

Title: Impact Assessment of the Transposition of the Revised Waste Framework Directive (Directive 2008/98/EC) Lead department or agency: Department for Environment, Food and Rural Affairs Other departments or agencies: Welsh Assembly Government	Impact Assessment (IA)
	IA No: Defra 1012
	Date: 23/11/2010
	Stage: Development/Options
	Source intervention: Domestic
	Type of measure: Secondary legislation
Contact for enquiries: John MacIntyre Tel: 020 7238 4353	

Summary: Intervention and Options

What is the problem under consideration? Why is government intervention necessary?

The recovery and disposal of waste has the potential to harm the environment and human health if unregulated. The revised European Waste Framework Directive (WFD) seeks to tackle the environmental/health externalities that result from certain types of waste management across the EU (such as the greenhouse gas impacts of landfilling relative to recycling) by requiring Member States by law to intervene to reduce the adverse impacts of waste generation and management. The revised WFD re-enacts, repeals or revises three existing Directives - the existing WFD, the Waste Oils Directive and the Hazardous Waste Directive - but also introduces several new provisions which potentially will have an impact both on the way waste is managed in England and Wales, and on the costs involved in doing so.

What are the policy objectives and the intended effects?

The objectives are to reduce the adverse impacts of the generation of waste and the overall impacts of resource use by: (1) introducing a household waste recycling target and construction and demolition recovery target, (2) to ensure that the four specified materials are collected separately by 2015, (3) taking measures as appropriate to promote the re-use of products and preparing for re-use activities; (4) applying the waste hierarchy as a priority order in waste prevention and management legislation and policy; (5) extending the self-sufficiency & proximity principles to apply to installations for recovery of mixed municipal waste from households, (6) revising the scope and content of waste management plans and (7) establishing waste prevention programmes.

What policy options have been considered? Please justify preferred option (further details in Evidence Base)

This final impact assessment covers 10 provisions of the revised WFD. The policy options considered are extensively covered in the Evidence Base. Where additional actions are taken, the costs and benefits of the options are appraised relative to the implicit do nothing baseline, and are presented in the summary tables throughout the document. Measures have been taken only where necessary to comply with the minimum requirements of the revised WFD. Table 1 covers the set of preferred options which is also what is covered in the Summary Sheet overleaf.

When will the policy be reviewed to establish its impact and the extent to which the policy objectives have been achieved?	It will be reviewed 12/2012
Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	Yes

Ministerial Sign-off For consultation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:..... Date:.....

Summary: Analysis and Evidence

Policy Option 1

Description:

This summary represents the summary for the preferred set of policy options in the IA. Detailed CBA for each of the policy options can be found within the IA.

Price Base Year 2010	PV Base Year 2010	Time Period Years 10yr	Net Benefit (Present Value (PV)) (£m)		
			Low:	High:	Best Estimate: -£60.9m

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	£28.5m	£1.6m	£40.5m
High	£51.0m	£3.9m	£81.3m
Best Estimate	£39.7m	£2.7m	£60.9m

Description and scale of key monetised costs by 'main affected groups'

Many of the provisions incur no additional costs, but there are 4 areas where costs may be incurred in the preferred set of policy options - Waste Hierarchy, Hazardous Waste, Waste Management Plans and Carriers. These are discussed in detail in Table 1. The largest component of the costs, are the one-off costs to business of reading and understanding the guidance under Stage 3 of the Waste Hierarchy actions.

Other key non-monetised costs by 'main affected groups'

There are no key non-monetised costs within this IA.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low			See box below
High			See box below
Best Estimate			

Description and scale of key monetised benefits by 'main affected groups'

.

Other key non-monetised benefits by 'main affected groups'

Waste hierarchy: Switching point analysis assesses the level of incentivisation up the waste hierarchy (combination of benefits from increased paper/card recycling and increased food waste prevention) required for measures to be cost neutral and indicates only a small percentage increase recycling (2-4%) and food waste prevention (0.3-0.5%) over the 10 year period. Measures on hazardous waste and carrier registration may reduce potential damage to environment, health and disamenity costs.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5%
--	--------------------------	------

The assumptions in the modelling of costs are discussed in detail in relevant sections

Impact on admin burden (AB) (£m):		Impact on policy cost savings (£m):		In scope
New AB:	AB savings:	Net: p. 4	Policy cost savings: n/a	No

Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	England and Wales				
From what date will the policy be implemented?	01/04/2011				
Which organisation(s) will enforce the policy?	EA lead				
What is the total annual cost (£m) of enforcement for these organisations?	n/a				
Does enforcement comply with Hampton principles?	Yes				
Does implementation go beyond minimum EU requirements?	No				
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)	Traded:		Non-traded:		
Does the proposal have an impact on competition?	No				
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?	Costs:		Benefits:		
Annual cost (£m) per organisation (excl. Transition) (Constant Price)	Micro	< 20	Small	Medium	Large
Are any of these organisations exempt?	No	No	No	No	No

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on...	Impact	Page ref within IA
Statutory equality duties¹? <u>Equality and Human Rights Commission: General guidance</u>	No	35
Economic impacts		
Competition? <u>Competition Impact Assessment</u>	Yes	35
Small firms? <u>Small Firms Impact Test</u>	Yes	35
Environmental impacts		
Greenhouse gas assessment? <u>http://www.defra.gov.uk/environment/index.htm</u>	Yes	35
Wider environmental issues? <u>Guidance has been created on the Defra site</u>	Yes	35
Social impacts		
Health and well-being? <u>Health: Health Impact Assessment</u>	No	35
Human rights? <u>Ministry of Justice: Human Rights</u>	No	35
Justice?	No	35
Rural proofing? <u>Commission for Rural Communities</u>	No	35
Sustainability? <u>Defra: Think sustainable</u>	No	35

¹ Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

References

Include the links to relevant legislation and publications, such as public impact assessment of earlier stages (e.g. Consultation, Final, Implementation).

No.	Legislation or publication
1	http://www.defra.gov.uk/corporate/consult/waste-framework/consultation.pdf
2	
3	
4	

+ Add another row

Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

Annual profile of monetised costs and benefits* - (£m) constant prices

	Y ₀	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈	Y ₉
Transition costs		31.2		8.6						
Annual recurring cost		2.2	2.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Total annual costs		33.4		11.8						
Transition benefits										
Annual recurring benefits										
Total annual benefits										

* For non-monetised benefits please see summary pages and main evidence base section

Annual costs relate both to (a) one off costs of reading guidance of the waste hierarchy and lower tier carrier registration incurred on new businesses at the time of start up and (b) on-going annual costs saving to existing business.

Annualised equivalent net cost to businesses is calculated instead of admin burdens in line with new requirements.

NPV of costs to businesses £39.4m to £80.2m. AER of £4.7m - £9.6m.

Evidence Base (for summary sheets)

Background

1. At the Environment Council on 28 June 2007, the Council reached political agreement on a proposed revision of the Waste Framework Directive (WFD). The Presidency, acting on behalf of the Council, reached a compromise agreement with the Rapporteur on the European Parliament (EP)'s proposed amendments to the revised WFD, and the EP voted to adopt the compromise agreement at its plenary session on 17 June 2008. The text of the Common Position, as amended by the Parliament, was adopted when the Environment Council met on 20 October 2008.
2. The revised WFD (2008/98/EC) was published on 19 November 2008 and the effect of Article 42 is to provide that it enters into force on 12 December 2008. Article 40 requires Member States to "bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 12 December 2010."

Purpose and Intended Effect

3. The revised WFD re-enacts, repeals or revises three existing Directives:
 - (i) the existing WFD²;
 - (ii) the Waste Oils Directive³; and
 - (iii) the Hazardous Waste Directive⁴.

The UK already has in place the necessary laws etc. to comply with these three Directives. However, the revised WFD also introduces several new provisions.

4. The main changes introduced by the revised WFD may be summarised as follows:-
 - Greater emphasis on resource efficiency and waste prevention as an objective of waste policy alongside protection of the environment and human health.
 - The "waste hierarchy" is now a "priority order" in policy and legislation (prevention; preparing for re-use; recycling; recovery (e.g. energy recovery); and disposal) but Member States may depart from it if doing so results in a better environmental outcome.
 - Member States must put in place "waste prevention programmes" by the end of 2013. The Commission must report on progress in waste prevention by 2011 and by the end of 2014 has to set waste prevention and decoupling objectives for 2020.
 - Member States must achieve a target of re-using or recycling 50% of household waste (including paper, metal, plastic and glass) by 2020; and achieve a target of re-using, recycling or recovering 70% of construction and demolition waste by the same date.
 - Member States must set up separate collection for at least paper, metal, plastic and glass by 2015, "where technically environmentally and economically

² Directive 2006/12/EC available at:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:114:0009:0021:EN:PDF>

³ Directive 75/439/EEC (as amended) available at:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31975L0439:EN:HTML>

⁴ Directive 91/698/EEC (as amended) available at:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31991L0689:EN:HTML>

practicable and appropriate". The Regulation make clear that co-mingled collection is a form of separate collection.

- to give effect to a 2005 judgment of the European Court of Justice (ECJ) to require registration of all those that "normally and regularly transport waste, whether the waste is produced by them or others". In line with a previous consultation in 2008, the rWFD consultation proposed a two tier system.

Rationale for Government Intervention

5. The recovery and disposal of waste imposes externalities on UK society, ranging from the greenhouse gas impacts of landfilling waste to the potential health impacts of hazardous wastes. The rationale for Government waste policy is therefore to tackle such externalities and their adverse impacts, [by aiding individuals and businesses to take into account the wider impact of their actions](#). [Effective policy intervention will counter the impact of those externalities by providing mechanisms for the full costs of activity related to waste to be taken into account](#). [These interventions can reduce the amount of waste being disposed and increase recovery, re-use and prevention of waste](#), thereby improving environmental and health outcomes in the UK. This is done in particular through:

- reducing the impact of waste on climate change; and
- reducing risks to health and the environment from potentially harmful substances within waste
- reducing the use of virgin materials and increase resource efficiency

[In many cases waste prevention measures that lead to significant private benefits for businesses are not undertaken](#). [This may be due to additional market failures and barriers such as insufficient information, long payback periods, credit constraints and organizational inertia](#). [Measures to address these barriers can lead to both private and wider social benefits](#).

Options

6. The WFD is already part of UK law. Not adopting the revisions to it into UK law would be illegal and would inevitably result in infraction proceedings by the European Commission against the UK and the consequential imposition of significant fines by the European Court of Justice (ECJ). However there still needs to be a full assessment of the costs and benefits associated with each option, including the status quo option of doing nothing, which might in some instances represent the preferred option. The purpose of this IA is to lay out all the evidence surrounding the options and to act as a basis for the preferred approach to transposing Directive requirements.
7. The European Court of Justice (ECJ) is able to impose financial sanctions on any Member State which fails to implement a judgement from the ECJ establishing an infringement of Community law. The Commission has warned that it will usually recommend both a penalty for each day between the judgement of the Court that there has been an infringement and compliance with the Directive, together with a

lump sum penalising the continuation of the infringement between the first judgement on non-compliance and the judgement delivered under Article 228 of the European Community (EC) Treaty. Annex 4 provides information on the potential size of these fines from infractions of other Directives.

8. Defra has considered the Specific Impact Tests (SITs) taking into account responses from the second stage consultation. The result of the SITs are in the annex.

9. Article 1 of the revised WFD explains that the Directive's objective is to lay down measures:-

“...to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use.”

10. Within the framework set by this objective, the consultation paper invited views on the transposition in England and Wales on the following provisions:-

- **Article 4: The waste hierarchy** and its application as a priority order in waste prevention and management legislation and policy.
- **Article 8: Extended producer responsibility** and whether the discretion available to Member States should be used to strengthen the re-use, prevention and recycling/recovery of waste.
- **Article 11: Re-use, recycling and collection** – which introduces the following range of provisions:-
 - o **Article 11(1)**: The taking of measures, as appropriate, to promote the re-use of products and preparing for re-use activities, notably by encouraging the establishment and support of re-use and repair networks, the use of economic instruments, procurement criteria, quantitative objectives or other measures.
 - o **Article 11(1)**: The setting up of separate collections of waste where technically, environmentally and economically practicable and appropriate to meet the necessary quality standards for the relevant recycling sectors – including by 2015 separate collection for at least paper, metal, plastic and glass⁵.
 - o **Article 11(2)(a)**: A household waste recycling target – the preparing for re-use and the recycling of waste materials such as at least paper, metal, plastic and glass from households and possibly other origins as far as these waste streams are similar to waste from households, must be increased to a minimum of 50% by weight by 2020.

