

Briefing Paper: Sustainable Procurement and Carbon Management: the potential for savings.

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Executive Summary

This briefing paper is the first output of the JISC funded project: PROC₂.¹ The aim of PROC₂ is to explore how to re-engineer procurement and re-imagine the University thereby reducing carbon dioxide emissions.² Specifically, the project aims to develop an ICT based decision-making tool enabling De Montfort University (and thereafter other HEIs) to reduce Scope 3 emissions, notably procurement. The project will involve a review of the impact of Scope 3 emissions, procurement best practice in the HEI sector, the design and construction and testing of an ICT tool to enable improved decision making around the environmental impact of suppliers, goods and services, and finally, to understand the organizational learning and change management issues surrounding such a change.

This briefing paper sets out the landscape of sustainable procurement in 2011 by firstly providing a brief overview of the procurement function before second, reviewing definitions of sustainable procurement and giving an overview of the current policy context and range of organisations involved in sustainable procurement. Third and finally, the paper will show the potential for greenhouse gas (GHG) emissions reductions through more sustainable management of procurement decisions. This section takes the form of a case study of De Montfort University that should be illustrative and instructive for other Higher Education Institutions.

¹ JISC (the acronym once stood for 'Joint Information Systems Committee', it is now their name) inspires UK colleges and universities in the innovative use of digital technologies, helping to maintain the UK's position as a global leader in education. Further information about their Greening ICT programme can be found here: <http://www.jisc.ac.uk/whatwedo/programmes/greeningict.aspx>

² For the purposes of naming the project, carbon dioxide was used. From now on though, 'greenhouse gas' (GHG) emissions will be used as carbon dioxide is one of six greenhouse gasses.

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There are a few key people and organisations to thank; without whom this literature review would not have been possible. Firstly, I want to thank JISC and Rob Bristow for funding the PROCO₂ project of which this literature review is the first deliverable. Second this project and its work builds on the innovative work of a unique partnership between key staff at De Montfort University and Arup: Karl Letten (the environmental and sustainability officer at DMU) and Leticia Ozawa-Meida (a Research Fellow at the Institute of Energy and Sustainable Development at DMU) have worked closely with Paul Brockway from Arup. Thanks also to Kevin Dobson, DMU's Head of Procurement and of course Professor Paul Fleming, DMU's Director of Sustainable Development and acting director of the IESD.

Several people provided useful feedback on earlier drafts of this report. Special mention to Janine Hamilton from the SPCE, Nicola Hogan from the EAUC/JISC. I also wish to thank Steve Butcher at HEFCE and Peter James from Bradford for their encouragement. Further details of the project and the team are available at our project website: <http://greenview.dmu.ac.uk/>. Final thanks to the co-authors of this report, Carl Holland and Leticia Ozawa-Meida for their hard work and attention to detail.

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1. Introduction

Procurement is the process by which goods and services are purchased – ‘procured’ – for the benefit of organisations. Increasingly highly regulated, it has emerged as both a key policy at the national and European level, and an organisational issue delivering significant financial savings, environmental and social impact. Public procurement in the UK accounts for 13% of GDP (Defra, 2006). This demonstrates the real impact that decisions by organisations (and of course the individuals within them) have on the world around them. Sustainable procurement is defined in the UK government’s report into sustainable procurement, Procuring The Future (Defra 2006), as:

the process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organisation, but also to society and the economy, whilst minimising damage to the environment.

We shall explore and unpack this further shortly. First though, we shall establish what is meant by procurement before considering what is sustainable procurement, and, finally, DMU’s own approach to tackling the carbon footprint of procurement.

2. The strategic value, impact and importance of procurement

Procurement is often not well understood in many organisations. Too often the focus is centred upon the ‘purchasing’ element of the process which can be perceived by some budget holders as ‘too regulated’ or ‘too long’. It often leads to the (mistaken) view or perception of the function/activity being wholly regulatory or compliance driven. The need to respond, to adapt and innovate in a rapidly changing environment for the Higher Education sector is evident given a turbulent and changing social and political context. In that regard procurement has a key role to play in supporting the University in being responsive, in innovating, and driving efficiency and value for money (VfM)³, in a manner that can still demonstrate consistency with the legal framework for public procurement.

³ ‘Value for money’ is defined by EU legislation and is interpreted by the Office of Government Commerce (OGC) as buying a product with the lowest whole life cost that is fit for purpose and meets specification.

The role of procurement then is not just to ‘buy stuff’ but rather to support and meet business objectives, without unduly compromising effective practice and compliance requirements (both internal and external). Universities needs to think of procurement in a more strategic manner, given the changing environment; a cohesive approach to policy formulation, assessment of need, project management and the role of the procurement process is key in that regard (see Table 1). The impact of procurement practice can be illustrated by the fact that at DMU, every 1% reduction in procurement costs equates to £400k of savings for the University.

Table 1: Overview of the three interpretations of procurement

Focus	Key Features
Strategic procurement	<ul style="list-style-type: none"> • Concerned with the creation of competitive advantage • Obtaining better value for money
Tactical procurement	<ul style="list-style-type: none"> • Relates to the execution of particular procurements once a strategy for that procurement has been determined. • Choice of procurement method affects the cost of the procurement process. For example, open invitation to tender for a local deal may involve more staff time than using pre-selected suppliers on a regionally negotiated agreement.
Transactional procurement	<ul style="list-style-type: none"> • The traditional domain of ‘purchasing’ or ‘P2P: Purchase to Pay’, the set of processes which determine the specification, timing, pricing, invoicing, receipt and payment. These transactional processes are often applied repeatedly to agreements already in place, for example stationery supplies and car hire.

Figure 1 shows a generic procurement cycle that can be applied to individual purchases, local procurement arrangements for the University, regional purchasing agreements and contracting for the whole of the HE sector.

