Landfill Tax (Scotland) Bill

The Scottish Government
Riaghaltas na h-Alba

Final Business and Regulatory Impact Assessment

Title of Proposal

Landfill Tax (Scotland) Bill

Purpose and Intended Effect

Background

1. By internalising the harmful environmental costs of landfilling waste, landfill tax aims to discourage landfilling of materials and resources and encourage more sustainable alternative outlets and treatment options, including recycling materials back into the economy.

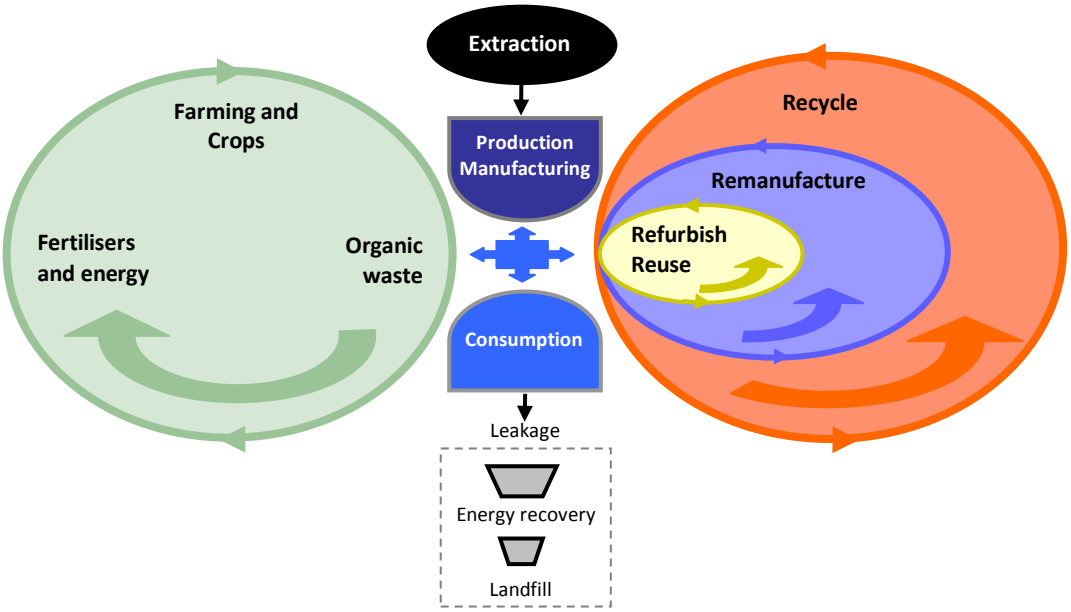
2. The Scotland Act 2012 devolves responsibility for taxing disposals to landfill to the Scottish Parliament. This includes responsibility for determining the nature of any tax, any rates, thresholds and exemptions and also responsibility for collecting and enforcing payment of the tax and managing an appeals system.

3. Provisions in the Scotland Act 2012 enable the "switching off" of the existing UK Landfill Tax in Scotland, which is planned to take place in April 2015. The Landfill Tax (Scotland) Bill will provide for the "switching on" of a replacement Scottish Landfill Tax at this time. Successful operation of the replacement tax will also require the enactment of additional tax management provisions to be set out in the Tax Management Bill, planned for introduction later in 2013[1] and subordinate legislation.

4. The Scottish Government's Zero Waste Plan (ZWP)[2], launched in June 2010, set out actions to deliver important changes to how Scotland treats and manages waste. The plan is an economic strategy and a resource strategy - not simply a waste strategy. It aims to maximise the value of all the material resources we use in our economy, helping to create new business opportunities as well as savings to existing businesses and local authorities in how they manage waste. To support this aim, the plan includes ambitious recycling targets, including a 70% recycling rate for all waste by 2025.

[1] http://www.scotland.gov.uk/Publications/2012/12/5404.
[2] www.scotland.gov.uk/Publications/2011/10/14120940/16

Figure 1 Zero Waste - a more circular model of resource use



5. The financial savings that can be made through avoided landfill tax have created the market conditions needed to support a shift away from a dependence on landfill. By internalising the wider costs of landfill on society and the environment, the tax has created the financial conditions needed to support investment by industry and the public sector in infrastructure that helps harness the value of secondary markets. This includes the collection infrastructure for recycling, sorting facilities, and treatment plants to harness energy.

6. Without the proposed legislation for a replacement landfill tax there will be impacts felt across the whole private waste management sector and public sector, as well as businesses and the wider public through the indirect costs that are passed on.

7. When the UK tax was introduced in 1996, typical pre-tax disposal fees for municipal wastes, or non-inert industrial wastes, were between £7 and £25 per tonne. The tax increased the price of landfilling by between 30-100% of the overall cost. The level of taxation for non-inert wastes (i.e. those that degrade to produce Green House Gases (GHG's)) was increased by means of an annual price escalator that was first introduced in 1998. Since then the magnitude of the escalator has increased (initially £1 per tonne per year escalator for five years, then £3 per tonne over three years, to the current £8 per tonne per year for three years, and due to continue at this rate for a further year until reaching £80 in 2014/15). Since April 2013, the tax rate has been £72 per tonne. The tax rate for inert wastes has remained relatively steady with only a 50p increase to £2.50 per tonne in 2007.

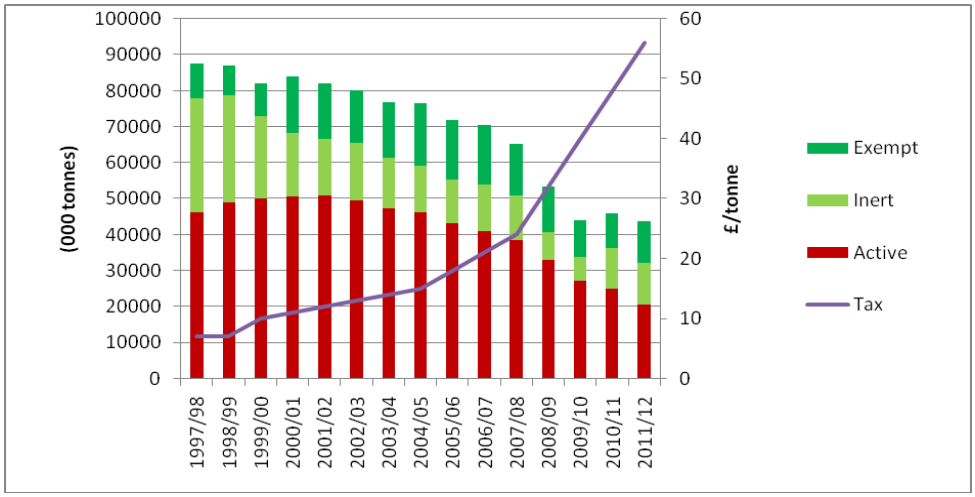
Table 1. U.K. Landfill Tax Rates (£/tonne)

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Active	7.0	7.0	7.0	10.0	11.0	12.0	13.0	14.0	15.0	18.0	21.0	24.0	32.0	40.0	48.0	56.0	64.0	72.0	80.0
Inert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Source: HMRC

8. Figure 2 shows how the quantity of waste landfilled has changed over time in the UK. The tonnage of waste landfilled under the active rate of tax remained fairly stable from 1997/98 to 2002/03, but has been falling at an increasing rate since then. The total fall over the last 15 years has been of the order 40 million tonnes.

Figure 2. Landfill Tax & Tonnage of Landfilled Waste in U.K.



