

Discussion Paper - Litter Abatement in Western Australia



Keep Australia Beautiful Council (WA)

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Executive summary

On a world scale Western Australian's enjoy a clean environment, however littering continues to be a major issue for Government agencies, Local Government Authorities, industry and the community. It is estimated that approximately \$16 million is spent in WA each year on litter abatement activities including illegal dumping. The majority of this expenditure is on clean up programs.

The amount of litter in our environment is caused by a number of factors, including:

- a lack of understanding of the environmental consequences of littering
- a community tolerance of irresponsible behaviour by a relatively small percentage of the population
- an inadequate distribution of bins
- a lack of recycling infrastructure in public places and at public events
- ineffective street and public place cleaning standards and regimes
- inappropriate products or product materials ie excess packaging
- a preference for cleaning up litter rather than preventing it *eg Australia Skynotes*
- a lack of effective litter monitoring
- an inadequate adherence to, or enforcement of, litter laws
- uncoordinated or under-resourced litter education initiatives.

Unless the causes of littering can be addressed expenditure on litter abatement will continue to grow. A comprehensive review by consultants Nolan ITU concluded that in the absence of any strategic planning, litter management throughout WA is ad hoc with little or no coordination between stakeholders.

This Discussion Paper has been prepared by the Keep Australia Beautiful Council (KABC) to build on the Nolan ITU review and to begin the process of the development, by all key stakeholders, of a comprehensive Litter Abatement Strategy for WA.

This discussion paper summarises the Nolan ITU review, highlighting the roles and responsibilities of major stakeholders, the priority litter streams and describing the litter problem in some detail.

Nolan ITU recommended that a Task Force, consisting of senior representatives of all key stakeholders be formed to oversee the development of the proposed Litter Abatement Strategy.

It is proposed that KABC establish the task force and provide the necessary resources to enable its members to develop the Litter Abatement Strategy.

It is also proposed that the task force be finite. The priorities of the task force should be to:

- develop a Litter Abatement Strategy for WA
- review the Litter Act and determine how a Litter Abatement Strategy should be effectively managed
- support the development and implementation of a National Litter Index
- help procure adequate resources for initiatives/programs proposed in the Litter Abatement Strategy.

1 Background

The discussion paper has been prepared as part of the process of developing a Litter Abatement Strategy for Western Australia (WA).

The paper examines the totality of the issue by combining the physical aspects of 'litter' and the behavioural aspects of 'littering' into a holistic 'litter effect' (Nolan-ITU 2002). The paper provides to the reader a snapshot of litter management in WA.

Litter abatement is best described as the use of different mechanisms to achieve a reduction of litter in the environment and a reduction in littering.

These mechanisms include:

- Education
- Enforcement
- Physical interventions
- Extended producer responsibility.

In 2002 the Western Australian Local Government Association (WALGA), through the Municipal Waste Advisory Council (MWAC) commissioned Nolan ITU to investigate options to best manage litter in WA. The project was overseen by a stakeholder representative Project Steering Group. This group included Beverage Industry Environment Council, Conservation Council of WA, Department of Environmental Protection, Keep Australia Beautiful Council, Municipal Waste Advisory Council, Shire of Dardanup, Shire of Greenough and Western Australian Local Government Association
WALGA received a Waste Management and Recycling Fund Grant (WMRF) for the project.

Through the project Nolan ITU:

- Gathered information about the litter issue in WA and litter management.
- Developed an assessment framework for evaluating litter management mechanisms.
- Make recommendations to provide a basis for future litter abatement strategies in WA.

Nolan-ITU did not provide specific recommendations on a preferred mechanism or strategy for WA as it was considered to be outside of the project brief.

This Discussion Paper – Litter Abatement in Western Australia builds on the Nolan ITU document, *'Litter Management options in WA.'* The discussion paper focuses on stakeholder roles and responsibilities and priorities for litter management in a WA context. It also includes significant input from the consultants currently developing an illegal dumping strategy for WA on behalf of the Darling Range Rubbish Removal Group.

The purpose of this paper is to provide background for the formulation of a comprehensive Litter Abatement Strategy for WA. The proposed strategy will provide direction for present and future litter and litter abatement programs and the development of appropriate legislation.

The Strategy will also provide an overarching framework for all organisations with litter abatement responsibilities such as Local Governments, Main Roads WA, Department of Conservation and Land Management, Department of Environment, Fisheries WA, Water Corporation, Beverage Industry Environment Council and the WA Police Department.

It is anticipated that the Waste Management Board will draw upon the recommendations provided in this discussion paper during the development of the proposed Resource Recovery and Waste Avoidance Bill and supporting policies.

1.1 Definition of litter

This Paper focuses on litter and littering. Currently the definition of litter in WA Litter Act 1979, is as follows:

All kinds of rubbish, refuse, junk, garbage or scrap; and

Any articles or material abandoned or unwanted by the owner or the person in possession thereof, but does not include dust, smoke or other like products emitted or produced during the normal operations of any mining, extractive, primary or manufacturing industry.

For the purposes of the Act, litter is deposited on land or on or in waters if:

It is placed, put, left, dropped or thrown there; or

It is allowed to fall there or be carried there by the action of wind or water, or both.

However these definitions do not consider human behavioural aspects and activities related to litter and littering, rather they focus on the material aspects (Nolan 2002). It is therefore important to develop a broader conceptual model that addresses litter, littering and the 'litter effect'.

Nolan-ITU reported that there are clearly two fundamental and inter-related aspects to consider:

- the physical entity called litter – what we actually see
- the human behaviours called littering - the sum total of attitudes and behaviours that result in littering.

Nolan-ITU further concluded that if the problem is defined solely as 'litter' then solutions will continue to focus on clean-ups of littered materials. Conversely if the problem is defined solely as 'littering' solutions could be overly directed at changing people's behaviours by educational programs. Importantly the 'litter effect' better encompasses aspects associated with broader issues including illegal dumping.

