S U P P L E M E N T A R Y

S U B M I S S I O N

TO THE

INQUIRY INTO WASTE MANAGEMENT

BY THE

PRODUCTIVITY COMMISSION

COMMENTS ON THE ACG ANALYSIS OF EPHC

PLASTIC BAG REDUCTION

POLICY SCENARIOS

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EXECUTIVE SUMMARY

This submission provides NARGA's comments on the plastic bag policy scenarios assessed by the Allen Consulting Group on behalf of EPHC. This assessment includes a range of scenarios reflecting a position put by the Australian National Retailers Association (ANRA).

Whilst NARGA represents the majority of Group Two stores in the previous plastic bag reduction scheme, NARGA was not approached for input.

NARGA represents more than 5000 small to medium sized businesses employing over 150,000 people

Retailers provide the interface between manufacturers and producers and the general public and are therefore significantly impacted by government efforts to 'manage' waste through regulation of elements of the supply chain for products and packaging, particularly where these impose additional requirements on retailers or where there is a call for allocation of retail space.

In our earlier submission to the Inquiry, we made a number of comments in relation to the plastic bag issue, which are summed up in this submission. In summary, we do not support further action to reduce plastic bag use, because this action does not directly target the problem of litter, and the policy targeting plastic bags for reduction was not properly developed or based on 'sound science'

Nothing in the reports prepared by the Allen Consulting Group (ACG) on behalf of EPHC and DEH has changed these views – in fact the reports tend to con firm our concern that plastic bag policy has not been based on 'sound science'.

The ACG reports have confirmed the huge expense attached to removing from the litter stream the less than 1% made up by plastic shopping bags.

We have shown in our previous submission, and demonstrate in this submission, that information regarding plastic bag litter impact, supportive of action aimed at reducing plastic bag use has been exaggerated, distorted and misrepresented, yet taken on board as a factual basis for policy development.

The information we have provided suggests that the issue of plastic bags in litter was not properly assessed at the time EPHC ministers initiated the plastic bag reduction program, and that no work since has properly addressed this lack of assessment.

Much of the initial push for action on plastic bag litter was in response to legislation passed in Ireland that imposes a tax on plastic shopping bags. We show the lack of basis for the Irish initiative and demonstrate that it has not eliminated plastic bag litter.

The Irish experience demonstrates that the plastic tax reduced plastic bag litter from an initial value of 0.75% to 0.22%, but did not eliminate it. The approach adopted in Ireland is more drastic than any of the taxing options being proposed locally. We tend to conclude that none of the policy options being proposed will eliminate plastic bag litter.

The May 2006 report presents a thorough and detailed analysis of the costs and benefits associated with the reduction and / or elimination of plastic shopping bags. It draws the following conclusions:

- The costs of the 9 scenarios assessed range from $646 million to $1.293 billion, with assessed net costs (after subtracting environmental benefit) ranging from $490 million[1] to $1.026 billion. (P viii) – (all costs are relative to a scenario of no further government action – **i.e. ignore costs that have been incurred to date)**

- **Whilst all scenarios outlined result in substantial economic cost implementation of scenario 2, the 'no further action' scenario (which was not fully described) yields an economic <u>benefit</u> of some $200 million (est.) over the study period (Fig 6.2 P50 and Table E.1 P viii)**

However the results of the assessment are distorted in favour of more action to reduce plastic bags because of the assumptions used:

- The value assigned to each plastic bag removed from the litter stream is $1.00. It is claimed that the value was derived from the value of time donated to Clean Up campaigns be volunteers – **and a significant scaling factor (P ix).** However, the calculation of the value of volunteer effort in relation to plastic bag clean up is just

[1] Three of the scenarios outlined in the ACG Supplementary report which analyses variations of new ANRA proposals come in at lower net costs, ranging from $276 million to $450 million, but propose the use of 'biodegradable' bags, an option that needs to be more fully assessed.

$0.02 (Box 3.4, P 18). If this value is plugged into the various scenarios two results would emerge:

- The costs of each scenario would exceed the benefits by a much wider margin

- It would be obvious that, apart from the calculated benefit of reduced litter, there is no environmental benefit. In fact, for all scenarios there would appear to be an environmental impact associated with plastic bag reduction. Is the high value chosen for plastic bag litter intended to mask this fact?

The assessment also suffers from the earlier assumption made by DEH relating to the proportion of plastic bags that end up as litter (the litter figures were simple made up), and their environmental fate.

Even so, none of the scenarios assessed, apart from the 'no further action' scenario, represent a net community benefit.

The NEPC Act requires (as do COAG guidelines and Competition Policy legislation), a proper assessment of any issue to be addressed by any regulatory mechanism, including voluntary agreements.

The ACG reports do not meet the requirements of the Act as they do not clearly identify the problem and do not address all available solutions.

The problem is identified as one of a need to eliminate light weight plastic shopping bags, whereas the problem is one of litter, where these bags make up around 0.67% (at last count).

The ACG reports are based on theory and each of the scenarios suggests that a proportion of plastic bags in use are eliminated and that this results in an estimated reduction of plastic bags in litter.

However, the relationship between bag numbers and bags littered is not linear. Most supermarket sourced bags find their way into the home and end up in landfill – either directly or via a subsequent use as bin liner or other use. This means that targeting shopping bags is a very indirect means of targeting bag litter – the connection between the typical shopping bag user and the typical bag litterer is tenuous.

The problems associated with a tax or levy have been documented and show that, even with high levies or taxes, plastic bag use persists and plastic bags still end up as litter.

A range of measures has been tried in Europe and elsewhere. Mandated charging for plastic bags has been in place in northern European countries for over 15 years, but has not eliminated bag litter.

The other reality is that shopping bag secondary use will be replaced by products with similar characteristics – and **these** will end up as part of the litter stream. The ACG reports do not address these matters.

When it comes to the economic impacts identified a wide number of groups are clearly affected. For example, depending on the scenario adopted, retailers face an up front cost of an average of $45,000 per store and an average annual cost of up to $14,347 per store – with smaller stores bearing a disproportionately greater cost burden.

Some of the scenarios assessed recommend a switch to degradable bags. In our view, degradable bags have a number of disadvantages that make them unsuitable as a plastic shopping bag substitute. Apart from higher cost – which represents an unnecessary community impost – their performance is variable and leads to other environmental problems that will need to be addressed.

