



Business Consultancy Service

Review of the Northern Ireland Carrier Bag Levy on behalf of the Department of Agriculture, Environment and Rural Affairs (DAERA)

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1. INTRODUCTION

1.1 Introduction

Business Consultancy Service (BCS) of the Department of Finance (DoF) was commissioned by the Department of Agriculture, Environment and Rural Affairs (DAERA) to complete a post project evaluation of the first phase of the carrier bag levy scheme in December 2015. BCS has now been commissioned to conduct a statutory review of the carrier bag levy charging provisions. This report details the findings and recommendations of the review based on the agreed terms of reference and will be laid before the Assembly as stated in the Carrier Bags Act (Northern Ireland) 2014.

A full list of all recommendations made can be found in Section 7 below.

1.2 Context

The Single Use Carrier Bag Charge Regulations (NI) were introduced in 2013, resulting in a 5 pence levy being charged for single use carrier bags. In January 2015, the levy was changed to include all carrier bags priced at less than 20 pence, regardless of what material they are made from. The purpose of the levy is to influence customer behaviour by associating a cost with the purchase of any bags therefore aiming to promote a significant reduction in bag usage, recognising that only residual consumption raises revenue.

Additional information on the background to the Carrier Bag Levy is included at **Annex A**.

1.3 Terms of Reference

The agreed Terms of Reference for the BCS engagement was agreed as follows:

“To carry out a statutory and independent review of the operation of the carrier bag levy and the effectiveness of the charging provision, also to determine if amendments to the charging provision are either desirable or necessary.”

It was agreed with DAERA that the effectiveness of the charging provision would be assessed in relation to the original objectives of the levy which were to:

- Reduce the consumption of single use carrier bags;
- Minimise the harmful environmental impacts of single use carrier bags; and
- Raise sufficient revenue from the levy each year to cover the associated collection and enforcement costs and provide funding for the environment.

1.4 Client

The client for the review is Dave Foster, Director RNRPD, Environment, Marine and Fisheries Group. The day to day point of contact within the Carrier Bag Levy Team was Rory O'Boyle, Principal, Carrier Bag Levy Team, Environment, Marine and Fisheries Group.

1.5 Approach

The Review Team's approach to the Review comprised the following key steps:

Project Initiation

- Meetings with relevant stakeholders in DAERA;
- Development and agreement of a project proposal including project scoping, approach and planning; and
- Background reading and desk research of corporate documentation e.g. the 2013 Full Business Case, 2015 Post Project Evaluation, 2015 Internal Audit Review of the Carrier Bag Levy and other relevant material.

Stakeholder Engagement

- Development of surveys for both consumers and retailers (agreed with DAERA);
- On street consumer surveys (conducted by DAERA);
- Telephone retailer surveys (conducted by DAERA);
- Face to face and telephone interviews / surveys with large retailers (conducted by both DAERA and the Review Team);
- Meetings with retail bodies / representatives - NI Independent Retail Consortium and Northern Ireland Independent Retail Association (conducted by both DAERA and the Review Team);
- Telephone interviews with Consumer Council for Northern Ireland and Federation of Small Businesses (conducted by the Review Team); and
- Meetings with DAERA Committee (former Chair and Deputy Chair) (conducted by both DAERA and the Review Team).

Benchmarking/Comparison Work

- Comparison and benchmarking research of similar levy schemes in other jurisdictions including England, Scotland, Wales, Republic of Ireland and wider internationally.

Analysis and Options Assessment

- Analysis of all findings from stakeholder engagement and comparison work;
- Analysis of DAERA management information and other corporate data;
- Reporting of interim findings to DAERA;
- Assessment of options; and
- Reporting of conclusions and recommendations.

1.6 Report Structure

The report covers:

- Findings in relation to the operation of the carrier bag levy and the effectiveness of the charging provision which were assessed against the original objectives of the levy, specifically:
 - Reduce the consumption of single use carrier bags;
 - Minimise the harmful environmental impacts of single use carrier bags; and
 - Raise sufficient revenue from the levy each year to cover the associated collection and environmental costs and provide funding for the environment.
- Findings in relation to the internal operation of the charging regime within the Carrier Bag Levy Team.
- Benchmarking comparisons.
- Stakeholder views in relation to the charging provision.
- Options assessment for an agreed number of potential options, specifically:
 - **Option A** – Continuing with current bag levy (**maintain**);
 - **Option B** – Removing the bag levy (**remove**); and
 - **Option C** – Increasing the bag levy to 10p and threshold to 40p (**increase**)
- Preferred option selection, conclusions and recommendations.

1.7 Acknowledgment

The Review Team would like to thank all of the staff in the CBLT for their courtesy, contribution and co-operation throughout the review process, as well as the key stakeholders for their participation.

2. IMPACT ASSESSMENT

2.1 Introduction

This section of the report aims to assess the effectiveness and impact of the carrier bag levy scheme to date, against the criteria defined in the Terms of reference¹.

2.2 Impact on Carrier Bag Usage

In 2012 it was estimated by the Department of the Environment (DOE), that the **baseline** figure for single use carrier bags was approximately 300² million carrier bags used each year in Northern Ireland.

2.2.1 Phase 1

The first phase of the NI Carrier Bag Levy was introduced in 2013. Initially the carrier bag levy applied only to single use carrier bags. In Year 1 there was a dramatic reduction in bag usage from 300 million bags to **84.5 million** bags. While the 82% reduction target defined in the original Carrier Bag Levy Full Business Case (FBC) (October 2013) was not fully achieved, there was a **reduction of 71.8%** from the agreed baseline.

2.2.2 Phase 2

In January 2015 (last quarter of Year 2), Phase 2 of the levy was introduced, which widened the scope from “single use carrier bags” to “carrier bags” which included reusable bags. A threshold of 20 pence permitted retailers to retain proceeds of bags priced 20 pence or above. This meant that the levy applied to all bags less than 20 pence. Recorded carrier bag usage increased in 2014/15 to **91.5 million** bags. This represented a **69.5% reduction from the baseline**, however an **8.2% increase** from the previous year (2013/14). While the exact reasons behind this increase are not fully known, it is generally accepted that the Phase 2 change to incorporate all carrier bags within the threshold broadened the range of bags classified within scope of the levy and increased total declared usage figures.

In Year 3 (2015/16), **101.2 million** carrier bags were consumed. This represented a **reduction of 66.3% from baseline** and a **10.6% increase** from the previous year (2014/15). It is possible that the greater number of bags dispensed in 2015/16 was due to the widened scope of the levy consequently gathering one full year of declared bag usage. In addition, the baseline figure quoted referred originally to single use bags only.

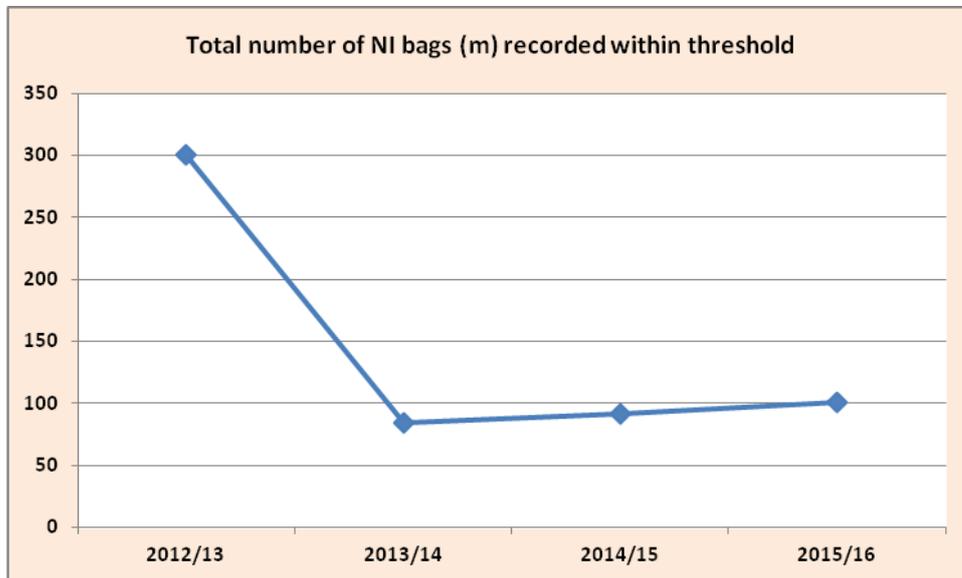
¹ It was agreed with DAERA that the effectiveness of the charging provision would be assessed in relation to the original objectives of the levy which were to: (a) Reduce the consumption of single use carrier bags, (b) minimise the harmful environmental impacts of single use carrier bags, and (c) raise sufficient revenue from the levy each year to cover the associated collection and enforcement costs and provide funding for the environment.

² This was adjusted by DOE from an original baseline of 246 million single use carrier bags (used in the business case) to 300 million based on additional analysis.

With the introduction of Phase 2, a number of retailers, as part of their internal pricing policy, increased the price of their low cost reusable bags to 20 pence or above, thereby ensuring such bags were outside the scope of the levy. The impact of this adjustment to their pricing policy means that the Department can only record and account for reusable bags that are charged at less than 20 pence. Currently there is no way of knowing exactly how many reusable bags are being sold outside the levy, as there is no requirement for retailers to declare how many bags are purchased which are priced at 20 pence and above.

Chart 2.1 below illustrates Northern Ireland carrier bag usage over the past three years.

Chart 2.1 – Total number of bags (m) recorded within threshold in NI



2.2.3 Carrier bag usage summary

The introduction of the carrier bag levy has had a dramatic effect on carrier bag usage with a reduction of 215.5 million bags in the first year (71.8% reduction from the baseline). There have been gradual increases in declared bag usage over the last two years with 91.5 million bags declared in 2014/15 (69.5% reduction from baseline) and 101.2 million bags declared in 2015/16 (66.3% reduction from baseline). These increases may be attributable to changes in the levy scope to include all carrier bags within the threshold but may also have been influenced by consumer behaviours, shopping patterns and business growth. Given the relatively recent changes to the scheme there is not enough data or analysis available to draw any longer term conclusions as to whether this upward trend in usage will continue, or at what level.

2.3 Environmental Impact of Carrier Bag Levy

One of the objectives of the original FBC for the bag levy scheme was to reduce the harmful environmental impacts of bags through a reduction of at least 82% in CO₂ emissions and in littering. A baseline figure of 512k tonnes of CO₂ emissions associated with carrier bag usage in 2012/13 was defined, based on 246m bags. This baseline was subsequently revised to 300m bags, equating to a 2012/13 baseline of 624k tonnes of CO₂ emissions³.

The 82% reduction target in CO₂ emissions was aligned to the reduction in carrier bag usage and as such, it can only be assumed that there was a Year 1 (2013/14) decrease of 71.8% in bag usage corresponding to an equalling decrease of CO₂ emissions to 176k tonnes (a reduction of 448k tonnes of CO₂ emissions). In Year 2 (2014/15) there was a 69.5% reduction from baseline, equalling CO₂ emissions of approximately 190k tonnes and in Year 3 (2015/16) there was a 66.3% reduction from baseline, equalling CO₂ emissions of approximately 210k tonnes.

It should be noted that the original CO₂ emissions calculations established for the 2013 baseline were based on single use carrier bags. For comparison purposes, the same equation has been used to calculate estimated CO₂ emissions following Phase 2 changes to help determine the environmental impact of the levy to date.

While the 82% reduction target defined in the business case was not fully achieved, there have been significant reductions in CO₂ emissions associated with bag usage.