Source: HMRC

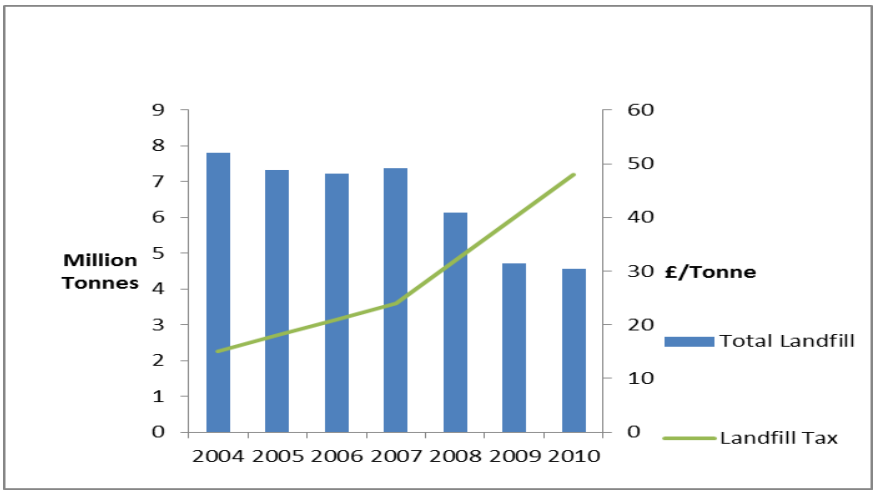
9. In real terms the landfill tax increased only marginally between 1996/97 and 2004/05 rising from £7/tonne to £15/tonne. This can partly explain what would appear – at least at the UK level – to be a lack of any very strong shift from landfill to other treatments as a result of the tax. Subsequent increases in the landfill tax escalator appear to be accelerating the diversion away from landfill. A complete breakdown of the data is not available but over the period 2004/05 to 2010/11 the volume of Local Authority Collected Municipal Solid Waste (LAMSW) sent to landfill fell by around 36%, while over the same period the volume of non-municipal solid waste sent to landfill fell by 48%.

10. The commercial and industrial waste market is, in principle, more dynamic than the municipal one and is more responsive to price signals. The pre-treatment requirements may also be requiring segregation of wastes by companies which have not hitherto been engaged in any such activity. With respect to household waste, the landfill tax, certainly up to its present level of £72/tonne, has been somewhat less influential in driving waste away from landfill. The main drivers for Local Authorities to increase diversion of household waste from landfill have been the Landfill Allowance

Schemes (LAS) and recycling targets, though the tax has played a more prominent role in recent years.

Figure 3 below shows the position with regards to tonnages of waste landfilled at the standard rate and the level of the standard rate of landfill tax for Scotland.

Figure 3. Scotland: Total Landfill and Active Landfill Tax Rate.



Objective

11. The ZWP aims to establish a policy and regulatory framework that will allow businesses and the Scottish economy to ultimately benefit from the resource value of waste. The objective of the policy is therefore to add long term value to Scotland's economy whilst tackling fundamental waste and resource issues in the short term.

12. Introduction of Scottish replacement for the UK Landfill tax will:

- ensure that the impacts on the environment (and people), which are side-effects of processes from landfilling material are reflected in the cost of landfill.
- promote behaviour change and the adoption of less polluting, less wasteful and more sustainable practices, reducing the environmental costs of waste and consumption.
- help maintain the stable policy landscape needed to support long-term investment decisions on waste and resources infrastructure and collection systems.
- reduce the amount of biodegradable material sent to landfill, thereby reducing harmful emissions of methane, and contributing towards the Scottish Government carbon abatement targets.

Rationale for Government intervention

General

13. Landfill Tax is a key driver in Zero Waste policy. It fuels investment in infrastructure and recycling technologies whilst diverting materials away from landfill and into the recycling and re-use sector. This corresponds with current waste policy that looks at maximising the use of resources and seeing waste as an opportunity instead of a problem. The Zero Waste Regulations in combination with the Landfill Tax are two keys to achieving the Scottish target of recycling 70% of all waste by 2025.

14. Economic activity and the consumption of goods and services create waste. However, one person's waste is another person's resource. In this context, waste can drive economic activity - whether through recycling and energy recovery or through more efficient use of resources.

15. In 2010 Scotland produced 18.6 million tonnes of waste. Although progress is being made to reduce waste generation and to recycle key materials, the resource value of much of Scotland's waste remains untapped: it is estimated that there are over £130 million worth of untapped resources in Scotland's key waste streams[3]. This figure is set rise as the value of discarded materials increase.

16. An important rationale for Government intervention in the waste sector is related to the impact of greenhouse gas (GHG) emissions. The management and disposal of waste produces GHG emissions, the full social cost of which is not taken into account either in the production and consumption decisions which lead to the generation of the waste, or in how that waste is managed. Ensuring that the amount of waste is reduced to the economically efficient level, and is optimally managed, will ensure that waste policy is delivering net benefits for society as a whole.

Complying with European Directives

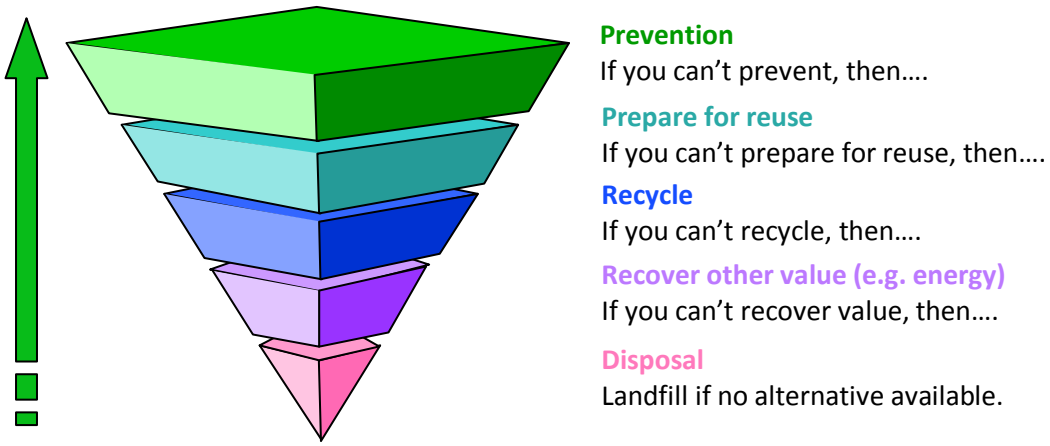
17. Resource and waste management are the subjects of various European Directives, Treaties and regulations. Collectively, these legislative instruments aim to minimise the environmentally harmful effects of waste on the environment and society.

18. A key principle enshrined in European waste legislation, Article 4 of the Waste Framework Directive, is the waste hierarchy (Figure 4). This hierarchy ranks the various waste management options according to their environmental impact. Driving waste management up the waste hierarchy is central to reducing the environmental impacts of waste and the delivering the Scottish Government's ZWP.

---

[3] Food, glass, metals, paper, plastics & textiles. ZWS estimate, April 2013.

Figure 4



19. Landfill Tax will help Scotland meet its obligation to promote the waste hierarchy while also helping meet the following EU and Scottish targets. It should also be noted that the European Commission is in the process of reviewing targets under the Landfill Directive, the Packaging Directive and the Waste Framework Directive with a view to aligning these with the vision elaborated in the Roadmap to a Resource Efficient Europe.

Table 2. European and Scottish Waste and Recycling Targets

Target/Cap	Year	Derivation
40% recycling/composting and preparing for re-use of waste from households.	2010	Scottish Government target[4]
No more than 2.7 million tonnes of biodegradable municipal waste to be sent to landfill.	2010	Article 5(2) of the EU Landfill Directive[5]
50% recycling/composting and preparing for re-use of waste from households	2013	Scottish Government target
The preparing for re-use and the recycling of 50% by weight of waste materials such as paper, metal, plastic and glass from household waste and similar.	2020	Article 11(2)a of the EU Waste Framework Directive [6]
No more than 1.8 million tonnes of biodegradable municipal waste to be sent to landfill.	2013	Article 5(2) of the EU Landfill Directive

[4] http://www.scotland.gov.uk/Publications/2010/06/08092645/6

[5] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31999L0031:EN:NOT . Target performance measured as landfilling of EWC Chapter 15 (packaging ; selected categories that are similar in composition to household waste); Chapter 19 (selected categories that are similar in composition to household waste); and Chapter 20, all relative to a 1995 baseline.