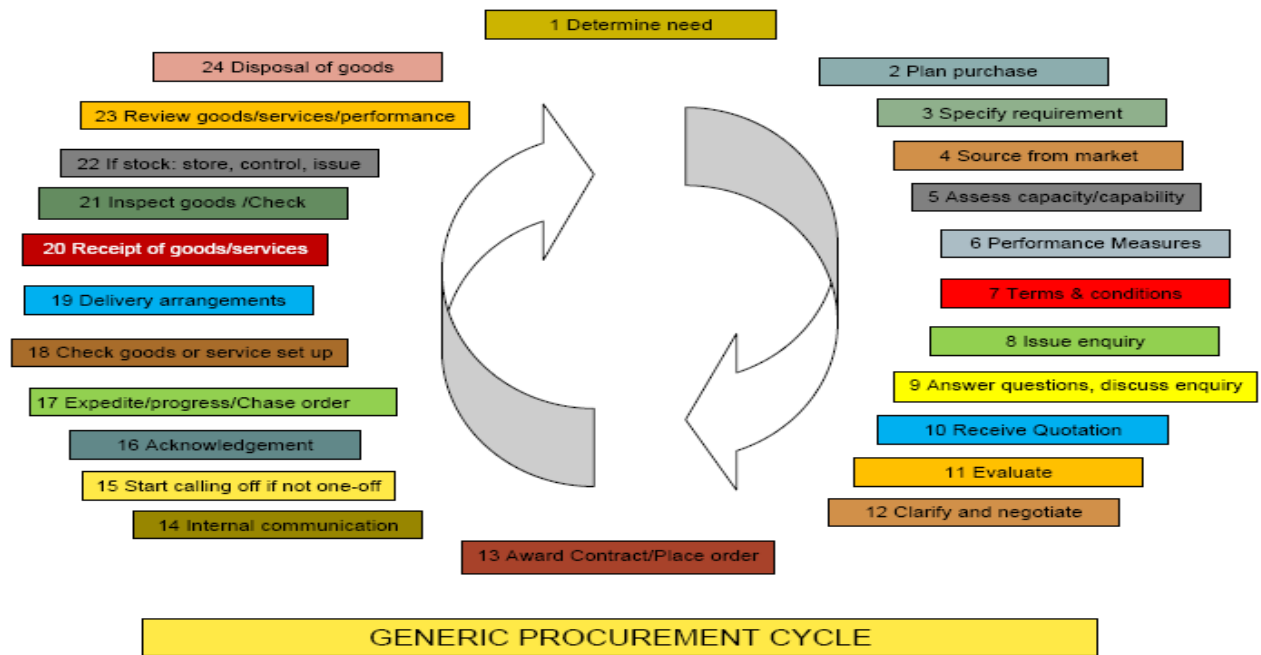


Figure 1: Generic Procurement Cycle

It should be noted that the early steps in the cycle have the greatest influence on the efficiency and effectiveness of the process. Key stages within the cycle are:

- Sourcing: Deciding for what, by whom, when, and through which suppliers to approach markets for goods and services. (steps 4-12)
- Contract management: Post-contract activity aimed at ensuring that suppliers deliver as required by the contract. Contract management may involve different stages, such as pre-tender/tender stage, specifications stage, award stage and the execution of the contract.
- Within the procurement cycle of the figure above, the contract management may involve all the 24 steps.
- ‘Purchase to Pay’ (P2P): The set of processes which communicate approval to spend, the specification, timing and pricing which effects invoicing, receipt and payment. P2P systems provide financial control, management information, process efficiency and risk management (steps 14 onwards)
- Supplier relationship management (SRM): Determining the set of behaviours to adopt with each supplier or set of suppliers. This covers all those steps where the University has a direct interaction with one or more suppliers (all steps)

Procurement in the public sector is governed by strict guidelines that attempt to clarify the core principles of “transparency, accountability and achieving value for money for citizens

and taxpayers” (Walker and Brammer, 2009, p.128). The legal framework is defined by the EU Procurement Directives, revised in 2006. They apply when public authorities seek to acquire goods, services, civil engineering or building works and set out procedures to be followed before the awarding of contracts.⁴ The Directives have been implemented into national law in the UK by Regulations. Revised Regulations came into force on 31 January 2006 to implement new Procurement Directives. The requirements of the Public Contracts Regulations (PCR) 2006 for example and the University's own Financial Regulations often require material procurements to involve full market testing and tendering.

That regulatory framework drives the choice of sourcing and is based largely on the public sector concept that there is a strong requirement to demonstrate value for money and probity. Therefore a more strategic approach to prospective partners and suppliers needs careful consideration and handling, if the ability to demonstrate value for money and probity is to be maintained. At the very least, those responsible for dealing with suppliers must do so on an open and equitable basis, particularly at the early stages. This is to avoid later accusations of ‘favouritism’ or conflict of interest, and to avoid premature adoption of a potential solution and loss of healthy competition.

Procurement affects every aspect of an organisations behaviour and has the potential to shape its culture. Procurement is not simply the ‘stuff that we buy’ and the ‘way’ we buy (although the tactical and transactional functions are important) – it is the approach to doing business (the strategic), it affects how an organisation manages itself and has reach far beyond the boundaries of its own ‘four walls’, for example in the suppliers it uses, who makes the products, who supplies the services and so on. It is for these reasons and more that the question of impact has been raised. And this leads us to the question of sustainable procurement.

⁴ The EC Supplies Services Directive applies to purchases valued at more than £156,442 excluding VAT and Works valued at more than £3,927,260 excluding VAT (effective from 1 January 2010)

3. Sustainable procurement: Procuring the future?

3.1. Defining sustainability

Sustainable development was first defined in the Brundtland Report (WCED, 1987):

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The UK government has had a growing commitment to sustainable development over the last fifteen years, first launching a strategy for sustainable development in 1994, after the 1992 Earth Summit in Rio de Janeiro. Its current strategy, 'Securing our Future' was launched in 2005 and focused on four areas: consumption and production, natural resource protection, sustainable communities and climate change.

In November 2008, the UK government passed the Climate Change Act in an effort to improve carbon management (carbon dioxide being the most abundant GHG and contributor to climate change) and provide a strong UK lead – the UK is the first country in the world to set legally binding targets. Ambitious targets have been set for GHG emissions (notably Carbon Dioxide – CO₂) reductions through action in the UK and abroad of at least 80% by 2050, and reductions in CO₂ emissions of at least 34% by 2020, against a 1990 baseline. As well as these targets a carbon budgeting system will cap emissions over five year periods.

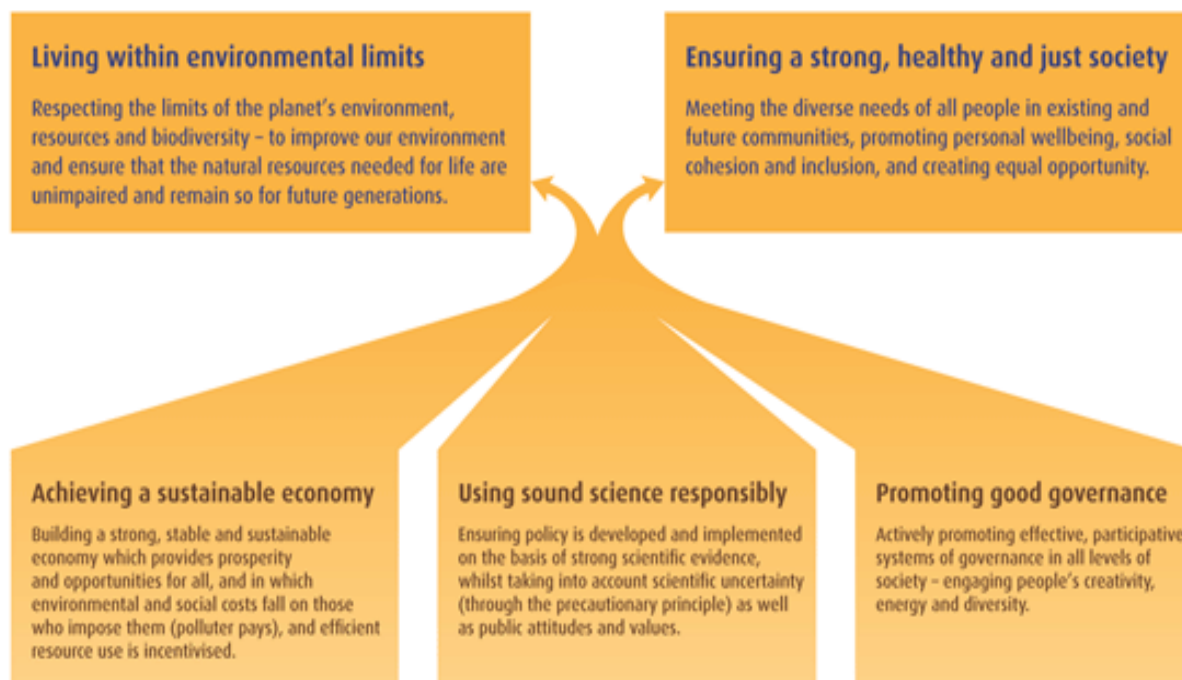


Figure 2: Five principles of sustainable development (Defra, 2005)

Figure 2 shows the five principals that underpin the UK Government's sustainable development strategy. Environmental responsibility, 'living within environmental limits' forms one part of sustainability, wellbeing, economic sustainability and good governance all contributing to what the UK government call 'sustainable development'. This diverse and broad understanding of sustainability is carried through into what we understand by 'sustainable procurement'.