Nolan ITU indicates that the litter effect occurs through a complex relationship of factors that result in different litter and littering patterns in different circumstances and their resultant environmental, social and financial impacts.

The litter effect's factors are:

Cause – why litter occurs or what is it the result of

Behaviour – how items get littered or the method/technique of littering

Item - what commonly gets littered

Stream – where litter accumulates (generally the combination of cause, behaviour and item that result in distinct litter impacts in identified locations)

Mechanism – intervention measure used to address either the causes and/or their behavioural effects and/or littered items and/or litter streams.

Understanding and using the litter effect provides a sound basis for developing comprehensive litter abatement options.

1.2 Current litter management status in WA

The Litter Management Report (Nolan ITU, 2002) outlined a number of findings with regard to litter. These issues are based on stakeholder opinions, current programs and available data:

1. For different reasons and in different ways, litter is considered a genuine issue by the majority of key stakeholders.

2. Litter appears to receive a lower priority than other issues with environmental impact, such as hazardous wastes or water pollution.
3. Many stakeholders are primarily concerned with the social (eg, aesthetics and amenity) and economic (eg, clean up costs) dimensions of litter rather than its environmental impact.
4. Within the overall litter issue, and although there is limited statistical proof of an increase in the practice, illegal dumping appears to be receiving an increasing priority among many stakeholders.
5. A variety of programs currently exist to address the litter with most focussed on cleaning up rather than addressing the causes and behaviours that result in litter.
6. It is estimated that more than \$16 million per year is currently being spent in WA on anti-litter initiatives by Government agencies and non-Government organisations.
7. The majority of direct costs for litter management are currently borne by Local Government.
8. There is a somewhat of a 'silo effect' occurring in terms of the conduct of anti-litter programs by agencies.
9. The extent, rate, amount, disbursement, and type of litter cannot be absolutely quantified at this stage due to existing data gathering systems that are not comprehensive or comparable.
10. The exact environmental, social and economic impacts of littering cannot be absolutely quantified for the same reason.
11. The current data is not sufficiently quantitative to set clear benchmarks for improvement or to definitively evaluate the effectiveness of implementing litter abatement measures.
12. Litter abatement mechanisms generally (beyond WA) do not undergo a formal evaluation process to determine effectiveness in achieving the objective of physically reducing litter or substantially altering littering behaviour.

The Nolan-ITU report also stated that:

"most 'information' is of a primarily anecdotal nature and that there is a lack of objective, reliable and comprehensive data and knowledge with which to quantitatively model the problem."

This led to the Nolan report being based on stakeholders' *perceptions* of the litter effect and its environmental, social and economic consequences; as well as some partial *objective* description of the litter effect based on the currently limited available data (Nolan, 2002).

1.3 Litter in the wider context of waste issues

Western Australia's many waste management issues are currently being reviewed, solutions developed, prioritised and formed into a comprehensive waste management strategy by the Waste Management Board. The proposed Litter Abatement Strategy and management will complement the waste management strategy.

Litter generally is not seen by waste managers as a high priority issue for a number of reasons. These include the perception that litter is being abated through the various programs currently in place and that litter may not cause significant environmental harm.

However litter, like recycling, is a major issue for the community as it is something people can see and relate to. It is emotive. This community concern and emotion will ensure that litter remains on the political agenda for many years to come.



2 Major stakeholders

There are a number of organisations, both local and national, that have a role in litter abatement management. It is recommended that the proposed Litter Abatement Task Force include senior representatives from each of these key stakeholders.

2.1 KABC

Keep Australia Beautiful Council WA (KABC) was formed as a statutory authority in 1970. KABC is responsible for the administration of the WA Litter Act.

The KABC consists of a part-time chairman and fifteen representatives from various industry associations, Education Department, Department of Local Government, Conservation and Land Management, Western Australian Local Government Association, Conservation Council

of WA, a consumers representative and a person with specific knowledge in litter prevention. The Manager of Community Education and Involvement within the Department of Environment (DoE) currently serves as Executive Officer to Council.

KABC currently has a Consolidate Revenue Fund budget of \$271,000 and three permanent staff. Three contract staff are employed to assist with program management.

KABC's vision is to strive for a litter-free, beautiful and environmentally healthy Western Australia. Its mission is to encourage and coordinate the correct disposal of unwanted items through programs aimed at reaching all Western Australians.

KABC has developed and implemented many litter intervention programs over the last three decades. These include:

- Litter Black Spot Project
- Earth Schools
- Roadside Litter Removal
- Captain Clean Up
- Keep Australia Beautiful Week
- Litter Report Schemes
- Litter Bins
- Perth's Best Beaches
- Tidy WA in May
- Perth Environment Awards.

KABC has also worked cooperatively with industry associations, local governments and other government agencies on a variety of litter abatement initiatives. KABC has also been very active at a national level and has been at the forefront in the development of a number of initiatives including Tidy Towns.

KABC's activities have traditionally been supported by sponsorship from industry, predominantly through the BIEC. However BIEC withdrew the majority of its financial support in 1999 and KABC has had to reduce many of its programs as a result.

*Beverage Industry
EW-Council*

As a consequence of the Machinery of Government Review in 2001 the KABC, the Department of Environmental Protection and the Water and Rivers Commission merged to form a new environment agency - DoE. The day to day management of KABC staff and programs is now the responsibility of the Manager of Community Involvement and Education Section within the DoE.

Through the amalgamation a number of programs have been rationalised. The following programs are currently being run by DoE:

- Tidy Towns
- WA Environment Awards
- Litter Enforcement

- Captain Clean Up (in conjunction with the Waste Wise Schools program)
- Roadside Litter Prevention Program (bag distribution only)
- Clean Up Australia Day in WA.