For the reasons outlined in this submission, a switch to degradable plastic bags is not supported by NARGA.

The ACG reports describe the net social benefit that needs to be allocated to the removal of plastic bag litter in order to justify the continuation of this policy in any form, with the implication that policy makers can justify their action if such social benefit can be, perhaps arbitrarily, assigned to their policy proposal.

It should be noted here that, as well as social benefit, there is great social disbenefit associated with the removal of plastic shopping bags – this too needs to be factored into the equation. How do we price convenience?

There are a number of references in the ACG reports re the influence of public opinion and the need for politicians to decide whether the costs imposed on the economy by proposed actions on plastic shopping bags are warranted in that light.

However, when it comes to plastic bag policy, the fact is that, for those who do not want to use plastic bags, the option of taking their own shopping bag has always been available. This option has been extensively promoted over recent years.

It is suggested that, on this basis alone, no further action is warranted.

Policy makers have a duty to look beyond public opinion and promote policies that deliver a net social benefit. To do otherwise would not be sustainable.

Public opinion is often not informed opinion. Those that wish to use public opinion as a form of 'consent' for a policy position need to realise that this is often not 'informed consent',

In a previous submission we highlighted the need for input from other departments into policy settings determined within the environment portfolio, because this is one portfolio that appears to suffer from isolationism that leads to 'groupthink' and the adoption of environmental mythology and / or politically correct terminology.

It is the use of such terminology and accepted 'truths' that then become a barrier to sound policy analysis – or as stated in the EPHC Strategic Plan – policy based on 'sound science'. We believe that this has happened in the case of plastic bag policy development.

We would suggest that an analysis of costs and benefits needs to be based on 'sound science' rather than public perception or untested concepts of environmental harm. To do otherwise would be to impose costs on the community, costs that do not result in a net community benefit.

To our concern the ACG reports suggest that: "Policy makers have the opportunity to weave these characteristics into a 'package' of measures that balances the economic, environmental and social issues involved." (P 54)

We would prefer policy to be based on the facts.

Whilst all scenarios outlined in the ACG reports result in substantial economic cost to the community – scenario 2, the 'no further action option' (which was not fully detailed), yields an economic benefit of some $200 million (est.) over the study period.

The real policy choice is scenario 2 (no further action). This still leaves consumers with a choice of bags they use for grocery shopping.

It is our recommendation that this policy scenario be adopted. Each of the other scenarios amount to an imposition of a tax on families, a regressive tax that yields little benefit.

This result would be in line with the Intergovernmental Agreement on the Environment which requires 'measures adopted to be cost-effective and not disproportionate to the significance of the environmental problem being addressed.'[2]

It is also recommended that other EPHC (and state) policies relating to waste and recycling should undergo a rigorous review.

[2] Schedule 3, NEPC Act 1994

WHO WE ARE

The National Association of Retail Grocers of Australia (NARGA) is the peak national body representing the independent retail grocery sector in Australia. It is composed of and related to the following organisations:

- Retail Traders and Shopkeepers Association of NSW
- The Master Grocers Association of Victoria
- Queensland Retail Traders and Shopkeepers Association
- WA Independent Grocers Association
- Tasmanian Independent Retailers
- IGA Retail Network
- State Retailers Association of SA

Together these represent more than 5000 small to medium sized businesses employing over 150,000 people

Retailers provide the interface between manufacturers and producers and the general public and are therefore significantly impacted by government efforts to 'manage' waste through regulation of elements of the supply chain for products and packaging, particularly where these impose additional requirements on retailers or where there is a call for allocation of retail space.

Examples of space allocation currently required include:

- Provision of recycling facilities for plastic bags in supermarkets
- Provision of recycling facilities for packaging materials (other than cardboard) in shops and shopping centres
- Provision of space for alternative bags (e.g. reusable bags)

Therefore, in the case of any plastic shopping bag reduction program, a substantial proportion of the costs involved are imposed on retailers, with the small businesses affected disproportionately.

INTRODUCTION

This submission provides NARGA's comments on the plastic bag policy scenarios assessed by the Allen Consulting Group on behalf of EPHC. This assessment includes a range of scenarios reflecting a position put by the Australian National Retailers Association (ANRA).

The submission follows an earlier submission to the Inquiry in response to the draft report on waste management and dealt with our concerns about plastic bag reduction policy, and government waste management policy in general.

NARGA has also responded to the current review of the National Environment Protection Council Act 1994, copied to the Commission, which reinforces our concerns about the lack of proper policy assessment in the area of waste management.

Whilst this submission concentrates on the reports prepared by the Allen Consulting Group (ACG) on the various plastic bag reduction scenarios proposed by EPHC, it reinforces our concern that EPHC policy development still lacks a rigorous, science based, approach. This is evidenced by an inability in the case of plastic bag policy to clearly define the problem and the failure to assess all possible solutions.

We congratulate ACG on their analysis of the options they were asked to asses, but regret that they were not asked to assess policy options that more clearly target litter as a whole. We also highlight the need for complete independence in the assessment process.

The comments on the ACG reports in this submission reinforce our view of a need for a more independent and more rigorous approach to policy assessment.

THE NARGA POSITION ON PLASTIC BAG REDUCTION

In our earlier submission to the Inquiry, we made the following comments in relation to the plastic bag issue:

> *"It does not appear that the nature and extent of problems associated with plastic bags in the environment was properly defined or researched by DEH prior to recommending policy to government. If the end objective was to avoid harm to marine creatures, at least the extent to which supermarket bags contribute to a potential problem should have been properly researched.*
>
> *Good policy formation should be based on clear identification of the issue or problem to be addressed and, if the existence of a problem is confirmed, examination of whether it is serious enough to warrant intervention, an examination of the available mechanisms and an analysis of whether the proposed method of intervention would be effective, cost-effective and worthwhile.*
>
> *In the case of plastic supermarket bags it would appear that the bags themselves became the 'problem'. There was little or no attempt to quantify the potential for impact on marine life (or other animal life) and no assessment of how plastic bags compared with other materials littered into the marine environment in terms of potential threat – i.e. should we act on supermarket plastic bags or act on bait bags or discarded fishing line or any of the other myriad of items that find their way into the marine environment.*
>
> *Analysis of the broad extent of the problem associated with land and sea litter based marine pollution would have allowed supermarket plastic bags to be placed in a broader context and a decision to be made on the priorities associated with dealing with this form of marine pollution. If, for example, supermarket plastic bags were a relatively small part of the perceived problem, as appears to be the case, it may have been more appropriate to focus on other aspects of the marine litter stream or to take a broad, comprehensive approach to marine litter.*
>
> *Having decided that plastic bags were the 'problem', an arbitrary target was set to reduce by 75% the proportion of supermarket plastic bags in the* ***land based*** *litter stream, at a time when there was (and still is) no hard data on the proportion of supermarket plastic bags in litter.*