Whilst the Defra definition at the start of this document encompasses the broad process and states that procurement must provide benefits 'to society and the economy, whilst minimising damage to the environment', this is still open to interpretation and encapsulates a vast array of issues. Walker and Brammer (2009) for example suggest a five-fold definition of sustainable procurement that includes the environment, diversity, human rights, philanthropy and safety. Thomson and Jackson (2007) tend to refer more to 'green procurement' implying bounding the definition more to environmental issues, whereas Preuss (2007) includes economic and social issues into their understanding of the issue.

In their practical guide on sustainable procurement, Forum for the Future (2007) map suggested objectives for sustainable procurement on to the three government principals of sustainable development (figure 3). This provides a clear illustration of the breadth, scope and complexity of sustainable procurement.

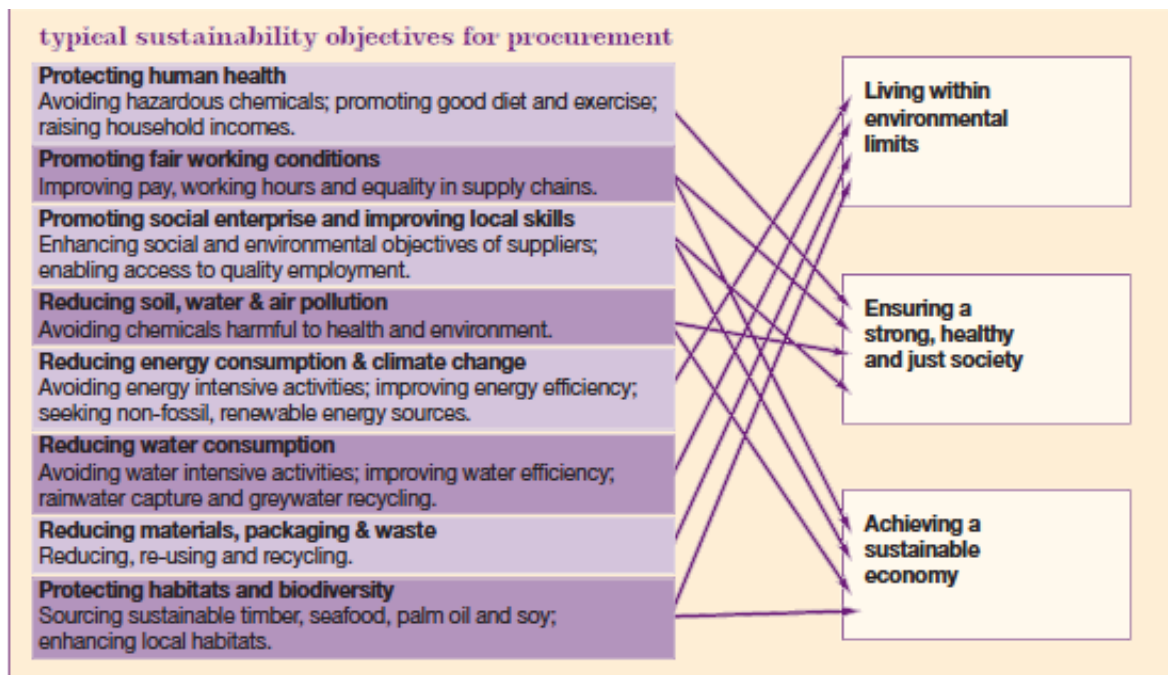


Figure 3: Typical sustainability objectives for procurement (Forum for the Future, 2007)

The plethora of legislation, guides and toolkits available provides further evidence of the uncertainty both in what actually constitutes ‘sustainable procurement’ and how to actually achieve it. Current trends in the area are explored more fully in section 3.3 (Trends and Tools for Sustainable Procurement) before exploring DMU’s approach focusing on the potential for carbon reduction initiatives in procurement. Before that we provide a brief overview of the legislative context of sustainable procurement, and in particular, the challenges and opportunities facing the Higher Education sector.

3.2. The Policy Context⁵

The UK was one of the first countries to respond to the calls made at the Rio Earth Summit, producing their first sustainable development strategy in 1994. Sustainable public procurement featured in the 2005 strategy ‘Securing the Future’. A goal was set in the strategy, recognising that UK public sector procurement accounted for £125 billion; to make the UK “a leader in the EU by 2009” (Defra, 2005).

⁵ For an excellent overview of the history of policy and legislation on sustainable procurement see Thomson, J. and T. Jackson (2007). "Sustainable Procurement in Practice: Lessons in Local Government." *Journal of Environmental Planning and Management* 50(3): 421-444.

In 2006, the UK government published 'Procuring the Future: The Sustainable Procurement National Action Plan'. The strategy was based upon the work and recommendations of the Sustainable Procurement Taskforce, a group of senior individuals from the public, private and third sectors. The policy document directly followed on from the 2005 publication of the governments updated sustainable development strategy, 'Securing the Future' which itself devotes an entire chapter to the role of procurement in achieving sustainable development.

In 'Procuring the Future' the Sustainable Procurement Taskforce makes six recommendations. These are listed below:

- For central government departments to lead by example
- For central government to streamline and provide clarity, to set clear priorities
- To set minimum standards and demanding future targets, to raise the bar
- To develop capabilities, to build capacity
- Ensure the budget supports and removes barriers to sustainable procurement
- Stimulate innovation in the market, to capture opportunities

The waste industry has a 'waste hierarchy' which sets out the priorities to follow in the management of waste. The 'waste hierarchy' is reported in 'Procuring the Future', alongside a proposed 'sustainable procurement hierarchy'. The hierarchy is similar to that used by the waste industry, with 'rethink need' being at the top of the hierarchy and being the instruction most likely to bring about sustainable procurement. See both the waste hierarchy and the procurement hierarchy below in figure 4.