[6] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:312:0003:0003:EN:PDF

60% recycling/composting and preparing for re-use of waste from households.	2020	Scottish Government target
No more than 1.26 million tonnes of biodegradable municipal waste to be sent to landfill.	2020	Article 5(2) of the EU Landfill Directive
70% recycling and preparing for re-use of construction and demolition waste.	2020	Article 11(2)(b) of the EU Waste Framework Directive
No more than 5% of **all** waste to go to landfill.	2025	Scottish Government target
70% recycling/composting and preparing for re-use of **all** waste by 2025.	2025	Scottish Government target

Contribution to the Government's Purpose and National Outcomes

20. The provisions in the Landfill Tax Bill (Scotland) are part of a wider initiative to maximise the benefit for Scotland of the new powers in the Scotland Act (2012). The immediate aim of the Bill is to implement a new landfill tax and an alternative tax credit scheme that at present provides funding for community and environmental projects.

21. The establishment of a replacement tax will ensure that Scotland continues to benefit from the important role that landfill tax has played in driving waste away from landfill and in creating the stable policy landscape needed to underpin long-term investment decisions on infrastructure and collection systems. In doing so, the proposals will contribute to the National Outcome on valuing and enjoying our built and natural environment and protecting it and enhancing it for future generations.

22. The proposals also contribute to the National Outcome on ensuring our public services are high quality, continually improving, efficient and responsive to local people's needs by proposing to more closely align landfill tax administration with the process of providing environmental consents in respect of landfill sites, thus creating scope to reduce the regulatory burden through reduced site visits and reporting.

Efficiency and Market Failure

23. Prior to local provision of collection and disposal services, local environments were spoiled by the unregulated disposal of wastes. To overcome the public health and environmental concerns of these problems, government intervention has been necessary. Local governments have set up collection and disposal systems to ensure waste is properly disposed of by households, as well as regulating to ensure businesses manage and dispose of waste properly.

24. Market failures and barriers to an optimised waste management system include the existence of environmental externalities, imperfect information and less than perfect competition (especially at local level), the existence of transactions costs (in terms of obtaining planning consents and contractual arrangements), and long payback periods. Tackling these failures will help support the transition towards a more circular and sustainable economy.

25. Landfill tax increases the cost of sending waste to landfill, but it does not sufficiently determine how waste which is not landfilled should be managed. The Waste Scotland Regulations 2012 are complementary instruments that are required to ensure a cost effective and environmentally beneficial waste management system when waste prevention, re-use, recycling and energy recovery are included.

Costs and Externalities (Wider Effects) of Landfill

26. GHG emissions are a key determinant of the wider effects of landfilling. Although landfills generate gas some of this gas is captured by the landfill itself. Where this is used to generate electricity, it can avoid the emissions associated with fossil-fuel derived generation. Many UK studies have used quite high figures for this, sometimes of the order of 75%.

27. A recent study modelled the damage costs associated with landfilling residual municipal waste[7]. The result – based upon a lifetime capture rate for landfill gas of 50% – was £57 per tonne (environmental externality plus disamenity), higher than previous estimates which have been based on low damage costs for the emission of methane, high capture rates for the landfill gas which is generated and lower estimates of the effect of disamenity.

28. Similar modelling indicates that where waste is stabilised prior to being landfilled, the impact falls to around £15 per tonne (excluding disamenty costs). This approach was used to argue in favour for reduced landfill taxes being applied to such materials[8]. The taxing of completely inert materials is related more to the disamenity, minimising the extraction of primary resources and land-use related effects of landfilling rather than the emissions of methane.

29. **Further details of the environmental costs of landfill are provided in paragraphs 77-82 below.**

---

[7] Eunomia: Scotland Landfill Tax Bill 2012: An Economic Assessment, April 2013.

[8] Eunomia (2008) "*Biostabilisation " of Waste: Making the Case for a Differential Rate of Landfill Tax*, January 2008, http://www.eunomia.co.uk/shopimages/Eunomia%20Landfill%20Tax%20Paper%20Final.pdf

Consultation

Within Government

30. Preparatory work for the consultation paper involved discussions across a wide range of Scottish Government interests including:

- Fiscal Responsibility
- Zero Waste Delivery Team
- Constitutional Change
- Scottish Government Legal Directorate
- Better Regulation and Industry
- Analytical Services & Economics (Environment)
- Her Majesties Revenue and Customs (HMRC) (U.K. Gov.)

31. Extensive discussions took place with the Scottish Environment Protection Agency (SEPA). Whilst acting as the Scottish environment regulator, SEPA also has an interest as the proposed collection agency for Landfill Tax, on behalf of Revenue Scotland.

32. The Scottish Government also liaised with Zero Waste Scotland as a consultative body.

33. A consultation session was held with COSLA and Local Authority Waste Managers and Sustainability Officers on 11 February 2013.

Public Consultation

34. The consultation, 'Protecting Our Resources - Consultation on a Scottish Landfill Tax', ran from October 2012 to January 2012/13. Sixty eight responses were received and analysis is available at: http://www.scotland.gov.uk/Publications/2013/05/3302/0.

35. Scottish Government ran a workshop to discuss the future of the Landfill Tax Communities Fund, in Stirling on 14 January 2013.

Business

36. Eight interviews with waste management organisations from the private and public sector where conducted during the 12 week consultation period as part of the Scottish Firms Impact Test. The results of this can be found at the end of this document (Paragraphs 100 – 135). A meeting to discuss landfill tax in Scotland and the Landfill

Tax (Scotland) Bill was also held with the Scottish Environmental Services Association (SESA) on 17 January 2013.

Landfill Tax Bill Stakeholder Group

37. Two Stakeholder events were held, one just prior to the consultation on 7 August 2013 and one immediately following the consultation period on 28 January 2013. Members of the Group include:

- Stuart Greig, Zero Waste Delivery Team – Waste Management – Chair;
- Dave Kerrouchi, SG, Zero Waste Delivery Team & Fiscal Responsibility;
- William Beattie, C/O Scottish Landfill Communities Forum (EB Scotland);
- John Brewster, C/O Chartered Institute of Wastes Management, (Waste & Recycling Group);
- Catherine Donnelly, CIWM;
- Tommy Cockburn, Avondale Environmental;
- John Conaghan, Fife Council;
- Eleanor Emberson, Revenue Scotland;
- John Ferguson, Binn Eco Park;
- Stuart Fraser, C/O Scottish Environmental Services Association (SESA) (William Tracey Group);
- Stephen Freeland, SESA;
- Rona Gold, Convention of Scottish Local Authorities (COSLA);
- Darren Greedy, HMRC;
- Claire Williams, HMRC;
- Gareth Heavisides, SG, Biodiversity;
- John Kenny, Scottish Environment Protection Agency (SEPA);
- Neil Langhorn, Forestry Commission;
- John Paul Liddle, Revenue Scotland;
- Max McGill, Office of the Scottish Parliamentary Counsel;
- Ian Moules, SG, Fiscal Responsibility;
- Ronnie Robinson, SEPA;
- Frazer Scott, Zero Waste Scotland;
- Gary Torbet, Scottish Enterprise;
- Edward Turner, SEPA;
- Greig Walker, SG Legal Directorate;
- Gregg Wilkie, C/O Scottish Environmental Link (Royal Society for the Protection of Birds - RSPB);

Options

38. Modelling future impacts on landfilling and recycling activities as a result of changes in taxation rates and regulations is highly complex. For instance, at a macro-economic level it is difficult to isolate the effect that the landfill tax escalator has had on landfilling rates from the impacts of recent recessionary pressures, whilst the effect on recycling could also be attributed to targets and other drivers that have been in place.

39. In principle, there are interactions between the different levels in the waste hierarchy and modelling outcomes will rely heavily on estimates of own price and cross price elasticity of demand. For example, increasing the standard rate of tax will drive waste from landfill but higher tax rates will also make competing residual waste management options more competitive. Outcomes will each have different impacts on economic, social and environmental factors.

40. In considering the options outlined below, it is important to be aware that there is no classic “do nothing” option. The Scotland Act 2012 ends the application of the UK Landfill Tax in Scotland. Each option therefore requires action leading to different benefits and costs. It should also be noted that the UK Government has indicated that it will reduce the Scottish Block Grant at the point of devolving the taxes: this will apply under all three options. Any marginal savings that accrue from the devolution of these taxes will be offset against the cost to the Scottish Government of implementing the Scottish Rate of Income Tax and therefore, these are not considered in the options analysis.

