# Sustainable Procurement: The Challenge for Contracting Organisations

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**Abstract:** *This paper examines the impact and effect of the implementation of sustainable procurement in the public sector within construction and how this necessitates changes in contracting within the construction industry. The research will reveal criteria that can help develop a policy in implementing successful sustainable procurement within large and medium construction organisations in the UK in working in the public sector. This paper will also analyse current contracting organisations, what they are doing and how they have responded to international and national requirements to successfully implement sustainable procurement in the public sector. The study concludes that public sector sustainable procurement is becoming increasingly important due to government investment whereby contracting organisations need to operate as a "100% Sustainable Procurement Organisation" in order to deliver wider objectives of sustainability to satisfy international and national directives. However, this paper has also concluded that this is unrealistic due to the variety in sizes of organisations within the industry therefore there is no perfect solution and organisations will interpret sustainable procurement differently. Finally, the author has developed diagrams which can be used as guides to create benchmarks for different sized organisations to implement sustainable procurement within the public sector in some capacity.*

*Keywords: contracting organisations, sustainable public procurement*

## Introduction

This comprehensive study analyses public sector sustainable procurement (SP) within large- and medium-sized construction contracting organisations which act in the role of main contractors in the West Midlands. Some suggestions for change further afield will be made, based on key criteria of SP found in this study. For the purposes of this research the definition of a medium organisation is from the European Commission (EC) which states that it is a company which employs between 50 and 250 people where turnover is between €10 and €50 million, and a large organisation is a company which employs more than 250 people and turnover is greater than €50 million. (European Commission, 2013). This study defines what SP is, how it is developing within UK construction companies and why it is being implemented within the UK construction industry. The most important part of the study is identifying key implementation

criteria that need to be adopted and implemented by construction organisations as part of their policy.
SP is an increasingly important part of public sector procurement. This is in response to the need of the United Nations (UN), European Union (EU) and UK Government to promote it within policies to support development of goods, services and products that are environmentally sustainable, as well as being socially and economically responsible. Consequently, this is a significant area of research to determine what is required of organisations as a response to this (Walker and Brammer, 2009, p. 128). This has resulted in directives being created from an international to local level appearing in numerous publications from various levels of Government. However, they need to be reviewed in terms of their implementation in practice, on construction projects, within the UK. Implementation is taking place through issuing policies, performance frameworks and good procurement practice at national, regional and local level (Milliband and Healey, 2007, p. 3); therefore being identified by UK Government through the Sustainable Development Strategy also known as 'Securing the Future', which was developed by the UK to "lead by example" (Milliband and Healey, 2007, p. 2). In response, the UK Government set up a task force to analyse requirements and provide recommendations, which ultimately led to the development of the 'UK Government's 'Sustainable Procurement Action Plan', also known as 'Procuring the Future', devised to present actions required to deliver SP internationally, nationally and locally through construction (Milliband and Healey, 2007, p. 2).

The origins of SP are in the 2002 Johannesburg World Summit on Sustainable Development, where participating countries decided that a 'Sustainable Procurement Implementation Plan' was required: therefore, policies have been developed at various levels to correct gaps identified within Agenda 21, which was developed in the first "Earth Summit" in Rio de Janeiro in 1992 (Doran, 2002, pp. 2, 4). The most recent summit was in June 2012, in Rio de Janeiro, where SP was once again recognised as an important component of Sustainable Development (Stoddart *et al*., 2012, pp. 3, 4).

The author works for a medium- sized main contractor, for whom SP is not yet an official company policy, although aspects of SP are in evidence such as site waste management plans (SWMP) and implementation of corporate social responsibility (CSR). SP is a new area of development and has provided motivation for the author as current public-sector tenders have a SP requirement as part of the pre-qualification questionnaire (PQQ), which may have resulted in the organisation potentially losing out on the opportunity to tender. The findings of this research will be presented to the management of the company to advise them on this subject.

This study would like to highlight advantages to UK construction companies which will increasingly need to focus on how to meet requirements of SP in tendering, and ultimately in managing construction projects, and what effects this will have on the sector. Furthermore, it is anticipated that government opinion will not change and, if anything, is likely to get more stringent in assessing this. Therefore, this research will indicate how organisations need to consider the requirements of 'Sustainable Public Procurement.' However, it is recognised that this is a very new concept

and companies are also dealing with continuing innovation in materials, a very difficult economic situation which has persisted since 2008 and other government initiatives such as use of Building Information Modeling (BIM) in public-sector projects. Consequently, the reality of changing policy and responding to yet another initiative presents very real difficulties to organisations. However, as will be shown, there is already substantial progress in this area which is perhaps not identified and the changes may not be as dramatic as envisioned thus assisting profitability. In addition, the recent recession and the need to make profit are making implementation difficult to apply to practice; therefore the research will seek to identify barriers.

**Aims and objectives**

The aim is to investigate what SP means in construction contracting and identify key criteria, specifically in public- sector procurement and apply these to the context of large and medium sized construction organisations in the UK.

The following objectives will be pursued in meeting this aim:

- Identify what influences SP within the UK public sector.
- Demonstrate the criteria relevant to construction SP in the public sector from an international to local level.
- Compare how SP is delivered in practice and theory in the public sector within the UK.
- Establish what is required to develop a SP Policy in the UK.

**Literature Review**

Berry and McCarthy (2011) state that SP is “a process whereby organisations meet their needs for goods, services, works and utilities” which benefits “organisations”, “society” and the “economy” whilst “minimising damage to the environment.” This is very difficult to assess as a result of an undefined definition and lack of standardisation of implementation. Kalubanga (2012) discovered this to be a result of increasing pressure from clients and Government within both private and public sectors. The Waste and Resources Action Programme (WRAP), The Society of Local Authority Chief Executives and Senior Managers (SOLACE), The Department of Environment, Food and Rural Affairs (DEFRA) and CIRIA support this and believe that sustainability should be incorporated into the procurement process (WRAP, 2003, p. 5), therefore demonstrating its important relationship with society, the economy and the environment. However, Walker and Brammer (2009) and Simms (2006) recognise that this is usually through public-sector, rather than private-sector, procurement, due to Government’s influential nature, being the biggest public sector purchaser with the greatest purchasing power and influence over the behaviour of private organisations within public-sector projects (Walker and Brammer, 2009, p. 129). Brammer and Walker (2011) have found that SP is becoming increasingly important in the private sector, as previous research studies have highlighted the link between procurement, sustainability and supply chain management, which previous research has also found to reduce risk and enhance performance for those organisations who are already trying to implement it.

Walker and Brammer (2009) have also distinguished that private sector projects look in depth at environmental issues of procurement and its economic benefits but disallow the effect on social aspects therefore not conforming to set requirements to meet elements of SP equally. This is appreciated by Pitt *et al*. (2009) and Laurie and Worrel (2012) who believe that "true sustainability" can only be accomplished if economic, social and environmental factors have the right balance. Similarly, this is supported by Walker (2006) and the Centre for Research in Strategic Purchasing and Supply (CRIPS) who recognise that most organisations are actually concerned with purchasing from small or local companies and employee health and safety rather than social, economic and environmental issues as it is more efficient and cost effective, therefore not taking all aspects of procurement into consideration.

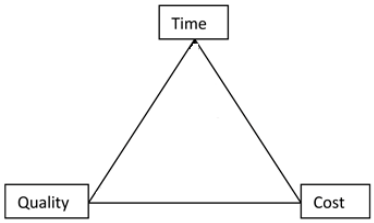
Simms (2006) has discovered that the business side of the Government is failing to deliver on its own policies resulting in missed opportunities and them not "leading by example." Milliband and Healey (2007) have proposed to alter this as a response to the 'Procuring the Future' report by Simms (2006).