⁵ Subject to Article 10(2) of the revised WFD, which provides that, where necessary to ensure that waste undergoes recovery operations and to facilitate or improve recovery, waste shall be collected separately if technically, environmentally and economically practicable and shall not be mixed with other waste or other material with different properties.

- **Article 11(2)(b):** A construction and demolition waste recovery target – the preparing for re-use, recycling and other material recovery⁶ of non-hazardous construction and demolition waste⁷ must be increased to a minimum of 70% by weight by 2020.
 - **Article 16: Principles of self-sufficiency and proximity.** These principles previously applied only to waste disposal installations, but Article 16 of the revised WFD extends them to apply also to installations for the recovery of mixed municipal waste collected from private households.
 - **Articles 17-20: Hazardous Waste.** The revised WFD repeals and re-enacts the existing Hazardous Waste Directive. However, the revised WFD also makes some changes which could impact on the management of hazardous waste.
 - **Article 21: Waste Oils.** The revised WFD repeals the Waste Oils Directive. However, some of the provisions of the Waste Oils Directive are re-enacted in the revised WFD.
 - **Article 22: Bio-waste** and the taking of measures to encourage (a) the separate collection of bio-waste with a view to its composting and digestion; (b) the treatment of bio-waste in a way that fulfils a high level of environmental protection; and (c) the use of environmentally safe materials produced from bio-waste.
 - **Article 28: Waste management plans.** Article 28 revises the scope and content of waste management plans and it will be necessary to transpose these revised requirements.
 - **Article 29: Waste prevention programmes.** Member States are required to establish waste prevention programmes not later than 12 December 2013. They should not only describe existing waste prevention measures but also evaluate the usefulness of 16 example measures set out in Annex IV to the revised WFD.
11. The Impact Assessment takes account of points raised by consultees about the costs associated with (a) the waste hierarchy and permitting, (b) the application of the waste hierarchy to waste producers, and (c) the registration of waste carriers affected by an ECJ judgement. Defra has worked closely with the Environment Agency and BIS to ensure that a light touch approach has been taken to transposing the Directive, with full consideration of the impact on businesses and minimising the costs to businesses, local authorities and individuals to the maximum extent possible consistent with meeting EU obligations.

Costs and Benefits

12. The following sections describe the costs and benefits associated with the implementation of the revised WFD. Many of the Articles considered here, in Government's view, do not require additional action in terms of new policy, and there are therefore no costs and benefits associated with those Articles.

⁶ Including backfilling operations using waste to substitute other materials.

⁷ Excluding naturally occurring material defined in category 17 05 04 of the European Waste Catalogue.

13. Where additional policy interventions are required to implement the revisions to the WFD the aim has been to do so in the least burdensome manner. Alternatives to regulation have been considered where possible. In the case of the implementation of the waste hierarchy, the legal requirements in Article 4(1) for its application as a priority order in waste prevention and management legislation and policy and in Article 15(1) requiring waste producers and holders to ensure that waste treatment is carried out in accordance with the waste hierarchy has rendered any non regulatory intervention, such as voluntary measures, insufficient to comply with the requirements of the revised Directive. Non-regulatory policies cannot ensure these legal requirements are met and would therefore put the UK at risk of infraction proceedings.

Table 1: Summary table presenting the preferred set of options (excluding those articles where there is no additional action)

ARTICLE	PREFERRED OPTION	COSTS	BENEFITS
Waste Hierarchy Stage 1: Applying the WH through existing strategies and frameworks	WH applied through LA plans, PPS10 or RWP	Additional minimal costs on public sector	<p>It is challenging to estimate the benefits of such a Directive, with many components cumulatively achieving incentivisation up the waste hierarchy. Therefore we have opted for an analysis based on the level of benefits we would need to observe in order to make the IA cost neutral.</p> <p>Taking a combination of prevention of food waste and increased paper/card recycling as an example, achieving a level of cost neutrality in the IA means that we would need to incentivise up the waste hierarchy to something equivalent of an extra 18,000-36,000 tonnes of food waste prevented and 54,000-116,000 tonnes of paper/card recycled over the 10 year policy period for benefits to exceed the high range. This represents 0.3% to 0.5% of the estimated food waste by businesses and 2-4% of the total tonnes of paper/card recovered from England and Wales municipal waste streams in 2007/08. It therefore looks achievable, especially as this is considering a 10 year cycle.</p> <p>This switching point analysis of the benefits will vary by material, and these figures are illustrative. Examples of the benefits of application of the waste hierarchy are in the IA.</p> <p>Non-monetised environmental benefits of include reduced GHG emissions and reduced use of virgin materials.</p>
Waste Hierarchy Stage 2: Applying WH through environmental permitting regime	New condition for new or significantly varied environmental permits to ensure that businesses take appropriate measures to minimise the waste generated by the operation and to ensure, where waste is generated, that it is treated in accordance with the hierarchy	<p>Annual costs of £40,300 to £80,600 for businesses to read and understand guidance, and apply to the permitting regime.</p> <p>Costs to public sector £40,300</p>	
Waste Hierarchy Stage 3: Applying WH to individual waste producers and waste holders	Waste producers to read and understand guidance. Declaration in Waste Transfer Note	<p>One-off cost of £21.9m to £38.4m to all businesses not requiring a permit of reading and understanding the guidance.</p> <p>On-going costs of £2.6m to £4.6m to new businesses of reading and understanding guidance</p>	
Hazardous Waste Consignment Note Procedures	Allow for the use of an amended standard (single) consignment note, which includes a round number, as a multiple note.	<p>Dependent on assumptions, impacts vary from annual cost savings to business of £3.0m to cost additions of £3.0m.</p> <p>One off costs of £445,333 to £450,333 to businesses and public sector</p>	<p>This will result in an annual estimated reduction in costs of £1.5m to businesses and a reduction in the amount of paperwork needed to be used by operators carrying out multiple consignment notes.</p> <p>The improved cradle to grave monitoring, which is a factor of option 3 will enable the Environment Agency to verify that businesses have handled and dealt with their hazardous waste properly in order to prevent it from harming the environment. The improved tracking will have the benefit of removing the risk of infraction proceedings an adverse judgment of which could result in fines of up to £70,000 a day and/or a lump sum of up to £20m.</p>
Waste management plans	Waste management plans to include details of existing major disposal and recovery installations	One-off cost of £304,000 to LAs	<p>This will allow waste producers to identify sites suitable for managing the wastes they produce.</p> <p>Including this in waste management plans helps us to understand both the local and national picture on waste infrastructure, both in terms of what is in existence and what capacity is likely to be required in the coming years. Married with data on waste arisings, this helps us to assess whether we have the right levels of capacity in different types of infrastructure to meet our needs. It also helps to provide clarity for investment decisions in waste infrastructure.</p>
Waste management plans	Waste management plans to include assessment of the need to close existing waste installations, using LA plans	One-off cost of £304,000 to LAs	

ARTICLE	PREFERRED OPTION	COSTS	BENEFITS
Carriers	Registration of lower tier carriers	One off costs of £5.5m - £11.5m to lower tier carriers. Ongoing costs of £0.6m - £1.4m for new businesses to register.	The wider registration will raise awareness of lower risk carriers and their responsibilities, and have the potential to reduce illegal fly tipping activities. Switching point analysis estimated a 3-6% reduction in fly tipping, based on direct clear up costs would make this measure cost neutral. This potential benefit remains non-monetised due to uncertainty. However, the main driver is to comply with EU law and reduce the risk of infraction for this part of the Directive.

Article 4: The waste hierarchy

14. Article 4 of the Directive requires Member States to apply the new waste hierarchy set out below, as a priority order in waste prevention and management **legislation** and **policy**.
- (a) *waste prevention*
 - (b) *preparing for re-use*
 - (c) *recycling*
 - (d) *other recovery, including energy recovery*
 - (e) *disposal*

15. We are proposing to apply the waste hierarchy in **policy** through national waste strategies, and the waste prevention plan which is required under Article 29 of the revised Directive. These activities will be subject to their own Impact Assessment and are not covered here.

'Business as usual' option

16. The 'business as usual' option would be to not transpose the new waste hierarchy. Our existing legislation would not cover the requirements of the revised Directive, and therefore the UK would be exposed to a significant infraction risk. All options are appraised relative to this business as usual option.

Transposition proposals

17. To ensure that the waste hierarchy is transposed into **legislation**, we are proposing a tiered approach:
1. Applying the hierarchy in England through updates to national planning policy (currently PPS10) and therefore to the preparation of Waste Development Frameworks, and in Wales through TAN 21, Regional Waste Plans, the National Waste Strategy (including the Sector Plans).
 2. Applying the hierarchy through the environmental permitting regime. (This would **only** apply to new permits or significant variations).
 3. Application of the hierarchy by individual waste producers or waste holders.
18. In the light of favourable consultation responses, we have decided that the **Hierarchy should be applied through LAs plans, or where those plans do not yet exist or are out of date, through PPS10 (England) and TAN21 and Regional Waste Plans**

(Wales). The waste hierarchy under article 3(1) of the previous Directive is already embedded in the planning system through PPS10 and TAN 21, and in the national waste strategies in England and Wales. In England, local authorities must have regard to both documents in the preparation of local development frameworks, and PPS10 and TAN21 are capable of being a material consideration in determining individual planning applications. This option would therefore not involve any additional burdens on businesses, though it could impose additional small costs on the public sector.

19. In England, this option could have a small impact on the 152 waste planning authorities (many of whom work together in consortiums on joint waste plans) who draw up Waste Development Frameworks (or Local Development Frameworks with a waste element). Current figures show that there are currently around 100 waste plans (including 70 core strategies and 30 development plan documents) at different stages of preparation in England. *(An average of 11 per region).*
20. In Wales, this option would impact the management of Regional Waste Plans which are put together by regional groups of local authorities, led by “lead” local planning authorities. We estimate that this is undertaken by around 11.5 members of staff in lead planning authorities and the Environment Agency Wales. The role of Regional Waste Plans will be reviewed as part of the forthcoming consultation on the Collection, Infrastructure and Markets Sector Plan. There are 25 local planning authorities (22 unitary authorities and 3 National Park Authorities). There are 14 adopted UDPs, with 1 further UDP close to adoption and 2 adopted LDPs. A further 21 LDPs are in preparation, with 5 currently at an advanced (deposit) stage. We estimate that on average 1 member of staff per authority works on waste planning.
21. In both England and Wales, this option would require these members of staff to familiarise themselves with the new Regulations or updated national planning policy/TAN21, and adapt their thinking when plans are being made to the principles of the hierarchy.

Second stage – This involves applying the hierarchy through the environmental permitting regime.

22. In 2009/10 the EA received a total of 2015 permit applications in England and Wales, (does not include permits where EA have initiated permit modifications, transfers and permit hold). We are therefore using this as our population size for estimating the costs. We do not have accurate information on the number of permits delivered by Local Authorities.
23. We propose that the EA and local authorities introduce a permit condition for new permits or significant variations to existing permits. This would require permit holders to take appropriate measures to minimise the waste generated by their operation and to ensure that, where waste is generated, it is treated in accordance with the hierarchy.
24. Businesses will be able to adapt their operations - if necessary - during the permitting application process or in advance of a permit review. In this way, they can take the hierarchy into account at least cost to them, e.g. by building any changes to processes or contracts into their normal operations over time. In terms of administrative burdens, we are assuming that it may take 1 hour to digest the

relevant guidance on applying the waste hierarchy, which would result in estimated annual costs of £40,300 to £80,600 depending on the wages of employees. We have extended the wage range, in response to consultation feedback, to £20-£40 an hour. The guidance has also been significantly shortened following responses to the second stage consultation. Estimated time taken to read and understand guidance has been reduced in accordance.

25. Annual administrative costs to the public sector are likely to be £40,300 assuming similar time to process the new permit condition.
26. We are not currently proposing to impose conditions on activities covered by an exemption, as exemptions primarily deal with low risk waste recovery operations.

Third stage – This would involve application of the hierarchy by individual waste producers and waste holders.

Option (a) – Modifying Waste Transfer Notes (WTNs) to add a declaration and a narrative about how the waste hierarchy has been considered (alongside a duty in the Regulations to take the hierarchy into account in consigning decisions).