KABC issues approximately 1 200 litter infringement notices per year. These notices are issued based on information received from registered litter reporters. The KABC works in co-operation with 900 registered voluntary litter reporters on the detection and reporting of litter offences. Staff members, who are Authorised Officers under the Litter Act 1979, are involved in issuing Infringement Notices and Warning Letters. KABC's policy is to issue warning letters for litter offences reported by the general public.

The Minister for the Environment has determined that the Litter Act will be repealed and its responsibilities included in the proposed Resource Recovery and Waste Avoidance Bill. It was also intended that the KABC will cease operation as an independent statutory authority at this point. A new 'litter' advisory body that reports to the Minister for the Environment through the Waste Management Board is to be established.

However the Waste Management Board is currently reviewing management and legislative options for litter abatement and has concluded that retaining separate litter legislation may be the best option. Discussions are continuing with the Waste Management Board with a view to providing a recommendation to the Minister for the Environment in the very near future.

In the meantime the functions of KABC (WA) will continue to be managed by DoE.

2.2 Waste Management Board

In January 2002, the Western Australian Government established the Waste Management Board. The Waste Management Board's role is to provide advice to the Minister for the Environment on waste management issues and to develop waste management policy for Western Australia.

The Waste Management Board is also currently developing the Resource Recovery and Waste Avoidance Bill that will provide a comprehensive legislative framework for moving towards a waste free future.

Other WMB responsibilities include:

- Reviewing and advising on available and new technologies within the waste industry.
- Assistance for technical advice for the community under the Technical Assistance Grants program.
- Reviewing education and recycling initiatives.
- Reviewing the Waste Management and Recycling Fund and the landfill levy.

- Examining issues ranging from the potential benefits from new waste industry technologies, market development and economics of future waste infrastructures including the need for consultation and improved forward planning.
- Assessing applications submitted by community groups for independent technical advice on resource recovery project proposals.

The Board replaces the Advisory Council on Waste Management (ACWM) and the State Recycling Advisory Committee (SRAC).

The Waste Management Board is fully funded by the Waste Management and Recycling Fund. DoE provides its executive, administrative and contract management support. The DoE also co-ordinates project specific activities on behalf of the Waste Management Board.

2.3 Local Government Authorities

Local Government is the main caretaker of litter in WA as it is a major land and asset manager where litter tends to accumulate through human activity. Nolan-ITU calculated that **\$13.8 million** per year is spent by Local Government in managing litter and littering throughout WA.

Nolan ITU, (2002) concluded that the major litter issues of concern for Local Government Authorities (LGAs) are:

- Littering in public places
- Litter thrown from vehicles and public transport
- Illegal dumping and abandonment of cars
- Cigarette butt litter
- Unkempt property and derelict sites
- Litter from commercial and private transport of waste and recyclables.

While actual litter abatement activities vary to a significant degree between Local Governments strategies currently employed include:

- Education, marketing, advertising
- Provision and maintenance of public waste and recycling bins and signage
- Installation and maintenance of storm water systems
- Enforcement.

There is currently no encompassing framework for litter management or best practice litter management guidelines to provide direction and support to Local Government.



2.4 WA Local Government Association

The Western Australian Local Government Association (WALGA) was formed to represent Western Australian Councils. WALGA provides advice and services to member councils on issues such as waste management, environment, policy and advocacy, taxation, workplace relations, training and development opportunities.

WALGA commissioned and managed the Litter Management Options project undertaken by Nolan ITU.

2.5 Department of Conservation and Land Management

The Department of Conservation and Land Management (CALM) has responsibility for implementing government policy relating to land and water management. This policy domain includes the conservation of biodiversity at ecosystem, species and genetic levels, management for the renewable resources they provide and for recreational services.

CALM manages more than 24 million hectares of land and water including national parks, marine parks, conservation parks, regional parks, State forests and timber reserves, nature reserves, and marine nature reserves in WA.

Litter, particularly illegal dumping, on this land is a serious management issue for CALM. Not only is the aesthetic value of national parks and reserves compromised by litter but the

maintenance of biodiversity is also threatened, directly by wildlife being killed or maimed by its interaction with litter. People burning stolen vehicles or broken glass igniting dry vegetation may start fires that affect wildlife.

CALM is involved in cooperative ventures between State Government departments and other stakeholders to combat illegal dumping. CALM is currently chairing the Darling Range Rubbish Group which is producing a WA illegal dumping strategy.

Step Slavin
Illegal Dumping Stakeholder Taskforce (for Darling Range)

It is not known how much CALM spends in total managing litter. However, it estimates that in 2001/2002 the cost of rubbish removal in the Darling Range area alone was more than \$200,000.

2.6 Main Roads WA

Main Roads WA is responsible for the construction and maintenance of all major roads, road verges and rest stops, throughout WA.

Main Roads WA endeavours, where possible, to clear roadsides and rest stops of litter through its RoadCare contractor. It also sponsors the Administrative Training Services (ATS) Unit 'work camps'. The ATS is a partnership between the Australian Defence Force and Main Roads WA that principally focuses on road side litter collection with the involvement of young unemployed Western Australians. The program also collects valuable data on litter and littering.

The total cost of litter abatement for Main Roads WA is not known. However, Main Roads WA has collected some data which indicates that the volume of litter is increasing. It does not analyse the types of litter that it collects although it is interested in examining the litter stream in more detail.

Through its experience with litter collection Main Roads WA has determined some littering behaviours of travellers. For example roadside littering on average commences twenty minutes after towns or roadhouses. Litter and rubbish increases significantly at rest stops that are near national parks or designated camping areas.

Step Slavin - heavy illegal dumping of containers etc on nighting

Littering may also contribute to driver fatigue, one of the main causes of accidents. Anecdotal evidence collected by Main Roads WA suggest that motorists may not stop at rest areas because they are badly littered, causing them to drive longer without stopping.