Teal (2005) suggests that SP is a result of harnessing purchasing power and meeting international targets, therefore demonstrating procurement's close relationship from international to local level. Similarly, Berry and McCarthy (2011) acknowledge purchasing power within procurement if the policy follows SP, therefore supporting a sustainable future by benefiting society, the economy and the environment. This is maintained by Brammer and Walker (2011) who have deduced that Government procurement has favoured UK companies rather than foreign suppliers to improve the economy within the local area and reduce the carbon footprint of projects, which demonstrates good SP as identified by Milliband and Healey (2007).

Simms (2006) has suggested that we should be "using procurement to support wider social, economic and environmental objectives in ways that offer real long-term benefits" (Mott MacDonald, 2009, p. 2). This is recognised by organisations such as DEFRA, The Environmental Association for Universities and Colleges (DEFRA and EAUC, 2012) and HM Government who believe that it is "the engine" that delivers sustainable development (Drexhage and Murphy, 2010, p. 2). This is also distinguished by Teal (2005) and local authorities who acknowledge that it will always be an international target of sustainable development, therefore relying on the UK to conform, thus demonstrating the importance of implementation. It could be said that SP is a key factor in Sustainable Development. However, it is only one of many elements as appreciated by Laurie and Worrel (2012).

Kalubanga (2012) has discovered that sustainability has become the *"fourth dimension"* in modern procurement alongside time, cost and quality, which needs to be added to the traditional Barnes procurement triangle (Figure 1) (Lock, 2007, p. 21).

Figure 1: Barnes Procurement Triangle:




(Association for Project Management, 2012)

This has also been identified in SP Guides and research by institutes such as WRAP, SOLACE, DEFRA and CIRIA, therefore highlighting its importance in UK construction and the procurement process.

Construction organisations such as Royal Institute of Chartered Surveyors (RICS), Chartered Institute of Building (CIOB) and Institution of Civil Engineers (ICE) have issued SP guidelines under Government influence to help construction organisations, which signifies their importance. Preuss (2009) recognises the influence that Government has upon the institutes and Local Authorities as they are obliged to report and provide leadership to the industry following policy from central Government. Subsequently, Local Authority policies have been developed to identify requirements to meet Government standards (Cheshire West and Chester Council, 2012; East Herts Council, 2009). This has originated from requirements set by the UN and the World Summits of 1992, 2002 and 2012 which enforce implementation. The most recent summit highlighted SP as a principle to ensure a "Green Economy" (Stoddart *et al*., 2012, pp. 3, 4) therefore revealing its pathway through reducing, re-using and recycling of procurement products (Stoddart *et al*., 2012, p. 4). This is supported by The Charted Institute of Purchasing and Buying (CIPS, 2011) and Marras (2012) which believes SP to be "green", therefore minimising environmental impact through reducing and minimising waste, which is in agreement with the reports by Michael Latham and John Egan on waste and inefficiencies in the UK construction industry (Dhaliwal, 2012, p.38; Carris *et al*., 2011, p. 2; CIPS, 2011, pp. 3, 5). Consequently, this demonstrates why increasing implementation of SP within construction has occurred. It could be said that SP is the key to a sustainable future but not everyone in the industry has bought into the idea, hence some construction organisations not implementing it within practice.

**Methodology**

This study used both primary and secondary research therefore exploiting both primary and secondary sources, thus using a "mixed method" of research also known as "triangulation" (Blaxter *et al*., 2010, p. 85). This type of research technique has been chosen as it provides a greater variety of sources, which is advantageous as it allows development of more appropriate findings to answer the aim and objectives, providing an insight into the topic and drawing of more appropriate conclusions.

Secondary research through secondary sources has benefited this study as this type of information has already been analysed and evaluated (Stewart and Kamins, 1993). However, initial secondary research was hindered as it was difficult to find a specific level of focus in terms of construction contracting due to the large nature of the topic since it is relatively new and historically research has found SP to be included in other contracting policies rather than being separate. Consequently, secondary sources were not only used for their topical information but also for their references to expand the range of information available for the research. Following up references in this way is identified by Greenhalgh (2005) as "Snowballing", which has been used effectively to broaden topical knowledge. This has also offered advantages as sources found have been current. Furthermore, Kitchin and Tate (2000) caution that secondary sources can provide excessive amounts of opinion and bias therefore not providing reliable information, which has resulted in

considerations being made by the author and monitoring throughout.
Primary research was conducted for latter objectives to adequately answer the main aim of the study. McNamara (1999) recognises the need for primary research, as it is a good way of obtaining peoples experiences, views and stories behind the subject. Silverman (2010) has found that primary data can provide an element of risk through creation of "artificial" data in "non-natural environments" set up by the researcher such as "interviews" and "focus groups"; as a result considerations were made and examined by the author through selection of data from these sources.

Data was collected from published literature such as journals, policies, and books, which have been reviewed looking specifically for the term of SP in construction, subsequently identifying the UK's stance and its origins which have been recognised in the literature review and results. The search decided to concentrate on 'public sector sustainable procurement' and exclude 'private sector sustainable procurement' as initial research clearly found that, at present, public procurement is the most important sector within construction through Government investment. This was completed as the study would have become too large which adds greater risk of bias therefore the author decided to concentrate on well-known large private multinational, blue-chip construction organisations who predominately work in the public sector such as Kier, Skanska, Galliford Try and Carillion. It is also this area of procurement where policy is advertised as part of the procurement strategy as Government have set a policy regarding SP that needs to take place.
The main sources of secondary data used have been publications of policies and guides from central Government, professional institutes, bodies and UK construction organisations. The author has also analysed policies from UK construction main contractors who are employed within the public sector of the construction industry and operate a SP policy or action plan therefore reviewing main contractors such as ISG shown in Figure 7. Furthermore, Local Authority policies such as Kirklees, shown in Figure 6, have been reviewed for comparative purposes, which has been demonstrated in the results and discussion section of this study. The data has been compared using a tabulated technique to easily identify re-occurring factors. The various tables have resulted in one table of key criteria being established to implement successful SP, which is shown in the results section of the study. Content analysis has been performed on the written documents, which has allowed the author to analyse existing data to establish requirements of a SP policy (Stewart and Kamins, 1993, pp. 6).

Primary source interviews were undertaken with construction professionals whose work is affected by SP. Five interviews were undertaken by telephone as interviewees were unable to commit time for a face-to-face interview. Furthermore, informal notes were recorded and copies were kept on a password protected computer with no access by others for ethical reasons. A copy was also given to the interviewee so that they could comment on the summary notes taken to ensure that it was not interpreted incorrectly. The author also developed consent forms for the interviewees to fill out prior to the interview as consideration under the Data Protection Act 1998, therefore this offered the interviewee the opportunity to remain anonymous and ensure that confidentiality will be kept at all times.

The interviews were originally intended to be non-structured and pre-dominantly led by the interviewee therefore being

naturalistic and in-depth, which would provide an interviewee led interview (Stewart and Kamins, 1993, p. 5; Blaxter *et al.*, 2010, p. 193) However, this was not the case as the author soon realised that semi-structured interviews would benefit the study far more as they are able to develop better results therefore 9 key questions were identified as shown in Figure 2.

Figure 2: Questions Established by the Author for Interviews:

Grand Tour Questions:
1. How is Sustainable Procurement managed within your organisation?

2.Why is Sustainable Procurement managed within your organisation?

Sub Questions:
1.How does your organisation review and monitor implementation of Sustainable Procurement?

2.Has your organisation encountered issues with implementing Sustainable Procurement? If so what issues have been encountered and why?

3.Who ensures that Sustainable Procurement is implemented within your organisation and how do they ensure it is implemented?

4.What do you think are the most important factors in implementing Sustainable Procurement in your organisation?

5.Do you have any issues with Sustainable Procurement and implementing it within your job role? If so what are the issues, why are they issues and how do you resolve them?

6.How have your supply chain reacted to Sustainable Procurement?