27. Waste producers would be required to read and understand the relevant guidance on the waste hierarchy. It is a legal requirement that waste producers have to have regard to the guidance when they sign the Duty of Care declaration. This had not been accounted for in the consultation stage IA and following second stage consultation responses, we now assume this applies to all private enterprises⁸. Given the significantly shortened guidance, as a response following the consultation, sole proprietorships are estimated to take 15 minutes and enterprises consisting of more than one employee are assumed to take 15 minutes to 1 hour. Sole proprietorships, roughly 75% of private enterprises are expected to take significantly less time to read the now significantly shortened guidance. It will, however act as an estimated wage cost of £5.00 for companies with no other employees. Transition costs to business are estimated £21.9m to £38.3m.
28. In addition, it is assumed all new waste producing enterprises are required to read and understand guidance. We assume 12.2% rate of new enterprise formation (taken from demographics for new businesses (IDB data)), average of last 5 years) and this rate is assumed constant across all businesses regardless of size. Taking away the number who will read guidance through the permitting regime per year (assume permits likely to be required by companies with one employee or more) the on-going costs of the requirements, incurred by new businesses are estimated £2.6m - £4.6m. These costs are not annual recurring costs to existing businesses, but are the on-going costs of the regulations. They are categorised as annual costs in the summary sheet, but relate to a one off cost to new businesses. This cost, although very low, will have an impact on the costs of starting up a business.

⁸ (4.3m, 2008 data <http://stats.bis.gov.uk/ed/sme/smestats2008-ukspr.pdf>).

29. Waste holders and producers who transfer waste would be required to.
 - a) confirm they have read the relevant guidance on the waste hierarchy, and
 - b) explain, in no more than 200 words, how they have made their choice of how the waste being consigned is being treated (e.g. recycling/composting, or other types of recovery, or disposal) in the context of the hierarchy.
30. The EA estimates that annually 20 million waste transfer notes and 2 million consignment notes are issued in England and Wales. Many businesses are expected to take advantage of a “season ticket” approach. This allows them to fill in a Waste Transfer Notes (WTN) at the start of a contract, and not every time waste is collected (as long as the content remains broadly constant), thus minimising the administrative burden.
31. The estimated cost of filling in a WTN ranges from £0.70 to £1.22. The obligation to produce a waste transfer note or consignment note rests as much on the producer of the waste as on the collector / carrier of that waste. In practice, waste contractors often handle the paperwork (sometimes for a fee) on behalf of the business producing the waste.
32. The cost of the total time to complete the narrative for each waste transfer note and consignment note is estimated as £59.2m. We anticipate that as waste holders and producers become familiar with the new WTNs, they would take much less time to complete.

Option (b) – duty in the Regulations to take the hierarchy into account in consigning decisions, backed up by a standard declaration certifying that waste holders and producers have done so included in Waste Transfer Notes.

33. As with option (a), costs to business would include a one-off cost of reading and understanding the guidance for each registered waste carrier, however, for this option we expect that the additional time required to sign the declaration would be nil and would be the less burdensome approach for businesses. This is why option (b) is the preferred option (Table 2), to meet the requirements of the revised WFD in a cost effective manner.
34. The number of prosecutions for offences relating to the Duty of Care are used to estimate the number of prosecutions arising from failure to apply the waste hierarchy. It assumed that there are 11 cases per year and prosecution costs are £700 per case. Further details are in the Justice Impact Test in Annex 5.
35. The cumulative costs of the preferred set of options include one-off costs between £21.9m to £38.3m to businesses and on-going costs between £156,976 and £235,464. These costs need to be appraised relative to the benefits, which are more difficult to gauge and were discussed in the opening sections. See Table 1 above.

Table 2: Summary Table of the tiered transposition proposals for Article 4 on the Waste Hierarchy (with implicit Do Nothing option)

STAGE	OPTIONS	COSTS	BENEFITS	ADDITIONAL NOTES
1. Applying the WH through existing strategies and frameworks	a. WH applied through LA plans, PPS10 or RWP	Additional minimal costs on public sector	It would be difficult to quantify the benefits of the individual stages of the proposed transposition system, because there will be a high degree of interaction.	This is the preferred option.
2. Applying WH through the environmental permitting regime	New condition for new or significantly varied environmental permits to ensure that businesses take appropriate measures to minimise the waste generated by the operation and to ensure, where waste is generated, that it is treated in accordance with the hierarchy.	Annual £40,300 to £80,600 to businesses applying for a permit of reading guidance and disseminating Costs to public sector of £40,300	In addition, the relative benefits of each of the options within the three tier of the proposed system would not be very different.	This is the preferred option.
3. Applying WH to individual waste producers and waste holders	a. declaration + narrative in WTNs	One off costs of £21.9m to £38.3m to all businesses of reading guidance. On-going costs of £2.6m - £4.6m to new businesses of reading and understanding guidance Annual cost of £59.2m to complete the declaration and narrative.	However, transposing the waste hierarchy would underpin a whole host of other policies which aim to shift waste management up the hierarchy so that environmental benefits are maximised. The analysis of the benefits is discussed more in paragraphs 37-49.	
	b. Declaration in WTN (without a narrative)	One off costs of £21.9m to £38.3m to all businesses of reading guidance. On- going costs of £2.6m - £4.6m to new businesses of reading and understanding guidance Costs of sanctions		This is the preferred option

irrespective of the effect of other instruments such as the Landfill tax etc.

36. Business behaviour is currently not optimal as businesses do not take into account the wider social impact of their actions when making decisions regarding waste. To counteract this, a range of policies have been put into place. Policies such as the landfill tax encourage a reduction in the amount of waste sent to landfill, moving it up the hierarchy. The current trend for commercial and industrial enterprises is a significant reduction in the proportion of waste sent to landfill (from 41% in 2002/3 to 23% in 2009) and an increase in the proportion sent for recycling (from 42% to 52% over the same period (source: Defra C&I waste survey 2010)). These trends are expected to continue, but it is difficult to establish a baseline as data is extremely limited with only 2 data points for national waste activity (2002/3 and 2009). The issues described also apply to public bodies, which are also expected to implement the waste hierarchy.

37. Under the proposals, businesses are required to apply the waste hierarchy, having read guidance which explains what the hierarchy is, what evidence it is based on, and the key questions they need to work through to apply the hierarchy in their

particular circumstances. The guidance will also signpost the financial benefits of moving waste up the hierarchy and resource efficiency. This is intended to help address barriers to efficient behaviour such as information failure in the waste market, organisational inertia and split incentives resulting from different agents making decisions relating to waste. The additional effects of this policy all relate to raising awareness of the potential benefits to businesses as well as the environment, of switching from one waste management option to a higher one. The guidance is intended to do this. Impacts are difficult to measure but the examples at paragraphs 45-48 give some indication the scale of private benefits and can be used to ascertain what range of actions are required for the benefits of policies on the waste hierarchy to be cost neutral.

38. The impact assessment by the EC relating to the revised Waste Framework Directive is limited in its scope and does not consider the impact of the requirement for businesses to have regard to the waste hierarchy. In general, the impact assessment for the Thematic Strategy on Waste states on p.6 ““It will entail negligible costs for industry and in the longer run could generate economic benefits for the EU”. The Impact Assessment lists some of the impacts of the proposed changes as less waste to landfill, more composting and energy from waste and more and better recycling. The impact assessment does not perform any analysis related to implementing the waste hierarchy at national level, but instead considers specific examples of possible changes.
39. In the analysis in this impact assessment, the costs of reading the waste hierarchy guidance have been estimated but evidence on the actual behaviour change is too limited to fully quantify the costs and benefits.
40. Consultation responses on Defra’s proposals giving effect to the waste hierarchy did not elicit further information related to costs and benefits to individual businesses producing or handling waste. 11 private sector respondents commented on the time to read and understand the guidance, and also noted that while changes in business procedures required could not be estimated at this point, they should be borne in mind as a source of future costs. Defra official held working groups on the waste hierarchy with business representatives from the CBI, the Federation of Small Businesses and other organisations. These meetings did not provide any information on the expected costs and types of behaviour change either.
41. The main difficulty in quantifying the costs and benefits is that the duties relating to the waste hierarchy can result in many different types of behaviour change, dependent on each specific situation. Some businesses may not need to change their behaviour at all to apply the hierarchy, whereas others may take many different actions such as changing procurement and production processes to reduce waste of raw materials, start recycling, sort more of their waste to increase recycling and recovery, etc. Both the costs and the benefits of these actions will vary from minimal to significant, depending on what each business currently do, as well as the timing and scale of any change in their operations.
42. It is assumed that any actions businesses take in relation to waste management are likely to result in net benefits at the firm level. The guidance is intended to address informational and other barriers to efficient behaviour and businesses are assumed to act only if it is in their interests to do so (e.g. taking up recycling when their waste management contract comes up for renewal; re-tooling to produce less waste, etc).

A study commissioned by Defra⁹ estimated savings from the reduction or improved management of waste through low-cost/no-cost interventions to be in the range of £18 billion per year. Since these savings all relate to low or no cost interventions, the net benefit from these measures should also be in the region of £18 billion/year.

43. In the absence of more detailed information, switching point analysis can indicate if the policy costs can be rendered neutral, and how achievable that may be. Specifically for the policy costs relating to the waste hierarchy the analysis considers at what point the benefits of each policy are equal to the costs incurred. The main benefits of moving waste up the hierarchy relate to reduced GHG emissions and reduced use of virgin material.
44. For this IA, the levels of benefits in terms of waste prevention and an increase in recycling needed to justify the costs are considered achievable. For the purpose of switching point analysis, the benefits from more businesses achieving an aggregate mix of (1) preventing food waste and (2) increasing paper/card recycling are considered. In general, environmental impacts are reduced by moving waste up the hierarchy and are maximised by pushing waste to the top of the hierarchy, resulting in waste prevention.
 - a. Food waste prevention: Landfilling food waste results in methane emissions estimated at 450tCO₂e per tonne. Shifting up the hierarchy to food waste prevention avoids the landfill disposal costs and associated methane emissions in addition to the avoided extra tonne of food production. This action would require companies to manage their demand for food in a more considered manner and reduce procurement where possible. The environmental benefits of food waste prevention are an estimated value of £2,000 per tonne (WRAP) compared to landfill.
 - b. Paper/card recycling: Recycling a tonne more paper/card rather than landfilling will avoid emissions from landfill, associated emissions and avoid the production of a tonne of paper/card from virgin material. The benefits are estimated at £115 per tonne (2010).

For the administrative costs of the policy to be rendered costs neutral, a combination of an 18,000 to 30,000 tonnes reduction in food waste and an increase of 53,000 to 116,000 tonnes increase in paper/card recycling would need to occur over the period. Given an estimated 20m tonnes of food waste arises each year, with business accounting for 30% or 6m tonnes (WRAP 2008), food waste prevention would need to rise by 0.3–0.5% over the whole 10 year period. An equivalent figure for paper/card recycling is a rise of 2-4% over the period. The required increase in paper/card recycling looks achievable when compared to the progress made from an increase in waste recycling to 58% (from the interim C&I survey for 2009/10) in 2009 from 43% in 2002. Actual actions undertaken are expected to pay off for the individual businesses and are illustrated below. These case studies document the private cost savings to a company and they may underestimate the social benefits of implementation of the waste hierarchy when account is taken of the avoided GHG emissions from the extraction of virgin materials.

⁹Defra research project “EV02036: *Business Benefits of Resource Efficiency (2006) and Additional Research (2009)*” Final Report (EV02036) and Additional Research Reports.

45. To supplement the switching point analysis, example of case studies are used to consider the type of behaviour change that is required, the associated costs and the number of businesses that need to change behaviour described above. The case studies illustrate the potential savings from implementing the waste hierarchy for medium sized businesses, and the balance between costs and benefits. In the case of a hotel, WRAP provided information and support in implementing a commitment to eliminate, reduce, re-use and recycle as much waste as possible. These benefits main changes were the supply of toiletries (e.g. using refillable pump dispensers), laundry treatment and purchasing habits. Each action did not incur significant costs and in a number of cases, reduced costs. Each of the changes were small but the total costs savings were £10,000 per annum.

Detailed analysis of example

This hotel employed 19 people and had 10 guest rooms. For the reduction in toiletries; 70% of the contents of 3x30ml bottles per room were disposed. A shifted to refillable pump dispensers saved £1,921 per year. A brief estimate of the changes required:

This estimate uses the Standard Cost Model wage of a hotel manager or proprietor and indexed to 2011 using the GDP deflator, the wage is estimated at £13.70 per hour.

- a. Costs of improving information and disseminating: for only 19 staff, assumed to take 1 hour for applying the waste hierarchy principles and communication.
- b. Costs of changing procurement: assumed to be when placing a regular order, supplier is assumed to stock alternatives, so significant search time not taken into account. Time taken could be conservative.
- c. The total estimated transition costs of £80.55 are low compared to the ongoing savings (net benefits) reported of £1,921 in lower procurement costs and avoided waste disposal costs.
- d. On-going costs of refillable bottles could be in the range of -£700 to over £700 per year with an average of no additional costs. Refilling bottles may take slightly longer than replacing them, but the time taken to deal with the delivery and transport of fewer larger bottles may offset.
- e. The reported savings are £1,921 which takes into account any additional annual costs.

