

# **Measuring scope 3 carbon emissions – supply-chain (procurement)**

**Report to HEFCE on an emissions reporting framework by  
Arup, CenSA and De Montfort University**

**January 2012**

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## Executive Summary

1. This report summarises the key steps of the development of a supply-chain (procurement) greenhouse gas (GHG) emissions reporting tool for the use by higher education institutions (HEIs) from 2012-13, believed to be the first public sector organisational emissions reporting framework for scope 3 supply-chain (procurement) emissions in the world.
2. Although the term 'procurement emissions' is widely used as a shorthand for elements of scope 3 emissions it does not accurately describe the purchasing of goods and services which generates these emissions. DEFRA guidance on scope 3 does not use this term but instead talks about emissions from the supply chain, which is more accurate. Therefore we have used a description of 'supply chain (procurement) emissions' throughout this document and guidance in order to retain accuracy but also aid understanding.
3. The project aim was to 'develop a reporting framework to measure supply-chain (procurement)-based scope 3 emissions from HEIs in England from 2012-13'. Several systems were reviewed, one based on the Estates Management System (EMS), one based on the Financial Management System (FMS), and the third based on the Annual Returns Database (ARD) system.
4. The option ultimately selected was based on the ARD system. An Excel-based tool has been developed to be run as follows.
  - It is aligned to the traditional reporting 'season': at the end of the financial year HEIs will submit their spend data to the four purchasing consortia in England: London Universities Purchasing Consortium (LUPC), North East Universities Purchasing Consortium (NEUPC), North West Universities Purchasing Consortium (NWUPC), and Southern Universities Purchasing Consortium (SUPC)
  - The data submitted will need to be in ProcHE or the United Nations Standard Products and Services Code (UNSPSC) formats. The consortia-held tool will then map the expenditure to carbon intensity data to produce output emissions results
  - These results are then produced in output tables and graphs and an emissions report is then passed back to the HEIs.
5. The final tool has several key benefits including:
  - **Harnesses an existing system:** by calculating emissions through the ARD process, the burden on HEIs is minimised – a key desired outcome from this process
  - **Provides incentives to both HEIs and consortia:** by only mapping classified spend to CO<sub>2</sub> emissions, there is an incentive for HEIs to improve classification. There is also an incentive for the consortia, as by providing useful CO<sub>2</sub> reports

they will receive better input data. In addition, as coding from HEIs improves, less time will be required within consortia to map non-coded data

- **Reduces emissions errors:** by performing emissions calculations within the consortia, the potential user errors are reduced versus 130+ HEIs each having their own systems
- **Allows the review of supply-chain (procurement) emissions among HEIs:** due to the central hosting of the tool, there will be a future facility to compare emissions among HEIs of the same type – for example large research or medical based institutions. This may provide insights into different patterns of emissions by different HEI types, and also variances within the same HEI type.

# 1. Introduction

## Project outline

- 1.1 Following the publication in 2010 of the Higher Education Funding Council for England (HEFCE) carbon reduction target and strategy for higher education (HE) in England<sup>1</sup>, HEFCE commissioned Arup, De Montfort University and the Centre for Sustainability Accounting (CenSA) to assist in measurement of scope 3 supply-chain (procurement) emissions by higher education institutions (HEIs) in England.
- 1.2 Although the term 'procurement emissions' is widely used as a shorthand for elements of scope 3 emissions it does not accurately describe the purchasing of goods and services which generates these emissions. DEFRA guidance on scope 3 does not use this term but instead talks about emissions from the supply chain, which is more accurate. Therefore we have used a description of 'supply chain (procurement) emissions' throughout this document and guidance in order to retain accuracy but also aid understanding.
- 1.3 The brief was to develop a reporting framework for English HEIs' scope 3 supply-chain (procurement) emissions, for use from 2012-13. The project comprised two key deliverables:
  - **A consortia-held reporting tool:** an Excel based spreadsheet which calculates individual institution supply-chain (procurement) emissions based on received expenditure data.
  - **This research report:** which shows the process and decisions that were made that led to the consortia held tool being developed.
- 1.4 In addition to the institution level project, a sector-wide baseline study of supply-chain (procurement) emissions was completed in parallel, for 2005-06. This report contains a more detailed treatment of the consumption-based methodology used for both the sector and institution level studies.

## Report Structure

- 1.5 The research study is reported in the sections listed below.
  - **Section 2. Background:** presents an overview of the policy context and background to the scope 3 reporting requirement.
  - **Section 3. Supply-chain (procurement) emissions reporting – review of options:** three options for reporting supply-chain (procurement) emissions in HEIs are outlined, with a final selection of the preferred candidate.
  - **Section 4. Development of the tool:** describes the basic structure and format of the tool that was developed, and the consultation that was undertaken.

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<sup>1</sup> HEFCE (2010). Carbon reduction target and strategy for higher education in England, HEFCE available at <http://www.hefce.ac.uk>.

- **Section 5. Successful implementation of the tool:** describes how the tool is envisaged to be hosted and gives guidance to HEIs and consortia.

1.6 This report also contains the following Annexes:

- **Annex A:** ProCHE and UNSPSC input codes
- **Annex B:** Supply-chain (procurement) webinars Q&A.

## Acknowledgements

1.7 This project has required the cooperation of and input from many organisations in the HE sector. We express our sincere thanks to:

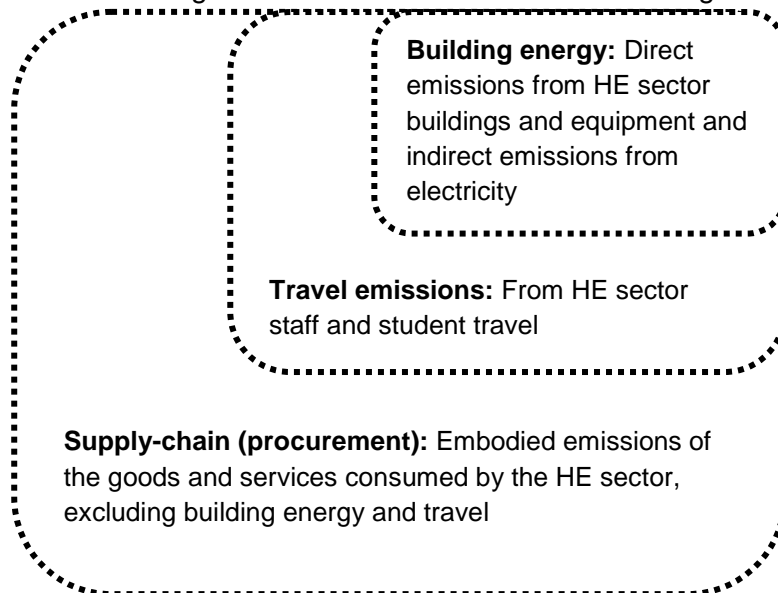
- All English HEIs that gave permission for us to obtain and use their collated expenditure data for the determination of the sector supply-chain (procurement) emissions
- The four purchasing consortia in England who passed the expenditure data to us: LUPC, NEUPC, NWUPC, SUPC
- Andy Wojciechowski from NWUPC, who input significant time and effort to help with queries and comments related to development of the tool
- HEFCE
- The Measuring Scope 3 Carbon Emissions Advisory Group members who are listed below:

<b>Chair</b>	
Tony Rich	University of Essex; Association of Heads of University Administration; HEFCE's Sustainable Development Steering Group
<b>Members</b>	
Sarah Grimes	Higher Education Statistics Agency
Sue Holmes	Leeds Metropolitan University; Association of University Directors of Estates (AUDE)
Jonathan Mills	University of Lancaster; Environmental Association for Universities and Colleges (EAUC)
Tony Overbury	University College London
Tim Pryce	The Carbon Trust
Paul Tomany	ENP; NWUPC

## 2. Background

### Supply-chain (procurement) emissions

2.1 The three categories of HE emissions are shown in Figure 2.1 below.



**Figure 2.1: HE sector primary emissions categories**

2.2 Guidance exists or is being developed for building energy and travel emissions within the Estates Management System (EMS). Therefore this project addresses the process for capturing supply-chain (procurement) emissions. An important point to note is that scope 3 'procurement' emissions do not refer to the act of procurement, but rather the embodied upstream emissions associated with the manufacture and distribution of a product or service purchased i.e. from the supply chain.

### Scope 3 emissions

2.3 As the research brief includes a reference to scope 3 emissions it is useful at this point to understand what are scope 1, 2 and 3 emissions. The "Greenhouse Gas Protocol" (also known as the GHG Protocol, see <http://www.ghgprotocol.org>) categorises GHG<sup>2</sup> emissions as being Scope 1, 2 or 3, as defined below and shown in Figure 2.2.

- **Scope 1 emissions:** direct GHG emissions occurring from sources owned or controlled by the organisation. Examples include vehicle fleet emissions, on-site emissions from boilers and combined heat and power (CHP) energy generation.
- **Scope 2 emissions:** GHG emissions from the off-site generation of grid electricity used by the organisation.
- **Scope 3 emissions:** an optional reporting category for all other indirect emissions, which are a consequence of the organisation's activities but occur from sources not owned or controlled by the organisation. Examples include

<sup>2</sup> Six main GHG gases were included within the 1997 Kyoto Protocol: carbon dioxide (CO<sub>2</sub>); nitrous oxide (N<sub>2</sub>O); methane (CH<sub>4</sub>); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF<sub>6</sub>). These gases trap heat in the earth's atmosphere, such that higher GHG levels cause higher temperatures – the so called 'greenhouse effect'.

‘upstream’ emissions from the production and transportation of purchased goods, and ‘downstream’ emissions from the use and disposal of the organisation’s products and services.

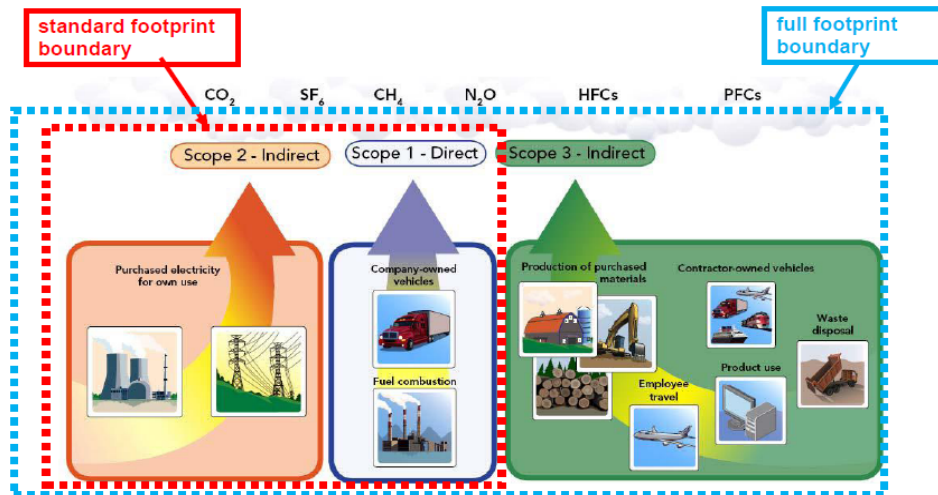


Figure 2.2: GHG Protocol classification of emissions<sup>3</sup>

## Environmentally extended input-output (EEIO) analysis

- 2.4 The sector level supply-chain (procurement) emissions for HE have been calculated using an environmentally extended input-output (EEIO) model. This uses top-down carbon intensity data combined with a breakdown of bottom-up expenditure data to produce overall carbon emissions calculations. This is known as a ‘consumption based’ approach. A fuller description of EEIO analysis is given in Annex A of ‘Measuring scope 3 carbon emissions – supply-chain (procurement). Report to HEFCE on sector emissions by Arup, CenSA and De Montfort University’<sup>4</sup>.
- 2.5 Importantly the consumption-based footprint analysis methodology is consistent with other national studies, most notably the NHS England<sup>5</sup> and Department for Children, Schools and Families (DCSF) schools<sup>6</sup> studies. This means it incorporates and considers the full supply-chain impacts of each procured good/service.
- 2.6 The basic approach involves obtaining a spend profile of an organisation (in this case the HE sector total spend breakdown) and mapping this to carbon intensity data, to estimate overall supply-chain (procurement) emissions.
- 2.7 A key limitation of the current methodology is that ‘sector-average’ carbon intensity values are used. This means they do not reflect ‘local’ differences in consumption such as consumption of ‘eco-friendly’ products. Indeed an organisation may record

<sup>3</sup> Clean Air-Cool Planet and Forum for the Future (2008) Getting to Zero: Defining Corporate Neutrality, available at <http://www.forumforthefuture.org/sites/default/files/project/downloads/getting-zero-uk-versionjune-2008.pdf>

<sup>4</sup> HEFCE (2012) Measuring scope 3 carbon emissions – supply-chain (procurement). Report to HEFCE on sector emissions by Arup, CenSA and De Montfort University’ available at <http://www.hefce.ac.uk>.