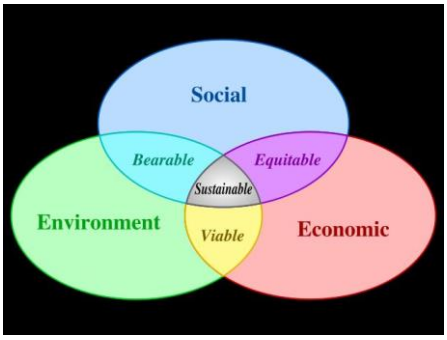
7.What is the general consensus within your organisation towards Sustainable Procurement?

The questions were derived through Creswell's (1994) approach to semi-structured questions, which identified two levels whereby there are 2-3 *"grand tour"* questions and 7-8 *"sub questions"*. This technique of interviewing was undertaken as it provides a better structure and insight into the experiences of the interviewee (Rubin and Rubin, 2011). The purpose of the interviews were to highlight and determine SP in practice compared to theory therefore this has compared theory with practice, which has been identified in the results and discussion section of this study.

**Results and Discussion**

There was a clear agreement from primary interviews and secondary research that SP has become an implementation forced upon the UK construction industry to meet international directives when procuring goods, services and products to ensure they are environmentally friendly as well as socially and economically responsible. (Walker and Brammer, 2009, p. 128) Research has appreciated that it is being led by the EU and the UK therefore being implemented down the chain through policy implementation. Consequently, the triple bottom line diagram, shown in Figure 3, has been established to demonstrate this as it illustrates a balance between social, environmental and economic factors.

Figure 3: Triple Bottom Line Diagram:




(DB Reflections, 2012)

This has resulted in implementation from international to local level and a snowball effect has occurred down the UK construction chain to ensure it is instigated throughout its supply chain to slow down the volume of waste produced during construction by looking to the lifecycle of components. (Wyatt *et al*., 2000, p. 77) Consequently, implementation of SP through regulation, facilitation and partnering (Slob *et al*., 2007, pp. 2) have become vital in executing this effectively through policies, strategies and action plans from public bodies at the forefront to formally spearhead SP.

**The Concept of Sustainable Procurement**

After analysing secondary sources it is clear that numerous guides, such as the *"Sustainable Procurement in Government: Guidance to the Flexible Framework"* by DEFRA and *"Sustainable Procurement"* by CIPS, have been published to help the UK construction industry implement SP. In response, SP policies, action plans and strategies have been produced from international to local level resulting in generation of various definitions due to SP being a modern process that has been continuously developed and improved within the last 20 years. (Doran, 2002, pp. 2 & 4) A clear definition has not formally been agreed upon due to its broad nature but initial research has grouped definitions and defined it as 'the process organisations use to meet their needs for goods, services, works and utilities to maximise the benefits to the organisation, society, the economy and the environment, consequently minimising damage.'

Additional research undertaken has clearly highlighted that SP is more complicated than a simple definition therefore this study has sought to determine a clear concept of SP that can be universally used within the construction industry in the UK. It has been identified as *"good procurement"* that is coherent with the values of Sustainable Development (Walker and Brammer, 2009, p. 128), which has resulted in use of purchasing processes in a way that offers social, economic and environmental benefits (Mott MacDonald, 2009, p. 2). This comprises of sustainable considerations, through purchasing power, as well as standard factors of price, quality and cost over the lifetime of the product, service or good being procured (CIPS, 2011, p. 11). This has resulted in an integrated supply chain to ensure best price and trust therefore recognising optimisation of efficiency in procurement which will allow performance and capabilities to be reviewed to ensure that the expectations of the chain are still the same (Hartman and Caerteling, 2010, pp. 354, 356), thus resulting in collaborative partnerships (Dhaliwal, 2012, p. 38; Carris *et al*., 2011, p. 2; East Herts Council, 2009, pp. 29, 30; Exeter City Council, 2009, p. 1). Moreover, the integration of procurement and its lifecycle depends upon SP therefore expecting Project Management to schedule, monitor and report on procurement processes throughout the lifecycle of the product, service or goods being provided, which allows monitoring and control to ensure it is procured sustainably (Office of Government Commerce, 2003, pp. 16, 17, 18). Finally, it has been identified as a simple process that offers clear benefits with long term cost effectiveness which ensures value for money (Simms, 2006, p. 2).

The author has produced two diagrams to explain the concept. Figure 4 demonstrates a simplified hierarchy and link between the integrated supply chain and its line of implementation from an

international to a local level therefore showing the origin of SP from international directives. This also shows how the concept and its implementation can be passed through the supply chain to ensure successful implementation. However, there are 7 corporations within the chain, as shown with a red box. Consequently, the vast amount of corporations has led to different interpretations of SP therefore the concept and diagrams constructed by the author will allow the construction industry in the UK to standardise implementation.

Figure 4

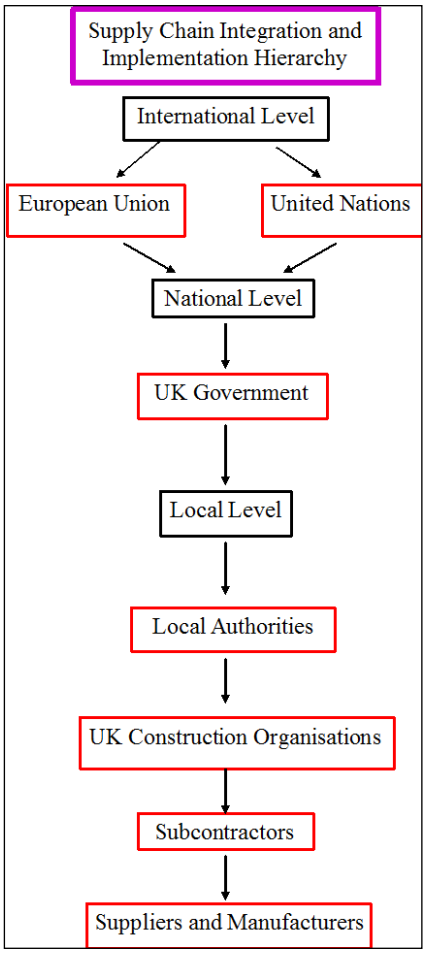
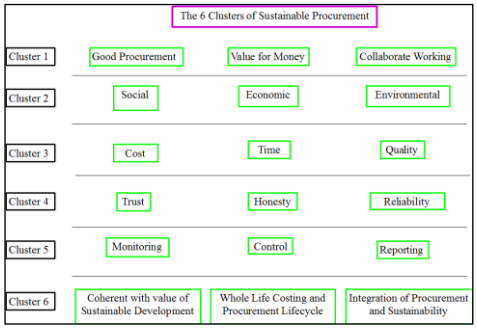



Figure 5 has been developed into 6 separate clusters, which group 3 factors within each cluster from the concept of SP recognised by the author in research of various Local Authority SP policies such as Kirklees Council in Figure 6. The idea behind the '6 Clusters' diagram,

Figure 5




produced by the author, is that each cluster represents a sector of SP identified in policies that needs to be implemented for it to be successful. Each cluster has been selected by the author from re-occuring factors within policies. Each cluster must be performed and the factors involved in each cluster must be executed equally alongside each other as they are reliant on one another. In an ideal world each factor in each cluster would need to be performed to ensure a '100% SP Organisation' but in reality this is never achieved. Consequently, the 6 Cluster diagram allows one or two clusters to be missed out if the organisation cannot implement them due to capacity and resource issues, as some organisations may be too small to have the finances to implement this fully. However, some of the other clusters must be implemented otherwise the organisation will not be operating SP at all. This diagram will allow an organisation to initiate SP even if they cannot comply with all aspects.