Costs of changes to toiletries procurement

One off changes required for toiletries efficiencies	
Applying waste hierarchy principles and disseminating	1 hour of manager's time (small staff and small number of rooms) = £13.70 (1 hour x £13.70)
Changing procurement from 30ml bottles to refillable bottles: Time to change order: assume 30 minutes to check suppliers' catalogue and change order, assuming same supplier of toiletries	£6.85 (£0.5 hours x £13.70) assuming manager is also in charge of procurement
Cost of buying refillable bottles (10 rooms x 3 bottles per room)	£60 (Costs of buying 30 new bottles at £2 each)
Total of one off changes	£80.55
On-going costs of using refillable bottles, such as time taken to refill bottles at each chambermaid visit	Between £-13.70 and £13.70 per week, (-£712.40 to £712.40 per year) Assume a range between extra 1 hour per and 1 hour less per week of less administrative time.

		Estimated to take a similar amount of time to disposing and replacing bottles and related time in having to gather and sort through lots of small bottles compared to having 3 larger bottles to refill. Less deliveries and less storage space required may also reduce costs.	
--	--	---	--

46. A further case study of a pharmaceuticals company with staff of 250 and turnover of £25m which focused on eliminating waste at source showed implementation of the waste hierarchy resulted in costs savings of £72,606 per year, mainly from a reduction in hazardous raw material usage and associated carrier costs, with further potential savings of up to £150,000 a year. Informational support from WRAP during a periodical process review considered the waste minimisation at the same time as process improvements and environmental performance. Activity was targeted at reducing the elimination and reduction of waste at source. The changes were made to cleaning technologies, reducing use of key hazardous materials and changes to the management and frequency of some operations. In addition to the business saving, wider environmental benefits resulting from reduced use of virgin hazardous waste materials.
47. A salad manufacturer employing 200 staff and producing 7,930 tonnes of salad per year, reduced costs by £65,279 per year as a result of the savings from diverting waste from landfill and improved packaging management. WRAP provided information and support in adopting waste management initiatives that moved waste up the hierarchy. Changes that were made were reducing product wastage, composting green waste, recycling cardboard and plastic and increasing packaging re-use. The staff involvement is high and new staff attend an induction course. The on-going staff-related costs are still likely to be minor relative to the benefits in terms of avoided waste management costs. The majority of the financial benefits were from reduced landfill costs from increasing green waste and recycling and increased revenue from recycling. The wider environmental benefits are from avoided greenhouse gas emissions and reduced use of virgin raw material.
48. For example, there are an estimated 1,087,000 businesses in England and Wales with 1-250 employees (source BIS <http://stats.berr.gov.uk/ed/sme/>). Assuming 1% of the business population make some changes to implement the waste hierarchy, and using the £10,000 benefits per annum described in paragraph 23 (the lowest estimate of the 3 examples for a business of 19 employees) as a very rough **average estimate of the net benefits**, the net benefits from reading the waste hierarchy guidance are £108.7m in the first year, significantly higher than the £42m - £73m PV range of the costs of reading the guidance for the whole business population.
49. An evaluation is required in order to assess the additional impact of the requirement to read and have regard to the waste hierarchy on businesses. Defra will seek to undertake an evaluation at an appropriate time and within the limitations of available resources. The evaluation could supplement existing surveys undertaken either by Defra or related partners, taking the opportunity to add value to existing work in order

to determine any impact of the waste hierarchy on the business behaviour. Alternatively, although a bigger burden on respondents and at significantly greater cost, government could conduct a more detailed and comprehensive survey that would gather information on what the companies have done differently in practice (if anything) and how much this has cost. The evaluation would be designed to ascertain whether the estimated benefits are likely to be achieved. Given the range and size of businesses involved, it is unlikely that aggregation of any company specific data is feasible within a reasonable cost, unless there are strong patterns of behaviour change.

Article 8: Extended producer responsibility

50. Defra and the Welsh Assembly Government do not propose to take forward any additional Producer Responsibility (PR) schemes under Article 8 of the revised WFD at this time. Several of the waste streams suggested are already subject to PR schemes and working to strengthen and improve these schemes, as some respondents suggested, would enable lessons to be learned for the benefit of any future schemes. The EU Directive on Waste Electrical and Electronic Equipment (WEEE) is currently being renegotiated and will no doubt result in changes to the UK's existing PR scheme for WEEE which Defra and the Welsh Assembly Government can learn from.
51. Several of the suggested waste schemes are also subject to voluntary action among industry, for example, waste clothing/textiles and paint, and it would be prudent to assess the success of these initiatives before considering the need for Regulation. There is also limited information on many of the waste streams suggested, and life cycle assessments, as well as research on the environmental and economic impacts of introducing PR for these streams, would need to be undertaken to assess whether this would be the right option.
52. Nevertheless, PR remains a valuable policy tool in reducing the impacts of waste products on the environment and Defra and the Welsh Assembly Government will keep the need for and suitability of additional PR schemes under review, or for extending existing PR schemes.

Article 11(1): Re-use and Preparing For Re-Use Activities

53. Article 11(1) requires Member States to 'take measures, as appropriate, to promote the re-use of products and preparing for re-use activities, notably by encouraging the establishment and support of re-use and repair networks, the use of economic instruments, procurement criteria, quantitative objectives or other measures.'
54. It is a key objective of Defra and WAG to put more emphasis on waste prevention and reuse, and there are a number of measures currently being taken to promote the re-use of products and preparing for reuse activities. The first stage consultation set out the existing measures and the view that they are sufficient to comply with the requirements of this part of the Article and proposed no further measures at this stage. There was broad consensus with this approach from respondents. Following

on from that, we therefore propose no further measures will be required to transpose the requirements of Article 11(1) covering reuse and preparing for reuse.

55. The Waste and Resources Action Programme (WRAP) are continuing to promote reuse and are working on a number of activities to realise the benefits of reuse and preparing for reuse. WRAP have an established programme of work to increase the third sector's capacity to operate in the waste and recycling sector and to strengthen the capacity and efficiency of the network and their enterprise culture.

Costs and Benefits

56. As no further action is proposed for transposing the requirements of Article 11(1) covering re-use and the prevention of re-use, there are no costs and benefits associated with this part of the Article.

Article 11(1): Separate Collections of Waste

57. In this section the options are focused on separate household waste collection for different types of plastics, as it is assumed that separate collection will already be provided for paper, metal and glass by 2015. Plastics is defined as plastic bottles in option 1 and all plastics in option 2. Option 2 would include plastic bottles, other rigid plastics such as pots and tubs, and plastic films. A key assumption under the preferred option here is that present trends continue in relation to paper, metal, glass and plastic bottles.

Option One: Reserve judgement on requiring any additional separate collection by local authorities above and beyond what is driven by other measures

58. This is the preferred option as it allows for further development of the recycling market for mixed plastics and consideration of the respective costs and benefits before confirming the approach, including any additional regulations or costs. In England and Wales, only one local authority does not currently provide for the separate collection of paper, metal and glass, whether by kerbside collection or the provision of bring banks. All Welsh local authorities currently provide for separate collection of plastic bottles, but 7 English local authorities do not provide, or have no plans currently to introduce, the separate collection of plastic bottles.

59. It is assumed that those authorities currently providing a separate collection will continue to provide this service through to 2015 and beyond, and if anything will expand or improve on this service. In addition the small number of local authorities that currently do not provide a separate collection for plastic bottles may introduce such a service by 2015. It is likely that any authority not providing such a service will need to be able to provide convincing evidence that this is not technically, environmentally and economically practicable and appropriate to meet the quality standards necessary for recycling.

Option Two: Require all local authorities to provide for the separate collection of **all** plastics by 2015 where this is technically, environmentally and economically practicable.

60. This option would require all local authorities to introduce separate collection of mixed plastics (rigid plastics and plastic films), in addition to plastic bottles, by 2015.

The analysis presented below provides an initial analysis of the additional costs in requiring all local authorities to provide separate collection of mixed plastics by 2015. Our current view is that it is unlikely to be technically, environmentally and economically practicable for all local authorities to provide such a service by 2015. This is supported by the findings of the WRAP¹⁰ report “Landfill bans: Feasibility research” (March 2010). This states that the additional financial costs of collecting and reprocessing plastics appear to exceed the associated environmental benefits of reduced GHG emissions associated with disposal and processing virgin materials—there is currently a net cost to society. However, the collection, sorting and recycling of mixed plastics is still in the relatively early stages of development. The situation may have moved on considerably by 2015 and it can be anticipated that other drivers on local authorities to increase their levels of recycling will drive increased provision of separate collection for mixed plastics. Therefore, further work is needed on the relative costs and benefits of mixed plastics collection before this option can be pursued. The intention is to provide separate guidance on what is considered “technically, environmentally and economically practicable” in light of further information. The relative costs and benefits of the interpretation provided for in the guidance will need to be subject to a more detailed impact assessment at the time.

61. In Wales it is anticipated that most local authorities will have to introduce collection systems for mixed plastics in order to meet the 52% recycling target proposed for 2012/13, and the 58% target proposed for 2016/17. All local authorities in Wales provide for collection of plastic bottles and some for other plastics. Some 9% of Welsh MSW is plastic with 6% being dense and 3% film. New infrastructure for reprocessing plastic bottles is coming on line and there are initiatives to look at the recycling of rigid plastics. Some local authorities collect plastic carrier bags and others will do so in future as plastic film collections are introduced more widely. Collection of mixed plastics must be predicated on post collection sorting of polymer types and the approach in Wales is to make mixed plastics collections align with the sorting and reprocessing infrastructure being established.
62. Costs vary between local authorities according to many factors, including contract costs, vehicle efficiencies, mix of housing stock, infrastructure and gate fees for recyclates. The calculations in this section are based on the assumptions and findings of WRAP project *the financial costs of collecting mixed plastics packaging* (June 2009)¹¹. The costs of this option will also depend on the type of separate collection introduced:
 - Co-mingled collection (in which all recyclates are collected together and separated out for recycling later): between £3.36 and £4.92 per household per year
 - Two-stream collection (in which recyclates are separated into two broad streams by the householder, and fully separated for recycling later): between £1.45 and £3.81 per household per year

¹⁰ http://www.wrap.org.uk/downloads/FINAL_Landfill_Bans_Feasibility_Research.6af3f2a2.8796.pdf

¹¹ Found at:
http://www.wrap.org.uk/downloads/The_Financial_Costs_of_Collecting_Mixed_Plastics_Packaging.949434a8.7205.pdf

- Kerbside sort (in which recyclates are separated by collection operatives before transportation):
 - Weekly collection: between £3.27 and £5.69 per household per year
 - Fortnightly collection: between £2.01 and £4.16 per household per year
63. At present only 71 local authorities have some provision to collect mixed plastics, out of a total of 375 across England and Wales, therefore the cost of this option is based on the additional costs of introducing mixed plastic collection in the 304 authorities. Calculations are made based on the costs for a 'generic' local authority of 50,000 households, in line with the assumption made in the source report.
64. For simplicity, we have amalgamated co-mingled and two-stream collections, and both frequencies of kerbside sort. Figures are the total cost per year across England and Wales.
- If all additional separate collection provided through a co-mingled collection: between £22m and £74.8m per year
 - If all additional separate collection provided through kerbside sort: between £30.6m and £86.5m per year
65. Local authority provision is currently split approximately 50/50 between the two types of collection. Assuming that all authorities continue to use their current model of collection and add mixed plastics to this collection, the overall cost is estimated to be between **£26.3m and £80.6m per year**. This figure is purely the cost of the adding the separate collection of mixed plastics and does not account for the benefits of such a service.
66. In addition separate collection through the adequate provision of bring banks is an acceptable approach to fulfilling the requirements of Option 2. The cost of bring bank provision is between £42.42 and £150.45 per tonne for mixed plastics (WRAP, 2009). This compares to a household collection cost of £150-217 per tonne. More research is currently being carried out on determining the circumstances where provision is lower costs than alternative collection systems.
67. However, this impact assessment has not attempted to model the likely balance of provision of separate collection for mixed plastics from the kerbside as opposed to bring banks that local authorities may choose to provide. Therefore, this aspect has not been included in the estimated national costs for comprehensive provision of separate collection for mixed plastics.
68. The key conclusion here is that option 1 is our preferred option at this time due to lack of data on the potential benefits of option 2, but we do not believe the additional benefits to be large enough to justify option 2 which is more costly.

