



Environment and Rural Development Committee

28th Meeting, 2005

Wednesday 9 November 2005

The Committee will meet at 10.00 am in Committee Room 4

1. **Environmental Levy on Plastic Bags (Scotland) Bill (in private):** The Committee will consider the evidence received to date at Stage 1.

Not before 10.30 am

2. **Environmental Levy on Plastic Bags (Scotland) Bill:** The Committee will take evidence at Stage 1 from—

Panel 1

Ross Finnie MSP, Minister for Environment and Rural Development;

Panel 2

Mike Pringle MSP, member in charge of the Bill; and

David Cullum, Non-Executive Bills Unit.

3. **Budget process 2006-2007 (in private):** The Committee will consider a draft report.

Mark Brough
Clerk to the Committee
Direct Tel: 0131-348-5240

The following papers are attached:

<u>Agenda Item 1</u>	
Paper from the Clerk (<i>for members only</i>)	ERD/S2/05/28/1a
<u>Agenda Item 2</u>	
Briefing paper (<i>for members only</i>)	ERD/S2/05/28/2a
Memorandum from the Scottish Executive	ERD/S2/05/28/2b
Supplementary evidence from the Scottish Executive	ERD/S2/05/28/2c
Regulatory Impact Assessment prepared by the Scottish Executive	ERD/S2/05/28/2d
Letter from Mike Pringle MSP on equalities issues	ERD/S2/05/28/2e
<u>Agenda Item 3</u>	
Draft report (<i>for members only</i>)	ERD/S2/05/28/3a
Letter from the Minister for Environment and Rural Development	ERD/S2/05/28/3b

ENVIRONMENTAL LEVY ON PLASTIC BAGS (SCOTLAND) BILL

MEMORANDUM BY THE SCOTTISH EXECUTIVE TO THE ENVIRONMENT AND RURAL DEVELOPMENT COMMITTEE OF THE SCOTTISH PARLIAMENT

Purpose

1. This Memorandum has been prepared by the Scottish Executive to assist consideration by the Environment and Rural Development Committee of the Environmental Levy on Plastic Bags (Scotland) Bill introduced by Mike Pringle MSP. The Scottish Executive has not yet taken a position on the Bill. However, we have taken a number of steps:

- We have commissioned a study, by AEA Technology, on the implications for Scotland of the introduction of a levy on plastic bags. This study, which has drawn on material from the UK, Republic of Ireland, France and Australia, can be found on the Scottish Executive's website:
Summary - <http://www.scotland.gov.uk/Publications/2005/08/1993102/31039>
Volume 1 - <http://www.scotland.gov.uk/Publications/2005/08/1993154/31553>
Volume 2 - <http://www.scotland.gov.uk/Publications/2005/08/1993259/33001>
- We are also preparing a Regulatory Impact Assessment on the proposed levy, which will be sent to the Committee for consideration in the next few weeks.
- We have been working to promote a Code of Practice, along similar lines to a Code in Australia, on plastic bags, to be used by retail outlets to reduce the number of unnecessary bags provided at the till.
- We have been working with the Waste and Resources Action Programme (WRAP), a UK body which aims to develop markets for recycled products and to minimise waste, to reduce food and packaging waste generally.
- WRAP intend, with retailers, to carry out a trial to promote the re-use of bags, in Edinburgh and Bristol, in September.
- WRAP have commissioned research on "Carrier Bag Use and Attitudes". This research can be found on the WRAP website at:
http://www.wrap.org.uk/templates/temp_publication.rm?id=698&publication=1909
http://www.wrap.org.uk/templates/temp_publication.rm?id=698&publication=1875

Detail

2. In the Executive's view, there are a number of issues which need to be taken into account when considering the implications of Mike Pringle's Bill. These issues are:

- The environmental impact of the levy in relation to waste, litter, wildlife and environmental awareness generally.
- The enforcement of the levy by local authorities.
- The implications of the levy for retail outlets and other businesses providing plastic bags to consumers.

- The implications of the levy for businesses in Scotland involved in manufacturing, importing and distributing bags.
- The implications of the levy for consumers.

Environmental considerations

3. The study by AEA Technology concludes that if the levy, as proposed in the Bill, was introduced, there would be environmental benefits in 5 of the 8 environmental indicators considered. The indicators showing a benefit are:

- Consumption of non-renewable primary energy.
- Acid rain.
- Air quality.
- Solid waste production.
- Risk of litter.

The indicators showing a disbenefit are:

- Consumption of water.
- Climate change (emission of greenhouse gases).
- Eutrophication of water bodies.

4. However, the AEAT study also suggests that the amount of waste generated in Scotland would increase if a levy on plastic bags (only) were introduced, although the solid waste production indicator shows a net benefit generally. The solid waste production indicator considers bags throughout their whole life-cycle, whereas the generation of waste in Scotland occurs, on the whole, just at the end of the life of the bags, given that most plastic bags used in Scotland are made elsewhere.

5. The study also notes that any environmental benefits from a levy are modest when compared with overall environmental indicators. HM Treasury have suggested that plastic bags make up around 0.3% of the municipal waste stream. Scottish Environment Protection Agency (SEPA) figures, on page 8 of Waste Data Digest 5 at http://www.sepa.org.uk/pdf/publications/wds/wdd_5.pdf, suggest that plastic film generally makes up, on average, around 4.23% of the composition of household waste.

6. Plastic bags also make up only a small (but visible) proportion of litter. The AEAT study notes that the Local Environmental Audit and Management System (LEAMS) report by Keep Scotland Beautiful (KSB) does not specifically record the level of plastic bags in its sources of litter section as a cause of litter. The AEAT study also notes a survey in England suggesting that plastic bags were 0.064% of all items of litter found. One issue – which KSB are pursuing – is whether litter studies of this nature take enough account of mobile litter which may be in bushes or trees, rather than on pavements, where litter measurements are normally made under statutory requirements.

7. The Marine Conservation Society (MCS) carries out an annual survey to collect and remove litter from beaches across the UK. In 2004, this survey collected 5,592 bags.

This equated to 2.03% of total litter collected and amounted to 38.5 plastic bags collected per kilometre of coastline.

8. It is difficult to obtain hard information on the impact of plastic bags on wildlife as, inevitably, animals adversely affected by plastic bags may not be seen by humans. Studies co-ordinated in the Netherlands have reported marine litter in Fulmars (a gull-like bird of the petrel family). A study published last year reported that “over the past five years (1999-2003) nearly every beachwashed Fulmar (98%) in the Netherlands contained plastics in an average quantity of 32 items or 0.34 gram per bird”. The study also noted that “losses of industrial plastic during manufacturing and transport have been reduced, but that the disposal of plastic garbage in the marine environment has increased”. The study looked at all forms of litter and all forms of plastics: not just carrier bags. The study can be found at

<http://www.alterra.wur.nl/Internet/Modules/pub/PDFFiles/Alterrapporten/AlterraRapport1093.pdf>

9. The MCS have reports of whales, dolphins and turtles adversely affected by a range of marine litter, including plastic bags. The Scottish Executive is part-funding a project to remove litter from the North Sea: more details can be found at <http://www.kimointernational.org/Portals/0/A4Flyer.pdf> The Scottish Society for the Prevention of Cruelty to Animals (SSPCA) received nine calls in 2003 which specifically reported animals trapped in plastic bags: this equates to 0.01% of all calls taken.

10. The AEAT study concludes that the overall environmental impact from any levy is “predicted to remain very similar to today’s situation. This is because the benefits of reducing plastic carrier bag use are displaced by the increased use of paper bags”. The study assumes that if a levy should extend to plastic bags only, 25% of the reduction in the use of plastic bags would switch to paper bags. This assumption is explained further in footnote 18 of the AEAT study, on page 19. It is based on 30% of transactions switching to “no bag” and an analysis of household expenditure in stores (footwear, clothing etc) most likely to switch to paper bags.

11. The study notes, on page 7, that the Irish Government have said about their PlasTax on plastic bags that “although use of paper bags has increased, it is not felt that their exclusion from PlasTax has been to the detriment of the scheme. Paper bags are reported as being used mainly by fashion and shoe shops. The grocery sector has switched largely to reusable bags”.

12. The AEAT study also looks at other scenarios: extending the levy to larger stores only and extending the levy to paper bags. A clear difficulty with the levy extending to larger stores only would be how to decide which stores should be covered. A small shop (eg a convenience store) might hand out a large number of plastic bags whereas a larger shop (eg a garden centre) might hand out relatively few plastic bags. An exemption could operate on the basis of the number of bags actually handed out (with outlets below a certain number not subject to the levy) but this would require detailed records to be kept and might prove complicated for stores around the exemption level. The study considers other options to distinguish larger stores, including turnover and shop floor space.

13. The AEAT study concludes, on page 31, that “the analysis demonstrates that SMEs and paper bags should [both] be included to maximise the potential environmental benefit

of the levy. The inclusion of paper bags in the levy makes a greater contribution to maximising environmental benefits than inclusion of SMEs”.

14. The study presents evidence that paper bags consume more natural resources than plastic bags when being manufactured (i.e. energy, water and materials). Although paper bags have less impact on litter and wildlife than plastic bags (because paper bags degrade more easily), paper bags have more impact on waste because they are bulkier. In addition, paper bags are biodegradable and the EU Landfill Directive targets on diverting municipal waste from landfill relate to biodegradable municipal waste, as biodegradable waste emits methane, a greenhouse gas, when in landfill sites. (Methane is a potent greenhouse gas: a tonne of methane has more than 20 times the warming action of a tonne of carbon dioxide). However, paper bags are more likely than plastic bags to be made from recycled material.

15. The plastics industry have indicated that if a levy should be introduced on plastic bags only, and not on paper bags as well, they might take legal action.

16. The Irish Government notified their levy to the European Commission under the Technical Standards Directive. If the proposals for a levy should proceed in Scotland, the Scottish Executive would also expect to notify the proposals to the Commission.

17. There has been no formal consultation on levying paper bags.

18. The AEAT study also addresses the issue of biodegradable plastic bags. The study notes that “it can be difficult to agree whether a particular type of bag is degradable or not. This could become significant if biodegradable bags were to be exempt from the levy”. The rate of degradation of any material varies, depending on the conditions in which it is placed. If a biodegradable bag is placed in a landfill site, there is an argument that it is no better than anything else in a landfill site – and, as indicated above, our waste target is to reduce the amount of biodegradable waste sent to landfill. The AEAT study also notes that biodegradable bags might contaminate recycle; might send out the wrong message on littering and might still cause problems for wildlife.

19. The AEAT study also notes the argument that a levy would increase waste awareness. This is hard to quantify, particularly as other steps are already being taken (eg the provision of resources to local authorities by the Executive through the Strategic Waste Fund to improve recycling facilities) to move Scotland away from landfill. The Executive is of the view that consumers should be encouraged to re-use bags. In some cases, for small purchases such as a newspaper or a pint of milk, a bag may not be needed at all.

Enforcement of the levy by local authorities

20. In Ireland, set-up costs for the Revenue Commissioners were €1.2 million and a further €358,000 were spent on an advertising campaign to launch the levy. (£1 is approximately €1.5). Under Mike Pringle’s proposals, the levy in Scotland would be collected by 32 local authorities: this is inevitably likely to be more expensive than enforcement by one central authority. The AEAT study makes a preliminary estimate that set-up costs in Scotland would be around £3.5 million: £2 million for local authorities and £1-£2 million for an education and awareness campaign.

21. The study suggests that, once a levy was in force in Scotland, it would cost local authorities around £3.5 million a year to manage the levy, with total revenue of around £7.75 million a year. In Ireland, around €1 million a month is being raised by the levy.

22. The study also notes that smaller local authorities could receive lower revenues without a proportional reduction in administrative costs. Under section 8 of the Bill, local authorities would be empowered to “spend the money raised from the levy, after deduction of reasonable collection costs, on environmental projects meeting criteria set out in guidance issued by the Scottish Ministers”. The Scottish Executive assumes that these projects would relate to waste reduction, recycling and tackling litter.

23. The Scottish Executive is of the view that, if a levy should be introduced in Scotland, local authorities would wish to consider using existing powers to make joint arrangements to collect the levy and thus reduce costs. As the Bill currently stands, any levy would take effect 6 months after Royal Assent. The Scottish Executive considers that if a levy should be introduced in Scotland, more time would be needed than 6 months after Royal Assent to allow local authorities and retail outlets time to gear up and to allow for an education and awareness campaign to be run.

24. We doubt if there would be many prosecutions in Scotland in relation to any plastic bag levy: enforcement by local authorities in this area would be unlikely to have priority. We are aware of one successful prosecution in Ireland. More details can be found at <http://www.friendsoftheirishenvironment.net/papers/article.php?sid=7391&mode=thread&order=0> In this case, Virgin indicated that they were switching to paper bags.

Implications of the levy for businesses providing plastic bags to consumers

25. As currently drafted, the Bill would impact on all businesses providing plastic bags, even those providing a small number. This would cause a burden for business. We are currently preparing a Regulatory Impact Assessment on the proposed levy and this will be sent to the Committee in the next few weeks.

26. The AEAT study states that the Carrier Bag Consortium have indicated that the cost to UK retailers of providing plastic bags to customers is around £64-£80 million. The cost of plastic bags is likely to be rising as plastic bags are made from a by-product of oil refining, and oil has recently been increasing in price. The study suggests that large food retailers would, on the whole, gain financially from a levy as they be providing fewer plastic bags to customers without charge and would be selling more bin liners and “bags for life”. However, non-food retailers could face increased costs as they are more likely to switch to large paper bags, which are more expensive.

27. The Scottish Executive has been working with the British/Scottish Retail Consortium on a possible Code of Practice on the provision of plastic bags. Such a Code of Practice is in force in Australia. A Scottish Code of Practice could cover issues such as: ensuring that check-out staff are trained not to hand out bags automatically; promoting the collection of plastic bags for recycling and encouraging the specification of bags made from recycled material. In our view a Code of Practice has a number of advantages: it tackles unnecessary use of plastic bags; it saves local authorities from having to enforce and collect a levy and it avoids a large-scale switch to paper bags. Our understanding is

that retailers are likely to consider the experience of WRAP's trial in Edinburgh, and Bristol, to promote the re-use of bags before reaching a final view on the proposed Code of Practice.

28. The WRAP trial will involve working with a number of supermarkets to promote the re-use of bags. The Executive welcomes this. We consider that it does not matter what types of bags are re-used, so long as good use is made of natural resources and new bags are only taken when absolutely necessary.

29. WRAP have also been working with the retailers to tackle issues relation to waste from products and packaging generally. Under the Innovation Fund, http://www.wrap.org.uk/waste_minimisation/retailer_initiative_innovation_fund/about_the.html, WRAP are procuring research and development projects into the design, prototyping and piloting of innovative products, packaging, materials and systems. Under the Courtauld Commitment, <http://www.scotland.gov.uk/News/Releases/2005/07/26121246>, retailers are committed to working with WRAP to tackle packaging and food waste.

Implications of the proposed levy for the plastics industry

30. Most plastic bags used in Scotland are now made outwith the EU, often in the Far East. However, the proposed levy would have an impact on employment in Scotland. The industry have suggested that around 300-700 jobs could be lost in Scotland in relation to manufacturing, importing and distributing bags. This would include 2 plants involved in manufacturing, with the potential loss of around 70 jobs. Scotland continues to have a paper bag manufacturing industry, such as Smith Anderson in Fife.