2.7 Beverage Industry Environment Council

The Beverage Industry Environment Council (BIEC) is a national industry association that represents the environmental interests of Australia's beer, soft drink and some wine manufacturers as well as their aluminium, glass and PET packaging suppliers.

BIEC was previously the major sponsor of the Keep Australia Beautiful Council programs, however withdrew most of its sponsorship in 1999 as it shifted its focus to its own national projects such as the *'Don't Waste Australia'* anti-litter advertising campaign.

The campaign has not yet been run in Western Australia although it was recently launched nationally. BIEC has recently indicated that the campaign will not be implemented in WA as it has not been able to secure partnership funding.

BIEC has conducted a number of professional development workshops for waste educators in WA and also co-sponsors the ATS Unit 'work camps' in partnership with Main Roads WA, Department of Education, Police Department and the Federal Department of Defence. This program has also received grants from the Waste Management and Recycling Fund.

Nationally BIEC has sponsored some leading research in littering behaviours which is available on their website (www.biec.com).

2.8 Other stakeholders

2.8.1 Swan River Trust

The Swan River Trust is responsible for the management of the Swan-Canning waterways, including the removal of litter, from approximately 300 kilometres of foreshore of the Swan, Canning, Helena and Southern rivers.

The Swan River Trust estimates that it spends over \$300,000 on litter abatement and illegal dumping programs each year. Additionally, the Swan River Trust has collected litter/rubbish statistics for over ten years which would be invaluable to all further research.



2.8.2 Fire and Emergency Services Authority of Western Australia

While Fire and Emergency Services Authority of WA is not directly responsible or involved in litter collection, as mentioned earlier, evidence suggests that a significant percentage of bushfires are caused by cigarette butts thrown from vehicles. The economic, social and environmental cost of these fires can be enormous.

Fire and Emergency Services Authority of WA also has a very large volunteer network throughout WA. There is a possibility that the volunteers may help with litter data collection and litter clean-up activities.

2.8.3 Department of Local Government

The Department of Local Government before the formation of the DoE provided administration support to the KABC and helped to ensure that Local Government addressed litter and littering. As the State Government agency responsible for the administration of the Local Government Act, the Department of Local Government should continue to play a significant role in litter abatement.

2.8.4 Department of Education and Training

The development of anti-littering values in students is a vital component of any litter abatement strategy. Not only will students who have these values develop appropriate behaviours, but research has shown that students also have a significant positive impact on their families and friends.

It is anticipated by KABC that the Department of Education and Training will continue to support new and existing anti-littering educational initiatives.

2.8.5 Fisheries WA

Unfortunately a number of professional and amateur fisherpersons still litter WA's oceans, rivers, streams and beaches. Fisheries WA as the management authority can have a significant influence on the actions of fisherpersons and so reduce the fisheries related litter stream.

2.8.6 Conservation Council of WA

The Conservation Council of WA represents many of the community conservation organisations. For many of these organisations litter and littering is an important issue as it can have a profound affect on wildlife and can spoil the aesthetic value of national parks and reserves.

2.8.7 Police Department

While littering may not be a high priority for the WA Police Service its members are currently authorised officers under the WA Litter Act and as such their role within the litter abatement issue needs to be assessed.

2.8.8 Water Corporation

The Water Corporation has delegated responsibility for the management of water supply catchments throughout WA. Many of these areas, particularly in the metropolitan region, are illegal dumping targets for various liquid and solid wastes that consequently threaten drinking water quality.

3 Litter, litter streams and littering

To develop effective and efficient strategies and actions a comprehensive understanding of litter, litter streams and littering is required.

BIEC has sponsored research which establishes the major demographics of 'litterers' to target for littering behaviour. Four reports have been published by BIEC that provide valuable

information that should be considered in the development of any litter abatement strategies within Australia.

However, there is a need to develop a better understanding of the barriers to change and the motivators that could/should be applied to stimulate change within those who litter.

The BIEC research will be used during the determination of the programs contained in the proposed litter abatement strategy. An example of BIEC's research is the following analysis of disposal behaviour.

Table 1: Demographic characteristics of disposal behaviour (BIEC 2001)

Demographic Characteristic	Disposal Behaviour
Gender in Public Places	<p>People of all ages and social backgrounds littered.</p> <p>56% of people using public places were male.</p> <p>Men litter and use bins less slightly more than women.</p>
Groups in Public Places Littering	<ul style="list-style-type: none"> • More than 50% of people over 45 years of age were unaccompanied in public places. • Over 86% of people under 18 used public place in groups of 2 or more. • Littering is more common in groups of 4 or more. The exception to this was for people over 65 years who littered more regularly when alone.
Age Groups and Littering in Public Places	<ul style="list-style-type: none"> • 35% of people observed were less than 24 years, 63% were less than 35 years. • Young people littered more than older people when in groups. When alone young peoples littering rates were equal to that of older people.
Age groups and Awareness of Littering	<ul style="list-style-type: none"> • Young people admit to littering more readily than older people. • Older people are less aware of their littering behaviour. Less than a third admitted to littering even though they had been observed doing so.
Age Group and Bin Use	<ul style="list-style-type: none"> • Young people use bins as often as older people. • Most age groups used bins less when in a group.
Education, Employment and Littering	<ul style="list-style-type: none"> • 55% of people surveyed were working. 22% were students. • People not working tended to litter more. • Students littered and used bins in approximately equal proportions, whereas, other groups tended to use bins more than littering. • Home-makers and retired people used bins more than littering. • People with tertiary education littered slightly less than those with secondary education.
Place of Residence and Littering	<ul style="list-style-type: none"> • Two thirds of people surveyed were local to the area. • Locals littered more than people not from the area.
Reasons people litter	<ul style="list-style-type: none"> • 24% - too lazy • 23% - no ashtray • 21% - no bin • 12% - don't know or habitual
Distance to bins	<ul style="list-style-type: none"> • 51% of littering occurred within 8 metres of a bin. • 40% of littering occurred within 6 metres of a bin. • The average bin distance for a litterer was 12 metres. • The average bin distance for a bin user was 7 metres. • 55% of people using litter or recycling bins were within 3 metres of a bin.