Table 3: Summary table of the costs and benefits associated with the options relating to Article 11(1) on separate collections of waste

OPTION	COSTS	BENEFITS	ADDITIONAL NOTES
1. Reserve judgement on requiring any additional separate collection by LAs	No additional costs	No additional benefits as the situation is expected to occur by 2015 anyway.	This is the preferred option. Separate collection is already

above and beyond what is driven by existing measures (DO NOTHING)			(more or less) being done for paper, metal, glass and plastic bottles by 2015.
2. Require all LAs to provide for the separate collection of mixed plastics by 2015	<p>Collection from households: £26.3m - £80.6m per year</p> <p>Collection via bring banks is likely to have significantly lower costs but we do not have the data to quantify these at this time.</p>	<p>The additional benefits of recycling mixed plastics, over and above plastic bottles would need to be greater than the cost range of £26.3m to £80.6m in order for this option to be preferable to option 1. Given that the net benefits of plastics recycling are deemed low this is not expected to be achievable and this option is inferior to option 1.</p> <p>It is assumed that the level of benefit derived from the provision of bring banks will be lower as the volume of recyclates collected will be lower. However, further work is needed to understand the relative benefits of the different approaches.</p> <p>There are environmental benefits from recycling mixed plastics. These include reduced GHG emissions, reduced use of virgin materials and reduced methane emissions from landfill .</p>	

69. Following analysis of the consultation responses, officials now recommend that rather than linking the separate collection requirement directly to the carrier or permitting regime, we should actually link it to duties modelled on the duty of care legislation to enforce separate collections of Commercial and Industrial (C&I) waste .
70. These duties in relation to separate collection are desirable as it is largely a self-regulatory system that fits with the aim of compliance-based regulation. In terms of sanctions, given the lack of enthusiasm for penalty based civil sanctions, breach of the new duties in relation to separate collection, would instead trigger the ability to serve compliance, stop or restoration notices. It is proposed that only when these notices are breached that the ability to take a prosecution would be triggered.
71. Those who are served with a notice would be able to appeal to the first-tier tribunal. This should limit the number of prosecutions. On prosecution, conviction would give the Environment Agency power to revoke registration. The notice procedure is a built-in safeguard against criticism that the Agency could revoke a carrier's registration for what might be a minor breach. Officials believe this is a pragmatic and low burden solution, but we are awaiting feedback from Ministry of Justice (MoJ) on these proposals.
72. Using current trends in the Duty of Care offences as detailed in the annex 5, it is estimated that 11 prosecution cases occur every 2 years and £2,820 prosecution costs for each case incurring an estimated annual cost £15,510. Further details are in the Justice Impact Test in annex 5.

Article 11(2)(a): Household Waste Recycling Target

73. Article 11(2)(a) of the revised WFD sets out a household waste recycling target for the first time. Member states are required to take the necessary measures designed to achieve the following target:-

“(a) by 2020, the preparing for re-use and the recycling of waste materials such as at least paper, metal, plastic, and glass from households and possibly from other origins as far as these waste streams are similar to waste from households, shall be increased to a minimum of overall 50% by weight.”

74. The 2007 Waste Strategy for England had set a domestic target for recycling and composting of household waste of at least 40% by 2010, 45 % by 2015 and 50% by 2020.

75. Responses from the first stage consultation demonstrated there was agreement with the proposed approach of implementing the 50% target with no further measures in England, given the Local Authority Waste Recycling Recovery and Disposal (LAWRRD) modelling showed the target will be met by 2020 with current measures. Following on from this, we have rerun an updated version of the LAWRRD model which incorporates more recent information. This IA covers England and Wales, however the LAWRRD model covers only English authorities. For further information on the LAWRRD model please see Annex 2.

76. In Wales, the Welsh Assembly Government has brought forward the proposed Waste (Wales) Measure 2010 that includes the setting of statutory municipal waste recycling targets to a level of 70% by 2024/25 (64% for 2020).

77. The IA considers the additional cost of meeting the Article 11(2)(a) requirement. Recycling in England has increased from 11.2% of the household stream in 2000/01 to 30.9% in 2006/07, 34.5% in 2007/08 and 37.6% in 2008/09. The Municipal Waste Statistics¹² for 2009/10 were released on 4 November and showed that the recycling rate for England is 39.7%. If the recycling rate continued to increase in a similar trend, the household recycling rate would well exceed the 50% target. Recycling in Wales has increased from around 7% of household waste in 2000-01 to 32% in 2007-08, 36% in 2008-09 and 40% for the first three quarters of 2009-10. For the first three quarters in 2009-10, the municipal recycling rate is also 40%. Both the municipal and household recycling rates in Wales are expected to exceed targets set in WFD in line with ambitious Wales’s waste strategy recycling targets.

78. The modelling for this IA includes the most recent landfill tax rate announcements in the April 2009 Budget announcement to continue the £8/tonne per annum escalator to a rate of £72/tonne in 2013/14. The March 2010 Budget included an announcement to continue this to £80/tonne in 2014/15 but as this was not included in the accompanying Finance Bill (the rate is set each year in the Finance Bill) therefore this last increase has not been included in the modelling. The Coalition Government also made a commitment to an £80 floor under this tax rate until 2020. Please see Annex 2 for the remaining assumptions.

¹² http://www.defra.gov.uk/evidence/statistics/environment/wastats/download/mwb200910_statsrelease.pdf

79. As detailed in Annex 2, the model adjusts the recycling pressure factor to fit past data. To take account of this, scenarios were thus generated from varying the recycling pressure factor from the LAWRRD model. Scenario A is the baseline and assumes the effect of previous unquantified factors/preference towards recycling rates remain the same for future years. Scenario B, C and D assume such preferences towards recycling decline over time at varied rates, i.e. to 80%, 50% and for Scenario D to have no effect at all.
80. The recycling rates in 2020 for the four scenarios are now as follows
- Scenario A:** Recycling rate of 56% (default modelling assumptions).
Scenario B: Recycling rate of 55%.
Scenario C: Recycling rate of 52%.
Scenario D: Recycling rate of 51%.
81. All modelling scenarios produce a recycling rate in excess of 50%. The sensitivity scenarios which were included to take into account modelling uncertainties also now meet the target.
82. Given the modelling results, England is not proposing to introduce any further measures at this time, though will keep household waste recycling rates under review going forward.
83. For Wales, policy measures have been outlined in the Proposed Waste (Wales) Measure 2010¹³ and an IA has been produced. This includes a detailed analysis of the costs and benefits (both financial and environmental) of establishing the higher recycling rates of 70% by 2024/25, compared to a baseline of 52%. The IA, which is based on detailed studies involving complex modelling scenarios, indicates that achieving a higher recycling rate of 70% will provide financial savings compared to maintaining current rates, as well as providing significant environmental benefits.

Article 11(2)(b): Recovery Target For Non-Hazardous Construction And Demolition Waste

84. Article 11(2)(b) of the revised WFD establishes, for the first time, a construction and demolition waste recovery target, as follows:
- “...(b) by 2020, the preparing for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials, of non-hazardous construction and demolition waste excluding naturally occurring material defined in category 17 05 04 in the list of waste shall be increased to a minimum of 70 % by weight.”*
85. The proposal is to transpose this requirement directly into the WFD implementing regulations, on the basis of our assessment that we are already meeting this target in England and Wales. The Waste and Resources Action Programme (WRAP) has

¹³ A link to the Proposed Waste (Wales) Measure 2010 is available at:
<http://www.assemblywales.org/bus-home/bus-legislation/bus-leg-measures/business-legislation-measures-waste.htm>

The information is on page 49 & 50 on the Explanatory Memorandum at:
<http://www.assemblywales.org/ms-ld7924-em-e.pdf>

recently conducted a research project into the Construction, Demolition and Excavation Waste (CD&E) arisings in England in 2008. This concluded that 89% of CD&E waste arisings in 2008 was recovered or beneficially re-used (including backfilling operations and engineering at landfill sites) without further processing, while 11% was landfilled as waste. These figures include volumes of naturally occurring material defined in category 17 05 04 (soils and stones) which are excluded from the WFD target. Analysis of data in the WRAP report suggests that this category accounts for around 65% of the CD&E waste landfilled as waste, but comprises a much smaller proportion of the total waste arisings. On this basis, when the naturally occurring material defined in category 17 05 04 in the list of waste is removed from the calculation, we would expect the 89% recovery rate to increase, thus making it even clearer that this target is already being met.

86. A survey of construction and demolition waste in Wales in 2005/06, carried out by Environment Agency Wales, showed that 85% of the 12.2 million tonnes of construction and demolition (C&D) waste was re-used and recycled, while 10% was landfilled. These figures include volumes of naturally occurring material defined in category 17 05 04 (soils and stones) which are excluded from the WFD target. The survey concluded that soils and stones made up 40% of the total C&D waste arisings. However, they accounted for only 110,000 tonnes of the 1.2 million tonnes of CD&E waste sent to landfill that year. Removing category 17 05 04 soils and stones from the survey figures for the calculation suggests that 1.16 million tonnes out of a total of 7.27 million tonnes of waste were sent to landfill in 2005/06, or 16% landfilled. The re-use and recycling rate is 79% which, again, confirms the view that this target is currently being met in England and Wales.
87. The position will be reviewed regularly, at least every three years as required under Article 11(5) of the revised WFD, and further consideration given at these points as to whether additional policy measures are required.

Article 16: Principles of self-sufficiency and proximity

88. Article 16(1) includes the requirement from the original WFD for Member States to create an integrated and adequate network of waste disposal installations, but extends the requirement to installations for the recovery of mixed municipal waste collected from private households, including where such collection also covers such waste from other producers (hereafter referred to as mixed MW). Article 16(2) requires that the network shall be designed to enable the European Community (EC) as a whole to become self sufficient in waste disposal, and in the recovery of mixed MW and for Member States to move towards that aim individually.
89. As all exports of waste for disposal from the EC are prohibited by the EC Waste Shipments Regulation (1013/2006/EC) (WSR), and all imports and exports of waste for disposal to and from the UK are generally prohibited by the UK Plan for Shipments of Waste, no further domestic transposition of this provision is required. Furthermore, Article 3(5) of the WSR requires that shipments of mixed MW for recovery shall be subject to the same provisions as shipments for disposal.
90. In England and Wales, the waste planning system already requires local authorities to plan for an adequate network of facilities for managing waste at all steps in the hierarchy. The proximity principle is recognised through an objective in waste planning guidance that communities take more responsibility for their own waste, and

enable sufficient and timely provision waste management facilities to meet the needs of their communities, although this objective must be balanced against other considerations.

91. Overall, the Government considers that current policy already implements requirements of Article 16, and that any required change to national planning guidance will be minimal.

Costs and benefits

92. As no further action will be required to transpose the requirements of Article 16 of the revised WFD, there are no costs and benefits associated with this Article.

Articles 17-20: Hazardous Waste

93. The Hazardous Waste Regulations 2005 “the Regulations” require that where someone collects hazardous waste from multiple premises on a single journey, they must use the format of paperwork laid in Schedule 6 of the Regulations. This applies to England and Wales.
94. We need to fully implement the requirements of the revised Waste Framework Directive which are intended to ensure that movements of hazardous waste are fully tracked from cradle to grave. As noted in the accompanying consultation document, it has become apparent the current system for tracking multiple consignments does not fully meet the cradle to grave requirements. Cradle to grave monitoring enables the Environment Agency to verify that businesses have handled their hazardous waste properly to prevent it from harming the environment, have only passed it to someone authorised to deal with it and have correctly entered the details of the waste on the consignment note so as to help others know how to handle it.
95. Option 3 below is the preferred option as it implements the requirements of the revised WFD is the least costs option and is estimated to result in costs savings to businesses.
96. The admin costs in this IA relate mainly to variations in the amounts of paperwork that people moving hazardous waste will need to print out as a result of a revised multiple consignment system. We anticipate there will be other costs as some businesses using IT-based systems may need to adapt them to the revised paperwork. There may also be a slight variance in the time required to complete the revised forms. We have detailed estimates received from the consultation responses in the costs set out below.

Analysis of proposed options

97. **Option 1:** Do nothing – no changes to any wording in the regulations relating to consignment note format or procedures.
98. This option maintains the status quo. e.g. no changes would be made to the current multiple consignment provisions of the Regulations. There are two sub options under Option 1. Option 1A is the multiple consignment system currently stipulated by the Regulations, hitherto referred to as the “regulatory procedure, Option 1B, an adaptation of the “regulatory procedure” system used by some businesses in the

industry, hitherto referred to as the “M procedure”. Currently businesses are following one of these two options.