Rather than viewing plastic bags in litter as a litter issue (a behavioural issue) and addressing plastic bag litter in the context of a broad litter strategy (i.e. addressing those who litter – the source of the litter problem) it was decided that the best way to reduce plastic bag litter was to reduce or eliminate plastic bags. This is like saying that the best way to reduce car accidents is to take some or all cars off the road – don't bother fining people for traffic infringements or worry about driver education.

Other possible mechanisms for reducing the 'problem' were not properly canvassed. It would seem that it was easier to make business 'responsible' for solving the perceived problem than to tackle the problem at it source – more stringent enforcement of litter laws and better management of landfills are just two examples of what could have been the focus of a 'plastic bag' policy."

Nothing in the reports prepared by the Allen Consulting Group (ACG) on behalf of EPHC and DEH has changed these views – in fact the reports tend to con firm our concern that plastic bag policy has not been based on 'sound science'.

The ACG reports have confirmed the huge expense attached to removing from the litter stream the less than 1% made up by plastic shopping bags.

INDUSTRY REPRESENTATION

It is noted here that ACG costed several variations of proposals put forward by the Australian National Retailers Association (ANRA). ANRA does not represent the independent supermarkets or the independent grocery sector (the Group Two Retailers referred to in the various EPHC agreements and schemes relating to plastic shopping bag reduction programs).

NARGA represents this sector and has not been consulted.

ANRA is dominated by the two major supermarket chains. It is a fact that any program of reduction of plastic shopping bags imposes significant costs on the supermarket sector, costs which impact the smaller supermarkets disproportionately. We therefore contend that any agreement reached between the government and ANRA in this matter that results in a continuation of or a ramping up of the current plastic bag reduction program is a means of imposing unfair competitive pressure on the independent grocery sector by the ANRA and its members.

THE PLASTIC BAG ISSUE HAS BEEN MISREPRESENTED

- Information used to justify the initial plastic bag reduction program

The table below sets out statements from public documents which purport to provide a basis for the reduction or elimination of plastic shopping bags, together with any facts on which each statement may have relied. Where possible, the origin of the statement is given, as well as factual data relating to the matter addressed by the statement. Information available to DEH at the time of initial policy development is also tabulated.

STATEMENT	BASIS FOR STATEMENT	FACTUAL DATA / COMMENT
"A figure of 100,000 marine animals killed **annually** has been widely quoted by environmental groups; this figure was from a study in Newfoundland which estimated the number of animals entrapped by plastic bags in that area over a four year period from 1981 -1984"[3] (DEH – 2002)	The report refers to information on an Environment Canada website, but misquotes it. The actual quote is: "**A four year** study off the coast of Newfoundland estimated that over 100,000 animals were killed by **entanglement** from**1981 to 1984.** (our emphasis) NB. Plastic bags are NOT mentioned	The original study refers to animals caught in fishing nets as part of fishing operations: "Summer surveys of the incidental catch of marine birds and mammals in **fishing nets** around the east coast of Newfoundland indicated that over 100,000 animals were killed **in nets** during a four year period (1981-1984)"[4] **NB No mention of plastic bags**
"Plastic shopping bags appear to be 2% of the Australian litter stream"[5]	Clean Up Australia 2002 Rubbish Report – This was not a proper litter survey because Clean-Up	There was **no data** available on the proportion of litter represented by plastic bags at the time the plastic bag

[3] Plastic Shopping Bags – Analysis of Levies and Environmental Impacts – Final Report, December 2002, Department of Environment and Heritage (DEH 2002)
[4] Incidental catch of marine birds and mammals in fishing nets off Newfoundland, Canada. Piatt, JF; Nettleship, DN, Marine Pollution Bulletin 1987
[5] DEH 2002

	targets rubbish sites. These are more indicative of illegal dumping than litter	policy was determined, yet EPHC ministers decided on a 75% reduction target of plastic bags in litter (75% of what?) Since then KESAB in SA has conducted litter surveys[6] that have looked at plastic bags as a separate litter item. These were conducted in 2004 and 2005. They show "Light weight carry bags" make up between 0.7 and 1.1% of litter in SA. However SA litter statistics are atypical as there is only a low level of litter law enforcement (in comparison with states such as NSW or VIC.)[7]
"The 0.8% level of littering plastic bags is very low…"[8] (There are two references in the report to 0.8% of plastic bags ending up as litter – but no supporting data)	"….however the actual number of bags currently in the environment or littered annually is not known"[9] "As there are no data available on the total size of the litter stream in Australia, this data cannot be used to determine the total number of	There are no data on the proportion of plastic bags that end up as litter. Even if it is assumed (as in the DEH report) that 0.8% of bags do so, it must follow that 99.2% of bags **do not** end up as litter. On the basis of that simple analysis, a litter reduction strategy based on eliminating plastic bags

[6] Litter Survey, McGregor Tan Research for KESAB, Wave 28, February 2005
[7] A more recent national survey shows plastic bag litter to comprise 0.67% of litter nationally – see below.
[8] DEH 2002 op. cit.
[9] Ibid

	bags entering the litter stream"[10]	cannot be justified.
"In this report it has been estimated that a total of between 50 and 80 million bags enter the environment as litter annually"[11]	No supporting evidence is given (Same comment applies to Victorian government claim that "About 10 million of these shopping bags become litter[12])	There is no data to support this number. But a simple reality check would show it to be a gross overestimation. (Also applies to the Vic government claim)
"Australia has a strong history over the last three decades of public education to prevent littering. By international comparison, the 0.8% level of littering plastic bags is very low compared to, in Bangladesh for example where 85% of plastic shopping bags were entering the litter stream"[13]	Neither figures are supported by references or data	If this statement has any validity it would point to the success of past litter education campaigns and not the need for a ban or levy
Referring to Ireland, the report states: "The levy has resulted in a dramatic decrease of 90 – 95% in 'single use' plastic bag consumption"[14]	No verifiable references given	The Irish data appears to be based on plastic bag tax revenue as a means of counting the number of bags dispensed. The problems surrounding reliance on this method of assessment are discussed elsewhere in this submission.
"In recent consultation with major	No references given.	Bag tax receipts show that, during 2005

