Title: **Revised Government Buying Standards for Textiles** **Lead department or agency:** Defra **Other departments or agencies:**	Impact Assessment (IA) **IA No:** **Date: 12/12/10** **Stage:** Development/Options **Source of intervention:** Domestic **Type of measure:** Other **Contact for enquiries:**

Summary: Intervention and Options

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

Central government procures a significant quantity of textile products. Evidence indicates that government procurement of textiles in 2008 was around £1.1bn. The environmental impacts of producing, using and disposing of textiles are susbstantial in terms of, for example, energy use and the dispersal of pollutants to air and water. In order to minimise such impacts and demonstrate leadership by demanding more sustainable textile products, all central government departments and their agencies have since 2003, had to integrate a series of environmental specifications into their procurement processes. This Impact Assessment considers updating these specifications to provide greater cost effectiveness and also ensure Government Buying Standards are aligned with EU Green Public Procurement (GPP) criteria.

What are the policy objectives and the intended effects?

The objective is to revise the Government Buying Standards for textiles and make it more comprehensive in an effort to reduce the adverse environmental impacts associated with textile products procured by central government departments and their executive agencies. By increasing demand for textiles with lower environmental impacts, government has the potential to stimulate and drive the market towards the production of more sustainable textile products. It should, however, be noted that this potential may be limited as the value of textile procurement is only around 1-2% of the value of the UK market for textile products.

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

Options have been developed to align Government Buying Standards with EU GPP criteria. Generally, where Government Buying Standards are considered to be more stringent, Defra encourages the EU Commission to adopt our criteria in EU GPP and vice versa. Two options are considered: Option 1 updates and aligns Government Buying Standards with EU GPP textile and EU Ecolabel requirements; Option 2 is as Option 1 with additional award criteria to promote consideration of impacts over the whole life of textile products. Our recommendation is Option 2 which aligns and goes slightly beyond EU GPP criteria to cover innovative end of life management of textiles. Whilst this is a higher cost than Option 1 it offers greater environmental benefits which would result in a higher Net Present Value (although since some of these are non-monetised it is uncertain as to whether these benefits would result in a Net Present Value figure greater than Option 1).

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 in 3 years
Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	Yes

SELECT SIGNATORY Sign-off 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 SELECT SIGNATORY:..... Date:.....

Summary: Analysis and Evidence

Policy Option 1

Description: Option aligns Government Buying Standards with EU GPP criteria

Price Base Year 2009	PV Base Year 2010	Time Period Years 11	Net Benefit (Present Value (PV)) (£m)		
			Low: -£0.11	**High:** £1.78	**Best Estimate: £0.83**

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	-		£0.16	**£1.50**
High	-		£0.36	**£3.38**
Best Estimate	-		£0.26	**£2.44**

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

There is no additional cost to meet the minimum mandatory specification - it is assumed that there is currently a sufficient supply of textiles within the market that meet this standard. Additional costs are assumed for the award criteria only. It is assumed that up to 30% of the value of textile procurement will meet the award criteria by 2013. It is also assumed that textile products that meet the award criteria may incur a small cost premium (estimated at between 0.8% and 1.25%) but this cost is assumed to decline to zero over a three year period as these standards become more widely adopted in the market. It should be noted that, although the review provided further data on textile procurement by government, there is still uncertainty regarding cost implications and the assumption described above is used as a best estimate.

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

No other key non-monetised costs have been identified. It is assumed there is a negligible impact on administrative burdens.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	-		£0.15	**£1.39**
High	-		£0.55	**£5.15**
Best Estimate	-		£0.35	**£3.27**

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

The assessment of benefits for Option 1 is partial because there are a number of benefits that may be significant but which are not monetised (listed below). The benefits that have been monetised are those derived from the award criteria that encourage the use of recycled textiles. It has been assumed that the increased use of recycled material will reduce the amount of textile waste sent to landfill thereby reducing greenhouse gas emissions from landfill and lowering waste management costs.

Other key non-monetised benefits by 'main affected groups' The key non-monetised benefits are:

(a) a reduction in the use of harmful and toxic chemicals resulting in reduced environmental damage and negative impacts to human health. (b) an increased use of organic cotton (or other naturally produced fibres) resulting in reduced toxicity of textiles which will cause less environmental damage when disposed via landfill. (c) social benefits arising through greater regard for ethical production standards. (d) streamlining the procurement of textiles by consolidating existing practice and current legislation (e) an improvement in compliancy with the current specification by adjusting the stringency.

Key assumptions/sensitivities/risks **Discount rate** 3.5%

Assumptions have been made in relation to: (a) the value of central government procurement of textiles. (b) the future procurement demand of textiles by central government. (c) the take-up of award criteria. (d) the range of additional costs to meet specifications.

It is assumed that the majority of textiles production occurs abroad and therefore some of the environmental and ethical benefits listed above may only provide benefits abroad rather than significant environmental benefits to the UK.

Impact on admin burden (AB) (£m):			Impact on policy cost savings (£m):	In scope
New AB: -	**AB savings:** -	**Net:** £0	**Policy cost savings:** -	Yes/No

Summary: Analysis and Evidence

Policy Option 2

Description: Option1, plus additional award criteria to promote consideration of impacts over whole life of textiles products

Price Base Year 2009	PV Base Year 2010	Time Period Years 11	Net Benefit (Present Value (PV)) (£m)		
			Low: £1.73	**High: £3.17**	**Best Estimate: £2.00**

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	-		£0.68	**£6.40**
High	-		£1.85	**£17.20**
Best Estimate	-		£1.27	**£11.80**

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

Costs include those of Option 1 plus an additional cost to meet the requirements under the award criteria that promote the consideration of impacts over the whole life of textiles products. It is assumed that an additional cost of 0.5% to 1% of the value of textiles procured under the award criteria of option 2 is incurred. It is also assumed that take-up of the award criteria will increase to 20% (low scenario) or 30% (high scenario) by 2014. Costs are assumed to decrease gradually after 2014 and decline to zero by 2020. An administrative burden is also assumed to reflect the fact that suppliers could be required to spend additional time demonstrating that they have met the award criteria and procurers may take additional time to check the compliance of such suppliers.

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

No other key non-monetised costs have been identified.

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	-		£0.83	**£7.69**
High	-		£2.14	**£19.91**
Best Estimate	-		£1.48	**£13.80**

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

The assessment of benefits includes those in Option 1 where there are a number of benefits that may be significant but cannot be monetised. The assessment of benefits under the award criteria of Option 2 also covers benefits which cannot be monetised (as listed below). The monetised benefits above estimate the reduction in end of life impacts of textile products resulting in reduced greenhouse gas emissions from textiles sent to landfill and lower waste management costs (additional to Option1) plus the value of reduced energy use from lowering "in use" impacts by washing at lower temperatures.

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

Other key non-monetised benefits include those in Option 1 plus additional energy and greenhouse gas savings from practices that reduce the in-use impacts associated with textiles such as drying, ironing etc and the use of materials that have lower environmental impacts over the whole life of the product.

Key assumptions/sensitivities/risks **Discount rate** 3.5%

Assumptions have been made in relation to: (a) the value of central government procurement of textiles. (b) future procurement demand of textiles by central government. (c) the take-up of award criteria. (d) the range of additional costs to meet specifications.

It is assumed that the majority of textiles production occurs abroad and therefore some of the environmental and ethical benefits listed above may only provide benefits abroad rather than significant environmental benefits to the UK.

Impact on admin burden (AB) (£m):			Impact on policy cost savings (£m):	In scope
New AB:	**AB savings:**	**Net: :** £0.5	**Policy cost savings:**	Yes/No

Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?			Options		
From what date will the policy be implemented?			01/03/2011		
Which organisation(s) will enforce the policy?			Cabinet Office		
What is the annual change in enforcement cost (£m)?			No change		
Does enforcement comply with Hampton principles?			Yes/NoNot applicable		
Does implementation go beyond minimum EU requirements?			Yes/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?			Yes/No		
What proportion (%) of Total PV costs/benefits is directly attributable to primary legislation, if applicable?			**Costs:**	**Benefits:**	
Annual cost (£m) per organisation – central government only	**Micro**	**< 20**	**Small**	**Medium**	**Large**
Are any of these organisations exempt?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/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 duties[1] Statutory Equality Duties Impact Test guidance	Yes/No	No impact - 19
Economic impacts		
Competition Competition Assessment Impact Test guidance	Yes/No	No impact-18
Small firms Small Firms Impact Test guidance	Yes/No	No impact 18
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	Yes/No	Yes - 21
Wider environmental issues Wider Environmental Issues Impact Test guidance	Yes/No	Yes - 21
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	Yes/No	No impact
Human rights Human Rights Impact Test guidance	Yes/No	No impact
Justice system Justice Impact Test guidance	Yes/No	No impact
Rural proofing Rural Proofing Impact Test guidance	Yes/No	No impact
Sustainable development Sustainable Development Impact Test guidance	Yes/No	Yes - 23

[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, Enactment).

No.	Legislation or publication
1	
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 preferred 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	Y_{10}	Total
OPTION 1												
Transition costs	-	-	-	-	-	-	-	-	-	-	-	
Annual recurring cost (Low)	£0.56	£0.56	£0.43	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	**£1.55**
Annual recurring cost (High)	£1.26	£1.26	£0.96	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	**£3.48**
Annual recurring cost (Best estimate)	£0.91	£0.91	£0.69	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	£0.00	**£2.51**
Transition benefits												
Annual recurring benefit (Low)	£0.05	£0.09	£0.16	£0.17	£0.17	£0.17	£0.17	£0.17	£0.17	£0.18	£0.18	**£1.68**
Annual recurring benefit (High)	£0.16	£0.32	£0.60	£0.62	£0.62	£0.63	£0.64	£0.64	£0.65	£0.66	£0.67	**£6.23**
Annual recurring benefit (Best estimate)	£0.10	£0.20	£0.39	£0.39	£0.40	£0.40	£0.41	£0.41	£0.41	£0.42	£0.42	**£3.95**
Option 2												
Transition costs	-	-	-	-	-	-	-	-	-	-	-	**-**
Annual recurring cost (Low)	£0.79	£1.01	£1.01	£0.90	£1.12	£0.90	£0.67	£0.45	£0.22	£0.00	£0.00	**£7.16**
Annual recurring cost (High)	£2.08	£2.90	£3.41	£3.27	£4.08	£3.27	£2.45	£1.63	£0.82	£0.00	£0.00	**£23.90**
Annual recurring cost (Best estimate)	£1.43	£1.95	£2.25	£2.08	£2.60	£2.08	£1.56	£1.04	£0.52	£0.00	£0.00	**£15.53**
Transition benefits	-	-	-	-	-	-	-	-	-	-	-	**-**
Annual recurring benefit (Low)	£0.15	£0.36	£0.75	£0.88	£1.01	£1.02	£1.03	£1.03	£1.04	£1.05	£1.06	**£6.70**
Annual recurring benefit (High)	£0.48	£1.04	£1.43	£2.40	£2.63	£2.66	£2.69	£2.69	£2.73	£2.76	£2.79	**£24.32**
Annual recurring benefit (Best estimate)	£0.32	£0.70	£1.09	£1.64	£1.83	£1.84	£1.86	£1.86	£1.89	£1.91	£1.92	**£12.52**

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

Evidence Base (for summary sheets)

TABLE OF CONTENTS

1. Introduction
2. Background
3. Rationale for intervention
4. Current specifications for textile procurement
5. Textile procurement by central government departments
6. Proposed specifications for textile procurement
7. Option appraisal
8. Impact on Market – Competition and Small Firms Assessments
9. Race, disability and gender equality Specific Impact Tests
10. Summary of costs and benefits

Annex A Sources for Impact Assessment
Annex B Option appraisal
Annex C Textiles – a review of impacts across whole life cycle
Annex D Analysis of the textiles sector

1. INTRODUCTION

This Impact Assessment considers the environmental, financial and other costs and benefits from adopting a revised set of specifications in relation to the textile products procured within central government departments and their executive agencies. The proposed specifications cover clothing and accessories and some interior products, including office items such as chairs. Wall and floor coverings are, however, excluded (see 6.3 for full scope).

These revised specifications have been developed from a review of evidence covering market capacity, together with an informal consultation with the textiles sector and government stakeholders which took place from August to October 2010. The review period successfully provided additional supporting evidence which validated and refined Defra's recommended option (Option 2). It was also an opportunity to check the accuracy of the underlying assumptions and reduce the uncertainty in the estimates of the costs and benefits. This includes the assumption that there would *not* be a cost premium on textiles which met the mandatory criteria and the extent of the take up of the award criteria. The review concluded that:

1. The majority of the respondents with one exception were willing to support Option 2 in which there are a number of criteria (including in-use impacts and end of life management) that are beyond those in the EU's Green Public Procurement criteria. The review indicated that the take-up of award criteria should be significant since some departments already have schemes in place that cover in-use impacts (such as sewn-in creases to reduce ironing and durability specifications) and end of life management (for instance take-back schemes). It is hoped that when the new Government Buying Standards for textiles are published, these departments will champion their initiatives and encourage their use across Government. See Annex C (C.3) for further information around take-up assumptions made after the review.