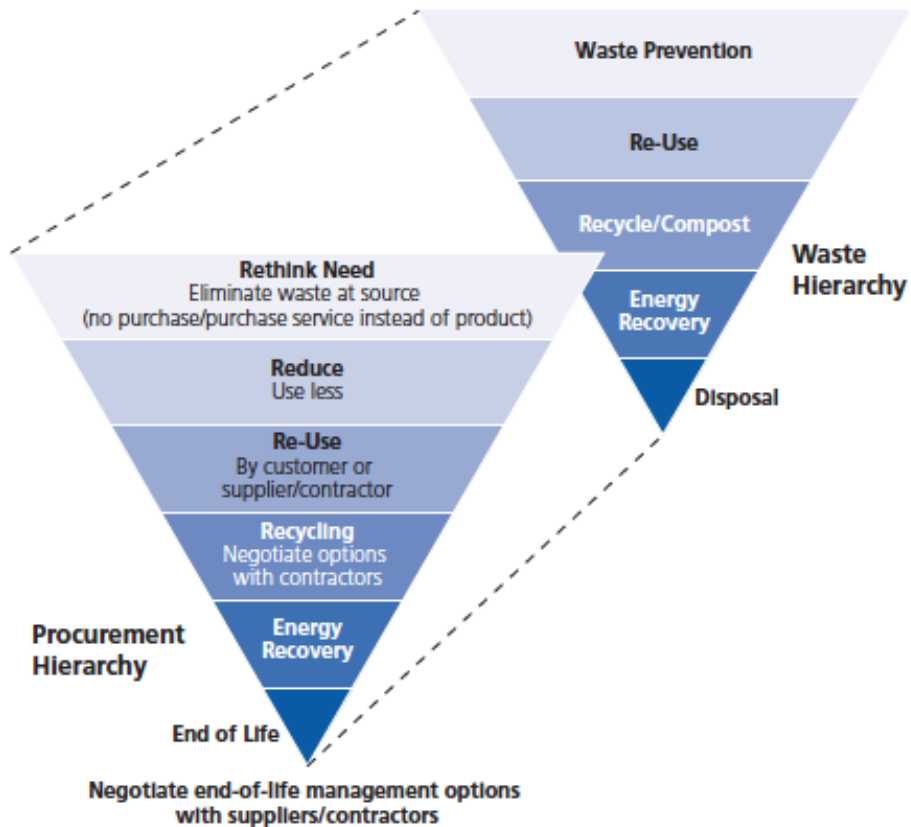


Figure 4: The waste & procurement hierarchies (Defra, 2006)

To enable public sector organisations to assess the quality of procurement activity and provide a clear route to better performance a ‘Flexible Framework’ was developed as part of the ‘Procuring the Future’ strategy. The Flexible Framework allows organisations to benchmark themselves in five key areas of sustainable procurement against a set of categories, and to make plans to improve within each area.

The key areas are listed below (see appendix 1 for the full Flexible Framework matrix):

- People
- Policy, Strategy and Communications
- Procurement Process
- Engaging Suppliers
- Measurements and Results

For each of the five key areas, progress is marked against a five point scale from level 1: Foundation, through level 3: Practice, to level 5: Lead. By 2009, it was hoped that every

public sector organisation would have achieved a minimum standard of level 3 for each of the five key areas, with level 5 reached in at least one of the five key areas. The strategy also contains many case studies of previous good practice in both the public and private sectors, where organisations and departments have made significant progress towards achieving a more sustainable procurement practice. The Framework is designed to encourage public sector organisations to capture opportunities to stimulate innovation in their supply chains through a consistent approach to risk management.

Alongside the Flexible Framework, the Office of Government Commerce (OGC), a sub-group of HM Treasury, had responsibility for encouraging sustainable practices across central government departments, supporting environmental, social and economic sustainability. It established the Centre of Expertise in Sustainable Procurement⁶ (CESP) in 2008 to provide leadership focusing on environmental sustainability across government. This included the creation of their executive agency 'Buying Solutions' who facilitated purchasing across the public sector. Both departments are now part of the Efficiency and Reform Group, under the Cabinet Office (since June 2010).

3.3. The HE Context

As outlined previously, the Climate Change Act 2008 requires the UK's net GHG emissions for the year 2050 to be at least 80% lower than the baseline 1990 level (HSMO, 2008). The Act also proposes a minimum interim target of a 34% cut in emissions by 2020, together with 5-year carbon budgets for 2008-12, 2013-17 and 2018-2022. The Higher Education Sector is not exempt from the Climate Change Act and as a significant contributor to public sector emissions, the Higher Education sector is expected to take a lead role in reducing emissions.

In its National Carbon Strategy, the Higher Education Funding Council for England (HEFCE) encourages Higher Education Institutions (HEIs) to adopt similar targets (HEFCE, 2010a). HEIs are compelled to set individual reduction targets for 2020 against a 2005 baseline for their direct and indirect emissions related to the use of fossil fuels and purchased electricity in their own buildings, stationary and mobile emission sources (Scope 1 and 2 emissions under the definitions of the GHG Protocol Corporate Standard, HEFCE, 2010b; WRI/WBSCD 2004). Indirect emissions from procurement, business travel, and commuting among other

⁶ <http://www.ogc.gov.uk/cesp.asp>

relevant sources (scope 3 emissions) are not currently included within the reduction targets. However, the strategy requires that institutions commit to undertake work to monitor and report these emissions, including the measurement of a baseline of carbon emissions from procurement by December 2012 and set a carbon reduction target by December 2013.

At the University Level, HEFCE encourages and supports institutions to adopt the principles of the Flexible Framework as an approach to sustainable procurement. As stated in HEFCE's Sustainable Development strategy;

A university's procurement policy is one of its strongest ways of supporting sustainability. English higher education spends over £8 billion a year on non-pay costs, and how that money is spent can have a great social and environmental impact (HEFCE, 2009).

The carbon strategy acknowledges that emissions from procurement “*has a considerable indirect carbon impact, but the data [at a national level in the higher education sector] for estimating emissions are not readily available*” (HEFCE 2010a). This supports research in other public sectors which suggests procurement embedded emissions may account for 45-60% of the overall GHG emissions in different organisations (Brockway, 2009). The strategy goes on to state that emissions from procurement may effectively double carbon emissions from the HE sector.

3.4. Bodies delivering Sustainable Procurement Guidance

A range of bodies now exist to advise and help organisations improve their procurement solutions including the Sustainable Procurement Task Force (SPTF), the Sustainable Procurement Centre of Excellence (SPCE), Buying Solutions, and JISC's own Procureweb, a procurement support service for the UK Higher and Further Education Sectors and Research Councils based at Cardiff University.

3.4.1. Sustainable Procurement Taskforce (SPTF)

The taskforce was established in 2005 on the back of the governments updated sustainable development strategy ‘Securing the Future’. The taskforce is made up of several senior and experienced professionals from across the private, public and third sectors, including for

example the Chief Procurement Officer from BT, the Chief Executive of the Chartered Institute of Purchasing and Supply, the Chief Executive of WRAP, the Director of Corporate Responsibility at Vodafone and the Chief Executive and Head of Procurement from the Environment Agency. The first goal of the taskforce was to agree and publish a national sustainable procurement strategy, that covered all public procurement spend – 13% of GDP. The strategy ‘Procuring the Future: The Sustainable Procurement National Action Plan’, as detailed above in section 3.2, was published in 2006.

The publication of the ‘Sustainable Procurement National Action Plan’ led to further publications. In 2007 the Local Government Association adopted the strategy and published their own version to be used by local authorities in England and Wales. Central Government also adopted the strategy, altering it for their purposes and publishing ‘Sustainable Operations on the Government Estate’ with a target to save approximately one million tonnes of carbon by 2020.

3.4.2. Sustainable Procurement Centre of Excellence (SPCE)

The SPCE was formed in October 2009 with funding for four years from HEFCE. Their remit is to assist and support the Higher Education sector in embedding sustainability into procurement practices. A quarterly newsletter, Grapevine, is published by SPCE offering support and guidance to procurement professionals, referencing key toolkits and giving examples of best practice within the sector.

The remit of the SPCE is to:

- Build capacity through training and guidance
- Develop procurement professionals' capability to influence supply chains
- Address process issues, test methodologies to develop best practice
- Develop measurement and monitoring tools such as the use of the national action plan's Flexible Framework
- Capture and report significant developments and good practice through its communications strategy

The SPCE website provides information via the ‘Knowledge Base’ on; sustainable procurement, commodity guidance, carbon reduction, whole life costing, legislation, toolkits,

case studies and best practice as well as updates on the latest sustainability news, events and training.