[10] Ibid
[11] Ibid
[12] Our Environment Our Future, Department of Sustainability and Environment, Melbourne, July 2006
[13] DEH 2002, op. cit.
[14] Ibid

Irish retailers, the sustained reduction of plastic shopping bags has been confirmed"[15]		the use of plastic bags in Ireland rose to 115 million, in spite of the tax. The Government has responded by increasing the tax from 15c to 19c (AU$0.30).[16] There also appears to be an enforcement problem, with many smaller stores not charging the tax – so the true level of bag use is unknown. See also other comments on assessment of bag use numbers.
"A total of 136 Australian fur seals and 1 New Zealand fur seal with neck collars were observed over the four year study period. Polythene trawl nets accounted for 42% of neck collars, polypropylene straps 29%, monofilament gill nets 15% and nylon rope 11%. Other incidental items included steel rings (n=2) and a rubber loop"[17]	From chapter entitled "Entanglement of Australian fur seals in human debris"	Information from DEH website that was available at the time the plastic bag 'problem' was first being discussed. No mention of plastic bags as an issue in this report.
"…in 1975 the US National Academy of Science estimated that 6.4 million tonnes of litter were jettisoned from ships at sea each year…"[18]	Chapter entitled "Ocean litter stranded on Australian coasts". - Provides details of sources and types of litter. Sources include ships, material drifting in	Available on the DEH web site. This is a detailed analysis of the marine litter issue but was not used by DEH in its report on plastic shopping bags. The study did not list plastic shopping bags

[15] Ibid
[16] Press release: The Green Party June 21, 2006.
[17] State of the Marine Environment Report for Australia: Pollution – Technical Annex 2. Zann LP Ed. DEST, 1995
[18] Ibid

	from other countries on ocean currents as well as beachgoers.	as a specific issue. It clearly defines waste from shipping as the primary source of the marine waste problem.
"The amount of soft plastic collected during the annual Robe Litter Survey has varied substantially....The largest proportion (87%) of the 'soft plastics' collected consisted of rope, however, netting, packaging tape and a smaller proportion of plastic bags were also collected..... It is important to note that the amount of soft plastics is likely to be an exaggerated amount given that some of the plastics, particularly plastic bags, contained sand."[19]	In 2004, the 'soft plastics' category made up 9.7% of marine litter in this study. Plastic bags, although present, made up a very small proportion of this litter (see adjacent column). Even then the amount of plastic was considered as overestimated and, as bags was likely to be filled with sand, and largely immobile.	This survey has been conducted annually since 1997 and would have been available to DEH when the 2002 report was in preparation. Again, the data shows that plastic bags are not the primary issue.

The most significant of the errors of research into the issue of plastic bags is the miss-quoting of the Newfoundland study[20] that purported to show the damage done to marine life due to plastic bags – when it had nothing to do with the issue.

[19] Marine Debris Monitoring in South Australia – A Report on the 2004 Annual Robe Litter Survey. Eglinton YM et al, SA Research and Development Institute Feb 2005

[20] Piatt JF et al, op. cit.

The above information suggests that the issue of plastic bags in litter was not properly assessed at the time EPHC ministers initiated the plastic bag reduction program. No work since has properly addressed this lack of assessment.

- **Use of Irish data**

The fact that Ireland had imposed a tax on plastic shopping bags in March 2002 featured strongly in the local response to the plastic bag 'problem'. The success of the Irish response to the issue has been quoted on many occasions since, with claims of an up to 95% reduction in the use of plastic bags.

These figures appear to be generated from Irish plastic bag tax receipts which are supposed to accurately reflect plastic bag use. However, the Irish government was recently prompted to increase its bag tax from 0.15 Euro (AU$0.25) to 0.22Euro (AU$0.37), because use of plastic bags was again on the increase.

Irish government data is not a true reflection of plastic bag use in Ireland because there is a significant problem of enforcement, particularly at the small store level. The (Irish) Green Party[21] is calling for greater enforcement of the tax. Lack of enforcement means that more bags are being issued than is suggested by the official tax receipt figures.

Industry sources[22] confirm that the volume of plastic bag material being exported to Ireland from the UK is not decreasing. This suggests that, whilst there may have been a measurable reduction in the use of plastic shopping bags, other bags (garbage bin liners?) are taking their place.

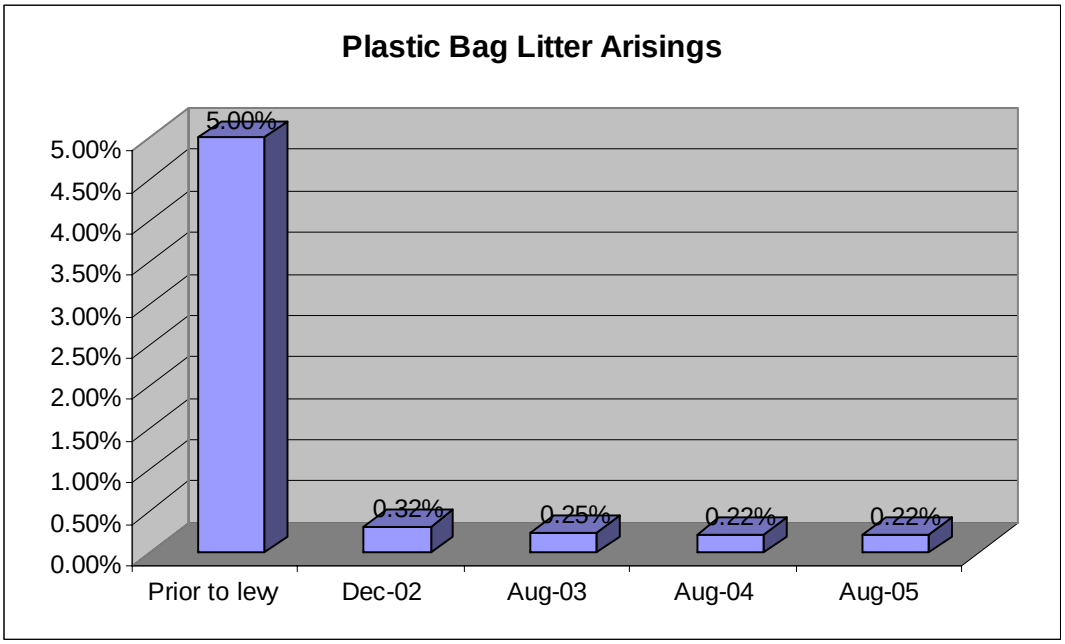
Given that it has been agreed that the majority of supermarket plastic shopping bags find their way into the home and are being reused as bin liners, what is the current program achieving?