The Marine Conservation Society's (MCS) "Great British Beach Clean" 2016 report⁴, found fewer than 7 bags per 100 metres of UK coastline cleaned; a 40% drop from the average 11 bags found in 2015 and the lowest number in 10 years. The MCS directly linked the reduction to the 5 pence charge, now in place across all UK jurisdictions, hailing the benefits for the marine environment. Northern Ireland and England were reported as having the largest decrease, with half as many bags recovered on beaches compared to 2015.

2.3.1 Environmental Impact Summary

CO₂ emission baseline calculations established a direct correlation between numbers of carrier bags used and estimated CO₂ emissions. While the 82% reduction target defined in the business case was not fully achieved, there have been significant reductions in CO₂ emissions associated with bag usage. Phase 2 of the levy incorporated all bags within the threshold into declared usage figures (regardless of material) which may affect the current CO₂ emission estimate calculation. The Review Team would recommend that if CO₂ emissions linked to carrier bag usage is a measure that is to be monitored and tracked as part of ongoing operational delivery, that the calculation is reviewed to confirm applicability to all bags within the threshold. Marine Conservation Society findings and anecdotal information gathered as part of this review indicate that there is a widespread perception that since the introduction of the levy there has been a reduction in discarded carrier bag litter.

³ Calculation based on single use carrier bags (used in original FBC October 2013).

⁴ <http://www.bbc.co.uk/news/uk-38053404>

2.4 Levy Revenue/Expenditure

The revenue associated with residual bag usage has been collected and allocated to cover all administrative and enforcement costs of the levy and provide funding for environmental initiatives.

The carrier bag levy has generated approximately **£14m** in revenue during the 3 years it has been in operation (2013-16). This revenue has covered all administration and enforcement costs (approximately £1.5m) and £11.8 for environmental projects⁵. Chart 2.2 below displays levy proceeds (rounded) received to date.

Chart 2.2 – Levy proceeds received (£m)

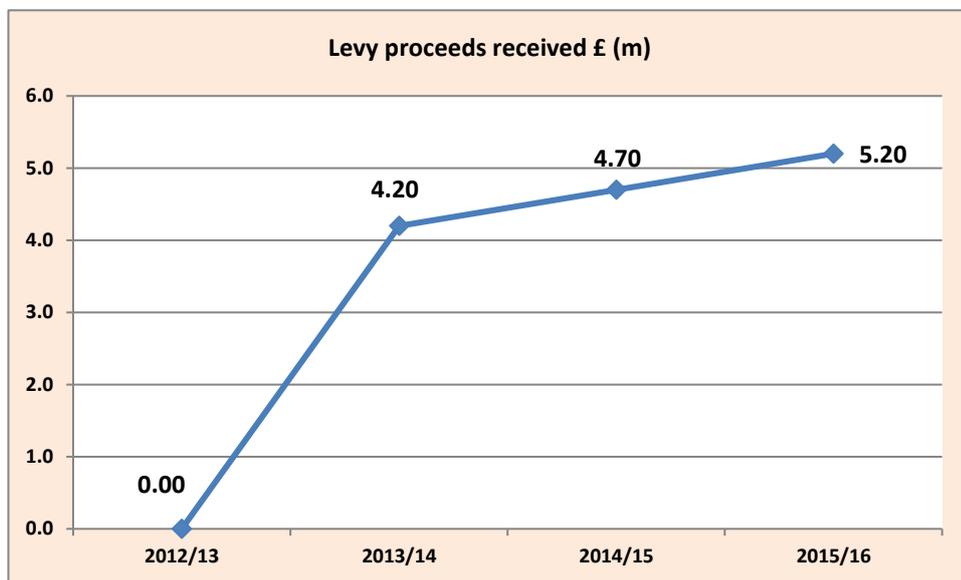


Table 2.1 below provides a summary of levy revenue and expenditure.

⁵ Unallocated revenue is carried forward into subsequent years.

Table 2.1 – Summary of NI Carrier Bag Levy Revenue and Expenditure

Financial Year	Actual Income Received	Unspent funding carried forward from previous year	Total funding available	Admin costs (A)	Expenditure on projects (B)	Total Expenditure (A + B)	Carry Over
2013/14	4,155,910	-	4,155,910	460,073	3,394,819	3,854,892	301,018
2014/15	4,664,099	300,000	4,964,099	548,609	4,163,270	4,711,879	252,220
2015/16	5,170,835	270,000 ⁶	5,440,835	521,779	4,229,400	4,751,179	689,656
Totals	13,990,844	570,000	14,560,844	1,530,461	11,787,489	13,317,950	1,242,894

⁶ There a minor variance between the £252k mathematical carry forward from 2014-15 into 2015-16 and the actual carry forward amount provided by DoF (£270k). This was due to the fact that at the time of bidding for the carry forward (June Monitoring) the final outturn position for the prior year had not quite been finalised.

2.4.1 Levy Revenue/Expenditure Summary

The carrier bag levy has generated approximately **£14m** in revenue during the 3 years it has been in operation (2013-16). This revenue has covered all administration and enforcement costs and funding for environmental projects.

2.5 Environmental projects funded

The proceeds of the levy are used to help communities, charities, business, schools and voluntary organisations deliver local programmes to support wellbeing and prosperity, by improving the environment.

The **Challenge Fund** is one of the mechanisms through which the proceeds of the Carrier Bag Levy have been returned to local communities, schools and the voluntary sector, to support the delivery of small scale projects to improve local environments and provide environmental education.

The fund has been used to deliver projects across the themes of Access and Recreation, Community Action, Education and Awareness and Environmental Management. This funding has delivered a wide range of local environmental projects including: the development of eco-gardens in schools to complement the eco-schools programmes; the development or clean up of disused, redundant or neglected sites for environmental, well-being and social benefit; and the creation and enhancement of areas where the public can enjoy the local environment.

The **Environment Fund** provides for eligible (not for profit) organisations that are capable of delivering key environmental outcomes at a province wide scale, regional landscape scale, or on NIEA natural environment sites. The funding has been made available to continue to protect and improve habitats, air and water quality, promote health, wellbeing, resource efficiency and sustainable economic development and access to the natural environment.

The Countryside, Coast and Landscape Team within the Natural Environment Division of the Northern Ireland Environment Agency, is responsible for the allocation, co-ordination and management of both the Challenge Fund and the Environment Fund. The team designs and reviews the funding processes, launches and manages funds, whilst ensuring compliance with governance principles.

2.5.1 Environmental projects funded Summary

Table 2.2 – Summary of Environmental Project Funding (Grants & Contracted Services)

	2013-14 £	2014-15 £	2015-16 £
Natural Heritage Fund	585,927	1,252,392	-
Natural Environment Fund	-	-	1,799,139
Community Waste Fund	-	225,540	231,282
Challenge Fund	2,309,712	1,235,618	403,210
Sustainability Innovation Fund	198,471	369,037	62,090
Exploris Grant (Seal Sanctuary)	-	-	43,230
Local Air Quality Grant	-	-	38,858
Listed Building Grant		412,083	460,720
Keep NI Beautiful Grants		368,600	250,000
Funding to Colin Glen Park	-	-	100,000
Data and Recording Support (CeDAR)	-	-	155,230
Funding to councils for local clean up support	300,709	300,000	299,123
Repatriation of Illegal Waste	-	-	30,062
City Waste (Campsie)	-	-	58,958
Contributions to Climate Change Committees (GB & NI)			226,873
Habitats Directive : Research and Surveillance	-	-	52,173
Modiolus Restoration			18,452
Actual Spend	3,394,819	4,163,270	4,229,400

3. STAKEHOLDER VIEWS

3.1 Introduction

The Review Team consulted with a wide range of stakeholders impacted by the carrier bag levy to gather as much pertinent information, from a range of perspectives, to establish the effectiveness of the carrier bag levy and to gauge opinions on the way forward in relation to the charging regime. It should be noted that this engagement was not intended to provide a representative, or statistically complete sample and was not a formal consultation process.

3.2 Stakeholder Engagement

Working in collaboration with the CBL team, the Review Team completed a range of primary research activities involving all of the key stakeholder groups identified by DAERA. This included a combination of surveys, telephone and face to face interviews as detailed in Table 3.1 below.

Table 3.1 – Primary Research Activities

Primary Research Activity	Sample Size	Consultation Method
End users/consumers	175	Survey – on street at various locations, administered by DAERA
Retailer	122	Included surveys administered by DAERA and a total of 9 face to face interviews/telephone interviews.
DAERA Committee	2	Deputy Chair and former Chair
Retailer representatives / associations	4	Interview / telephone call

3.3 Consumer engagement findings

The Review Team developed a consumer survey in relation to the carrier bag levy to obtain feedback on consumer behaviours, views of the levy and opinions on the way forward.

The consumer survey was conducted at a variety of shopping locations across a varied geographical spread in Northern Ireland and aimed to target differing age ranges. The survey was completed in November 2016 and a total of 175 responses were received; 23% of responders were aged 30 or below and approximately 75% aged 30+.

Carrier bag usage - results showed that 28% of consumers reported that they always brought bags when shopping, 37% of consumers reported that they brought bags as often as possible, with 18% occasionally bringing bags and 17% never bringing their own bags.

Bag usage since the introduction of the levy – when asked if they brought carrier bags more or less often since the introduction of the levy in 2013, 73% of consumers stated that they brought bags more often since the levy was introduced, 21% reported no change, 3% less often and 3% didn't know⁷.

Bag types - when asked what types of bags consumers preferred to use when shopping, 47% preferred reusable plastic bags for life, 35% preferred more durable reusable type bags (e.g. canvas, woven) or other, and the remaining 18% preferred single use plastic bags.

Bags purchased within levy threshold - 19% of consumers stated that they never purchase carrier bags which cost less than 20 pence, whereas 15% stated that they always do; the remaining 66% of consumers occasionally purchase bags priced at less than 20 pence.

Effectiveness of charge in discouraging bag purchase - when asked if the carrier bag levy discouraged consumers from purchasing bags when shopping, 69% stated "Yes", with the remaining 31% stating "No".

Reasons why bags were purchased (and not reused) - of 199 responses provided for consumers not reusing carrier bags, 66% reported that they forgot to bring their own bags with them when shopping. 12% of consumers stated that new bags were cheap to purchase and 12% reported that they didn't reuse carrier bags. The reasons provided for the remaining 10% of consumers who provided "Other" reasons varied from "laziness", "not enough bags" or "bags were worn out".

Usage increase - when informed that carrier bag usage had increased over the past two years, 62% of consumers expressed that they were concerned for environmental reasons, whereas 36% were not concerned about the increased usage.

Revenue allocation - more than half of consumers (55%) were not aware that proceeds from bags costing less than 20 pence went to local environmental projects.

Support for the levy - 80% of respondents supported the aims of the carrier bag levy and 9% did not, with 11% not sure.

Impact on consumers – when asked what impact best described the levy on consumers, 93% of consumers felt that the carrier bag levy had either a positive impact (61%) or no impact (32%) on them. 7% reported a negative impact, mainly due to cost and having to remember to bring their own bags.

Full details of the consumer survey results are included at **Annex B**.

⁷ It is unclear what percentage of consumers that reported no change already reused bags prior to the introduction of the levy.

3.4 Retailer engagement findings

As part of the review a retailer survey was developed to gather information in relation to the carrier bag levy, to obtain feedback, views of the levy and opinions on the way forward. In addition to the survey, the Review Team engaged with several large retailers to gather additional information.

The survey itself received 122 responses, 88% small retailers, 5% medium retailers and 7% large retailers.

Carrier bag usage - 79.5% of retailers felt that consumer bag usage had decreased since the introduction of the carrier bag levy mainly due to; consumers being aware of the levy, caring for the environment, not willing to pay, now bringing their own bags or willing to carry items when shopping.

