

Consumer behavioural study on the use and re-use of carrier bags 2012



A review of consumer perceptions and usage of single use carrier bags, bags for life and other containers in Scotland and Wales

A report of a study that provides information about the levels of use of different shopping bags and containers by consumers in Scotland and Wales. The purpose of this report is to assist Zero Waste Scotland, Scottish Government and Welsh Government develop policies, advice, tips and tools to help the reduction of new single carrier bag use

FINAL REPORT (Wales)

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This document has been prepared by Exodus Research who carried out the research on behalf of Zero Waste Scotland and the Welsh Government.

Views expressed in this report are those of the researcher and not necessarily those of the Welsh Government.

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Zero Waste Scotland works with businesses, individuals, communities and local authorities to help them reduce waste, recycle more and use resources sustainably.

Find out more at www.zerowastescotland.org.uk

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Executive summary

This report provides an evaluation of the impact of a charge for single use carrier bags by the Welsh Government one year after implementation (01 October 2011) and explores the changes in consumer behaviour that have followed this legislation. A report has also been provided to the Scottish Government on perceptions and behaviours of their own population, as they consider implementing a similar charge for single use carrier bags at some point in the future.

Exodus Research was commissioned by the Welsh Government and Zero Waste Scotland to conduct a telephone research survey amongst 1005 Scottish and 1012 Welsh households to understand the views and stated behaviours of consumers in relation to their use of single use bags, bags for life and other containers whilst shopping. In addition, the project team asked Exodus to provide 9000+ observations of actual consumer behaviours whilst purchasing goods in food chain, non-food chain and independent shopping sites (4884 Wales and 4645 Scotland transactions were observed).

The results of both phases of research are individually statistically robust, however interesting comparisons can be drawn from analysis of the two datasets where respondents stated behaviours differ from what was observed. In addition, the behaviours of the retailers particularly provide an additional perspective on how the desired reduction in single use carrier bag use is being interpreted and implemented, and the ultimate environmental impact of the scheme in practice.

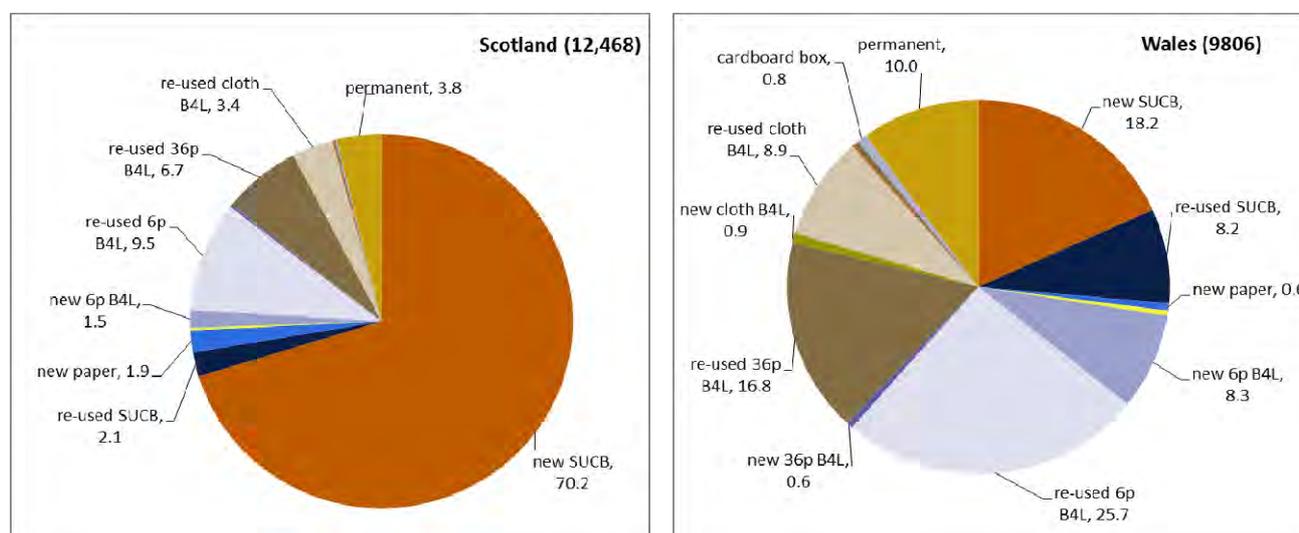
Types of containers observed in use

The number of different types of bags or containers used by shoppers during the in-store observational research was recorded and shoppers in Wales were observed to have used 9806 bags or containers, whilst those in Scotland used 12,468. Although this analysis does not take account of items taken away loose, less than a fifth (18.2%) of all containers used by Welsh shoppers were single use carrier bags (SUCB); whilst the majority of containers used by Scottish shoppers are SUCBs with these accounting for 70.2% of all containers.