The options considered are:

1. **No landfill tax to apply in Scotland – i.e. do not replace the landfill tax when it is withdrawn from Scotland in 2015.**

2. **Maintain a similar landfill tax system as the rest of the UK, set at similar tax rates.**

3. **Maintain similar system as UK model but implement a non-self-assessment model.**

Option 1: No Landfill Tax from April 2015

i.e. do not replace the landfill tax when it is withdrawn from Scotland in 2015.

(It is important to note that Landfill Tax currently exists in Scotland and so this option represents the option of greatest change and is not the 'business as usual' option)

Sectors and groups affected

41. In the absence of a Scottish landfill tax, there would be impacts across several sectors of the economy. Under this scenario, it is assumed that total waste generation will increase due to a reduced waste prevention effect resulting from the tax. If no countervailing action is taken by the authorities in England and Wales, landfilling activity is also expected to rise sharply and significant tonnages of cross-border waste will enter Scottish landfill sites.

42. The phased implementation of the Waste (Scotland) Regulations 2012 is expected to moderate most other potential impacts. By end of 2013, all businesses must source segregate dry recyclables and certain food waste. There are further bans on mixing source segregated materials and on landfilling or incinerating source segregated materials at the end of 2013. By the end of 2015, local authorities must complete a roll out of food waste collection and a ban comes into place on dense plastics and metals passing into incineration. By the end of 2020, biodegradable municipal waste will be banned from landfill. For waste arising in Scotland, therefore, the Regulations are expected to ensure that waste is moved away from landfill even in the absence of the tax.

Waste management industry & Cross Border Movement of Waste

43. Landfill operators could potentially increase gate fees. By April 2014, active waste going to landfill will face total costs of around £100/tonne (tax of £80/tonne plus average Scottish gates fees of £20/tonne). The withdrawal of the landfill tax in 2015 would make landfilling the cheapest option for managing residual waste by some margin and create market conditions where landfill operators could increase their fees whilst still ensuring an overall drop in landfill prices as a result of the tax's removal. No tax would also allow landfill operators to set gate fees at higher levels taking into account available void space (existing and new landfill site developments), the extent of local competition and the costs of competing residual waste treatment.

44. Modelling[9] of scenarios under Option 1 indicate that, with a differential in the landfill tax of £80/tonne, substantial volumes of cross-border waste could flow into Scottish landfill. Potential sources of shipments span the whole of England and Wales.

45. Two waste movement scenarios were modelled:

a. High Movement – where the maximum potential movement across the border is modelled; and
b. Low Movement – where waste flows are limited to existing capacity constraints.

46. The High Movement Scenario represented the case where sufficient landfill void was consented such that the maximum potential waste movement would occur.

47. The maximum potential waste movement was calculated by assuming that no new residual waste treatment capacity would be built in England or Wales (excluding plant already under construction). It also assumed that all residual waste, except that treated by existing plant, could potentially move to Scotland. This includes Local Authority controlled landfilled waste, as contractual arrangements might allow contractors to landfill waste at any site, not at a particular specified site. This, therefore, represents a worst case position from the point of view of waste movements.

48. The total amount of residual waste generated over time in England and Wales was modelled using forecast growth and recycling rates by sector (residual waste is expected to fall over time as recycling increases). Residual waste capacity in operation in England and Wales[10] was netted off from the total available waste, by region.

49. The Low Movement Scenario was calculated by applying a constraint on cross-border flows, reflecting the ability of Scottish landfills to accept the potentially large quantity of waste that could be supplied by England and Wales. The approach taken was as follows:

a. The total annual capacity which Scottish landfills could accept under the terms of their permits (active wastes) was estimated at 10 million tonnes; [11]
b. The projected total active waste landfilled in Scotland was subtracted from this annual limit to derive a figure for the maximum level of additional

[9] Eunomia: Scotland Landfill Tax Bill 2012: An Economic Assessment, April 2013.
[10] Eunomia (2012) *Residual Waste Infrastructure Review: High-level Analysis – Issue 3*, http://www.eunomia.co.uk/documents/Eunomia_Residual_Waste_Infrastructure_Review_High-level_Version.pdf

[11] SEPA waste sites and capacity information. http://www.sepa.org.uk/waste/waste_data/waste_site_information/waste_sites__capacity.aspx

annual landfilling which could take place with no change in permitting conditions, and no increase in available capacity;

c. The annual figures were also constrained by the total available existing void space (~66 million tonnes). [12]

Table 3. Potential Additional Landfilling of Waste in Scotland (Million tonnes)

	2015	2020	2025	Total (2015-25)
Low movement scenario	8	0	0	31
High movement scenario	8	2	2	38

50. In the medium term (2015 – 2020) significantly higher levels of landfilling active waste would require that more inert tonnes be diverted to landfill sites to be used for engineering purposes. Due to the low cost of inert waste and the relatively high transportation costs there is less likelihood of cross-border movement from England. It is feasible that under these circumstances, inert material in Scotland could be drawn out of recycling operations for use in landfill via negative gate fees (e.g. positive payments).

51. It should be noted that if a fully devolved Scotland becomes a separate EU Member State, rules under the Waste Shipments Regulations dictate that transfer of wastes between Member States for disposal is prohibited other than under quite specific circumstances. The waste flows under this scenario would not be expected to be greatly different from the case where the tax was maintained.

Recycling Industry

52. Waste being treated via recycling, composting and anaerobic digestion will increase slightly due to higher industrial waste generation (no tax equates to a reduced waste prevention effect).

Residual Waste Treatment Industry

53. Mechanical Biological Treatment (MBT) to stabilization is the next cheapest option to landfill for residual waste (outputs from this process are no longer subject to taxation) and tonnage processed through this route will rise. Conversely, there is a large reduction in the quantity of waste treated at MBT/ Mechanical and Heat Treatment (MHT) sites which send residues to thermal facilities, and at incineration plants, as treatment is significantly more expensive in comparison to landfill and alternative residual waste treatment processes. In the period from 2015 to 2020 there is a significant increase in the landfilling of active wastes in Scotland. The amount of waste landfilled from 2021 falls sharply when the ban on biodegradable waste to landfill comes

[12] SEPA (2010) *Landfill Capacity Report for Scotland, 2009*.

into effect. Some increases in the landfilling of inert wastes are also seen as a result of the removal of the lower rate tax.

Local Authorities

54. Without the tax, the lowest cost residual waste option for local authorities would be landfill and the incentive to recycle household waste would be reduced. Twelve Scottish local authorities have their own landfill sites and for these operations there would be a particularly strong incentive to landfill (higher gate fees avoided). Volumes of municipal biodegradable waste sent to landfill would be limited via the EU Landfill Directive (capped at 1.26 million tonnes per annum by 2020).

55. Table 4 shows the effects in different years of removing the tax. Because the Zero Waste Regulations are deemed to continue to drive recycling and composting performance, the main effect is on residual waste treatment, with a significantly higher level of landfilling relative to other residual waste management methods. The somewhat counter-intuitive impact on recycling (an increase) is a reflection of the assumed efficacy of the Zero Waste Regulations and the higher level of waste generation in the tax-off scenario.

Table 4. Change in Mass Flows in moving from Tax On to Tax Off Scenarios (000 tonnes).

	2015	2017	2019	2021	2023	2025
Total Recycling / Composting / AD	6	19	31	43	54	66
Total MBT – Stabilisation	10	23	225	719	714	710
Total MBT/MHT – Thermal (e.g. Autoclaving)	-182	-448	-616	-645	-638	-632
Total EfW Incineration + Sorting	-95	-234	-277	-178	-175	-172
Active Landfill	262	644	646	85	84	84
Inert Landfill	6	22	34	36	36	35

Costs and Benefits

Benefits

56. Scottish landfill operators could substantially increase revenues via higher gate fees, exclusive of tax, for landfilled tonnes. Under this scenario cross-border flows of waste would be reduced. (See Table 15). This assumes no countervailing action would be taken in the rest of the UK.