Bag types - retailers, dependant on size, can provide a range of bag types for consumers to purchase. Survey data indicates that 100% of retailers surveyed still provide 5 pence (single use type) bags.

Positive impact on business - when asked if the carrier bag levy had benefited their business in any way, 75% responded “No”. However, 18% of retailers responded “Yes”, mainly due to the reduced costs of purchasing bags.

Negative impact on business - when asked if the levy had disadvantaged businesses in any way, 75% of retailers felt that it hadn’t, however 19% of respondents felt that their business had been disadvantaged in relation to theft, reduced sales, loss of consumers and administrative burden.

Overall impact on business – when asked to take everything into consideration 81% of retailers reported that the carrier bag levy had either no impact or a positive impact on their business. The positive impact responses (21%) were mainly due to retailer savings due to the reduction in the volume of bags they purchase, as consumers are reusing their own. 19% of retailers felt the levy had negatively impacted their business due to reduced sales and increased theft.

Full details of the retailer survey results are included at **Annex C**.

Usage increase - other feedback gathered as part of retailer engagement indicates a variety of retailer opinions on why carrier bag usage had increased during 2014-16 including:

- all retailers may not have been complying from the outset and that Year 1 statistical results may not have been reflective of actual usage;
- concern that current statistics have been affected by the introduction of Phase 2, may not be reflective of a normal trend and affect direct comparison with previous years;
- a view that the levy needs to be allowed to “norm” before consistent statistical data can be gathered, over a longer time period;
- consumer behaviours directly affect usage levels. There was a view that further analysis should be completed on consumer behaviours which may offer alternative options to reduce bag usage;
- consumers are shopping more frequently now (convenience shopping);
- business growth; and
- unplanned shopping/buying more items than intended.

3.5 Stakeholder views on impact of the levy

Survey data suggests that 79% of retailers and 69% of consumers felt that the carrier bag levy had benefited Northern Ireland generally as they felt that reduced bag usage was better for the environment, created less waste / litter and provided for environmental projects / good causes.

This is a view shared with the majority of wider stakeholders who were consulted as part of the Review.

3.6 Stakeholder views on the way forward

When asked their views on the way forward, in relation to the carrier bag levy, the following survey responses were received:

Table 3.2– Stakeholder survey views on the way forward

	Retailer	Consumer	Average
The current 5p levy on all bags priced less than 20p should continue as is	67%	64.5%	65.75%
The levy should be removed	15%	12.5%	13.75%
The 5p levy and 20p threshold should be increased	18%	23%	20.5%

Findings from wider stakeholder engagement indicate a broad spectrum of opinion on the options to maintain, remove or increase the levy. Key data and information on each option is summarised below.

3.6.1 Option A - Maintain

Retailers, consumers and other external stakeholders provided a range of opinions on why the levy should be **maintained**, including:

- The levy was considered a success in terms of positive consumer acceptance, reduced bag usage and associated environmental benefits, including the fact that environmental projects are funded from levy revenue;
- There was a view that the levy needed time to “norm out” to allow for further analysis in terms of its impact;
- It was felt that the current charge is pitched at just the right amount;
- The fact that there is now a similar 5p levy across 4 UK jurisdictions for the first time providing sufficient stability to allow for more detailed comparisons; and
- It is in retailers own interest to keep bag usage at a minimum, from a bag purchase cost perspective and retailers’ Corporate Social Responsibility.

3.6.2 Option B - Remove

Stakeholders who felt the carrier bag levy should be **discontinued** provided a range of views including:

- A feeling that consumers shouldn’t have to pay for a bag;
- The charge should be removed for smaller retailers; and
- There should be a total ban on plastic bags.

Some retailers felt that if the levy was removed that this would remove the incentive and that bag levels would return to previous levels.

3.6.3 Option C – Increase

Retailers, consumers and other external stakeholders who felt that the levy should be **increased**, thought that this change would:

- encourage more consumers to bring their own bags;
- encourage some to **start** reusing bags;
- discourage people from purchasing low cost bags.

There were also a number of stakeholders opposed to increasing the levy citing the following reasons:

- Levy statistics gathered by the Department are a crude measure of bag usage – not holistic or representative of all bag usage;
- There is not enough data or strong evidence to support an increase;
- Alternative options should be considered e.g. behavioural research, publicity, promotion, reminders, education and awareness;
- Increasing the levy would be disproportionate and have a negative impact on consumers, retailers in terms of sales (basket shops / impulse shopping) and administration and bag manufacturers in Northern Ireland;
- Retailers are working on reducing the overall cost of shopping for consumers, to increase the levy would hamper these efforts;
- There would be no consistency across the UK; and
- Some viewed the levy as another form of “taxation” to generate revenue and “top up” Government finances.

3.7 Stakeholder engagement conclusions

In general, the majority of stakeholders who contributed to the review supported the aims of the carrier bag levy and considered it to have had a positive impact on Northern Ireland as a whole. There is a broad range of opinion on what the way forward should be, but the majority of stakeholders supported leaving the current arrangements in place unchanged. From a stakeholder perspective removal of the levy does not appear to be a viable option. It should be noted, that while the stakeholder views expressed as part of this review provide useful insight from a range of perspectives they do not provide a representative or complete sample.

4. OPERATION OF THE LEVY

4.1 Overview of Operational Responsibilities

The operational delivery of the Carrier Bag Levy Scheme is provided by the Carrier Bag Levy Team (CBLT), part of Environment, Marine and Fisheries Group (EMFG), Department of Agriculture, Environment and Rural Affairs (DAERA).

The financial management of revenue collected is administered by Business Support Branch, EMFG.

The Countryside, Coast and Landscape Team within the Natural Environment Division of the Northern Ireland Environment Agency, is responsible for the co-ordination and management of both the Environment Fund and the Challenge Fund. The team designs and reviews the funding processes, launches and manages funds, whilst ensuring compliance with governance principles.

The Carrier Bag Levy Team (CBLT) was established in 2012 and is responsible for administration of, and ensuring compliance with, the carrier bag levy. The organisational structure focuses on the two core functions; “Levy Administration” and “Levy Compliance”. The team originally comprised 12 staff: one Grade 7, one DP, one SO, four EO1s, one EO2, two AO’s and two AA’s.

One EO1 vacancy was suppressed in October / November 2015 in response to wider Departmental vacancy management policies and financial pressures. The remaining Customers Relations Manager EO1s and the CBL admin team have reorganised and refocused delivery to successfully deliver all of the teams’ objectives.

The CBLT currently comprises eleven team members.

A pivotal role within the structure is the Large Case Manager role which has the responsibility for managing the relationship between the major retailers and the Carrier Bag Levy Team / Department.

4.2 Governance

The Review Team found that the Carrier Bag Levy Team have appropriate business plans, risk management and financial management procedures in place.

Management of the Carrier Bag Levy was reviewed by DOE’s Internal Audit Branch in October 2015, to provide an opinion on the adequacy and effectiveness of risk management, control and governance. The audit covered a range of key processes and activities involved in the administration of the carrier bag levy and resulted in a positive report on the management of the levy.

The Audit report made two recommendations in relation to procedural review, both of which have since been implemented.

4.3 Performance Monitoring

A Post Project Evaluation of the Carrier Bag Levy Scheme was completed in December 2015. In effect, the scheme has now transitioned into steady state operational delivery.

The Review Team would recommend that new targets are defined, agreed and incorporated into business objectives/plans to allow progress and performance to be tracked. These targets must accommodate Phase 2 changes i.e. all bags now in scope. DAERA may also wish to consider re-establishing new baselines to ensure that ongoing tracking is based on comparable data i.e. that Phase 2 scope changes are factored into comparisons.

4.4 Processes/Procedures

Whilst the majority of internal processes are automated, some manual intervention is required by CBLT members to fulfil their duties. With regard to external processes, 80% of retailers indicated that the process for declaring and paying for carrier bag usage was easy to follow and effective. 16% of respondents indicated a preference for the declarations and payments returns to be less frequent (currently quarterly).

4.5 Engagement & Communications

Evidence gathered throughout the review indicates that the CBLT has worked hard to identify, engage and communicate with key stakeholders during the introduction of the levy and subsequently in the administration and enforcement of it and to work, where possible, in a collaborative manner.

This is evidenced in the findings of the retailer survey where 88% of retailers felt that the responsibilities of retailers and the requirements of the levy had been clearly communicated to them. In addition, 85% of retailers who had engaged with the Carrier Bag Levy Team felt their queries had been handled in a professional and knowledgeable manner. Overall, on a star rating system, retailers rated their experience with the levy team as 4.2 out of 5.

Discussions with large retailers indicated that they have had a very good working relationship and two way communication with the Carrier Bag Levy Team, which would appear largely attributable to having established a dedicated Large Case Manager.

Retailers recommended that additional marketing and promotion should take place, in order to remind consumers of the levy intent/benefits, to further influence behaviours and promote the environmental initiatives that the levy proceeds support.

More than half of consumers (55%) were not aware that proceeds from bags costing less than 20 pence went to local environmental projects.

The Review Team recommends that DAERA should design and implement a communications plan which clearly promotes the benefits of the levy scheme, particularly the environmental benefits arising from the significant investment of levy proceeds on local and regional environmental projects. This should be part of a wider communications strategy which seeks to encourage positive behaviour change. The Innovation Lab within DoF may be able provide DAERA with expert support in the area of using communications interventions to change human behaviour.

4.6 CBLT IT System

An “in house” IT system was developed for the introduction of the levy, to enable the operational delivery of the levy scheme and to support the CBLT to complete their day to day operational functions. The ICT system is based on a web portal interface, which allows users to record their retailer details, quarterly returns and payments on line.

The majority of internal processes are carried out using the Carrier Bag Levy IT System which is effective. There are, however, opportunities for improvements to the administrative requirement / burden of manually reconciling payments received against retailers’ details held in the CBL IT system. In addition, a previous audit recommendation relating to the IT system stated the requirement for an enforcement module. Work is ongoing with EMFG Business Support to address both issues.

Recommendation: the Review Team would recommend that the CBLT commit to reviewing IT system requirements in order to:

- Remove manual payment intervention;
- Support longer term business needs which have evolved since the system was initially developed;
- Incorporate a complete enforcement functionality; and
- Provide qualitative management information.

This may involve upgrading/changing the current IT system or exploring alternative options to meet business needs in the future.

4.7 Operation of the Levy Conclusions

The recent Post Project Evaluation (December 15) and Internal Audit Review (October 2015) determined that the operational delivery of the levy by the Carrier Bag Levy Team was effectively and efficiently administered. Analysis of the controls, administration, processes, procedures, governance, engagement, communications and systems completed by the review team as part of this review would support this assessment.

There are a number of areas highlighted above that could further improve the operational delivery of the Carrier Bag Levy that the CBLT should consider.

5. BENCHMARKING COMPARISONS

5.1 Introduction

In order to assess whether any changes to the NI bag levy are either desirable or necessary, it is useful to consider the impact of the levy in other jurisdictions.

In many countries there has been a phase-out of disposable plastic bags. Some countries have placed bans on disposable bags and some have introduced bag levies.

In November 2013, the European Commission published a proposal aiming to reduce the consumption of lightweight (thickness below 50 microns) plastic carrier bags⁸. Under the proposal, EU member states can choose the most appropriate measures to discourage the use of plastic bags. On 29 April 2015 EU Directive 2015/720 defined that Member States should include either or both of the following:⁹

- a) the adoption of measures ensuring that the annual consumption level does not exceed 90 lightweight plastic carrier bags per person by 31 December 2019 and 40 lightweight plastic carrier bags per person by 31 December 2025, or equivalent targets set in weight. Very lightweight plastic carrier bags may be excluded from national consumption objectives; and
- b) the adoption of instruments ensuring that, by 31 December 2018, lightweight plastic carrier bags are not provided free of charge at the point of sale of goods or products, unless equally effective instruments are implemented. Very lightweight plastic carrier bags may be excluded from those measures.