3.4.3. JISC Procureweb

Based at Cardiff University and funded by JISC, JISC Procureweb provides advice and guidance to the Higher Education sector on all procurement related issues, not limited to just sustainable procurement. The main resource JISC Procureweb provides to higher education institutions (HEI) is the Central universities Purchasing Information Database (CuPID). CuPID is the sector's online contract management database. This contract information is available to all HEI, allowing them to search both regional and national contracts.

The JISC Procureweb website also hosts a number of message board type resources for universities to access. One, tenders.ac.uk, allows universities to advertise contracts that they have available for suppliers to apply for, another, Xchange, allows universities to advertise items that they no longer need, such as furniture and equipment, and allows other universities to purchase the items at prices much less than buying new. A further resource, H.E.L.P, also provides practical information to HEI when writing procurement strategies, policies and procedures, with best practice procurement, tendering support and legal help. JISC Procureweb has also developed an online tool 'Measure', an adapted version of the Efficiency Measurement Model (EMM) to help procurement managers quantify cash and efficiency savings.

Another tool also offers sustainability guidance to procurement professionals. The 'Tender Evaluation Model' (TEM) incorporates whole life costing as part of its evaluation process, and recognises the importance of sustainability, fitness for purpose and qualitative judgements in procurement decisions.

3.4.4. Environmental Association of Universities and Colleges (EAUC)

Formed in 1996 to support and improve the environmental performance of both higher and further education institutions, the EAUC is a member led organisation which now represents over 280 institutions. Originated to provide a forum for best practice and share experiences amongst individuals from institutions across the UK, the EAUC, a charity, is now an influential voice within the HE and FE sectors.

As well as being a forum for best practice and sharing experiences, the EAUC administers the annual 'Green Gown' awards, recognising outstanding achievements within the sectors, with award categories, amongst others, for carbon reduction, behaviour change, social responsibility, green ICT, and also sustainable procurement. The EAUC also hold an annual conference, organise regular professional development programmes, and hold regular events tailored towards certain practical sustainability initiatives that can be adopted by individuals within institutions across the sector.

The EAUC website has a 'resource bank' providing a widespread and thorough information source for members. Amongst the categories is procurement, where members can gain access to recent reports, tools and reference materials for various aspects of sustainable procurement. These practical tools offer members information on how to go about bringing the changes necessary in their own institution. Inspiring case studies, where institutions have developed and made significant differences in their procurement practices are also available to download and read.

3.4.5. Association of University Procurement Officers (AUPO)

In response to the strategies, policies and guidance and the numerous bodies tasked with delivering them, university procurement officers formed the Association of University Procurement Officers (AUPO). Aiming to be "the voice of the procurement practitioner serving higher and further education" (AUPO, 2008 p1) the AUPO, like the EAUC, is a member led association, with a constitution, regional representatives and headed by an elected council. The AUPO hold bi-annual conferences, national and regional events, facilitate networking and promote best practice amongst its members.

Sustainable procurement forms one of the four key work streams of the AUPO and work in this area is led by a 'Sustainable Procurement Group'. The chair of the sustainable procurement group sits on the steering group of the Sustainable Procurement Centre of Excellence (SPCE). The AUPO, recognising the plethora of guidance and information available in this area already, do not seek to publish more, but simply help members find the required information with the resources already available (such as the EAUC and the SPCE).

Table 2: Organisations tasked with delivering sustainable procurement

Level	Organisation Name	Organisation Type	Who/What	Notable Publications
European	European Commission	International	International legislation	Overview of Government Initiatives - Sustainable Public Procurement (2007); Buying Green - A handbook on environmental public procurement (2004)
	International Council for Local Environmental Initiatives (ICLEI)	International, member association	Provide information	The Procura ⁺ Manual/Campaign
National Policies, Local and Central Government	Department of Food and Rural Affairs (DEFRA)	Government Department	National legislation. Government department responsible for SP policy for public/private sector organisations	Securing the Future (2005) Sustainable Procurement Action Plan (2007); Guidance to the Flexible Framework (2010); Assessment of Green claims on products (2010); Sustainable Procurement Policy Statement (2011a); Consumer understanding of Green terms (2011b);
	Sustainable Procurement Taskforce	Sub-division of Defra, public and private sector leaders	Set up specifically to deal with sustainable procurement	Procuring the Future (2006)
	HM Government	Government	Central Government legislation	UK Government Sustainable Procurement Action Plan (2007) (Central Government response to Procuring the future, 2006)
	Centre of Expertise in Sustainable Procurement (CESP)	Sub-division of OGC	Provide information/support	Buy Green and Make a Difference (2008); Considering Energy Efficiency in Procurement (2009)
	IDEA/LGA	Government funded, non-departmental body	Provide information	Local Government Sustainable Procurement Strategy (2007) Sustainable Procurement - Making it happen (2003)
	National Audit Office	National government spending auditor	Provide information	Sustainable Procurement in Central Government (2005)
	Gershon review	Independent	Independent review	Releasing resources to the front line (2004) -

				(the Gershon Review)
Higher Education Sector Specific	Sustainable Procurement Centre of Excellence	HE funding council - funding from Government	HEFCE funded project. Provide information and support	Quarterly newsletter
	Environmental Association for Universities and Colleges (EAUC)	Member associates are Universities and Colleges	Provide information/support	A host of resources available from the website "Resource Bank"
	Association of University Procurement Officers (AUPO)	Member associates are University Procurement Officers	Provide information/support	Constitution (2008)
	JISC Procureweb	Funded by HEFCE, based at Cardiff University	Provide information/support	CuPID database; message boards 'tenders.ac.uk' 'measure' and 'Xchange'
Others	Action Sustainability	Not for profit, consultancy	Provide information/support	A number of case studies are available to download from the resources section of the website
	Waste and Resources Action Programme (WRAP)	National body, publicly funded	Provide information/support	Procurement requirements for reducing waste and using resources efficiently (undated);
	East Midlands Development Agency (EMDA)	Regional body	Soon to be abolished	Measuring Sustainable Procurement (2009)
	Forum for the Future/Higher Education Partnership for Sustainability	Non-profit government pressure group/Group of 18 Universities	Provide information/support	Buying a better world (2008) WLC and CO ₂ User Guide (2009)
	Forum for the Future	Non-profit government pressure group	Provide information/support	Whole life costing user guide (2009)

3.5. Trends & Tools for Sustainable Procurement

This section provides an overview of some of the current trends and tools available for sustainable procurement. There is no shortage of guidance available to organisations wishing to reduce the negative environmental and social impacts of their activities, achieve value for money and make their procurement sustainable. We have seen earlier that sustainable procurement follows the same three concepts as sustainable development. But within each of these concepts, there are many considerations. Choosing between the three concepts and then choosing where within each concept to focus the attention of the organisations procurement is a difficult task in itself. To help an organisation to begin to tackle sustainable procurement, a number of public, private and third sector bodies and organisations have put together a number of toolkits that focus attention on various elements of procurement, for use at every stage within the procurement cycle. The purpose of these toolkits is to help organisations to tackle their procurement, and to help them to achieve sustainable procurement.