The number of bags for life used by Welsh consumers accounted for more than 6 in 10 transactions compared with only 2 in 10 of Scottish respondents that were using any form of bag for life. Similarly nearly three times the number (10.0%) were consumers using their own permanent bag in Wales compared to those in Scotland (3.8%) across all types of shopping.

The following charts illustrate the proportion of containers by type that were observed being used by consumers in Scotland and Wales for all types of shopping trips.

Figures 1 and 2 Proportion of containers observed being used by shoppers by type in Scotland and Wales (*containers >0.5% labelled*)



The extent to which consumers (re-)use single use and reusable bags when shopping

Anecdotal observations suggest that the store's behaviour at checkouts is key to the take-up of new SUCBs. Particularly in Scotland cashiers offer new SUCB in all types of stores and/or will begin to pack items in new SUCB without asking the customer. The difference in assumption of better environmental practices with regards to bag use in the Welsh and Scottish retail environments are obvious and there can be little doubt that the charge has profoundly influenced consumer behaviour in Wales.

The percentage of consumers only using new SUCB for all types of shopping was observed to be nearly half in Scotland (47%) compared to only 12% of Welsh consumers, and for all ages and shopper composition the Scottish were far more likely to be selecting new SUCB. This is not surprising in some respects, as Scottish retailers' staff were observed to provide new SUCB as the default option in many transactions at the till in all types of shopping activities. It should also be noted that this activity was also prevalent in non-food shops in both Scotland and Wales.

The numbers of shoppers re-using SUCB for any type of shopping was quite low; in Wales just less than 10% were observed to be reusing one or more SUCB and this was twice as many as those observed in Scotland. This figure may be further distorted by SUCB re-use observations being distorted by 'same day' re-use of bags from other purchases/ retailers.

Heavy duty plastic bags for life retail for 6-10p per bag and it was observed that some retailers are pushing the use of heavy duty plastic bags for life to consumers at tills - if these are in fact not being re-used and replaced as intended this may have unforeseen unfavourable effects on the environment in the wider context. Analysis by retailer suggests that some supermarkets are quite prolific in the distribution of these new bags accounting for

around one in ten of their shoppers and it is understood that the sales of these bags are not covered by the levy, which is something that consumers may not be aware of. Welsh consumers observed in-store were most likely to re-use these heavy duty bags for life for food shopping (25.7%) compared to 9.5% of Scottish shoppers. Only 2.4% of Scottish consumers were observed to purchase a new bag for life during the observations compared to 1 in 10 Welsh shoppers (mostly at food chains). The numbers of Welsh consumers that were observed to re-use bags for life for all types of shopping (44%) was double that of Scottish shoppers (21%). Welsh consumers were also more likely to be taking their re-used bags for life for non-food shops (18%) and at independent stores (33%).

The following table illustrates that from the survey results compared to the observations, households were likely to over-state their re-use of bags for life and under-state use of new SUCB; this may be compounded by respondents taking bags for life but forgetting to use them in-store rather than solely a desire to provide socially acceptable answers.

Table 1 Proportion of households/shoppers re-using bags for life and taking new SUCB by type of store

	Type of store	Scotland		Wales	
		Re-use bag for life	New SUCB	Re-use bag for life	New SUCB
Stated behaviour	Food chain	65.2%	24.8%	79.4%	9.6%
	Non-food chain	24.8%	56.3%	54.7%	27.9%
	Independent	33.3%	27.3%	53.3%	12.9%
Observed behaviour	Food chain	27.7%	66.3%	51.2%	15.8%
	Non-food chain	0.7%	65.9%	17.6%	25.9%
	Independent	2.9%	60.4%	32.7%	24.3%

The ways in which consumers (re-)use bags subsequently

93% of Welsh and 86% of Scottish households stated that they own one or more bags for life. Of these, nearly nine in ten (90% Wales, 89% Scotland) re-use the bags, with the majority saying that this is on at least ten occasions (70% Wales, 68% Scotland). However, of those that indicated that they had disposed of a bag for life within the last year (32% Wales, 23% Scotland), three in ten Welsh and four in ten Scottish respondents said that they did this using the general waste stream.