All UK regions¹⁰ and the Republic of Ireland now have a carrier bag levy in place. Fund proceeds are levies – not taxes. The fundamental difference between taxes and levies is that the purpose of levies is not to generate revenue but to change consumer behaviour. Table 5.1 below provides a summary of the bag levy in each jurisdiction.

Table 5.1 – Benchmark Comparisons across the United Kingdom and Republic of Ireland

⁸ https://en.wikipedia.org/wiki/Phase-out_of_lightweight_plastic_bags#cite_note-37

⁹ <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015L0720&from=EN>

¹⁰ <http://researchbriefings.files.parliament.uk/documents/CBP-7241/CBP-7241.pdf>

	England	Wales	Scotland	Republic of Ireland ¹¹	Northern Ireland
Levy amount	5p since October 2015. No changes to date.	5p since October 2011. No changes to date.	5p since October 2014. No changes to date.	€0.15 in March 2002. Increased to €0.22 in 2007	5p since 2013. No changes to date.
What is covered	Minimum of 5p for any new single use carrier bag, defined as 'an unused bag made of lightweight (thickness less than 70 microns) plastic material with handles'.	Minimum of 5p for any new single use carrier bag, defined as 'bags made wholly or mainly from plastic, paper or plant based starch which are not intended for multiple re-use (e.g. bags for life).	Minimum of 5p for any new single use carrier bag, including bags made from plastic, paper or plant based materials not intended for multiple re-use (e.g. bags for life).	Minimum of €0.22 charge for any new single use plastic carrier bag.	Minimum of 5p for any new carrier bag with a retail price of less than 20p. In January 2015 the scope of the levy was extended to include all bags with a retail price of less than 20p.
Exemptions	Only applies to single use plastic bags. Bags for life and paper bags are exempt. Small and medium-sized enterprises (retailers employing less than 250 staff) are exempt from applying the charge.	Bags for life are exempt. There are also specific exemptions for bags made of cloth, cotton etc.	Bags for life are exempt. There are also specific exemptions for bags of certain size (e.g. small paper bags) and used for specific purposes (e.g. for carrying loose, unpackaged fruit).	Only applies to plastic bags (mainly single use) up to €0.70. Bags for life and paper bags are exempt.	All new carrier bags over a threshold price of 20p. There are also specific exemptions for bags of a certain size (e.g. small paper bags) and used for specific purposes (e.g. for carrying loose, unpackaged fruit).
Proceeds	Retailers are free to use the proceeds of the charge as they wish (although they are strongly encouraged to donate them to "good causes").	Retailers are free to use the proceeds of the charge as they wish (although they are strongly encouraged to donate them to "good	Retailers are free to use the proceeds of the charge as they wish (although they are strongly encouraged to donate them to "good	In Republic of Ireland proceeds go to an Environment Fund along with revenue from Republic of Ireland's landfill levy – this is ring-fenced for environmental projects. In 2006 120 million bags were	The proceeds of the levy are paid to central government and used to fund local environmental projects and to

¹¹ It should be noted that Republic of Ireland's data is based on the collection of revenue for plastic bags and per capita estimates are calculated by dividing annual revenue (collected from all retailers) by population estimates for any given year. There is not a census every year so population figures are based on Central Statistics Office population estimates. Data published and validated by Department of Communication, Climate Action and Environment.

	England	Wales	Scotland	Republic of Ireland ¹¹	Northern Ireland
	The Government has estimated that the English charge will raise around £70 million per year.	causes”). The Environment (Wales) Act 2016 now places a duty on all sellers to donate to good causes – this will be enacted once new regulations are introduced.	causes”).	bought generating €20 m. In 2007 this dropped to 100 million but, because of the higher cost per bag, it generated €22m. Revenue has gradually decreased since 2008 and in 2014 now generated €12m.	administer and enforce the levy.
Impact	In 2014 over 7.6 billion single-use plastic bags were used. Since the introduction of the levy bag usage has reduced by around 80%.	The scheme in Wales saw a reduction in plastic bag consumption of 79% in its first 3 years. There has been an estimated 57% <u>overall</u> reduction in bag use.	In Scotland the charge was introduced in the final 11 weeks of 2014 and figures show a drop of 18% when compared with the statistics for the previous year. The Scottish Government estimated that the charge could raise £5-6 million per annum, based on an 80% reduction in bag use.	The levy resulted in dramatic change in ROI consumer behaviour: <ul style="list-style-type: none"> • Immediate - 94% reduction in plastic bag consumption • Pre levy consumption – 328 bags/inhabitant/year • Post levy consumption – 21 bags/inhabitant/year • Pre levy increase 2006 – 31 bags/inhabitant/year • Post levy increase 2007– 28 bags/inhabitant/year • Usage in 2010 – 18 bags/inhabitant/year • Usage in 2012 - 14 bags/inhabitant/year • Usage in 2013 - 15 bags/inhabitant/year • Usage in 2014 - 13 bags/inhabitant/year 	Actual reductions in bag usage were: <ul style="list-style-type: none"> • 71.8% in 2013/14 • 69.5% in 2014/15 • 66.3% in 2015/16
Other Relevant Information		Powers were included in the Environment (Wales) Act 2016 which has extended			

	England	Wales	Scotland	Republic of Ireland ¹¹	Northern Ireland
		<p>the Welsh Minister’s powers so they may set a charge for other types of carrier bags, in addition to the current charge on single use carrier bags. However, it is currently not the intention to enact these powers until there is sufficient evidence to support this direction. Work is ongoing to determine how best to gather this evidence.</p>			

5.2 Other benchmark examples

- In 2003, **Denmark** introduced a tax on retailers for giving out plastic bags. This encouraged stores to charge for plastic bags. It was estimated that this saved approximately 66% of plastic and paper bag usage. By 2014, Denmark had the lowest plastic bag usage in Europe, with an estimated 4 bags per person per year usage;
- The **Netherlands** implemented a comprehensive ban on free plastic shopping bags (with exemptions) on 1 January 2016. Stores, particularly supermarkets, sell reusable plastic bags for around €0.15 to €0.25;
- In 2011, **Italy** banned the distribution of bags that are not made from biodegradable sources;
- In **Germany**, all stores that provide plastic bags must pay a recycling tax;
- **France** banned plastic carrier bags under 50 microns in July 16 and consumers are charged for reusable bags; and
- In **Belgium**, a plastic bag tax was adopted in 2007.

5.3 Usage Comparison across regions

WRAP (Waste and Resources Action Programme) was set up in 2000 to promote sustainable waste management. WRAP works with governments, businesses and communities to deliver practical solutions to improve resource efficiency.

Data on carrier bags issued by supermarkets has been gathered and analysed by WRAP at the request of UK governments on an annual basis since 2006.

Figures published by WRAP in July 2015¹² allow for a direct comparison between UK regions for thin-gauge bags¹³ usage per capita per month based on participating retailer¹⁴ data as detailed in Table 5.2 below.

Table 5.2 – Usage comparison across regions

Bags per person, per month	2010	2011	2012	2013	2014
Northern Ireland	8.0	8.6	8.8	2.6	1.6
Wales	9.6	7.4	1.7	2.0	2.1
Scotland	11.9	11.8	11.9	12.6	10.3
England	10.0	10.6	11.0	11.5	11.7

¹² http://www.wrap.org.uk/2015_carrier_bag_figures

¹³ Thin-gauge bags constitute 95% of all bags used by supermarket consumers, and are defined as all paper bags and polyethylene bags of a gauge (thickness) of less than 25 microns.

¹⁴ Participating retailers are: Asda, Co-operative Group, Marks & Spencer, Morrison's, Sainsbury's Supermarkets Ltd, Tesco and Waitrose.

The **actual** declared low cost (5p) bag usage in NI between 2013/14 and 2015/16 is detailed in Table 5.3 below.

Table 5.3 – Single use bag figures, per person, for Northern Ireland (these figures include both plastic and paper).

	2013/14	2014/15	2015/16
Total Single Use (5p) Bags	84,531,885	87,242,263	88,682,717
NI Population (estimated millions)	1,830,000	1,840,000	1,850,000
Estimated single use bags per person, per year	46	47	48
Estimated single use bags per person, per month	3.8	3.9	4

There was an average of 86,818,955 low cost (5p) bags declared in NI between 2013/14 and 2015/16. With an estimated population of 1.84m, this equates to approximately **47** low cost bags per capita per year, or **3.9** low cost bags per person per month in this period.

Data published by Republic of Ireland is detailed in Table 5.4 below.

Table 5.4 – Single use plastic bag figures, per person, for Republic of Ireland

	2010	2011	2012	2013	2014
Bags per person, per year	18	16	14	15	13
Bags per person, per month	1.5	1.3	1.2	1.2	1.1

It should be noted that Republic of Ireland's data is based on the collection of revenue for plastic bags and per capita estimates are calculated by dividing annual revenue (collected from all retailers) by population estimates for any given year. There is not a census every year so population figures are based on Central Statistics Office population estimates.¹⁵

¹⁵ Data published and validated by Department of Communication, Climate Action and Environment.

5.4 Benchmarking conclusion

The key conclusions from the benchmarking exercise are as follows:

- There is variance in the nature of bag levies across the UK and Republic of Ireland, with various exemptions locally;
- Evidence from other jurisdictions suggests that the introduction of bag levies does impact consumer behaviour;
- Evidence from Republic of Ireland suggests that an increase in the bag levy can further reduce bag consumption;
- Northern Ireland and Republic of Ireland are the only regions studied which have price thresholds, other regions charge based on the type of bag as opposed to its price;
- UK now applies a levy (5 pence) across all regions;
- In England, Wales and Scotland retailers choose how the proceeds are allocated;
- Based on WRAP figures, Northern Ireland has the lowest single use bag consumption per month (1.6 in 2014) compared to other UK regions and is only 0.5 bags per month, or 6 bags a year behind Republic of Ireland bag usage figures; and
- Based on **actual** declared figures for all bags, NI single use bag (5p) usage is 48 per capita, per annum (2014/15) and currently below the required EU target of 90 lightweight plastic carrier bags per person by 31 December 2019. Further information on projected usage is provided in Section 6.3 below.

6. OPTION ASSESSMENT

This section of the report will analyse the three agreed options, identified in the Terms of Reference, for the review using a defined set of assessment criteria to help determine the impact of each option and assess whether any changes to the NI Bag Levy are either desirable or necessary.

6.1 Options to be Assessed

- **Option A – Maintain:** Continuing with current bag levy i.e. a 5p levy on all bags priced at under 20p;
- **Option B – Remove:** discontinuing the existing bag levy and removing the 5p charge; and
- **Option C – Increase:** Increasing the bag levy to 10p for all new bags and extending the threshold to 40p.

6.2 Assessment Criteria

Each option will be assessed against the evaluation criteria detailed below. These criteria are intended to help determine the desirability or necessity for changes to the charging provision. Implementation considerations and risks associated with each option will also be assessed.

The option assessment criteria are:

- Impact on carrier bag consumption;
- Impact on the environment;
- Revenue generation;
- Resource allocation to environmental projects;
- Implementation considerations; and
- Risks.