2. Evidence from the review indicated that a potential uplift in prices for the organic requirement in the proposed award criteria may not be cost effective for departments at the present time. Consequently, whilst the criterion has been retained, it has been moved to the best practice level. We believe that this will enable the specification to support departments that are already procuring organic textiles to continue to show leadership and provide a direction of travel to the market and wider public sector.

3. In further follow-up during the review, government stakeholders confirmed that they did not expect there to be an uplift in prices if the mandatory criteria in options 1 and 2 were adopted. This is in line with some current contracts and is a logical development of the existing mandatory criteria. It also appears that the market can easily supply the standards.

Therefore in summary, evidence from the responses to the review as well as further information elicited from subsequent follow-up with procurement experts and suppliers indicates that Option 2 offered the greatest scope for innovative procurement and long term cost effectiveness.

2. BACKGROUND

2.1 Brief policy history

The UK Government spent around £236 billion on routine products and services in over 44,000 organisations in 2009/10. The environmental impacts of producing, using and disposing of these goods (i.e. across the product life cycle) are substantial in terms of energy use and the dispersal of pollutants to air and water. In order to minimise such impacts, all central government departments and their executive agencies have, since 2003, had to integrate a series of environmental specifications into their procurement processes. In effect, only goods and services which meet such environmental standards should be supplied to Government Departments.

These standards are detailed within a toolkit known as Government Buying Standards. They consist of a set of **mandatory minimum** standards and **voluntary best practice** specifications for products commonly purchased across central government. The products selected are chosen for their environmental / financial impact, scope for environmental improvement, and political or example-setting function. All central government departments and their executive agencies are required to use Government Buying Standards. Their use is encouraged and promoted to the wider public sector by Defra.

The Government Buying Standards are revised periodically to reflect technological advances and subsequent market developments. These revisions also reflect UK and EU policy aspirations for more sustainable products and greater environmental benefits through sustainable procurement. Consequently the standards are being harmonised with other initiatives under the EU Sustainable Consumption and Production Action Plan (2008) that covers environmental impacts across the whole product life cycle. In order to formulate a more robust and transparent process for revising minimum and best practice environmental specifications, Impact Assessments are undertaken for proposed amendments to the major product groups.

EU Green Public Procurement

At the European level the European Commission has drafted and consulted on EU Green Public Procurement criteria applicable across the European Union. Each product specification has a background report that explains the product in question, its environmental impacts and related legislation and a product sheet that details the selection criteria, technical specifications, award criteria and contract clauses, as appropriate. These are intended for use by buyers to help understand the impacts of particular products and services and provide criteria for tender documents[2].

To encourage widespread uptake of green procurement the Commission has set a political target that by 2010, 50% of all public procurement should be green; that is, compliant with the “core” criteria in the GPP toolkit.

Greenest Government Ever

The aim of the coalition’s initiative to be the Greenest Government Ever is to ensure that sustainability is an integral part of the way that government manages its estate, operations and procurement. Whilst the targets and benchmarks have yet to be agreed, they are expected to cover carbon, water and waste as well as the supply chain. Sustainable procurement holds an important place in the initiative, encouraging Government to use its purchasing power to positively influence suppliers and the products and services they provide. The proposed expansion of the specifications and scope of the textiles criteria should encourage departments to engage with suppliers on procurement policy and look to where they can

[2] **Commission Green Public Procurement –** EU Commission, DG Environment, Green Public Procurement Toolkit http://ec.europa.eu/environment/gpp/index_en.htm

encourage innovation and demonstrate leadership. It also complements the move towards centralising procurement contracts, an initiative being led by the Cabinet Office.

2.2 Textiles

The criteria for textile products within the existing Government Buying Standards were developed over four years ago. It is appropriate to consider revising the criteria alongside updates of other Government Buying Standards and to consider the textile criteria developed by the European Commission in the EU Green Public Procurement initiative. This revision also takes into account experience of the existing mandatory standards. The EU Green Public Procurement textile criteria are based on a combination of criteria taken from existing ecolabel schemes, including the development of an EU Ecolabel for textiles, as well as ecolabels created in Member States such as Milieukeur (Netherlands), NF Environment (France), Nordic Swan, and others. Revised EU Ecolabel criteria for textiles came into force in December 2009.

In addition, Defra is leading the Government's work on ten product roadmaps that chart the sustainable impacts from these products and propose action plans through consultation with key stakeholders. There is a roadmap for clothing (Defra 2008) which included an action to undertake a demonstration project to illustrate the business case for sustainable clothing procurement in the public sector in line with the EU Green Public Procurement criteria for textiles[3]. In 2008 Defra produced a Sustainable Clothing Action Plan which set out some examples of potential criteria and actions that may help improve the sustainability of clothing:

- certified organic cotton and non-toxic dyes in garments (production);
- purchase of garments that can be proven to have been sourced through 'fair trade' and where possible have sought to address better working and trading conditions;
- purchase and use of clothes that require less drying;
- use of detergents that allow a cooler wash (less energy) and less water pollution;
- more energy-efficient washing machines and dryers (use); and
- encourage reuse / recycling of clothing at end of life.

A recent report by Entec[4] recommended that there should be greater cross-Government collaboration in more of *"...the priority [spend] areas of common procurement, such as **clothing and textiles**, and furniture".* This would be a very useful step in achieving several targets: better value for money, access to a greater number of suppliers, shared knowledge and experience and, ideally, reduced environmental and social impacts from greater bargaining power.

3. RATIONALE FOR INTERVENTION

Many of the negative externalities, such as sustainability impacts that are not compensated for in the purchase price from producing and using goods and services, are already addressed by government policies (for example, by putting a price on carbon emissions through the EU Emission Trading System, or regulating electrical waste through the Waste Electrical and Electronic Equipment Directive). These are applicable to goods and services procured by the government as they are to the rest of the UK. However, a number of other market failures and behavioural barriers can justify intervention specifically in government procurement, where it is cost-effective.

The rationale for intervention in the case of textile procurement primarily concerns reducing the environmental impacts across the lifecycle of the product. The proposed specifications are aimed to overcome **behavioural barriers or information failures**. For example, barriers such as inertia - that is, a tendency to continue doing what has always been done - or a reluctance to acquire information and new skills about products and product standards.

[3] **Defra 2008** - Sustainable Clothing Action Plan, Defra, 2008
http://www.defra.gov.uk/environment/business/products/roadmaps/pdf/sustainable-clothing-action-plan.pdf

[4] Review of Sustainable Operations Targets and Sustainable Procurement Measures for OGC CESP (Entec 2009)

There may be positive externalities and spillovers from government procurement of 'green' goods and services. For example, if the government accounts for a large proportion of demand for a product or service, then it may be able to incentivise the market to improve in order for suppliers to capture this demand (e.g. innovation spillovers). There is also evidence to suggest that setting a 'good example' may encourage others (such as businesses and industry) to adopt stricter standards, to influence the market and drive demand towards more sustainable or efficient products that have a lower impact on the environment over their lifetime (while also generating financial savings in terms of reduced energy use):

- Energy Star initiative[5]. In 1992 the US Environmental Protection Agency (EPA) introduced Energy Star as a voluntary labelling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions. Computers and monitors were the first labelled products. Whilst this relates to a type of eco-label in the US it essentially recognises a product that meets a range of prescribed criteria. Statistical data from annual Energy Star household surveys (over four years between 2002 and 2005) show movement toward sustained markets for Energy Star labelled products that are directly attributed to the Energy Star program.
- Canada – Federal Buildings Initiative which used third party financing and management firms to procure more energy and water efficient services and products to lead to a reduction in greenhouse gas emissions from government buildings as well as reductions in water consumption. The programme was evaluated (Siemens, 2003) and also found that the initiative was "adopted or imitated by provincial or municipal governments with additional savings"[6].

Section 8 explores the potential for government to influence the market. As central government procurement of textile products only represents just under 2% of market share, it is unlikely that the government will have a significant direct influence on the overall market. However, the government can still demonstrate leadership and provide an exemplar in achieving environmental benefits and long term cost effectiveness in the wider public sector as well as the economy as a whole. Government also has the capacity to influence suppliers by buying in bulk.

The options developed to address these failures (see Section 6) include an option to go beyond the EU Green Public Procurement minimum environmental requirements. The rationale for doing so is that this option delivers higher environmental benefit, although at a higher cost.

4. CURRENT SPECIFICATIONS FOR TEXTILE PROCUREMENT

The current specifications for textile procurement within central government departments and their executive agencies, as detailed in the Government Buying Standards are:

Textiles
Purchase of textile products with low pesticide content, reducing the use of environmentally harmful substances in production and reducing the residues of substances harmful to human health.
MINIMUM Specification(s)
1. **Cotton fibres** must contain 0.2ppm or less of the **pesticides** listed in the EU ecolabel, unless 25% or more of the cotton is organically certified. 2. **Wool fibres** must contain limited amounts of trace **pesticides**, with a total of 15ppm. 3. Synthetic polyamide and polyester must have VOC releases (emissions) no more than twice the levels set in the EU ecolabel.
BEST PRACTICE Specification(s)

[5] A Renetta Simmons (2003) A Review and Critical Evaluation of Selected Greener Public Purchasing Programmes and Policies, Privy Council Office, Government of Canada in The Environmental Performance of Public Procurement, Issues of Policy Coherence, OECD, 2003 (p68)

[6] Usdoe (2008), Methodological Issues in Evaluating Policy Measures, International Workshop on Meeting Energy Efficiency Goals: Enhancing Compliance, Monitoring & Evaluation International Energy Agency, Paris

Complies with the EU Green Public Procurement comprehensive criteria.

5. TEXTILE PROCUREMENT BY CENTRAL GOVERNMENT DEPARTMENTS

5.1 Current consumption by central government

An estimate (Defra, 2005)[7] of Government expenditure on different types of products was developed in 2005 and updated in 2010 to 2008 expenditure. These estimates were calculated from details within the National Accounts and used information on the 'intermediate consumption' of products taken from input-output tables (for fuller details of the methodology refer to the source). This provided information of the 'market share' that public sector procurement represented.

The table below uses information on the 'intermediate consumption' of products taken from input-output tables from the National Accounts. The top twenty-one products have been included for context and comparison of magnitude with the other estimates. It is estimated that government procurement on textiles was £1.1bn in 2008.

Central and local government procurement of products ordered by market value, 2008

I-O Code	Product	Market Value (£m)	Of which:	
			Central Government	Local Government
88	Construction	34,241	25,029 (73%)	9,212 (27%)
117-118	Health and social work	28,446	10,403 (37%)	18,043 (63%)
109-114	Other business activities	24,885	13,725 (55%)	11,160 (45%)
43	Pharmaceuticals	13,091	13,075 (100%)	16 (0%)
116	Education	10,684	5,563 (52%)	5,121 (48%)
76	Medical and precision instruments	8,973	8,850 (99%)	123 (1%)
69	Office machinery and computers	7,401	5,324 (72%)	2,077 (28%)
107	Computer services	7,029	2,683 (38%)	4,346 (62%)
119	Sewage and sanitation services	6,228	2,553 (43%)	3,675 (57%)
103-105	Real estate activities	5,151	3,135 (61%)	2,016 (39%)
78-80	Other transport equipment	5,140	5,140 (100%)	0 (0%)
98-99	Post and telecommunications	4,912	3,562 (72%)	1,350 (28%)
34	Printing and publishing	4,517	1,227 (27%)	3,348 (73%)
121	Recreational services	4,515	1,629 (36%)	2,885 (64%)
100	Banking and finance	4,339	4,275 (99%)	64 (1%)
62-68	Machinery and equipment	3,925	3,475 (99%)	20 (1%)
94	Other land transport	3,477	1,585 (46%)	1,893 (54%)
81-84	Other manufacturing and recycling	3,219	1,491 (46%)	1,728 (54%)
92	Hotel, pubs and catering	3,182	1,661 (52%)	1,521 (48%)
108	Research and development	2,663	2,663 (100%)	0 (0%)
21-28	**Textiles**	**1,102**	**729 (66%)**	**373 (34%)**

Source: Defra 2010

It should be emphasised that the current Government Buying Standards criteria are only mandatory for central government departments and their executive agencies. Data for the above expenditure on textiles is mostly captured in I-O code 21-28 shown in bold above is for both central and local government. Leather products are not included in this code.

[7] Analysis of national input-output tables on areas of public expenditure – linking to the environmental impact of the public sector (v2.0, ESI Division)

As is the case with other products purchased by Government, there is currently a lack of detailed disaggregated data at departmental level on the amount of textiles purchased and any information about the environmental characteristics of textile products purchased (Entec 2009). Departments and their executive agencies are able to arrange, commission, and procure independently of other departments, including the Cabinet Office and Buying Solutions (a purchasing organisation), to meet their needs.

5.2 Potential for government to influence market

According to the guidance within the Office of Fair Trading's (OFT) *Assessing the Impact of Public Sector Procurement on Competition*[8], these levels are below the threshold of Public Sector expenditure as a proportion of domestic supply (i.e. less than 10%). There are a number of UK specialist suppliers in, for example, justice, health or defence related products that are more dependent on central government and wider public agencies. However, contracts with these suppliers are more specialised with potentially a wider range of other performance requirements. Despite there being a number of significant procurement frameworks, public sector procurement of textiles is not wholly centralised (and is unlikely to become so in the short term). The OFT document has not highlighted the textile sector as being a priority concern regarding the impact of public sector procurement. This situation does not appear to have changed much since its publication.