<sup>5</sup> The NHS Carbon Footprint available at

[http://www.sdu.nhs.uk/documents/publications/1232983829\\_VbmQ\\_nhs\\_england\\_carbon\\_emissions\\_carbon\\_footprint\\_mode.pdf](http://www.sdu.nhs.uk/documents/publications/1232983829_VbmQ_nhs_england_carbon_emissions_carbon_footprint_mode.pdf)

<sup>6</sup> Schools carbon footprint report to DFES available at [http://www.sd-commission.org.uk/publications/downloads/SDC\\_Carbon\\_Footprint\\_report\\_to\\_DFES.pdf](http://www.sd-commission.org.uk/publications/downloads/SDC_Carbon_Footprint_report_to_DFES.pdf)



higher emissions using this methodology if the 'eco-friendly' product has a higher price.

- 2.8 The alternative to the EEIO approach is a life cycle assessment (LCA), where individual products each have a separate bottom-up supply-chain emissions calculation, each with distinct calculation boundaries. This is particularly time consuming and impractical for the HE sector, which would require analysis of many thousands of products and services that have been purchased in any year.
- 2.9 Therefore the EEIO consumption-based emissions approach has been adopted as it is the best available at this point. It allows overall emissions to be estimated and identifies carbon 'hotspots', which can be studied in more detail using LCA or similar approaches. In due course more sophisticated hybrid EEIO-LCA models will allow 'local carbon intensities' to be used, removing the average carbon intensity current limitation.

### **3. Project requirements**

#### **Project aim and objectives**

- 3.1 The overall aim of the project was to develop a reporting framework to measure supply-chain (procurement)-based scope 3 emissions from HEIs in England from 2012-13.
- 3.2 The original project objectives were given to meet this aim:
- Produce definitions for measuring supply-chain (procurement)-based scope 3 emissions at institutional level for use within EMS from 2012-13.
  - Provide guidance that helps HEIs to adopt efficient and effective data collection practices.
- 3.3 During the course of the project, modified objectives were developed as EMS was not used:
- Produce definitions for measuring supply-chain (procurement)-based scope 3 emissions at institutional level for use within a consortia-held reporting tool from 2012-13
  - Provide guidance to both HEIs and consortia that helps adopt efficient and effective data collection and reporting practices.

#### **Project guidelines**

- 3.4 When developing the reporting framework the following project guidelines were adhered to:
- Consider and build upon existing work in this area
  - Consider existing methodologies for measuring scope 3 emissions and whether these are suitable for HEIs
  - Consider utilising existing systems and processes for obtaining information
  - Engage with a wide range of organisations
  - Cover all greenhouse gases expressed as carbon dioxide equivalents
  - Align with national carbon reporting guidance and protocols as set out by the Department for Energy and Climate Change (DECC) and the Department of Environment, Food and Rural Affairs (DEFRA)
  - Be considerate of the potential burden and cost for HEIs, looking to minimise this where possible
  - Do not require HEIs to purchase specific commercial products, though recognising that some institutions may chose to do this
  - Be clear and consistent.

#### **Project deliverables**

- 3.5 To meet the project objectives and guidelines, the following deliverables were required:

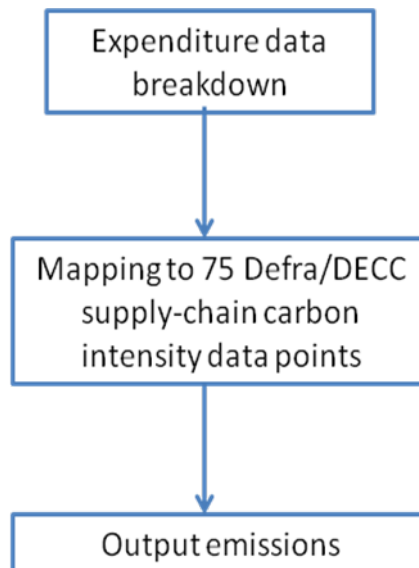
- A consortia-held reporting tool: this is an Excel-based spreadsheet which calculates individual institution supply-chain (procurement) emissions based on received expenditure data.
- This research report, which shows the process and decisions that were made that led to the consortia-held tool being developed.

## 4. Supply-chain (procurement) emissions reporting tool: review of options

- 4.1 Below is an overview of the basic supply-chain (procurement) emissions calculation steps, followed by an outline of three options for reporting supply-chain (procurement) emissions in HEIs, with a final selection of the preferred candidate.

### Calculation steps

- 4.2 The supply-chain (procurement) emissions methodology is based on an environmentally extended input-output (EEIO) consumption-based methodology, as noted previously. The basic steps in the supply-chain (procurement) emissions analysis are in Figure 4.1 below.



**Figure 4.1: Steps in supply-chain (procurement) emissions analysis**

- 4.3 The carbon intensity data used is crucial to gain an accurate overview of the carbon emissions. For supply-chain (procurement), the carbon intensity values (kgCO<sub>2</sub>e/£ spent) are derived from Environmentally Extended Input-Output (EEIO) analysis according to National Accounts (NA) sectors. This gives carbon intensity data for 75 NA sectors<sup>7</sup>, and whose values are obtained from the Defra GHG reporting factors (Annex 13)<sup>8</sup>.

<sup>7</sup> For the sector level emissions study the 123 NA sector intensity values in the TBL2 model were used, as this is the most accurate data available. For the institutional level supply-chain (procurement) emissions tool, 75 sector intensity values are used. This is because they are publically available and therefore can be used without the need for proprietary software, a key requirement of that workstream.