Each option will be assessed on its potential to impact carrier bag consumption and associated environmental and revenue generation/funding factors. Where existing data and relevant comparable benchmark information allows, estimated projections will be provided for each option. These projections are intended to provide an indicative estimate of the impact of each option based on the best available information at the time of the review.

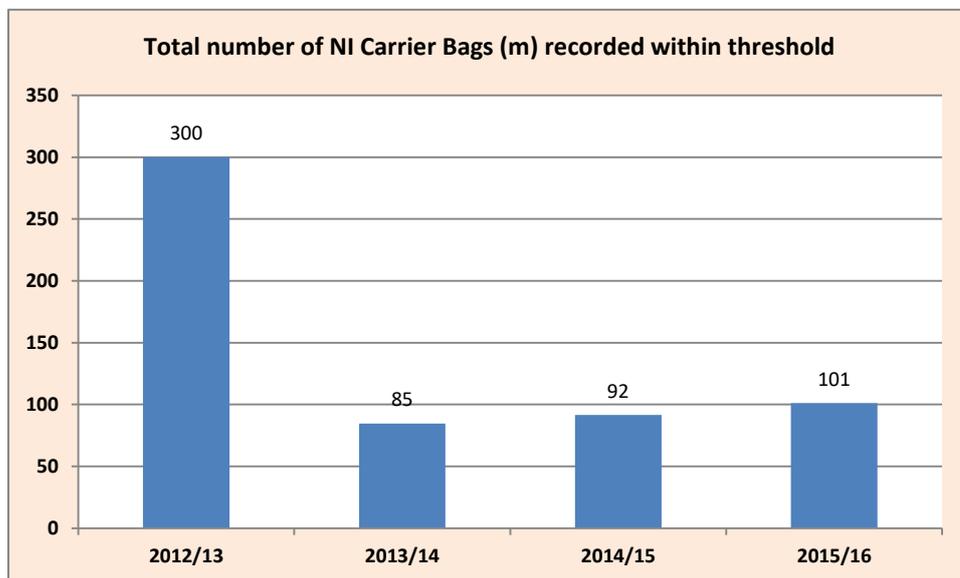
6.3 Impact on carrier bag consumption

Prior to the introduction of the Carrier Bag Levy, it was estimated by the Department of Environment (now DAERA), that single use bag consumption was approximately 300 million per year in Northern Ireland¹⁶.

6.3.1 Option A – Maintain

Bag usage has reduced significantly since the introduction of the carrier bag levy in 2013, as detailed in Chart 6.1 below:

Chart 6.1 – Total NI Carrier Bags (m) recorded within threshold



There are, on average, 207.6 million less carrier bags being used every year in NI, representing an estimated total reduction of 623 million bags over 3 years. Bag usage levels (recorded under the 20 pence threshold), are currently 66.3% below the 300 million baseline estimate. Year 1 saw a dramatic reduction in declared bag usage from 300 million bags in 2012/13 to 85 million (71.8% reduction from baseline) in 2013/14. As detailed in Section 5.3, according to WRAP figures, Northern Ireland has the lowest single use bag consumption per month (1.6 in 2014) compared to other UK regions and is only 0.5 bags per month, or 6 bags a year behind Republic of Ireland per capita bag usage figures.

¹⁶ This was adjusted by DOE from an original baseline of 246 million single use carrier bags (used in the business case) to 300 million based on additional analysis.

Carrier bag usage has, however, increased over the past two years to 101 million in 2015/16. While the exact reasons behind this increase are not fully known, it is generally accepted that the Phase 2 change to incorporate all carrier bags within the threshold broadened the range of bags classified within scope of the levy and increased total declared usage figures. As detailed in Section 2.2.2, usage figures may also have been impacted by consumer behaviours, business growth, shopping patterns and retailer pricing policies.

Usage figures between 2013/14 and 2015/16 represent an average annual increase of 9%. This percentage incorporates both lower and upper rate bag usage. Lower rate bags are defined as carrier bags costing 5p (all materials). Upper rate bags are bags priced at less than 20p (all materials). Data from the 3 years official validated statistics indicates that in financial year 2013/14 there was 84,531,885 declared single use bags¹⁷. In 2014/15 this increased to 87,242,263 lower rate bags (3.2% increase) and in 2015/16 there was an increase to 88,682,717 lower rate bags (1.7% increase). The average across these increases is 2.45%. With reference to upper rate bag usage, the scope of the levy was extended in the last quarter of Year 2 only. The only complete set of data available for upper rate bags is for Year 3 where 12,470,913 upper rate bags were included within the scope of the levy. Consequently no data is yet available for comparison purposes for upper rate bags. It should, however, be recognised that lower rate bag usage represents 88% of overall bag usage on validated statistics from Year 3.

Given the range of variables potentially influencing usage figures and the relatively limited amount of complete data available, it is difficult to predict with any degree of certainty if the upward trend in bag usage will continue at the current rate or if it will slow and level out. Analysis of data available for Republic of Ireland indicates that after the initial dramatic reduction in bag usage following the introduction of the levy in 2002, there was an average annual increase of 10% year on year until 2006, at which point Republic of Ireland introduced an increase to the levy charge (July 2007). It should, however, be noted that while the data for Republic of Ireland offers a useful comparable example, the type of bags measured vary (single use plastic carrier bags), the method of measurement is different (per capita) and the administration and enforcement approach differs.

For the purposes of estimating projected usage figures for Option A, if we use the official validated figures available for lower cost carrier bag usage (5p bags) between 2013/14 and 2015/16 (the only complete data available), this equates to an average annual increase of approximately 2.5%¹⁸. This annual increase has been applied to 2015/16 declared bag usage figures (lower and upper rate bags below the 20p threshold) for a period of nine years to 2024/25¹⁹. It should be noted that the only official data available to the Review Team was historic, up to 2015/16. At the time of the review the 2016/17 data was not available (expected to be published in August 2017).

¹⁷ In Year 1 published data there was no reference to lower rate bags, only single use bags. It should also be noted that the only data available for year 1 may include some bags subsequently defined as upper rate bags. There is no means to separate this information and the total figure has been used for comparison purposes.

¹⁸ Average lower cost bags declared between 2013/14 and 2015/16 average an increase of 2.45% per annum. This has been rounded to 2.5% for projection purposes.

¹⁹ Projecting usage estimates to 2024/25 will allow analysis of potential impact in terms of achievement of EU Directive 2015/720 which sets a target of 40 lightweight plastic carrier bags per person per year by 31 December 2025.

Table 6.1 – Projected bag usage for all bags (lower and upper rate bags below 20p) if levy is maintained²⁰

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags (m)	104	106	109	111	114	117	120	123	126

6.3.2 Option B – Remove

The Review Team could find limited comparative evidence for the removal of a carrier bag levy. The only relevant broadly comparable example was in South Africa where a charge of 46 Rand cents was introduced in May 2003²¹. The use of plastic bags fell sharply (90%) following the change but gradually started to increase thereafter. In response to growing pressure from affected stakeholders, the carrier bag charge was reduced by an average of 46% as retailers altered the cost of bags. While exact data is unavailable, the use of carrier bags increased significantly as the levy was reduced. The conclusion of the South African carrier bag charge experience was that the levy had only succeeded in reducing consumption in the short term and bag usage increased significantly following reductions in levy charges.

Although a different subject matter, congestion charges were introduced in a trial in Stockholm in 2006 to try to disrupt driver behaviours and reduce traffic congestion. This action resulted in a 20% reduction in rush hour traffic²². On completion of the trial (while full implementation was being considered), traffic congestion **immediately** reverted to original pre-trial levels.

These two examples seem to suggest that user behaviours are directly influenced by monetary charges and quickly revert when this charge is altered or removed. This is supported by 69% of surveyed consumers who thought that the current carrier bag levy discouraged consumers from purchasing bags when shopping.

There is insufficient comparable data to allow for estimated projections to be made on the impact of removing the levy on bag usage. However, it seems logical to conclude that there would be an immediate impact and it is very likely that there would be a significant increase in carrier bag usage.

²⁰ Based on an average annual increase of 2.5%. Projections assume no change to retailer internal bag pricing policies.

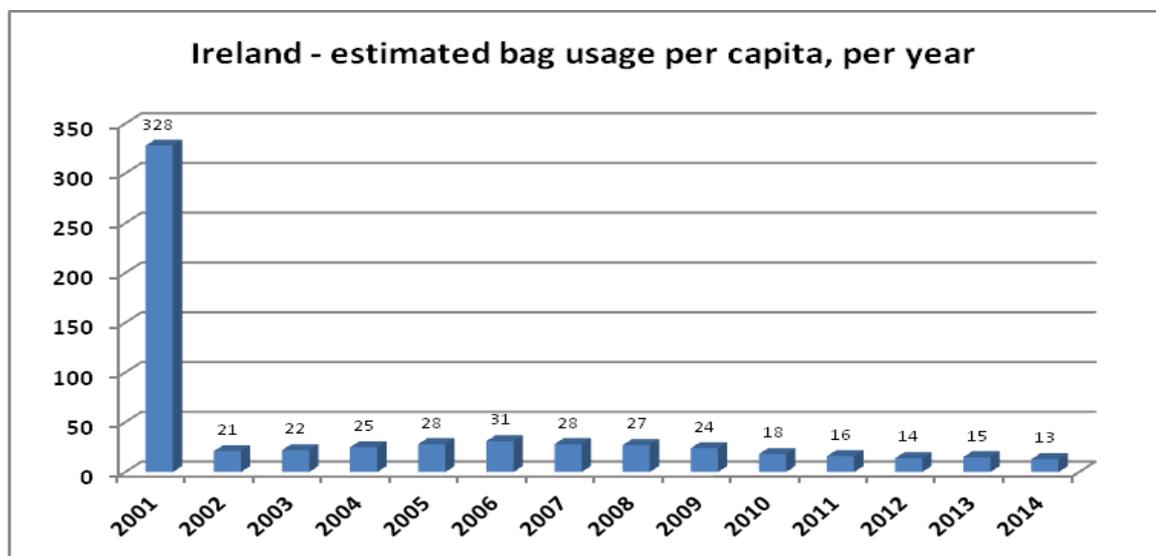
²¹ Analysis of the plastic-bag levy in South Africa

²² https://www.ted.com/talks/jonas_eliasson_how_to_solve_traffic_jams?language=en

6.3.3 Option C – Increase

While carrier bag levy charges are only one aspect of influencing consumer behaviours to reduce bag usage, evidence from other countries suggests that increasing the charge can have a direct impact on bag usage. In Republic of Ireland the levy was increased to €0.22 in July 2007 in response to a gradual increase in consumer bag usage. Following the increased levy charge, bag usage declined yearly from 27 bags per capita in 2008 to 13 bags per capita in 2014. This represents an annual reduction of approximately 10%.

Chart 6.2 Republic of Ireland – estimated bag usage per capita, per year



If the carrier bag levy was increased in Northern Ireland to 10 pence per bag with a threshold of 40 pence, it seems reasonable to conclude that carrier bag usage would reduce.

For the purposes of estimating projected usage figures for Option C, it will be necessary to forecast the potential impact based on estimated rates of usage reduction. A range of three potential reduction scenarios have been detailed below to give an indication of the possible effect of increasing the levy in NI.

The average annual decrease from the Republic of Ireland comparator (10% average annual reduction) has been used as an upper range scenario. As outlined above, while the data for Republic of Ireland offers a useful comparable example, the type of bags measured vary (single use plastic carrier bags), the method of measurement is different (per capita) and the administration and enforcement approach differs. For these reasons, two other potential reduction scenarios have been provided based on a potential 7% reduction and a 4% reduction. These scenarios will provide insight into the potential effect of a levy increase and can be used for further analysis of environmental and revenue impact. It should be stated that these scenarios are intended to provide indicative estimates only.