Implications of the levy for consumers

31. If consumers wished to use a plastic bag for their purchases, they would have to pay the levy. The AEAT study reports that in Ireland plastic bag use fell by 90%, showing a significant change in consumer behaviour to avoid the levy. Assuming a similar change in consumer behaviour in Scotland, the study estimates that Scottish consumers would pay total levy costs of £7.75 million a year. As the levy would be at a flat-rate, regardless of income, there is an argument that it would be regressive as it has the greatest impact on the poorest in society. However, the levy could be avoided, legitimately, by re-using bags.

32. The AEAT study also notes that there could be further costs for consumers in relation to purchasing "Bags for Life" and bin liners and in relation to any additional costs passed on by retailers through having to purchase (more expensive) paper bags. Overall, the report suggests that the levy could cost the average consumer some £10.58 a year.

Conclusions

33. In summary, the Scottish Executive:

- Has not taken a position on the Bill.
- Has commissioned and published a study by AEA Technology on the implications of the levy for Scotland.

- Notes that this study concludes that the overall environmental impact from any levy on plastic bags is predicted to remain very similar to today's situation.
- Notes that the study concludes that there is an argument for extending any levy to paper bags.
- Notes that there has been no consultation on any proposal to levy paper bags.
- Notes that paper bags cause fewer concerns in relation to litter and wildlife, and are often made from recycle. However, paper bags appear to consume more natural resources when being manufactured; are bulkier, thus leading to more waste; and are biodegradable, cutting across the targets to reduce the amount of biodegradable municipal waste sent to landfill and thus cut the emission of greenhouse gases.
- Notes that if the proposals for a levy on plastic bags should proceed, it would expect to have to notify the proposals to the European Commission.
- Notes potential concerns about biodegradable plastic bags.
- Will send the Committee in the next few weeks a Regulatory Impact Assessment of the proposed levy on plastic bags.
- Notes that there will be set-up costs before any levy is introduced but that after any levy is introduced, income to local authorities should, across Scotland, exceed expenditure. However, this may vary from authority to authority, depending on the size of authority.
- Considers that if a levy should be introduced, local authorities may wish to use existing powers to work together to collect and enforce the levy.
- Considers that, if a levy should be introduced, more than 6 months would be required after Royal Assent for authorities, retailers and consumers to gear up.
- Intends to work further with the British/Scottish Retail Consortium on the proposed Code of Practice, after the WRAP trial to promote the re-use of bags has taken place in Edinburgh, and Bristol, in September.
- Notes that whilst food retailers may gain financially from any levy on plastic bags, other retailers could lose out, by having to purchase more expensive paper bags.
- Continues to support WRAP's work with the retailers to reduce waste from products and packaging.
- Supports the WRAP trial to promote the re-use of bags.
- Notes that the plastics industry have said that the proposed levy on plastic bags could lead to around 300-700 job losses in Scotland.
- Notes that the proposed levy on plastic bags could cost the average consumer around £10.58 a year.

SCOTTISH PARLIAMENT

ENVIRONMENT AND RURAL DEVELOPMENT COMMITTEE

ENVIRONMENTAL LEVY ON PLASTIC BAGS (SCOTLAND) BILL.

Supplementary evidence by the Scottish Executive on the environmental implications of the Bill.

Introduction

1. This note outlines the Scottish Executive's views on the environmental implications of the Bill.

Key points

2. Key points raised by the Bill are outlined below.

Waste

- Plastic bags are not major contributors to the waste stream. The Executive accepts the analysis by HM Treasury that plastic bags constitute around 0.3% of the municipal waste stream.
- There is evidence of unnecessary use of plastic bags. Earlier this year, WRAP commissioned research on Carrier Bag Usage and Attitudes across the UK: http://www.wrap.org.uk/applications/publications/publication_details.rm?id=698&publication=1909 This contains references to checkout staff automatically pulling down "single use bags" and to "packers at the checkout being quite profligate with the single use bags and not trying to fill them up".
- As recorded below, if a levy on plastic bags should be introduced, the Executive would expect to see an increase in the amount of waste generated in Scotland, due to the heavier weight of paper bags.
- Not all of this additional waste would be landfilled: some would be recycled.

Litter

- Given their durability, plastic bags are more significant than paper bags in the litter stream.
- However, Keep Scotland Beautiful, in their evidence to Committee, noted that plastic bags have not been found to be a significant source of street litter.
- Keep Scotland Beautiful did note, though, that there is no survey data in Scotland on the levels of plastic bags on trees and bushes and roadside verges.
- The Report for the Executive by AEA Technology refers to a survey carried out in England by ENCAMS, for the Industry Council for Packaging and the Environment, in which 37 carrier bags were collected out of a total of 58,401 items, equating to 0.064% of all items of litter found.

- The Marine Conservation Society beach litter survey results for 2004 showed 5,592 plastic bags collected. As a percentage of total litter, this equated to 2.03%. It also represented 38.5 plastic bags per kilometre of coastline.

Wildlife

- In their evidence, the SSPCA note that they received 9 calls in 2004 relating to animals suffering due to plastic bags, out of a total of 96,697 calls in 2004.
- In 2005, the SSPCA have received 12 calls, so far, relating to animals suffering due to plastic bags.
- The SSPCA note that other animals may have suffered from plastic bags without it being recorded and that “therefore it is highly probable that there are greater numbers of wildlife that are killed or injured by plastic bags”.
- The SSPCA also notes that it received a call in August relating to a cow with a plastic bag stuck in its mouth. However, the State Veterinary Service doubts that a large number of farm animals are adversely affected by plastic bags.
- Since the UK Marine Mammal Strandings Scheme started in 1990, plastic has very occasionally been seen in the stomachs of cetaceans, although there has not been an association with cause of death.
- In contrast, the majority of marine turtles examined had some plastic, including bags, in their stomachs, but only in one case (1994) has this directly contributed to the death of a stranded animal.
- A Dutch study between 1982 and 2001 showed that 96% of fulmars had plastic fragments in their stomachs. However, these plastic fragments will have come from a variety of sources, and not necessarily from carrier bags.

Awareness

- A levy on plastic bags would clearly encourage consumers to consider whether they needed a new plastic bag. However, it is less certain that it would increase waste awareness generally.
- The levy on plastic bags in Ireland was introduced in March 2002.
- According to the Irish Environmental Protection Agency National Waste Database Interim Report 2003, <http://www.epa.ie/TechnicalGuidanceandAdvice/NationalWasteDatabase/PDFsforNWD/FileUpload,6039,en.pdf> Municipal Waste Generation in Ireland from 2001-2003 was:

Category of municipal waste	2001 (Tonnes)	2002 (Tonnes)	2003 (Tonnes)
Household waste	1,468,834	1,528,314	1,596,501
Commercial Waste	1,156,732	1,129,852	1,332,735
Street cleansing waste	78,469	65,573	71,779
Total municipal waste	2,704,035	2,723,739	3,001,016

- The Irish EPA say that the recorded increase in municipal waste in 2003 is due to better quality data and overall increased resource use and waste generation on the part of consumers and business.

Paper v plastic bags

3. A feature of the debate up until now has been the issue of the environmental performance of paper versus plastic bags. The usual way of carrying out such an assessment is by Life Cycle Analysis (LCAs), which look at environmental performance of products throughout their lives.

4. More details of LCAs on plastic and paper bags are given in Appendix 1 to this note. The results shown by the main international studies suggest that plastic bags perform better than paper bags. The one exception to this relates to a study in Sweden, for the paper industry, which looked at paper and plastic animal feed distribution sacks and concluded that paper was preferable to plastic. For shopping bags, however, plastic bags have performed better than paper bags in LCAs.

5. However, the Committee has received evidence and representations suggesting that the Life Cycle Analysis reports have been too harsh in relation to the environmental impact of paper bags.

6. The Scottish Executive considers that some of the points made have validity. In particular:

- The AEA Technology Report notes (page 17, Volume 2) that “with respect to water pollution, there are also changes (eg as a result of the Urban Waste Water Treatment Directive), which may be expected to influence results for eutrophication significantly”. In other words, paper bags manufactured in the EU may have less impact on eutrophication than LCAs have generally assumed up until now, because of higher EU environmental standards.
- The AEA Technology Report also notes (again on page 17 of volume 2), that emissions are likely to fall as a result of higher EU environmental standards.
- The Report also notes that energy mixes vary considerably from country to country and so comparisons of energy used to make bags in various countries are hard to carry out.
- There are a wide variety of paper and plastic bags being used both within Scotland and the UK and internationally. Again, this makes it harder to produce exact comparisons.

7. The paper bag manufacturing capability in Scotland is more significant than the plastic bag manufacturing capability. However, if there should be a switch to paper bags, there is no guarantee that retailers would source their additional requirements from Scottish/UK manufacturers. The retailers could be expected to purchase paper bags from whichever companies offered the best value for money.

Generation of waste

8. The Committee has also received representations on possible increases in waste being generated, if a levy on plastic bags should be introduced and there should be a switch to paper bags. As outlined in the AEA Technology Report, a paper bag is more likely to be bulkier than its equivalent plastic bag.

9. The AEAT Report suggested that 5,409 additional tonnes of waste would be generated if a levy on plastic bags were introduced and there were a switch to paper bags. This is based on the following assumptions:

- Weight of a plastic bag is 8 grammes.
- Weight of a paper bag is 51 grammes.
- Weight of a “bag for life” is 47 grammes.
- Weight of bin liners is 15 grammes.
- Levy would lead to 90% reduction in use of plastic bags.
- Of this reduction, 30% would switch to “no bag”. This is based on an Australian assumption.
- 25% switches to paper carrier bags. More details on the calculations for this assumption can be found in Appendix 2 to this note. Paragraph 4.10 of the FSB evidence to Committee says that their survey indicates that 35% of respondents would change to paper bags.
- 45% switches to “bags for life”, based on the analysis of spend on food/non-food.

10. This analysis has been criticised on two main grounds:-

- 51 grammes is too low for the weight of the average paper bag. This seems a reasonable criticism as this is given as the weight of a bag without handles, whereas the average weight of a paper bag is given in the AEA Technology Report as being 99 grammes.
- 30% is too high for the switch to “no bag”. This does not seem a reasonable criticism. Some shopping trips would not need a bag. In other cases, too many bags are provided at the cash-desk at the moment.

11. This would suggest the following:

Bag	Pre-levy consumption in tonnes in AEA Report	Pre-levy consumption in tonnes using amended weight figure for paper bags	Post-levy consumption in tonnes using amended weight figures for paper bags
Plastic bag	6,200	6,200	620
Bag for life	364	364	1,102
Bin liners	1,764	1,764	3,122
Paper	1,976	3,861 [assumes paper bags are 99 grammes, rather than 51]	21,087
Totals	10,304	12,189	25,931

12. This suggests a total increase in tonnes arising of 13,742 [25,931 less 12,189].

13. Total municipal waste arisings in Scotland in 2004/05 were 3,407,978 tonnes, according to the latest figures from SEPA: http://www.sepa.org.uk/pdf/nws/data/quarterly/total_2004_05.pdf Therefore, an additional 13,742 tonnes would equate to around 0.4% of municipal waste.

14. The Scottish Executive agrees that this increase would not necessarily be landfilled. WRAP have provided information on the recycling of paper bags in their supplementary evidence to Committee. The relevant extract is at Appendix 3 to this note.

Biodegradable bags

15. The Committee has also received evidence on biodegradable bags.

16. The Scottish Executive has a number of concerns about biodegradable bags, as outlined below:

- If biodegradable bags are recycled with other plastics, they could contaminate the recycle.
- Biodegradable bags could be beneficial if they are composted. However, there is no guarantee that the consumer will compost the bags.
- Any additional elements added to bags to make them biodegradable could worsen environmental impact.

17. The Scottish Executive considers that a preferred environmental route is outlined on page 16 of Volume 1 of the AEAT Report, where it comments on the recycled carrier bag used by Dixons.

“Bags for life”

18. Life cycle analysis generally shows that “bags for life” are environmentally preferable to standard HDPE bags, so long as they are re-used 4 or more times. However, there is no guarantee that this will happen. The survey carried out for WRAP earlier this year on Carrier Bag Usage and Assumptions, showed that of those who had purchased a “bag for life”:

16% would re-use them every time they went shopping.

16% would re-use them most of the time.

26% would re-use them sometimes.

14% would rarely re-use them

28% would never re-use them.

19. This survey suggested that of those who sometimes/rarely/never re-used “bags for life”, the main reason (67%) was because the consumer forgot to take them.

Summary

20. In summary:

- Plastic bags are not significant in the municipal waste stream.
- Plastic bags are not significant in the litter stream on streets and pavements, although we do not have accurate data on the levels of plastic bags on trees and bushes and roadside verges.
- Plastic bags can impact on wildlife. However, the data available does not show large numbers of wildlife being killed by plastic **bags**.
- A levy on plastic bags would encourage consumers to consider whether or not they need to purchase a new bag. However, it is less certain that it would increase waste awareness generally.
- Life Cycle Analysis (LCA) usually show paper bags performing poorly.
- However, higher EU environmental EU standards are likely to mean that paper bags made in the EU have less of an impact on the environment than LCAs have shown up until now.
- Paper bags are, though, bulkier than paper bags.
- If a levy on plastic bags should be introduced, the Executive would expect the amount of waste generated in Scotland to increase by some 13,742 tonnes a year, equating to around 0.4% of municipal waste.
- This would not necessarily be landfilled: some of it would be recycled.
- The Executive has concerns about the environmental credentials of biodegradable bags.
- “Bags for life” generally do well in LCAs, so long as they are re-used. A key concern, however, is that they may be forgotten when the consumer goes shopping.

Conclusions

21. Overall, the Executive is of the view that a levy on plastic bags would make little overall difference to the environment.

22. The Executive is aware of suggestions that any levy should be extended to paper bags. There has, however, been no consultation on this matter.

Environment and Rural Development Department
Scottish Executive
November 2005

APPENDIX 1

LIFE CYCLE ANALYSIS OF PLASTIC AND PAPER BAGS

1. The South African FRIDGE (Fund for Research into Industrial Growth and Equity) Report, by Bentley West Management Consultants on the Socio-economic impact assessment of the proposed plastic bag regulations, <http://www.nedlac.org.za/research/fridge/plastics/life.pdf>, helpfully discusses the principles behind LCAs. The FRIDGE Report says

“ A life cycle analysis (LCA) provides a framework and methods for identifying and evaluating environmental burdens associated with the complete life cycles of products and services, ie from the product cradle to the grave.

The life cycle assessment (LCA) method deals with the complex interaction between the provision of a product or service, through all stages of its life cycle, and the environment. The LCA attempts to predict the overall environmental burdens associated with the provision of the product and identify particularly burdensome or wasteful processes therein”.

2. The report prepared by AEA Technology was not, as the report itself makes clear, a full LCA: this could have taken a number of years to carry out. Rather, the AEAT study considered a variety of scenarios drawing on experience from elsewhere in the world and on LCAs which have been carried out.