## Criteria for Implementing Sustainable Procurement in Theory

After analysing secondary sources it is clear that there are fundamental factors in implementing SP and they have been recognised in this study through a list of criteria identified to help implement

successful SP within UK construction organisations in the public sector. This has been conducted through comparisons of SP policies, strategies and action plans from an international to local level therefore being extracted from policies such as *Sustainable Development Innovation Briefs* by the United Nations Department of Economic and Social Affairs (2008) and *The UK Government Sustainable Procurement Action Plan* by Miliband and Healey (2007). To compare the policies the author tabulated the data, as shown in Figure 7A and 7B, to arrive at the criteria established in Figure 8.

Figure 7A: Tabulated Comparisons of Sustainable Procurement Policies:

**Local Authority Sustainable Procurement Policy/Strategy Comparison**

**KEY:**

- Value for money
- Encourage in tendering
- Training
- Promote sutainable options
- Whole life cycle costing
- Promote re-use and recycling etc
- Reviewing and monitoring
- Equality, diversity, ethical and fair
- Encourage balance of social, economic and environmental factors
- Others

Key Targets

| | Lancaster City Council | Cumbria Council | East Herts Council | Exeter City Council | Slough Borough Council | Kirklees Council |
|---|---|---|---|---|---|---|
| 1 | Achieve best value | Ensuring policies are environmentally, economically, socially and ethically sustainable | Clear framework for procurement | Ensure optimum value for money | Cost effective and efficient services | Recognises vital role in furthering sustainable development through procurement of buildings, goods, works and services |
| 2 | Planned, responsive, professional, well-managed | Aims to generate efficiency savings, facilitate improvements | Framework for best value | Whole life approach | Ensuring best value services provided to customers and improvement required | Recognises the fact that procurement decisions have socio-economic and environmental implications for now and future generations |
| 3 | Embraces the national action plan | Value for money and procures quality services and supplies which are tailored to local needs | Improve quality of peoples lives and preserve all that is best | Minimum environmental impact and maximum cost effectiveness | Embraces whole supply chain through contract monitoring, and management arrangements | Educate, train and encourage purchasers to review consumption of goods/services |
| 4 | Using procurement to support wider social, economic and environmental objectives in ways that offer real long term benefits | Commitment to deliver excellent services to meet the needs of people and places and its procurement policies, procedures and practices | Working collaboratively with partners and communities | Embraces initiatives | Promote effective procurement | Reduce use |
| 5 | Set an example for public and private organisations | Balance the full consideration of cost, quality, and whole life value to ensure outcomes environmentally, socially, economically and ethically sustainable | Promoting prosperity and wellbeing | Deliver efficiencies but not at cost of quality | Balance between setting out procurement principles and objectives | Adopt environmentally friendly alternative products |
| 6 | Enhance public trust and reputation | Promoting the local economy | Providing access to opportunities | Identify and embrace social responsibility | Reflects statutory requirements set that the council must ensure to meet best practice outlined by the National Procurement Strategy for Local Government and England | Make staff aware of policy |
| 7 | Help build sense of common responsibility towards sustainability | Considering the economic, social, environmental and ethical impact of purchasing decisions | Fit for purpose | Framework to obtain value for money | Supports key priorities set in the sustainable community strategy | Consider costs and benefits of environmentally friendly goods/services |
| 8 | Procuring local to support local economy, reduce miles, cut greenhouse emissions and contribute to peoples health | Helping to deliver National objectives | Shaping future | User and community engagement and analysis | Prioritises economy, skills, health, wellbeing, regeneration, environment, housing, safety, community cohesion | Investigate impact of expenditure on goods and services to identify environmental impacts |
| 9 | Efficient use of energy leads to financial savings | Flexible framework approach used as developed by the Sustainable Procurement Taskforce | Follow governments direction on procurement | Monitoring outcomes, evaluating and challenging services | Undertaken in conjunction with risk register | Investigate opportunities for re-cycling and re-use of products |
| 10 | Environment efficient measures to reduce running costs | Works with organisation to provide an effective partnership | Requirements for value for money | Understanding the needs of community and challenging existing services | Provide reliable and responsive quality services | Assess environmental and corporate risks |
| 11 | Management of long-term risks | Minimise duplication, share skills, information and knowledge to develop a clear direction and deliver excellent services | Clear and focused on achieving value for money | Fair and open competition | Deliver cost effective and efficient solutions | Work in partnership with organisations |
| 12 | Basing decisions on sustainability criteria to ensure value for money in the long term | Ensuring that the right contracts are in place with suppliers to deliver priorities and deliver best value | Procurement options chosen to support and deliver aim and objectives | Incentives for providers and sustainable funding | Effective leadership | Promote best practice |
| 13 | Take the whole life cost approach to procurement | Identify and deliver annual efficiency savings | Process of balancing cost against community benefit | Best value | High standards of procurement practice | Supplier evaluation process in relation to environmental criteria in awarding of contracts |
| 14 | Required to contribute to sustainable development | Encourage small and medium sized enterprises by ensuring 10 days payment terms | Identify shortfalls and skills required to ensure procurement skills are strengthened within the organisation | Linking payments to performance outcomes | Use of innovative procurement techniques | Allow suppliers option to submit environmentally friendly alternative products |
| 15 | Sourcing of natural resources | Achieve good and excellent satisfaction rates from customers | Plans to manage supply and demand | Efficient planning | Sustainable, commercial and financial solutions | Specify use of environmentally friendly goods |
| 16 | Sourcing of renewable resources | Early engagement and consultation in tender stage and procurement activities | Review of social, economic and environmental policies to ensure they support the procurement procedures | Duty on council since 2000 to seek to promote and improve economic, social and environmental well being | Customer focused approach | Educate suppliers |
| 17 | Type and quantity of raw materials and energy used | Ensure equality and diversity | Encouraging local businesses | Wide range of products, services and goods | All works undertaken within the procurement framework and comply with procurement legislation | Encourage and persuade supplier to adopt policy |
| 18 | Transport and pollution | Increase use of recycled products | Establish the effect on local, national and world environments | Integrates supply and demand with environmental, social and economic factors to procurement | Committed to delivering value for money | Encourage and persuade supplier to adopt environmentally friendly processes |
| 19 | Durability, adaptability, re-use, consumption, waste of products and equipment | Reduce CO2 emissions | Reducing waste | Meet obligations to stakeholders and customers whilst balancing environmental, social and economic objectives and commitment to sustainable development | Promoting sustainable procurement options | Local supplier encouraged to bid for works |
| 20 | Operation and maintenance implications | Achievement of levels through the flexible framework | Using environmentally friendly materials | Consideration of entire life cycle of products | Putting value for money at the centre of procurement | Work with suppliers to make changes and improve supply chain sustainability |
| 21 | Only buy supplies when necessary | Achieve minimum of very good BREEAM standards | Energy efficiency | Consider environmental impact of products over its lifetime | Improving outcomes through efficient procurement | Comply with environmental legislation |
| 22 | Minimise amount of material used | Performance monitoring | Commitment to equality - equality of opportunity in all aspects of activity | Consider social aspects such as labour, equality, conditions and diversity | Procedures to ensure procurement arrangements, procedures and practice achieve the best and most effective | Meet targets set by the Sustainable Procurement Task Force |
| 23 | Explore re-used/re-allocated systems | Framework for procurement and sets targets for measureable improvements | Encourage partner organisations to share and help deliver aspirations | Fair trading | Best proactive to ensure that needs of goods, services, works and utilities are met to achieve value for money on a whole life basis and in turn generates benefits | |
| 24 | Source materials made from re-cycled products | Comply with the EU Procurement Directives, UK Legislation and council procedures | Value for money and effective use of resources | Consider regulations and legislation | Working to achieve the 5 levels of National Sustainable Procurement Strategies Flexible framework | |
| 25 | Source products that are recyclable and minimal packaging | Procurement in effective and efficient management to ensure value for money | Meet user requirements | Consideration of price, quality, risk, availability and functionality of products | Ensure environmental considerations are included in procurement | |
| 26 | Select more durable and environmentally friendly products | Procurement will reflect and build on best practice | Should be read in conjunction with other policies and strategies | Stimulate innovation, create jobs and retain wealth in the area | Value of money at centre of procurement | |
| 27 | Buy energy efficient equipment | Procurement will optimise opportunities | Determining the need, buying and delivery of products | Low Carbon economy | Cost reduction | |
| 28 | Use energy efficient and less polluting vehicles | Procurement will be fair, open and transparent and to the highest standards of probity, integrity, honesty and professionalism | Appointment of a shared procurement officer who offers professional advice and guidance on developing contracts, tendering, evaluation and monitoring procedures and management plans | Continuous improvement | Increased procurement performance and practice | |
| 29 | Long term financial efficiencies | Trained, skilled, knowledgeable people required to deliver effective procurement | Obtaining supplies, services and construction works spanning the life cycle of the asset or service | Legal and ethical procurement | Ensure a skilled workforce | |
| 30 | Supply chain costs through whole life cycle costing | Invest in training, development and learning | Securing services and products that meet the needs of users and local communities | Social responsible procurement models to engage | Staff training to levels required for their role in sustainable procurement | |
| 31 | Inform all suppliers of good and services of the policy | Meeting community needs | A common framework is provided to be conducted | Economic regeneration | Performance reviews | |
| 32 | Seek information from suppliers about the environmental effects of products | Engaging suppliers - suppliers have a key role to deliver services to those who live, work and visit the area | Procure best value supplies | Sustainability and environmental management | | |
| 33 | Encourage all supplier to have a policy | Only do business with suppliers who meet sustainable objectives | Adopting life cycle approach | Adopts Sustainable Procurement Taskforce Flexible Framework approach | | |
| 34 | Review policy every two years | Provide information and training in tendering processes | Provide effective and up to date procurement procedures | Aligns council policy with national principles | | |
| 35 | Training | Economic benefit in local economy | Ensuring procurement helps deliver objectives | Offers opportunities to challenge and improve sustainable procurement practices | | |
| 36 | Reviewing | Monitoring of performance through performance measurement system | Regulation of procurement function set out in the rules | Suggestion of practical steps and actions suppliers etc can take | | |
| 37 | Environmental checklist is pre-qualification questionnaire | Performance indicators used to result in value for money, service improvements and sustainable outcomes | Rules are those determined by EU and UK law | | | |
| 38 | Sustainable procurement must be encouraged as a marking criteria when tendering a contract | Continuous improvement to support government legislation | Continue to review strategy | | | |
| 39 | | Review and monitoring | All contracts are adequately monitored and managed to achieve a service on time, to budget and in accordance with specification | | | |
| 40 | | | Engagement of staff in procurement and contract management - training and qualifications provided | | | |