57. No costs to Scottish Government from the implementation of tax collection and administration systems.

Costs

We have split the costs of switching off landfill into three separate sections:

I. Financial Costs
II. Disamenity Costs
III. Environmental Costs

I. Financial Costs

Cost to Government

58. Scottish Landfill Tax revenue would drop to zero in 2015. At present levels of tax receipts, this would imply a reduction in the Scottish Government's budget of around £130m a year, with corresponding reductions in the volume and / or quality of public services in Scotland. It has also been estimated that the cost of enforcing ZWP Regulations in the absence of the tax would be around four times higher than business as usual. If gate fees for landfill disposal rise, this implies a transfer from public finances to excess profits of landfill operators.

Cost to Industry

59. Loss of the tax would fundamentally destabilise the market, creating uncertainties for investors, and reducing momentum for the next generation of waste and resource infrastructure.

60. By eliminating the need for waste producers to incorporate the cost of waste disposal into business decisions, Scotland would fall behind the rest of Europe and the UK in the development of sustainable waste management options. The financial savings that can be made through adopting alternatives to landfill, now central to the economics of waste management would be lost.

61. Landfilling waste would be less expensive than recycling and would result in the loss of valuable resources to the Scottish economy. The tax has helped establish the stable policy landscape needed to support long-term investment decisions on waste and resources infrastructure and collection systems. New investment opportunities in recycling infrastructure and associated employment would be undermined. Recent

investments in anaerobic digestion, energy from waste, material recovery facilities, new collection systems and new recycling technologies would also be undermined.

62. Table 5 below illustrates the difference in treatment costs between the 'tax on' and 'tax off' scenarios. The key driver of the changes in costs is the change in the management of wastes in Scotland (see above).[13] The change in unit costs (or gate fees) between treatment types influences the overall pattern of costs. The most significant cost saving (represented by negative figures) is from the removal of the standard of rate landfill tax.

63. In the case of MBT/MHT-Thermal, increased savings are evident as the 'tax off' scenario sees a decrease in waste treated at these residual waste treatment facilities because they become (relatively more costly). The same can be said for incineration, where available alternatives are made cheaper.

64. The reduced expenditure on MBT - stabilisation initially is due to the switch of waste into cheaper landfills. After 2021, when the ban on sending biodegradable waste to landfill comes in, waste switches from more expensive treatments to this now much cheaper option (due to the removal of the tax on the landfilled outputs), and thus overall cost of treatment increases relative to the 'tax on' scenario. As more waste is landfilled in the 'tax off' scenario there will also be an increase in gate fees paid to landfill operators, but the tonnage sent to landfill decreases substantially following the 2021 ban.

Cost to both Industry and Government

65. The increase in gate fees reduces the cost savings that would be realised by Local Authorities and businesses once the tax is removed. The difference – some £140 million in Net Present Value terms – effectively represents additional revenue realised by landfill operators, the vast majority of which would be expected to be realised as profit. Operators would stand to make a considerable amount of money if the removal of the tax enabled them to increases their gate fees significantly.

Table 5. Change in Treatment Costs With Tax 'Off' (£ million 2012/13 Real Terms)

	2015	2017	2019	2021	2023	2025
Active Landfill – Tax	-£144	-£105	-£72	-£39	-£39	-£39
MBT/MHT – Thermal	-£13	-£37	-£54	-£60	-£59	-£59
EfW Incineration + Sorting	-£8.8	-£23	-£29	-£22	-£22	-£22

[13] Note, that the change in costs of managing wastes generated in England and Wales is outside the scope of this analysis.

MBT - Stabilisation	-£16	-£15	£1.1	£39	£39	£38
Active Landfill - Gate Fee	£4.0	£12	£12	£1.7	£1.7	£1.7
Other Treatment Costs	£0.04	£0.5	£1.0	£1.5	£1.9	£2.4

66. Table 6 below shows the distribution of costs across key sectors. The greatest change in costs is for commercial & industrial waste, followed by local authorities. The lowest change in costs is seen in the C&D sector where volumes of waste landfilled (which are not already exempt from the tax) are lower and gate fees are minimal. The costs of collection for industrial wastes were modelled in the same way as in the Zero Waste Plan CBA study[14].

Table 6. Financial Costs by Sector (£ million 2012/13 Real Terms)

	2015	2017	2019	2021	2023	2025
Local Authority	-£71.43	-£68.09	-£58.04	-£32.57	-£32.49	-£32.41
Commercial and Industrial Sector	-£87.09	-£82.30	-£67.01	-£31.20	-£30.36	-£29.53
C&D Sector	-£18.02	-£17.08	-£16.21	-£15.37	-£15.15	-£14.94

Summary of Financial Costs

67. Table 7 below shows the overall financial costs from switching from the 'tax on' to the 'tax off' scenario. It is clear that the most significant costs are those associated with the treatment of waste, which, as indicated above, is mainly the change in residual waste treatment costs.

Table 7. Total Financial Costs, (£ million 2012/13 Real Terms)

	2015	2017	2019	2021	2023	2025
Change in Collection Costs	£0.3	£0.9	£1.5	£2.0	£2.6	£3.2
Change in Treatment Costs	-£176	-£167	-£141	-£78	-£78	-£77
Change in Regulatory / Admin Costs	£3.5	£3.4	£3.4	£3.5	£3.5	£3.5
Total Change in Costs from 'Tax on' to 'Tax off'	-£172	-£162	-£136	-£73	-£71	-£70

II. Disamenity Costs

Landfill Disamenity

68. Disamenity, in the context of waste management, covers the localised nuisance associated with waste management activities, including visual intrusion, noise, the

[14] Economic Assessment of the Zero Waste Plan for Scotland, July 2011

nuisance created by dust, odour, wind-blown litter, vermin and, potentially, the perception of increased health risks. For the purposes of this analysis, the noise and congestion impact of waste trucks accessing the waste facilities is excluded. These are typically considered as part of transport-related externalities, and these are already internalised by fuel duty.

69. The most recent study for the purposes of this report is the one conducted by Cambridge Econometrics and Eftec (most of the more recent studies are actually based on this one)[15] This was based upon a hedonic pricing study, examining the effect of proximity to landfills on house prices.

70. The study analysed 11,300 landfill sites in Britain (of which, 6,100 were operational) and 592,000 mortgage transactions (containing information on house prices, housing characteristics and location) during the period 1991-2000. Regressions were performed on a county-by-county basis to help separate different property markets across Britain. The study found firm evidence of a statistically significant fixed disamenity within a half-mile of a landfill site.

71. The results for Scotland saw house price reductions of 41.3% within a 0.25 mile radius of the landfill, compared to a Great Britain average of 7%. The study also noted that the Scottish housing market was stable in the period concerned and suggested that this made the effects easier to discern.

72. Applying these effects to the stock of Scottish housing, as per the above-mentioned study, gives the following distribution of dwellings in Scotland.

Table 8. Distribution of Dwellings in Scotland According to Distance from Landfill

Distance from Landfill (miles)	% of Dwellings
0-0.25	5.3%
0.25-0.5	14.9%
0.5-1.00	35.1%
1.50-2.00	35.1%
>2.00	9.6%

[15] Cambridge Econometrics in association with EFTEC and WRc (2003) *A Study to Estimate the Disamenity Costs of Landfill in Great Britain*, London:Defra, February 2003.

73. Latest data suggests there are 2,360,000 dwellings in Scotland. The average price of a property in Scotland was taken to be £153,501 [16]

Taking:

- The distribution of households as per Table 8;
- The effects on price as per the above description;
- The average price (and assuming – in the absence of any better data – that the households concerned are otherwise representative of the average);
- Amount of additional landfill space needed.

Table 9. Calculation of Total Disamenity from Scottish Landfills

Distance from Landfill	Proportion of Dwellings in Given Radius	Reduction in Dwelling Value from Landfill	Contribution to Total Disamenity
0-0.25	5.30%	41.30%	£7,929,560,798
0.25-0.5	14.90%	7.73%	£4,172,429,184
0.5-1.00	35.10%	3.01%	£3,827,338,060
1.50-2.00	35.10%	2.67%	£3,395,014,159
>2.00	9.60%		
Total Dwellings	2,360,000		
Total Present Value Of Disamenity			£19,324,342,201

74. The present value was converted to an annuity on the basis of a 25 year period and a discount rate of 6% (above the social discount rate and reflecting the higher time preference for money likely to be expressed by householders).The annualised value was then converted to a unit value on the basis of amounts currently being landfilled. This gave a central figure for Scotland of **£22.90 per tonne**.