Our view is that although central government's share of the market is small the promotion of more sustainable textiles as a result of the specification means that central government bodies can support demand for such products. This should send a clear signal to the wider public sector and the market of the government's commitment to pursuing procurement policies that minimise environmental and social impacts. It has been noted that this may provide some suppliers with a signal and confidence to invest in additional capacity for such goods and may result in re-investment with localised knock-on employment benefits. There are a significant number of textile manufacturers and wholesalers in the UK offering a range of specialist products which compete well in a globalised market.

5.3 Textile consumption by central government

There is no evidence available at this time to suggest that future consumption will change significantly from the current trend. Government departments and their executive agencies will continue to procure staff uniforms on a regular basis. However, there are a number of factors that may influence the nature of textile goods purchased:

- Government departments are required to maximise value to the public purse with a downward pressure on prices balanced with a need to meet sustainable procurement objectives (such as reduced material and energy consumption (including transportation). The Cabinet Office is leading an initiative to put in place central procurement contracts to increase the negotiating power of central government procurement and to reduce costs.
- The frequency with which clothing is likely to be replaced (later referred as the replacement rate), for reasons of fashion, aesthetics and re-branding is uncertain although, it is not expected to be as frequent as may have occurred in either the private or public sector in the past given the focus on cost savings in the short to medium term. The primary reason for replacement is likely to relate to the durability of garments
- Public awareness of the provenance and production of clothing and textiles has increased and has become an important issue not least for the reputational perception of high street retailers. Responsibly produced (environmental, social and ethically) textiles have become an important issue and some public sector organisations have responded by amending the goods demanded, for example, the Ministry of Defence include some Ecolabel criteria in their clothing procurement contracts;

6 PROPOSED SPECIFICATIONS FOR PROCUREMENT OF TEXTILE PRODUCTS

6.3 Introduction

[8] OfT, 2004, *Assessing the Impact of Public Sector Procurement on Competition',* Ref.: OFT742a, September 2007

This section sets out proposed changes to the current Government Buying Standards criteria.

6.4 Rationale for proposed changes

The following provides a description of the main reasons for the proposed revision to criteria:

1. **Harmonisation with EU Green Public Procurement.** The current Government Buying Standards voluntary best practice specification is aligned with the EU Green Public Procurement comprehensive criteria. However, Government Buying Standards minimum mandatory criteria do not currently map directly to the 'core' EU Green Public Procurement criteria. The latter includes criteria that principally aims to restrict the use of a range of banned as well as potentially harmful and toxic chemicals that may be present in the finished product or used in its production. A review of some of the principal environmental and health impacts in the life cycle of textiles is set in Annex C.

2. **Take account of updated Ecolabel criteria (January 2010).** EU Green Public Procurement are being increasingly drawn from EU Ecolabel specifications. The EU Ecolabel criteria have been revised recently and new requirements came into force on 1 January 2010. The changes include a tightening of the stringency of some requirements, for example:
   - the permissible amount of **free formaldehyde** has changed from: "*30 ppm for products that come into direct contact with the skin, and 300 ppm for all other products*", to: "*20 ppm for babies and young children under 3 years old, 30 ppm for products that come into direct contact with the skin, and 75 ppm for all other products*."
   - the criterion for **bleaching agents** has been revised. The previous criterion required "*In general, AOX emissions in the bleaching effluent shall be less than 40 mg Cl/kg*." and has been amended to "*Chlorine agents are excluded for bleaching yarns, fabrics and end products*." This requirement does not apply to the production of man-made cellulose fibres.
   - proposed changes relating to **fire retardant substances** in the Ecolabel are not suitable for all UK applications.

3. In response to some of the difficulties in complying with the existing criteria for cotton fibres, the new Government Buying Standards increases the level of pesticides that a product can contain from 0.2 ppm to 1 pmm. This should ensure that the limit is set at a level which the market can meet and is in line with the EU Green Public Procurement criteria.

4. **Additional award criteria (option 2).** In preparing the revision to the Government Buying Standards for textiles, we identified a number of additional aspects that could be considered:

   - including higher ranking products that contain a proportion of **other materials that have lower environmental impacts** (embedded impacts over the whole life of the product) compared with cotton and polyester. For example, flax and hemp fibres have lower energy use in production than both cotton and polyester and lower water consumption than cotton (FERA 2009);
   - **social issues** such as Ethical Trading Initiative Standards, ILO standards, Fair Trade. Consideration has been given as to how to implement such criteria (OGC 2006 and RESPRIO 2007) either in the technical specifications, award criteria or contract performance clauses. There is a need to take account of the varying status of legislation relating to such issues as well as the ease with which they can be implemented. The international Local Governments for Sustainability (ICLEI) organisation has suggested including requirements as part of award criteria to identify suppliers that have socially and responsibly produced products (RESPIRO 2007). The Environment Agency (EA 2009) includes some social criteria in tender requests for clothing. It is understood that the latter criteria were developed with an existing contracted supplier as part of an ongoing supplier improvement programme. For example, cotton clothing was identified as being Fair trade.

5. **Minimising impacts through product use and at end of life (disposal) (option 2)**. A significant indirect impact of textiles relates to washing during the products' life[9] and disposal at end of its useful life. Procurement standards cannot directly affect these phases but there may be scope to **provide and influence guidance on the care of clothing,** or in the case where contract clothing and cleaning services are procured, award criteria to encourage more sustainable practices in the use and disposal of the products:

    - there may be scope to include information on and communication relating to **energy intensive processes applied in the care of clothing** (particularly those articles that may be washed frequently) to cover the best methods for washing including temperature, detergent dosing and line drying;

    - **cleaning service contracts** should minimise energy use, detergent consumption and have appropriate environmental and sustainable performance management objectives and systems. This can be achieved through the provision of guidance. It is recognised that industrial and institutional ("I and I") cleaning systems, for example those used in hospitals, are likely to operate at higher temperatures and use more concentrated cleaning agents and should expect to follow stringent requirements.

    - **product labelling** can also be used to encourage sustainable actions at the end of it life. Where opportunities exist there may be scope to include consideration of sustainable disposal in Contract Performance Clauses (CPC) to reduce the end of life environmental impacts. According to Defra (Defra 2007 and Defra 2008) the vast majority of old clothing is sent to landfill, only 16% of it is recovered, meaning either recycling or incineration (or possibly composting). There may be scope therefore to introduce CPC with clothing contractors and suppliers to accept old / worn out clothes at the end of their useful life for more sustainable disposal, that is in line with the UK waste hierarchy.

The above have been considered and reflected in two options that have been assessed as part of this Impact Assessment and comments and evidence to test the proposed rationale have been provided by stakeholders during the review.

6.5 General scope of textile products included in revised Government Buying Standards

The proposed criteria cover the same range of products that are set out in the EU Green Public Procurement product sheet for textiles.

- Textile clothing and accessories: clothing and accessories (such as handkerchiefs, scarves, bags, shopping bags, rucksacks, belts etc.) consisting of at least 90 % by weight of textile fibres;
- Interior textiles: textile products for interior use consisting of at least 90 % by weight of textile fibres. This will include the textiles used in products such as chairs. Wall and floor coverings are however excluded;
- Fibres, yarn and fabric: intended for use in textile clothing and accessories or interior textiles.

  Please note:

  1. For 'textile clothing and accessories' and for 'interior textiles': down, feathers, membranes and coatings need not be taken into account in the calculation of the percentage of textile fibres.
  2. Leather goods are excluded (they are however covered by the Swedish Environmental Management Council criteria and the Nordic Swan ecolabel criteria).

[9] **Defra 2007** – *'Mapping of an Evidence Base on Sustainable Development Impacts that Occur in the Life Cycles of Clothing'*, Defra, 2007 http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=14601

6.6 Options for appraisal

For the purposes of considering whether the Government Buying Standards criteria could be revised in line with EU Green Public Procurement and the recent EU Ecolabel, two options have been considered in this Impact Assessment. These options are intended to illustrate the general range of policies and reasonable alternatives under consideration at this time and can provide a useful focus for consultation responses to gather evidence that either supports or rejects a particular approach:

- **Baseline.** The 'do nothing' scenario considers that the current Government Buying Standards criteria continue to apply as well as current legislation. The baseline also takes into account future anticipated changes to procurement practice as well as the compliance of goods available;
- **Option 1 – Government Buying Standards revised in line with EU Green Public Procurement and Ecolabel -** with technical specifications and award criteria aimed at reducing potential for harmful substances as well as minimising wider social and ethical impacts as a result of production processes;
- **Option 2 – as Option 1 with additional award criteria to promote consideration of impacts over whole life of textile products.** This option will cover better end of life management (such as take back schemes) and in-use impacts associated with washing clothes. The contract might (for instance) provide guidance on the best methods to reduce the amount of energy used to wash and dry clothes.

In addition to these options, the review sought feedback on the proposed award criteria relating to **ethical production** (listed as award criteria number 3 in the table below). Ethical production is not covered in the current EU Green Public Procurement. However the government recognises the importance of these issues in relation to the textile sector and would like to move towards including ethical criteria within the minimum mandatory specifications. Three of our stakeholders with influence in and experience of ethical production issues expressed support for this aim and offered to share research and make recommendations for any future revision of the specifications.

6.7 Proposed specifications

The following tables set out the proposed specifications for textile product procurement. The specifications will be verified through information provided by the supplier:

Proposed MINIMUM MANDATORY Specification(s)
Technical Specification
Potentially harmful and toxic chemicals **1. Pesticides**. For products made from cotton or other natural cellulosic fibres, the final product shall not contain more than 1 ppm (parts per million) in total of the following substances (*Note: Most of these pesticides are already banned from placing on the market and use.)* 2,4,5-T Aldrin Captafol Chlordane Chlordimeform DDT Dieldrin Dinoseb and salts Endrin Heptachlor Hexachlorobenzene Hexachlorcyclohexane, α Hexachlorcyclohexane, β Hexachlorcyclohexane, δ Methamidophos Monocrotophos Parathion Parathion-methyl Propethamphos Toxaphene **2. Dyes** classified as sensitising/allergenic, carcinogenic, mutagenic or toxic to reproduction: The following dyes shall not be used in the final product: C.I. Basic Red 9 C.I. 42 500 C.I. Acid Red 26 C.I. 16 150 C.I. Basic Violet 14 C.I. 42 510 C.I. Direct Black 38 C.I. 30 235 C.I. Direct Blue 6 C.I. 22 610 C.I. Disperse Blue 26 C.I. 63 305 C.I. Disperse Blue 35 C.I. Disperse Blue 102 C.I. Disperse Blue 106 C.I. Disperse Blue 124 C.I. Disperse Orange 37 C.I. Disperse Orange 76 (previously designated Orange 37) C.I. Disperse Red 1 C.I. 11 110 C.I. Disperse Red 11 C.I. 62 015 C.I. Disperse Red 17 C.I. 11 210

C.I. Direct Red 28 C.I. 22 120	C.I. Disperse Brown 1	C.I. Disperse Yellow 1 C.I. 10 345
C.I. Disperse Blue 1 C.I: 64 500	C.I. Disperse Orange 1 C.I. 11 080	C.I. Disperse Yellow 3 C.I. 11 855
C.I. Disperse Blue 3 C.I. 61 505	C.I. Disperse Orange 3 C.I. 11 005	C.I. Disperse Yellow 9
C.I. Disperse Blue 7 C.I. 62 500	C.I. Disperse Orange 11 C.I. 60 700	C.I. Disperse Yellow 39
		C.I. Disperse Yellow 49

3. Arylamines: The final product shall not contain the following arylamines (from azo dyes):

4-aminodiphenyl (CAS no. 92-67-1)	3,3'-dimethylbenzidine (CAS no. 119-93-7)
Benzidine (CAS no. 92-87-5)	3,3'-dimethyl-4,4'-diaminodiphenylmethane (CAS no. 838-88-0)
4-chloro-o-toluidine (CAS no. 95-69-2)	p-cresidine (CAS no. 120-71-8)
2-naphthylamine (CAS no. 91-59-8)	4,4'-methylene-bis-(2-chloraniline) (CAS no. 101-14-4)
o-amino-azotoluene (CAS no. 97-56-3)	4,4'-oxydianiline (CAS no. 101-80-4)
2-amino-4-nitrotoluene (CAS no. 99-55-8)	4,4'-thiodianiline (CAS no. 139-65-1)
p-chloroaniline (CAS no. 106-47-8)	o-toluidine (CAS no. 95-53-4)
2,4-diaminoanisol (CAS no. 615-05-4)	2,4-diaminotoluene (CAS no. 95-80-7)
4,4'-diaminodiphenylmethane (CAS no. 101-77-9)	2,4,5-trimethylaniline (CAS no. 137-17-7)
3,3'-dichlorobenzidine (CAS no. 91-94-1)	4-aminoazobenzene (CAS no. 60-09-3)
3,3'-dimethoxybenzidine (CAS no. 119-90-4)	o-anisidine (CAS no. 90-04-0)

4. Flame retardants: The following flame retardants shall not be used in the final product:

PBB (Polybrominated biphenyls) CAS no. 59536-65-1
pentaBDE (Pentabromodiphenylether) CAS no. 32534-81-9
octaBDE (Octabromodiphenyl ether) CAS no. 32536-52-9

5. Pentachlorophenol and tetrachlorophenol: For products made from cotton or other natural cellulosic fibres, the final product shall not contain more than 0.5ppm (parts per million) of pentachlorophenol. *(Note: Pentachlorophenol is already banned from pesticide applications in the group of plant protection products and severely restricted for other pesticide applications including biocides applications.)*

6. Phthalate softeners: For products that come into direct contact with the skin the following phthalate softeners shall not make up more than 0.1% by weight of the final product:

DEHP (Di-(2-ethylhexyl)-phthalate) CAS no. 117-81-7
BBP (Butylbenzylphthalate) CAS no. 85-68-7
DBP (Dibutylphthalate) CAS no. 84-74-2

7. Formaldehyde: The amount of free and partly hydrolysable formaldehyde in the final fabric shall not exceed 20 ppm in products for babies and young children under 3 years old, 30 ppm for products that come into direct contact with the skin, and 75 ppm for all other products.