As part of the scenario modelling it has been necessary to adjust the first year figures to allow for the extension of the scope of the levy i.e. with an increase of the threshold to 40p, more bags will be within scope of the levy and there will be an initial increase of declared bags. This does not indicate increased bag usage but an extension in the number of bags subject to retailer declaration. No data is available from retailers about current bag usage within the 20p to 40p bracket so it has been necessary to estimate this increase based on Phase 2 increases. The first full year of Phase 2 declared bag usage (2015/16) saw 12,470,913 bags declared (upper rate bags priced less than 20p). This took the total number of declared bags for 2015/16 to 101,153,826, with the total number of upper rate nags representing 12% of the total number of declared bags.

For estimation purposes, if we assume a similar 12% increase for the first year (2016/17) following the extension of the threshold from 20p to 40p, this would lead to an additional 13,793,704 bags included within the scope of the levy taking the total number of declared bags to 114,947,530. As outlined above, the increase of the levy to 10p would also result in a potential change to consumer behaviours so an annual percentage reduction will be applied for the three scenarios detailed above:

- Scenario 1 – annual 10% reduction in declared bags;
- Scenario 2 – annual 7% reduction in declared bags; and
- Scenario 3 – annual 4% reduction in declared bags.

This annual decrease will be applied from 2016/17, so the 114,947,530 (115m rounded) total will be subject to a percentage reduction from the first year (based on scenario percentage).²³ The tables below detail the impact of these scenarios in terms of total declared bags.

Table 6.2 – Scenario 1 - projected bag usage for all bags (lower and upper rate bags below 40p) if levy is increased based on 10% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags (m)	104	93	84	75	68	61	55	50	45

Table 6.3 – Scenario 2 - projected bag usage for all bags (lower and upper rate bags below 40p) if levy is increased based on 7% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags (m)	107	99	93	86	80	74	69	64	60

Table 6.4 – Scenario 3 - projected bag usage for all bags (lower and upper rate bags below 40p) if levy is increased based on 4% annual reduction in bag usage

²³ It should be noted that these indicative projections do not allow for implementation time i.e. time taken to actually implement any change to the levy.

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags (m)	110	106	102	98	94	90	86	83	80

6.3.4 Impact on EU bag usage targets

Lower cost (5p) bags represented 88% of the total declared bags in 2015/16. While these declared bags encompass **all material types**, they include a large percentage of lightweight plastic carrier bags. By using the same modelling approach detailed above, it is possible to provide an indicative assessment of impact in terms of achievement of EU bag reduction targets of no more than 90 lightweight plastic carrier bags per person per year by 31 December 2019 and 40 lightweight plastic carrier bags per person per year by 31 December 2025. Northern Ireland Statistics and Research Agency (NISRA) population projections have been used to calculate approximate annual per capita bag usage.²⁴

²⁴ http://www.ninis2.nisra.gov.uk/InteractiveMaps/Population/Population%20Pyramids/Projections_1982-2064/Pop_Pyramid_October2015.html

Table 6.5 – Option A - projected bag usage for lower rate bags (5p) if levy is maintained

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags	90,899,785	93,172,280	95,501,587	97,889,126	100,336,354	102,844,763	105,415,882	108,051,279	110,752,561
NI Population (estimated millions)	1,860,000	1,870,000	1,880,000	1,890,000	1,900,000	1,910,000	1,920,000	1,930,000	1,940,000
Estimated low cost bags per person, per year	49	50	51	52	53	54	55	56	57

Table 6.6 – Option C Scenario 1 - projected bag usage for lower rate bags (5p) if levy is increased based on 10% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags	79,814,445	71,833,001	64,649,701	58,184,731	52,366,258	47,129,632	42,416,669	38,175,002	34,357,502
NI Population (estimated millions)	1,860,000	1,870,000	1,880,000	1,890,000	1,900,000	1,910,000	1,920,000	1,930,000	1,940,000
Estimated low cost bags per person, per year	43	38	34	31	28	25	22	20	18

Table 6.7 – Option C Scenario 2 - projected bag usage for lower rate bags (5p) if levy is increased based on 7% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags	82,474,927	76,701,682	71,332,564	66,339,285	61,695,535	57,376,847	53,360,468	49,625,235	46,151,469
NI Population (estimated millions)	1,860,000	1,870,000	1,880,000	1,890,000	1,900,000	1,910,000	1,920,000	1,930,000	1,940,000
Estimated low cost bags per person, per year	44	41	38	35	32	30	28	26	24

Table 6.8 – Option C Scenario 3 - projected bag usage for lower rate bags (5p) if levy is increased based on 4% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Bags	85,135,408	81,729,992	78,460,792	75,322,361	72,309,466	69,417,088	66,640,404	63,974,788	61,415,796
NI Population (estimated millions)	1,860,000	1,870,000	1,880,000	1,890,000	1,900,000	1,910,000	1,920,000	1,930,000	1,940,000
Estimated low cost bags per person, per year	46	44	42	40	38	36	35	33	32

6.3.5 Impact on carrier bag consumption conclusions

There is insufficient data available to draw accurate conclusions on the impact of leaving the bag levy unchanged (Option A). There is only two years worth of complete data and while this would indicate an upward trend in bag usage the figures have been subject to Phase 2 changes and other potential variables. Bag usage data for NI would need to normalise and be captured over a longer time frame to be able to establish usage patterns with any degree of certainty²⁵.

For the purposes of this review projections have been made for Option A to provide an indicative view into potential bag usage. There is limited published data available to analyse the effect on bag usage if a levy was removed (Option B). Analysis of user behaviours does suggest monetary charges disrupt consumer behaviours which quickly revert when this charge is altered or removed. It would seem reasonable to assume that if the bag levy was removed in NI that there would be a marked increase in bag usage and that this would continue to increase over time.

The bag levy had a dramatic effect on bag usage in NI when it was first introduced. While not the only factor, it is generally accepted that a monetary charge can and does disrupt behaviours. The experiences of Republic of Ireland suggest that an increase to an existing charge can have a secondary effect and reverse increasing usage trends. If it was considered that bag usage levels in NI had reached, or were forecast to reach, unacceptable levels, then an increase to the levy would almost certainly help drive down usage. Estimated projections have been developed as part of this review to provide indicative reduction levels based on three potential scenarios.

6.4 Impact on the environment

Bag production and usage has been linked to CO₂ emissions, litter and impact on marine environment and wildlife.

6.4.1 Option A - Maintain

Based on the CO₂ emission calculation described in Section 2.3, the current CO₂ emissions linked to carrier bag usage in NI is 210k tonnes for 2015/16 based on 101m bags. If we apply the estimated annual percentage bag usage increase detailed in Section 6.3.1, by 2024/25 there would be approximately 126 million bags equalling 262k tonnes of associated CO₂ emissions.

Table 6.9 – Projected CO₂ emissions (linked to carrier bag usage) if levy is maintained

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
CO₂ (k tonnes)	215	221	226	232	238	244	250	256	262

²⁵ Ireland had four years of published data on bag usage which informed their decision to increase the levy charge.

6.4.2 Option B – Remove

It is impossible to accurately predict the impact on bag usage figures if the levy were to be removed. Analysis outlined above would seem to suggest that bag usage would significantly increase and this would have a direct affect on CO₂ emission levels.

When informed that carrier bag usage had increased over the past two years, 62% of consumers expressed that they were concerned for environmental reasons.

Consumer and retailer survey data and the Marine Conservation Society’s report would suggest that any increased bag usage associated with the removal of the levy could have a direct impact on the environment in terms of an increase in discarded bags.

6.4.3 Option C - Increase

Using the same CO₂ emission equation outlined above and the projected bag usage scenarios detailed in Section 6.3.3, it may be possible to provide an insight into potential CO₂ emissions figures if the levy were to be increased.

Table 6.10 – Scenario 1 - projected CO₂ emissions (linked to carrier bag usage) if levy is increased with a 10% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
CO ₂ (k tonnes)	215	194	174	157	141	127	114	103	93

Table 6.11 – Scenario 2 - projected CO₂ emissions (linked to carrier bag usage) if levy is increased with a 7% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
CO ₂ (k tonnes)	222	207	192	179	166	155	144	134	124

Table 6.12 – Scenario 3 - projected CO₂ emissions (linked to carrier bag usage) if levy is increased with a 4% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
CO ₂ (k tonnes)	230	220	212	203	195	187	180	173	166

Consumer and retailer survey data and the Marine Conservation Society’s report would suggest that any reduction in bag usage associated with the increase of the levy charge could have a direct and positive impact on the environment in terms of a decrease in discarded bags.

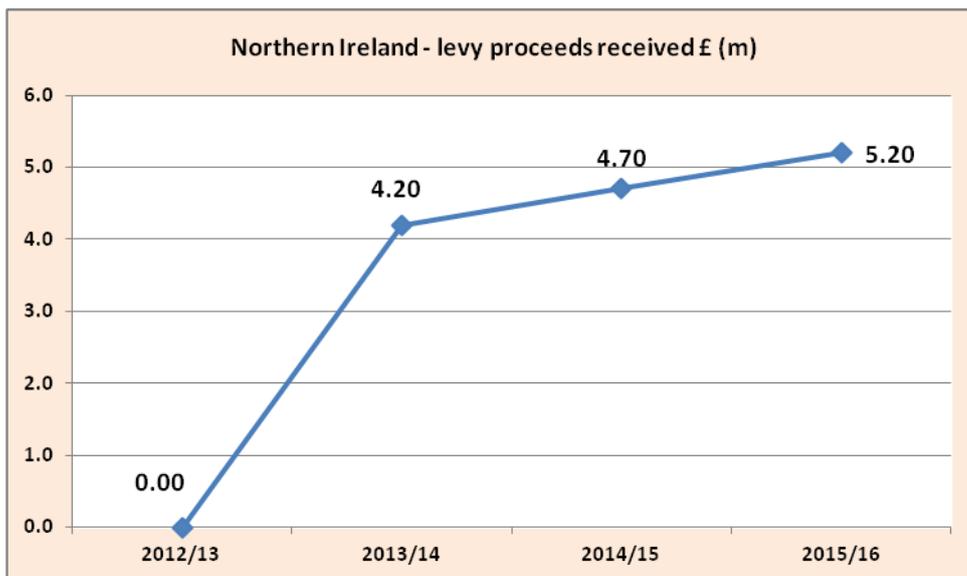
6.4.4 Impact on the environment conclusions

A CO₂ emissions baseline was agreed as part of the carrier bag levy business case and established a direct correlation between total bags used and CO₂ emissions. The baseline provides a method to calculate estimated CO₂ tonnage per million bags. While it is acknowledged that the calculation was originally intended for single use carrier bags, for comparison purposes this same equation has been used to project estimated CO₂ emissions for each option. The CO₂ emission projections are based on the same estimated bag usage scenarios detailed in Sections 6.3.1 to 6.3.3 and the limitations of these figures apply to corresponding CO₂ emission estimates. Based on this analysis Option C would have the greatest impact on reducing CO₂ emissions.