<sup>8</sup> Carbon intensity values for scope 3 GHG emissions obtained from Annex 13 of Defra's 2010 Guidelines to Defra/DECC's Greenhouse Gas Conversion Factors for Company Reporting, available at: <http://archive.defra.gov.uk/environment/business/reporting/pdf/101006-guidelines-ghg-conversion-factors.pdf>

## Types of system considered

### Estates Management System (EMS)

4.4 The EMS system is used to collect estates management data from HEIs across the UK. Each year HEIs send data reports from their institutions covering numerous aspects which relate to their estates, including:

- Energy use
- Water
- Waste
- Size of estate
- Travel data

4.5 An extract of the EMS system is given in Table 4.1 below.

	Institution:	
	2009-10	2009-10 accurate (A) or estimate (E)?
D31 Energy costs C14 Residential - oil*		
D31 Energy costs C14 Residential - gas*		
D31 Energy costs C14 Residential - electricity*		
D31 Energy costs C14 Residential - coal*		
D31 Energy costs C14 Residential - steam/hw*		
D31 Energy costs C14 Residential - other fuels*		
D31 Energy costs C14 Residential - all fuels* (sum of above)		
D31 Energy costs C13 Total non-residential - oil*		
D31 Energy costs C13 Total non-residential - gas*		
D31 Energy costs C13 Total non-residential - electricity*		
D31 Energy costs C13 Total non-residential - coal*		
D31 Energy costs C13 Total non-residential - steam/hot water*		
D31 Energy costs C13 Total non-residential - other fuels		
D31 Energy costs C13 Total non-residential - all fuels (sum of above)		
D31 Energy costs C1 Total - oil*		
D31 Energy costs C1 Total - gas*		
D31 Energy costs C1 Total - electricity*		
D31 Energy costs C1 Total - coal*		
D31 Energy costs C1 Total - steam/hot water*		
D31 Energy costs C1 Total - other fuels		
D31 Energy costs C1 Total - all fuels (sum of above)		

**Table 4.1: Extract from EMS data capture sheet**

- 4.6 Currently there are over 300 input cells to be completed by each institution.
- 4.7 Each data cell has a data definition which defines the variable to be input, and supporting calculations to show the process by which the variable is calculated.
- 4.8 For supply-chain (procurement) emissions, the process of mapping from expenditure to carbon emissions is a complex process which is not easily shown in a sample calculation and data definition using the EMS format.
- 4.9 Therefore after due consideration this option was discounted on the basis of practicality.

### Financial Management Systems (FMS)

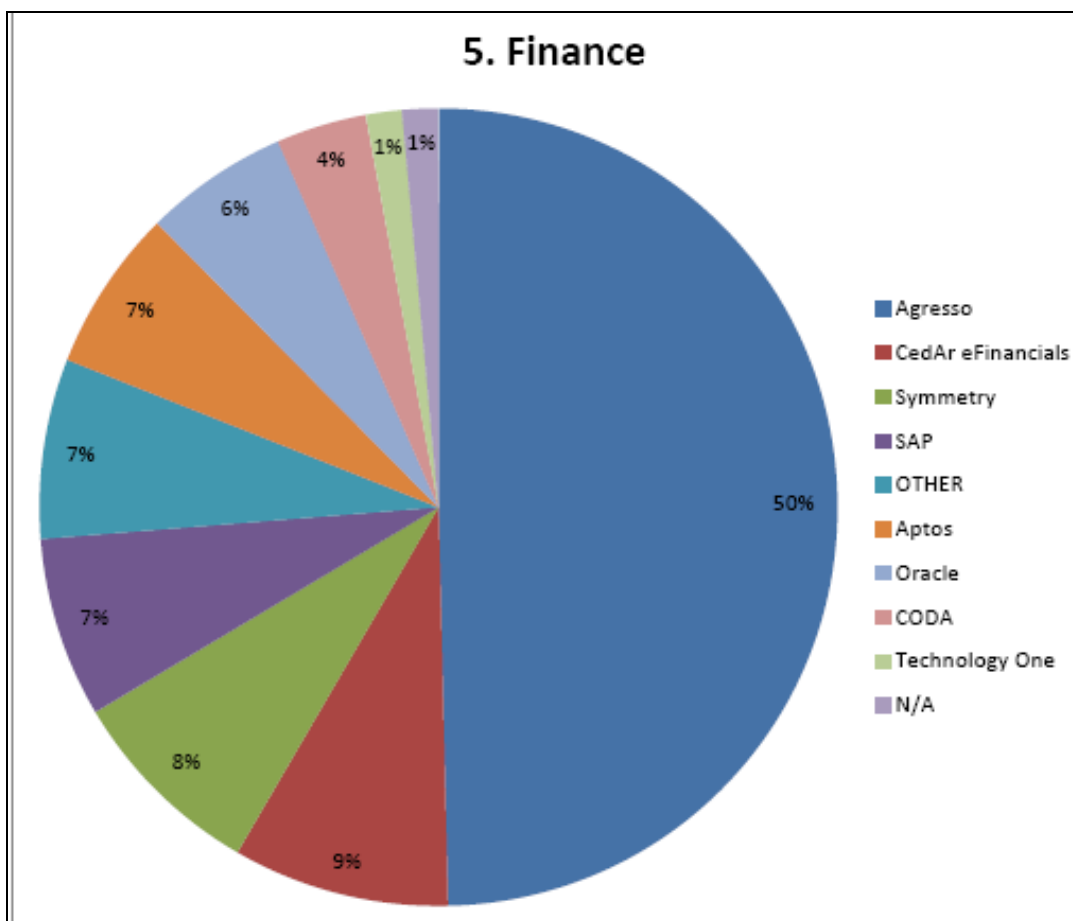
- 4.10 The FMS is the central financial system used by HEIs. It reports annual expenditure according to ledger/accounting codes. An extract from the typical accounting system is given in Table 4.2 below.

Category		2009-10 Spend
AA	Audio equipment GOODS	£251,787
AAZ	Audio equipment SERVICES	£38,101
AB1	Display/Projection Equipment GOODS	£172,856
AB1Z	Display/Projection Equipment SERVICES	£1,009
AB2	Display/Projection Consumables GOODS	£4,857
AB2Z	Display/Projection Consumables SERVICES	£53
AC	Learning packs GOODS	£1,345
ACZ	Learning packs SERVICES	£2,340
AD	Music GOODS	£0
ADZ	Music SERVICES	£0
AE1	Photographic Equipment GOODS	£58,544
AE1Z	Photographic Equipment SERVICES	£13,507
AF		£0
AFZ	Studio Costs (SERVICE)	£46
AG		£911
AGZ	Theatre Costs SERVICE	£2,653
AH	Video Equipment GOODS	£32,465

**Table 4.2: Extract from Financial Management System (FMS)**

- 4.11 The advantage is that it uses a system which HEIs already have. However, there are many different software systems used, as shown in Figure 4.2 below<sup>9</sup>.