8. Heavy metals: The amount of Cadmium (Cd), Chromium (Cr), Nickel (Ni), Lead (Pb), Copper (Cu) in the final product shall not exceed:

Cadmium (Cd)	0.1 ppm
Chromium (Cr)	2.0 ppm
Nickel (Ni)	4.0 ppm
Lead (Pb)	1.0 ppm
Copper (Cu)	50.0 ppm

Useful life of textile products

9. Durability: where relevant, the following fitness for use criteria of the EU Ecolabel must be met (full criteria document available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:197:0070:0086:EN:PDF):

Shrinkage (criterion 34)
Resistance to fading from washing (criterion 35)
Colourfastness to perspiration (criterion 36)
Colourfastness to wet rubbing (criterion 37)
Colourfastness to dry rubbing (criterion 38)

Resistance to fading from light (criterion 39)

Award Criteria* Additional points will be awarded for:

1. Recycled fibres. Bidders must indicate the proportion of the product by weight made of recycled fibres, i.e. fibres originating only from cuttings from textile and clothing manufacturers or from post-consumer waste (textile or otherwise).
Verification: The supplier must provide evidence of the origin of the recycled fibres used.

2. Ethical standards in production: Bidders must provide information to illustrate that suppliers and production sites should hold an independently audited and internationally-recognised standard relevant to the product, in order to demonstrate how they are addressing ethical and social issues such as living wage provision, avoidance of child labour, application of fair trade principles, adequate working conditions, animal welfare in the manufacture of textiles.

Verification: Relevant protocols and standards include those by the ILO, Fair Trade Foundation, Ethical Trading Initiative. Indicative standards are SA8000 or ISEAL. Other private or national textile labels fulfilling the listed criteria can also be accepted. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.

Proposed BEST PRACTICE Specification(s)

Technical Specification As well as the minimum mandatory (core) above these include the following as well:

Additional criteria *(production process and fibre-specific criteria) based on the EU Ecolabel are also suggested. However, it is important to note that as there are currently few products on the market which carry the EU Ecolabel for textiles, the contracting authority should carry out a market search to check prices and availability before applying these criteria in the specifications. Alternatively they could be used as award criteria.*

10. Where the following fibres make up more than 5% by weight of the total weight of the textile fibres in the product, the relevant criteria of the EU Ecolabel must be met (full criteria document available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:197:0070:0086:EN:PDF):

Acrylic (criterion 1).
Cotton and other natural cellulosic side fibres (including kapok) (criterion 2). Products deriving from organic production will be automatically deemed to comply
Elastane (criterion 3).
Flax and other bast fibres (including hemp, jute and ramie) (criterion 4).
Greasy wool and other keratin fibres (including wool from sheep, camel, alpaca, goat) (criterion 5).
Man-made cellulosic fibres (including viscose, lyocell, acetate, cupro, triacetate) (criterion 6).
Polyamide (criterion 7).
Polyester (criterion 8).
Polypropylene (criterion 9).

Verification: Bidders must provide a list of all fibres that make up more than 5% by weight of the total weight of the textile fibres in the product, together with appropriate documentation demonstrating that the relevant criteria are met. The EU Ecolabel will be accepted as proof of compliance, as will any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body.

11. Products must meet the following criteria of the EU Ecolabel related to chemicals and processing methods (full criteria document available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:197:0070:0086:EN:PDF):

Auxiliaries and finishing agents for fibres and yarns (criterion 10).
All chemicals and chemical preparations (criterion 14).
Detergents, fabric softeners and complexing agents (criterion 15).
Bleaching agents (criterion 16).
Impurities in dyes (criterion 17).
Impurities in pigments (criterion 18).
Waste water discharges from wet-processing (criterion 27).

Verification: The EU Ecolabel will be accepted as proof of compliance, as will other private or national textile labels fulfilling the listed criteria, as well as any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body.

12. Organically produced cotton or other natural fibres. Bidders must indicate the proportion of cotton or other natural fibres used in the final product by weight deriving from organic production. To be considered as such the crop at the origin of the fibre must be produced in compliance with Regulation (EC) No 834/2007.
Verification: The supplier must provide evidence of the origin of the fibres used and the organic nature of their

production, such as the EU organic logo or approved national logos for organic production.

Please note: this specification has been moved from award to best practice in response to data on the potential uplift in prices during the review.

Award Criteria* These are as for the minimum mandatory (core), above.

Notes: * = Award criteria: Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least 10 to 15 % of the total points available.

OPTION 2

Award Criteria add the following to Minimum Mandatory Specification

4. Use of materials that have lower environmental impacts over whole life of the product. Bidders should indicate how they have applied life cycle thinking to select fibres and materials that have the lowest environmental impact over the whole life of the product. A number of fibres, for example flax and hemp, have been identified as having lower environmental impacts in production than, for example, commoner fibres such as cotton and polyester. Hence the proposal of lower impact fibres as alternatives is encouraged, but their use must be justified over the whole product lifecycle.
Single fibre types are generally more recyclable than blends of fibres and are to be preferred, subject to the lifecycle issues identified above.
Verification: The supplier must provide evidence of the benefit compared with a realistic alternative fibre over its lifetime, as justified by independent studies (e.g. life cycle assessment)

6. Innovative approaches to encourage more sustainable practice through product use or / and at end of life.
Bidders describe their approach to encouraging more sustainable practice though the products use and / or at the end of its life, for example:

- **In-use phase impacts** are mainly from the use of energy and water to wash and dry clothes, use of detergents and subsequent load on the wastewater treatment system. Line drying can lead to a significant reduction in impact.
    - There may be scope to include information on and communication relating to clothing (particularly those articles that may be washed frequently) to usefully include, for example; guidance notes on best methods, correct temperature, detergent dosing and line drying;
    - This option could be used to ensure cleaning service contracts oblige the supplier to minimise energy use, detergent consumption and have appropriate environmental and sustainable performance management objectives and systems. It is recognised that industrial and institutional ("I and I") cleaning systems, for example those used in hospitals, are likely to operate at higher temperatures and use more concentrated cleaning agents and therefore be expected to follow closer scrutiny.
- **End of life management**: A significant portion of old clothing is sent to landfill. Product labelling or take back schemes can encourage sustainable actions at the end of life stage. Uniforms should not include logos or names that are difficult to remove, but should use removable badges (unless permanent identification for security or tax reasons is required, when these should be as discreet as possible). Design of the garment and of the garment management scheme to facilitate reuse or recycling is encouraged. This can include labelling, product takeback schemes or partnerships with third parties who can reuse or recycle high proportions of the used textiles.

Verification: The supplier must provide sufficient information to allow the effective evaluation of the innovative approaches proposed, including independently verified estimates of their potential benefits.

7 OPTION APPRAISAL

An option appraisal has been undertaken in line with HM Treasury Green Book guidelines (see section 10). The appraisal takes account of the costs and benefits that can and cannot be monetised at this time and includes environmental as well as financial effects. A review of the potential impacts that may arise through whole life of textile products was undertaken to screen those that could be monetised and is provided in Annex B. Additional evidence to inform this appraisal was provided by stakeholders during the review.

8 IMPACT ON THE UK MARKET FOR TEXTILE PRODUCTS, COMPETITION AND SMALL FIRMS ASSESSMENTS

8.1 Potential supply constraints

Overseas markets supply 75 – 90% of the UK's textiles and clothing products. We have assumed that given the global extent and capacity of the market it is likely that products that meet the new specification are available and this was confirmed by responses to the review. The following provides a description of some evidence of potentially compliant products through a discussion of ecolabels as well as fairly traded cotton products – it is not thought that there is any supply constraint in meeting ecolabel criteria.

The EU Ecolabel Store (www.eco-label.com, 16.07.09) noted that there are 316 textile products registered in the EU. Their origin includes many EU Member States, including 11 from the UK, but also outside the EU: Australia, Hong Kong, India, Indonesia, Korea, New Zealand, Thailand and Turkey. This database also indicates that, in total, 53 of these products are available in the UK which shows that goods that will comply with a majority of the proposed criteria are available. As ecolabels are voluntary it is likely that other products will be available that meet environmental and social requirements. The proposed revision to the Government Buying Standards has taken the criteria in the recent revised EU Ecolabel into account to ensure some alignment with products that will be registered with it. This is also in anticipation that EU Green Public Procurement standards will be drawn from the EU Ecolabel in 2011 and will minimise the need for significant future revisions to Government Buying Standards when this happens. EU Green Public Procurement is also relevant to Ökotex and Nordic Swan ecolabel criteria which will have a number of products registered and available.

8.2 Competition assessment

The competition assessment guidelines (OFT, August 2007) sets out four questions to establish whether a proposed policy is likely to have an effect on competition and competitiveness. A brief summary of the four questions and a response considering the current proposals is presented in the table below:

Competition assessment filter questions

Do the proposed revisions to the Government Buying Standards…	Response	Comment
Q1. Directly limit the number or range of suppliers?	• No	Proposals do not seek to directly limit the number of suppliers.
Q2. Indirectly limit the range of suppliers?	• No	For the majority of textile products there is considered to be sufficient number of new and existing suppliers available in a globalised market place. Proposals do not prevent entry or exit from the market. For some more specialised higher performing products there may be a more limited number of suppliers (such as uniforms or work clothes), however, these higher performance products are likely to comply with revised criteria.
Q3. Limit the ability of suppliers to compete?	• No	Proposals encourage innovation and completion with a range of award criteria. The majority of minimum standards applied in this case represent either 'market average' and in those cases where standards may be considered 'best practice' will help encourage the direction of market travel with suppliers being better able to differentiate their products. These proposals do not affect the ability of suppliers to pass costs on to procurers.
Q4. Reduce suppliers' incentives to compete rigorously?	• No	Proposals do not seek to directly limit the incentives for suppliers to compete and the introduction of award criteria recognising innovation should help encourage suppliers to compete especially with more sustainable products.

Considering this information and the information from the review, it is considered that the revised proposals will have little impact upon competitiveness.

8.3 Small firms assessment

Compliance with Government Buying Standards is not a legislative requirement although it will be mandatory for business wishing to supply central government. Any proposal that has the potential to impose a cost on business requires a Small Firms Impact Test (i.e. companies that with fewer than 50 employees).

Annex D provides a detailed analysis of textile manufacturing and supply base in Great Britain and illustrates the range of businesses of different scales identified in the Annual Business Inquiry for 2008 (note: this does not reflect the wider supply chain or tertiary design sector). Of the 9,000 textile manufacturing businesses 81% were firms with between one to ten employees (micro) and employed an estimated 21,000 persons. Almost 99% of all textile manufacturing businesses in Great Britain had less than 200 employees. Therefore exemptions for firms with less than 20 or 50 employees is not appropriate. If these business were exempted from meeting the criteria it would affect a significant portion of suppliers and reduce the scope of potential positive impacts on suppliers in the UK.

Research to scope some of the potential issues has been undertaken to inform the review on this Impact Assessment and draws on some of the evidence gathered as part of the development of the Sustainable Clothing Action Plan[10] (Defra, latest 3rd revision in 2010):

- Competition from abroad has made UK companies move up the 'value chain' and in high-quality, niche products or high-tech 'technical textiles'. The UK also has a number of established traditional brands (such as knitwear in Scotland);
- Volatility in some of the main factors of production remain principal concerns for the profitability of UK firms from energy and raw material / component prices, labour and transport costs and availability of skilled labour;
- Availability of finance for enterprise and continued capital investment is particular issue for all manufacturing and is likely to remain so in the short term.

In summary, it is not expected that there will be a disproportionate impact on SMEs as a result of these options. Screening undertaken as part of this Impact Assessment (see Annex B) identified that whilst there may be potential costs to suppliers as a result of the proposed revision to Government Buying Standards any significant costs were likely to be passed to procurers. Further information on the impact the new criteria was sought from industry and stakeholders during the review but was not forthcoming.

9 RACE, DISABILITY AND GENDER EQUALITY SPECIFIC IMPACT TESTS

There are not expected to be any significant specific impacts as a result of the revision of a procurement standard for textile products.

10 Summary of Costs and Benefits

The following is a summary of the expected costs and benefits from the proposed revisions to the Government Buying Standards specifications for textiles. Two options were considered (described in section 6.4).

- **Option 1: update and align Government Buying Standards with EU GPP textile and EU Ecolabel requirements** - with technical specification and award criteria aimed at reducing potential for harmful substances as well as minimising wider social and ethical impacts as a result of production processes; and
- **Option 2: as Option 1 with additional award criteria to promote consideration of impacts over whole life of textile products** as well as the introduction of contract performance criteria to reduce the impact of services, such as cleaning.