It also appears that, prior to the introduction of the plastic bag levy in Ireland, the Irish government had little in the way of litter data on which to base any action.

Whilst a national litter survey was being developed in the years 1999 – 2001, at the time the policy debate was taking place, no accurate litter data was available.

[21] Green Party, op.cit.
[22] Press Release, PIFA, 06/8413/5

However, the Irish environment department prepared the following graph to show the impact of the litter tax on plastic bag litter.[23] Note that a plastic bag litter prevalence of 5% is reported prior to the tax, and that after the introduction of the tax, plastic bag litter levels are seen to fall to 0.32% and then later to hold steady at 0.22%, the implication being that the tax was highly successful as a mechanism for reducing plastic bag litter.



However, data available from the Irish Environment Department (DOEHLG) – National Litter Monitoring System[24] website on litter shows the following trend for plastic bags:

% of plastic bags in litter	Survey Date	Comment
0.75%	Dec 2001	Prior to the tax implementation
0.64%	Aug 2002	Not shown in above chart
0.32%	Dec 2002	
0.25%	Aug 2003	
0.22%	Aug 2004	
0.22%	Aug 2005	

[23] Plastic Bag Levy, DOEHLG, undated
[24] National Litter Monitoring System – Ireland – Survey Reports

There would appear to be no data available to support the initial 5% litter estimate.

The Irish experience demonstrates that the plastic tax reduced plastic bag litter from an initial value of 0.75% to 0.22%, but did not eliminate it. The approach adopted in Ireland is more drastic than any of the taxing options proposed locally.

- **Australian Litter Statistics**

Prior to the implementation of the EPHC plastic bag reduction program in 2003 there were no national litter statistics showing the proportion of plastic shopping bags in litter. The DEH report[25] on the topic used the 2002 Clean-up Australia data[26] to indicate that plastic shopping bags made up 2% of the litter stream. In our previous submission we showed how that data could not be relied upon as an indication of the proportion of plastic bags in litter.

The DEH report goes on to estimate that, variously, that 0.8% and 1% of plastic shopping bags are littered, and that between 50 million and 80 million plastic shopping bags are littered into the environment each year.

Again, there is no data to support these assumptions.

The earliest available data that indicates the proportion of plastic bags in litter in Australia is the work carried out on behalf of KESAB in 2004-05, quoted above.

The same researchers conducted a more recent and national survey of litter, reported in June 2006[27], showed plastic bags made up around 3% of all plastic litter, or 0.67% of all litter in May 2006.

Plastic shopping bags did not make it into the top 12 litter items (The Dirty Dozen) by either count or volume.

[25] DEH 2002, op. cit.
[26] Rubbish Report 2002, Clean Up Australia
[27] National Litter Index, McGregor Tan Research, June 2006

THE ACG REPORTS[28]

- **Summary of findings**

The May 2006 report presents a thorough and detailed analysis of the costs and benefits associated with the reduction and / or elimination of plastic shopping bags. It draws the following conclusions:

- "…all change options identified by EPHC produce outcomes in which the estimated economic and environmental costs exceed the benefit by substantial margins…" (P48)

- "…. In most cases a net present value of social benefit of around $500 million to $1 billion is required to justify the phase out of LWPBs…" (P48)

- "This reflects the fact that only a small percentage (under 1 percent) of LWPBs arise as litter – the rest are disposed of in landfill. The calculations presented here reflect the costs of attempting to eliminate 100 per cent of LWPBs in order to get at the less than 1 per cent of LWPBs that are the principal cause of environmental damage." (p49)

- "…The analysis shows that the environmental benefits from eliminating the 1 bag in a hundred that is a problem do not come close to justifying the costs associated with eliminating the other 99, and this is likely to be true for a wide range of environmental values." (p52)

- The costs of the 9 scenarios assessed range from $646 million to $1.293 billion, with assessed net costs (after subtracting environmental benefit) ranging from $490 million[29] to $1.026 billion[30]. (P viii) – (all costs are relative to a scenario of no further government action – **i.e. ignore costs that have been incurred to date)**

[28] These consist of three papers: Phasing Out Light-Weight Plastic Bags, Costs and Benefits of Alternative Approaches, May 2006; The ANRA proposal on plastic bag management, June 2006; and Options for reducing the environmental impact of plastic shopping bags Cost Benefit Analysis, Explanatory Note, undated, The Allen Consulting Group

[29] Three of the scenarios outlined in the ACG Supplementary report which analyses variations of new ANRA proposals come in at lower net costs, ranging from $276 million to $450 million, but propose the use of 'biodegradable' bags, an option that needs to be more fully assessed.

[30] These costs are disproportionate to the funds currently expended on all anti-litter programs, yet the policy options target less than 1% of the litter stream.

- "These policies also have modest consequential greenhouse impacts...However the analysis suggests that these greenhouse savings are achieved at a relatively high cost per tonne. (e.g. Scenario 4 - $12,000 per tonne)"(P 35)

- "The required NPV of social benefit needs to be, on average, $2.40 per bag removed from litter, for the policy to have any net benefit." (P 53) (The report calculates that the recovery of littered bags by volunteers costs $0.02 per bag)

- "..Of the 40 to 60 million LWPBs (littered)....about half are estimated to have been littered inadvertently. This means that they were intended for garbage collection and landfill, but have blown off-course at some stage, or are blown off the landfill sites once they are dumped." (P 16) (Suggesting that half of the litter problem can be overcome by tighter controls on waste management operations.)