<sup>9</sup> The CIS Survey is available to members at [http://www.ucisa.ac.uk/en/bestpractice/surveys/cis\\_2009/private\\_version\\_2009.aspx](http://www.ucisa.ac.uk/en/bestpractice/surveys/cis_2009/private_version_2009.aspx)



**Figure 4.2: FMS systems used by HEIs**

4.12 Even within Agresso, the dominant system with half of HEIs using this, there are variants used by different HEIs. There is therefore significant complexity in producing a front end mapping page to all FMS systems; this would require working with each supplier of software to develop and embed that reporting/calculation format within each FMS system. In addition as each new supplier entered this market then a new version would be required.

4.13 Therefore for practicality reasons this proposed system was discounted.

#### **Consortia-held reporting tool**

4.14 There are four regional purchasing consortia in England as listed below.

- LUPC (London University Purchasing Consortium)
- NEUPC (North East University Purchasing Consortium)
- NWUPC (North West University Purchasing Consortium)
- SUPC (Southern University Purchasing Consortium)

4.15 These consortia collect Annual Returns Database (ARD) from HEIs annually. The ARD data since 2005-06 has been collated in a database held by the consortia. The ARD spend data is submitted in a format that is largely classified according to ProcHE coding. A summary of the data submitted 2005-06 to 2008-09 is shown in Table 4.4 below:

Consortia		2005-6	2006-7	2007-8	2008-9
NWUPC	Total spend	£836,947,768	£992,076,026	£892,678,766	£1,001,485,714
	Unclassified	£57,127,400	£65,197,121	£84,145,536	£271,414,948
	% Unclassified	6.83%	6.57%	9.43%	27.10%
NEUPC	Total spend	£871,803,823	£1,120,756,008	£1,132,291,129	£1,281,084,483
	Unclassified	£173,549,278	£708,899,720	£516,761,638	£771,038,169
	% Unclassified	19.91%	63.25%	45.64%	60.19%
LUPC	Total spend	£548,219,241	£561,300,762	£365,041,650	£543,946,195
	Unclassified	£208,764,762	£278,079,987	£208,646,298	£385,711,454
	% Unclassified	38.08%	49.54%	57.16%	70.91%
SUPC	Total spend	£1,386,789,303	£1,492,639,594	£1,673,834,941	£2,074,678,790
	Unclassified	£37,255,345	£42,204,308	£110,305,968	£604,828,632
	% Unclassified	2.69%	2.83%	6.59%	29.15%
Total	Total spend	£3,643,760,135	£4,166,772,389	£4,063,846,486	£4,901,195,182
	Unclassified	£476,696,785	£1,094,381,136	£919,859,440	£2,032,993,203
	% Unclassified	13.08%	26.26%	22.64%	41.48%

**Table 4.4: HE sector procurement spend data from ARD data collation**

- 4.16 The proposed system was to develop a consortia-held emissions reporting tool, which would:
- Take the annual return data, and use this as input data to the reporting tool.
  - Output the emissions calculated as a single report to each HEI.
- 4.17 The advantages of this system were:
- **Harnessing an existing system:** the HEIs already used the ARD reporting system, so this reporting tool 'piggy backs' onto this existing process. This minimises the burden to HEIs – a key desired outcomes from this process.
  - **Provides incentives to both HEIs and consortia:** by only mapping classified spend to CO<sub>2</sub> emissions, there is an incentive for HEIs to improve classification. There is also an incentive for the consortia, as by providing useful CO<sub>2</sub> reports they will receive better input data. In addition as coding from HEIs improves, less time will be required within consortia to map non-coded data.
  - **The input data is in only two formats: ProcHE and UNSPSC codes.** This is much better than the FMS systems, where there are many different classification systems.
  - **Facility to review supply-chain (procurement) emissions between HEIs:** due to the central hosting of the tool, there will be a future facility to compare emissions within HEIs of the same type – for example large research or medical



based institutions. This may provide insights into different patterns of emissions by different HEI types, and also variances within the same HEI type.

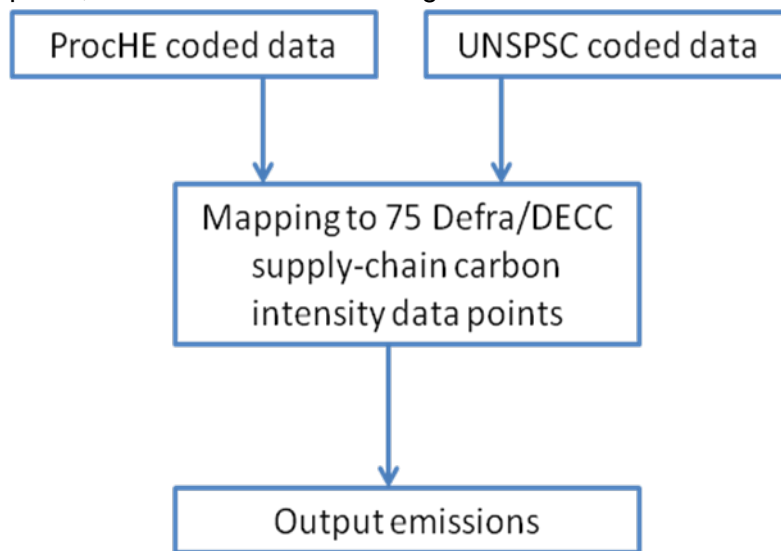
- **Reduces emissions errors:** by performing emissions calculations within our consortia, the potential user errors are reduced versus 130 HEIs each having their own systems.
- **The ARD data system will improve sector-wide emissions calculations:** it uses the same ARD bottom-up data system that was used for the sector wide emissions study. This means in future that improvements to coded data will also benefit the calculation of sector-wide emissions at the same time.

4.18 The main limitations with this system are based around the quantity and quality of the data. In particular the accuracy of coding to ProCHE and UNSPSC coding is subject to human error, and as the system tends to be used for Official Journal of the European Union (OJEU) level spending, an unknown (and possibly significant) level of spend may therefore go unreported.