99. Option 1B does not meet the minimum standard of cradle-to-grave auditing of hazardous waste, which is a fundamental requirement of the overarching European legislation. It could therefore be reasonably supposed that maintaining the status quo would increase the risk of EC infraction proceedings. Recent case law indicates that an adverse judgment in an infraction case could result in fines of up to £70,000 a day and/or a lump sum of up to £20m.
100. **Option 2:** Make the use of multiple consignment notes, as they are presently formatted, mandatory where the reduced charge is claimed by consignees. This option should have a neutral effect on printing costs for those operators currently using the “regulatory procedure” as this should be the same as under option 1, but will impose additional costs on those currently using the 1B option.
101. **Option 3:** Allow for the use of an amended standard (single) consignment note, which includes a round number, as a multiple note (but only when round number field is completed and that note forms part of a multiple collection as specified in the regulations).
102. This option proposes amending the current single note to enable it to also be used to track movements that form part of a multiple consignment round. An extra field added to the current single note will contain a box that can be completed with a unique “round” identifier only for those movements that form part of a multiple consignment round. This round identifier would ensure that each carrier and consignee can uniquely identify the collections on a round. A transition time of 6 months will be given to allow users to continue to use the existing notes.
103. Costs and benefits of options: The figures in Table 4 are based on a typical business carrying out 40000 multiple consignment rounds per annum (based on replies from the Industry in a previous consultation) with an average of 3 collections per multiple collection round (based on EA figures). Detailed information on the methodology and assumptions used to inform this analysis is found in Annex 3.

Option 1: It is estimated that a typical business carrying out 40,000 visits per year incurs £9,600 printing costs using option 1a, the “regulatory procedure”. The corresponding cost to a typical business using option 1b, the “M procedure” would be £6,000 per year. Environment Agency data indicates that 846 businesses reported multiple collections in 2008/2009. Projecting typical business costs nationally results in a national yearly cost of £8,121,600 for those using the “regulatory procedure” (£9,600 x 846 businesses) and £5,076,000 for those using the “M” procedure (£6,000 x 846 businesses) under option 1. Option 1 costs have been analysed so that the costs for option 2 and 3 can be assessed as those additional costs, i.e. relative to the baseline of option 1 (do nothing). These additional costs are presented in Table 4.

Option 2: has a neutral cost impact on typical businesses currently using the “regulatory procedure”. However, there is no option to use the “M” procedure under option 2 meaning that businesses currently using the “M” procedure would see their printing costs rise from £6,000 to £9,600. The national increase for those currently using the “M” procedure will be £3,045,600, which is the difference between

£8,121,600 and £5,076,000. There will be no change for those currently using the “regulatory procedure”.

Option 3: This is the preferred option. It is estimated that this option will reduce printing costs from £9,600 to £6,000 for a typical business currently using the statutory “regulatory procedure”. Projecting this to the 846 businesses reporting multiple collections, will result in a national cost reduction of £3,045,600, i.e. the difference between £8,121,600 and £5,076,000. More detail on the calculations can be found in Annex 3. Even taking account of the costs of IT to businesses, estimated at £435,333, this option will result in costs savings to businesses.

104. One-off IT and training costs are estimated following responses from the second stage consultation and are detailed further in Annex 3.

Table 4: Additional costs per year relative to baseline option 1

	Costs	Benefits	Additional Notes
Option 2	<p>- no impact on businesses already following the regulatory procedure</p> <p>- 60% annual cost increase on businesses that currently follow the M procedure, leading to national costs between £3million and £1.5million, depending on what proportion of businesses currently use the M procedure (estimates use 100% to 50% in order to represent higher order estimates)</p>	<p>If the regulatory procedure is correctly used, it would assist producers, carriers and consignees in their duty of care requirements. The Environment Agency will be able to verify that businesses have handled their hazardous waste properly to prevent it from harming the environment, have only passed it to someone authorised to deal with it and have correctly entered the details of the waste on the consignment note so as to help others know how to handle it.</p>	
Option 3	<p>- 38% annual cost decrease on businesses that currently use the regulatory procedure. This leads to national cost savings up to 3.0 million if we assume all businesses currently use the regulatory procedure</p> <p>No change in costs on businesses that currently use the M procedure.</p> <p>If we assume 50/50 proportions of businesses in these two groups we can assume an annual reduction in costs of £1.5m to businesses.</p> <p>One off IT costs to businesses of £435,333</p> <p>One off costs to EA of £10,000 - £15,000</p>	<p>Potential for net cost savings under certain circumstances.</p> <p>It is a requirement of the revised WFD that Member States take actions to ensure traceability from production to final destination and control of hazardous waste in order to safeguard environmental protection. This option will enable the Environment Agency to identify multiple collection rounds where the correct procedure has been used and so meet that obligation and avoid costly EC infraction proceedings. It will also result in a reduction in the amount of paperwork needed to be used by operators carrying out multiple consignments.</p>	<p>This is the preferred option</p>

Article 21: Waste Oils

105. Defra and the Welsh Assembly Government do not intend to propose any measures prescribing that waste oils must be regenerated if technically feasible. There are, therefore, no costs and benefits associated with this Article.

Article 22: Bio-waste

106. Defra and the Welsh Assembly Government do not intend to specifically propose any additional measures in the transposing regulations but rather that any new measures to encourage the separate collection of bio-waste should be set out in national waste policies. Any additional measures will need to be considered in the context of, and consistent with, other initiatives being undertaken and on their own merits. The draft regulations therefore consist of a requirement for the national waste management

plan (in practice this will be Defra's and the Welsh Assembly Government's respective Waste Strategies) to set out measures, as appropriate, to encourage the separate collection of bio-waste. There are no costs and benefits associated with this provision in the Directive. Any future measures taken will be accompanied by their own individual impact assessments.

Article 28: Waste management plans

107. Article 28 of the revised Directive carries forward a number of provisions from Article 7 of the existing Directive. However, the new obligations imposed on Member States are more elaborate. It requires Member States to draw up one or more waste management plans that cover its entire geographical area. Waste management plans must contain the information listed in Article 28(3) and may contain the information listed in Article 28(4). Waste management plans must be made in accordance with the waste hierarchy; the protection of the environment and human health; and the principle of self-sufficiency and proximity.

108. England and Wales have already implemented the predecessor of Article 28 through a tiered system of plans, including both national waste strategies and local planning documents. These include:

- The Waste Strategy for England 2007
- The Wales Waste Strategy "Wise about Waste" (the new overarching waste strategy document, Towards Zero Waste, is due to be published on 21st June 2010.)
- Regional Waste Plans (Wales) – required under Technical Advice Note (TAN) 21, but not statutory
- The Municipal Waste Management Strategy for Greater London; and
- Local authority waste plans (Development Plans in Wales)

109. Where feasible we are adopting a similar, tiered approach to transposition of Article 28. This will use the National Waste Strategy and a mix of national and local plans required under the spatial planning regime (in England) and TAN 21 (in Wales) to meet our revised obligations. However, the requirements of Article 28 are more elaborate and so other forms of implementation will be required. Throughout the text below the term "waste management plan" can therefore refer to any document depending on the method of implementation. We have tried to be clear which it refers to for each provision under discussion.

110. Furthermore, the Government proposes to set out in legislation the requirements to comply with Article 28 of the Directive. This is intended to increase the transparency of the transposition of the Article.

111. Articles 28(2) and 28(3) set out the specific requirements which must form part of the waste management plans. One advantage of adopting a tiered approach to implementing the requirement is that not every requirement will be needed at each level of waste management plan. Some elements will be best dealt with at national level in for example the National Waste Strategy while others will be best addressed

in local spatial plans produced by local authorities (hereafter “local waste plans” or “local authority waste plans” or “local development plans in Wales”).

112. Taking each of the requirements and their impacts in turn:

Article 28(2) requires waste management plans to “set out an analysis of the current waste management situation in the geographical area concerned, as well as the measures to be taken to improve environmentally sound preparing for re-use, recycling, recovery and disposal of waste and an evaluation of how the plan will support the implementation of the objectives and provisions” of the Directive. In England we propose to satisfy this requirement through the National Waste Strategy, which we regularly review, or other national level documents. In Wales, the analysis of the current situation will be set out in the overarching strategy for Wales “Towards Zero Waste” and in a series of Sector Plans which are directed by the Strategy. In particular, the Municipal, Construction and Demolition and Collection, Infrastructure and Markets Sector Plans will provide this analysis. We therefore do not expect there to be additional costs with this provision.

Article 28(3)(a) requires waste management plans to include the type, quantity and source of waste generated, waste likely to be shipped from or to the national territory, and an evaluation of the development of waste streams in the future. In England, we propose to satisfy this requirement through the National Waste Strategy and the national level Waste Management Plan for Exports and Imports. In Wales it will be set out in the overarching strategy for Wales “Towards Zero Waste” and the series of Sector Plans directed by the Strategy. We therefore do not expect there to be additional costs with this provision.

Article 28(3)(b) contains three particular requirements. Firstly it requires waste management plans to include details of existing waste collection schemes. The National Waste Strategies will cover collection mechanisms at a national level. We also expect this to be supported by an assessment at local level by Waste Collection Authorities in their municipal waste management strategies. We would expect the additional cost to be minimal but welcome further views as part of this consultation. In Wales, details of existing collection schemes will be provided in the Collection, Infrastructure and Markets Sector Plan that will be published for consultation in December 2010.

Secondly it requires waste management plans to include details of existing major disposal and recovery installations. Local planning authorities already provide most of this information through a combination of local waste plans and Annual Monitoring Reports (which are required under the Planning and Compulsory Purchase Act 2004), more specifically Core Indicator W1 asks for details of capacity of new waste management facilities granted throughout the year. However, not all local planning authorities have a comprehensive list of existing capacity and their plans will need to be updated to reflect this. In Wales, details of existing major disposal and recovery installations will be provided in the Collection, Infrastructure and Markets Sector Plan that will be published for consultation in December 2010.

We expect the new burden on local planning authorities from this second requirement would be minimal. CLG have estimated that this cost could be £2,000 per authority depending on the quality of existing information. There are

152 local planning authorities giving a total cost of £304K. We expect this to be a maximum figure as assuming that all LAs need to do this additional work.

Finally, Article 28(3)(b) requires waste management plans to also include special arrangements for waste oils, hazardous waste or waste streams addressed by specific Community legislation. The special arrangements for certain wastes are already made for in existing legislation, such as WEEE and the Hazardous Waste Regulations, or in national level plans. The forthcoming hazardous waste national policy statement will also satisfy the special arrangements for larger hazardous waste facilities. We therefore do not expect there to be additional costs for this element of the provision.

Article 28(3)(c) also contains three specific requirements. Firstly, it requires waste management plans to include an assessment of the need for new collection schemes. The National Waste Strategy will cover collection mechanisms at a national level. We also expect this to be supported in England by an assessment at local level by Waste Collection Authorities in their municipal waste management strategies. We expect the additional cost to be minimal. In Wales, details of existing collection schemes will be provided in the Collection, Infrastructure and Markets Sector Plan that will be published for consultation in December 2010.

Secondly, it requires waste management plans to include assessment of the need for the closure of existing waste installations. We anticipate that this could be done in one of two ways. Option (a) is to place a requirement on the Environment Agency to assess the need for closure. The Agency is a suitable candidate in that it is required to inspect a number of waste installations as part of the permitting regime, and would be able to identify those facilities which might be suitable for closure either because, for example, it is aware that certain facilities might not be able to comply with the requirements of the permit, or because it is able to keep track of capacity of landfill facilities. This option would place a burden on the Environment Agency, but not on businesses or local authorities.

Option (b), the preferred option (see table 5), is to place this requirement on local planning authorities as part of their Annual Monitoring Report. However, for local authorities to meet this obligation they will need to liaise closely with the Environment Agency to obtain information on the continuing suitability of existing installations to operate. CLG have estimated that this cost could be £2,000 per authority depending on the quality of existing information. There are 152 local planning authorities giving a maximum total cost of £304K, assuming all planning authorities need to do this.

Finally, it requires waste management plans to include an assessment of the need for additional waste installation infrastructure, having particular reference to the need to comply with Article 16. This is something that is already required of the existing planning system as well as through other documents such as the proposed National Policy Statements under the Planning Act 2008, TAN 21 (Wales) the National Waste Strategy and Packaging Strategy, so we do not anticipate any additional burden from this part of the provision.

Article 28(3)(d) requires waste management plans to include sufficient information on the location criteria for site identification and on the capacity of future disposal or major recovery installations. The first part of this requirement – on identification of suitable locational criteria – will be met through the proposed National Policy Statements under the Planning Act 2008, as well as a combination of an updated national Planning Policy (England), TAN 21 (Wales), the Collection, Infrastructure and Markets Sector Plan (Wales) and local waste plans. The second part of this requirement will be met largely from the combination of an updated national Planning Policy (England), the Collection, Infrastructure and Markets Sector Plan (Wales) and local waste plans as part of consideration of future need for waste management facilities. As these provisions are already required of local planning authorities by the existing Planning Policy Statement 10 (England) and TAN 21 (Wales) there will be no additional burdens from this provision.