# Figure 7B: Tabulated Comparisons of Sustainable Procurement Policies:

**Main Contractor Sustainable Procurement Policy/Strategy Comparison**

**KEY:**

- Value for money
- Encourage in tendering
- Training
- Promote sustainable options
- Whole life cycle costing
- Promote re-use and recycling etc
- Reviewing and monitoring
- Equality, diversity, ethical and fair
- Encourage balance of social, economic and environmental factors
- Others

Key Targets

| | Kier | Amey | Wilmott Dixon | Balfour Beatty | Carillion | ISG | Skanska | Morrison |
|---|---|---|---|---|---|---|---|---|
| 1 | When making procurement decisions a sustainable approach to be taken in relation to economic, environmental and social issues | Recognise supply chain to be efficient and cost effective service | Choices of materials that have effect on people, the environment and the supply chain | Collaborative working with customers, partners and supply chain | Engage and collaborate with supply chain | Commitment to highest standards of environmental management | Value for money when considering the environmental, social and ethical aspects over the products lifecycle | Carrying out procurement in a manner environmentally and socially responsible |
| 2 | Promote understanding of competition law throughout the supply chain | Building long term sustainable relationships | Reducing consumption of primary resources | Respect and contribute to local communities | Provide competent workforce | Consider sustainable products and where they originate | Will only do business with suppliers and subcontractors who have understood the nature of the product/service | Commitment to incorporating environmental and social considerations into procurement processes |
| 3 | Improve health, safety and welfare in construction | Proactive approach to add value by using best and most capable suppliers | Use fewer negative impact products on the environment | Address life cycle impacts and low carbon technologies | Meeting the needs for goods and services to achieve value for money on a whole life basis | Seek to provide best outcome for human and natural environments for both now and in the future | Will only with suppliers and subcontractors who recognise their responsibility to protect the environment | Encourage suppliers and subcontractors to minimise negative environmental or social effects that maybe associated with products supplied |
| 4 | Drive chain by working with other industries and supply chain | Suppliers who operate safely, protect environment, support community, innovate and are customer focused and reliable | Policy aims to play a part in slowing climate change, preserving water, maximising resource efficiency, reduce waste and stemming the loss of biodiversity | Adapt responsible resource practice | Generate benefits to the organisation, society and environment | Sustainable purchasing is relation to environmental and social factors influencing purchasing decisions | High degree of integrity and ethics when doing business | Encourage suppliers and subcontractors to offer viable sustainable alternative products to clients |
| 5 | Following of equality, diversity and business ethics policies which will for part of selection process in appointing subcontractors and supply chain | Well-structured and clear procurement process | In line with BS 8903 to peruse best practice sustainable procurement | protect and enhance ecology | Enhance sustainable products and services | What the products are made of, where they are from and who has made them | Comply to legal requirements | Ensure that locally based suppliers and subcontractors are used |
| 6 | Supply chain to provide continual improvement of material resource efficiency | Suppliers are identified, evaluated, selected, measured and reviewed on their ability to supply, manage and deliver requirements | Use fewer resources and less energy through design | Leaders in environmental practice | Development of community engagement strategies | Sets principles, policies and procedures on which procurement is based | Respect UN declaration | Ensure that niche suppliers and subcontractors are not discriminated against during procurement process |
| 7 | Minimise environmental impacts of waste | Operate in a legal, ethical and professional manner | Select materials that encourage a balance between social, economic and environmental factors | Consulting those effected by works | Accreditation process for suppliers to provide guidance to meet requirements | Prompt staff involved in procurement of goods and services to use sustainability as a factor in purchasing decisions | Develop and adapt practices that are environmentally sound, socially responsible and ethical | Reduction of usage |
| 8 | Ensure compliance with site waste management plans regulations | Manage suppliers | Use recycled content | Consideration when applying works | Using sustainability criteria on projects | Encourages suppliers to develop proactive approach to equalities | Mutual trust to deliver on time, what is required, safe, and responsible | Procure based upon Sustainable Principles |
| 9 | Work with supply chain to identify products with harmful effect on environment and health | Involve procurement staff at an early stage | Use resource efficient products | Adopt waste hierarchy | Maximise local spending and employment | Ensure suppliers understand key sustainable issues so that they tailor their products accordingly | Have a safe working environment and pay promptly | Promote products that are made, used and recycled in an environmentally and socially responsible way |
| 10 | Find alternative products that are less damaging | Achieve best value and optimum supplier performance | Whole life costs | Avoid pollution | Purchase products that are responsibly and ethically sourced | Ensure equal ethics | Creating and maintaining positive H&S culture | Ensure specifications include sustainable criteria |
| 11 | Utilise environmental criteria with performance assessment process | Promote procurement philosophy for customers | Source products that can be reused | Offer customers and clients environmental sustainable solutions | Effective management and mitigation of environmental impacts | Help develop sustainable products | Commitment and participation of employees, suppliers and subcontractors | Ensure sustainable criteria in used within contracts |
| 12 | Support local community and companies | Utilise procurement systems | Ensure fair contract prices and terms are applied and respected and that ethical, human rights and employment standards are met | identify environment risk of activities | Continually improve social and environmental performance | Monitor and review sustainable issues within tender documents | Must act within the Skanska code of conduct | Work with existing and potential suppliers to investigate environmentally friendly products, services etc |
| 13 | Technical, manufacturing and construction capabilities | | Provide opportunities for local employment | Remove and mange environmental risk | Identify opportunities and implement actions to reduce carbon and fuel | Assist businesses that wish to work with ISG | All products and services must be in compliance with all laws and regulations throughout the supply chain | Share knowledge and experience with suppliers to help their organisation achieve its environmental goals |
| 14 | Pre-qualification questionnaire must be undertaken to demonstrate capability and competence | | Provide opportunities for local training | Ensure training of the workforce is carried out to make them aware | Suggest sustainable alternatives based on whole life cost basis | Training of staff | Complies with the 10 principles of the UK global compact | Consider lifecycle costs of products with suppliers and subcontractors within contracts |
| 15 | Seek evidence of commitment from supply chain | | Provide opportunities for local diversity | Seek innovative solutions | Deliver leading sustainable solutions to clients | Disposal of waste in environmentally friendly way | Verified timber sources only | Give employees awareness of social and environmental effects of products etc |
| 16 | Review manufacturing partners their economic, social and environmental performance on a regular basis | | Work collaboratively with voluntary sector | Adopt good practice | "Make tomorrow a better place" | Products that have high recycled content where there is little difference in cost | Equal opportunities | Provide training to employees about sustainable procurement processes and procedures |
| 17 | Engage with clients and consultants to ensure requirements of policy are addressed | | Source services that embody environmental, health and safety policy | Take advantage of new technology | Ethical and transparent methods of work | Whole life cost and energy usage and cost considerations prior to purchase | Respect indignity of all supply chain members | Provide guidance to relevant staff |
| 18 | Training of staff | | Social, environmental and economic responsibility | Continually improve by setting targets to achieve | All suppliers subject to Carillion's accreditation process | | Increased diversity of suppliers and contractors | Progress with sustainable procurement strategy |
| 19 | Publish and raise awareness of policy to ensure support from clients, supply chain, designers, sub-contractors and suppliers | | Promote to clients and those helping to deliver | Look for environmental opportunities | Comply with international law as well as local laws and regulations | | All supply chain members should prevent environmental harm and minimise environmental impact | Maintain sustainable buying guide |
| 20 | | | Responsible sourcing preventing exploitation of people and land | | Provide clear and fair procurement procedures | | Programmes in place to achieve minimisation of environmental impact | Continually develop objectives with stakeholders to minimise negative environmental and social effects of products |
| 21 | | | Increase recycles content of buildings contracted and maintained | | Develop long term relationships | | Effect environmental management systems | Incorporate environmental and social aspects into procurement process |
| 22 | | | Reduce contribution to climate change | | Treat people fairly and with respect | | Manage and reduce carbon footprint | Clearly measure progress of the organisation |
| 23 | | | Suppliers are required to specify and use substances | | Culture of equality and equity | | Committed to improving the economy, efficiency and effectiveness of all activities | Clearly identify roles and responsibility for sustainable purchasing and provide relevant training |
| 24 | | | Reduce carbon emissions by reducing distances travelled | | Deliver to agreed specification | | All procurement based upon best value | |
| 25 | | | Reducing packaging waste | | Work in accordance with other policies | | Meeting customer requirements for best value and choosing optimum combination of whole life costs and benefits | |
| 26 | | | Procure efficient plant and generators | | Support united nations universal declaration | | Quality management systems must be in place | |
| 27 | | | | | Consulting, listening to and acting on suppliers suggestions for improvement | | Systems must be in place to identify customer requirements | |
| 28 | | | | | Provide continuous improvement programmes for supply chain | | Efficient and effective delivery processes to minimise waste | |
| 29 | | | | | Deliver solutions to clients | | Target zero defects | |
| 30 | | | | | Reduce cost, eliminate waste | | Application of policies managed through pre-qualification questionnaires and processes | |
| 31 | | | | | Deliver value for money | | | |
| 32 | | | | | Develop and deliver innovative solutions | | | |