- **Whilst all scenarios outlined result in substantial economic cost implementation of scenario 2, the 'no further action' scenario (which was not fully described) yields an economic <u>benefit</u> of some $200 million (est.) over the study period (Fig 6.2 P50 and Table E.1 P viii)**

- **Assumptions**

The ACG reports make a number of assumptions that are crucial to the outcomes reaches. Amongst those the following are of concern:

- The value assigned to each plastic bag removed from the litter stream is $1.00. It is claimed that the value was derived from the value of time donated to Clean Up campaigns be volunteers – **and a significant scaling factor (P ix).** However, the calculation of the value of volunteer effort in relation to plastic bag clean up is just $0.02 (Box 3.4, P 18). If this value is plugged into the various scenarios two results would emerge:

    - The costs of each scenario would exceed the benefits by a much wider margin

    - It would be obvious that, apart from the calculated benefit of reduced litter, there is no environmental benefit. In fact, for all scenarios there would appear to be an environmental impact associated with plastic bag reduction. Is the high value chosen for plastic bag litter intended to mask this fact?

- The (unsubstantiated) estimates for plastic bags in litter used in the initial DEH report[31] (50 – 80 million bags) is accepted as fact and adjusted for the proportion of bags removed during litter clean-ups (10 – 20 million), and include the bags assumed to blow out of landfill sites (20 – 30 million) resulting in an estimate of 40 – 60 million bags in litter. None of these numbers are based on any hard evidence – put simply, **they are just made up**. Yet reduction in the number of bags littered is the main component of the 'benefit' side of the equation and is critically dependent on the accuracy of these estimates. These assumptions need a reality check to see if there really is an issue that needs to be addressed.

The assumptions made of the proportion of bags littered, and the value assigned to each; distort the assessment in favour of more plastic bag reduction, but still result in a substantial net cost in each case.

[31] DEH 2002, op. cit.

OTHER CONCERNS

- **Requirements of the NEPC Act**

The NEPC Act requires (as do COAG guidelines and Competition Policy legislation), a proper assessment of any issue to be addressed by any regulatory mechanism, including voluntary agreements.

The ACG reports do not meet the requirements of the Act as they do not clearly identify the problem and do not address all available solutions.

The problem is identified as one of a need to eliminate light weight plastic shopping bags, whereas the problem is one of litter, where these bags make up around 0.67% (at last count).

Solutions that should have been canvassed as part of a cost-benefit assessment include:

- Greater levels of anti-litter enforcement
- Better and better targeted litter education
- Improved / extended litter clean-up campaigns, both voluntary and funded
- Given the high proportion of plastic bags estimated to come from landfill sites and waste management activities – specific programs to address these sources
- Expanded us of litter traps in stormwater systems and rivers
- Greater emphasis on the provision and servicing of litter bins
- Greater emphasis on the control of illegal dumping and / or rejection of policies that encourage this[32]
- Promotion of re-use / proper disposal
- The 'do nothing' option – on the basis that this form of litter can never be eliminated (as shown by the record in other countries

[32] The high levels of landfill tax in NSW have lead to an increase in illegal dumping as evidenced in the recently published National Litter Index.

that have implemented the range of scenarios assessed by ACG) – The question that needs to be asked is what level of litter is acceptable, and how much should the community pay to achieve that.

- **Theory vs. Practice – effectiveness of proposed policy approaches**

The ACG reports are based on theory and each of the scenarios suggests that a proportion of plastic bags in use are eliminated and that this results in an estimated reduction of plastic bags in litter.

However, the relationship between bag numbers and bags littered is not linear. Most supermarket sourced bags find their way into the home and end up in landfill – either directly or via a subsequent use as bin liner or other use. This means that targeting shopping bags is a very indirect means of targeting bag litter – the connection between the typical shopping bag user and the typical bag litterer is tenuous.

The scenarios examined in the report are not new. The Irish experience with a tax has been documented and shows that, even with high levies or taxes, plastic bag use persists and plastic bags still end up as litter.

A range of measures has been tried in Europe and elsewhere. Mandated charging for plastic bags has been in place in northern European countries for over 15 years but has not eliminated bag litter.

The reasons are many and include the need to provide exemptions for certain uses, the difficulty of enforcement, and the variety of plastic shopping bag replacements that come into use as the availability of plastic shopping bags is reduced.

The latter is a response to the reality that the needs covered by the re-use of bags are real – e.g. bin liners, dog refuse collection, various carrying / transport tasks etc. and people will purchase other items with similar characteristics to take the place of the plastic shopping bags – and **these** will end up as part of the litter stream. The ACG reports do not address these matters.

The net result will be huge community cost but little net benefit.

- **Other economic impacts**

The reports highlight the economic impacts associated with each of the plastic bag reduction scenarios, including the impact on GNP. However, each of the following groups is clearly affected:

- **Retailers –** depending on the scenario adopted, an up front cost of an average of $45,000 per store and an average annual cost of up to $14,347 per store – with smaller stores bearing a disproportionately greater cost burden. (See Appendix B)

- **States –** GSP is impacted, with the greatest impact on Victoria (the first state to legislate for a levy) with losses to GSP ranging from $202 million to $364 million, depending on the scenario adopted. (P 37)

- **Households –** Impacts on household incomes range between a loss of $56 million p.a. (2010, Scenario 3) to $166.5 million p.a. (2016, Scenario 5). (P 29)

- **Jobs –** The bag reduction policy exports jobs, replacing locally manufactured plastic bags with imported re-usable bags. The reports estimate job losses of between 68 and 349 people in the plastics sector (with corresponding damage to the businesses concerned) depending on the chosen scenario. Flow-on effects to the remainder of the local plastics industry (due to the removal of this proportion of feedstock requirement) has not been assessed.

- **Jobs -** Additional jobs in the retail sector (363 – 697 people) reflect additional costs to that sector, passed on as higher prices to households.

- **Flow-on effects –** Reductions in household expenditure and household income will flow on to the rest of the economy.

- **Some impacts not costed -** As mentioned in our previous submission, the potential for food contamination and risks to worker health and safety posed by re-usable has not been costed. As many who use re-usable bags leave them in the car boot (so they don't forget them), the use of re-usable bags results in some thousands of tonnes of additional material (depending on the degree of substitution) being permanently carried around in their owners car (for all kilometres travelled by that vehicle), with a corresponding impact on costs to the individual and the environment (greenhouse and pollution)

- **Degradable bags**

The ANRA proposal, assessed by ACG in their supplementary report[33], is for the current plastic shopping bags to be replaced with biodegradable bags once an acceptable bag becomes available (at reasonable cost), and once the 50% reduction target for Group One stores has been reached by end 2006.