4 Priority litter issues

There is significant community concern about issues relating to litter. This is substantiated by letters and phone calls received by the Minister for Environment and KABC staff and by recent reports and articles in the media.

This document highlights some of the priority litter issues, however it does not address all components of the litter stream. The proposed litter abatement strategy will contain some broad programs for managing litter. It should also include specific programs or actions to manage the following litter issues.

4.1 Take away food packaging litter

Take away food packaging is a high level visual litter pollution. It is estimated, based on statistics collected by Keep South Australia Beautiful, that approximately 22% of the total litter stream is packaging materials. While some stewardship has been shown by the fast food industry much remains to be done to resolve the problem.

A possible contribution could include industry stakeholders demonstrating stronger stewardship. Working closely together to develop strategies and education initiatives to reduce the impact of take away food litter in the environment would have a significant impact on this priority litter stream.

4.2 Roadside litter

Litter found alongside roadsides includes domestic products (cigarette butts, take away packaging, toilet paper, beverage containers, etc), items fallen from commercial and private vehicles and tyre pieces mainly from haulage trucks. It is estimated that roadside litter accounts for over 40% of all litter in the environment (BIEC 2002).

Litter increases are also noted on roads next to landfill sites and transfer stations and next to domestic and industrial building sites.

Illegal dumping or fly-tipping is also prevalent on roadsides.

Litter on roads and road verges is unsightly and may detrimentally affect the tourism industry, particularly in rural WA. Roadside litter, particularly large tyre pieces may also cause motor vehicle accidents or damage.

Effective enforcement and education campaigns will help to reduce the roadside litter problem if implemented and sustained. However, stewardship must also be displayed by the transport industry and tyre manufactures as they are partially responsible for this priority litter stream.

Need higher penalties for pre-arranged dumping.

4.3 Cigarette butts

It is estimated that cigarette butts, by quantity, make up over 45% of the litter stream (Nolan ITU 2003). Throughout Australia over seven billion butts that are 'littered' each year affect our visual amenity and pollute the environment (Nolan ITU 2003). The Fire and Emergency Services Authority also suggests that cigarette butts thrown from vehicles may start bushfires.

The changes to legislation banning smoking in workplaces and many entertainment venues, combined with the inadequate placement of bins in many areas, ensures that cigarette butt littering will continue to increase unless appropriate measurements are put in place.

Butt litter reduction requires behavioural change by consumers, stewardship by the cigarette industry, effective bin management by local governments and businesses.

4.4 Illegal dumping

Illegal dumping is a significant issue in Western Australia for Local Governments, land managers - such as the Department of Conservation and Land Management and the Water Corporation; and Main Roads WA. It is not known what the true economic, social and environmental costs of illegal dumping are in WA, however undoubtedly they are substantial.

Illegal dumping is currently managed in an ad hoc manner in WA. However, a report is currently being developed by the Darling Range Rubbish Group (DRRG) to guide and maximise management strategies and activities. The DRRG report will be used during the development of the proposed Litter Abatement Strategy.



4.5 Building and construction site litter

Residential and commercial building sites continue to be significant sources of litter in urban areas.

This priority litter stream is caused due to poor work place practices, lack of appropriate infrastructure, lack of incentives or disincentives. This problem is compounded by little or no enforcement by the Department of Environment or local governments and a low level of acceptance of the problem by industry.

The current high level of building activity will translate to increases in building and construction site litter and littering unless appropriate management strategies are put in place by industry, local and state governments.

4.6 Marketing flyers and posters

Indiscriminate placement of flyers under car windscreen wipers and advertising posters placed on buildings and telegraph poles contribute to the litter stream. Other promotional materials contribute to the litter stream when disposed of inappropriately these items add to the litter management costs.

While some may be generated through genuine need to educate or inform the community, there is often no action by the person/persons involved to ensure that the materials do not end up in the litter stream.

4.7 Shopping trolleys

The dumping of shopping trolleys in suburbs next to shopping centres continues to be a problem and often generates considerable community angst. The cost of collection and removal of abandoned shopping trolleys is most often borne by local government.

The Retail Traders Association has developed a program called "trolley-tracker" which is a phone service that organises for retailers to collect dumped trolleys. Additionally, the Retail Traders Association recently prepared a draft voluntary Code of Practice for Centre Managers. However, the draft was not supported by Local Government and the Retail Traders Association now appears unwilling to proceed with the code.

Communication should be encouraged between the Retail Traders Association and the Western Australian Local Government Association to further pursue options and strategies.



4.8 Plastic shopping bags

Plastic bags continue to attract the attention of the community, the media and several Non Government Organisations such as Planet Ark and the Clean Up Australia Foundation.

There are several programs being implemented by these Non-Government Organisations and also by industry that will lead to a significant reduction in plastic shopping bags in the litter stream.

The Commonwealth Government and the State/Territory Environment Ministers are examining options for reducing plastic shopping bag usage.

5 Factors relating to litter in WA

The Litter Management Options project (Nolan ITU, 2002) investigated the major causes of litter, the common behaviours relating to littering, the commonly littered items and the major waste streams. Table 2 is a concise summary of these findings.