Figure 8: Author's Interpretation of Criteria Required for Sustainable Procurement from Research of Procurement Policies from an International to Local Level:

1. Ensure procurement is clearly focused on effective and efficient management to achieve Value for money
2. Encourage Sustainable Procurement in the tendering stage of project procurement through an established criteria and questionnaire scheme
3. Provide efficient Training of staff, contractors, subcontractors and suppliers in the supply chain to ensure that they are aware of Sustainable Procurement, its functions and implementing it on a day to day basis
4. Promote Sustainable options, good procurement and best practice to ensure Sustainable Procurement is implemented effectively
5. Consideration of the whole life cycle of the product from manufacture to demolition therefore accounting for running and maintenance costs etc
6. Promote re-use, re-cycling and reducing through the waste hierarchy
7. Regular reviewing and monitoring of Sustainable Procurement, its policies and its implementation through the supply chain to ensure that they still support procurement procedures and update if required
8. Promote use of renewable sources over the lifetime of a project
9. Procure ethically and fairly therefore being diverse, open and transparent to ensure the highest degree of integrity, honesty and professionalism
10. Encourage selection of products that provide a balance of social, economic and environmental factors in accordance with the triple bottom line diagram

Criteria devised in Figure 8 clearly demonstrate the diverse nature of SP and highlights the vast amount of work that needs to be undertaken for it to be successful. The criteria may be identified as logical good business practice, therefore competent organisations are already exercising some or most of the criteria but it is incorporated within other policies. However, Figure 9, a Local Authority Sustainable Procurement Policy and Figure 10, a UK construction organisation policy, show that secondary sources have revealed that there are clearly many more factors that will need to be considered to run a '100% SP Organisation.' This illustrates that the criteria identified in Figure 8 are not currently employed by all Local Authorities and UK construction organisations, hence the need to develop criteria as devised by the author. This has highlighted the need for benchmarks within SP, the monitoring thereof and the establishment of criteria can be argued to be the start of the benchmarking process. Furthermore, it expresses how there is no defined methodology of what is required to operate SP effectively therefore it was essential that the criteria were formulated by the author as it can now be used as a possible list of criteria necessary for successful implementation. This demonstrates how SP is open to interpretation throughout the industry, which results in error and limitations therefore nothing can currently be procured perfectly sustainably. This has proven how standardising SP is vital as far as it is possible and the identification of criteria as shown should be of benefit therefore allowing implementation to be become easier.

Figure 9: Local Authority Sustainable Procurement Policy (Light and Vincent, 2007, pp. 1)

Kirklees COUNCIL

**SUSTAINABLE PROCUREMENT POLICY**

The Council recognises it has a vital role in furthering sustainable development, through its procurement of buildings, goods, works and services. Procurement decisions have a major socio-economic and environmental implication, both locally and globally, now and for future generations. The Council will therefore strive to:

**People, Education and Awareness**

- Educate, train and encourage internal purchasers to review their consumption of goods/services, reduce usage and adopt more environmentally friendly alternative products
- Communicate the sustainable procurement policy to all staff, suppliers and stakeholders

**Policy, Strategy & Communications**

- Consider the costs and benefits of environmentally preferable goods/services as alternatives
- Investigate the impact of the Council's expenditure on goods and services to identify potential environmental impacts
- Investigate opportunities for the recycling and re-use of materials where appropriate
- Assess the environmental and corporate risks to the organisation with a commitment to continually improving sustainable performance related to the supply chain
- Work in partnership with other organisations, such as YPO and Pro5 to improve sustainable procurement

**Procurement Process**

- Promote best practice for sustainable procurement
- Ensure that where appropriate, suppliers' environmental credentials are, as far as legally practicable, considered in the supplier evaluation process and that environmental criteria are used in the award of contracts
- Ensure that consideration is given to inclusion, within all specifications, of a facility for suppliers to submit offers for environmentally friendly alternatives
- Specify, wherever possible and practicable, the use of environmentally friendly goods

**Engaging Suppliers**

- Educate our suppliers regarding the Council's environmental and sustainability objectives
- Encourage and persuade suppliers to adopt environmentally friendly processes and supply environmentally friendly goods/services
- Address barriers to entry in order that Small and Medium Sized Enterprises (SMEs) and local suppliers are encouraged to bid for the Council's business.
- Work with key suppliers to make changes and thereby extend sustainability improvements throughout the supply chain

**Measurements and Results**

- Comply with all relevant environmental legislation
- Meet the targets as set out by the Sustainable Procurement Task Force in the National Action Plan.