75. There is a growing literature regarding the externalities related to disamenity from incineration. In this work a figure of **£6 per tonne** has been used.[17]

76. For MBT no studies are available which derive figures from first principles. A somewhat lower figure of **£4 per tonne** has been assumed for the pre-treatment process as opposed to incineration. An additional externality figure has been included depending upon the nature of the outputs so that additional externalities are linked to landfill and incineration, according to the fate of residues from the process.[18]

[16] http://www.ros.gov.uk/pdfs/ros_statistical_report_apr-jun2012.pdf.pdf
[17] Eunomia: Scotland Landfill Tax Bill 2012: An Economic Assessment, April 2013.
[18] Eunomia: Scotland Landfill Tax Bill 2012: An Economic Assessment, April 2013.

III. Environmental Costs

77. Higher landfilling activity would have negative impacts on Scotland's environment. Methane emissions caused by landfilling biodegradable waste will increase and if additional landfill capacity is required, there will also be a potential impact on habitats and biodiversity. The monetized negative impacts of methane emissions depend upon the material landfilled (how much methane is generated), the efficiency with which methane is captured for flaring / energy generation, and the extent to which the landfill cap oxidises the methane, converting it to carbon dioxide.

78. Monetised environmental externalities have been calculated to assess the overall costs and benefits of the policy options. The assessment of environmental externalities also includes the impacts from landfilling waste which is assumed to cross the border from England and Wales, due to the significant price differential in the cost of landfill.

79. The approach to assessing the environmental externalities of the switch to a 'tax off' scenario was based upon the methodology in the ZWP CBA study[19]. The impacts of changes in GHG emissions were assessed using the latest guidance from DECC and future emissions from landfill were discounted using the discount rate recommended by HM Treasury. The landfill model was based on the IPCC default landfill model, but with a landfill gas capture rate of 50%.

80. The figure for landfill externalities in 2015 is around **£34 per tonne** of residual waste. For the waste crossing the border from England and Wales, a value for landfill disamenity was also included, at a value of £22.90 per tonne of waste. This factor was also included for Scottish waste, along with a decrease in disamenity resulting from a reduction in the use of non-landfill treatments. Unit impacts for residual waste treatment processes were updated, including modelling the impact of segregating hard plastics and metals at all EfW plants.

81. Tables 10 and 11 show a summary of the environmental externalities from 2015 to 2025 with the removal of landfill tax. Although there is more industrial waste in the waste stream, and therefore more industrial recycling, no credits have been given as more waste is actually generated in this scenario. Thus as a proxy for including waste production impacts, we have removed the recycling offset. This is likely to understate the impact of additional waste generation, but the additional tonnages are small and not significant compared with other impacts modelled in the analysis.

[19] Economic Assessment of the Zero Waste Plan for Scotland, July 2011

Table 10: Change in Environmental Externalities from Removing Tax, Low Cross-border Movement Scenario (£ million 2012/13 Real Terms)

	2015	2017	2019	2021	2023	2025
Change in Dry Recycling	£0	£0	£0	£0	£0	£0
Change in Organics Treatment	£0.00	-£0.01	-£0.02	-£0.04	-£0.06	-£0.09
Change in Residual EfW	-£3.4	-£10.3	-£13.1	-£8.9	-£8.9	-£8.9
Change in Other Residual Treatments	-£7	-£21	-£27	-£18	-£18	-£18
Change in Landfill (Scottish Waste)	£11	£34	£38	£16	£16	£16
Change in Landfill (Cross-border Waste)	£552	£567	£424	£343	£0	£0
Total Change in Environmental Costs	£553	£569	£422	£333	-£10	-£11

82. There are some small savings from additional AD treatment of industrial food wastes, but more significant savings from a switch from incineration and MBT/MHT – thermal to MBT – stabilised waste to landfill. This is mainly due to the fact that combustion of fossil based wastes produces GHG emissions, whereas the same materials do not produce emissions in landfill, and biogenic CO_2 emissions are lower also. In terms of additional externalities from landfilling under the 'tax off' scenario, the vast majority relate to the landfilling of waste from cross-border movements.

Table 11: Change in Environmental Externalities from Removing Tax, High Cross-border Movement Scenario (£ million 2012/13 Real Terms)

	2015	2017	2019	2021	2023	2025
Change in Dry Recycling	£0	£0	£0	£0	£0	£0
Change in Organics Treatment	£0.00	-£0.01	-£0.02	-£0.04	-£0.06	-£0.09
Change in Residual EfW	-£3.4	-£10.3	-£13.1	-£8.9	-£8.9	-£8.9
Change in Other Residual Treatments	-£7	-£21	-£27	-£18	-£18	-£18
Change in Landfill (Scottish Waste)	£11	£34	£38	£16	£16	£16
Change in Landfill (Cross-border Waste)	£746	£584	£424	£343	£342	£341
Total Change in Environmental Costs	£747	£586	£422	£333	£331	£330

Option 2

Maintain a similar landfill tax system as the rest of the UK, set at similar tax rates, collected in Scotland.

Sectors and groups affected

83. Under Option Two a similar landfill tax system existing in the rest of the UK including the landfill tax rates regime currently in force, would remain in place in Scotland after 2015. The Waste Scotland Regulations 2012 are phased in across Scotland through 2025. There would be no changes to existing cross-border waste flows from the rest of the UK and it is assumed that there would be little effect on expected trends in the waste sector or wider Scottish economy. The necessary resource to administer the tax using would be a cost on the Scottish Government.

84. Under this option, a replacement for the Landfill Communities Fund would be implemented in Scotland.

Benefits

85. **The Financial, Disamenity and Environmental costs to Scottish society as outlined in paragraphs 58-82 would be avoided and benefits of the current system maintained.**

86. The modelling carried out in the 'Economic Assessment of the Zero Waste Plan (ZWP) for Scotland' demonstrated that the move to ZWP would not impose additional financial costs compared to a business-as-usual scenario. There is a **net** financial saving of the order £18 million per annum (almost entirely in Landfill Tax), amounting to £178 million in net present value terms over the period 2011-2025. Landfill Tax therefore incentivises and enables actions required under the ZWP to becoming a more sustainable society.

87. Tax administration would be overseen by a new body, Revenue Scotland. Revenue Scotland would work with two established Scottish organisations: Registers of Scotland (RoS) to administer the new land and property tax, and SEPA to administer disposals to landfill. These partnerships would offer further opportunities for us to customise tax collection arrangements that are specific to the Scottish situation, drawing on the relevant knowledge and expertise within RoS and SEPA to eradicate duplication and deliver greater simplicity.

88. One of the main benefits of SEPA fulfilling a role in administering a landfill tax system in Scotland is the opportunity it affords for linking its existing permitting role for landfill sites with tax collection functions. This could include using existing enforcement staff and site visits to reduce administrative and regulatory burdens on landfill operators. Furthermore, SEPA is already responsible for waste data returns from landfill sites.

89. The Scottish Government would continue to receive revenue from Landfill Tax, contributing to the overall Scottish budget[20].

Illegal Dumping

90. Some increase in revenue should arise from taxing illegal dumping of waste. Given the nature of illegal disposals it is not possible to estimate the likely level of additional receipts. However, SEPA estimates that in one recent case alone, resulting in a conviction for illegal dumping of waste, around £3 million in tax had been evaded.

Costs

91. The costs associated with this option would be met by the Scottish Government within its overall budget. Estimates of the costs of setting up and operating the two devolved taxes have been prepared and placed in the Scottish Parliament Information Centre (SPICe). As regards Landfill Tax only, the estimated cost within SEPA of planning for and setting up a self-assessment system for Scottish landfill tax administration is estimated at about £540,000 (£100,000 for staff and £440,000 for IT). These costs could be reduced if it proves possible to adapt existing IT systems. Annual running costs within SEPA are estimated at £300,000, of which £250,000 would be staff costs. These costs are estimated on the basis of 70 operational landfill sites in Scotland.