In 2009 the consultants ERM (Environmental Resource Management) produced a 'Scoping Study on Sustainable Procurement Tools and Databases' for Defra (ERM, 2009). The aim of the scoping study was to collate into one document all of the tools⁷ that are available, describing what the tools are designed to be used for, at which stage of the procurement process they should be used at, and some other useful characteristics of the tools, such as their ease of use, their credibility, and their reliability.

A total of 78 tools were identified, all offering a different perspective on how best sustainable procurement might be achieved, and where organisations should focus their attentions. Interestingly, out of the 78 tools identified and assessed, 65 were focussed on achieving environmental goals, with the remainder focussing on social or economic goals. The tools available fit into various stages of the procurement cycle. In the report ERM plot the types of tools available against the procurement cycle (see figure 5). The OGC (2003) have also produced an excellent report which is currently being updated but has a very useful chart mapping interventions within the procurement cycle (see Appendix 2)

⁷ What constituted a 'tool' was open for debate and came in many forms, for example, decision trees and guidance documents to spreadsheet calculations and complicated cost-benefit and life cycle-assessment tools.

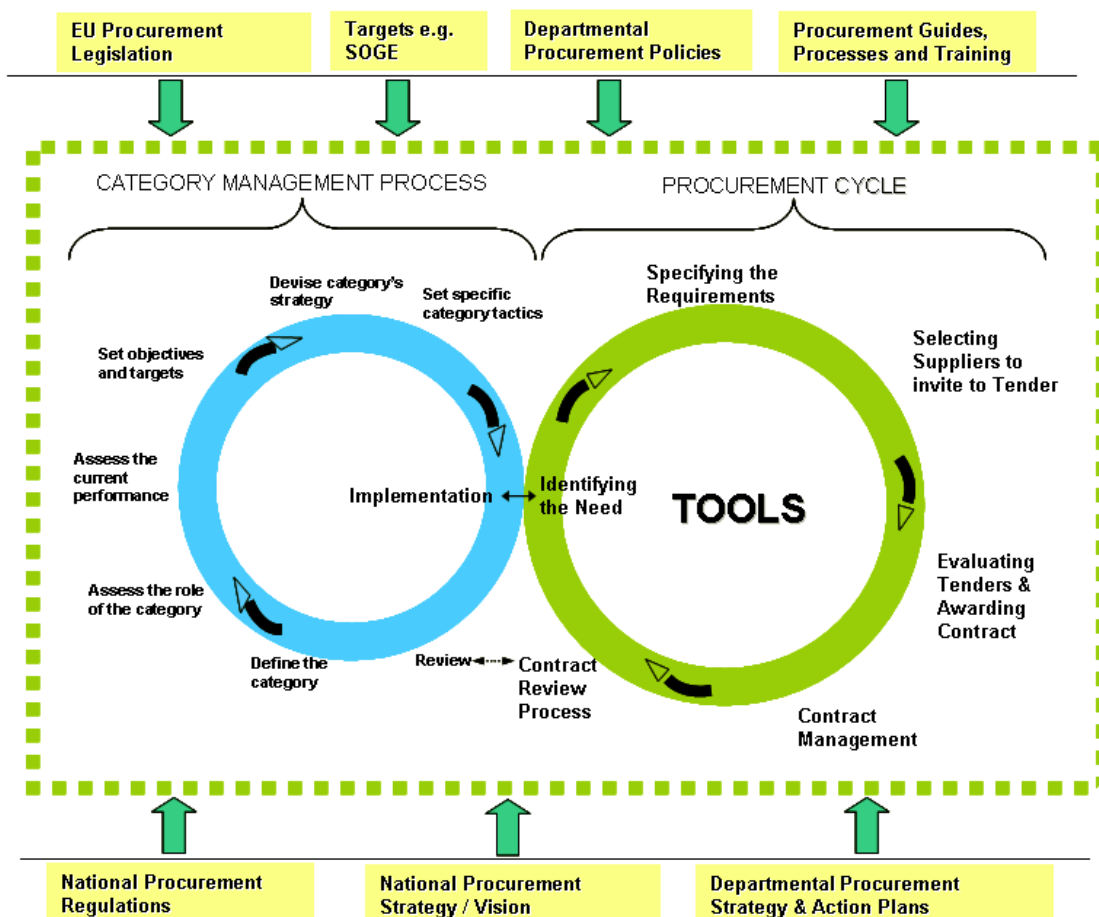


Figure 5: A schematic of where tools can be used in the procurement process (ERM 2009)

Given the constraints of this document it is not possible to review all 78 of the tools that are available. Three are presented below as notable examples.

3.5.1. Government Buying Standards (formerly Defra – Buy Sustainable Quick Wins)

Originally developed as “Buy Sustainable – Quick Wins” the Government Buying Standards service is a database of a number of products (circa 3,000) that have been self-certified by the suppliers as meeting a standard and set of criteria that has been set by central government – products either meet the ‘minimum standard’ (identified by a green tick), ‘best practice’ (green tick +) or for ICT products, ‘class leaders’ (green tick ++). The focus of the criteria is on the environmental impacts of the product, such as the energy used by the product in its lifetime, the materials and energy used to manufacture the product, and the end of life disposal. Currently 10 product categories are covered, from cleaning products and

construction to food, furniture, textiles and transport. All central government departments must meet the minimum standards.

3.5.2. New Economics Foundation – LM3 and the Money Trail

This Government recognised tool (LM3) helps procurers to analyse the economic and social impacts of money spent within the local community. As well as measuring how money spent impacts upon the local economy and society, the tool provides suggestions as to how the spend could be improved to enhance the benefits to both the local economy and society. The tool has been used in the past by public, private and voluntary sector organisations, and is freely available to download for some organisations. The Money Trail is the user-friendly guide book developed to help procurers get the most out of the LM3 tool, with worked and real-life examples.

3.5.3. Forum for the Future – Sustainable Procurement Tool

The tool developed by Forum for the Future covers all products and services and all aspects of sustainability. The focus is on improving environmental and social sustainability, and also allows for contract evaluation by rating performance before and after contract award. The tool was developed alongside a local authority, and has since been used by more than 20 local authorities. In addition to the tool, there is a comprehensive guidance notes available to help procurers get the best from their procurement.

4. Academic Literature

A small number of academic articles have sought to understand the sustainable procurement agenda from the point of view of the practitioner. Though in most cases the number of practitioners interviewed or questioned was quite small, the conclusions as to why the sustainable procurement agenda was struggling to gather pace, and the conclusions as to what might facilitate the sustainable procurement agenda, were remarkably similar.

In many of the papers reviewed, financial concerns such as value for money and cost/price were cited as the main barrier for implementation (Walker and Phillips, 2006; Walker and Brammer, 2009; Brammer and Walker, 2011; Thompson and Jackson, 2007; Preuss, 2007;

Hidson and Clement, 2008). Here, the argument against sustainable procurement is the initial and upfront costs of choosing a product or service that is more expensive because it also delivers against a set of sustainability criteria. It was suggested however, that though the costs of choosing a product that delivers sustainability criteria may be higher initially, over the medium term the costs become neutralised, and over the long term the costs are lower (Hidson and Clement, 2008).

There is consensus across the board that leadership and senior commitment within organisations are key to sustainable procurement. It was suggested that with support from the management of an organisation, finances can be made available for products and services that may initially cost more, but may deliver short term sustainability objectives, and may also deliver medium and long term financial benefits (Walker and Phillips, 2006; Walker and Brammer, 2009; Brammer and Walker, 2011; Thompson and Jackson, 2007; Preuss, 2007; Hidson and Clement, 2008).