6.5 Revenue generation

Since the introduction of the carrier bag levy in Northern Ireland in 2013/14, where residual carrier bag usage exists, associated revenue has been generated and collected. This revenue has increased year on year in line with increased bag consumption as outlined in Chart 6.3 below:

Chart 6.3 – NI Levy proceeds received £(m) between 2012/13 and 2015/16



6.5.1 Option A - Maintain

It is anticipated that maintaining the levy at the current level would see an increased amount of revenue generated in line with the current upward trend in bag usage over the last two years. Based on the projected estimate detailed in Section 6.3.1, by 2024/25 it is estimated that annual revenue generated could be in the region of £6.3m, a potential increase of £1.1m on the £5.2m generated in 2015/16. It should, however, be noted that these projections do not factor in any changes to retailer bag pricing policies which may take bags out of the 20p threshold. When Phase 2 was introduced (changing the single use bag levy [5 pence only] to all bags less than 20p) some

retailers priced bags at 20p and above, therefore pushing themselves outside the scope of the levy completely. In effect this revenue stream is sensitive to such changes.

Table 6.13 – Projected revenue (£m) if levy is maintained

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	5.2	5.3	5.4	5.6	5.7	5.9	6.0	6.2	6.3

6.5.2 Option B – Remove

There would be no revenue generated if the levy were to be removed.

6.5.3 Option C – Increase

In Republic of Ireland the increase in levy in 2007 from €0.15 to €0.22 saw a marked reduction in bag consumption and a decrease in the amount of revenue generated from €22.6m in 2007 to €12.7m in 2014. The two years immediately after the levy change did however see an increase in income to €26.7m in 2008 and €23.5m in 2009 before the pattern of year on year decreases in revenue emerged. The table below forecasts potential revenue for NI based on the scenarios detailed in Section 6.3.3.

Table 6.14 – Scenario 1 - projected revenue (£m) if levy is increased with a 10% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	10.4	9.3	8.4	7.5	6.8	6.1	5.5	5.0	4.5

Table 6.15 – Scenario 2 - projected revenue (£m) if levy is increased with a 7% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	10.7	9.9	9.3	8.6	8.0	7.4	6.9	6.4	6.0

Table 6.16 – Scenario 3 - projected revenue (£m) if levy is increased with a 4% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	11.0	10.6	10.2	9.8	9.4	9.0	8.6	8.3	8.0

It is projected that increasing the levy to 10 pence would generate an increase in revenue in the years immediately after such a charge was introduced. It is likely that revenue would taper off year after year in line with the expected reduction in bags being consumed.

6.6 Resource allocation to environmental projects

6.6.1 Option A – Maintain

As detailed in Section 2.5, the proceeds of the levy are currently used to deliver local environmental initiatives/projects and help communities, charities, business, schools and voluntary organisations deliver local programmes to support wellbeing and prosperity, by improving the environment. Approximately £11.8m of carrier bag levy revenue has been distributed to environmental projects since 2013.

The funding has been made available to protect and improve habitats, air and water quality, to promote health, wellbeing, resource efficiency and sustainable economic development and access to the natural environment.

If we apply the same percentage annual increase detailed in Section 6.3.1, the amount of revenue generated will increase to £6.3m in 2024/25. If we apply an estimated 1.5% annual inflationary uplift to 2015/16 administration and enforcement costs this would leave an estimated £5.7m of available funds for environmental projects in 2024/25.

Table 6.17 – Projected resources (£m) available for allocation to environmental projects if levy is maintained

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	5.2	5.3	5.4	5.6	5.7	5.9	6.0	6.2	6.3
Costs (£m)	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Revenue available for allocation (£m)	4.7	4.8	4.9	5.1	5.2	5.4	5.4	5.6	5.7

6.6.2 Option B – Remove

If the levy was to be removed any subsequent carrier bag usage would not generate revenue and the funding for environmental projects would have to be found elsewhere, or discontinued.

6.6.3 Option C – Increase

It is projected that increasing the levy to 10 pence would generate an increase in revenue in the years immediately after such a charge was introduced. It is expected that revenue would taper off year after year in line with the expected reduction in bags being consumed.

If we apply an estimated 1.5% annual inflationary uplift to 2015/16 administration and enforcement costs we can calculate estimated remaining resources for environmental projects using the projected bag usage scenarios detailed in Section 6.3.3.

Table 6.18 – Scenario 1 - projected resources (£m) available for allocation to environmental projects if levy is increased with a 10% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	10.4	9.3	8.4	7.5	6.8	6.1	5.5	5.0	4.5
Costs (£m)	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Revenue available for allocation (£m)	9.9	8.8	7.9	7.0	6.3	5.6	4.9	4.4	3.9

Table 6.19 – Scenario 2 - projected resources (£m) available for allocation to environmental projects if levy is increased with a 7% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	10.7	9.9	9.3	8.6	8.0	7.4	6.9	6.4	6.0
Costs (£m)	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Revenue available for allocation (£m)	10.2	9.4	8.8	8.1	7.5	6.9	6.3	5.8	5.4

Table 6.20 – Scenario 3 - projected resources (£m) available for allocation to environmental projects if levy is increased with a 4% annual reduction in bag usage

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Revenue (£m)	11.0	10.6	10.2	9.8	9.4	9.0	8.6	8.3	8.0
Costs (£m)	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Revenue available for allocation (£m)	10.5	10.1	9.7	9.3	8.9	8.5	8.0	7.7	7.4

6.7 Implementation considerations

6.7.1 Administrative and enforcement costs

There would be very limited additional costs associated with administering and enforcing the levy for each of the options considered as the current processes and delivery structures would apply to Option A and Option C. Option B would require no administration or enforcement if the levy was to be removed but there would be redeployment considerations for the CBLT.

6.7.2 IT Changes

There would be no internal IT changes required to continue administering and enforcing the levy using existing IT systems if the current levy provision remained unchanged (Option A). There are, however, opportunities to enhance service provision through some IT enabled business change/investment as detailed in Section 4.6. Discussions with the current IT support team suggest that removal of the levy (Option B) would have virtually no impact. There would be limited IT changes required to continue administering and enforcing the levy using existing IT systems if the current levy was increased (Option C). The same opportunities exist to enhance service provision through some IT enabled business change/investment as described for Option A.

6.7.3 Legislation

Option A would require no changes to existing legislation. There would be minimal legislative changes required to remove the levy. Option C would require legislative changes to increase the levy to 10p with a 40p threshold. Officials involved in introducing the current Carrier Bag legislation have estimated that it may take between 12-18 months to complete all aspects of the required change which requires Assembly approval.

6.8 Risks

The purpose of this section is to identify and analyse the risks that might impact upon each option.

The benefits of this exercise are that it allows:

- assessment of how each of the options is impacted by these uncertainties;
- the selection of a preferred option from a risk perspective; and
- better understanding of the relative importance of the various risks in relation to the option which is finally selected.

The approach taken in this analysis of risk is as follows:

- identify the important areas of risk and assess the impact of each risk should it materialise (detailed in the table 6.22 below); and
- assess the likelihood of risks occurring for each of the options and then establish an overall risk rating (Impact score X Likelihood score).

6.8.1 Risk Scoring Matrix

Table 6.21 – Risk Scoring Matrix

Scoring Matrix			
Likelihood	1 - Unlikely	2 – Possible	3 - Probable
Impact	1 – Low	2 – Medium	3 - High

6.8.2 Identified Risks

Table 6.22 – Risk Identification and Impact

#	Risk	Impact	Risk/Impact Description
R1	Failure to meet European Directive, 2015/720/UE targets	3	Option fails to meet European Directive, 2015/720/UE targets to reduce the consumption of lightweight plastic carrier bags leading to EU criticism and reputational damage.
R2	Negative environmental impact	2	Option leads to a negative impact on the environment or fails to realise potential environmental benefits.
R3	Public do not accept proposed option	2	Option leads to a negative impact on consumers either by incurring additional costs or adversely affecting their shopping experience. If this risk was to materialise it could lead to criticism of the Department and/or DAERA's Minister.
R4	Retailers do not accept proposed option	2	Option is unpopular leading to widespread resistance and non-compliance and potential negative publicity.
R5	Retailer pricing policies impact declared bag usage and associated revenue	2	Option is adversely affected by retailers altering their pricing policy impacting declared bag usage and associated revenue. For example, carrier bags are charged at 20p or above to avoid declaration and payment of levy.

6.8.3 Risk Assessment – Option A

Table 6.11 – Risk assessment for Option A

#	Risk	Impact	Likelihood	Overall Risk Rating	Assessment Description
R1	Failure to meet European Directive, 2015/720/UE targets	3	3	9	It is probable that if the upward trend in bag usage continues, the current levy will fail to meet EU targets for 2025. These targets relate specifically to lightweight plastic carrier bags so it would be difficult to interpret exact usage from declared figures.
R2	Negative environmental impact	2	1	2	The current levy has had a positive environmental impact in terms of CO ₂ emissions, funding for environmental projects and reduction in litter. These environmental benefits would remain under this option.
R3	Public do not accept proposed option	2	1	2	Survey results indicate that 80% of consumers support the current levy. 93% felt that the levy had no direct impact or a positive impact. 68% of consumers thought that the levy had generally benefitted NI. It is unlikely that the public would reject this option.
R4	Retailers do not accept proposed option	2	1	2	Survey results indicate that 75% of retailers felt that the levy had not disadvantaged their business. 81% thought that on balance the levy had either no, or a positive impact on their business. 79% of retailers considered the levy to have generally benefitted NI. It is unlikely that retailers would reject this option.
R5	Retailer pricing policies impact declared bag usage and associated revenue	2	2	4	It is possible that over time retailers will alter their pricing policies. Some retailers have already increased bag costs to 20p and above thus avoiding declaration of bags and the levy. Currently many bags are priced at 15p, so a shift to 20p would seem possible.
Total				19	

6.8.4 Risk Assessment – Option B

Table 6.12 – Risk assessment for Option B

#	Risk	Impact	Likelihood	Overall Risk Rating	Assessment Description
R1	Failure to meet European Directive, 2015/720/UE targets	3	3	9	It is probable that this option would fail to meet European Directive, 2015/720/UE targets as bag usage would likely increase dramatically if the levy was removed.
R2	Negative environmental impact	2	3	6	It is probable that this option would have a negative environmental impact as bag usage would equate to increased CO ₂ emissions and increased litter. Funding for environmental projects would not be secured and funding would either have to be found elsewhere or discontinued.
R3	Public do not accept proposed option	2	3	6	It is probable that the public would not accept this option. Only 12.5% of consumers surveyed supported the removal of the levy. 87.5% of consumers wanted the levy to remain or increase.
R4	Retailers do not accept proposed option	2	2	4	It is possible that retailers would not accept this option. Only 15% of retailers surveyed supported the removal of the levy. 85% of retailers wanted the levy to remain or increase.
R5	Retailer pricing policies impact declared bag usage and associated revenue	2	1	2	Retailer pricing policies would have no impact on this option as removal of the levy would not require any retailer charging or declaration.
Total				27	

6.8.5 Risk Assessment – Option C

Table 6.12 – Risk assessment for Option C

#	Risk	Impact	Likelihood	Overall Risk Rating	Assessment Description
R1	Failure to meet European Directive, 2015/720/UE targets	3	1	3	It is likely that this option would meet or exceed EU targets for lightweight plastic carrier bags usage. Analysis of the impact of levy charge increases suggests that it would further reduce bag usage.
R2	Negative environmental impact	2	1	2	If an increase levy reduced bag usage this would have a positive environmental impact in terms of CO ₂ emissions, funding for environmental projects and reduction in litter.
R3	Public do not accept proposed option	2	2	4	It is possible that the public would not accept this option leading to public criticism. There would need to be a coordinated communication campaign to describe the rationale for the change, the evidence to support it and a clear articulation of the associated benefits.
R4	Retailers do not accept proposed option	2	3	6	It is probable that retailers would not accept this option as it would directly affect their income if more bags came within the scope of an adjusted threshold (40p). This option would also require some IT and administrative changes for retailers.
R5	Retailer pricing policies impact declared bag usage and associated revenue	2	1	2	Under this option not only will the charge increase to 10p but the threshold will also increase to 40p. It is unlikely the retailer pricing policies would significantly affect declared bag usage and associated revenue within this threshold range.
Total				17	

6.8.6 Risk Assessment Summary

Table 6.11 – Risk assessment summary

#	Risk	Overall Risk Rating		
		Option A	Option B	Option C
R1	Failure to meet European Directive, 2015/720/UE targets	9	9	3
R2	Negative environmental impact	2	6	2
R3	Public do not accept proposed option	2	6	4
R4	Retailers do not accept proposed option	2	4	6
R5	Retailer pricing policies impact declared bag usage and associated revenue	4	2	2
Total		19	27	17

Comparison of the three options from a risk assessment perspective indicates that Option B represents the highest risk with a risk rating of 27, Option A has a risk rating of 19 and Option C carries the lowest risk with a risk rating of 17.