There has been considerable work carried out by a task force under the National Packaging Covenant Council, to examine biodegradable bag options and develop standards. The work on degradable bags was started when the matter of plastic shopping bags was first raised by EPHC ministers, and it too is a knee-jerk reaction to the plastic bag 'problem'.

In our view, degradable bags have a number of disadvantages that make them unsuitable as a plastic shopping bag substitute. Apart from higher cost – which represents an unnecessary community impost – their performance is variable and leads to other environmental problems that will need to be addressed.

One example is obvious. Currently a littered plastic bag can be removed from the litter stream in one piece (one action). A 'degradable' bag breaks down into many pieces and will be more difficult to recover and can, potentially, create more problems for land-based wildlife.

At a practical level, the adoption of biodegradable bags will interfere with plastics recycling and, depending on the technology used, may not be up to the task of carrying wet or frozen products, or provide the right type of barrier properties when used to carry certain foods. Biodegradable bags also tend to require more energy to manufacture.

A move to degradable bags will see an increase in the proportion of degradable material going to landfill, with implications for associated emissions.

Again we see the impact of confused public perception where degradability itself is seen as an inherent benefit, regardless of the other environmental issues introduced by this form of degradable packaging.

If degradable bags are introduced and promoted they would need to conform to a set of standards which would be beyond the average retailer to assess, leaving them, the public and the environment open to

[33] ACG, June 2006, op. cit.

false claims of degradability. Degradable bags would also give government an enforcement problem.

A switch to degradable bags is not supported by NARGA.

- **Social Benefit**

The report describes the net social benefit that needs to be allocated to the removal of plastic bag litter in order to justify the continuation of this policy in any form, with the implication that policy makers can justify their action if such social benefit can be, perhaps arbitrarily, assigned to their policy proposal.

It should be noted here that, as well as social benefit, there is great social disbenefit associated with the removal of plastic shopping bags – this too needs to be factored into the equation. How do we price convenience?

- **Pandering to public opinion**

There are a number of references in the ACG reports re the influence of public opinion and the need for politicians to decide whether the costs imposed on the economy by proposed actions on plastic shopping bags is warranted in that light. For example:

- "Some argue that significant social benefits will accrue to elimination of LWPBs because they are a symbol of waste within society, and such action would represent a first step towards greater environmental consciousness and stewardship." (P 45)

- "If the 'problem' with LWPBs is that they are a symbolic example of unnecessary waste within our society, then it is likely that the policy makers' deeper purpose in targeting the reduction of LWPB consumption is encouraging the uptake of more resource efficient alternatives." (P 41)

The second quote merely highlights the reality that, contrary to the requirements of legislation, the objective of plastic bag policy has not been properly defined.

The NEPC Act that governs the policy and measures developed by EPHC does not suggest the mechanisms available be used to deal with 'symbols'.

Gauging public opinion, and then using it as a basis for policy has its difficulties. How do you know that you are not merely listening to the vocal minority, and that survey results simply reflect those views, in the absence of any other expressed views?

If the use of LWPBs is really 'a waste' in consumers / voters minds, why are there still some 5 billion bags used each year, when the reusable alternatives have been available since 2003?

If these bags are truly an 'unnecessary waste', the implication being that they are less sustainable than alternatives, why does it cost over $1 billion, according to these reports, to completely replace them with an alternative?

The fact is that, for those who do not want to use plastic bags, the option of taking their own shopping bag has always been available. This option has been well promoted over recent years. It is suggested that, on this basis alone, no further action is warranted.

Policy makers have a duty to look beyond public opinion and promote policies that deliver a net social benefit. To do otherwise would not be sustainable.

Public opinion is often not informed opinion. Those that wish to use public opinion as a form of 'consent' for a policy position need to realise that this is often not 'informed consent',

- **Environmental mythology and 'groupthink'**

In a previous submission we highlighted the need for input from other departments into policy settings determined within the environment portfolio, because this is one portfolio that appears to suffer from isolationism that leads to 'groupthink' and the adoption of environmental mythology and / or politically correct terminology.

It is the use of such terminology and accepted 'truths' that then become a barrier to sound policy analysis – or as stated in the EPHC Strategic Plan – policy based on 'sound science'.

Some examples of the use of this terminology and / or implicit assumption used in the ACG reports follow, together with our comments: (*in italics)*

- "Clearly there is merit in pursuing policies that reduce waste and profligate use of scarce resources within our society. There appears to be widespread recognition of an overconsumption problem associated with LWPBs, and support for policies that reduce their use" (P x)

    - *There would be 'overconsumption' of LWPBs if shoppers were taking home more bags than they needed for to hold their shopping. This is clearly not the case. If the study by ACG shows anything, it is that LWPBs are ideally suited to their task. If that were not the case, the move to an alternative would result in a net benefit, not a net cost.*

    - *There is an implicit assumption that moves against plastic bags preserves 'scarce resources'. If this is the policy objective, the availability of resources would need to be assessed and then the best way of preserving the relevant resource, if this was considered necessary. In the case of the resources used to manufacture LWPBs, their removal would not represent the most efficient means of preserving that resource.*

- "The implied free status of LWPBs generates no incentive for consumers to reduce their use of these items" (P xi)

    - *Their free status does not result in shoppers asking for more bags than they need. There would appear to be no incentive to overuse either.*

- "Reusable bags are a highly cost-effective alternative to LWPBs..." (P xi)

    - *If this were true, there would not be a high cost associated with a switch to reusable bags, as has been identified by the ACG report.*

- "....the others decorate the landscape as litter or find their way into waterways and other ecosystems." (P 1)

    - *Use of such language does not enhance the credibility of what is supposed to be an independent study. The terms are used as part of an assessment of the proportion of LWPBs that end up as litter, and mask the fact that there is no hard data to support the assumed amounts.*

- "For many, single use plastic bags have become symbolic of our 'disposable' society, flagrantly chewing through the Earth's finite resources. Yet, few would deny the service they perform and the need for this function to be maintained, but in a way that is more sustainable and cost-effective." (P1)