Both options align the UK with EU minimum requirements. It should be noted that Option 2 extends beyond EU minimum requirements, although EU Green Public Procurement criteria are voluntary in nature. The baseline takes into account the existing market situation plus the current and planned policy.

10.1 Summary of Monetised costs

[10] **Defra 2008** - Sustainable Clothing Action Plan, Defra, 2008
http://www.defra.gov.uk/environment/business/products/roadmaps/pdf/sustainable-clothing-action-plan.pdf

This assessment provides a broad quantitative estimate of the effect on costs. The screening assessment set out in Annex B highlighted a number of potential costs.

Administrative burdens: There are a number of potential costs that may be incurred by central government authorities or those providing services on their behalf related to; (i) additional staff time to include criteria in tender documentation; as well as (ii) time taken to review and analyse the responses. Suppliers will also incur costs to gather appropriate documents and information to verify their claims. As above, an estimate of the potential effect on the time required by an assumed wage rate (for senior managers) and the likely number of occasions has been used. It is expected that these are once only costs (i.e. 'transition' costs) as the information can be used by suppliers at subsequent occasions.

In the case of Option 1 it is assumed that the impact on administrative burdens is negligible by enabling the criteria to become a single point of reference through which procurers can meet a variety of existing legislation and practice as well as policy priorities of their organisation. It is assumed that the market is well-placed to deliver products that meet the specifications under Option 1, so little additional time is required by procurers or suppliers beyond current practice. However, under Option 2 it is assumed that suppliers may have to spend extra time verifying claims and procurers may incur additional time/staff costs to review and analyse tender responses and check suppliers' claims. As such, an administrative burden of £0.5m has been assumed over the period 2010 to 2020 under Option 2.

Financial procurement costs: There may potentially be higher purchase costs of textiles that meet the award criteria under both Options 1 and 2. These costs reflect any additional resource costs incurred by suppliers in producing products that are compliant with higher environmental performance standards. It is assumed that 100% of costs incurred are passed on to procurers.

Under Option 1 it is assumed that no additional cost is incurred in meeting the mandatory specifications. It is thought that the market is well placed to deliver products that meet these specifications. If take-up is encouraged beyond central government then additional environmental benefit could be achieved at zero cost (although the environmental benefit is likely to be local environmental improvement abroad i.e. where production occurs). However, responses to the review indicated that there may be a cost premium if applying all the award criteria of Option 1, for example, a 10% cost premium exists for recycled polyester. Therefore, it has been assumed that only 20% - 30% of the value of textile procurement will meet all the award criteria by 2013.

The analysis also assumes that 50% of purchases use polyester blends and that of these, at least half of the blend is polyester. Therefore if recycled polyester is used, it is believed that this would lead to between a 0.8% and 1.25% cost increase in clothing prices. This cost is assumed to decline to zero over a three year period as these standards become more widely adopted in the market. In reality the price of recycled materials and primary materials vary significantly, where recycled materials are not cost effective the award criteria would not be expected to be adopted. The 20-30% take up of the award criteria reflects the fact that take up will be contingent on whether procurers consider it to be cost effective. It should be noted that although further evidence from stakeholder review has been used to refine these estimates there is still some uncertainty regarding the cost estimates.

The additional financial cost under Option 2 includes the costs of Option 1, plus an additional cost to reflect some uptake of the best practice award criteria. It is assumed that an additional cost of 0.5% to 1% of the value of textiles procured under the award criteria of Option 2 is incurred. It is assumed that take-up of the award criteria will increase to 20% (low scenario) or 30% (high scenario) by 2014. Take-up under this option is assumed to be lower than under Option 1, as the award criteria are considered more challenging to meet. Costs are assumed to decrease gradually after 2014 and decline to zero by 2020. An administrative burden is also assumed to reflect the fact that suppliers could be required to spend additional time demonstrating that they have met the award criteria and procurers may take additional time to find and verify such suppliers.

	Option1		Option2	
	Low (£m PV)	High (£m PV)	Low (£m PV)	High (£m PV)
Additional cost of procuring textile	£1.50	£3.38	£6.40	£17.20

A range of potential impacts from the two options were considered in relation to the baseline (essentially the current specification, forthcoming regulations and potential anticipated future market and procurement trends). These impacts were screened to identify potential additional impacts and included consideration of instances where voluntary aspects of the proposals may also create additional effects (a table summarising the screening exercise is set out in Annex B). The screening also identified where costs and benefits might be monetised and the assumptions required. The key assumptions used in this Impact Assessment are:

- value of central government textile procurement (taken from historical data).
- future trend in government textile procurement – assumed to remain at current levels
- the level of take-up rates across central government and its agencies (assumed to be 85% - 95% for minimum mandatory specifications)

10.2 Summary of Monetised Benefits

It should be noted that a partial coverage of benefits is provided in this Impact Assessment. It was not possible to place monetary values upon all impacts but the significance of all potential impacts has been assessed as far as possible and results are presented within the screening tables in Annex B. Where monetisation has not been possible, benefits have been described qualitatively within section 10.3. Additionally, certain impacts are assumed to occur abroad and are therefore not counted in total cost/benefit estimates. This Impact Assessment assumes that the production and manufacture of textile products generally occurs abroad and that changes to production processes yielding environmental improvement do not directly benefit the UK. This is particularly relevant for potential impacts under minimum mandatory specifications for core EU Green Public Procurement. It also recognises that there will be some production/manufacture of textile products for government procurement within the UK and that benefits may be underestimated. Information provided by stakeholders to the review has been considered and helped refine the analysis for the award and best practice criteria. In response to this additional information it was decided to move the criterion for *organically produced cotton or other natural fibres* from award to best practice due to the potential for an uplift in price (approx 16%).

Monetised Benefits from Mandatory minimum technical specifications (for both Options 1 and 2)

(i) Reduction in the use of hazardous and toxic chemicals

Under Options 1 and 2, the mandatory minimum technical specifications are likely to lead to a reduction in the use of hazardous and toxic chemicals. It has not been possible to quantify this effect but more detail can be found in the screening table within Annex B.

Monetised Benefits from award criteria (for both Options 1 and 2)

(ii) Increased use of recycled fibres

This covers benefits derived from the use of recycled fibres only from cuttings, other processes or post consumer waste – as a proportion of weight of final product. Polyester is likely to be within 30% to 60% by weight of all clothing purchased and promotion of the use of recycled content over virgin sources may be significant in reducing energy use and emissions through production. The effects are predominantly expected to be a benefit at the place of origin, however, avoided greenhouse gas emissions may be beneficial to wider society and overall efforts to reduce climate change impacts.

It has been assumed that an increase in the use of recycled fibres may save some textile waste from being disposed of via landfill as textiles may be sent back to suppliers or to recycling facilities. It has been assumed that the take-up of the award criteria for the use of recycled fibres will increase gradually over the period to 20%-30% of all textiles procured by central government by 2020. Of the amount meeting the award criteria each year, it is assumed that up to 50% could be diverted from landfill as a result of increased recycling. However, this may not necessarily be the case if the source of recycled material is outside of the UK and the uncertainty around this figure should be noted.

Using the assumption above, estimates have been made of the savings that may be achieved in terms of reduced waste management costs and lower greenhouse gas emissions from fewer textiles being sent landfill.

(iii) *Increased use of organically produced cotton (or other naturally produced fibres)*

These benefits are predominantly expected to occur at the place of origin. Evidence has shown that the toxicity impact falls by around 90% when switching from conventional to organic cotton that uses less toxic dyes. It has not been possible to quantify this benefit but further evidence surrounding the impacts of organically produced cotton is presented in Annex C.

Monetised Benefits from further Award Criteria (Option 2 only)

(iv) Use of materials that have lower environmental impacts over whole life of the product

It has been assumed that the benefits at the production/manufacture stage would predominantly occur abroad and are therefore not monetised in this Impact Assessment. This includes the potential increase in use of recycled material over virgin materials which is likely to result in reduced greenhouse gas emissions at production stage. Textiles present particular problems in landfill as synthetic (man-made fibres) products do not decompose, whilst woollen garments do decompose and produce methane, which contributes to climate change. It may be that, through making changes at the production stage, the impact of textiles when landfilled, in terms of the greenhouse gas savings emitted, can be reduced e.g. by using material that can decompose with less associated greenhouse gas emissions. However, the potential to reduced greenhouse gas emissions from landfilled textiles has not been quantified due to the uncertainties in the greenhouse gas effects of different materials.

(iv) Innovative approaches to encourage more sustainable practice through product use or at end of life

The in-use phase impacts are mainly from the water and energy consumption when washing and drying clothes, the use of detergents and subsequent load on the wastewater treatment system and, to some extent, from ironing. An estimate has been made of the energy and greenhouse gas savings that may be achieved through washing at lower temperatures (30^0C rather than 40^0C) and from reduced ironing. This has been assumed for an estimated value equivalent of 20%-30% take-up of the award criteria by 2020. The reduced ironing benefits are additional to those in the previous Impact Assessment.

In terms of the end of life management of textiles, benefits are likely to be achieved through reduced replacement rates as a result of more easily recyclable and reusable material. This will result in additional benefits of reduced waste management costs and reduced greenhouse gas emissions from landfill. Benefits have been estimated based on take-up of award criteria for both options (Option 1: 20-30% of the value of central government procurement; Option 2: 20%-30%) and monetised within the table below:

Summary of Monetised Benefits	£m (PV), 2010-2020
Option 1	
Reduced waste management costs Low High *Value of reduced greenhouse gas emissions* Low High	 £0.48 £1.27 £0.90 £3.88
Option 2 (includes benefits of Option 1 above plus)	
Reduced waste management costs Low High *Value of reduced greenhouse gas emissions – from end of life measures* Low High	 £0.86 £2.25 £1.83 £7.09

Value of energy savings – from in use (washing at lower temps) Low High	£2.76 £4.14
Value of greenhouse gas savings – from in use (washing at lower temps) Low High	£0.50 £0.75
Value of energy savings – from reduced ironing Low High	£0.30 £0.46
Value of greenhouse gas savings – from reduced washing Low High	£0.06 £0.08

10.3 Summary of non-monetised costs and benefits

The revised specification will produce non-monetised benefits from reductions in the use of chemicals and the associated reductions in impact of human health and air quality in the manufacture phase. A number of effects have been considered in the assessment and include:

1. compliance with EU and UK legislation and achievement of sustainable procurement targets;
2. effect on the demand and market for recycled goods;
3. greenhouse gas emissions both during production and transportation (over product life cycle);
4. energy and resource consumption both in production and transportation (over product life cycle);
5. reduction of wastes / waste to landfill (over product life cycle);
6. reduction in use of materials hazardous to humans and environment (over product life cycle); and
7. social benefits from ethical standards in production (avoidance of child labour, adequate working conditions, etc.)

The options were considered to have a number of positive environmental and human health impacts. This is particularly true for chemicals such as Volatile Organic Compounds used in surface coatings. For textiles there may be other benefits from the reduced use of chemicals, such as pesticides used in the growth stage of the materials. This could result in better surface-water quality, reduced greenhouse gas emissions due to less production of these chemicals and better worker health. As noted earlier since a significant portion of goods are manufactured abroad, these benefits are likely to occur outside the UK.

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 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.

Basis of the review: Procurement provides for a variety of policy commitments including the political commitment on Green Public Procurement and the achievement of the targets and commitments for Sustainable Operations and Procurement in Government.
Review objective: This review could be part of a wider exploration of the implementation and effectiveness of the Government Buying Standards and Green Public Procurement criteria. In 2011 the European Commission will assess whether the UK has met a political target of 50% compliance with the minimum core criteria set across a range of product priority groups, including textiles. There is expected to be a further review when Departments begin reporting on the targets for Sustainable Government Operations and Procurement in 2012/13.
Review approach and rationale: The scope and metrics of the EU Commission's assessment have yet to be decided. We expect there to be regular assessments of the Government targets for Greening Government Operations and Procurement – and this is likely to involve requiring departments to publish regular updates on their progress.
Baseline: Although Departments are expected to establish a performance baseline against the metrics for Government Buying Standards they will be required to begin to implement the required systems during the 2010/11 financial year to allow regular reporting on sustainable procurement. For the review led by the EU Commission we expect that they will seek to assess the UK's performance against a target of 50% compliance with the minimum core criteria set across a range of product groups including textiles.
Success criteria: Success criteria for the Greening Government Operations and Procurement initiative are expected to be agreed by 2010/11. The success criteria for the Commission's assessment is expected to be that 50% of Government procurement is compliant with EU Green Public Procurement.
Monitoring information arrangements: At the present time routine monitoring of departmental compliance with the textiles specifications is expected to be overseen by the Cabinet Office. The EU Commission has yet to announce how it will measure compliance with the 2010 commitment.