Table 2: Litter effect aspects in WA

1. Major CAUSES
Insufficient and/or inappropriately designed disposal facilities in public place locations and on construction and demolition sites
Increases in landfill charges
Lack of guidelines and/or strict regulation for the storage and/or handling of waste materials
Distance to waste disposal bin/facilities
Negligence / habit
Lack of education / awareness
Weather
2. Common BEHAVIOURS
Casual littering by individuals
Avoidance of long distance waste haulage / and or landfill charges
Lack of due care in the collection and transportation of wastes and recyclables
Lack of due care in the transportation of loads (ie. uncovered loads)
Throwing litter from motor vehicles and public transport
Placing of advertising material in open spaces (ie. under vehicle windscreen wipers, property gates etc)
Lack of due care during building construction and demolition activities
Overfilling or inappropriate use of public place litter and recycling bins
Inappropriate disposal of syringes and hazardous items
Vandalism of public bins and property

3. Common ITEMS
Beverage containers
Beverage related litter (straws, caps and tops)
Confectionery wrappers
Construction materials
Cigarette butts
Domestic waste (general)
Hazardous items (general – inc. containers of liquid waste)
Junk mail
Large household items (inc. white goods, appliances)
Milk cartons
Paper (general – inc. newspaper and packaging)
Plastics (general – inc. assorted bags and packaging)
Syringes
Takeaway food packaging
Vehicle tyres
Vehicle components (general – inc. whole cars)
Vending tickets (ATM, public transport tickets, dockets, invoices)
4. Major litter STREAMS
Roadsides
Construction and industrial sites
Waterways and beaches
Shopping centers
Bus stops, train stations and other public transport postings
Unkempt property and derelict sites
Fast food outlets
Special events (general)
Remote areas (ie. nature reserves)

Nolan ITU (2002)

6 Standardised evaluation methodology/counts

Nolan-ITU concluded that no reliable methodologies exist for evaluating the levels of litter either locally or internationally.

For major stakeholders to make policy and planning decisions, and to ascertain the effectiveness of interventions, reliable litter information must be collected. A standard

methodology for litter data collection should be developed and utilised by all stakeholders to ensure that there is uniformity and consistency across programs.

Another important component of litter evaluation is reporting by local and state government of the real costs associated with litter cleanups.

Nolan-ITU recommended that a review be conducted to determine:

- the relative benefits of count-based versus behavioural observation-based approaches
- the appropriate number, type, location and size of data gathering sites and areas on a state-wide basis
- the best way to gather, collate, manage and utilise measurement data.

Nolan ITU also recommended that when the methodology for litter data collection has been standardised it would be appropriate to conduct training sessions on the application of this methodology. This would provide results that are objective and reliable.

Nolan ITU (2002) also emphasised the importance of trialing the methodology on a number of programs. It would also be pragmatic for these trials to be conducted by an independent group to objectively determine the effectiveness of the methods.

Table 3 below provides a summary of the litter data reviewed by Nolan ITU (2002) which clearly highlights the differences in terms of methodology, scope, coverage and unit of measure. For all the litter information reviewed, no one set is representative of all the litter streams in WA nor are any two sets directly comparable.

Table 3: Summary of litter data reviewed

Organisation	Methodology	Components of Analysis	Unit of measure	Scope	Coverage
Keep Australia Beautiful Council	Visible litter count surveys (most common form of litter assessment in WA)	Material type Product type Product grouping Site categories	Item	State (63 sites) & national	Beaches Car parks Retail shops Highways Industrial sites Recreational areas Residential areas
Main Roads WA	Litter collection and analysis from main roads clean up	Material type Product grouping Manufacturers Note: (CIC)	Weight (& item)	Regional	Main road reserves
Swan River Trust	Litter collection and analysis from river catchment clean up	Material type	Item	Regional	Swan and Canning Rivers catchments
Clean Up Australia	Visible litter count survey	Site categories Material type Product type	Item	National	All areas
BIEC	Littering behaviour studies Disposal behaviour index	Material type Product type Product grouping Site categories	Personal observation of littering behaviour	National	Public places

It is impossible to determine the performance of litter abatement activities and programs without a valid litter index. The National Keep Australia Beautiful Council recently agreed to forward a proposal to the Federal Minister for the Environment for the Commonwealth Government to provide funding for the development of a National Litter Index and Data Collection Methodology.

The proposed index would be used by all jurisdictions allowing for comparisons between states of the effectiveness of various approaches to litter abatement implemented.

It is suggested that key stakeholders, through the KABC (WA), support the development of a National Litter Index.

7 Legislation

There are several Acts that prohibit illegal waste disposal and littering.

Existing Legislation includes:

Litter Act (1979)

- Conservation and Land Management Act (1986)
- Environmental Protection Act (1986)

Regulations 2002

- Metropolitan Water Supply, Sewerage and Drainage Act (1909) and By-Laws (1981).

Legislation underpinning litter abatement and management is urgently in need of an overhaul. The current legislation no longer reflects the emphasis the community places on litter and littering.

In Western Australian penalties for littering are the lowest in Australia. Local Government Authorities continue to emphasise that the Litter Act fails to support authorised officers dealing with offenders.

Relevant Acts should be reviewed to embrace a broader scope, clear definitions for littering, enforcement options and agency responsibility.

7.1 Western Australian Litter Act 1979

Enforcement measures are the ‘big stick approach’ to litter abatement aimed at preventing litter by providing a framework to penalise offenders and create disincentives to inappropriate behaviours. Table 4 Details the current schedule for littering offences in WA (Nolan ITU, 2002).

Litter Act

Penalties

Table 4 - the current schedule for littering offences in WA

Item	Section or Regulation	Nature of Offence	Penalty (\$)
1	s.23	Littering	50
2	s.24	Breaking glass, metal or earthenware	50
3	s. 24A (1)	Bill posting	100
4	s.24A (2)	Bill posting on a vehicle	50
5	reg. 6	Depositing domestic or commercial waste in a public place receptacle	50
6	reg. 8	Transporting load inadequately secured	100

penalties \$400 → \$1000

The Litter Act (1979) has not been substantially amended since its proclamation and does not reflect the sophistication required to manage a complex social problem such as littering.

Western Australia's litter fines are low relative to other states and do not necessarily reflect community concern for littering. Stakeholders also report an under-resourced and sub-optimal approach to fine enforcement in WA (Nolan ITU, 2002).