3. There are a number of other reports comparing plastic and paper bags. The four main ones known to the Executive are:

“ Evaluation des impacts environnementaux des sacs de caisse Carrefour. Analyse du cycle de vie de sacs de caisse en plastique, papier et matériau biodégradable.” Report prepared for Carrefour, Ecobilan, February 2004. http://www.carrefour.fr/pdf/rapport_carrefour_post_revue_critique.pdf [France]

“Plastic Shopping Bags – Analysis of Levies and Environmental Impacts” Prepared by Nolan-ITU in association with RMIT Centre for Design and Eunomia Research and Consulting Ltd, December 2002. <http://www.deh.gov.au/settlements/publications/waste/plastic-bags/analysis.html> [Australia]

“ The Socio-economic impact assessment of the proposed plastic bag regulations”. A South African FRIDGE (Fund for Research into Industrial Growth and Equity) Report, by Bentley West Management Consultants. <http://www.nedlac.org.za/research/fridge/plastics/life.pdf>

“Resource and Environmental Profile Analysis of Polyethylene and Unbleached Paper Grocery Sacks”. Franklin and Associates Inc. 1990. A summary can be found at <http://www.ilea.org/lcas/franklin1990.html> [USA]

4. The Carrefour study concludes:

“ Le sac PE jetable se situe donc plutôt mieux que les sacs papier et biodégradable sur la plupart des indicateurs, sauf pour le risque par abandon qui est la principale faiblesse de ce sac (surtout en zones littorales, proches du milieu marin).”

[The disposable plastic bag is therefore markedly better than paper and biodegradable bags on most indicators, except for litter which is the main weakness of this bag (especially in coastal areas, close to the marine environment)].

5. The Nolan-ITU study for the Australian Department of Environment and Heritage] said:

“ There is significant potential to reduce life cycle environmental impacts of plastic bag usage in the form of resource consumption, energy, greenhouse gas emissions and litter.

A substantial shift to more durable reusable bags would deliver environmental gains over the full life cycle of the bags. Heavy duty reusable plastic bags with a long usable life were found to achieve the greatest environmental benefits.

Little or negative gain was found to be derived from the shift from single use bags to other single use bags such as biodegradable bags and paper bags, with potential litter gains offset by negative resource use, energy and greenhouse outcomes.”

6. The South African FRIDGE Report did not carry out its own LCA but it looked at two previous LCAs. The first was the Franklin Report, outlined below, which found that plastic bags were environmentally preferable.

7. The second LCA considered was a Report called “Distribution in Paper Sacks”, CIT Ekologik 2000. This was commissioned by Eurosac (European Federation of Multiwall Paper Sack Manufacturers) and by the Confederation of European Paper industries. This study compared paper and plastic animal feed distribution sacks. These are bigger than shopping bags. This LCA concluded that the paper alternative was to be preferred.

8. The 1990 Report by Franklin Associates concluded that plastic bags were environmentally preferable to paper bags. The summary of the Franklin Report says: “Through a lifecycle energy analysis, plastic is the better bag. At current recycling rates two plastic bags use less energy and produce less solid, atmospheric, and waterborne waste than a single paper bag. Moreover future improvements only increase preference in plastic bags. Increased recycling rates and reducing the 2-to-1 ratio through proper bagging techniques would further the energy preference for plastic bags”.

**Environment and Rural Development Department
Scottish Executive
November 2005**

Appendix 2

ASSUMPTION THAT OF THE 90% REDUCTION IN USE OF PLASTIC BAGS AFTER A LEVY, 25% WOULD SWITCH TO PAPER BAGS.

1. This is based on an analysis of spend on food/non-food items, using information from the UK Expenditure and Food Survey, and an assumption that any switch to paper would take place in non-food stores.
2. The analysis of spend suggests that 36% of expenditure likely to need a bag is in stores selling items such as footwear and clothing and 64% is in stores selling items such as food and beverages.
3. Given the assumption that 30% of the reduction will switch to “no bag”, this suggests that 25% [36% x70%] will switch to paper bags.
4. The details behind the assumption can be found at footnote 18 on page 19 of volume 1 of the AEA Technology Report.

Appendix 3

THE RECYCLING OF BAGS

1. In their supplementary evidence to Committee, WRAP said:

“ It is (of course) possible to recycle paper bags. However, the nature of the paper and the adhesives typically used means that they would be better combined with cardboard recycling programmes rather than with ‘news and PAMs’ (newspaper and magazine) recycling collections. Whilst cardboard recycling services are increasingly becoming available across Scotland, they are still less well developed than news and PAMS collections, as illustrated by the fact that there are 394 Recycling Centres and Points in Scotland to recycle cardboard, compared to 1,122 for paper. If paper bags were included in news and PAMs collections, the paper mills to which they were sent would regard any brown paper as contaminants, and the adhesives as undesirable materials, with certain types of adhesives presenting difficult technical challenges. Potential food contamination would also be an issue, and bags which had had direct food contact would not be wanted. These various challenges might therefore restrict the number of outlets willing to process combined collections, as well as reducing the value of the paper. WRAP has funded some research into the effects of different adhesives within paper recycling, and we expect to publish a report on this in the near future.”

2. It is also possible to recycle plastic bags. Information from the Scottish Waste Awareness Group shows that a number of retailers, including Tesco, provide recycling points for plastic bags. The Scottish Executive welcomes this. Part of the aim of the proposed voluntary Code of Practice on handing out plastic bags would be to encourage a greater number of recycling facilities at supermarkets for recycling bags.

Regulatory Impact Assessment

The Environmental Levy on Plastic Bags (Scotland) Bill 2005

1. This Regulatory Impact Assessment (RIA) is an evaluation of the costs and benefits for Scotland of the proposed Environmental Levy on Plastic Bags (Scotland) Act 2005.

Summary of RIA findings: levy on plastic bags (only)

2. A full summary can be found at Paragraph 69. However, the Executive considers that the potential impact of a levy on plastic bags (only) on the various business sectors is as shown below.
3. Up to 400 jobs could be directly affected by the levy in Scotland. Up to 100 of these jobs are in manufacturing and the remainder in distribution. With the exception of around 60 jobs in British Polythene Industries PLC, these jobs are in SMEs. There could be increased opportunities in the paper bag manufacturing industry. There could be a one-off benefit for the shop-fitting industry, as some retailers might need to adjust their till lines. There could be an increased number of jobs in the public sector, as local authorities might need to take on staff to collect and enforce the levy.
4. The impact of a levy on plastic bags (only) on the various retail sectors currently providing bags to customers is outlined below:

Summary of the impact of a levy on plastic bags on retail sectors

Sector	Annual Savings/benefits £ million	One-off costs million £	Annual costs £ million	Comments
Large food retailers	14.3	1.4	0.2-0.3	Benefits from handing out fewer plastic bags and selling more bin liners and “bags for life”
Large non-food retailers	1.4	0.4	22.2 – 22.5	Has to meet costs of providing more paper bags
SME food retailers	4.3	1.0 -1.8	3.9 – 7.4	Benefits from handing out fewer plastic bags and selling bin liners but likely to find costs of registering with local authorities and sending in returns burdensome.
SME non-food retailers	1.2	0.5 – 1.0	11.5 – 13.5	Has to meet costs of providing more paper bags and of registering with the local authority and sending in returns.
Totals	21.2	3.3 - 4.6	37.8 – 43.7	

Purpose and Intended Effect of the Bill

5. This Bill is a Member’s Bill promoted by Mike Pringle MSP. **The Scottish Executive has not yet taken a position on the Bill.** This RIA has been prepared by the Scottish Executive to help inform the Environment and Rural Development Committee’s consideration of the Bill, at Stage 1 of the Parliamentary process.
6. The Bill seeks to introduce a levy of 10p on specified bags made wholly or partially of plastic. The levy would be enforced and collected by local authorities. Annex A to this RIA provides more detail on the Bill.
7. The Scottish Executive consulted with business and business organisations during the preparation of this RIA. Annex B records some of the points made by business during this consultation. Key points were that SMEs often do not have

sophisticated stock control and till systems. As a result, they might face difficulties in relation to recording the number of bags supplied to customers.

Consultation

8. Within Government: Waste Strategy Team in the Environment and Rural Affairs Department has consulted the Office of the Solicitor to the Scottish Executive, Analytical Services Division, and the Enterprise, Transport and Lifelong Learning Department.
9. With other bodies: The Scottish Executive has consulted the Federation of Small Businesses; two companies, in Peebles and Inverkeithing, who are members of the FSB; the Carrier Bag Consortium; the Convention of Scottish Local Authorities; the Scottish/British Retail Consortium; the Scottish Environment Protection Agency and Friends of the Earth.

Options

10. The following four options have been identified:

Option 1: **Do Nothing**

This represents the base case of business as usual, against which all other options are compared.

Option 2: **Pass the Bill, introducing a levy on plastic bags**

All bags with plastic content, except those specifically exempt in the Bill, would be levied at 10p per bag, with the levy being collected by Local Authorities.

Option 3: **Voluntary code of practice**

The Bill would not be passed, but a voluntary code of practice would be developed, to which retailers would commit.

Option 4: **Pass an amended version of the Bill, to include paper bags**

The Bill would be passed, but amended to include paper bags in the levy.

Sectors & Groups Affected

11. The proposed levy will impact upon :

- Consumers – who would have to pay the levy, unless they took legitimate steps to avoid it, such as re-using bags, and would also have to purchase alternative products to get their purchases home (eg bags for life) and to dispose of their waste (eg bin liners). As drafted, the Bill would require the customer to pay the levy: it would not be possible for suppliers to absorb the cost of the levy.
- Retailers and other suppliers of plastic bags – who would have to register with the local authority, collect the levy from customers, send in regular returns to

the local authority, outlining bags provided and amounts collected, and pay to the local authority the amount collected. As currently drafted, the Bill would impact on **all** bodies (private, voluntary and public) supplying plastic bags “in the course of business”. Some retailers will see their costs decrease (through buying fewer plastic bags) and others will see their costs increase (through buying more paper bags).

- Manufacturers of plastic bags – who could be expected to see demand for their product decrease. Most plastic bags used in Scotland are now manufactured in the Far East, although there continues to be a small manufacturing capability in Scotland and across the UK.
- Distributors of plastic bags – a number of merchants based in Scotland who distribute plastic bags would be affected by a diminishing demand for bags.
- Local authorities – who would have to ensure that suppliers of plastic bags registered with the authority; would have to keep registers and records; would have to enforce the levy (including making any reports to the Fiscal and levying any civil penalties) and would have to send an annual report to the Scottish Ministers on their performance. Under section 7 of the Bill, local authorities would be empowered to spend any resources raised from the levy on environmental projects meeting criteria set out in guidance issued by the Scottish Ministers.
- The Crown Office and the Procurator Fiscal Service – who would be responsible for considering whether any prosecutions should be pursued and for taking forward any prosecutions.
- The Scottish Executive – who would need to run an information campaign and would need to consider what advice would need to be provided to local authorities and others and would need to devise, in consultation, standard forms and procedures. The Scottish Executive would also need to notify the proposed levy to the European Commission under the Technical Standards Directive.

Benefits/disbenefits

12. The perceived benefits of the Bill are that there would be a reduction in the number of plastic bags provided to the consumer: in Ireland, it is estimated that the reduction since the introduction of their PlasTax has been of the order of 90%. A reduction in the use of plastic bags reduces litter and waste although plastic bags are not a significant feature of either stream. Plastic bags can impact on wildlife although by the nature of wildlife this is very difficult to quantify. A levy on plastic bags would also increase public awareness of waste issues, although waste awareness is already being increased in Scotland as local authorities improve recycling facilities following Strategic Waste Fund awards made by the Scottish Executive.

13. A possible disbenefit of the Bill is that it could lead to an increase in the use of paper bags. These are bulkier and, as a result, there could be an increase in the amount of waste generated in Scotland.

14. More detail on the benefits/disbenefits of the Bill can be found in Annex C.

Costs to business and the voluntary sector

Option 1: no action

15. There are no costs attached to this option.

Option 2: The Bill as drafted

16. The costs to business and the voluntary sector of the Bill would impact on three main areas:

- Impact on jobs in the plastic bag manufacturing industry.
- Impact on jobs in the plastic bag importation, distribution and supply industry.
- Potential burdens to businesses (eg retailers) supplying plastic bags to the ultimate consumer.

17. There could also be some benefits to business, such as:

- Increased sales of bin-liners and “bags for life”
- Reduced costs in providing plastic bags free to consumers (although there could be increased costs in increasing the number of paper bags supplied. Paper bags are more expensive than plastic bags).
- Increased demand for paper bags.

18. The plastics industry have estimated that around 300-700 jobs in Scotland could be affected by the proposed levy. **The Executive’s calculations suggest that up to 400 jobs could be directly affected in Scotland.** This would consist of approximately 100 people in plants with a continued interest in manufacturing and approximately 300 people in companies involved in distributing plastic bags. More information on plastics companies that could be affected by the levy can be found at Annex D.

19. The costs/savings to businesses (eg retailers) supplying plastic bags to consumers derive from a number of sources:

- There would be financial savings from handing out fewer plastic bags, currently generally provided by retailers free of charge to consumers.
- There would be costs arising from having to provide more paper bags, which are more expensive.
- There could be some increased income for retailers in relation to selling more “bags for life” and bin liners.
- All businesses intending to supply plastic bags to consumers after the levy came into force would have to register with the local authority.
- All businesses supplying plastic bags would have to keep records of number of bags provided and give this information, together with the amounts raised by the levy, to the local authority.
- Some businesses might incur costs in relation to changes to the design of the till line (eg to give the cashier greater control over the bags, rather than leaving them on display to be taken freely by customers, and to change any designs where the provision of a plastic bag is currently an automatic part of a shopping transaction).
- There could also be some costs in relation to updating till software so that plastic bags are properly recorded. The AEAT study noted on page 7, in relation to the

Irish PlasTax, that “the main cost to retailers was updating their software so that till receipts would itemise the sale of plastic carrier bags”.

- There could also be some costs in ensuring that the receipts from the levy are properly recorded in business accounts.
- There could also be some costs in increasing anti-theft measures. The AEAT study notes on page 7 of Volume 1, in relation to the Irish PlasTax that “theft was reported to increase at the outset but when the Department investigated these claims, they were unable to substantiate them”. The study adds that “some increased control measures were introduced to stop trolleys being taken away from stores”.

20. The costs/savings will vary depending on the types of business involved. In particular:

- Large food retailers will benefit from handing out fewer plastic bags free of charge. Food retailers are unlikely to switch to paper bags in significant numbers as paper bags are not generally suitable to carry a large number of food items.
- Large food retailers will also benefit from selling more “bags for life” and bin liners.
- Large food retailers are also likely to find the registration and returns process less burdensome than SMEs, given the staff resources available to larger stores.
- However, larger food retailers may need to make changes to both their tills and till lines. They may also need to take some anti-theft measures.

21. The Executive’s estimates of the impact of the levy on large food retailers is outlined below. More detailed information on the calculations to reach these estimates can be found at Annex E.

Impact of levying plastic bags on large food retailers.