ANNEX A: SOURCES FOR MAIN DOCUMENT

Buying Solutions
http://www.buyingsolutions.gov.uk/frameworks/full.html?list_by=name&contract_search=workwear

Commission Green Public Procurement – EU Commission, DG Environment, Green Public Procurement Toolkit
http://ec.europa.eu/environment/gpp/index_en.htm

Defra 2007 – *'Mapping of an Evidence Base on Sustainable Development Impacts that Occur in the Life Cycles of Clothing'*, Defra, 2007
http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&Completed=0&ProjectID=14601

Defra 2008 - Sustainable Clothing Action Plan, Defra, 2008
http://www.defra.gov.uk/environment/business/products/roadmaps/pdf/sustainable-clothing-action-plan.pdf

Defra Clothing – Defra Product Roadmap for Clothing
http://www.defra.gov.uk/environment/business/products/roadmaps/clothing.htm

EA 2009 – Promoting and sharing good practice in sustainable procurement Case Study: Fairtrade 'Organic in Conversion' clothing with Burlington Uniforms, Environment Agency, 2009

Entec 2009 – *'Economic and Environmental Costs and Benefits and Market Evaluation of European Union Green Public Procurement Criteria against UK sustainable Standards. Product Group: Textiles'*, Final Report, February 2009.

Entec 2009a – *'Review of Sustainable Operations Targets and Sustainable Procurement Measures',* OGC – CESP, April 2009

EU Green Public Procurement Textiles – Textiles Background Product Report, ICLEI 2008
http://ec.europa.eu/environment/gpp/pdf/toolkit/textiles_Green Public Procurement_background_report.pdf

FERA 2009 – '*The role and business case for existing and emerging fibres in sustainable clothing'*, The Food and Environment Research Agency, Centre for Technical Textiles, University of Leeds, Textile Engineering and Materials Research Group, De Montfort University **– IN DRAFT and CONFIDENTIAL**

IFM 2006 – '*Well dressed? The present and future sustainability of clothing and textiles in the United Kingdom'* - University of Cambridge Institute for Manufacturing, 2006
http://www.ifm.eng.cam.ac.uk/sustainability/projects/mass/UK_textiles.pdf

National Audit Office 2009 – *'Addressing the environmental impacts of Government procurement'*, NAO, April 2009
http://www.nao.org.uk/publications/0809/addressing_sustainable_procure.aspx

OGC 2006 - *'Social Issues in Purchasing'*, OGC, February 2006
http://www.ogc.gov.uk/documents/Social_Issues_in_Purchasing.pdf

ONS 2005 – '*Analysis of national input-output tables on areas of public expenditure – linking to the environmental impact of the public sector (2003) (v2.0)',* ONS, August 2005.

QW 2006 – *'Advancing Quick Wins: Consultation on 54 Candidate Specifications',* Market Transformation Programme, 2006

RESPIRO 2007, *'Guide on Socially Responsible Procurement of Textiles and Clothing'*, ICLEI, 2007 http://www.respiro-project.eu/

Siemens, 2003 - Renetta Siemens (2003) *A Review and Critical Evaluation of Selected Greener Public Purchasing Programmes and Policies'*, Privy Council Office, Government of Canada in *The Environmental Performance of Public Procurement, Issues of Policy Coherence,* OECD, 2003

Sustainable Procurement Task Force 2006 – *'Procuring the Future*, *Sustainable Procurement National Action Plan: Recommendations from the Sustainable Procurement Task Force'*, Sustainable Procurement Task Force, 2006 http://www.defra.gov.uk/sustainable/government/documents/full-document.pdf

UK Trade and Investment, 2010 - Textiles, Interior Textiles & Carpets. https://www.uktradeinvest.gov.uk/ukti/appmanager/ukti/sectors?_nfls=false&_nfpb=true&_pageLabel=SectorType1&navigationPageId=/textiles

USDOE, 2008 - *Methodological Issues in Evaluating Policy Measures*, International Workshop on Meeting Energy Efficiency Goals: Enhancing Compliance, Monitoring & Evaluation International Energy Agency, Paris, France 28-29 February 2008 Jeff Dowd, U.S. Department of Energy (USDOE). http://www.iea.org/work/2008/meeting_goals/8_Dowd_final.pdf

ANNEX B: SCREENING ASSESSMENT OF COSTS AND BENEFITS

B.1 Screening table

The following table presents a 'long-list' of some of the potential costs and benefits that may arise as a result of the different policy options with impact on: society, procurers (government), and suppliers. This list of potential effects covers both specific effects that might occur as a result of a proposed change as well as more generic consideration of effects. These have been screened to identify those that are significant and can be readily monetised, for example, benefits to which a monetary value can be attached. This analysis indicates that there are only a limited number of potential additional effects as many of the potentially quantifiable effects occur outside of the UK. This screening also indicates where an effect may be significant as well as information that might be helpful to obtain through the consultation process in order to monetise an effect.

B.2 Key assumptions

The key assumptions applied in the screening assessment are outlined below:

Additionality of effects

- impacts arise only from minimum mandatory technical specification and contract performance criteria;
- some effects of award criteria have the potential to introduce additional impacts;
- textile products will be compliant with existing UK quality and health and safety standards.

Baseline

- the figures are representative of the 'average annual procurement' of different types of textiles as they are aggregated across government departments;
- there are not likely to be any planned major stock replacement planned across central government that are likely to affect the baseline;
- no future planned refurbishments or changes in the stock of textiles and clothing or number of employees within central government departments.

Average annual procurement

- the **average amount purchased** is assumed to be broadly a factor of the **price of goods** and their **replacement rate**. If one or both of these factors increase the average amount purchased is also assumed to increase. Similarly, if the rate or price reduces so does the amount purchased;
- the **replacement rate** (the total annual quantity demanded) is affected by factors that influence the useful life (**asset life**) of the product such as:
    - the products **durability** (inherent to the design, production methods and materials used in product);
    - **fashion**/tastes (unpredictable, although well designed textile products may retain desirability over a longer period. Uniforms tend to be to be developed to meet specific performance requirements and styles may change less frequently);
    - whether a product meets **legislative criteria** (inherent to the design, production methods and materials used in product); and

- **functional use** requirements (requirements may change and affect the design, production methods and materials used in product).

- the **replacement rate** is also affected by some other factors including:
  - the relative **price of alternatives** is important as procurers / asset managers may only consider changing interior textile products when the cost to replace the product (such as office chairs) is affordable – commonly some longer wearing textile products may be retained or reused despite being either less functional or fashionable
  - **change in number of staff** who may require clothing. Simply more staff may require more uniforms. Note, for this analysis we assume this to remain constant.

Effects on procurers (costs)

- It is assumed that suppliers are able to pass on a portion of the additional costs they face in light of the revised requirements to procurers. In this assessment it is assumed that costs passed on by suppliers will be 1 to 5% of total procurement costs.

Effects on suppliers (costs)

- The total potential effect of proposals was estimated to impose a cost on all suppliers. However, only a portion of this was considered could be passed to procurers. Note that the costs presented here are for UK suppliers only which were estimated to represent 5 to 10 % of all suppliers (generally it is recognised that 90% of all textiles and clothing is imported). However, it is recognised that the proportion of UK producers can be quite high for certain types of products, for example uniforms.

The 'significance' of the effects refers to the overall relative significance of an effect considering its contribution to the total effect and in comparison with the other effects. This is a qualitative assessment based on a broad understanding of the level of procurement and nature of market described elsewhere in this Impact Assessment.

B.3 Result of screening

A number of these effects are likely to be *not* significant over the product life cycle for the reasons stated in the table and can be scoped out of the assessment:

- administrative costs to government;
- enforcement costs to government; and
- maintenance and use costs to the government.

Other effects are expected to be significant over the product life cycle and are further examined in the remainder of the assessment.

Table B.2 Screening of potential effects of options

Proposed criteria	Potentially additional effect?	Description of character and distribution of potential effects with reference to stage in lifecycle (party affected in brackets)	Potential likely significance?	Effect readily monetised?
REVISED GOVERNMENT BUYING STANDARDS – PROPOSED MINIMUM MANDATORY SPECIFICATION **Technical Specification – minimum standards to be met:**				
1. Restriction of particular pesticides within final product.	Potentially. A number of the pesticides are already banned. However, this controls the permissible amounts of some specific pesticides in final products that might not otherwise be restricted.	Particularly relevant to cotton fibres in finished products where there may be a reduction in the use of pesticides which have both positive impacts on human health (in terms of exposure to pesticides) as well as environmental benefits. Expected to be an environmental benefit experienced at place of origin. Potential for environmental benefit as disposal of procured textiles may produce wastes that contain relatively less harmful chemicals than under current specification and the environmental damage of the waste in the UK is reduced (assuming that most procured textiles are disposed of in landfill rather than recycled). Potential for a financial cost to producers / suppliers in terms of costs to test products (for residual pesticides) - but likely suppliers can select from available compliant products.	Majority of principle environmental benefits likely to be experienced outside of the UK and where production occurs. Some minor environmental benefits. Minor environmental cost to procurer identified.	Environmental benefits as a result from reduced chemicals to landfill would require information on type and amount of material from central government to landfill and change in content of harmful chemicals followed by modelling of avoided damage costs. Potential costs to suppliers.
2. Restriction of particular dyes within final product.	No. Already current practice / chemicals restricted in UK.	n/a	n/a	n/a
3. Restriction of particular arylamines (from azo dyes) within final product.	No. Already current practice / chemicals restricted in UK.	n/a	n/a	n/a
4. Restriction of particular flame retardants within final product.	Potentially. Proposals derived from EU GPP / Ecolabel amended to suit	Amended set of approved flame retardants may include some that may be generally more expensive (financial cost to procurers) but	Yes. Depends on the specific product.	Financial cost to procurers: No. Difficult to make specific assumptions regarding the impact on price of goods

Proposed criteria	Potentially additional effect?	Description of character and distribution of potential effects with reference to stage in lifecycle (party affected in brackets)	Potential likely significance?	Effect readily monetised?
	UK legislative context.	depends on the specific product. These costs might contribute to those passed to procurers and will vary depending on the type of product. Potential for environmental benefit as disposal of procured textiles may produce wastes that contain relatively less harmful chemicals than under current specification and the environmental damage of the waste in the UK is reduced (assuming that most procured textiles are disposed of in landfill rather than recycled).		procured. Effect included in consideration of potential costs to government procurers described later. Environmental benefits as a result from reduced chemicals to landfill would require information on type and amount of material from central government to landfill and change in content of harmful chemicals followed by modelling of avoided damage costs.
5. Restriction of amount of pentachlorophenol and tetrachlorophenol within final product of items made of cotton or other natural cellulosic fibres.	No. Already current practice / chemicals restricted in UK.	Unlikely to be a significant cost implication to producers or procurers.	n/a	n/a
6. Restriction of particular phthalate softeners within final product of textiles that come into direct contact with the skin.	Unlikely. Already current practice / chemicals restricted in UK.	n/a	n/a	n/a
7. Restriction of amount of free and partly hydrolysable formaldehyde permissible within final product of products for babies and young children, products that come into direct contact with the skin and other products.	Unlikely. Already current practice / chemicals restricted in UK.	n/a	n/a	n/a
8. Restriction of particular heavy metals within final product.	No. Already current practice / chemicals restricted in UK.	n/a	n/a	n/a
9. Durability and fitness for use criteria (namely; shrinkage, resistance to fading from washing, colourfastness to perspiration, colourfastness to wet or dry rubbing and resistance to fading from light).	No. Already current practice / chemicals restricted in UK. Criteria provide general reassurance. Performance related aspects likely to already be a significant aspect of purchasing criteria – especially for	n/a	n/a	n/a

Proposed criteria	Potentially additional effect?	Description of character and distribution of potential effects with reference to stage in lifecycle (party affected in brackets)	Potential likely significance?	Effect readily monetised?
	uniforms, etc.			
Award criteria – points awarded for:				
1. Use of organically produced cotton or other natural fibres – as a proportion of weight of final product.	Potentially, some take up yet depends on product availability and weighting applied by procurers. Criteria taken from EU Green Public Procurement.	Predominantly expected to be a benefit experienced at place of origin. Organically produced cotton or other natural fibres are reportedly more costly and the magnitude of impact on procurers will depend on the amount of products purchased of this nature. As best practice criteria there is no obligation on procurers to purchase products of this nature, unless they can be sourced at an equivalent price to non-organic man-made alternatives.	Benefits likely to be experienced outside of the UK and where production occurs. Costs to procurers depend on take up and are therefore uncertain.	Organically produced cotton or other natural fibres in products are estimated to cost between 5 to 50% higher although these may fall as the market for these products matures. A respondent estimated that the use of organic cotton for shirts can lead to a 16% price increase.
2. Use of recycled fibres only from cuttings from other processes or from post consumer waste – as a proportion of weight of final product.	Likely some take up yet depends on product availability and weighting applied by procurers. Criteria taken from EU GPP.	Polyester is, broadly, likely to be within 30% to 60% by weight of all clothing purchased and promotion of use of recycled content over virgin sources may be significant in reduction of energy use and emissions through production. Effects predominantly expected to be a benefit experienced at place of origin; however, avoided greenhouse gas emissions may be beneficial to wider society.	Uncertain. Generally, benefits likely to be experienced outside of the UK and where production occurs. However use of recycled content over virgin polyester may be significant in terms of avoided greenhouse gas emissions even if the take up by procurers is uncertain.	Uncertain. Requires realistic assumptions regarding take up (low 1% of annual clothing consumption to 10% high) and amount of avoided green house gases through use of recycled over virgin sources of materials. Use of shadow price of carbon to value avoided emissions.
3. Assurance of ethical standards in production of textile products.	Yes. New proposed award criteria some take up likely especially as proposal indicates potential inclusion of variation as technical specification.	Social and ethical benefits to production employees together with trade benefits to suppliers (such as ensuring that they achieve fair price for goods, etc.). Benefits distributed, in most cases, outside of the UK.	No. Benefits likely to be experienced outside of the UK and where production occurs.	Some data (using business case for initiatives) may be available to indicate scale of potential benefit overseas from use of SA8000 or similar. Benefits may be in terms of reduced average accidents per hour.
(OPTION 2) 4. Application of life cycle approach to select fibres and materials that have the lowest environmental impact over the	Low potential given best practice award criteria.	Expect benefits as a result of a reduction in; energy and resource consumption, production of waste and wastes to landfill, use and emissions of materials hazardous to	No / Uncertain.	