Even though the intrinsic promise made when purchasing a bag for life is that the bag will be replaced with a new one at end of life once represented to the retailer, only 7 Welsh and no Scottish shoppers were observed replacing a bag for life in this way. These observations along with the self-reported data on disposal of bags for life into residual waste suggests that more research is needed on the actual life journey of the bags for life and the ultimate disposal of these items.

66% of Wales and 81% of Scotland households stated that they own one or more SUCB. Of these, nine in ten (89% Wales, 94% Scotland) re-use these bags, however this is most likely to be on just one occasion (47% Wales, 52% Scotland) and as a bin liner, with most of SUCBs being disposed of in the general waste stream. Overall, less than a three in ten of all respondents that disposed of a SUCB in the last year indicated that they currently recycle any unwanted SUCB (30.4% Wales, 16.0% Scotland).

The following table illustrates that households were most likely to claim that they re-use bags for life for food shopping, whilst they pre-dominantly re-use SUCB as bin liners.

Table 2 Re-use of bags for life and SUCB

Re-use activity	Scotland		Wales	
	Bag for life	SUCB	Bag for life	SUCB
Food shopping	83.0%	21.5%	92.4%	35.5%
Non-food	45.2%	8.9%	66.2%	21.7%
Storage	25.6%	15.7%	24.6%	14.7%
Suitcase	22.3%	17.2%	19.3%	8.2%
Waste	6.9%	69.3%	8.3%	55.3%

The use of non-carrier bag alternatives

The following table illustrates that from the survey results compared to the observations, Scottish households were most likely to over-state their use of their own bags or containers when in a non-food chain or independent store. All respondents under-stated their occasions on which they take items loose; however, the observations do include shoppers using bags and containers in addition to taking a few items loose – these tended to be bulky purchases or those with in-built handles (such as toilet rolls or nappies).

Table 3 Stated and observed use of permanent/own bags and taking items loose

	Type of store	Scotland		Wales	
		Permanent	Loose	Permanent	Loose
Stated behaviour	Food chain	8.8%	4.0%	8.2%	3.4%
	Non-food chain	14.0%	12.2%	13.7%	5.9%
	Independent	19.4%	26.7%	19.0%	12.6%
Observed behaviour	Food chain	8.1%	26.9%	13.3%	39.7%
	Non-food chain	1.2%	14.1%	15.5%	19.3%
	Independent	4.9%	11.3%	13.1%	28.7%

The perceived 'value' of SUCB and bags for life

Around half of the respondents (46% Wales, 52% Scotland) stated that they would prefer to purchase cloth/hessian bags for life if they had to buy a bag to take their shopping home. In the main, Welsh shoppers preferred to buy these because they are stronger than SUCB (49%) and/or because they can re-use them for future shopping trips (35%). 22% of Welsh and 15% of Scottish respondents stated that they would prefer to purchase a heavy-duty (budget) bag for life if they had to buy a bag to take their shopping home. In addition, Welsh shoppers preferred to buy heavy duty bags for life because they are stronger than SUCB (61%) and/or can be re-used for further shopping trips (47%).

Three in ten respondents (30% Wales, 31% Scotland) stated that they would prefer to purchase SUCB if they had to buy a bag to take their shopping home. Mainly Welsh shoppers preferred to buy these because the charge is too small to worry them (54%) and/or because they can re-use the SUCB as a bin liner (20%).

The most common reason given by respondents for taking new SUCB at the till when food shopping in both Scotland (43%) and Wales (58%), was that they did not have their own bags to hand. Anecdotally, these respondents had either forgotten to take their own bags (normally bags for life) or had purchased more items than would fit in the bags that they had taken. Respondents in Scotland were more likely (30% compared to 19%) to state that the shop's cashier had offered them a new SUCB to pack their items as opposed to any other type of bag. Overall, respondents believed that shoppers *in general* are motivated to use new SUCB because of three factors as follows:

- Convenience (45% Wales, 60% Scotland)
- Forget take/use (36% Wales, 37% Scotland)
- Free/low cost (9% Wales, 23% Scotland)

Conversely, the most common (unprompted) reason given for using a previously owned bag for life by the Welsh respondents was that it was the cheapest option or saved them money; nearly half (47%) of those using their bags for life said this, with several specifically mentioning that they wanted to avoid paying the 5p charge. Half of the Scottish respondents said that they used their bags for life because they don't like using SUCB; many additionally mentioned the environmental issues associated with littering and landfill and/or the poor design of the SUCB for carrying heavy or bulky items. Interestingly, the Scottish respondents were more likely to suggest these environmental concerns compared to their Welsh counterparts. This difference in opinion may be due to the carrier bag charge in Wales; Welsh shoppers are aware that they will need to buy bags if they do not take their own alternatives, whilst Scottish shoppers not subject to the levy are more likely to focus on green and not financial implications of using alternatives to SUCB.