4.19 However, after due consultation the ARD consortia tool emerged as a clear winner, in terms of practicality and ease of introduction, and was taken forward for development.

## 5. Development of the supply-chain (procurement) emissions reporting tool

5.1 The basic reporting system is an Excel-based tool that is built to cover the three key steps required, which are described in Figure 5.1 below.



**Figure 5.1: Calculation steps in supply-chain analysis**

### Collection of input data

5.2 The first step is to collect the required expenditure data from the HEIs. There are two formats for the input data, which can be additive if describing different spend:

- ProcHE coded data from ARD supplier data. This is the traditional dataset sent by HEIs.
- The United Nations Standard Products and Services Code® (UNSPSC®)<sup>10</sup> datasets, which are emerging in more E-marketplace transactions.

5.3 Extracts of the two formats are given in Tables 5.1 and 5.2 below, and given in full in Annex A.

Code	Description
<b>A</b>	<b>The Arts, Audio-Visual &amp; Multimedia Supplies and Services</b>
AA	Audio Visual Equipment, purchase, maintenance, repair and hire
AB	Display and Projection Equipment and Consumables
AC	Learning and Training Packs and Pre-recorded Media
AD	Music Instruments, Scores, Purchase, Maintenance,
AE	Photographic Equipment Supplies and Services
AF	Studio Hire and Running Costs
AG	Theatre Production Costs (scenery, lighting, props, costumes)

<sup>10</sup> The United Nations Standard Products and Services Code® (UNSPSC®) available at <http://www.unspsc.org/Defaults.asp>

Code	Description
AH	Video Equipment (suspended)
AJ	Audio Visual Consumables, Accessories, Cassettes etc
AK	Photographic Consumables, Accessories etc
AL	Digital Imaging Equipment Purchase, Maintenance, Repair, Consumables
AM	Commercial and Graphic Art Equipment Purchase and Maintenance and Consumables
AN	External Production Services (Performances, Tours)
AP	Tape Machines, Video Interviewing Equipment
AQ	Website Design and Services (suspended)
AR	Fine and Creative Arts, Equipment Purchase, Maintenance, Consumables
AT	Audio-Visual Equipment (suspended)
AZ	Other and General Audio Visual Aids

**Table 5.1: Extract of first 18 codes from ProCHE coding system**

Code	Description
10000000	Live Plant and Animal Material and Accessories and Supplies
10100000	Live animals
10110000	Domestic pet products
10120000	Animal feed
10130000	Animal containment and habitats
10140000	Saddlery and harness goods
10150000	Seeds and bulbs and seedlings and cuttings
10160000	Floriculture and silviculture products
10170000	Fertilizers and plant nutrients and herbicides
10190000	Pest control products
10200000	Live rose bushes
10210000	Live plants of high species or variety count flowers
10220000	Live plants of low species or variety count flowers
10230000	Live chrysanthemums
10240000	Live carnations
10250000	Live orchids
10300000	Fresh cut rose
10310000	Fresh cut blooms of high species or variety count flowers

**Table 5.2: Extract of first 18 codes from UNSPSC coding system**

## Mapping to carbon emissions

5.4 The input spend data is then mapped to the carbon intensity datasets based on the 75 Defra carbon data points<sup>11</sup>. An extract is given in Table 5.3 below.

<sup>11</sup> Carbon intensity values for scope 3 GHG emissions provided to Defra's 2011 Guidelines to Defra/DECC's Greenhouse Gas Conversion Factors for Company Reporting, available at <http://archive.defra.gov.uk/environment/business/reporting/pdf/110707-guidelines-ghg-conversion-factors.xls>

Supply chain emission factors for spending on products: kgCO <sub>2</sub> e per £										Total GHG	
SIC code (SIC 2003)	Product category	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous Oxide (N <sub>2</sub> O)	HFCs	PFCs	SF <sub>6</sub>	Amount spent by product category (£)	x	Total kg CO <sub>2</sub> e per £	Total kg CO <sub>2</sub> e
01	Agriculture products <sup>2</sup>	0.65	1.15	1.47	0.01	0.0009	0.0007		x	3.29	
02	Forestry products	0.46	0.04	0.02	0.03	0.0012	0.0010		x	0.56	
05	Fish products <sup>2</sup>	1.09	0.11	0.04	0.02	0.0014	0.0015		x	1.27	
10	Coal, lignite, peat <sup>3</sup>	2.15	6.52	0.03	0.03	0.003	0.003		x	8.74	
11	Crude petroleum, natural gas <sup>3</sup>	0.81	0.10	0.01	0.00	0.0005	0.0005		x	0.93	
13	Metal ores	1.13	0.11	0.02	0.01	0.0013	0.0014		x	1.27	
14	Stone, sand and clay, other minerals	1.21	0.10	0.03	0.01	0.0015	0.0014		x	1.36	
15	Food and drink products <sup>2</sup>	0.55	0.38	0.29	0.01	0.0010	0.0009		x	1.23	
16	Tobacco products	0.07	0.05	0.04	0.00	0.0002	0.0002		x	0.16	
17	Textiles	0.33	0.03	0.02	0.01	0.0006	0.0005		x	0.38	
18	Wearing apparel	0.25	0.04	0.02	0.01	0.0006	0.0005		x	0.32	
19	Leather products, footwear	0.25	0.07	0.05	0.01	0.0004	0.0002		x	0.38	
20	Wood and wood products	0.88	0.06	0.02	0.01	0.002	0.002		x	0.97	
21	Pulp and paper, paper products	0.69	0.05	0.02	0.01	0.0008	0.0008		x	0.77	
22	Printing matter and related services	0.35	0.03	0.01	0.01	0.0007	0.0006		x	0.40	
23	Refined petroleum, coke and other fuels <sup>4</sup>	0.97	0.19	0.01	0.00	0.0005	0.0004		x	1.17	
24.11, 24.12	Industrial gases and dyes	1.39	0.09	0.03	0.02	0.003	0.002		x	1.53	

**Table 5.3: Extract of supply-chain (procurement) Defra carbon intensity data values (table 13)**

### Output: graphs and tabular data

5.5 After this, the data is ready to be presented as output pages which are consistent between HEIs and report categories of relevance. The following outputs are produced:

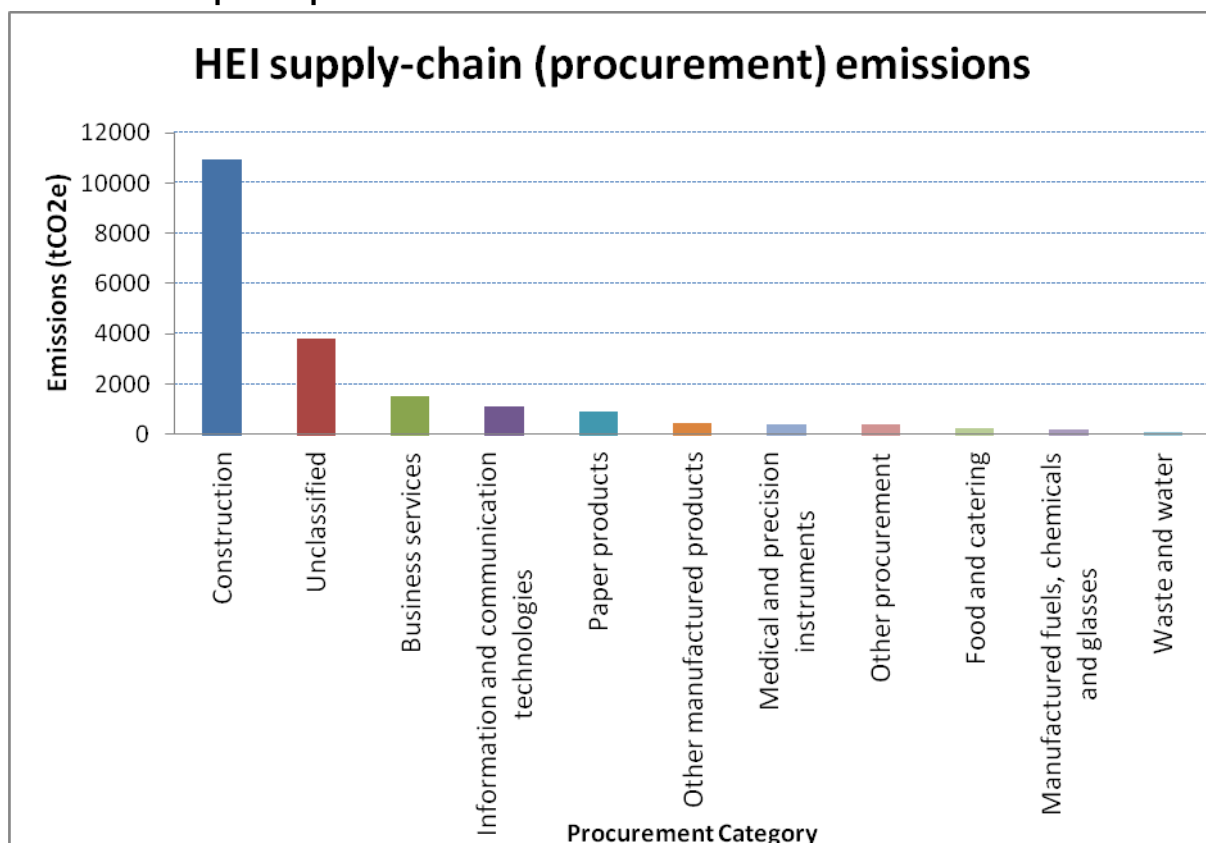
- Table – 75 sector breakdown: this gives the carbon results in the original Defra categories
- Table – 10 sub-sector categories: the 75 sector results are then aggregated to a more meaningful set of categories
- Graph – 10 sub-sector categories: the aggregated results are produced in a graphical format to help viewing.

5.6 Typical outputs are shown in Table 5.4 and Figure 5.1 below.

Year	2012
	Tonnes CO <sub>2</sub> e
Business services	1,517
Paper products	906
Other manufactured products	432
Manufactured fuels, chemicals and gasses	198

Food and catering	236
Construction	10,945
Information and communication technologies	1,120
Waste and water	113
Medical and precision instruments	410
Other procurement	390
<b>Unclassified</b>	<b>3,831</b>
<b>Total</b>	<b>20,097</b>

**Table 5.4: Sample output emissions table**



**Figure 5.1 Sample emissions graph**

5.7 The output pages show the amount of unclassified spend, which is mapped to the general construction sector carbon intensity. As this carbon intensity is higher than the overall HE sector emissions intensity, a higher value of overall emissions is reported than would be the case if all data was coded. This is intended to incentivise coding of data by HEIs.

### Overlap with existing HEI emissions reporting in EMS

5.8 The 75 Defra categories of carbon intensities include upstream emissions associated with the following categories which are already reported by HEIs:

- **Defra Sector 48: gas** – these emissions are not calculated in the scope 1 calculations from kWh data in EMS, as these are upstream scope 3 emissions associated with the extraction and transportation of gas to point of use on HEI

sites. They are therefore additive to the EMS calculations, and should thus be **included** within scope 3 emissions.

- **Defra Sector 47: electricity** – these emissions are already calculated via kWh data in the EMS system, which are separated as scope 1 and 3 impacts in the Defra/DECC carbon intensity data, and therefore should be **excluded** by the HEI in calculating their overall HEI emissions to avoid duplication.
- **Defra sector 49: water emissions** – these emissions overlap with the bottom-up LCA calculations in EMS, and so should be **excluded** by the HEI in calculating their overall HEI emissions.
- **Defra sector 72: waste and sewerage emissions** – these emissions overlap with the bottom-up LCA calculations in EMS, and so should be **excluded** by the HEI in calculating their overall HEI emissions.
- **Defra sectors 55-58: land and air based travel** – some of these emissions will overlap with the bottom-up calculations for scope 3 business travel in EMS, but not all as spend on air and land based freight for example would be captured in the consortia tool. Therefore only the staff travel component of these emissions (by pro-rata of spend in these categories) should be **excluded** by the HEI in calculating their overall HEI emissions.