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	2,565,807.50		
Selling additional “bags for life”	6,495,480		
Selling additional bin liners	5,204,430		
Cost of registering with local authority		19,900 – 26,300	
Keeping records and sending in returns			151,750 - 315,000
Updating tills, till lines and security		1,349,000.	
Totals	14,265,717	1,368,900 - 1,375,300	151,750 - 315,000
Rounded	£14.3 million	£1.4 million	£0.2 - £0.3 million

22. The Executive’s estimates of the impact of the levy on large non-food retailers is outlined below. More detailed information on the calculations to reach these estimates can be found at Annex F.

Impact of levying plastic bags on large non-food retailers

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,443,266.75		
Increasing number of paper bags			21,882,953
Cost of registering with local authority		39,800 – 52,500	
Keeping records and sending in returns			303,500 – 630,000
Updating tills, till lines and security		379,250	
Totals	1,443,266.75	419,050 – 431,750	22,186,453 – 22,512,953
Rounded	£1.4 million	£0.4 million	£22.2 – £22.5 million

23. The Executive's estimates of the impact of the levy on SME food retailers is outlined below. More detailed information on the calculations to reach these estimates can be found at Annex G.

Impact of levying plastic bags on SME food retailers

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	2,199,263.50		
Selling bin liners	2,146,500.		
Cost of registering with local authority		964,500 – 1,841,500	
Keeping records and sending in returns			3,858,000-7,366,000
Totals	4,345,763.50	964,500 – 1,841,500	3,858,000-7,366,000
Rounded	£4.3 million	£1.0 - £1.8 million	£3.9 - £7.4 million.

24. The Executive's estimates of the impact of the levy on non-food SME retailers is outlined below. More detailed information on the calculations to reach these estimates can be found at Annex H.

Impact of levying plastic bags on non-food SME retailers

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,237,085.70		
Increasing number of paper bags			9,378,409
Cost of registering with local authority		542,500–1,036,000	
Keeping records and sending in returns			2,170,000-4,144,000
Totals	1,237,085.70	542,500-1,036,000	11,548,408 – 13,522,409
Rounded totals	£1.2 million	£0.5 - £1 million	£11.5 - £13.5 million

Option 3: Code of Practice

25. Under this option, retailers and other bodies providing plastic bags to consumers would sign up to a voluntary code of practice to reduce the number of plastic bags being provided. A draft Code of Practice has been prepared by the British/Scottish Retail Consortium and the Carrier Bag Consortium. Key points in this draft Code are:

- The BRC and CBC commit to reducing the number of bags used, through customer communication at checkouts, staff training and the promotion of stronger re-usable bags.
- Support for campaigns to promote the re-use of bags.
- Support for the collection of bags for recycling.
- Measurement of the number of bags distributed and delivered to BRC members and other retailers.

26. A Code of Practice of this nature, developed by the Australian Retailers Association, is in force in Australia. The Code divides signatories into two groups. Group One signatories are major supermarket chains, who are asked to produce audited results of the impact of the Code of Practice on reducing the use of plastic bags. Group Two signatories (smaller retailers) are asked to provide the Australian Retailers Association with information on the number of bags they purchased.

Benefits of Option 3

27. The perceived benefits of Option 3 are:

- It has produced a reduction in plastic bag use in Australia of around 25% (however, the levy in Ireland has produced a reduction of around 90%).
- It targets action at **unnecessary** use of bags and avoids any switch to paper bags to avoid a levy.

- It enables proportionate action to be taken by large retailers, SMEs and other outlets providing plastic bags, rather than applying a levy to all bodies supplying bags to customers.
- It saves business from having to send in returns to 32 local authorities (although some returns to a central body would still be needed, to measure the effectiveness of the Code) and it would save local authorities from having to set up procedures to collect and enforce the levy.

28. The perceived disadvantages of Option 3 are:

- There could still be some job losses in the plastic bags manufacturing and distribution industry in Scotland, as demand for plastic bags falls.
- A Code of Practice may not focus consumers' minds on waste reduction and re-use of bags as strongly as a levy.
- There will be burdens on business in relation to keeping records and sending in returns.

29. Scottish Retail Consortium members have indicated that they will consider the proposed voluntary Code of Practice further after the WRAP trial to promote the re-use of bags, currently taking place in Edinburgh and Bristol, has finished.

Impact of Option 3 on business.

30. A 90% reduction in the use of plastic bags, which might follow the introduction of any levy, could impact on up to 400 jobs in Scotland. Therefore, **a Code of Practice, which might lead to a 25% reduction in the use of plastic bags, could impact on around 111 jobs in Scotland.** [400 divided by 90 and multiplied by 25].

31. The Executive's estimate of the impact of the proposed Code of Practice on major food retailers is summarised below. More detailed information on the calculations to reach these estimates is outlined at Annex I.

Impact of Code of Practice on major food retailers

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	713,235.60		
Keeping records and sending in returns			26,200 – 53,900
Updating tills, till lines and security		1,349,000	
Totals	713,235.60	1,349,000	26,200 – 53,900
Rounded totals	£0.7 million	£1.3 million	£0 - £0.1 million

32 The Executive's estimates of the impact of the proposed Code of Practice on major non-food retailers is summarised below. More detailed information on the calculations to reach these estimates is outlined at Annex J.

Impact of Code of Practice on major non-food retailers

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	401,195.02		
Keeping records and sending in returns			52,400 – 108,000
Updating tills, till lines and security		379,250.	
Totals	401,195.02	379,250	52,400 – 108,000
Rounded totals	£0.4 million	£0.4 million	£0.1 million

33. Food and non-food stores in the SME sector would be asked to participate in measures to reduce the number of bags (eg better training at the till) but would only be asked to send in information on the number of bags bought from wholesalers. In Australia, there has been limited progress in relation to getting “Group 2” retailers to sign up. In Australia, 126 “Group 2” retailers have signed, representing only 4% of the estimated number of Australian Retail Association members utilising HDPE plastic bags.

34. Given the wide and diverse nature of the SME sector in Scotland, the Scottish Executive expects that a Scottish Code of Practice might also have limited penetration amongst SMEs. Given this, any cost/benefit analysis of this option on SMEs might be unrealistic. However, **it can be expected that the cost to SMEs of implementing the Code (eg better training; sending in information on number of bags bought) would be covered by the cost savings from providing fewer plastic bags.**

Impact of option 4 on business

35. Under this option, paper bags would be subject to a levy as well as plastic bags.

36. The perceived benefits of this option are:

- Paper bags are bulkier than plastic bags and so generate more waste.
- Avoids a switch to paper bags if a levy should cover plastic bags only.
- Creates a level playing field between plastic and paper bags.

37. The perceived disbenefits of this option are:

- There has been no consultation on levying paper bags. This makes it harder to quantify the effects.
- There would be an increase in potential job losses in Scotland. Scotland continues to have a significant paper bag manufacturing industry.
- Paper bags are more likely than plastic bags to be made from recycle.

38. In terms of potential job losses, Smith Anderson in Fife employs around 250 people in relation to its paper bag operation. Clearly, many of the bags may be sold elsewhere in the UK or overseas. However, **levying paper bags as well as plastic bags would increase the number of jobs that could be impacted by the levy from around 400 to around 650.**

39. So far as businesses supplying customers with plastic bags are concerned, the impact of levying paper bags as well as plastic bags would relate to the number of the various types of bags provided. The overall costs of registering, recording, sending in returns and adjustments to shops would remain the same.

40. The Executive's estimates of the impact on large food retailers of levying both plastic and paper bags are shown below. More detailed information on the calculations used to reach these estimates is in Annex K.

Impact of levying both plastic and paper bags on large food retailers

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	2,565,807.50		
Selling additional "bags for life"	9,093,672		
Selling additional bin liners	5,204,430		
Cost of registering with local authority		19,900 – 26,300	
Keeping records and sending in returns			151,750 – 315,000
Updating tills, till lines and security		1,349,000.	
Totals	16,863,909	1,368,900-1,375,300	151,750 – 315,000
Rounded total	£16.9 million	£1.4 million	£0.2 - £0.3 million

41. The Executive's estimates of the impact on large non-food retailers of levying both plastic and paper bags are shown below. More detailed information on the calculations used to reach these estimates is in Annex L.

Impact of levying both plastic and paper bags on large non-food retailers

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,443,266.75		
Reducing number of paper bags	4,401,744		
Cost of registering with local authority		39,800 – 52,500	
Keeping records and sending in returns			303,500 – 630,000
Updating tills, till lines and security		379,250	
Totals	5,845,011	419,050 – 431,750	303,500 – 630,000
Rounded totals	£5.8 million	£0.4 million	£0.3 - £0.6 million

42. Levying paper bags as well as plastic bags would make no significant difference to the costs/savings for the SME food retail sector. These are shown again below, for ease of reference:

Impact of levying both plastic and paper bags on the SME food retail sector

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	2,199,263.50		
Selling bin liners	2,146,500		
Cost of registering with local authority		964,500 – 1,841,500	
Keeping records and sending in returns			3,858,000-7,366,000
Totals	4,345,763.50	964,500 – 1,841,500	3,858,000-7,366,000
Rounded	£4.3 million	£1.0 - £1.8 million	£3.9 - 7.4 million.

43. The Executive's estimates of the impact on the SME non-food sector of levying both plastic and paper bags is shown below. More detailed information on the calculations used to reach these estimates is in Annex M.

Impact of levying both plastic and paper bags on the SME non-food sector

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,237,085.70		
Reducing number of paper bags	1,886,461.50		
Cost of registering with local authority		542,500 – 1,036,000	
Keeping records and sending in returns			2,170,000-4,144,000
Totals	£3,123,547.20	542,500 – 1,036,000	2,170,000-4,144,000
Rounded totals	£3.1 million	£0.5 - £1.0 million	£2.2 - £4.1 million

Impact on Small and Medium-sized Enterprises (SMEs)

44. The tables below summarises the overall impact of the proposed levy on plastic bags only on SMEs supplying plastic bags to consumers.

Impact of the levy on plastic bags (only) on SMEs in the retail sector supplying bags to customers

Description	Annual Savings/Benefits £ million	One-off costs £ million	Annual costs £ million
Food SMEs	4.3	1.0 – 1.8	3.9 – 7.4
Non-Food SMEs	1.2	0.5 – 1.0	11.5 – 13.5
Totals	5.5	1.5 – 2.8	15.4 – 20.9

45. In year 1, net estimated costs to SMEs supplying plastic bags are between £11.4 million [£15.4 million plus £1.5 million less £5.5 million] and £18.2 million [£20.9 million plus £2.8 million less £5.5 million]

46. From year 2 onwards, net estimated costs to SMEs supplying plastic bags are between £9.9 million [£15.4 million less £5.5 million] and £15.4 million [£20.9 million less £5.5 million].

47. There are 52,690 retail outlets in Scotland. 92% of these are SMEs. This suggests that there are 48,475 SME retail outlets in Scotland. **In year 1, the estimated cost per retail SME of the levy on plastic bags would be between £235 and £375. From year 2 onwards, the cost per retail SME of the levy on plastic bags would be between £204 and £318.**

48. In their evidence to Committee, the Scottish Retail Consortium estimate an extra cost to SMEs of between £500-£600 a year.

Administration of the Levy

49. Administration of the levy would fall to local authorities. The AEAT Report suggests the following scenario in relation to local authority income/expenditure:

	Year 0 £m	Year 1 £m	Year 2 £m	Year 3 £m
Set-up costs	-3.5	-	-	-
Annual costs	-	-3.5	-3.5	-3.5
Revenue	0	7.75	7.75	7.75
Net	-3.5	4.25	4.25	4.25
Cumulative	-3.5	0.75	5.0	9.25

50. However, this estimate included between £1 - £2 million set-up costs for an education campaign. The Executive considers that such a campaign would have to be run nationally. We estimate that such a campaign would cost the Executive around £750,000. Running a campaign nationally would save some resources for local authorities.

51. In Ireland (where there is a centralised collection service), the advertising campaign to launch the levy cost some €358,000. The Revenue Commissioners also received some €1.2 million to cover set-up costs and some €300,000 a year for on-going costs. Around €1 million a month, or €12 million a year, is raised by the levy.

52. In Scotland, the Executive would intend to encourage joint working amongst local authorities, to reduce costs. The Executive would also produce standard forms and guidance, to ease implementation.

Small/Micro Firms Impact Test

53. As indicated elsewhere, the Executive considers that the proposals would have a significant impact on small/micro firms. This impact would be as follows:

- The Executive considers that up to 400 jobs in Scotland could be affected by the levy. All of the firms involved, with the exception of BPI which employs around 60 people in a plant at Cowdenbeath engaged in the manufacture of plastic bags, are believed to be small/micro firms.
- In year 1, the estimated cost per retail SME of the levy on plastic bags would be between £235 and £375. From year 2 onwards, the cost per retail SME of the levy on plastic bags would be between £204 and £318.

54. The Federation of Small Businesses have expressed concern about the added regulatory burden which the proposed levy would impose on small business.

55. The Scottish Executive have made efforts to promote a voluntary Code of Practice on handing out plastic bags. To be successful, such a Code would need support from large retailers, who hand out most plastic bags. The British/Scottish Retail Consortium's current position is that they will take stock of the proposed Code of Practice after the trial by WRAP to promote the re-use of bags has been completed.

56. On unintended consequences, it has been suggested that a levy on plastic bags could lead to increased shoplifting. However, the Irish experience suggests that while shoplifting may initially increase, there is not a lasting effect. In addition, shoplifting may be more of an issue for larger stores than for SMEs. A further possible unintended consequence could be "bag rage": consumers annoyed at being charged a further 10p after spending money. As indicated elsewhere, the Scottish Executive would intend to run a publicity campaign about the levy, should the Bill become law.

57. The Association of Charity Shops have also suggested that there could be a fall in charitable donations if there should be fewer plastic bags available to store the goods being donated.

58. The Scottish Executive have considered whether there could be an exemption in the Bill for SMEs, and other bodies, handing out a small number of bags. Such exemptions could be based on:

- The turnover of the business.
- The square footage of the premises.
- The number of bags handed out by the business.

59. However, there could be practical difficulties in framing such exemptions. In particular:

- The turnover of the business and square footage of the premises may not bear much relationship to the number of bags handed out. For example, car

showrooms hand out few plastic bags but have high turnover and high square footage and so would not be exempted. As a result, any plastic bags they do hand out (eg containing brochures) would be subject to the levy.

- An exemption based on the number of bags handed out, and exempting businesses and other bodies below a certain figure, might be fairer. However, this could lead to businesses needing to keep a note of the number of bags handed out. There might also be considerable debate at where the exemption level should be set, with businesses just above the level expressing concern.

60. An exemption in some premises and not others might also be confusing for the public and for local authorities enforcing the levy.

Test runs of Business Forms

61. There are no business forms prepared at the moment. As indicated elsewhere, if the Bill should progress to Stage 2, the Executive would intend to establish an implementation group, including business interests. Part of the role of this group would be to consider drafts of standard forms (eg to register with authorities as a supplier of plastic bags and to send in returns to local authorities of the number of bags supplied).

Competition Assessment

62. The Executive considers the following is the position in relation to the competition filter test questions.

Question 1: In the market(s) affected by the new regulation, does any firm have more than 10% market share?

Yes, in the retail market.

Question 2: In the market(s) affected by the new regulation, does any firm have more than 20% market share?