Overall, respondents believed that shoppers *in general* are motivated to avoid use of new SUCB because of three factors as follows:

- Environmental/green issues (47% Wales, 52% Scotland)
- Avoid landfill (41% Wales, 42% Scotland)
- Bags for life are stronger (37% Wales, 42% Scotland)

There are three key barriers that need to be overcome if shoppers are to be encouraged to use alternatives to new SUCB. These are:

- Convenience of new SUCB seen as a reason for use (45% Wales, 60% Scotland)
- Use of SUCB by consumers for smaller shops (it is not known if these shops are planned or ad hoc)
- Not remembering to take/use alternatives (36% Wales, 37% Scotland)

However, there are positive messages that are said to encourage change, these being:

- Environmental issues seen as reason for using alternatives (47% Wales, 52% Scotland)
- Durability and design of alternatives (37% Wales, 42% Scotland)

Impact of the charge on how people handle household waste

Three in ten (30%) Welsh and more than four in ten (46%) Scottish respondents indicated that they do actively use SUCB as bin liners, whilst 83% Welsh and 75% Scottish households [also] use purpose made bin liners. Prior to the introduction of the SUCB charge in Wales, 46% of Welsh households used SUCB as bin liners and 74%

used purpose made liners. Therefore it can be seen that use of SUCB for waste purposes has decreased (by 15%) since the charge (although a causal effect is unproven), whilst the purchase of purpose made bin liners has increased.

The motivations for supporting the charge and improved behaviour in the use of re-useable bags

The impact of the charge has had a strong effect on the Welsh consumer as more than half say they take a lot less SUCB, mainly to avoid the cost (57%) and for environmental reasons (35.4%). Interestingly nearly 50% of Scottish households claim to take a few or a lot less SUCB and that this is either for environmental reasons or because they are already using bags for life/ own bags. Both national consumer groups are supportive of the charge in respect of encouraging people to use less SUCB and use bags for life/ own bags, although Welsh residents reported that they are currently using more bags for life.

For Wales, the 5p charge has had significant impact on new SUCB use, particularly in food chains, however there are some key issues that should be considered to encourage more positive behaviours:

- Some stores appear to be promoting heavy duty bags for life; this is an issue if the bags are subsequently disposed of to landfill. Throughout several stores (particularly non-food chains and independents) a lack of choice of alternative carriers to SUCB was observed
- Consumers need to be encouraged to return bags for life for free replacement; even considering respondents' claims in the survey regarding stated behaviour, there is much room for improvement
- Use of SUCB as bin liners has decreased as shoppers take fewer new SUCB, however, this is still the most likely re-use activity and so these bags are being sent to landfill after the first 're-use'
- The use of bags for life is becoming 'second nature' but more focus is needed to encourage use for:
 - Smaller shops; shoppers buying a few items are using new SUCB
 - Young families / young men are least likely to use alternatives
 - Non-food chains and independent stores are automatically placing items in new SUCB

The following table illustrates that Welsh respondents were more likely to agree strongly with the positive impacts of the SUCB charge than Scottish respondents who were considering the likely impact of such an introduction within their nation. In particular, Welsh households were most likely to strongly agree that the charge has resulted in a reduction in waste (34%) and littering (32%).

Table 4 Proportion of respondents strongly agreeing on statements regarding the introduction of the charge

Impact of charge	Scotland	Wales
Reduce waste	23.6%	33.5%
Reduce littering	21.9%	31.7%
Benefits charity	23.1%	30.3%
Discourage use of SUCB	19.0%	23.3%
Encourage re-use of SUCB	17.3%	19.9%

Extent to which households are aware of wider waste prevention / recycling issues

The following table illustrates that respondents who stated that they re-use bags for life were more likely to agree with each of the pro-environmental behavioural statements than those who do not use bags for life when shopping. In particular, a comparison of Welsh households with their Scottish counterparts indicates that the Welsh are particularly more inclined to agree with the statements – particularly with respect to using recycling points such as bring-banks or HWRCs, composting at home or using the council's collection services and the importance of recycling/re-using unwanted materials. Although any causal impact is unproven, indications are that the SUCB charge in Wales may be a factor in increasing pro-environmental awareness and behaviours.