7. RECOMMENDATIONS AND CONCLUSIONS

7.1 Recommended Option

The Review Team has considered a number of Options against a range of criteria.

Option B (Removal) is not a policy intervention that can be given serious consideration due to its inability to reduce carrier bag consumption and the significant risks attached to it. History tells us that the distribution of carrier bags without charge leads to excessive consumption.

The most attractive features of Option C (Increase) are its potential to further reduce the use of carrier bags, to generate sufficient revenue to continue to meet administrative and enforcement costs, to fund environmental projects and positively impact the environment. The impact of such a change was evidenced in Republic of Ireland following the introduction of an increase to its levy charge in 2007. However our risk assessment of this Option reflects a risk of stakeholder opposition. The main concern expressed by stakeholders is that there is currently insufficient data available on the impact of the current 5p levy in Northern Ireland, over a significantly representative period of time, to justify increasing it. Option C (Increase) could be considered again if carrier bag consumption continues to increase over the next 2-3 years.

Until clear evidence emerges of a sustained, continuing pattern of increased carrier bag consumption the Review Team finds it difficult to recommend any Option other than Option A (Maintain). The introduction of the 5p levy has been effective in helping to significantly reduce the consumption of carrier bags in Northern Ireland (by 66% over the period 2012/13 to 2015/16). This option will continue to carry a positive environmental impact and would attract less potential stakeholder opposition than the other Options considered.

7.2 Conclusions

In the absence of any strong evidence base derived from like for like data on carrier bag consumption in Northern Ireland, the Review Team is not currently in a position to recommend a change to the 5p carrier bag levy. Currently there is only one full year's data (2015/16) on Phase 2 bag consumption. Whilst this showed an increase in bags declared compared with the previous year, the change of scope, which for the first time included all "carrier bags" within the threshold, is considered to be a key contributing factor in this increase. Given the relatively recent changes to the scheme there is not enough data or analysis available to draw any longer term conclusions as to whether this upward trend in usage will continue and at what level.

The introduction of the 5p levy has had a significant impact on carrier bag consumption reducing it by 66%, (101m in 2015/16 from 300m in 2012/13). This has generated positive environmental impacts in terms of reduced CO₂ emissions and a widespread perception that carrier bag litter has reduced. The 5p levy has also generated approximately £14m of revenue since 2013 which has covered all scheme administration and enforcement costs and the funding of environmental projects across Northern Ireland.

Operational delivery of the carrier bag levy was assessed and found to be effectively and efficiently administered by the Carrier Bag Levy Team.

Stakeholder data elicited from surveys and interviews conducted as part of this Review show that 69% of consumers and 79% of retailers felt that the carrier bag levy had benefitted Northern Ireland. It also shows that 67% of retailers and 64.5% of consumers support continuing with the current 5p levy on all bags priced less than 20p.

The conclusions from the comparison/benchmarking exercise suggest the introduction of a bag levy does change consumer behaviour. It also shows a levy of 5p is in place across all UK jurisdictions, although Northern Ireland is the only UK region to have a price threshold. Republic of Ireland is the only country to have increased its levy which resulted in a further reduction in bag consumption. Based on WRAP figures Northern Ireland has the lowest single use bag consumption per month compared to other UK regions. Actual declared usage figures for single use (5p) bags indicates that NI is on course to meet EU usage reduction targets for 2019 but appears to exceed the targets of 40 lightweight plastic carrier bags per person by 31 December 2025.

7.3 Recommendations

The Review Team recommends that new bag consumption reduction targets are defined, agreed and incorporated into business objectives/plans to allow progress and performance to be tracked. These targets must accommodate Phase 2 changes i.e. all bags are now in scope. DAERA should consider establishing new baselines to ensure that ongoing tracking is based on comparable data i.e. that Phase 2 scope changes are factored into comparisons.

The Review Team recommends that DAERA continue to monitor bag usage, compliance and retailer pricing policies to ensure that bag usage remains within agreed/acceptable levels. This may include options to gather additional bag usage information above the current 20p threshold. This would provide a baseline of bag usage within this price bracket and allow DAERA to track pricing changes directly affecting declared bag usage.

The Review Team also recommends that if CO₂ emissions linked to carrier bag usage is a measure that is to be monitored and tracked as part of ongoing operational delivery, that the calculation is reviewed to confirm applicability to all bags within the threshold.

The Review Team recommends that DAERA commit to reviewing IT system requirements in order to:

- Remove manual payment intervention;
- Support longer term business needs which have evolved since the system was initially developed;
- Incorporate a complete enforcement functionality; and
- Provide qualitative management information.

This may involve upgrading/changing the current IT system or exploring alternative options to meet business needs in the future.

The Review Team recommends that DAERA should design and implement a communications plan which clearly promotes the benefits of the levy scheme, particularly the environmental benefits arising from the significant investment of levy proceeds on local and regional environmental projects. This should be part of a wider communications strategy which seeks to encourage positive behaviour change. The Innovation Lab within DoF can provide DAERA with expert support in the area of using communications interventions to change human behaviour.

In summary, the Review Team recommends **Option A** (continuing with the 5p levy) as the preferred Option with operational delivery monitored by DAERA on an ongoing basis.

Changes to the current levy may be required if bag usage reaches, or is forecast to reach, unacceptably high levels (based on agreed NI targets or EU targets). Analysis of bag consumption data in Northern Ireland will provide increasing value as it normalises over a longer time frame and will enable consumption patterns and trends to be established with a greater degree of certainty. This data will allow DAERA to forecast bag usage and, where required, consider changes to the levy, based on a firm evidence base.

It is recommended that DAERA continue to collect and publish annual validated statistics. The collection of this data will enable DAERA to monitor and react to trends on an ongoing basis. Changes may also be required if there is a significant shift in retailer pricing policies that would adversely affect the NI Carrier Bag Levy.

ANNEX A: BACKGROUND TO THE NI CARRIER BAG LEVY

Single Use Carrier Bags – Voluntary Agreement

In 2006, several of the larger UK retailers signed up to the Voluntary Carrier Bag Agreement – an agreement between DEFRA, the British Retail Consortium, its supermarket members and the devolved administrations. The aim of this agreement was to reduce the amount of carrier bags used by 50% between 2006 and 2009. The results, published in July 2009, for the UK as a whole demonstrated an estimated 48% reduction in thin-gauge carrier bags distributed.²⁶ An agreement was made for Waste and Resources Action Programme (WRAP) to continue monitoring carrier bag use during the period 2010-2014, although no formal target was agreed.

Climate Change Act 2008

The UK wide Climate Change Act 2008 (the Act) was enacted in November 2008 and provided for a wide range of powers designed to tackle climate change. Under Part 5 of the Act (section 77) there is provision to enable regulations about charges for single use carrier bags. However it did not include a provision for funds raised to be returned to central government.

Schedule 6 (Part 1) of the Act, enables regulations to be made requiring sellers of goods to charge for single use carrier bags supplied. Paragraph 4 of Schedule 6 provides that the regulations can specify the minimum amount that a seller must charge for each single use carrier bag, or for that amount to be determined in accordance with the regulations.

Single Use Carrier Bag Act (Northern Ireland) 2011

In December 2010 Daithi McKay (MLA) introduced a Private Members Bill (the Bill) with the aim of amending Schedule 6 of the Act in so far as it extends to Northern Ireland to enable the making of regulations requiring sellers to pay the proceeds of charges for single use carrier bags to the then Department of the Environment (DOE), now the Department of Agriculture, Environment and Rural Affairs. The intention was that proceeds raised would be used for initiatives which would generate environmental benefits.

The Bill progressed through the NI Assembly and the Single Use Carrier Bags Act (Northern Ireland) 2011 (the 2011 Act) received Royal Assent in May 2011

The 2011 Act amended the Climate Change Act 2008 so as to enable provision to be made by regulations for the payment of the proceeds of charges for single use carrier bags to the Department of the Environment (now DAERA).

²⁶ http://www.wrap.org.uk/sites/files/wrap/UK-Voluntary-Carrier-Bag-Agreement-Presentation_v4_0.pdf

In the Draft Budget 2011-15, the Northern Ireland Executive commissioned the Environment Minister to introduce a carrier bag levy with the intention that any revenue raised would be used to provide funding for the environment. The Department's budget (DOE at that time, now DAERA) consequently reduced by £4m per annum with the shortfall to be made good by levy receipts.

The Single Use Carrier Bag Charge Regulations (Northern Ireland) 2013

The Department developed detailed policy proposals for the introduction of the charge and in parallel with this, drafted regulations to introduce the charge, to enable the charge to be collected and to require revenue generated by the charge to be returned to central government.

The Single Use Carrier Bag Regulations (Northern Ireland) 2013 (the Regulations) made under the Climate Change Act 2008 came into operation 8 April 2013 (referred to as Phase 1).

Regulation 6 of the Regulations provides that; "a seller shall charge a consumer at least 5 pence for every single use carrier bag supplied new for the purpose of enabling goods purchased to be taken away or delivered."

Regulation 8 provides that; "a seller shall pay to the Department the net proceeds of the charge".

Carrier Bags Act (Northern Ireland) 2014

The Carrier Bags Act (Northern Ireland) 2014 (the 2014 Act), enacted 28 April 2014, amended the Climate Change Act 2008 and the Single Use Carrier Bag Charge Regulations (Northern Ireland) 2013. This amendment introduced Phase 2 of the levy in January 2015, by widening the scope from "single use" carrier bags to "carrier bags" and widening the description of carrier bags to include bags of any material.

Section 11 of the 2014 Act provides that:

- (1) The Department must, within 3 years of this section coming into operation, prepare a report on the operation of the charging provisions.
- (2) A report under this section must assess –
 - a. The effectiveness of the charging provisions
 - b. Whether any amendments to the charging provisions are necessary or desirable.
- (3) The Department must –
 - a. Lay a report under this section before the Assembly
 - b. Publish a report under this section in such manner as it thinks appropriate.

ANNEX B: CONSUMER SURVEY RESULTS

Please See Annex B attached separately

ANNEX C: RETAILER SURVEY RESULTS

Please See Annex C attached separately

ANNEX D: DOCUMENT CONTROL

Revision History

Revision	Date	Author	Designation	Changes
V0.1	19.09.16	Cheryl Robinson	Senior Consultant	Initial Creation
V0.2	12.12.16	Angela Ross	Consultant	Internal revision
V0.3	14.12.16	Pete McStravick	Senior Consultant	Internal revision
V0.4	21.12.16	Philip Spence	Principal Consultant	Draft for issue
V0.5	17.01.17	Philip Spence	Principal Consultant	Final Draft
V1.0	30.01.17	Philip Spence	Principal Consultant	Moved to Final

Approvals

Name	Designation	Date

Distribution List

Designation	Date