Yes, in the retail market.

Question 3: In the market(s) affected by the new regulation, do the largest three firms together have at least 50% market share?

Yes, in the retail market.

Question 4: Would the costs of the regulation affect some firms substantially more than others?

Yes. As outlined in the RIA, SMEs and the non-food sector would face more costs than large non-food retailers. In addition, as currently drafted the Bill only impacts on plastic bags and so would impact on the plastics industry but not other industries manufacturing and distributing other types of bags.

Question 5: Is the regulation likely to affect the market structure, changing the number or size of firms?

Yes. Some firms engaged in the manufacture and distribution of bags may close. In the retail sector, SMEs and non-food shops will have a greater cost burden than the larger food retail sector.

Question 6: Would the regulation lead to higher set-up costs for new or potential firms that existing firms do not have to meet?

No. All firms – new and existing - supplying plastic bags would have to register with the local authority.

Question 7: Would the regulation lead to higher ongoing costs for new or potential firms that existing firms do not have to meet?

No. All firms – new and existing – supplying plastic bags would have to send returns to the local authority.

Question 8: Is the sector characterised by rapid technological change?

No.

Question 9: Would the regulation restrict the ability of firms to choose the price, quality, range or location of their products?

No.

63. The Executive considers that the impacts on different business sectors are:

- The industry that manufactures and distributes plastic bags will be adversely affected.
- Small retailers and non-food retailers will be adversely affected.
- There could be benefits for industries involved with other types of bags, such as paper.
- There could also be increased sales of bin-liners and “bags for life”.

Enforcement, Sanctions and Monitoring

64. The enforcement of the levy would be a matter for local authorities. The Bill contains a number of offences/civil penalties:

- Failure to charge the levy would be an offence. The penalty on summary conviction is a fine, not exceeding level 3 on the standard scale [£1,000] and a penalty of £100 for each occasion when a customer who was required to be charged the levy was not so charged.
- Wilfully delaying or obstructing a local authority authorised officer would be an offence. The penalty on summary conviction is a fine, not exceeding level 3 on the standard scale [£1,000].
- Failing to register with the local authority could lead to a civil penalty. The penalty is £100 for each infringement.
- Failing to submit a return to the local authority could lead to a civil penalty. The penalty is £100 for each infringement.

- Failing or delaying to pay the amount of levy collected to the local authority could lead to a civil penalty. The penalty is £100 for each infringement.

65. Under section 9 of the Bill, local authorities would have to submit annual reports to the Scottish Ministers. The Scottish Ministers would monitor these returns, and keep in contact with the business community, to check on the effectiveness of the legislation.

Implementation and delivery plan

66. If the Bill should proceed past Stage 1, the Scottish Executive would intend to establish an implementation group with representatives from business, the voluntary sector, local authorities, the Scottish Environment Protection Agency and the Scottish Waste Awareness Group.

Post-implementation review

67. If the levy should be enacted, the Scottish Ministers would intend, in the first instance, to monitor the annual reports submitted by local authorities to see if the levy was being administered well. If these reports suggested that there were any difficulties, or major concerns were raised by business interests, the Executive would re-establish its implementation group.

Summary and recommendation

68. The Scottish Executive has not yet taken a position on the Bill. We have continued to promote voluntary measures to reduce the unnecessary use of plastic bags.

Summary costs and benefits table

69. A summary of the costs and benefits is attached below:

Option	Total benefit per annum: economic, environmental, social	Total cost per annum: - economic, environmental, social - policy and administrative
1: Status quo	NIL	NIL
2: Levy on plastic bags	<ul style="list-style-type: none"> • Some £21.2 million saved/gained by retailers a year. • Decreased use of plastic bags in Scotland: around 90% in Ireland • Increased public awareness. • Decreased impact of plastic bags on wildlife. • Decreased impact of plastic bags in the litter stream (albeit marginal) • Income for local authorities of around £4,250,000 a year for environmental projects (from AEAT Report) • Increased opportunities for paper bag manufacturers in Scotland (although there is no guarantee that UK retailers will purchase bags made in Scotland/UK). • One-off opportunities for shop-fitters. 	<ul style="list-style-type: none"> • Between £3.3 million and £4.6 million one-off costs incurred by retailers • Between £37.8 and £43.7 annual costs incurred by retailers • Up to 400 jobs in Scotland affected. • Economic cost felt disproportionately by SMEs • Increased use of paper bags. • Possible increase in waste generated in Scotland of 13,742 tonnes a year (from Scottish Executive supplementary evidence). • Local authorities would need to administer and enforce the levy. • Local authorities would incur start-up costs of around £3.5 million (from AEAT Report). These might decrease as Scottish Executive runs awareness campaign, rather than authorities. • Consumers would need to pay the levy and purchase more bin-liners and “bags for life”.
3. Voluntary Code of Practice on supplying plastic bags	<ul style="list-style-type: none"> • £1.1 million saved/gained by retailers. • Decreased use of plastic bags in Scotland: around 25% in Australia • Some increased public awareness • Some decreased impact on plastic bags on wildlife. • Some decreased impact of plastic bags in the litter stream 	<ul style="list-style-type: none"> • £1.7 million one-off costs incurred by retailers. • Between £0.1 and £0.2 million annual costs incurred by retailers. • Up to 110 jobs in Scotland affected.
4 Levy on both plastic and paper bags	<ul style="list-style-type: none"> • £30.1 million saved/gained by retailers a year. • Decreased use of plastic and paper bags in Scotland. • Increased public awareness. • Decreased impact on plastic bags on wildlife. • Decreased impact of plastic bags in the litter stream. • Decrease in amount of waste generated in Scotland. • Income for local authorities for environmental projects. 	<ul style="list-style-type: none"> • Between £3.3 million and £4.6 million one-off costs incurred by retailers. • Between £6.6 and £12.4 million annual costs incurred by retailers. • Up to 650 jobs affected in Scotland. • Local authorities would need to administer and enforce the levy. • Consumers would need to pay the levy and purchase more bin-liners and “bags for life”.

Declaration and publication

I have read the regulatory impact assessment.

Signed

November 2005

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ANNEX A: PROVISIONS OF THE ENVIRONMENTAL LEVY ON PLASTIC BAGS (SCOTLAND) BILL

1. The Bill would impose a 10p levy on specified plastic bags, with the levy being enforced by local authorities.

2. There are a number of exemptions in the Bill. These exemptions cover:

- Small bags used to contain any unpackaged food for human or animal consumption. “Small bags “ are defined for the purposes of this exemption as bags which when measured flat with any gussets opened are not larger than 300 mm by 300 mm. Under section 2(4), the Scottish Ministers may make an affirmative resolution Order to reduce the size of bags subject to this exemption.
- Bags used for packaging any goods and sealed before the goods are offered for retail sale or supply. The Explanatory Notes prepared by the Non-Executive Bills Unit on behalf of Mike Pringle MSP indicate that bags that would fall within exemption include bags used to contain pre-packed nails, dog food, toilet rolls, compost, frozen goods and cereals.
- Bags sold in the ordinary course of trade for use by the customer away from the premises at which they are sold. The Explanatory Notes indicate that this is intended to exempt plastic bags that are sold in rolls, bags or boxes with the expectation that the customer will be buying them to use elsewhere such as rolls of black bin bags used for domestic or garden waste, rolls of pedal bin liners, nappy sacks and dog fouling bags.
- Bags provided to the customer for the transmission of goods to the supplier. The Explanatory Notes indicate that examples include charity collection bags and money bags used by banks.
- Bags designed for re-use which are sold to the customer at a cost of at least 5 times the amount of the levy. Under section 2(4), the Scottish Ministers may make an affirmative resolution Order to alter this multiplier, but not to less than 3.
- Bags designed to be used for the disposal of waste. The Explanatory Notes indicate that nappy sacks provided in the suppliers’ customers toilets or dog fouling bags provided by a supplier would be able to be used in or around the premises without the levy being charged.
- Bags used to contain goods sold on board a ship, aircraft, train or bus used for carrying passengers although bags issued at ports or airports (eg at duty free shops) are not exempt under the current drafting of the Bill.

3. Under section 3 of the Bill, any person who provides a non-exempt plastic bag to a customer in the course of business must charge the customer a levy and must ensure the amount charged is itemised on any invoice or receipt issued to the customer.

4. Under section 4, suppliers of plastic bags must register beforehand with the local authority where the bags are to be provided. Under the provisions of the Bill as currently drafted, **all** bodies supplying bags in the course of business would have to register with the relevant local authority(ies), even if the number of bags provided is low.

5. Section 4 also gives the Scottish Ministers the power to make regulations to make further provision in relation to registration. If the Bill should become law, the Scottish Executive would intend, either by regulatory or administrative means and in consultation

with CoSLA and business organisations, to introduce a standard registration form for local authorities to use across Scotland and to provide advice and guidance to local authorities on registration procedures (including accepting registrations electronically).

6. Section 5 requires suppliers of plastic bags to submit returns to local authorities indicating how many bags subject to the levy were supplied in a given period. Suppliers would also have to pay the amounts raised by the levy to the local authority. Section 5 lays down that returns and moneys would have to be sent to the local authority no more frequently than monthly. Again, if the Bill should become law, the Scottish Executive would propose to produce standard forms, for use by local authorities across Scotland, and would also intend to provide advice and guidance on collection procedures. Section 5 gives the Scottish Ministers the power to make further regulations on returns and the times and methods of payments.

7. Section 5 also lays down, as currently drafted, that where a supplier provides plastic bags at more than one location within an authority, a separate return would be required for each outlet, unless the local authority and the supplier otherwise agree.

8. If the Bill should become law, the Scottish Executive would intend to discuss with CoSLA whether administrative cost savings (for both local authorities and business submitting returns) could be made by local authorities establishing joint arrangements to collect the levy. There are a number of powers in existing legislation to set up joint arrangements between authorities, such as:

- Section 56 of the Local Government (Scotland) Act 1973 empowers one authority to arrange for its functions to be discharged by another.
- Section 57 of the 1973 Act empowers authorities to set up joint committees.
- Section 62A of the 1973 Act, as inserted by section 20 of the Local Government etc. (Scotland) Act 1994, empowers the Scottish Ministers to incorporate local authority joint committees into joint boards.
- Section 62B of the 1973 Act, as inserted by section 20 of the 1994 Act, empowers the Scottish Ministers to establish a joint local authority board, after consulting the relevant authorities
- Section 65 of the 1973 Act empowers one local authority to place staff with another local authority.

9. Section 6 of the Bill requires suppliers to keep full and accurate records of the number of non-exempt bags provided to customers, and the amounts of levy received. The supplier must retain the records kept under this section, together with all other documents containing particulars on which the records are based, for a period of at least 5 years from the date of the return made under section 5. The Explanatory Notes indicate that supporting documents which would need to be kept include invoices from suppliers and till receipts to customers.

10. Section 7 of the Bill lays down that local authorities would have to supply information to suppliers on registration requirements; frequency of returns and payments; form of returns and any supporting documentation and methods of payments. Again, the Scottish Ministers can make further provision by regulation. The Executive considers that businesses should be given maximum flexibility in relation to making payments, so that authorities would accept electronic transfers, cash, credit cards, cheques and other reasonable forms of payment.

ANNEX B: POINTS MADE BY BUSINESS DURING CONSULTATION ON THIS RIA

1. Points made were:

- Stock records at smaller businesses may not always be accurate at the moment.
- Counting plastic bags is a time-consuming exercise.
- There can be discrepancies between the number of plastic bags advertised to be in a box and the number of bags actually in a box.
- Companies will need to show receipts from the proposed plastic bag levy separately in their accounts, to ensure that their turnover is not inflated artificially.
- The lack of clarity on whether or not the proposed levy would itself be subject to VAT would add to potential uncertainty.
- Whilst larger companies may supply bar-coded plastic bags, which could be recorded easily by modern tills, smaller companies may not have the till technology to supply and record bags in this way.
- Bags provided to business may not necessarily be supplied to customers. They might be used for other purposes (eg clearing up mess).
- Bags in plastic bags distributors' warehouses may be owned by the final supplier but not actually delivered to the supplier until required (because the supplier may not have much space to store bags).

2. In some cases, plastic bags may be bar-coded and recorded accordingly by modern till machines. This should make supplying the information required by sections 5 and 6 (on number of bags provided and levy collected) straightforward.

3. In other cases, however, businesses may not have modern till machines and bar-coded plastic bags. This makes it harder to provide the correct information. In theory, shop-keepers could count the number of bags in stock at the beginning of a period and the number of bags at the end. In practice, however, the Executive would expect businesses without automatic recording systems to estimate the number of bags in stock at the end of the period and the number at the end, taking account of any that have been used in store without supplying them to the customer.

4. For the purposes of the levy, if it should be enacted, the Executive considers it would be reasonable for a supplier to assume that information provided to them on the number of bags in a box is accurate (even if in practice there might be a minor discrepancy between the number in the box and on the label). The Executive also considers that it would be reasonable to use information provided in invoices. The Executive further considers it reasonable not to take account of any bags owned by suppliers but not actually on their premises.

ANNEX C: ENVIRONMENTAL BENEFITS/DISBENEFITS OF THE BILL

1. Key environmental impacts of the Bill are:

- A reduction of 90% in the use of plastic bags, as appears to be the case in Ireland. [Revenue from the levy in the Republic of Ireland is around €12 million Euros a year. At 15 cents a bag, this equates to 80 million bags a year in Ireland, with a population of around 4 million. Scotland, with a population of around 5 million, uses around 775 million lightweight plastic bags a year, according to the AEAT study commissioned by the Executive].
- An increase in waste awareness (including messages about reducing waste). However, in Scotland, recycling rates for municipal waste have already increased after local authorities have improved facilities following Strategic Waste Fund awards by the Executive. The AEAT study notes, on page 7 of Volume 1, that “introduction of the [Irish] levy coincided with introduction of Ireland’s Waste Strategy”.
- The Marine Conservation Society has noted that plastic bags can impact on wildlife. The SSPCA dealt with 9 telephone calls in 2004 about animals suffering due to plastic bags (out of a total of 96,697 telephone calls in 2004) and have dealt with 12 calls so far in 2005. The SSPCA also note that there is some anecdotal evidence that agricultural animals and horses can consume plastic materials, causing death: they received one phone call of this nature in August 2005. However, the State Veterinary Service has not found plastic bags to have a significant impact on the health of farm animals.
- Friends of the Earth Scotland have carried out some calculations on the perceived benefits of the proposed levy. Based on an Australian study, FoES estimate that the energy embodied and consumed in the manufacturing process of a typical single high density polyethylene bag is 0.48MJ per bag (with 8.7 bags equivalent to driving a car 1km).
- Friends of the Earth Scotland further estimate from this that a reduction of 800 million bags used would be equivalent to a reduction of 92 million car kilometres. (Key Scottish Environment Statistics show that a total of 33,674 million vehicle kilometres were driven in Scotland in 2004. A reduction of 92 million would be the equivalent of 0.27%). [Using the figures from the AEAT Report suggests that a reduction of 800 million bags after a levy in Scotland may be slightly higher than anticipated].
- Friends of the Earth Scotland add that if one in eight bags is LDPE and the rest HDPE, the net environmental benefits would be: 480 MJ energy; 12,800 tonnes of CO₂ equivalents and 4,270 tonnes of waste avoided.
- However, a levy on plastic bags would be likely to increase the use of paper bags. Although paper bags are more likely than plastic bags to be made from recycle and to be made in Scotland or the UK, the AEAT study indicates that they consume slightly more energy than HDPE plastic bags when being manufactured, consume 4 times the amount of water and generate 2.7 times the amount of solid waste.
- If the levy was applied was to plastic bags only, waste generated in Scotland could increase by around 13,742 tonnes a year (supplementary evidence prepared by the Scottish Executive).