Table 5 Proportion of respondents strongly agreeing or agreeing with pro-environmental statements

Statement	Scotland		Wales	
	Do not re-use bags for life	Do re-use bags for life	Do not re-use bags for life	Do re-use bags for life
My household recycles or re-uses more of the waste which used to go in the regular bin	67.8%	85.9%	73.6%	87.5%
I am prepared to recycle items not currently collected by my council's household service by using other recycling points	67.5%	59.9%	84.0%	82.0%
I have become more aware of the importance of recycling or re-use rather than throwing items away in the regular bin	70.8%	68.7%	88.1%	98.4%
I compost as much food/garden waste as possible	39.4%	43.4%	63.6%	71.0%
I am careful about what is thrown away in my household because of the current economic situation	54.6%	76.7%	64.5%	77.7%
I am careful about what is thrown away in my household because of the environmental impacts	67.0%	88.4%	70.6%	88.6%

Conclusions

- The 5p charge has had a significant impact on new SUCB use, particularly within food chains in which only 15.8% of Welsh shoppers were observed taking new SUCB. This compares favourably with two thirds of shoppers in Scotland taking new SUCB where there is currently no national SUCB levy.
- Amongst Welsh consumers, motivations for using bags for life are to avoid the charge and a dislike of SUCB which are seen as being of environmental concern with respect to landfill and littering.
- Around a third of Welsh shoppers overstate use of bags for life in food chains and this rises to two thirds overstating use in non-food chains. There are interesting differences in consumers stated behaviour

during the research interviews and the behaviours observed in practice. This may be due to forgetting to take/use these bags in-store rather than giving socially acceptable responses to the survey questions.

- Within non-food stores and independent outlets use of SUCB is quite prevalent. In many observed shops use of SUCB was often automatic with sales staff placing purchased items immediately into SUCBs. This activity may impact on consumer behaviour and could be addressed by the introduction of store policies and staff training.
- Consumers need to be encouraged to return bags for life for free replacement rather than to dispose of them in the general waste (or using them as bin liners); very few shoppers were observed replacing unwanted bags for life in-store and from the stated behaviour it is apparent that a significant number of unwanted heavy duty plastic bags are ending up to landfill.
- Use of SUCB as bin liners has decreased as shoppers take fewer; but this remains the most likely re-use activity. Regardless of re-use, only three in ten Welsh respondents who disposed of SUCB in the last year indicated that they recycled unwanted single use carrier bags.
- Some stores were observed promoting heavy duty bags for life (which are not covered by the levy), this may be of concern if these bags are being disposed of to landfill and if consumers believe the cost of the bag is in part benefitting charitable organisations when it is outside of the charge and a commercial transaction.
- Use of bags for life is becoming 'second nature', particularly for food shopping, but more focus is needed to encourage use for smaller or ad hoc shops, for non-food shopping activities and also with respect to ensuring consumers remember to take their bags into stores. Young families and men in particular are two consumer groups that should be targeted to change consumer behaviour.

Further Research

This programme of research has provided detailed information on the attitudes and behaviours (both stated and observed) of Welsh shoppers following the introduction of the carrier bag levy one year ago. The data that has been captured has been informative and in some cases has raised further areas of questioning which policy makers may wish to explore further as follows:

- There is a need to further understand the length and life journeys of different types of single use bags and bags for life in order to assess the whole life environmental impact. In particular, this research has highlighted a potential difference in the lifestage of the different types of bags for life that are available to consumers (heavy duty bags for life, recycled polyester and cloth/hessian).
- The observational research raised a possibility of some stores promoting heavy duty bags for life for profit and an exercise to quantify the sales of the different bags sold cross-checked against levy receipts could provide further information on the scale of this activity.
- Similarly, the observational research indicated that few consumers are actively replacing their unwanted bags for life free of charge in-store. Further work could help to understand the extent to which different types of bags for life are being replaced, identify levels of awareness and any barriers preventing consumers replacing bags free of charge and identify the factors that influence consumers' decisions to replace, recycle or dispose of different types of bags.

- If consumers dispose of bags for life in the general waste stream, is the price point that would discourage this too low? What other interventions can be done to have these bags collected by retailers for recycling?
- Some independent and chain store sales staff were observed automatically placing purchases directly into single use carrier bags. Further investigation could help to identify what opportunities there are to encourage non-food and independent retailers to restrict the issuance of SUCB; for example, are there corporate or cultural changes required? Why do consumers act differently in these environments?
- It has been seen that whilst many consumers view the use of bags for life as second-nature, there are other consumers (for example, young males) and some circumstances where use of bags for life is less prolific. A programme of research could assist with understanding what are the decision drivers that influence consumers to select bags for life of different types to identify any design opportunities or if consumers see some bags as more re-usable than others?