The Council recognises that there are some important environmental targets set within the 2025 Environment Vision, Environment Policy, Environmental Purchasing Policy, Local Area Agreement and the Council's forthcoming ambitions. This sustainable procurement policy has a role in helping to meet these objectives.

**Councillor Robert Light**
Leader of the Council

**Rob Vincent**
Chief Executive KMC

**This policy is an official statement of Kirklees Metropolitan Council as of 28 March 2007**

Figure 10: UK Construction Organisation Sustainable Procurement Policy: (ISG, 2012, pp. 1)

**ISG technology**
**Sustainable Procurement Policy**

**1. General**

ISG technology is committed to the highest standards environmental management. As part of those controls the company seeks to consider the sustainability of products and where they originate. Sustainability seeks to provide the best outcomes for the human and natural environments both now and into the indefinite future, therefore:

> "Sustainable purchasing is all about taking environmental and social factors into account in purchasing decisions. It's is about looking at what your products are made of, where they come from and who has made them."

**2. Purpose of the Policy**

The purpose of the Sustainable Procurement Policy is to set out the principles, policies and procedures on which sustainable procurement activity within ISG technology will be based. The Sustainable Procurement Policy serves to prompt staff involved in the procurement of goods and services to use sustainability as a factor in their purchasing decisions.

ISG technology's Procurement section will strive to:

- Encourage suppliers to develop a proactive approach to equalities;
- Ensure where appropriate suppliers understand the key sustainable issues so that they can tailor their products accordingly;
- Ensure that Local and Regional Businesses, Small and Medium Sized Enterprises and Ethnic Minority Businesses can bid for the business;
- Help in the development of sustainable products;
- Monitor and review the response to sustainable issues within tender documents;
- Assist businesses that wish to work for ISG;
- Carry out a sustainable risk / impact analysis of the products / services procured.
- Other ISG staff will develop specifications that assist in ensuring that:
    - Goods that can be used and disposed of in an environmentally responsible way are considered;
    - Items with a high recycled content are used where there is little difference in cost;
    - Whole-life cost and energy usage and cost is considered prior to purchase;

Advice is sought from the Procurement Management Section.

ISG technology Sustainable Procurement Policy – May 2012

The criteria are ultimately the essential factors that are required to establish a successful SP Policy therefore if they are exercised effectively by an organisation then they can ensure successful implementation. The criteria interlink with other non-classified factors; therefore, once they are established, other non-classified factors will automatically be utilised. However, as stated previously, this can be open to interpretation and thus errors can occur, which is why it might be necessary to define a rating system.

The criteria will allow an organisation to deliver an effective SP policy in accordance with directives issued by the UN, EU and UK Government, thus satisfying the needs from an international to local level. Nevertheless, it has been noted that, in practice, an organisation acting as a '100% SP Organisation' is not achievable as construction is not a controlled environment: each new building is different from the next, therefore there is a wide variety of projects with different requirements which makes implementing a standard set of SP rules and criteria difficult. This study has recognised that the criteria are a result of public and not private procurement; but research has identified the importance of both sectors within SP in the UK construction industry. In private procurement, Corporate Social Responsibility (CSR) has been identified as the most important factor in ensuring SP, whereas for public procurement it has not. This gives a contrast since public procurement has CSR embedded within it as it recognises that it is an element of SP. CSR was originally defined as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (European Commission, 2011, p. 3). However, The European Commission (2011) has now identified a new definition of "the responsibility of enterprises for their impacts of society" whereby they "integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders." This demonstrates how CSR has many definitions and is open to interpretation, in a similar way to SP. The new definition recognises similar criteria identified within SP therefore illustrating the resemblance. However, the critical difference between the two is that CSR is solely about how the business is portrayed therefore working with their client to eradicate concerns in order to ensure that they make profit and establish repeat business in the process. This contrasts with SP as it not only takes CSR into consideration to ensure a good reputation but ensures fairness, value for money, whole life cycle costs and balance as within the public sector taxpayer's money is being utilised therefore it must be spent wisely to achieve value for money. CSR can be identified as only benefiting the organization, therefore it has been acknowledged as important for private organisations to be competitive in the market place, which offers benefits such as risk management, cost savings, access to capital and improved customer relations thus resulting in profit and good client relations for future works (European Commission, 2011, pp. 3).

It has been found that SP requires an integrated supply chain as the Government and worldwide bodies have recognised that public money is the taxpayers therefore agreeing that this money needs to achieve 'value for money' (Simms, 2006, p. 1) This

ensures that it is spent wisely as the public expect a good quality service for money contributed into the system (Simms, 2006, p. 1). Value for money has been identified as the most important element of criteria due to its cost effectiveness in producing "greener" products, as it considers the whole life cycle of products to achieve an optimum combination of cost and quality to meet the client's requirements (The United Nations Department of Economic and Social Affairs, 2008, p. 2; Dhaliwal, 2012, p. 38). This has been highlighted by the United Nations Department of Economic and Social Affairs (2008) and Marras (2012). However, Light and Vincent (2007) have discovered that value for money is not solely money- orientated and that this must be exercised alongside other criteria to successfully accomplish SP. This has resulted in procurement of expensive goods, products and services in order to abide by SP. Consequently, this demonstrates how one factor alone cannot deliver successful SP for an organisation on any scale, as all key factors rely on each other to attack SP equally in accordance with its mechanisms, which state that social, economical and environmental issues need to be in balance for successful implementation in accordance with the triple bottom line. In turn, it has been found that some UK construction organisations do not have the capacity or resources to implement it. For this reason the author has come to the conclusion that there should be a sliding scale of implementation of SP due to capacity difficulties of some organisations, whereby large companies apply SP in one way, medium sized in another and small in another. In response the author has provided recommendations as shown in Figure 11.

Figure 11: Sliding Scope of Implementation of Sustainable Procurement:

| Sliding Scope of Implementation of Sustainable Procurement: | | |
|---|---|---|
| **Organisation Type:** | **Amount of people on the organisation** | **Requirements of Implementation for Each Organisation Type:** |
| Large UK Construction Organisation | 250 people or more | The organisation will require a Sustainable Procurement department to work soley on training, improvement, monitoring, reviewing and controlling Sustainable Procurement on a day to day basis throughout the organisation and all its departments. An in depth Sustainable Procurement Policy is required to be produced and issued to all employees therefore being monitoring, reviewed and controlled by the 'Sustainable Procurement Department.' The organisation will need to employ a manager of this department who will report on Sustainable Procurement to the board of directors throughout the organisation on a monthly basis therefore being reviewed against project programmes and cost/procurement strategies. |
| Medium UK Construction Organisation | less than 250 people but more than 50 people | The organisation will not require a Sustainable Procurement department. However, Sustainable Procurement training, improvement, monitoring, reviewing and control will need to be performed on each individual project therefore being managed and reported on by the Contracts Manager, Project Manager and Quantity Surveyor on a monthly basis as part of other monthly project reports. In turn, the reports will be reviewed against project programmes and cost/procurement strategies. An in depth Sustainable Procurement Policy is required to be produced and issued to all employees therefore being monitoring, reviewed and controlled by the directors. |
| Small UK Construction Organisation | less than 50 people but more than 10 people | An external consultant is required to produce a Sustainable Procurement Plan for the organisation. This plan will be put into place by the organisation and standard forms will be completed on a monthly basis by the team on each project. The consultant will have a weekly review, one day a week, of the plan and its implementation by the organisation. In turn, quarterly reviews will be held in order to provide training and discuss the progress the organisation had made in implementing the policy. The consultant will also provide quarterly advice in order for the organisation to improve upon the policy. |
| Micro UK Construction Organisation | less than 10 people | An external consultant is required to produce a Sustainable Procurement Plan for the organisation. This plan will be put into place by the organisation and standard forms will be completed on a quarterly basis by the teams on each project. The consultant will have a monthly review, one day per month, of the plan and its implementation by the organisation. In turn, 6 monthly reviews will be held in order to provide training and discuss the progress the organisation had made in implementing the policy. The consultant will also provide 6 monthly advice in order for the organisation to improve upon the policy. |