Legislation for littering should provide a holistic framework and include a broad range of tools and disincentives such as:

- litter fees and penalties that are an adequate deterrent to prevent negative behaviours
- more agencies and officers issuing infringement notices
- a levy on manufacturers whose products end up in the litter stream
- clean up costs included in entrance fees to parks and venues
- drivers to be accountable for passengers littering
- loss of demerit points from offending drivers licenses
- mandatory covering of loads to eliminate spillage.

The KABC is reviewing litter penalties and intends to recommend to the Minister for the Environment that they be increased.

7.2 Conservation and Land Management Act 1984

penalties

There are several regulatory powers that are available to CALM officers to manage and control illegal activities on its land.

Under the CALM Act (1986), authorised CALM officers have the right to issue on the spot fines and may prosecute any person on CALM estate found to be littering, lighting fires or

no

\$10,000

committing any other unlawful activity. Breaches of the CALM Act can incur \$1000 fine and one year's imprisonment.

The following sections of the CALM Act may allow for prosecution of unlawful activity (Pollution Prevention Taskforce, 2001):

- Section 62 Land may be classified for specific purposes.
- Section 106 Unlawful occupation of land.
- Section 107 Miscellaneous enforcement.
- Section 114A Infringement notices.
- Section 115 Obstruction to officers.
- Section 124 Powers of rangers and CALM officers.
- Section 126 Regulation of general powers.

CALM Regs 2002
 r24 \$1000, modified penalty
 r25 building materials \$2000 (min) \$2000 off
 r27 removal of litter \$2000 \$1000
 r21 discharging or depositing waste \$2000
 r36 dumping of vehicles \$2000

Part X

7.3 Environmental Protection Act 1986

The existing Environmental Protection Act provides little scope of prosecution for littering unless it can be proven that the litter has polluted the environment.

Stake

The Environment Protection Bill currently before Parliament includes a capacity for prosecution for 'environmental harm' however as the maximum penalty is \$500 000 or 5 years imprisonment it is unlikely that action would be taken for littering under the Act. However, the proposed Act may be appropriate for prosecuting offenders who illegally dump hazardous waste.

7.4 Draft Resource Recovery and Waste Avoidance Bill 2002

The Minister for the Environment has indicated that the WA Litter Act should be amalgamated with the proposed Resource Recovery and Waste Avoidance Bill. The Waste Management Board is developing the framework for the legislation through a key stakeholder steering committee. The steering committee has suggested that it may be more appropriate for the Litter Act to be retained as separate legislation.

At the time of drafting this paper a final decision had not been made as to the future of the Litter Act.

8 Existing policy

There is an urgent need for a more holistic approach to littering and litter abatement in Western Australia. This requires a refocus from litter clean-up programs (effect) to litter prevention programs (cause). There are several organisations endeavoring to manage the litter problem. However, they are doing so in the absence of a clear vision, objectives, inadequate legislation and insufficient resources.

A good example of the diffuse way that litter is managed in WA is CALMs 'No Bins in National Parks' policy. While this policy has been very effective in reducing the levels of littering in national parks, Main Roads WA's surveys indicate that the litter has merely been

transferred to their road reserves and rest stops. In this instance the littering problem has not been solved. The problem has been transferred from one location to another and the responsibility and clean-up cost transferred from one agency to another.

There has also been a lack of coordination to deal with the cause of litter, particularly packaging. There has not yet been a thorough examination of tools such as Extended Producer Responsibility, the potential and impact/implications of the National Packaging Covenant or Container Deposit Legislation.

A number of these tools are detailed in this position paper. However, as their effectiveness has not been evaluated, specific recommendations have not been made to adopt them. What is recommended is that the benefits or costs of each be closely examined and decisions reached on their practicality.

8.1 Extended producer responsibility

The Organisation for Economic Co-operation and Development (OECD) defines extended producer responsibility as:

'a policy approach under which producers accept significant responsibility - financial and/or physical - for the treatment or disposal of post-consumer products' (www.oecd.org/).

There are two key features of EPR policy that directly relate to litter abatement:

- Preventing waste at the source and enhancing product design for the environment, ie. taking into consideration potentially littered components of products and packaging at the design stage.
- Providing support for the achievement of public recycling and materials management goals, including litter abatement.

In this instance the primary function of Extended Producer Responsibility would be to transfer some of the costs and/or physical responsibility of managing litter back to the producers of commonly littered items.

EPR can take a number of forms as stand alone initiatives by a company, or group of companies, or contributions made to joint initiatives. EPR could also be applied in a mandated or legislated manner or voluntarily by companies.

EPR related mechanisms could include:

- **Container deposit legislation** - legislation that provides for a refundable deposit on containers (as specified under a particular Act) when returned for reuse or recycling
- **Reduction** - in unnecessary packaging ie more appropriate and environmentally aware packaging

- **Product labelling** - product brand owners, particularly of fast moving consumables such as snack and fast foods, to include messages on products to promote correct disposal and/or recycling behaviour of products and packaging
- **Industry programs and support** - general industry initiatives to take responsibility for litter and/or provide support for collaborative programs
- **Industry Waste Reduction Plans** - key industry groups and government to include litter prevention in broader Industry Waste Reduction Plans (IWRPs), or similar means that are enshrined in legislation (Nolan ITU, 2002).

8.2 National Packaging Covenant

In Australia, the National Packaging Covenant (NPC) can be considered a driver toward broader Extended Producer Responsibility measures related to product packaging and paper products. The NPC establishes a national framework for the effective lifecycle management of these related items based upon the principles of product stewardship and shared responsibility. NPC signatories effectively recognise that they bear at least some responsibility for the post-consumer implications of items that are part of their supply chain (Nolan ITU, 2002).