2. There are a number of factors which make it difficult to quantify the exact environmental implications of the Bill as drafted: waste awareness is hard to quantify; the exact impact of plastic bags on wildlife is also hard to quantify, given that wildlife, by their

very nature, generally lives away from human contact and measurement and the exact switch to paper bags if a levy should be introduced is hard to quantify.

3. Overall, however, plastic bags are not significant in relation to the litter and waste streams. The AEAT study says, on page 25, that the overall environmental impact of a levy on plastic bags “is predicted to remain very similar to today’s situation. This is because the benefits of reducing plastic carrier bag use are displaced by the increased use of paper bags”.

ANNEX D: PLASTICS COMPANIES IN SCOTLAND THAT COULD BE AFFECTED BY THE LEVY

1. In Scotland, the plastic bag manufacturing industry is now relatively small. The Scottish Executive is aware of three companies based in Scotland that have an involvement in manufacturing plastic bags. British Polythene Industries (BPI) are a major plastics company, with their Headquarters in Greenock. They have a plant in Cowdenbeath which employs around 60 people. The Executive understands that around one third of this plant's turnover relates to the manufacture of HDPE bags, often small runs for charities.

2. MacKinnon and Hay, based in Penicuik, are involved in the manufacture of LDPE bags. They employ around 15 people.

3. The Executive also understands that Tough Packaging, another SME, manufacture and extrude plastic film in Alness. They are also involved in supplying plastic and paper bags and other packaging material.

4. Therefore, the Executive considers that up to 100 jobs in manufacturing could be directly affected by the levy

5. The Executive is aware of the following companies in Scotland engaged in distribution:

- SIMPAC Glasgow. SIMPAC employ around 140 people in the manufacture of paper packaging and in the purchasing, warehousing and distribution of polythene packaging.
- Travelstock (Packaging) Ltd, Aberdeen. Distribute printed films, bags and carriers.
- T J Wright (Packaging) Ltd, Glasgow. Supply paper and polythene carrier bags
- George E Morris and Co, Glasgow. Bag merchant.
- C S Robertson (Packaging) Ltd. Bag supplier.
- Glasgow Packaging and Print Ltd. Bag supplier.
- Marshall Wilson Packaging Limited, Glasgow. Supplies packaging materials to the independent retail sector in Scotland. Employ 12 people.
- Peter Bryson Packaging Ltd, Glasgow. Bag supplier.
- East of Scotland Contracts Ltd. Supply plastic and paper bags. Employ 6 people.
- Edward McNeil. Employs around 40 people.
- Park Packaging. Employs around 20 people.
- Kelpack. Employs around 20 people.
- Plaspac, East Lothian. Supply retail and industrial packaging, including bags.
- Baggit Limited, West Lothian.

6. Other than SIMPAC, most of these companies are relatively small. **The Executive considers that up to 300 non-manufacturing jobs could be directly affected by the levy.**

7. Therefore, **in the Executive's view, around 400 jobs could be directly affected by the levy.** There could also be indirect effects, on other bodies working with the companies listed above.

8. However, many of the companies listed above will also distribute other products (eg paper bags) and will also distribute to other parts of the UK, where there are no current plans to introduce a levy. There could also be opportunities for business if there should be an increase in demand for paper bags, “bags for life” and bin liners.

ANNEX E: POTENTIAL IMPACT OF THE LEVY ON PLASTIC BAGS ON LARGE FOOD RETAILERS

1. The AEAT study indicates, on page 33 of Volume 1, that spending at SMEs accounts for 30% of total household expenditure. This suggests that 70% of expenditure is at larger stores. The AEAT study also suggests, on page 19 of Volume 1, that 64% of household expenditure needing a carrier bag relates to food (and beverages). For the purposes of this RIA, therefore, the Executive has assumed that 44.8% of household expenditure involving a carrier bag takes place in larger food retailers.

2. Table 4.2 in the AEAT study shows estimated annual carrier bag consumption under the different scenario. Across Scotland, current consumption of HDPE lightweight bags is 775 million. After any levy is introduced, it is assumed this will fall to 78 million. In relation to large food retailers, current consumption is 347,200,000. Consumption after the levy would be 34,944,000. The saving in bags is 312,256,000.

3. Table 2.1 in the AEAT study shows the average cost to the retailer of various types of bags. 1,000 bags cost £7.47. This suggests that the saving for large food retailers would be 312,256,000 divided by 1,000 and multiplied by £7.47. This produces a figure of £2,332,552.32. As oil prices have increased since the AEAT Report was published, impacting both on the price of bags and the cost of transporting them, it is reasonable to increase this figure by 10%. **This produces total annual savings to large food retailers from reducing their free supply of plastic bags to customers of £2,565,807.50.**

4. It is assumed that large food retailers will not supply more paper bags after the levy is introduced. It is assumed that the increase in “bags for life” will be entirely due to them being sold by large food retailers after the levy is introduced (“bags for life” are predominantly found in large food retailers rather than in non-food retailers or SMEs). Before any levy is introduced, AEAT estimate that current annual consumption of “bags for life” is around 8 million. After the levy, it would increase to 23 million: a difference of 15 million.

5. Under the Bill, “bags for life” would not be subject to the levy so long as they are sold at a cost of at least 5 times the amount of the levy (i.e. 50 pence). Assuming retailers decide to sell “bags for life” at 50 pence, rather than charge the levy, this would produce increased annual revenue to the large food retailers of £7.5 million. The cost to retailers of purchasing “bags for life” is shown in Table 2.1 of the AEAT Report as £60.88 per thousand. Purchasing 15 million would therefore cost the retailers £913,200. Increasing this by 10% to allow for the inflation in the oil price, produces a figure of £1,004,520. Therefore, **sales of “bags for life” could produce annual income for large food retailers of £6,495,480.** This would, of course, have to be paid for by the consumer.

6. Currently, “bags for life” are often replaced free of charge by retailers when they run out. However, it does not appear that this would be legal if the Bill should become law: either the 10p levy would have to be charged or replacement “bags for life” would have to be sold at 50p. This could increase the income stream for retailers in relation to both the existing “bags for life” sold and the further ones that might be sold after the introduction of a levy. For the purposes of this RIA, we have only quantified the increased income in relation to additional “bags for life” sold.

7. The AEAT Study suggests that before any levy, annual bin liner consumption in Scotland is 118 million and that after any levy it would be 208 million: a difference of 90 million. It seems reasonable to assume that sales of bin liners would be split 70%/30% between larger retailers (those selling food) and SMEs, in line with the general split outlined in the AEAT Study.

8. The AEAT study does not give any prices for bin liners. However, www.polybags.co.uk [accessed on 8 November] gives a figure of £17.39 per 1,000 for White High Density Swing Bin Liner, if purchasing over 25,000. For large retailers, therefore, purchasing 63 million (70% of 90 million) would cost £1,095,570. The retail price for such bags is around £1 per a pack of 10: this indicates that a total of 63 million would sell for around £6,300,000. **Therefore, this would produce a total increased net annual revenue stream for large food retailers of £5,204,430.** This would, of course, have to be paid for by the consumer.

9. The Bill will require all businesses supplying bags to register with the local authority and submit returns and the amounts raised by the levy. Businesses will also have to keep records. For the purposes of RIAs, standard hourly rates are used to calculate the cost of time spent on burdens. These hourly rates are as follows:

Management level	Hourly rate for 2005/06 financial year
Director	76.32
Senior Manager	59.36
Middle Manager	40.98
Junior Manager	31.09
Clerical	19.76

10. It is likely that all large food retail outlets would have to register with the local authority, as they are likely to continue to provide some plastic bags to customers after the introduction of any levy. The Bill would allow all premises run by a company within a local authority to be registered at the same time, although the supplier would have to register with each local authority where bags would be provided after the levy. Registration could be expected to take around 2 hours and may have to be carried out by a manager, given that the process is novel. Depending on the level of manager, this would cost between £31.09 (junior manager) and £40.98 (middle manager) per hour. Multiplied by 2 hours, by the 32 local authorities and by the [approximately] 10 large food retail chains in Scotland, the total figure would therefore be between £19,897.60 and £26,227.20. **The cost to large food retail chains of registering with local authorities before supplying plastic bags is therefore estimated at between around £19,900 and £26,300.**

11. This is largely a one-off cost although there would be changes required to the original registration as new outlets open up and old ones shut down and outlets change hands. However, this is a marginal cost and is therefore regarded as de minimis for the purposes of this RIA.

12. Large food retailers will also need to keep records and send in returns to local authorities. The stock control systems operated by large retailers should make it relatively straightforward to keep records and send in returns, although, as outlined below, there may be costs involved in updating till software. Returns from large retailers are likely to be monthly, given the volume of activity in these stores. Section 5(3) of the

Bill would allow the retailer and the local authority to agree that a joint return could be provided covering all of the retailer's outlets in a local authority area.

13. Keeping records and returns can be expected to take around 2 hours a month. Depending on the level of staff member, this would cost between £19.76 (clerical) and £40.98 (middle manager) per hour. Multiplied by 2 hours, by 32 local authorities, by the [approximately] 10 large food retail chains in Scotland, by 12 months, this amounts to between £151,756.80 and £314,726.40. **The annual cost to large food retailers of keeping records and sending in returns to local authorities is therefore estimated at between £151,750 and £315,000.**

14. Finally, large food retailers may need to adapt tills and till-lines and may need to take anti-theft measures. The AEAT study indicates on page 7 of volume 1, in relation to the Irish PlasTax, that "the main cost to retailers was updating their software so that till receipts would itemise the sale of plastic carrier bags". The Executive considers that large food retailers would also wish to ensure that bags put through the till are recorded automatically to help with the returns to local authorities. In some cases, till-lines may also need to be adjusted to give cashiers more control in relation to handing out plastic bags (this would provide a brief spin-off benefit for the re-fitting industry). Finally, retailers may wish to provide security guards some training on procedures to follow if a levy should be introduced, and a greater variety of bags used in-store.

15. It is difficult to quantify the cost of these measures. However, they apply per outlet, rather than by company, and are one-off costs: the Executive would expect that future design of till lines, tills and training of staff would take automatic account of any levy, at minimal cost. It appears to the Executive that a cost per store of £500 is reasonable.

16. The SRC indicate in their evidence to Committee that 92% of retail stores in Scotland are smaller businesses. This suggests that 8% are larger businesses. [This relates to the **number** of stores. Larger retailers have a larger share of the market as the volume of transactions in their stores is greater]. 64% of purchases using a carrier bag relate to food and beverages: so around 5.12% of stores in Scotland are large food retailers. Page 43 of Volume 1 of the AEAT Report indicates that there are 52,690 retail outlets in Scotland. This suggests that there are around 2,698 large food stores in Scotland.

17. The one-off cost of updating till lines, tills and security measures to take account of the levy is £500 (cost per store) x 2,698 (number of stores). This produces a figure of £1,349,000. **Therefore, it is estimated that the one-off cost to large food retailers of updating their stores to take account of any levy is £1,349,000.**

18. A summary of costs/savings to the large food retail sector in Scotland is shown below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	2,565,807.50		
Selling additional "bags for life"	6,495,480		
Selling additional bin liners	5,204,430		
Cost of registering with local authority		19,900 – 26,300	
Keeping records and sending in returns			151,750 - 315,000
Updating tills, till lines and security		1,349,000.	
Totals	14,265,717	1,368,900 - 1,375,300	151,750 - 315,000
Rounded	£14.3 million	£1.4 million	£0.2 - £0.3 million

ANNEX F: POTENTIAL IMPACT OF THE LEVY ON LARGE NON-FOOD RETAILERS

1. The costs and benefits for large non-food retailers are outlined below.
2. 70% of household expenditure involving plastic bags is at larger stores and 36% of household expenditure involving a carrier bag relates to non-food items. For the purposes of this RIA, therefore, the Executive has assumed that 25.2% of household expenditure involving a carrier bag takes place in larger non-food retailers.
3. Table 4.2 in the AEAT study shows estimated annual carrier bag consumption under the different scenario. Across Scotland, current consumption of HDPE lightweight bags is 775 million. After any levy is introduced, it is assumed this will fall to 78 million. In relation to large non-food retailers, current consumption is 195,300,000. Consumption after the levy would be 19,656,000. The saving in bags is 175,644,000.
4. Table 2.1 in the AEAT study shows the average cost to the retailer of various types of bags. 1,000 bags cost £7.47. This suggests that the saving for large non-food retailers would be 175,644,000 divided by 1,000 and multiplied by £7.47. This produces a figure of £1,312,060.68. As oil prices have increased since the AEAT Report was published, impacting both on the price of bags and the cost of transporting them, it is reasonable to increase this figure by 10%. **This produces total annual savings to large non-food retailers from reducing their free supply of plastic bags to customers of £1,443,266.75**
5. It is assumed that large non-food retailers will supply more paper bags after the levy is introduced. The AEAT study suggests that the number of paper bags used in Scotland after the introduction of a plastic bags levy would rise from 39 million to 213 million: an increase of 174 million. Taking the previously used 70/30 split in relation to expenditure in larger stores and expenditure in SMEs, it is assumed that around 121,800,000 of the increase would fall to larger non-food retailers.
6. The AEAT Report indicates in footnote 40 on page 33 that the average cost of paper bags to the retailer is £163.33 per 1,000. This suggests that the cost of providing additional bags for large non-food retailers would be 121,800,000 divided by 1,000 and multiplied by £163.33. This produces a figure of £19,893,594. Adding 10% to reflect oil price increases produces £21,882,953. **Therefore, the estimated annual cost to large non-food retailers of providing additional paper bags is £21,882,953.**
7. It is likely that all large non-food retail outlets would have to register with the local authority, as they are likely to continue to provide some plastic bags to customers after the introduction of any levy (eg if it rains). Registration could be expected to take around 2 hours and may have to be carried out by a manager, given that the process is novel. Depending on the level of manager, this would cost between £31.09 (junior manager) and £40.98 (middle manager) per hour. Multiplied by 2 hours, by the 32 local authorities and by the [approximately] 20 large non-food retail chains in Scotland, the total figure would therefore be between £39,795.20 and £52,454.40. **The cost to large non-food retail chains of registering with local authorities before supplying plastic bags is therefore estimated at between around £39,800 and £52,500.**
8. Large non-food retailers will also need to keep records and send in returns to local authorities. Keeping records and returns can be expected to take around 2 hours a month. Depending on the level of staff member, this would cost between £19.76

(clerical) and £40.98 (middle manager) per hour. Multiplied by 2 hours, by 32 local authorities, by the [approximately] 20 large non-food retail chains in Scotland, by 12 months, this amounts to between £303,513.60 and £629,452.80. **The annual cost to large non-food retailers of keeping records and sending in returns to local authorities is therefore estimated at between £303,500 and £630,000.**

9. Finally, large food retailers may also need to adapt tills and till-lines and may need to take anti-theft measures. However, the Executive would expect these issues to be less burdensome for non-food retailers than for food retailers. The issue of bags being currently readily available to consumers is less of a problem for non-food retailers. It is also less likely that theft will be an issue in non-food stores, given the expected shift to paper bags. It therefore appears to the Executive that a cost per non-food store of £250 is reasonable.