**Theory vs. Practice:**

Primary research was undertaken over a five-week period where five interviews were conducted through telephone conversations. The interviewees were as follows:

1. Interviewee 1 – A West Midlands Council PQS
2. Interviewee 2 – A West Midlands Council PQS
3. Interviewee 3 – Procurement / purchasing manager from a large UK construction organisation
4. Interviewee 4 – Procurement / purchasing manager from a medium-sized UK construction organisation
5. Interviewee 5 – A West Midlands Council PQS

The general consensus from the interviews is that SP is an encompassing part of procurement through sustainability and an integrated supply chain which has also been identified within theory; therefore monitoring and control of SP within the supply chain has become critical in implementing it within construction. However, it has also been determined that SP has its limitations and that sometimes it is not utilised due to other factors that become more important, such as time and cost; therefore being acknowledged as an aspect of sustainable construction rather than being distinguished as an individual element as illustrated within theory. Interviewee 1 stated that "sustainable procurement is only used on large-value projects, of approximately £4.0 million plus, which have to be let under OJEU rules and regulations" (this refers to the *Official Journal of the European Union*). This is supported by interviewee 4 who states that SP is "spearheaded through procurement" therefore dedicating a SP Manager to the task. This demonstrates how both Local Authorities and main contractors are adapting to SP and how the main contractor has enforced it within their company through management of the work. This demonstrates good practice from a main contractor and that this type of set up should be incorporated by all main contractors working in the public sector. Interviewee 1 has also stated that "on all projects we issue a Pre-Qualification Questionnaire (PQQ) which lists a number of questions relating to sustainability, and the answers are scored on their merits. The score will then determine if a contractor will be invited to tender for the scheme" therefore demonstrating how Local Authorities are looking at sustainability as a key issue in the tendering process; which relates to theory. This is also recognised by interviewee 3 who has said that they are "happy to incorporate sustainable procurement within our organisation because if we don't we run the risk of not winning large scale projects". However, this respondent also said that "if it wasn't a requirement of clients then we would always give our best price rather than alternatives that comply with sustainable demands", therefore demonstrating how SP in practice has become an enforced necessity from an international level down to a local level rather than a preferred choice of good and best practice; which suggests that if it was not mandatory then it would not be implemented as much as it has been in recent years. This also demonstrates negative construction industry opinion of SP and that it will take a lot to change this belief.

Interviewee 4 has distinguished the need for monitoring of the supply chain as they state that "we monitor our supply chain's adoption of our Sustainable Procurement policy principles through pre-qualification audits" which demonstrates how supply chain management from a national level to local level has become increasingly

important in implementing SP and that monitoring and control of this process has become increasingly important to "deliver best value." This has also been acknowledged by interviewee 5 who identifies that "it takes time to assess each individual company's compliance with sustainable procurement which can sometimes drain on time and resources whereby smaller companies are usually more reluctant to comply with the ethos of sustainable procurement". This demonstrates that not every contractor has the capacity or capabilities to respond to the requirements of SP issued from an international and national level, therefore linking the results found in theory with the results found in practice; thus identifying limitations of SP. It also suggests that some local authorities do not 'believe in' SP which, again, links to the UK construction industry's belief that SP is mandatory and that, if it was not compulsory, it would not be utilised as it may not offer the most competitive price or quality of product that non-sustainable products may offer. However, in the public sector this is not taken into account as the primary aim is to achieve value for money through SP: this demonstrates the difference between private and public sector procurement even though the construction organisations within both sectors are the same. The difference is that the clients are not the same for both sectors, which demonstrates how SP is the main concern for public sector clients such as Government whereas private sector clients will value best price as the principal concern.

**Conclusion**

Critical Reflection:

This study has discovered that public sector procurement has become increasingly important within the UK construction industry as international organisations have recognised the importance of Government and their influence on the industry to acquire value for their money. In turn, it has been found that SP has various definitions and explanations, which have been outlined in this study, from which the author has developed a concept in order to standardise its meaning in a particular context. In so doing, the author has also created a list of criteria that can be utilised throughout by others to move towards the end goal of a '100% SP organisation' despite the low likelihood of this being achieved. However, in moving in this direction more sustainable projects will be delivered encompassing the wider objectives of sustainability. Consequently, this can now be exercised by organisations so that they comply with SP and its needs within the public sector. Furthermore, this can also be used within the private sector in order to demonstrate competency and pro-activeness towards SP.

It has been found that Government has been acknowledged as the most important public sector purchaser from an international to local level therefore having the most purchasing power, thus having a substantial influence when it comes to procurement and sustainability. In turn, theory has recognised that the combination of procurement and sustainability to deliver SP is now a Government requirement set in coordination with international directives therefore those who wish to work in this sector of construction must ensure that they comply to secure public sector work. However, this is not reflected in practice, as the interviews have revealed that SP is sometimes not implemented as a single element but as part of sustainable construction. In turn, practice has also found that sometimes cost outweighs sustainability particularly in the current economic climate unless rules and

regulations are imposed upon the organisation. This demonstrates how SP can only be implemented if it is made mandatory in every project. If this does not occur then organisations will interpret it differently and in some cases it will not be taken into account within construction at all. However, criteria developed by the author will help reduce miss-interpretation within the industry thus generating a standard set of criteria that can be put in place by UK construction organisations which will change the industry to comply with SP requirements

To conclude, it is clear that SP will become a mandatory requirement for public procurement due to world requirements; therefore making mandatory implementation inevitable. This will result in adaption of all UK construction organisations which will be required to implement SP through a form of policy approach. In turn, it is clear that this study will help UK construction organisations develop an approach to adapt to SP and meet requirements through standard criteria and SP diagrams, which allow them to develop a policy of their own in order to not effect and limit themselves in terms of type of work, projects and sectors they can become involved with.

Future Research:

It is suggested that further research should be undertaken into SP within the public sector as this study has highlighted its importance and implementation within contracting organisations. It is also suggested that a comparative study should be undertaken to identify the differences between private sector SP and public sector SP and why the differences have occurred in order to develop reasons and expand upon the results of this study. In addition to this it is suggested that further research should be undertaken after this study in order to determine whether the results of this study are achievable in practice. Furthermore, this study has found that there has been minimal research on public sector procurement but this has now become extremely important due to changing international and national influence; therefore the criteria and diagrams for implementation, developed by the author, need to be tested in practice within the industry to determine if the results of this study are viable. The author believes that further research must be undertaken to increase the understanding of sustainable public procurement and its influence from an international to local level as it is continually developing and transforming which will enhance performance, reduce risk and optimise sustainability within procurement as a response to international, national and local needs for value for money through SP.

Summary:

1. There is a range of definitions of SP.

2. Value for money has been recognised internationally as the most important factor of SP.

3. Government has been recognised as an important influence on sustainable public procurement.

4. 100% SP organisations are required but this is unlikely to be achieved.

5. There is currently no standard template or perfect solution to SP.

6. SP will become a mandatory requirement of SC.

7. UK construction organisations will need to adapt to meet SP requirements.

8. Sometimes cost outweighs SP.

9. Sometimes SP is not implemented on its own but within sustainable construction.

10. Organisations interpret SP in different ways.

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