92. Costs in relation to Landfill Tax would also arise in respect of setting up and operating Revenue Scotland. These costs would be shared across the devolved taxes for which Revenue Scotland would have responsibility. It is not possible to split these cost estimates between the two taxes. The estimated total cost of setting up Revenue Scotland is £1.7m and the annual running cost is estimated at £2.2m. Were the costs of Revenue Scotland to be attributed to the two taxes broadly by reference to estimated tax revenues, about 26% of costs would be attributed to The Landfill Tax. This would

[20] http://www.scottish.parliament.uk/S4_Bills/Landfill%20Tax%20Bill/b28s4-introd-en.pdf

give an estimated figure of £442,000 for set up costs for Revenue Scotland and £572,000 a year in operating costs.

93. Adding these to the estimated costs falling on SEPA, the total public sector costs for set-up would be approximately £980,000, spread over the period 2013 to April 2015; and approximately £870,000 annually thereafter. This would represent less than 1% of Landfill Tax receipts at present levels. Financial provision has been made in the draft Budget for 2013-14 for start-up costs relating to Scotland Act powers totalling £3.5m. The proportion of the total estimated start-up cost of £980,000 that falls in 2013-14 would be met from this provision.

94. It has been agreed that any offsetting savings realised by HMRC in 'switching off' the devolved taxes in Scotland will be passed on to the Scottish Government. HMRC have not as yet been able to provide an estimated savings figure. However HMRC has indicated that such savings are likely to be small because the taxes in question are largely dealt with at present by single teams on a UK basis, with Scottish tax cases accounting for significantly less than 10% of the UK total. HMRC have indicated that they will provide estimates of potential savings, which would not begin to flow until April 2015 at the earliest, as soon as it is possible to do so.

Option 3

Maintain similar system as UK model but implement a non-self-assessment model, collected in Scotland.

Sectors and groups affected

95. Same as Option 2.

Benefits

96. Same as Option 2, except as follows: Under a non-self-assessment system SEPA would centrally assess landfill tax liability using quarterly returns from operators and issue a tax assessment at the end of the relevant tax period. Benefits of such a system could include less paper work for landfill operators and a stronger linkage between tax liability and what is "tipped" into landfill. The quality of data could be improved as a consequence of better knowledge of the link between tax receipts and data in site returns.

Costs

97. Same as Option 2, except as follows: The cost to SEPA of setting up a non-self-assessment system for Scottish landfill tax administration is estimated to be higher than the costs for a self-assessment system (Option 2) by approximately £50,000 in respect of start-up costs, and by about £45,000 a year in respect of annual running costs. There is not expected to be any impact on the costs of setting up or running Revenue Scotland. Assumptions about the number of operational landfills in Scotland remain the same.

Administration Costs Under the Non Self-Assessment Option

98. The administration costs for Government for Setting up Like-for-like System:

- £540k set up cost in run-up to implementation (£295k in 2013, £245k in 2014)
- £300k per annum running costs from 2015 onwards

Consultation Feedback

99. The majority of respondents felt there was no need to change the existing scheme due to a general consensus that there is no obvious abuse and that it works well. An assessed route might generate more appeals and generate a lot of

administration work for the collector. Advantages that were identified included a reduced scope to abuse the systems and greater clarity. However most respondents felt the dis-advantages out- weighed the positives in this approach.

Scottish Firms Impact Test

100. Eight landfill operators were contacted from a pre-selected list to give a representative cross-section of the industry (local authority, private sector, size, scale of operations, location). A series of scenarios and questions had been prepared by Zero Waste Scotland and this was used as the basis for the interview. A questionnaire was sent in advance to each of the selected operators and then followed up with a direct meeting lasting between two and four hours where industry views were recorded and discussed.

101. A summary of the key findings is given below.

Material Exemptions

102. Charging tax on materials which were required to operate landfill sites, (for example soils for cover material and brick and rubble for road making) did not make environmental sense for operators as they then have to purchase quarried or mined virgin material.

103. Over 50% of the operators suggested that asbestos should be exempt from landfill tax (or at least taxed at the low rate).

104. There was general support for either a low rate or no charge for contaminated land material. This was partially to try and reduce the disposal of this material by illegal means (for example Waste Management License (WML) exempt sites, mixing and dilution). It was also to ensure that the application of active rate of landfill tax did not hinder the re-development of contaminated sites.

105. There was a widely held view that there are some materials (asbestos, contaminated soils) where disposal in an engineered landfill site is the most environmentally sustainable option. An argument was made by some operators who had strong views that no landfill tax should be charged on material where landfill is the only realistic option. Operators believe that the current rates of landfill tax are driving these materials away from landfill to the detriment of the wider environment and legitimate businesses.

Illegal Dumping

106. The overwhelming response from operators was that illegal dumping is a huge concern in the industry. Operators had examples of contaminated soils, some only suitable for non-hazardous and even hazardous sites being disposed in WML exempt sites. The general consensus is that much tighter regulation is required and some suggested increased application rate to cover this cost.

107. The main issue was around the unfair advantage exempt sites have over other landfill operations. They apply no landfill tax, have no waste acceptance criteria (WAC) testing on material, no environmental monitoring, and little or no regulation, all of which gives them a distinct cost advantage.

108. A number of operators recognised (and used) WML exempt sites and felt they were a valuable tool, particularly for the construction industry, but they recognised that such sites were being abused. The consensus of the test was that WML exempt sites must be subject to much tighter regulation, and operators were supportive of proposals to tax illegal disposals of waste as a deterrent.

109. The Bill incorporates provisions that will allow a wide range of unauthorised waste deposits to be captured by the tax regime. Defining illegal disposals as unauthorised and taxable within the Scottish Landfill Tax will help to rebalance these concerns.

Credit System and Communities Fund.

110. The general consensus from all operators was that there is little need or desire for change. A number did express a wish to expand the area round a landfill site further than the current 10 mile restriction. This was often to provide some of the funding to areas where the waste transfer station feeding the landfill site was located. A number of operators already did this presumably by working within the 10 mile radius of another landfill site.

111. A number of operators recognised that an increase in the allocation would be necessary as level of funds will ultimately decrease as volumes to landfill decreases.

112. The overall view is that a Scottish system should follow the current model.

Not Introducing a Landfill Tax

113. Responses to this question varied depending on what operations the operator currently had or was planning to develop. Some could see a possibility of increased waste to landfill, but it was felt that this would have an impact on quantities being treated via Materials Recovery Facilities (MRF's) and Anaerobic Digestion facilities.

114. There was a general consensus that reverting to no landfill tax was not an option and was generally viewed as a retrograde step. One operator was keen to point out that although welcome for diverting waste away from landfill the impact of landfill tax on the wider economy should not be under estimated.

115. Having no landfill tax would increase waste flows into the landfill and waste would readily flow in from the rest of the UK.

116. Having no landfill tax is not an option the landfill operators would wish to consider.

No Landfill Tax & Gate Fees to Landfill Sites

117. Five operators suggested there would be no change in price. However, two operators believed there would be a large increase in price.

118. Some thought that due to lack of void space there would be an increase in price while others reckoned there would be some operators keen to fill their remaining void and this would have a downward pressure on prices. It is likely that competitive pressures in the central belt would limit any price increase however sites out with the central belt could be subject to large increases.

Landfill Tax Escalator

119. All operators recognised that the landfill tax escalator had caused a decline in active waste being landfilled. One operator was less convinced that this was due to the landfill tax escalator and more due to the current poor economic climate. Some operators had seen a decline in waste to landfill but had a corresponding increase in waste to Material Recovery Facility. There was a strong view that the landfill tax escalator was driving export of material and quantities being exported had increased significantly in the last year (2012).

120. There has been a noticeable increase in the distance waste is travelling as the gate fee is a small portion of overall cost. The current industry focus is to avoid landfill at all costs and complex arrangements are being made to do so.

A Higher rate of Tax than the Rest of the UK

121. All operators recognised that a difference in tax rate would encourage waste to flow across the border. The differential in price suggested ranged from £5 / tonne to £16 / tonne. There was little doubt amongst the industry that a large differential in tax between the UK and Scotland would induce significant cross-border shipments. As the tax increases the haulage cost will become a smaller component of the overall price. The utilisation of return loads, for example coal freight, will further reduce the cost.