Litter is within the scope of the NPC and is also known to be a strong concern to several members of the NPC Council. One means for firms to discharge their obligations under the Covenant is through funding or undertaking anti-litter programs, and this will create a context of increasing non-government activity in litter prevention (Nolan ITU, 2002).

Several companies have made litter-related commitments within their action plans. A review of the 107 available action plans in February 2002 by Nolan-ITU identified 52 litter related commitments by 28 different signatories. BIEC has the most extensive commitment to litter abatement of all signatories.

The NPC Council recently agreed that litter management actions could be supported by specific grants from their transitional funds.

8.3 Container Deposit Legislation

Container Deposit Legislation (CDL) has been touted for many years as an effective litter abatement strategy. A number of comprehensive reviews have been or are being undertaken by various jurisdictions and by BIEC. There does not appear to be a consistent opinion on the advantages or disadvantages of CDL developed through these reviews.

The Minister for the Environment, the KABC and the Waste Management Board are currently reviewing the various studies and will form positions on CDL in the very near future. The National Environment Protection and Heritage Council is also reviewing CDL.

It should be noted that CDL may only be able to be introduced if it is adopted in all states and territories as implementation by single states may be contrary to the National Competition Policy.

Recommendations

This discussion paper summarises the major issues and stakeholders involved in litter management for Western Australia. To take these findings one step further the following recommendations have been made.

9.1 Need for a more holistic approach to litter abatement in Western Australia

There is an urgent need to develop a framework or strategy that encompasses the full range of inter-relationships between organisations and their litter management responsibilities.

There is also need for strong leadership by an organisation that has litter as its primary focus. KABC has a very high public profile and brand recognition throughout WA and it would make sense to build on both.

The significant reductions in KABC's budget have had a real impact on its ability to be both proactive and strategic.

Further, other key stakeholders such as the Main Roads WA, Fisheries WA and the Water Corporation have not been adequately engaged or involved in litter abatement strategies developed by KABC.

Recommendations:

- a) A task force, consisting of senior representatives from key stakeholders, be formed by the KABC to develop a comprehensive '*Litter Abatement Strategy for WA*'.
- b) Facilitate the development of a comprehensive '*Litter Abatement Strategy for WA*' through the litter task force.
- c) The proposed task force assess and include, when practical, the recommendations of the Nolan-ITU '*Litter Management Options in Western Australia*' in the proposed Strategy.

9.2 Need for appropriate resources

Although over \$16 million was spent on litter management in 2001 most of these funds were spent on litter cleanups. A relatively small proportion of this expenditure was spent on proactive infrastructure, education, behavioural research, evaluation or policy development. If this cycle is not broken then expenditure on litter cleanup will continue to spiral as WA's population increases.

Nolan-ITU noted that there is potential to streamline spending and improve effectiveness of mechanisms if 'best practice options' are developed and implemented. It is also probably unwise to shift funding from litter clean-up programs to litter prevention programs as there will no doubt be a period when litter will increase with the likely result that littering may become an 'accepted' occurrence within some portions of the community.

In the initial years of implementing the Litter Abatement Strategy it is likely that additional funding resources will be needed for new projects and programs that address the cause of littering. It is anticipated that some of the costs can be recovered through better litter enforcement.

Key stakeholders will need to consider reallocating resources to give priority to litter management in the short term, or assist in additional sourcing of funds and resources.

The development of a comprehensive litter abatement strategy with specific actions will determine the funding required for effective litter prevention programs and provide recommendations on the potential sources of revenue required to fund these programs.

Recommendation:

d) That the estimated cost and funding options for specific litter prevention actions/programs be included in the proposed Litter Abatement Strategy.

10 References

BIEC & Community Change Pty Ltd. (2001). *"Littering Behaviour Study III. Measuring environmentally desirable change in Australia"*. BIEC, Sydney.

Nolan ITU (2002) *'Litter Management Options in Western Australia'* WA Local Government Association

Pollution Prevention Taskforce (2001) *'Draft Gnamptara Park Pollution Prevention Strategy'* Conservation and Land Management.

Nolan Butt Littering Report (5.3)

BIEC Action Plan (2002) Roadside Litter 5.1

**PUBLIC SUBMISSION ON THE DISCUSSION PAPER:
 'Litter Abatement in Western Australia' – Keep Australia Beautiful Council,
 July 2003**

The input and involvement of the entire community will be critical in ensuring the success of this initiative. This discussion paper has been prepared by the Keep Australia Beautiful Council to stimulate and encourage constructive debate regarding litter management in Western Australia.

Making a written submission is one way that you can provide input into the development of a Litter Abatement Task Force, particularly its Terms of Reference. The proposed Task Force will be responsible for the development and implementation of the Litter Abatement Strategy in Western Australia.

Attached is a form to help you comment. Please note that you do not have to restrict your submissions to this format, although if you intend making a more substantial written submission, please take note of the following guidelines.

Guidelines for written submissions

To make sure your submission is as effective as possible:

- make it clear and concise;
- make sure you refer your comments to the appropriate subject sections and page numbers in the Strategy;
- indicate whether you agree or disagree with any or all of the subjects or just those of specific interest to you - clearly state your reasons (particularly if you disagree); and
- suggest ways to deal with litter and littering. Please provide supporting information where possible.

Each submission is important, but those that give reasons for concerns, give support where appropriate and offer information and constructive suggestions are most useful.

Name	
Organisation (if applicable)	
Address	
Phone	
Fax	
Email	
Interest (educator, householder, industry, government, small – medium business)	

I would like my details kept confidential

In answering these questions, please refer to specific actions and page numbers where possible.

1. What did you like about this Discussion Paper?

2. What has been left out of this Discussion Paper?

3. What do you see as the key responsibilities of the proposed Litter Abatement Task Force?

4. What do you think the primary goals of the proposed Litter Abatement Task Force should be?

5. Do you have any other general comments on the Discussion Paper?