10. 8% of stores are larger businesses and 36% of purchases using a carrier bag relate to non-food items. So around 2.88% of stores in Scotland are large non-food retailers. There are 52,690 retail outlets in Scotland. This suggests that there are around 1,517 large non-food stores in Scotland.

11. The one-off cost of updating tills to take account of the levy is £250 (cost per store) x 1,517 (number of stores). This produces a figure of £379,250 **Therefore, it is estimated that the one-cost to large non-food retailers of updating their stores to take account of any levy is £379,250.**

12. A summary of costs/savings to the large non-food retail sector in Scotland is shown below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,443,266.75		
Increasing number of paper bags			21,882,953
Cost of registering with local authority		39,800 – 52,500	
Keeping records and sending in returns			303,500 – 630,000
Updating tills, till lines and security		379,250	
Totals	1,443,266.75	419,050 – 431,750	22,186,453 – 22,512,953
Rounded	£1.4 million	£0.4 million	£22.2 – £22.5 million

ANNEX G: POTENTIAL IMPACT OF THE LEVY ON SME FOOD RETAILERS

1. The costs/benefits to food stores in the SME sector are outlined below.
2. 30% of household expenditure involving plastic bags is in SMEs and 64% of household expenditure needing a carrier bag relates to food (and beverages). For the purposes of this RIA, therefore, the Executive has assumed that 19.2% of household expenditure involving a carrier bag takes place in food stores in the SME sector.
3. Across Scotland, current consumption of HDPE lightweight bags is 775 million. After any levy is introduced, it is assumed this will fall to 78 million. In relation to SME food retailers, current consumption is 148,800,000. Consumption after the levy would be 14,976,000. The saving in bags is 133,824,000.
4. Plastic bags are likely to cost food retailers in the SME sector more than they cost large retailers as the large retailers have considerable economies of scale in their purchasing power. The figures in the AEAT study shows the average cost to the large retailer of various types of bags and the Executive considers it appropriate to use different figures for the SME sector. A reasonable assumption is to assume that the cost to small retailers of plastic bags is double: this produces a figure of £14.94 per 1,000 (doubling the figure of £7.47 in the AEAT study).
5. This suggests that the saving for SME food retailers would be 133,824,000 divided by 1,000 and multiplied by £14.94. This produces a figure of £1,999,330.50. As oil prices have increased, impacting both on the price of bags and the cost of transporting them, it is reasonable to increase this figure by 10%. **This produces total annual savings to SME food retailers from reducing their free supply of plastic bags to customers of £2,199,263.50.**
6. It is assumed that SME food retailers will not supply more paper bags after the levy is introduced. It is further assumed that the increase in “bags for life” will be entirely due to them being sold by large food retailers after the levy is introduced (“bags for life” are predominantly found in large food retailers rather than in non-food retailers or SMEs).
7. The AEAT Study suggests that before any levy, annual bin liner consumption in Scotland is 118 million and that after any levy it would be 208 million: a difference of 90 million. It seems reasonable to assume that sales of bin liners would be split 70%/30% between larger retailers (those selling food) and SMEs (again, those selling food), in line with the general split outlined in the AEAT Study.
8. The AEAT study does not give any prices for bin liners. However, www.polybags.co.uk [accessed on 8 November 2005] gives a figure of £20.50 per 1,000 for White High Density Swing Bin Liner, if purchasing between 5,000 – 9,000. For SME retailers, therefore, purchasing 27 million (30% of 90 million) would cost £553,500. The retail price for such bags is around £1 per a pack of 10: this indicates that a total of 27 million would sell for around £2,700,000. **Therefore, this would produce a total net annual revenue stream for SME food retailers of £2,146,500.** This would, of course, have to be paid for by the consumer.
9. The Bill will require all businesses supplying bags to register with the local authority and submit returns and the amounts raised by the levy. Businesses will also have to keep records. It is likely that all SME food retail outlets would have to register with the

local authority, as they are likely to continue to provide some plastic bags to customers after the introduction of any levy. The Bill would allow all premises run by a company within a local authority to be registered at the same time, although the supplier would have to register with each local authority where bags would be provided after the levy. Some SMEs will have more than one outlet in a local authority area but others will not. The total number of retail outlets in Scotland is 52,690: the SRC have indicated that 92% of these are SMEs. Approximately 64% of household expenditure involving a bag relates to food purchases. Therefore, approximately 31,024 of the retail outlets in Scotland can be assumed to be food SMEs.

10. Given that some of these retail outlets will have more than one store in a local authority area, it is reasonable to take half of 31,024 (i.e. 15,512) to produce a figure for the number of registrations required from SME food stores should the Bill be enacted. Registration could be expected to take around 2 hours. SMEs may not have a full staff of junior, middle and senior managers. The registration process may therefore cost between £31.09 per hour (junior manager) and £59.36 per hour (senior manager). Multiplied by 2 hours, by [approximately] 15,512 SME registrations, this would result in total costs of between £964,536.16 and £1,841,584.64. **The cost to SME food retail chains of registering with local authorities before supplying plastic bags is therefore estimated at between around £964,500 and £1,841,500.**

11. This is largely a one-off cost although there would be changes required to the original registration as new outlets open up and old ones shut down and outlets change hands. However, this is a marginal cost and is therefore regarded as de minimis for the purposes of this RIA.

12. SME food retailers will also need to keep records and send in returns to local authorities. Discussions with business and business representatives during the preparation of this RIA suggested that SMEs do not always have much time to operate tight stock control systems. The discussions also suggested that, unlike large retailers, SMEs generally do not have sophisticated till systems to assist with stock. One option if the levy should be enacted might be for SMEs to invest in such till systems. However, this appears to be a less likely option. Instead, the Executive would expect SMEs to estimate manually the number of bags provided. This is likely to mean that it will take longer for SMEs to keep records and send in returns than is the case for the larger retailers.

13. Conversely, however, the Executive would expect the local authority to need less frequent returns, given that fewer bags are likely to be provided. However, if returns are too infrequent, both the supplier and the local authority will lose track. Therefore, 6 monthly returns might be appropriate taking 4 hours of a manager's time. Taking into account the possibility of fewer tiers of management within an SME, this could cost between £31.09 per hour (junior manager) and £59.36 per hour (senior manager). Multiplied by 4 hours, by 2 returns per year, by [approximately] 15,512 registered SMEs, results in costs of between £3,858,144.64 and £7,366,338.56. **The annual cost to SME food retailers of keeping records and sending in returns to local authorities is therefore estimated at between around £3,858,000 and £7,366,000.**

14. The Executive doubts if many food SMEs will need to adjust the design of the till lines: this is more likely to be an issue for large retailers in city centre sites. Similarly, the Executive doubts if SMEs will need to take additional security measures. Again, this is more likely to be an issue for large (more anonymous) retailers.

15. A summary of costs/savings to the SME food retail sector in Scotland is shown below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	2,199,263.50		
Selling bin liners	2,146,500.		
Cost of registering with local authority		964,500 – 1,841,500	
Keeping records and sending in returns			3,858,000-7,366,000
Totals	4,345,763.50	964,500 – 1,841,500	3,858,000-7,366,000
Rounded	£4.3 million	£1.0 - £1.8 million	£3.9 - £7.4 million.

ANNEX H: POTENTIAL IMPACT OF THE LEVY ON NON-FOOD SME RETAILERS

1. The costs/benefits to the non-food SME sector are outlined below.
2. 30% of household expenditure involving plastic bags is in SMEs and 36% of household expenditure needing a carrier bag relates to food (and beverages). For the purposes of this RIA, therefore, the Executive has assumed that 10.8% of household expenditure involving a carrier bag takes place in non-food stores in the SME sector.
3. Across Scotland, current consumption of HDPE lightweight bags is 775 million. After any levy is introduced, it is assumed this will fall to 78 million. In relation to SME food retailers, current consumption is 83,700,000. Consumption after the levy would be 8,424,000. The saving in bags is 75,276,000.
4. As outlined in paragraph 4 of Annex G above, the cost of plastic bags to SMEs, before recent oil increases, is assumed to be £14.94 per 1,000. This suggests that the saving for SME non-food retailers would be 75,276,000 divided by 1,000 and multiplied by £14.94. This produces a figure of £1,124,623.40. As oil prices have increased, impacting both on the price of bags and the cost of transporting them, it is reasonable to increase this figure by 10%. **This produces total annual savings to SME non-food retailers from reducing their free supply of plastic bags to customers of £1,237,085.70.**
5. SME non-food retailers will supply more paper bags after the levy is introduced. The AEAT study suggests that the number of paper bags used in Scotland after the introduction of a plastic bags levy would rise from 39 million to 213 million: an increase of 174 million. Taking the previously used 70/30 split in relation to expenditure in larger stores and expenditure in SMEs, it is assumed that around 52,200,000 of the increase would fall to non-food SME retailers.
6. The average cost of paper bags is given in the AEAT Report as £163.33 per 1,000. This suggests that the cost of providing additional bags for SME non-food retailers would be 52,200,000 divided by 1,000 and multiplied by £163.33. This produces a figure of £8,525,826. Adding 10% to reflect oil price increases produces £9,378,409. **Therefore, the estimated annual cost to SME non-food retailers of providing additional paper bags is £9,378,409.**
7. It is assumed that non-food SME retailers will not be selling “bags for life” and will also not be selling bin liners.
8. It is likely that all SME non-food retail outlets would have to register with the local authority, as they are likely to continue to provide some plastic bags to customers after the introduction of any levy (eg when it rains). The total number of retail outlets in Scotland is 52,690: the SRC have indicated that 92% of these are SMEs. Approximately 36% of household expenditure involving a bag relates to non-food purchases. Therefore, approximately 17,451 of the retail outlets in Scotland can be assumed to be non-food SMEs.
9. Given that some of these retail outlets will have more than one store in a local authority area, it is reasonable to take half of 17,451 (i.e. 8,726) to produce a figure for the number of registrations required from SME non-food stores should the Bill be enacted. Registration could be expected to take around 2 hours. SMEs may not have a

full staff of junior, middle and senior managers. The registration process may therefore cost between £31.09 per hour (junior manager) and £59.36 per hour (senior manager). Multiplied by 2 hours, by [approximately] 8,726 SME registrations, this would result in total costs of between £542,582.68 and £1,035,950.72. **The cost to SME non-food retail chains of registering with local authorities before supplying plastic bags is therefore estimated at between around £542,500 and £1,036,000.**

10. This is largely a one-off cost although there would be changes required to the original registration as new outlets open up and old ones shut down and outlets change hands. However, this is a marginal cost and is therefore regarded as de minimis for the purposes of this RIA.

11. SME non-food retailers will also need to keep records and send in returns to local authorities. Discussions with business and business representatives during the preparation of this RIA suggested that SMEs do not always have much time to operate tight stock control systems. The discussions also suggested that, unlike large retailers, SMEs generally do not have sophisticated till systems to assist with stock. One option if the levy should be enacted might be for SMEs to invest in such till systems. However, this appears to be a less likely option. Instead, the Executive would expect SMEs to estimate manually the number of bags provided. This is likely to mean that it will take longer for SMEs to keep records and send in returns than is the case for the larger retailers.

12. Conversely, however, the Executive would expect the local authority to need less frequent returns, given that fewer bags are likely to be provided. However, if returns are too infrequent, both the supplier and the local authority will lose track. Therefore, 6 monthly returns might be appropriate taking 4 hours of a manager's time. Taking into account the possibility of fewer tiers of management within an SME, this could cost between £31.09 per hour (junior manager) and £59.36 per hour (senior manager). Multiplied by 4 hours, by 2 returns per year, by [approximately] 8,726 registered SMEs, total costs are estimated at between £2,170,330.72 and £4,143,802.88. **The annual cost to SME non-food retailers of keeping records and sending in returns to local authorities is therefore estimated at between around £2,170,000 and £4,144,000.**

13. The Executive doubts if many non-food SMEs will need to adjust the design of the till lines: this is more likely to be an issue for large retailers in city centre sites. Similarly, the Executive doubts if non-food SMEs will need to take additional security measures. Again, this is more likely to be an issue for large (more anonymous) retailers.

14. A summary of costs/savings to the SME non-food retail sector in Scotland is shown below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,237,085.70		
Increasing number of paper bags			9,378,409
Cost of registering with local authority		542,500–1,036,000	
Keeping records and sending in returns			2,170,000-4,144,000
Totals	1,237,085.70	542,500-1,036,000	11,548,408 – 13,522,409
Rounded totals	£1.2 million	£0.5 - £1 million	£11.5 - £13.5 million

ANNEX I: ESTIMATED IMPACT OF THE PROPOSED CODE OF PRACTICE ON LARGE FOOD RETAILERS

1. In relation to major food retailers, the main impact of the Code of Practice is likely to be:

- Reduction of about 25%, as in Australia, of use of carrier bags.
- No increase in paper bags or in sales of bin liners (there would still be enough plastic bags)
- Some increase in sales of “bags for life”. However, this is likely to be small (some people would re-use HDPE bags). In addition, the AEAT Report indicates that 1,000 “bags for life” cost £60.88 or 6p each. As they generally retail at around 10p, and are replaced free of charge, the retailers are unlikely to generate significant revenue from the sale of “bags for life”. [As indicated above, this would change if the Bill required retailers to sell “bags for life” for a higher price to avoid the levy].
- Even though not charged for, bags would need to be recorded by the tills when purchases are made to keep an accurate record of how many are provided. This may require some changes to till lines.
- Records would need to be kept of the number of bags provided and returns would have to be sent either to the British/Scottish Retail Consortium or to the Scottish Executive.

2. As indicated in paragraph 2 of Annex E above, current consumption of plastic bags by large food retailers is estimated at 347,200,000. After a Code of Practice came into force, this would decrease by 86,800,000 to 260,400,000. At £7.47 per 1,000 bags, this would produce a saving of £648,396 [86,800,000 divided by 1,000 and multiplied by £7.47]. Adding 10% for the recent increases in fuel costs indicates that **under this option large food retailers would save £713,235.60 a year in reducing the number of plastic bags handed out.**

3. The record keeping requirements for the Code of Practice would be different to the levy. There would still be a need for stores to keep records, although there would no longer be any need to send in returns to local authorities. Conversely, however, a manager within the business would need to collate the returns, around once a year, and send in a report to either the Scottish Retail Consortium or the Scottish Executive. Keeping records and returns can be expected to take around 2 hours a month of 5 staff members' time across Scotland and 8 hours of one manager's time once a year.