Proposed criteria	Potentially additional effect?	Description of character and distribution of potential effects with reference to stage in lifecycle (party affected in brackets)	Potential likely significance?	Effect readily monetised?
whole life of the product.		human health and the environment; through production, use and end of life. Some of these effects, particularly relating to transportation and disposal, may benefit society in the UK, for example a reduction in waste to landfill.		
(OPTION 2) 5. Innovation - approaches to encourage more sustainable practice through product use or at end of life (for example; information on clothing, cleaning service impacts, product takeback schemes)	Low potential given best practice award criteria.	Expect benefits as a result of a reduction in; energy and resource consumption, production of waste and wastes to landfill, use and emissions of materials hazardous to human health and the environment; through production, use and end of life. Some of these effects, particularly relating to transportation and disposal, may benefit society in the UK, for example a reduction in waste to landfill.	No / Uncertain	This Impact Assessment provides an estimate of the benefits through reduced waste management.
REVISED GOVERNMENT BUYING STANDARDS – PROPOSED BEST PRACTICE SPECIFICATION **Technical Specification – minimum standards to be met:**				
10. Where specific fibres are present in sufficient quantities within the final product, need to meet EU Ecolabel criteria. These aim to reduce harmful impacts in production process.	No. Already included within EU Green Public Procurement and therefore implied within current Government Buying Standards.	n/a	n/a	n/a
11. Compliance with EU Ecolabel relating to chemicals and processing methods used in production of finished product.	No. Already included within EU Green Public Procurement and therefore implied within current Government Buying Standards.	n/a	n/a	n/a
GENERIC EFFECTS ASSOCIATED WITH ADOPTION OF REVISED GOVERNMENT BUYING STANDARDS				
Generic effect.	Purchase costs to central government procurers	Anticipate minor cost to central government as suppliers pass through their costs but not expected to be greater than 1 to 5% given	Yes. Minor to Low significance.	Yes. Broad quantitative estimate possible based on current procurement by Central Government and assumption

Proposed criteria	Potentially additional effect?	Description of character and distribution of potential effects with reference to stage in lifecycle (party affected in brackets)	Potential likely significance?	Effect readily monetised?
		scale of competition across sector and extent of potentially compliant products available.		regarding potential change in price. Further input on procurement and potential impact on price from suppliers and stakeholders has helped refine this analysis.
Generic effect.	Potential administrative costs to government as a result of revised Government Buying Standards.	Potential administrative costs to government.	No. Assume Central Government procurers already have number of recording mechanisms in place to monitor Government sustainable procurement targets.	Impact Assessment indicates that there is likely to be a administrative burden of 0.5% over the period 2010 to 2020 associated with option 2.
Generic effect.	Potential enforcement costs to government as a result of revised Government Buying Standards.	Potential enforcement costs to government.	No. Assume organisations (for example, CESP / Cabinet Office) and mechanisms already in place to monitor procurement by Central Government.	Not at the present time – targets for Government Sustainable Operations and Procurement are still under consideration.
Generic effect.	Potential maintenance and use costs to the government as a result of revised Government Buying Standards.	Unlikely to result in an effect of this nature.	No.	No – would require estimate of current maintenance costs by type of textile product and information to inform an assumption regarding impact of options on maintenance and use. Information has not been forthcoming during the review.
Generic effect.	Potential compliance costs to UK based suppliers as a result of revised Government Buying Standards.	Any such costs (estimated to be in the order of 1 to 10%) likely to be passed to purchaser and some shared throughout supply chain, where possible.	No.	Two suppliers believed that they were likely to face compliance costs connected to administration/data collection but did not give a specific figure.

ANNEX C: TEXTILES: REVIEW OF IMPACTS ACROSS WHOLE LIFE CYCLE

C.1 Introduction

Environmental impacts from textile production can vary greatly depending on the fibre in question, how it is grown or manufactured and then how it is subsequently used and disposed. What is clear is that these environmental impacts can be reduced through conscious choices made on reducing chemicals consumption in the production stage as well as energy and water consumption in the use stage.

It has been stated (FERA 2009) that there are significant gaps in our knowledge on the sustainability of textile fibres and their full environmental and social impacts. Cotton and polyester are the dominant fibres, but other fibres with smaller market shares have lower environmental impacts - hemp, flax and jute to name but three. It is clear that whilst many good efforts have been made to address the social impacts of textiles production, this area requires more research. For example, there is currently no standard for assessing the social impacts of a product or the manufacturing process.

Textiles can have many different environmental impacts across the life cycle which includes the manufacture of the raw material fibres, preparing the fibres, manufacturing the fabric including dyeing and finishing, transport and distribution, in-use washing and ultimately disposal. These impacts will vary in size and severity depending on which actual environmental impact. For example water consumption is generally low for natural fibres, with the exception of cotton growth and wool dyeing/finishing processes. The following two tables summarise the impacts, firstly by fibre type (FERA 2009) and then by life cycle stage (EU Green Public Procurement Textiles, IFM 2006).

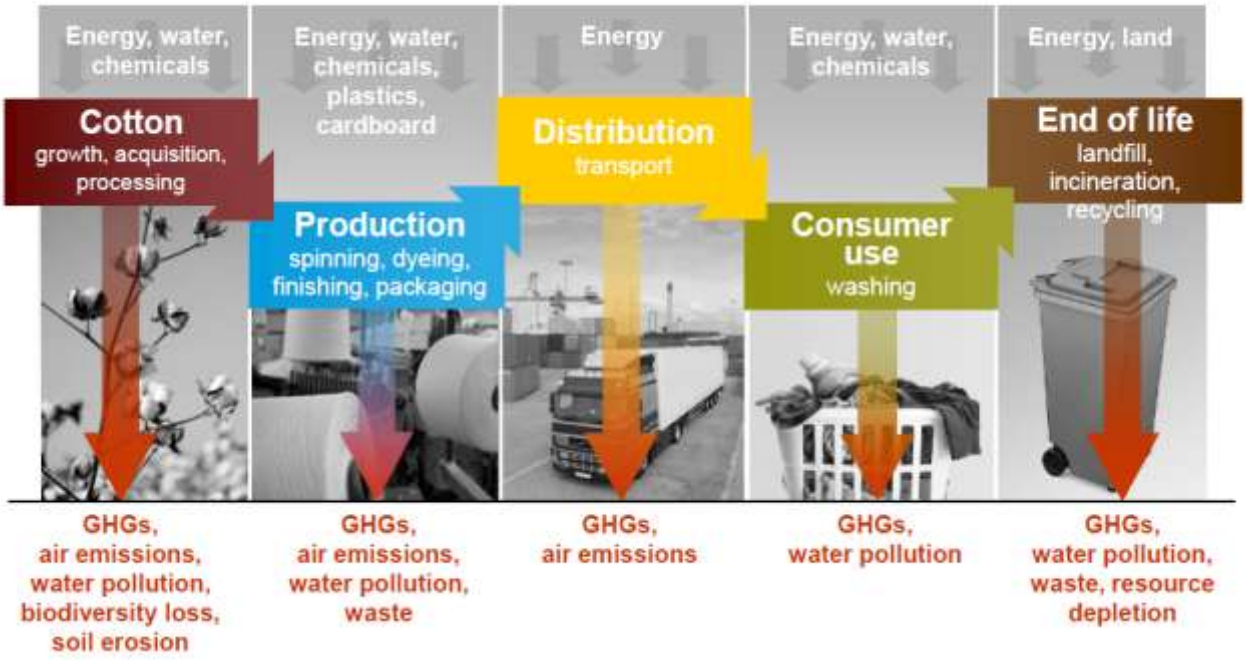
Table 1: Main Fibres and their Main Environmental Impacts

Fibre	Main Impacts
Cotton	Very high water use in growing as well as high pesticide and fertiliser use in growing (conventional) and high energy demand in dyeing.
Flax	Low water use, energy use low except for dyeing and finishing processes, pesticide use generally low.
Wool	Has low energy and water use in production, but higher energy and water use in dyeing and finishing processes
Polyester	Has high energy and water use in raw material production, fabric production, and dyeing and finishing. Low energy demands and water use for fibre production
Nylon	Has high energy demands but low water use at all stages of production.

Table 2: Key Life Cycle Impacts of Fibre Production

Life Cycle Stage	Impacts
Textile Production / Growth	Land use; ground and surface water pollution (including eutrophication) from pesticides and fertilisers; water consumption (irrigation); energy and fuel use (man-made fibres, agri vehicles); air pollution from fertiliser degradation to nitrous oxide.
Fibre preparation and Manufacture	Use of chemicals: dyes, fixers, finishing chemicals, detergents, chemical release during manufacture of synthetic fibres, wastewater discharge of used chemicals; air pollution. Energy consumption in production of primary materials, especially man-made fibres and in yarn manufacturing of natural fibres; water use.
Use phase	Energy from cleaning and drying; water pollution from dyeing processes and cleaning detergents and water consumption
Disposal phase	Impacts of greenhouse gas emissions from landfill from natural fibres; solid waste arising from yarn manufacturing of natural fibres; options for re-use and recycling of items/ materials

These are depicted in the following diagram (Defra Clothing):

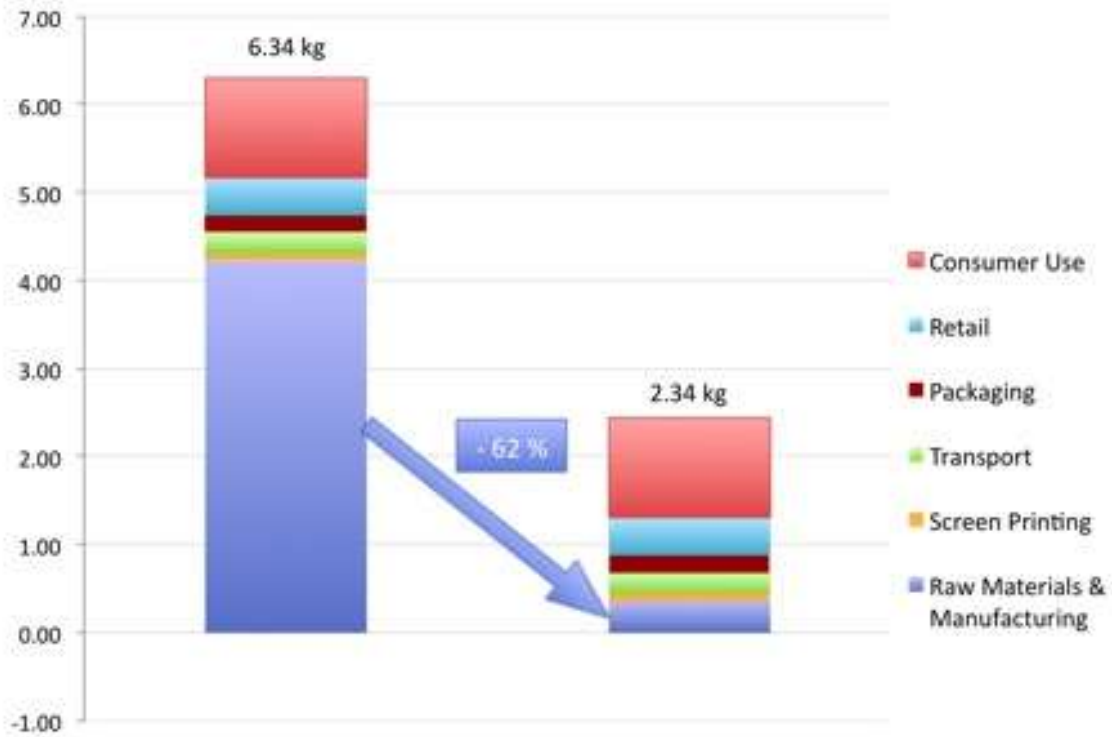


C.2 Production and manufacture

There is some life cycle data available for comparing different processes in fibre and textile manufacture.

A manufacturer, Continental, has undertaken a study following the Carbon Trust PAS 2050 methodology to calculate the carbon footprint of one of their organically grown 240g cotton t-shirt over its whole life. They found that it is 2.34kg CO_2e *per t-shirt* (9.75kg CO_2e *per kg of cotton textile*), using renewable fuel sources.

If conventional grid electricity energy sources are used the figure is 6.34kg CO_2e *per t-shirt* (26.4kg CO_2e *per kg of cotton textile*). This is depicted in graph 1 below; conventional grid electricity on the left and renewable energy sources on the right.