Article 28(3)(e) requires waste management plans to include general waste management policies, including planned waste management technologies and methods, or policies for waste posing specific management problems. These are issues best addressed at a national level and will be included in the National Waste Strategies. There will therefore be no additional burdens from this provision.

Article 28(4) contains a number of aspects that waste management plans may contain: it does not *require* them to do so. We are not making any of these aspects mandatory. As such there will be no additional burden from this provision.

Article 28(5) continues the requirement of waste management plans containing certain provisions with respect to packaging waste and the need to conform to the strategy for reducing biodegradable waste going to landfill. We consider that these issues are capable of being addressed through the National Waste Strategies and the Packaging Strategy for packaging waste, and through the National Waste Strategies for reducing biodegradable waste. We see no additional burden from this provision.

Costs

113. There will be an increased burden on local planning authorities, and possibly Waste Collection Authorities and Waste Disposal Authorities, as they revise their existing local waste plans to comply with the new, additional requirements of Article 28. Those costs will arise from new requirements to include:

- details of existing waste collection schemes in their areas
- details of existing major disposal and recovery installations (total estimate £304K)
- an assessment of the need for new collection schemes
- an assessment of the need for the closure of existing waste installations (possible estimate £304K depending on implementation mechanism)

Benefits

114. The new approaches outlined above serve to reinforce the need for sustainable waste management - through measures to protect human health and the environment, including more reduction, recycling and recovery of waste and using the disposal of waste as a last resort - and ensuring the timely delivery of new waste infrastructure to deliver the desired outcomes.
115. Up-to-date waste plans, along with sound monitoring arrangements, provide significant financial and environmental benefits. These plans are critical in providing clarity for investment decisions in waste facilities: they help integrate waste management with the wider need to cut greenhouse gas emissions, and are an essential component in meeting our legal requirements under European law.
116. The approaches lined up above will facilitate a step-change in the way waste is handled and significant new investment in modern waste management facilities. Positive planning provides the framework for new waste management facilities of the right type, in the right place and at the right time. They will ensure that there is a clear vision and plan in place to facilitate effective co-ordination between planning and waste management, and reduces barriers to attracting capital investment in new facilities and should lead to a reduction in the amount of landfill tax paid out.
117. There are also strong environmental benefits, as up-to-date waste plans can make a significant contribution to tackling climate change, and giving proper consideration to the provision and siting of such facilities through waste planning will deliver sound climate change benefits.
118. Having up to date information on existing collection schemes and assessments on whether new schemes are needed in any given area will promote more environmentally beneficial treatment of waste by encouraging the recycling, recovery and beneficial uses of waste. It will help divert waste from landfill and potentially reduce greenhouse gas emissions from landfill sites.

Table 5: Summary table of costs and benefits associated with the options around waste management plans (excluding those with no additional requirements)

ARTICLE	REQUIREMENT	COSTS	BENEFITS	ADDITIONAL NOTES
28(3)(b)	1. WMPs to include details of existing waste collection schemes	Minimal as many Waste Collection Authorities already have municipal waste management strategies in place.	Helps put the right collection mechanisms in place thereby promoting more environmentally beneficial treatment of waste. Lead to increased recycling and recovery rates and divert more waste from landfill.	
	2. WMPs to include details of existing major disposal and recovery installations	Some LAs do not already include this info and will have to update their plans at an additional cost. Estimate of £2000 per LA, 152 LAs, giving a one off total maximum cost of £304,000.	Contributes to positive waste planning arrangements by setting a framework of existing waste management facilities, so as to enable consideration of the need for future facilities of the right type, in the right place and at the right time. Provides clarity for investment decisions in waste facilities.	

ARTICLE	REQUIREMENT	COSTS	BENEFITS	ADDITIONAL NOTES
28(3)(c)	1. WMPs to include an assessment of the need for new collection schemes	Minimal as many Waste Collection Authorities already have municipal waste management strategies in place.	Helps put the right collection mechanisms in place thereby promoting more environmentally beneficial treatment of waste. Lead to increased recycling and recovery rates and divert more waste from landfill.	
	2. WMPs to include assessment of the need to close existing waste installations	Option a) to use EA. No additional burden on businesses or local authorities and minimal costs as EA already inspects premises as part of the permitting regime. Option b) to use Local Authority plans. Estimate of £2000 per LA, 152 LAs, giving a one off total cost of £304,000.	Provide clarity for investment decisions in waste facilities. Contributes to positive waste planning arrangements by setting a framework of existing waste management facilities, so as to enable consideration of the need for future facilities of the right type, in the right place and at the right time.	Option b is preferred

Article 29: Waste Prevention Programmes

119. Article 29(1) requires Member States to establish waste prevention programmes by December 2013.

120. The costs and benefits of such programmes will depend on the objectives and policy measures proposed, and will be subject to a separate Impact Assessment.

Carriers

121. At present most businesses that transport controlled waste are required to register with the Environment Agency, however, there are some exemptions e.g. those carrying their own waste, charities and carriers of certain types of waste such as agricultural waste. However, a ruling by the European Court of Justice in 2005, against the Italian Government, made clear that such exemptions are illegal. The judgment ruled that any business normally and regularly carrying waste must be registered, even if it is not their sole or principle activity. Until the registration system is amended the UK is at risk of infraction and fines.

122. Using the environment Agency's definition, a waste carriers is any person who carries controlled waste with a view to making profit, in the course of any business to or from any place in Great Britain. Controlled waste is defined as any waste from domestic, commercial or industrial activity. Waste carriers, except those that are exempted are required to register with the Environment Agency. Exemptions apply in the following cases, if the person is:

- carrying waste that you have produced, unless it is building or demolition waste;
- moving waste between different places within the same premises; you are transporting waste from outside Great Britain to a place within it and the waste is not landed in Great Britain until it arrives at that place;
- the waste is being transported by sea or air from a place in Great Britain to a place outside Great Britain;
- qualifies for an exemption

Amending the registration system to comply with the European Court of Justice Ruling was consulted on in detail in 2008 as part of the rWFD consultation. The consultation proposed a two tier system, under which existing registered waste carriers would move seamlessly into an upper tier with a requirement to re-register every year, and with most of the businesses currently exempt from registration (including those carrying their own waste) being brought into a lower tier requiring one-off low- cost registration.

123. Respondees to both rWFD consultations accepted that the UK has an obligation to amend its domestic legislation in the light of the ECJ's judgment and recognised that the two tier system provided a method of meeting the terms of the judgment whilst seeking to minimise the burden on industry. Some consultees, including small business interests, expressed concern about the additional administrative burden of annual re-registration for those in the upper tier. As a result the proposals were amended to require upper tier re-registration every three years in line with the current registration system. The final IA for the transposition of the regulations relating to the Waste Framework Directive includes the registration of lower tier carriers.
124. The IA was consulted on and has been updated to reflect new information on the population of businesses that would be likely to 'normally and regularly' carry waste. The methodological details are in the previous IA. The figures have been updated to figures from the 2008 Interdepartmental business register (IDBR). The classifications and inclusions of businesses have changed since the previous IA. The main impact is a significant rise in the number of health related businesses from 37,800 to 124,610. This increases the number of businesses estimated to be within the scope of the ruling from 100,000 to 388,000 to a new range of 219,370 to 461,263. It is likely this range includes human health related activities that were not previously included. Further detail can be found in the table below.
125. The time required for businesses to register is estimated to be 20-25 minutes and wages are assumed to be £24.57. The EA now estimates that the cost of lower tier registration may be £15 for online registration and £20 for off-line (telephone or paper applications) registrations. This is lower than the £30 assumed in the consultation stage IA and reduces the burden imposed on lower tier waste carriers.
126. The transitions costs are calculated based on the expected number of new registrations required. This is estimated to incur £5.4m to £11.4m to businesses to register (admin and regulatory costs). In addition, the EA estimates one off IT costs will be £140,000.
127. On-going costs are estimated in this IA to reflect the impact on new businesses. Assuming the new business formation rate of 12.2% (average over the past 5 years) is constant across industry classifications, the on-going costs to new businesses categorised as lower tier carriers each year is £0.6m to £1.4m (26,762 – 56,334 new businesses per year).

Table 6: Registration of lower tier carriers

Costs to businesses of registration	Transition costs of £5.4 to £11.1m to businesses carrying waste 'normally and regularly' On-going costs of £0.6m to £1.4m of registration per year for new businesses carrying waste 'normally and regularly'
Costs to Environment Agency	One off IT costs of £140,000 to EA

Table 7: Potential number of waste carriers affected by ECJ ruling

SIC	Description of classification		potential number of new waste carriers			
class		total no. of businesses	Assumption (decision rules)	No. Of businesses	Assumption (survey)	No. Of businesses
A,B	Agriculture	106,790	20%	21,358	20%	21,358
C	Mining and quarrying	1,685	0%	-	0%	-
D	Manufacturing	115,530	5%	5,777	10%	11,553
E	Utilities	20,230	varies	801	8%	1,618
F	Construction	252,750	50%	126,375	50%	126,375
G	Motor trade, trade, etc	435,875	varies	3,561	23%	100,251
H	Hotels and catering	150,920	5%	7,546	35%	52,822
I	Transport and coms	219,420	varies	52,056	19%	41,690
J	Finance	58,885	0%	-	8%	4,711
K	Propoerty and business	565,250	varies	1,044	25%	141,313
M	Education	58,265	0%	-	13%	7,574
N	Health	124,610	100%	124,610	21%	26,168
L,O,P,Q	Public admin and other services	186,445	varies	2,617	28%	52,205
	TOTAL			345,745		587,638
	Minus construction (should already be registered)			219,370		461,263

128. The two tier option proposed is the minimum required to comply with the ECJ ruling. The benefits of lower tier registration are expected to raise awareness of lower risk carriers and others to their responsibilities. Improved identification of waste carriers through the registration process may result in reduced opportunities for waste crime by making it more difficult for unregistered waste carriers to operate.

129. There is evidence that the current registration system, covering those that will fall within the Upper Tier of the new system, acts as protection against illegal waste activity and environmental damage. Pre-registration checks need to be carried out before a waste carrier licence is issued and registration can be removed from anyone who has committed a relevant offence (i.e. a waste or pollution crime). This increases confidence in the system for user and registrant alike. Information held by the Environment Agency shows that the offence of not being registered and other waste crimes are often linked. In 20% of prosecutions taken by the Environment Agency for not being registered, other waste offences were also disposed of for the same defendant at the same hearing. Widening the population of registered carriers enables better identification of waste carriers and reduces the number of non-registered businesses carrying waste to only those that have exemptions.

130. Local authorities spent £45.8m in 2009/10 clearing 947,000 illegal fly tips (source, Flycapture). Local Authorities also spent £19.1m in 2009/10 on enforcement action, an increase of 2.3% on 2008/9. Using switching point analysis, an estimated reduction in fly tipping of 3-6% per year would offset the costs of lower tier registration, assuming enforcement costs remained at the same level i.e. it is only the reduction in clearing flytipping that is considered and not any reduction in enforcement costs. This compares with a drop of 25% over the 2 year period between 2007/8 and 2009/10. These figures do not take account of the disamenity and health costs associated with fly tipping, which could also be significant. As is the case with the analysis for many waste related policies, it would be difficult to separate out any reduction in flytipping related to lower tier registration alone. Evaluation of the impact of this policy would be needed to clearly identify the benefits. It may be possible in due course to look at whether there is a correlation between repeated breaches of lower tier registration requirements and other waste crimes. Enforcement will be proportionate to the perceived level of risk so the intention is that those who are found not to have registered in the lower tier will receive advice about registration/notices telling them they will have to register as a first stage. Failure to register and subsequent failure to act on compliance notice would result in stronger enforcement.

Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added to provide further information about non-monetary costs and benefits from Specific Impact Tests, if relevant to an overall understanding of policy options.

Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their actual costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

<p>Basis of the review: [The basis of the review could be statutory (forming part of the legislation), it could be to review existing policy or there could be a political commitment to review];</p> <p>The basis of the review is to review the transposing legislation on the revised WFD by December 2012, to tie in with the Commission's timetable for review of the implementation of the revised WFD.</p>
<p>Review objective: [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]</p> <p>To ensure that the transposing legislation is compliant with the revised WFD</p>
<p>Review approach and rationale: [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]</p> <p>The review approach is expected to monitor/evaluate the transposing Regulations to ensure compliance with the revised WFD</p>
<p>Baseline: [The current (baseline) position against which the change introduced by the legislation can be measured]</p> <p>The baseline for the review is the provisions for Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives</p>
<p>Success criteria: [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]</p> <p>The objectives are to reduce the adverse impacts of the generation of waste and the overall impacts of resource use by:(1) introducing a household waste recycling target and construction and demolition recovery target, (2) to ensure that the specified four materials are collected separately by 2015, (3) taking measures as appropriate to promote the re-use of products and preparing for re-use activities; (4) applying the waste hierarchy as a priority order in waste prevention and management legislation and policy, (5) extending the self-sufficiency & proximity principles to apply to installations for recovery of mixed municipal waste from households, (6) revising the scope and content of waste management plans and (7) establishing waste prevention programmes. Success will show achievement of these objectives.</p>
<p>Monitoring information arrangements: [Provide further details of the planned/existing arrangements in place that will allow a systematic collection systematic collection of monitoring information for future policy review]</p> <p>To be completed</p>
<p>Reasons for not planning a PIR: [If there is no plan to do a PIR please provide reasons here]</p> <p>N/A</p>

Annex 2: Additional Assumptions for Household Waste Recycling Target

- (i) The rate of waste growth (and therefore the level of waste arisings) is assumed to be the same across the different recycling scenarios. The underlying assumption here is that the level of recycling that is occurring does not impact on the level of waste arisings. This may be a slight simplification, although in the absence of strong evidence on the relationship between recycling rates and waste arisings growth it is a reasonable assumption.
- (ii) As in the England Waste Strategy 2007 central case, the rate of waste growth is assumed to be 0.75% per annum. Although, on average, household waste arisings have decreased by -0.88% in the last 5 years, and by -2.85% in the last 2 years, this is attributable in part to external drivers such as macro factors and behavioural change, all of which may differ in future years. In the absence of more robust forecasts of household waste arisings we take a more conservative approach around this parameter. In any case, the recycling rate does not appear to be particularly dependent upon the level of arisings.
- (iii) Targets on diverting biodegradable municipal waste from landfill (from the Landfill Directive) are met, via the Landfill Allowance Trading Scheme. This is set as a constraint in our modelling.
- (iv) We take as our base the most recent recycle prices and apply inflationary increases in future years.
- (v) The LAWRRD model runs only to 2020, which is the target year for this Article.
- (vi) Although the model considers the possibility of delays in planning, and allows for the possibility of an increase in the cost of facilities as demand for facilities begins to stretch supply, it does not specifically consider the possibility of a lack of infrastructure delivery in order to meet Landfill Directive targets in 2010, 2013 and 2020 (i.e. it does not include the impact of short-term factors such as current credit market conditions).

Annex 3: Methodology for estimating administrative burdens associated with Hazardous Waste Consignment Note Procedures

- A typical business is assumed to be one carrying out approximately 40,000 visits per annum. Multiple collections on these visits would typically consist of three collections per round.
- The paper costs in the IA are the estimated costs for printing a page of paperwork, which a key stakeholder has calculated at £0.05 per page. It does not factor the actual cost of the paper itself.
- There were approximately 1,381,776 multiple consignment movements in the country in the period 2008/2009.
- 846 businesses reported movements using multiple consignments in the period 2008/2009.
- The multiple consignment system currently stipulated by the Regulations is hitherto referred to as the “regulatory procedure”.
- An adaptation of the “regulatory procedure” system used by some businesses in the industry is hitherto referred to as the “M procedure”.

Costs and Benefits

Option 1

A multiple consignment round consisting of 3 collections using the “regulatory procedure” and where producer or holder is the same as the consignor for all collections would require 14 sheets of paper to be printed (5 notes and 9 annexes).

It costs a typical business £0.70 in printing costs for a multiple collection round consisting of 3 collections. The printing cost per visit would therefore be $£0.70/3 = £0.24p$. The annual cost to a typical business in the industry currently carrying out around 40000 visits per annum is approximately £9,600 in printing costs [i.e 40000 visits x £0.24].

The most recent figures indicate that 846 businesses reported multiple collections in 2008/2009. So based on data for a typical business, the current cost to the industry of printing paperwork for a multiple collection round consisting of 3 collections under the “regulatory procedure” is $846 \times 9600 = £8,121,600$.

- (i) A multiple consignment round consisting of 3 collections using the “M procedure” and where the producer or holder is the same as the consignor for all collections would require 9 sheets of paper. The printing costs for the paper generated on this round would be £0.45. The printing cost per visit would be £0.15.

This procedure currently costs a typical business in the industry carrying out 40000 visits per annum approximately **£6,000** per year in printing costs [i.e 40000 visits x £0.15].

Option 2

This option should not affect the printing costs for those operators currently using the “regulatory procedure” as this should be the same as under option 1. So, as in option 1, the printing costs for a typical multiple consignment round consisting of 3 collections using the “regulatory procedure” and where producer or holder is the same as the consignor for will cost a typical business in the industry approximately **£9,600** per year in printing costs.

This main impact of this option will be the obligation for all operators, including those currently using the “M procedure”, to use the “regulatory procedure”.

Option 3

- (i) A multiple consignment round consisting of 3 collections using the “regulatory procedure”, where the producer or holder is the same as the consignor for all collections and where no summary sheet is left with the holder or consignor would require the use of 9 sheets of paper (9 notes and no summary sheets). The cost of printing paper generated on this round to a typical business will be less than the **£0.55 previously estimated**. The cost per visit will be £0.15.
- (ii) The cost to a typical business carrying out around 40000 visits per year will be approximately **£6,000** per year in printing costs i.e (40000 visits x £0.15).
- (iii) Costs to changes to IT and training costs are estimated using figures from industry sources. The sources account for 15% of consignment notes annually and they estimate costs to be £65,300. This figure is scaled up to estimate a cost to business of £435,333.

Annex 4: Fines levied by the Court of Justice of the European Union on non-compliant Member States

1. Under Articles 258 and 260(3) of the Treaty on the Functioning of the European Union (TFEU), the European Commission may bring the failure of a Member State to notify measures transposing a directive before the Court and in doing so, it may specify the amount of lump sum or penalty payment to be paid by the Member State concerned. No fines have yet been imposed under Article 260(3). The Commission's approach will be guided by three fundamental criteria:
 - The seriousness of the infringement
 - Its duration
 - The need to ensure that the sanction itself is a deterrent to further infringements.The Commission is due to publish a communication on the implementation of Article 260(3), in particular on its approach to seeking lump sum and penalty payments.
2. In three cases of Member States being fined since 2000 under the predecessor provisions in the EC Treaty, substantial and progressively greater penalties were imposed. In the first case, a fine of €20,000 was imposed for each day of delay in implementing measures required by a Directive. The second case resulted in a fine of €624,150 per year and per 1% of bathing areas not conforming to the Bathing Waters Directive for the year in question. In the third case, the fine was €57,761,250 for each period of six months from the date of the judgement, together with a lump sum penalty of €20,000,000.
3. Although difficult to be precise about the likely size of any possible fine, which is based on a case by case basis, we anticipate that the costs may range similar to the examples provided above.

Annex 5

Specific impact tests

Statutory Equality duties

The regulations are not expected to have an impact on statutory equality duties

Economic impacts

Competition Impact Test

The regulations, have been applied with a light touch approach, and are not expected to significantly affect competition between businesses. The application of the waste hierarchy is assumed to affect all businesses, both existing and new. Other changes are required to existing processes but these have been kept to a minimum to comply with the revised WFD and some changes result in costs savings. The costs of application of the waste hierarchy to all waste producers and requirement for lower tier carrier registration will act as a very small increase in costs for new business start ups. To the extent that application of improved waste management could lead to lower costs for businesses, the net impact may be a lowering of overall on-going costs.

Small Firms Impact Test

As detailed above, the costs of application of the waste hierarchy and the requirement for registration as a lower tier carrier will result in a small increase in costs for new businesses. The registration proposals have been discussed with small business interests including the Federation of Small Businesses and BIS. There was general acceptance of the need for registration to be extended to comply with the ECJ judgment and recognition that the proposals aimed to minimise the additional burden on businesses.

The guidance for the application of the waste hierarchy has been significantly shortened in response to the second stage consultation. It is a legal requirement that waste producers have to have regard to the guidance when they sign the Duty of Care declaration. The burden of reading and understanding the guidance is now estimated to be limited for those companies that have no employees. The time taken to disseminate the waste hierarchy is expected to rise in companies with more than one employee. Small businesses and representative organisations were consulted on several occasions and the length of the guidance and costs of application of the hierarchy were discussed. Estimates of alternative costs for its application were not received. As noted above, the application of these measures, although slightly increasing the regulatory burden on small businesses in particular, may lead to lower resource costs and result in a net benefit to businesses.

Other regulatory measures may affect small businesses but many of the articles do not require additional action so it is unlikely that small businesses will be significantly negatively affected. Small companies that currently operate in the waste management sector may be affected by the changes to the regulations, but we do not have sufficient information from responses to consultation to identify specific impacts.

Environmental impacts

The transposition of the revised Waste Framework Directive reinforces the need for sustainable waste management, that should lead to reduced GHG emissions and reduced use of virgin materials. Quantifying the actual environmental impacts is not possible due to the unknown impact of the measures taken. The application of the waste hierarchy is likely to lead to a reduction in waste generation with a beneficial impact on natural resource use. Any incentivisation up the hierarchy is also likely to lead to a reduction in GHG emissions for the same amount of waste generated.

Social Impacts

Health and well-being

The regulations are expected to reduce the risks to health from potentially harmful substances within waste.

Human Rights

There are not expected to be any significant impacts on human rights.

Justice impact test

Please see attached Justice Impact Test.

Rural proofing

There are not expected to be any significant impacts on rural communities.

Sustainable Development Impact Test

Stage 1

1. Environmental Standards

1a. Are there any significant environmental impacts of your policy proposal (see Wider Environment Specific Impact Test)?
Yes
If the answer is 'yes' make a brief note of the impacts below:
The measures in this IA relate to reinforcing the need for sustainable waste management through applying the waste hierarchy and reduction, recycling and recovery of waste. This should lead to environmental benefits of reduced GHG emissions and reduced use of virgin materials.
1b. If you answered 'yes' to 1a., are the significant environmental impacts relevant to any of the legal and regulatory standards identified?
No
If the answer is 'yes' make a brief note of the relevant standards below:
If you answered 'yes' to 1b, have you:
1c. Notified the Government Department which has legal responsibility for the threshold and confirmed with them how to include the impacts appropriately in the analysis of costs and benefits?
1d. Informed ministers where necessary?
1e. Agreed mitigating or compensatory actions where appropriate?

2. Intergenerational impacts

2a. Have you assessed the distribution over time of the key monetised and non-monetised costs and benefits of your proposal? This assessment can be included in your Evidence Base or put in an annex.

Yes

2b. Have you identified any significant impacts which may disproportionately fall on future generations? If so, describe them briefly.

No

If you answered 'yes' to 2b. , have you:

2c. Informed ministers where necessary? If so, provide details.

2d. Agreed mitigating or compensatory actions where appropriate? Provide details.

Stage 2

3. The purpose of the second stage is to bring together the results from the impact assessment with those from the first stage of the SD test. The following questions are intended to reflect the uncertainties in the cost benefit analysis and help you consider how to proceed in the light of further evidence from the first stage of the SD test.

3a. Indicate in the appropriate box whether the balance of monetised costs and benefits is:				
Strongly positive	Moderately positive	Roughly neutral / finely balanced	Moderately negative	Strongly negative
		x		

3b. Indicate in the appropriate box whether the balance of non-monetised costs and benefits is likely to be:				
Strongly positive	Moderately positive	Roughly neutral / finely balanced	Moderately negative	Strongly negative
	x			

3c. Indicate in the appropriate box whether the results of the SD questions 1-3 are, on balance, likely to be:				
Strongly positive	Moderately positive	Roughly neutral / finely balanced	Moderately negative	Strongly negative
	x			

3d. Indicate in the appropriate box whether, overall, the balance of the monetised and non-monetised costs and benefits and the sustainability issues is considered to be:				
Strongly positive	Moderately positive	Roughly neutral / finely balanced	Moderately negative	Strongly negative
	x			

3e. Provide an explanation of the final result from 3d, explaining, for example, how you have compared monetised and non-monetised costs and benefits and how you have resolved any conflicts between the cost-benefit results and the SD results.				
<p>The monetised costs are compared to the monetised benefits of an increase incentivisation up the waste hierarchy. This is discussed in the IA, but as an indication, the level of waste recycling or waste prevention could be sufficient to make this IA cost neutral. Embedding sustainable waste management could achieve greater long term benefits in terms of reduced greenhouse gas emissions, reduced use of virgin materials and health protection from hazardous waste than figures calculated over the time frame of this IA.</p>				