    - *LWPBs may be 'symbolic' of a disposable society. The question that needs to be asked and answered is whether disposable is more sustainable than multi-use. The current study suggests that in the case of LWPBs disposable is more sustainable – in the full meaning of sustainability.*

    - *The second part of the quote implies that the alternatives proposed are 'more sustainable and cost-effective'. The ACG report confirms that this is clearly not the case.*

    - *LWPBs are used extensively around the home and elsewhere for secondary purposes. Although some attempt has been made in these reports to factor in the replacement costs of bin liners, the LWPB utility in a secondary use role has not been properly assessed and factored into the cost-benefit equation.*

- LWPBs are perceived to be an environmentally unsustainable product..." (P 19)

    - *Reality rather than perception should form the basis of policy. If LWPBs were 'unsustainable' their replacement by an alternative could be shown to yield environmental benefits greater than social and economic costs. This is clearly not the case.*

- LWPBs may take between 20 to 1000 years to break down in the environment. As a result, the environmental impact of plastic bags in landfill is likely to be low due to their inert nature." (P21)

    - *This confirms that the plastic bags that end up in landfill (after one or more uses) should not be the target of regulatory action – the littered portion should be, as part of a broader anti-litter policy approach.*

    - *The question of 'degradability' in landfill is widely misunderstood, with the general public seeing it as a 'good thing' for materials going to landfill to be degradable – so over time they fade away. The reverse is the case. Inert materials going to landfill have a lower impact – they just take up space.*

- Littered LWPBs can also have a serious impact on wildlife – particularly marine life – in relation to entanglement, suffocation and ingestion. (P 19)

    - *As detailed in our submission, the purported marine life impacts attributed to LWPBs have not been shown. Whilst LWPBs do show up in some reports as a minor element contributing to marine litter, they are not considered a major, or the major, entanglement / ingestion problem confronting marine life. Again, if the intention of policy is to protect marine life, then the causes of damage and injury need to be assessed and corrective action prioritised on the basis of that assessment. They would most likely find that the focus of any corrective action needs to be in the fishing industry and on dumping from ships at sea – not on sources of land-based litter.*

- "If legislation is to be developed to address the problem associated with LWPBs – environmental damage, and a symptom of modern 'throw-away' society…" (P 40)

    - *The use of emotive language and reinforcement of public perceptions relating to waste could suggest that, in spite of the enormous cost to the community associated with plastic bag reduction proposals, they are somehow justified.*

- "A key problem that can undermine voluntary approaches is the risk of 'free-riding'. (P 42)

    - *'Free-riding also occurs in legislated schemes – only in that case the free rider id breaking the law, and results in an enforcement cost to government. 'Free-riding' occurs when the cost of complying with a particular measure is substantial enough to warrant the downside of non-compliance. In the case of EPR based schemes, free-riding is an artefact of the EPR approach.*

- "Environmental benefits flow from a reduction in littered bags."(P54)

    - *We would agree with that statement – and suggest it is a reason to target the litterer (or littered bags) rather than all bag use.*

We would suggest that an analysis of costs and benefits needs to be based on 'sound science' rather than public perception or untested concepts of environmental harm. To do otherwise would be to impose

costs on the community, costs that do not result in a net community benefit.

CONCLUSIONS

"Policy makers have the opportunity to weave these characteristics into a 'package' of measures that balances the economic, environmental and social issues involved." (P 54)

The above quotation appears to be an invitation to policy makers to use the information made available by the ACG reports to justify an ongoing program of plastic shopping bag reduction.

We contend that all of the scenarios outlined in the ACG report that promote an extension of plastic bag reduction efforts are unacceptable because:

- The community cost of each far exceeds the measurable environmental benefit
- The decision to target plastic bag reduction was initially, and still is, not based on 'sound science'
- The proposed plastic bag reduction measures do not address the problem, that of litter in general and plastic bag litter in particular
- There is no data available to suggest that the proposed plastic bag reduction proposals are going to be effective (let alone cost-effective) in eliminating plastic bags, or plastic bag litter. Overseas experience with the measures proposed suggests that plastic bags will always be a part of the litter stream
- Current policy assessment is based on a series of unfounded assumptions regarding the quantity of plastic bag litter and its consequences. Some would suggest that data has been manufactured or distorted to support a case for action.
- Use of 'biodegradable' bags is proposed as a substitute for LWPBs, but their potential for environmental impact has not been properly assessed.
- With the exception of Scenario 2 – all proposed policy scenarios impose substantial costs on businesses, particularly participating small businesses, costs that are disproportionate to community benefit. This comes at a time when all governments have

committed themselves to a reduction in the regulatory burden legislation places on business

- The current policy approach appears to be an attempt to address public perception of plastic bag litter, rather than litter itself.

- Current policy settings appear to be based more on appeasing the noisier elements of the green movement than based on a sound assessment of the issue and the available solutions.

- The assessed environmental benefits, where they occur (and if they can be achieved), are **trivial** in comparison to the overall economy's impact – the community's resources could be better spent elsewhere

The fact is that, for those who do not want to use plastic bags, the option of taking their own shopping bag has always been available. This option has been extensively promoted over recent years and will remain available.

It is suggested that, on this basis alone, no further action is warranted.

Policy makers have a duty to look beyond public opinion and promote policies that deliver a net social benefit. To do otherwise would not be sustainable.

Public opinion is often not informed opinion. Those that wish to use public opinion as a form of 'consent' for a policy position need to realise that this is often not 'informed consent',

We would suggest that an analysis of costs and benefits needs to be based on 'sound science' rather than public perception or untested concepts of environmental harm. To do otherwise would be to impose costs on the community, costs that do not result in a net community benefit.

Whilst all scenarios outlined in the ACG reports result in substantial economic cost to the community – scenario 2, the 'no further action option' which was not fully detailed, yields an economic benefit of some $200 million (est.) over the study period.

The real policy choice is scenario 2 (no further action). This leaves consumers with a choice of bags they use for their grocery shopping.

It is our recommendation that this policy scenario be adopted. Each of the other scenarios amount to an imposition of a tax on families, a regressive tax that yields little benefit.

This result would be in line with the Intergovernmental Agreement on the Environment which requires 'measures adopted to be cost-effective and not disproportionate to the significance of the environmental problem being addressed.

It is also recommended that other EPHC policies relating to waste and recycling undergo rigorous review.