4. Regular record keeping could be undertaken by clerical level staff (£19.76/hour), or by junior or middle managers (£31.09 and £40.98 per hour respectively). Annual collating of records would be expected to be carried out by a manager senior to the record keeper, therefore a junior, middle or senior manager, at a cost of £31.09, £40.98 and £59.36 per hour respectively. Multiplied by 2 hours, by 5 record keepers across Scotland, by [approximately] 10 large food retailers across Scotland, by 12 months per year, the cost of record keeping would be between £23,712 and £49,176. Multiplied by [approximately] 10 large food retailers across Scotland, by 8 hours per year, the cost of collating records would be between £2,487.20 and £4,748.80. **The annual estimated cost to large food retailers of keeping records and sending in returns is therefore between approximately £26,200 and £53,900.**

5. The one-off cost of updating till lines, tills and security measures to take account of the code of practice is the same as for the levy. £500 (cost per store) x 2,698 (number of stores). This produces a figure of £1,349,000. **Therefore, it is estimated that the one-cost to large food retailers of updating their stores to take account of any levy is £1,349,000.**

6 A summary of costs/savings to the large food retail sector in Scotland is shown below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	713,235.60		
Keeping records and sending in returns			26,200 – 53,900
Updating tills, till lines and security		1,349,000	
Totals	713,235.60	1,349,000	26,200 – 53,900
Rounded totals	£0.7 million	£1.3 million	£0 - £0.1 million

ANNEX J: ESTIMATED IMPACT OF THE PROPOSED CODE OF PRACTICE ON LARGE NON-FOOD RETAILERS

1. The costs/benefits for large non-food retailers would be similar: a reduction of use in plastic bags; no increase in paper bags; need to keep records and send in returns and a one-off cost to update tills, till lines and security measures.

2. In relation to large non-food retailers, current consumption of plastic bags is 195,300,000. Consumption after the code of practice would fall by 48,825,000 to 146,475,000. This suggests that the saving for large non-food retailers would be 48,825,000 divided by 1,000 and multiplied by £7.47. This produces a figure of £364,722.75. Increasing this figure by 10% to reflect recent oil price rises **produces total annual savings to large non-food retailers from reducing their free supply of plastic bags to customers of £401,195.02.**

3. The record keeping requirements for the Code of Practice would be different to the levy. There would still be a need for stores to keep records, although there would no longer be any need to send in returns to local authorities. Conversely, however, a manager within the business would need to collate the returns, around once a year, and send in a report to either the Scottish Retail Consortium or the Scottish Executive. Keeping records and returns can be expected to take around 2 hours a month of 5 staff members' time across Scotland and 8 hours of one manager's time once a year.

4. Regular record keeping could be undertaken by clerical level staff (£19.76/hour), or by junior or middle managers (£31.09 and £40.98 per hour respectively). Annual collating of records would be expected to be carried out by a manager senior to the record keeper, therefore a junior, middle or senior manager, at a cost of £31.09, £40.98 and £59.36 per hour respectively. Multiplied by 2 hours, by 5 record keepers across Scotland, by [approximately] 20 large non-food retailers across Scotland, by 12 months per year, the cost of record keeping would be between £47,424 and £98,352. Multiplied by [approximately] 20 large non-food retailers across Scotland, by 8 hours per year, the cost of collating records would be between £4,974.40 and £9,497.60. **The annual estimated cost to large non-food retailers of keeping records and sending in returns is therefore between approximately £52,400 and £108,000.**

5. The one-off cost for large non-food retailers of updating tills to take account of the code of practice is the same as for the levy. This is £250 (cost per store) x 1,517 (number of stores). This produces a figure of £379,250. **Therefore, it is estimated that the one-cost to large non-food retailers of updating their stores to take account of any levy is £379,250.**

6. A summary of costs/savings to the large non-food retail sector is as follows:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	401,195.02		
Keeping records and sending in returns			52,400 – 108,000
Updating tills, till lines and security		379,250	
Totals	401,195.02	379,250	52,400 – 108,000
Rounded totals	£0.4 million	£0.4 million	£0.1 million

ANNEX K: ESTIMATED IMPACT OF LEVYING BOTH PLASTIC AND PAPER BAGS ON LARGE FOOD RETAILERS

1. In relation to large food retailers, the only significant impact of extending the levy to paper bags is that estimated sales of “bags for life” would increase from 8 million (with no levy) to 29 million (rather than 23 million with a levy on plastic bags only). This would be an increase of 21 million bags from the status quo.

2. Assuming retailers decide to sell “bags for life” at 50 pence, rather than charge the levy, this would produce increased annual revenue to the large food retailers of £10.5 million. The cost to retailers of purchasing “bags for life” is around £60.88 per thousand. Purchasing 21 million would therefore cost the retailers £1,278,480. Increasing this by 10% to allow for the inflation in the oil price, produces a figure of £1,406,328. Therefore, **sales of “bags for life” could produce increased annual income for large food retailers of £9,093,672.** This would, of course, have to be paid for by the consumer.

3. Again, for the purposes of this RIA we have not taken account of possible increased revenue from increased prices for the current number of “bags for life” sold by large food retailers.

4. A summary of the costs/benefits to the large food retailers of levying plastic and paper bags is shown below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	2,565,807.50		
Selling additional “bags for life”	9,093,672		
Selling additional bin liners	5,204,430		
Cost of registering with local authority		19,900 – 26,300	
Keeping records and sending in returns			151,750 – 315,000
Updating tills, till lines and security		1,349,000.	
Totals	16,863,909	1,368,900-1,375,300	151,750 – 315,000
Rounded total	£16.9 million	£1.4 million	£0.2 - £0.3 million

ANNEX L: ESTIMATED IMPACT OF LEVYING BOTH PLASTIC AND PAPER BAGS ON LARGE NON-FOOD RETAILERS

1. The main impact for large non-food retailers if paper bags should be levied as well would be that the number of paper bags provided to consumers would reduce from the status quo (rather than increase if just plastic bags were levied).

2. The AEAT study suggests that the number of paper bags used in Scotland after the introduction of a levy on both plastic and paper bags would fall from 39 million to 4 million: a decrease of 35 million. Taking the previously used 70/30 split in relation to expenditure in larger stores and expenditure in SMEs, it is assumed that around 24,500,000 of the increase would fall to larger non-food retailers.

3. The average cost of paper bags is given in the AEAT Report as £163.33 per 1,000. This suggests that the savings in providing fewer paper bags for large non-food retailers would be 24,500,000 divided by 1,000 and multiplied by £163.33. This produces a figure of £4,001,585. Adding 10% to reflect oil price increases produces £4,401,744. **Therefore, the estimated annual savings to large non-food retailers of providing fewer paper bags is £4,401,744**

4. A summary of the impact of levying plastic and paper bags on the non-food sector is given below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,443,266.75		
Reducing number of paper bags	4,401,744		
Cost of registering with local authority		39,800 – 52,500	
Keeping records and sending in returns			303,500 – 630,000
Updating tills, till lines and security		379,250	
Totals	5,845,011	419,050 – 431,750	303,500 – 630,000
Rounded totals	£5.8 million	£0.4 million	£0.3 - £0.6 million

ANNEX M: ESTIMATED IMPACT OF LEVYING BOTH PLASTIC AND PAPER BAGS ON NON-FOOD SMEs

1. For the SME non-food sector, the main difference if paper bags should be levied as well as plastic bags is that the number of paper bags provided would decrease, when compared with the status quo, rather than increase if a levy were introduced on plastic bags only.

2. The AEAT study suggests that the number of paper bags used in Scotland after the introduction of a levy on both plastic and paper bags would fall from 39 million to 4 million: a decrease of 35 million. Taking the previously used 70/30 split in relation to expenditure in larger stores and expenditure in SMEs, it is assumed that around 10,500,000 of the decrease would fall to non-food SME retailers.

3. The AEAT study indicates that the average cost of paper bags to the retailers is £163.33 per 1,000. This suggests that the savings in providing fewer paper bags for SME non-food retailers would be 10,500,000 divided by 1,000 and multiplied by £163.33. This produces a figure of £1,714,965. Adding 10% to reflect oil price increases produces £1,886,461.50. **Therefore, the estimated annual savings to SME non-food retailers of providing fewer paper bags is £1,886,461.50.**

4. A summary of the impact of levying plastic and paper bags on the SME non-food sector is given below:

Description	Annual Savings/Benefits £	One-off costs £	Annual costs £
Reducing number of plastic bags	1,237,085.70		
Reducing number of paper bags	1,886,461.50		
Cost of registering with local authority		542,500 – 1,036,000	
Keeping records and sending in returns			2,170,000-4,144,000
Totals	£3,123,547.20	542,500 – 1,036,000	2,170,000-4,144,000
Rounded totals	£3.1 million	£0.5 - £1.0 million	£2.2 - £4.1 million

Agenda Item 2

**Environment and Rural
Development Committee**

9 November 2005

ERD/S2/05/28/2e

20th September 2005

Dear Sarah

Equalities Issues – Environmental Levy on Plastic Bags (Scotland) Bill

Thank you for your letter of 29 June, I have endeavoured to provide the additional information you require in answering the questions you provided.

1. What is the policy for? Who is the policy for? What are the desired and anticipated outcomes?

The policy behind the Bill is to protect the environment and to raise awareness of environmental issues. The Bill aims to reduce the number of plastic bags in circulation and to encourage people to reuse their plastic bags whenever possible and to recycle them after their final use.

The Bill does not prohibit the use of plastic bags; the introduction of the levy encourages everyone to think as to whether or not a plastic bag is required for their purchase before they automatically take one. It will also encourage people to look for and use alternatives to plastic bags.

The policy behind the Bill also fits in with the targets for recycling and reducing the amount of municipal waste going to landfill sites set for local authorities by the Scottish Executive in their National Waste Plan 2003, as outlined in paragraphs 26 to 29 of the policy memorandum.

2. Do we have full information and analysis about the impact of the policy upon all equalities groups? If not, why not?

The Bill will affect everyone who currently uses plastic bags in the same way; they will all be faced with the same choices and decisions to be made regarding using plastic bags in the future. The same choice is available for all, although there will arguably be a disproportionate impact on those on lower incomes if they choose to purchase a plastic bag.

The resources available for Members Bills are limited and as the Bill does not treat any individuals or groups differently a full analysis of the impact of this environmental policy on all equality groups was not carried out.

3. Has the full range of options and their differential impacts on all equality groups been presented?

Please see the response to Question 2

4. What are the outcomes and consequences of the proposals? Have the indirect as well as the direct, effects of the proposals been taken into account?

If the Bill is successful then anyone wishing to take a plastic bag will be required to pay a levy of 10p which will be collected by the supplier and passed on to the relevant local authority. The proposal does not prohibit the use of plastic bags; by requiring people to pay for a plastic bag it will encourage them to think whether or not they actually need one or whether they can use an alternative instead.

While the direct effects of the policy are that anyone who chooses to use a plastic bag will be required to pay 10p, as stated in the Policy Memorandum (paragraphs 90 and 91) there will be an indirect effect in that people on low incomes may be affected slightly more than other groups. It is also noted in the Policy Memorandum that some ethnic minority groups, disabled people, women and single parents are likely to be amongst those on low incomes.

It is also acknowledged in the Policy Memorandum that the effect may not always be financial as if they decide not to take a plastic bag then they will require a suitable means to carry their purchases home and as they are unlikely to have access to their own transport then they may be inconvenienced more than other groups.

There are also environmental impacts. A direct impact will be that there will be less bags in circulation and an indirect impact will be through how the local authority decides to use the levy collected. Depending on how it is used employment opportunities could be created in the community.

A further indirect impact could occur in relation to the cost reduction for businesses in having to purchase less plastic bags, these savings could then be passed on to their customers.

5. How have the policy makers demonstrated they have mainstreamed equality?

The policy in the Bill presents everyone who uses a plastic bag with the same choices and decisions with a view to protecting the environment. It does not discriminate against any particular group or groups of people. As covered in the answer to question 4 above it is acknowledged that some groups might be slightly more affected than others by the policy although not to the extent they are discriminated against, nor does the Bill require these groups or any other group(s) to specifically use plastic bags and as such it is considered that

specific provisions for mainstreaming equality are not required to be specified in the papers.

There is nothing in the Bill to prevent traders and retail outlets from providing assistance to certain groups of customers to carry their purchases home through whatever means they think is appropriate for their business as long as whatever action they take does not fall foul of the provisions of the Bill. Examples of this are home deliveries or providing other types of carriers to customers.

6. How will the policy be monitored and evaluated? How will improved awareness of equality implications be demonstrated?

Members Bills are generally limited in size and scope and as such the Bill does not make provision for the effects of the Bill to be monitored or evaluated. It is hoped that the Committee may wish to take a future interest in monitoring and evaluating. I would also undertake to lodge Parliamentary Questions on performance related matters.

However each local authority is required to publish annually a report on its performance in respect of, for example, the amount of the levy collected and how it was spent. From this information it should be easy to ascertain how many plastic bags are provided to customers each year and whether or not the number of plastic bags in circulation has reduced or not. For instance if the policy has been successful then it is likely that the amount of the levy collected will be low and vice versa.

It may be that if the Bill is implemented the Scottish Executive may wish to establish a system to monitor and evaluate the effects of the Bill along with any equality implications that may arise in the future.

Yours sincerely

Mike Pringle, MSP
Member in Charge of the Bill



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November 2005

SCRUTINY OF THE 2006-07 BUDGET

When I met the Committee on 26 October I undertook to write to you on two matters raised by Members but with which I was not able to deal at the time. I understand that, following the meeting, the Clerks requested and received from my officials explanations on a number of detailed issues which Members would have pursued in Committee, had time permitted. The material provided dealt with the technical reasons for the apparent drop in the value of Water Environment spending, one of the issues which I undertook to pursue. My reply here addresses the Committee's interest in provision for the Organic Aid Scheme (OAS).

As I set out when we met, OAS expenditure is included within a more general agri-environment budget under the Scottish Rural Development Programme (SRDP) and we have the ability to move funds between that budget and those for other agri-environment measures in the Programme. The OAS, like other agri-environment schemes, is of course discretionary and actual expenditure depends on the level of applications. I confirm that we have not so far had to restrict entry to the OAS because of any shortage of funding for the scheme.

The OAS budgets considered by the Environment and Rural Development Committee are based on known commitments and projections of expenditure founded on the patterns of applications to the scheme. If these patterns change and demand proves greater than expected, then I would wish to use the flexibility available within the SRDP to ensure that we can continue to support good quality OAS applications.

Agenda Item 3

Environment and Rural Development Committee

9 November 2005
ERD/S2/05/28/3b

As you may be aware, we recently published the second annual report on progress towards delivering the Organic Action Plan. The report makes clear that, with the close co-operation of the industry, we have delivered substantially on our commitments and that we are making progress towards meeting our specific targets. In a foreword to the report, Rhona Brankin also reconfirms our commitment to the organic farming sector and notes that we have looked again at the payment rates available under the scheme (as part of a wider review of agri-environment payment rates), to ensure that they continue to provide the right level of support to farmers. As with the development of the Organic Action Plan itself, the review of payment rates has been carried out in co-operation with industry stakeholders and our proposals are now being considered by the European Commission. Any changes to the payment rates will, of course, have to be approved by the Scottish Parliament before they can be introduced.

I hope that this further explanation reassures the Committee of our continued commitment to organic farming in Scotland and to the provision of funding for the Organic Aid Scheme.

ROSS FINNIE