122. Companies looked at the overall price which is a combination of gate fee, landfill tax, and VAT to produce an overall final figure – any way of reducing that figure (for example reduction in landfill tax south of the border) will alter disposal routes.

123. The operators believe there is a limit to how much further the landfill tax can be increased. If further increases are planned then consideration needs to be given to how the proximity principle is enforced, how to apply better regulation, and how to manage and control exports.

Differential rates for Stabilised Material

124. Many operators welcomed the idea of a different lower rate for stabilized organic material. On consideration they did quickly identify a number of issues with definition of stabilized organic material and how this would be enforced.

125. There was genuine concern and in some cases companies were against an additional rate as a new rate would simply provide more opportunities for tax avoidance and evasion.

126. If a new rate was introduced it would have to be very clear how this material was determined and it would have to be well regulated.

127. Most operators who either had a MRF or were planning one, recognised that a reduced rate of tax would provide a commercial advantage and encourage investment in MRF's.

128. There were no clear answers or views amongst the remaining operators. If a new rate was applied they would simply adapt their business to suit.

129. A number of operators wanted to see this new rate being used for material where the only real option was landfill. This would only occur after all the material had been extracted.

130. There was a strong view that material should be used in Scotland and economic and employment opportunities should be maintained in Scotland. The current system is encouraging the export of this resource from Scotland.

Should there be any change in the lower tax rate?

131. The general consensus amongst operators was that the lower rate of tax should either apply to all facilities (landfill and WML exempt sites) or none at all. However operators were very conscious of the adverse effect on the construction industry during the current economic climate of any application of low rate of landfill tax on WML exempt sites.

Self-Assessments v Centrally Assessment

132. The general preference was to continue to self-assess as per the current UK system. Most operators felt this was a robust and effective system. There was a strong view that there would be issues with SEPA managing this role due to perceived lack of resources and conflicts of interest.

133. A small number thought with more resources SEPA could improve the current system. A number also suggested that audits must be much more systematic and apply to both materials recovery facilities and landfill sites and follow waste through the system.

134. Operators overall view was the system should be kept as simple as possible.

Competition Assessment

135. We have applied the Office of Fair Trading Competition Filter Questions and find that the proposals will not directly or indirectly limit the number or range of suppliers, limit the ability of suppliers to compete, nor reduce suppliers' incentives to compete vigorously.

Test run of business forms

136. Forms needed for the collection of the tax by the tax authorities will be prepared in consultation with Revenue Scotland, SEPA and Landfill Operators. Landfill Operators are the only users, currently of Landfill Tax return forms. These details will be finalised in a further BRIA when subordinate legislation is laid before Parliament.

137. We will keep open the possibility of merging Landfill Tax return forms with aspects of the Pollution Prevention and Control Permitting returns. We will also look at making the return an online system replacing the paper system currently in operation. We will test run any new forms with business as and when required.

Legal Aid Impact Test

138. We have consulted the Legal Aid Board and do not believe there to be any legal aid implications associated with these proposals.

Enforcement, Sanctions and Monitoring

139. Management of Landfill Tax will be undertaken by the tax authorities appointed by the Scottish Government. Most of the appeals, civil and criminal provisions will sit within the Tax Management Bill. The Partial Business and Regulatory Impact Assessment for the Tax Management Bill can be found at: http://www.scotland.gov.uk/Publications/2012/12/5404/13.

Implementation and Delivery plan

140. Working with SEPA and Revenue Scotland, the Scottish Government will ensure that the Scottish Landfill Tax is delivered on time and supported by a smooth transition from the current UK Tax. Improvements to the operation of the tax will be made by means of this Bill, while others may be brought in through the Tax Management Bill or through the design of the administration and IT arrangements for collecting and enforcing the tax.

Post-implementation review

141. The regulations will be formally reviewed within ten years of the commencement date of the Landfill Tax (Scotland) Bill, as passed by the Scottish Parliament.

Summary and Recommendation

142. The above analysis has provided a forecast of the potential financial and environmental impacts from the policy options considered in this BRIA. Strictly speaking, it is not accurate to sum the costs and benefits as presented above since there is an element of double counting in the change in the payments of landfill tax is included in the analysis. However, the removal of the tax does represent a real saving to businesses. Therefore, the costs are presented alongside the environmental externalities.

143. All the results in this Section, where they do not specifically refer to a given year, are represented in Net Present Value (NPV) terms for the period from to 2025.

144. Table 12, which shows the results where the cross border movements are at the lower end of what may be expected, clearly indicates that for Option 1, there are savings in financial terms, but these are exceeded by the increased environmental damages. In Table 13, the situation becomes more marked as the financial costs remain the same, but the environmental externalities increase.

Table 12. Overall Costs and Benefits of Switch from Option 2 to Option 1, Low Cross-border Movement Scenario, NPV to 2025 (£ million 2012/13 Real Terms)

Cost Category	Change in Costs
Total Change in Financial Costs	-£1,070
Total Change in Environmental Costs	£2,870
TOTAL	£1,800

Note: negative figures represent savings

Table 13. Overall Costs and Benefits of Switch from Option 2 to Option 1, High Cross-border Movement Scenario, NPV to 2025 (£ million 2012/13 Real Terms)

Cost Category	Change in Costs
Total Change in Financial Costs	-£1,070
Total Change in Environmental Costs	£4,160
TOTAL	£3,090

Note: negative figures represent savings

145. Under Option 1 (tax off), there are savings that accrue to companies based *outside* Scotland and this is driving the movement of waste across the border. This movement is also the source of additional revenue for Scottish landfill operators. These figures are not included in the above analysis.

146. Under Option 1 it is also possible that landfill operators will increase gate fees. If gate fees are increased from £20 per tonne to £60 per tonne the cross-border price differential falls to around £40 per tonne. At a £40 price differential, it is not cost effective to transport waste (by road) from the South West of the UK. There is the possibility to transport the waste by rail, but taking a conservative approach it is assumed that 50% of the maximum available cross-border waste moves under this scenario. The overall result of this scenario is shown in Table 14.

Table 14. Overall Costs and Benefits of Switch from Option 2 (BaU) to Option 1, WITH INCREASE IN LANDFILL GATE FEES (£ million 2012/13 Real Terms)

Cost Category	Change in Costs
Total Change in Financial Costs	-£930
Total Change in Environmental Costs	£2,060
TOTAL	£1,130

Note: negative figures represent savings

Recommendation

147. We are proceeding with Option 2. The key changes between the main waste management routes are summarized in Table 15 below. The figures clearly indicate that removing the landfill tax in Scotland would increase disposal, reduce recovery and increase waste generation. All of these effects run counter to the objective of the revised Waste Framework Directive to move waste up the waste hierarchy, and the thrust of the Scottish Zero Waste Plan, which seeks to improve resource efficiency in the economy.

Table 15 Total Change in Mass Flows between Tax On and Tax Off Scenarios 2012 to 2025 (million tonnes)

Option	Landfilled	Incinerated and Other Recovery	Recycled / Reused	Composted	Total Waste Managed
Option 2 & 3	19	24	123	19	185
Option 1 (Scottish Waste Only)	23	20	124	19	186
Option 1 (Inc. Cross-border Waste)	91[1]	20	124	19	254

1) The average of low and high movement scenarios for cross-border waste flows is taken for this figure.

Declaration and Publication

I have read the impact assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs I am satisfied that business impact has been assessed with the support of businesses in Scotland.

Signed:

Date: 29th May 2013

JOHN SWINNEY, CABINET SECRETARY FOR FINANCE AND SUSTAINABLE GROWTH

Scottish Government contact point: David Kerrouchi, Fiscal Responsibility Division & Environmental Quality Division
david.kerrouchi@scotland.gsi.gov.uk.

The Scottish Government
Riaghaltas na h-Alba

ISBN: 978-1-78256-621-2 (web only)

The Scottish Government
St Andrew's House
Edinburgh
EH1 3DG

Produced for the Scottish Government by APS Group Scotland
DPPAS14352 (06/13)

Published by the Scottish Government, June 2013