Other common themes identified in the articles included the need for better information on the claims made by suppliers, about their products and services (Brammer and Walker, 2011; Thompson and Jackson, 2007; Walker and Phillips, 2006; Hidson and Clement, 2008; Walker and Brammer, 2009). Procurement practitioners suggested that, without being educated to a level whereby they can objectively evaluate claims themselves, and without a set of standards or an approvals body to verify the claims for every product or service, they weren't sure who or what to trust. This point is further amplified by the success of the Energy Star campaign in the USA/EU, and the Government Buying Standards in the UK. It was also noted that success in organisations, whereby procurement had begun to deliver against the sustainability agenda, was largely down to the personal commitment and drive of a small number of individuals within the organisation, at the operational level (Brammer and Walker, 2011; Walker and Brammer, 2009; Thompson and Jackson, 2007).

The sustainability agenda, as noted, balances environmental, social and economic priorities. A number of the articles sought to understand whether practitioners and the organisations they represented balanced all three, or whether they focussed on one area as a priority for a specific reason. In a review of the Procura+ campaign, Hidson and Clement (2008) noted achievements of some of the participants. Though the Procura+ campaign is designed to encompass all three areas of sustainability, the achievements of the three participants are all firmly located in the environmental sphere – focussing on energy efficiency across buildings

and equipment (Zurich City Council), adding green and environmental supply criteria to all procurement (Kolding Municipality) Agenda 21, ISO 14001:04, timber purchasing criteria (Barcelona City Council).

Walker and Brammer (2009) not only highlighted the differences between the three areas of sustainability across the public sector in the UK, but also noted the differences between different sections of the public sector in the UK. Across the public sector as a whole, they found that economic concerns were the most prevalent. Dividing the public sector up, they found that in the higher education sector, the focus is on environmental concerns, whereas local authorities tend to prioritise local and small businesses, with the health sector, in comparison, struggling to grapple with sustainable procurement at all. In a follow-up study capturing the international arena, Brammer and Walker (2011) again investigated the focus within the sustainability agenda. Again, they find that the environmental agenda is not the most prominent, and again that small and local businesses are the focus, along with labour and safety practices. Both studies contrast starkly with the focus group sessions held by Walker and Phillips (2006) where 'moving-on' from a focus on the environmental sphere was one of four key themes, with discussion centring around overcoming both social and economic concerns.

Though the number of studies and the numbers involved in each study are small, the barriers and facilitators to achieving sustainable procurement identified are clear and most certainly identify common themes across the studies. Achieving sustainable procurement, balancing environmental, economic and social concerns, is proving a challenge also, with different sections of the public sector prioritising and making in-roads with different objectives.

5. DMU's approach to Sustainable Procurement – an opportunity for carbon reduction

It will not have gone unnoticed by this stage in the report that sustainable procurement is a complex issue saturated with well-intentioned advice, guidance and bodies offering solutions. The ERM (2009) document clearly illustrates this. This section briefly outlines De Montfort University's own approach which seeks to explore and embed sustainable procurement into its carbon management strategy.

De Montfort University (DMU) has made a commitment to move sustainability out of the 'green ghetto' and into the mainstream culture of its organization. A key objective is that within the next ten years De Montfort University aims to make a major contribution to society's efforts to achieve sustainability and become a leader in the Higher Education sector. Activities are being driven by a cross-faculty sustainable development task force that has produced a Sustainability Strategy (2009) which sets out the overall direction for the organisation in terms of sustainable development. This strategy highlights the importance of measuring and monitoring environmental performance and GHG emissions to implement an ambitious carbon reduction plan. The strategy was agreed and adopted by the University's Board of Governors in February 2009. A thorough review of research, teaching and learning strategies are underway and sustainability is being embedded at the heart of these documents.

In August 2010, DMU commissioned Arup to undertake a carbon footprint assessment using a consumption-based approach. The overall ambition of the study was to quantify the total carbon footprint for the University, including procurement, identifying key carbon 'hot spots', reviewing possible interventions and identifying actions to make quantitative reductions in GHG emissions. The total consumption-based emissions for 2008/09 were estimated to be 51,080 tCO₂e (metric tonnes of CO₂ equivalent). Under the classification of the WRI/WBCSD GHG Protocol, scope 1 and 2 emissions represented 6% and 16% respectively to the overall emissions, while scope 3 emissions contributed 78% (see Figure 6). Procurement accounted for 48% of scope 3 emissions.

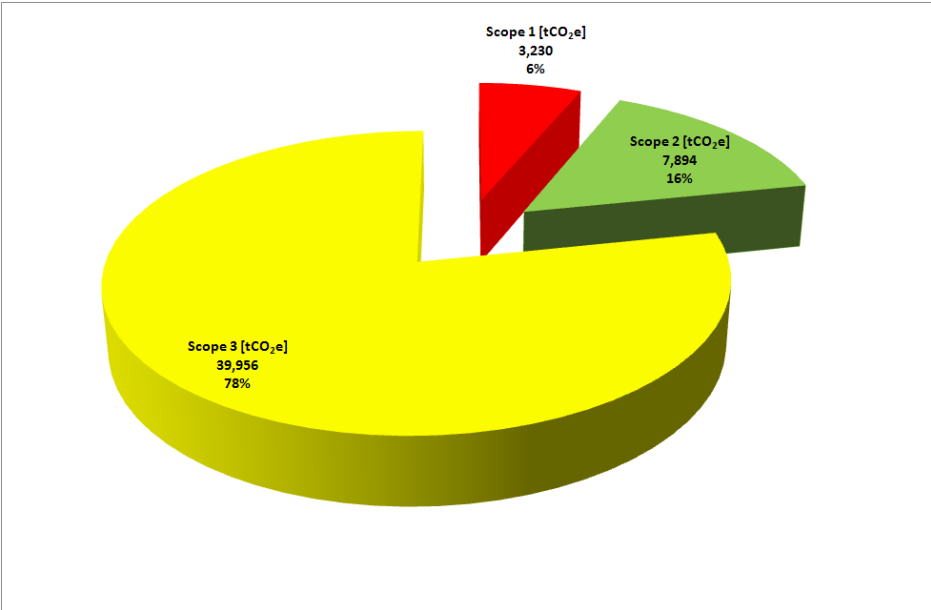


Figure 6:2008/09 DMU GHG emissions by scope

Within the procurement emissions, the largest contributors identified were:

- Construction. This sub-sector represented around 30% of the procurement emissions in 2005/06. However, these emissions almost doubled during the analysed period due to a significant investment in new buildings (56% of procurement emissions in 2008/09).
- Business services. This sub-sector includes spending on financial, legal and marketing services among other sub-categories. Emissions have reduced by around 10%. Despite the fact that this sub-sector is less carbon intensive than construction, the spend remains significant.
- Other manufactured products. This sub-sector comprises the embodied emissions resulting from the purchase of a range of manufacturing products, such as textiles, fibres, machinery and equipment, rubber, plastic and glass products, etc. Notably, spend on furniture accounts for around 25% of spend in this sub-sector. These emissions have decreased by around 29% in the period.
- Information and communication technologies (ICT). This sub-sector encompasses the supply chain emissions associated with manufacture of ICT products purchased by DMU including PCs, monitors, printers and associated consumables (including ink and toner cartridges).