Graph 1 – Carbon footprint of cotton t-shirt

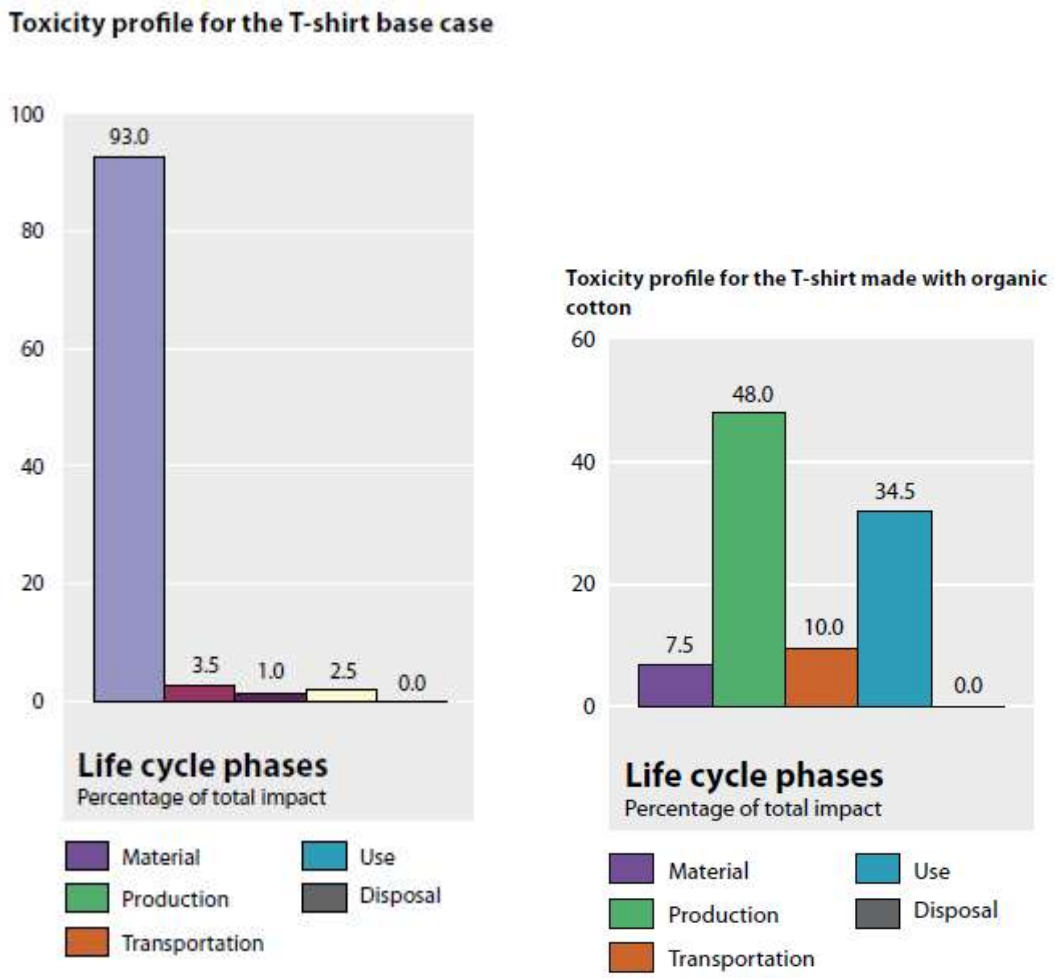
The raw materials and manufacturing process clearly accounts for the majority of the greenhouse gas impacts using conventional fuel sources; 4.22kg CO_2e *per t-shirt* (17.58kg CO_2e *per kg of cotton textile*).

Comparative data for the growth and manufacturing stages from LCA inventories (SimaPro) for conventionally grown cotton quotes greenhouse gas emission impacts to be 25.50kg CO_2e *per kg of woven cotton textile.* These figures are comparable as it needs to be understood that the organic version will not use the pesticides that conventionally grown cotton does.

By reducing the use of such chemicals in production the impact on local watercourse and soil condition can also be greatly reduced. Similarly, restricting use at the manufacture stage will also have benefits on local water through lower wastewater loads as well as health (social) improvements through using fewer toxic substances.

The recent report by the Cambridge University (IFM 2006) states that *"For products in which raw material production dominates, in addition to measures to extend product life, alternative processes or materials should be pursued. A switch from conventional to organic cotton growing would eliminate most toxic releases, at the cost of price rises in the UK."* Whilst this will deliver environmental benefits it is not so clear from the cost point of view, as highlighted by a number of the responses to the review.

The data below indicates the reduced toxicity levels in organic cotton compared to conventionally grown cotton (IFM 2006).



Graphs 2 and 3 – toxicity profile for the t-shirt conventional and organic cotton

Graphs 2 and 3 graphs show that the toxicity impact falls by around 90% by switching from conventional to organic cotton with less toxic dyes. The Cambridge report also comments on the advantages of organic over conventional cotton farming; a 40% reduction in the amount of time dealing with pests and significant reduction in the cost of buying fertilisers and pesticides. Other information from studies showed that organic methods can improve crop yields, enhance soil fertility as well as food security. The report also mentions that current production of organic cotton is in the region of 1% compared to conventional cotton.

The main areas for organic cotton growth are Turkey, India, the USA, and China, but with expansion in Africa (FERA 2009). Production in 2007 was 60,000 tonnes and has been growing at 50% since. The drawbacks, compared to environmental advantages, are lower yields and greater land take.

C.3 Use

Although there is potentially a large impact when using textiles such as energy to heat washing water, detergent use for cleaning (and its subsequent impact on water) and energy for drying and ironing, there is less scope for direct influence as it is beyond the reach of the Government Buying Standards to specify behaviours (e.g. what temperature and which detergent to wash clothes in).

The previous study by Continental states that energy impacts from consumer use (wash, dry, iron) are most significant for the drying and ironing stages. As such, if these could be minimised or eliminated then up to 75% of the impacts from this stage of the life cycle can be reduced.

However, other routes such as the Wash Right Campaign are addressing this http://www.washright.com/uk/index.html. Impacts here could be addressed through awareness raising or even contract performance clauses.

Recently the retail sector has begun recommending that the majority of the garments they sell should be washed at 30°C rather than 40°C. Studies have shown that this small change reduces electricity consumption by washing machines by around 40 percent on average. One leading UK retailer changed the washing instruction labels on their clothes in March 2007 and have not so far received any negative feedback from their customers. From July 2007 another UK retailer will continue to display their standard maximum washing temperature warning on their labels, but will add Think climate - Wash at 30°C4. Considering the product communication via advertising and media towards “cold” wash, it is expected that consumers will change their traditional habits with respect to laundry wash and that an average reduction of 10 C can be achieved.

A report on this issue Reducing the Environmental Impact of Clothes Cleaning Defra 2009[11] is available and was initiated under the Sustainable Clothing Roadmap. This study demonstrated that low temperature detergents performed well at 30 degrees (and lower) across a range of environmental indicators for washing performance and suggested that clothing guidance be revised to incorporate mandatory wash temp instructions and use of line drying.

Since these actions will increase the durability of clothing and reduce energy costs persuading consumers and stakeholders of the benefits should not be challenging. The in-use impacts requirements in the award criteria should reinforce this activity for clothing provided by institutions.

C.4 End of life and disposal

Clothing can be disposed of to landfill, via incineration for energy recovery, through downcycling for other textile uses, as well as reuse, via charities for example. Current UK rate for recovery (recycling, reuse, incineration), however, are at a mere 16% for all clothing disposed in the UK (Defra 2008). Again, this is possibly beyond the direct scope of the Government Buying Standards, although advice can be provided as to the best ways of dealing with end of life textiles. Unless of course for large scale contracts, the use of contract performance clauses is made to mitigate end of life environmental issues.

Were the proposed criteria to be used then the expected environmental benefits would consist of reduced pesticide and fertiliser use, along with other chemicals and indirectly from lower energy use (embodied energy from the manufacture of these chemicals).

[11] The report is at: http://www.defra.gov.uk/environment/business/products/roadmaps/clothing.htm

ANNEX D: ANALYSIS OF TEXTILE SECTOR – MANUFACTURES AND SUPPLIERS, GREAT BRITAIN 2008

Great Britain, 2008	Workplaces					Employees				
Industry	1-10 employees	11-49 employees	50-199 employees	200 or more employees	All	1-10 employees	11-49 employees	50-199 employees	200 or more employees	All
1310 : Preparation and spinning of textile fibres	110	30	15	5	160	320	705	1,645	910	3,580
1320 : Weaving of textiles	175	55	35	5	270	540	1,560	3,285	1,280	6,665
1330 : Finishing of textiles	535	105	30	0	670	1,605	2,185	2,475	230	6,495
1391 : Manufacture of knitted and crocheted fabrics	95	20	5	0	120	335	450	365	475	1,625
1392 : Manufacture of made-up textile articles, except apparel	1,735	350	50	10	2,145	5,370	7,410	4,715	4,310	21,805
1393 : Manufacture of carpets and rugs	150	25	30	10	215	440	570	2,700	2,410	6,120
1394 : Manufacture of cordage, rope, twine and netting	70	20	5	0	95	220	540	435	0	1,195
1395 : Manufacture of non-wovens and articles made from non-wovens, except apparel	0	15	5	0	20	0	360	535	225	1,120
1396 : Manufacture of other technical and industrial textiles	130	30	10	0	170	410	700	875	0	1,985
1399 : Manufacture of other textiles n.e.c.	440	50	20	5	515	1,220	1,265	1,750	675	4,910
1411 : Manufacture of leather clothes	75	0	0	0	75	170	25	0	0	195
1412 : Manufacture of workwear	235	50	20	0	305	690	1,135	1,455	295	3,575
1413 : Manufacture of other outerwear	1,415	170	35	0	1,620	3,820	3,945	2,540	525	10,830
1414 : Manufacture of underwear	165	45	5	0	215	525	915	675	585	2,700
1419 : Manufacture of other wearing apparel and accessories	1,330	145	15	0	1,490	3,440	2,955	820	610	7,825
1420 : Manufacture of articles of fur	10	0	0	0	10	35	50	0	0	85
1431 : Manufacture of knitted and crocheted hosiery	55	15	5	0	75	175	380	415	420	1,390
1439 : Manufacture of other knitted and crocheted apparel	155	50	15	5	225	620	1,200	1,360	750	3,930
1511 : Tanning and dressing of leather; dressing and dyeing of fur	55	15	10	0	80	185	295	915	0	1,395
1512 : Manufacture of luggage, handbags and the like, saddlery and harness	195	45	10	0	250	630	1,020	610	0	2,260
1520 : Manufacture of footwear	165	55	20	5	245	515	1,270	1,855	1,290	4,930
Manufacturing sub-total	**7,295**	**1,290**	**340**	**45**	**8,970**	**21,265**	**28,935**	**29,425**	**14,990**	**94,615**
Proportion	***81%***	***14%***	***4%***	***1%***	***100%***	***22%***	***31%***	***31%***	***16%***	***100%***
4611 : Agents involved in the sale of agricultural raw materials, live animals, textile raw materials and semi-finished goods	770	40	0	0	810	1,560	825	195	625	3,205
4616 : Agents involved in the sale of textiles, clothing, fur, footwear and leather goods	1,880	80	15	0	1,975	4,125	1,780	1,250	210	7,365
4641 : Wholesale of textiles	2,040	260	35	0	2,335	5,715	5,510	2,900	610	14,735
4642 : Wholesale of clothing and footwear	4,590	565	120	10	5,285	11,515	12,485	11,530	3,590	39,120
4647 : Wholesale of furniture, carpets and lighting equipment	2,695	325	50	10	3,080	7,395	6,975	4,165	3,750	22,285
4664 : Wholesale of machinery for the textile industry and of sewing and knitting machines	150	20	5	0	175	435	320	190	0	945
Agents / wholesale sub-total	**12,125**	**1,290**	**225**	**20**	**13,660**	**30,745**	**27,895**	**20,230**	**8,785**	**87,655**
Proportion	***89%***	***9%***	***2%***	***0%***	***100%***	***35%***	***32%***	***23%***	***10%***	***100%***
4751 : Retail sale of textiles in specialised stores	2,940	300	10	0	3,250	9,400	5,445	865	0	15,710
4753 : Retail sale of carpets, rugs, wall and floor coverings in specialised stores	5,165	185	5	0	5,355	16,390	3,050	385	0	19,825
4771 : Retail sale of clothing in specialised stores	22,070	4,955	1,315	170	28,510	87,550	103,425	116,265	63,840	371,080
4772 : Retail sale of footwear and leather goods in specialised stores	6,865	1,250	55	5	8,175	25,865	23,220	3,810	2,220	55,115
4782 : Retail sale via stalls and markets of textiles, clothing and footwear	20	0	0	0	20	25	0	0	0	25
Retail sub-total	**37,060**	**6,690**	**1,385**	**175**	**45,310**	**139,230**	**135,140**	**121,325**	**66,060**	**461,755**
Proportion	***82%***	***15%***	***3%***	***0%***	***100%***	***30%***	***29%***	***26%***	***14%***	***100%***
All sectors	**56,480**	**9,265**	**1,940**	**250**	**67,935**	**191,235**	**191,970**	**170,985**	**89,825**	**644,015**
Proportion	***83%***	***14%***	***3%***	***0%***	***100%***	***30%***	***30%***	***27%***	***14%***	***100%***

Source: Annual Business Inquiry (ABI) Workplace Analysis, 2008, SIC 2007