This study conducted by Arup in collaboration with DMU also identified potential interventions in different procurement areas, such as construction, food and catering, ICT, and paper and printing. The analysed interventions comprised a mixture of quantitative and qualitative actions. The qualitative recommendations focused on exploring the opportunities to improve procurement processes, to deliver sustainable procurement and to embed the principles of sustainable construction in new build and refurbishment projects. The quantitative initiatives focused on potential financial and carbon savings from ICT and paper.

Within the ICT category, three key areas with significant potential GHG reductions and cost savings were identified:

- Server optimisation: more efficient use of servers
- Thin clients: replacement of traditional desktops (60W energy use) by thin clients (7W)
- Multi-functional Device (MFD) printers: integration and rationalisation of individual printers, scanners, fax machines and photocopiers to MFDs. This measure can also reduce paper and consumables

It was estimated that the total annual ICT capital and operational costs could be reduced by around 10% by the wide scale deployment of these three separate measures (see Table 3).

Table 3: Summary of ICT-related potential cost and CO₂e annual savings

Sector	Annual financial savings [£/year]	Annual GHG savings [tCO₂e/year]
ICT equipment	£172,443	90
Paper use	£20,928	16
Building energy	£168,983	760
Total	£362,354	866

Source: Arup (2010). Carbon footprint study of the De Montfort University 2005-2008, Final report, August 2010, Leicester, UK

For gaining support for sustainable procurement and making an argument for change, clear procurement choices need to be identified with measurable benefits.⁸ This particular quantifiable result from the study has inspired a series of projects currently under development in the university. For example, the university is currently analysing a programme for the integration and rationalisation of individual printers, scanners, fax machines and photocopiers to multifunctional devices and the formalisation of a tendering process policy to purchase energy efficient equipment into a set of procedures that can be used to assess the energy consumption and whole-life costs.

6. Conclusions

This report has attempted, in a manageable size document, to provide an introduction to the vast subject that is sustainable procurement. The plethora of documents, guidance and tools currently available is not only bewildering but illustrative of a degree of confusion still as to

⁸ Thomson, J. and Jackson, T. (2007). "Sustainable procurement in practice: Lessons from local government" in *Journal of Environmental Planning and Management*, vol. 50, no. 3, Routledge Publisher, UK, pp. 421-444.

what constitutes sustainable procurement. Competing objectives and definitions may mean that the three pillars of sustainability – economic, social and environmental are potentially pitted against one another. Studies of sustainable procurement in the public sector by Walker and Brammer (2009) and Thomas and Jackson (2007) present encouraging signs but all observe that sustainable procurement is more often than not reduced to ‘buying green’ rather than operating at the strategic level and even these decisions are limited by the availability of green products and their perceived higher costs.

Information is key and this report has shown that managing procurement better affords HEIs opportunities to meet their carbon reduction targets, and may enable more strategic, targeted interventions than simply ‘finger in the air’ approaches. The Higher Education Sector, like all public sector organisations is facing increased scrutiny and tightening budgets. The need to demonstrate value for money sits alongside requirements to show leadership in meeting ambitious carbon reduction targets. Recent research by De Montfort University shows that, if viewed strategically, sustainable procurement has a vital role to play in not just meeting these carbon reduction targets but to offer a strategic lead within organisations to improve service delivery whilst reducing costs and GHG emissions.

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8. Appendix 1: The Flexible Framework

	Foundation Level 1	Embed Level 2	Practice Level 3	Enhance Level 4	Lead Level 5
People	Sustainable procurement champion identified. Key procurement staff have received basic training in sustainable procurement principles. Sustainable procurement is included as part of a key employee induction programme.	All procurement staff have received basic training in sustainable procurement principles. Key staff have received advanced training on sustainable procurement principles.	Targeted refresher training on latest sustainable procurement principles. Performance objectives and appraisal include sustainable procurement factors. Simple incentive programme in place.	Sustainable procurement included in competencies and selection criteria. Sustainable procurement is included as part of employee induction programme.	Achievements are publicised and used to attract procurement professionals. Internal and external awards are received for achievements. Focus is on benefits achieved. Good practice shared with other organisations.
Policy, Strategy & Communications	Agree overarching sustainability objectives. Simple sustainable procurement policy in place endorsed by CEO. Communicate to staff and key suppliers.	Review and enhance sustainable procurement policy. In particular consider supplier engagement. Ensure it is part of a wider Sustainable Development strategy. Communicate to staff, suppliers and key stakeholders.	Augment the sustainable procurement policy into a strategy covering risk, process integration, marketing, supplier engagement, measurement and a review process. Strategy endorsed by CEO.	Review and enhance the sustainable procurement strategy. In particular recognising the potential of new technologies. Try to link strategy to EMS and include in overall corporate strategy.	Strategy is reviewed regularly, externally scrutinised and directly linked to organisations' EMS. The Sustainable Procurement strategy recognised by political leaders, is communicated widely. A detailed review is undertaken to determine future priorities and a new strategy is produced beyond this framework.
Procurement Process	Expenditure analysis undertaken and key sustainability impacts identified. Key contracts start to include general sustainability criteria. Contracts awarded on the basis of value-for-money, not lowest price. Procurers adopt Quick Wins.	Detailed expenditure analysis undertaken, key sustainability risks assessed and used for prioritisation. Sustainability is considered at an early stage in the procurement process of most contracts. Whole-life-cost analysis adopted.	All contracts are assessed for general sustainability risks and management actions identified. Risks managed throughout all stages of the procurement process. Targets to improve sustainability are agreed with key suppliers.	Detailed sustainability risks assessed for high impact contracts. Project/contract sustainability governance is in place. A life-cycle approach to cost/impact assessment is applied.	Life-cycle analysis has been undertaken for key commodity areas. Sustainability Key Performance Indicators agreed with key suppliers. Progress is rewarded or penalised based on performance. Barriers to sustainable procurement have been removed. Best practice shared with other organisations.
Engaging Suppliers	Key supplier spend analysis undertaken and high sustainability impact suppliers identified. Key suppliers targeted for engagement and views on procurement policy sought.	Detailed supplier spend analysis undertaken. General programme of supplier engagement initiated, with senior manager involvement.	Targeted supplier engagement programme in place, promoting continual sustainability improvement. Two way communication between procurer and supplier exists with incentives. Supply chains for key spend areas have been mapped.	Key suppliers targeted for intensive development. Sustainability audits and supply chain improvement programmes in place. Achievements are formally recorded. CEO involved in the supplier engagement programme.	Suppliers recognised as essential to delivery of organisations' sustainable procurement strategy. CEO engages with suppliers. Best practice shared with other/peer organisations. Suppliers recognise they must continually improve their sustainability profile to keep the clients business.
Measurements & Results	Key sustainability impacts of procurement activity have been identified.	Detailed appraisal of the sustainability impacts of the procurement activity has been undertaken. Measures implemented to manage the identified high risk impact areas.	Sustainability measures refined from general departmental measures to include individual procurers and are linked to development objectives.	Measures are integrated into a balanced score card approach reflecting both input and output. Comparison is made with peer organisations. Benefit statements have been produced.	Measures used to drive organisational sustainable development strategy direction. Progress formally benchmarked with peer organisations. Benefits from sustainable procurement are clearly evidenced. Independent audit reports available in the public domain.

9. Appendix 2: Guidance from the OGC: Joint Note on Environmental Purchases (2003)