5.9 Data should be collated from EMS and the supply-chain (procurement) tool, as set out in Table 5.5 below.

Primary sector	Sub-category	Source data for GHG Protocol emissions		
		Scope 1	Scope 2	Scope 3
Building energy	Gas, coal etc	EMS	n/a	Tool <sup>1</sup>
	Electricity	n/a	EMS	EMS <sup>2</sup>
Travel	Transport fuel	EMS	n/a	n/a
	Business travel	n/a	n/a	EMS <sup>3</sup>
	Staff commuting	n/a	n/a	EMS <sup>4</sup>
	Student commuting	n/a	n/a	EMS <sup>4</sup>
	Air student travel	n/a	n/a	EMS <sup>4</sup>
Procurement	Construction	n/a	n/a	Tool
	Business services	n/a	n/a	Tool
	Information and communication technologies	n/a	n/a	Tool
	Other manufactured products	n/a	n/a	Tool
	Manufactured fuels, chemicals and gasses	n/a	n/a	Tool
	Paper products	n/a	n/a	Tool
	Medical and precision instruments	n/a	n/a	Tool
	Food and catering	n/a	n/a	Tool
	Other procurement	n/a	n/a	Tool
	Waste and water	n/a	n/a	EMS <sup>5</sup>

**Table 5.5: Scope 1-3 data reporting sources**

### Table notes

- 1 Upstream emissions associated with the extraction and supply of gas/coal to point of use. This is typically around 10-15 per cent of the scope 1 value.
- 2 Upstream emissions associated with the extraction and supply of fuel to power stations, and electricity transmission losses. These are typically around 10-15 per cent of the scope 2 value, and are identified in Defra/DECC values as separate scope 3 factors.
- 3 Business travel emissions are estimated by both the EMS and scope 3 tool analyses, and so the scope 3 tool value should be excluded to avoid double counting.
- 4 These values have been calculated for the overall sector emissions study, but are not currently part of the mandatory HEI EMS reporting.
- 5 These emissions are estimated by both the EMS and scope 3 tool analyses, and so the scope 3 tool value should be excluded to avoid double counting.

### **Pilot consultation**

- 5.10 The basic principles, format, and basic design of the tool were tested through consultation. There were different aspects to this as set out below.
- AUDE/EAUC annual conferences: a presentation and feedback session was given to each of these conferences in April 2011
  - Advisory group input: the tool development and rationale was tested with the project advisory group in April 2011, and the draft tool was reviewed by the group in July 2011
  - Webinars: two webinars were held for the supply-chain (procurement) reporting tool, in April and May 2011. The Q&A from the webinar is given in Annex B
  - Purchasing consortium: the prototype tool was reviewed by NWUPC.

## **6. Successful implementation of the reporting tool**

6.1 This final section describes how the tool is envisaged to be hosted and gives guidance to HEIs and consortia.

### **Testing the tool**

6.2 It may be prudent to trial the tool at NWUPC for the group of universities in their region, in advance of the tool being run/launched nationally. Feedback and updates to the tool can then be implemented in advance of the formal launch.

### **Consortia hosting**

6.3 The four consortia will need to agree the process for hosting and using this tool. For example, it may be more practical to host and run the tool from NWUPC, rather than from four separate consortia. Responsibilities will need to be allocated to individuals and appropriate dates/timelines developed to manage expectations for:

- Submission of input coded spend data to consortia from HEIs
- Return of supply-chain (procurement) emissions reports.

6.4 The process is expected to follow a similar timeline as for current ARD datasets: submission after the financial year-end (October – December), with emissions reports generated and subsequently returned to HEIs.

### **HEI data guidance**

6.5 HEIs will need to review their procurement systems to ensure they are ready to submit data from 2012-13. All their non-pay spend will need to be analysed, to ensure that their complete non-pay spend is submitted. There may be various systems in operation which all need to be captured and submitted in ProcHE or UNSPSC formats:

- FMS systems
- Outsourced hotel/travel systems
- Expenses
- E-procurement cards/systems
- Petty cash
- Other systems

6.6 Overlaps between data will also need to be reviewed; for example, some expenses may end up in the FMS system, but not all.



## Updating the tool

- 6.7 The consortia-held tool will need to be updated periodically. This is to cover different aspects that will need updating:
- **Input data codes:** if additional codes are developed (to those given in Annex B) these will need to be added to the input data sheets and mapped to carbon intensity values.
  - **Carbon intensity data:** as revised carbon intensity data becomes available from Defra, the existing 75 sector values will need to be replaced in the tool.

## Annex A. ProcHE and UNSPSC input codes

The following tables provide the input codes for the procurement expenditure datasets used by the supply-chain (procurement) emissions reporting tool:

- Table A1: ProcHE commodity codes
- Table A2: UNSPSC commodity codes

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
A	The Arts, Audio-Visual & Multimedia Supplies and Services
AA	Audio Visual Equipment, Purchase, Maintenance, Repair and Hire
AB	Display and Projection Equipment and Consumables
AC	Learning and Training Packs and Pre-recorded Media
AD	Music Instruments, Scores, Purchase, Maintenance
AE	Photographic Equipment Supplies and Services
AF	Studio Hire and Running Costs
AG	Theatre Production Costs (scenery, lighting, props, costumes)
AH	Video Equipment (suspended)
AJ	Audio Visual Consumables, Accessories, Cassettes etc
AK	Photographic Consumables, Accessories etc
AL	Digital Imaging Equipment Purchase, Maintenance, Repair, Consumables
AM	Commercial and Graphic Art Equipment Purchase and Maintenance and Consumables
AN	External Production Services (performances, tours)
AP	Tape Machines, Video Interviewing Equipment
AQ	Website Design and Services (suspended)
AR	Fine and Creative Arts, Equipment Purchase, Maintenance, Consumables
AT	Audio-Visual Equipment (suspended)
AZ	Other and General Audio-Visual Aids
B	Library & Publications
BA	Book Binding Services
BB	Books
BC	Inter-Library Loans
BD	Journals
BE	Library Subscriptions
BF	Manuscripts
BG	Newspapers and Periodicals
BJ	Archiving Equipment and Consumables (inc. maintenance and repair)
BK	Electronic Media, inc. Microfilm
BL	Manuals; Computer, Workshop, Training
BM	Tickets and Tokens (including electronic tickets and book tokens)
BN	Library Equipment and Services (e.g. book tagging) (including maintenance, repair and hire)

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
BZ	Other and General Library
C	Catering Supplies & Services
CA	Beers, Wines, Spirits, Alcoholic drinks
CB	Bakery Products
CC	Dairy Produce
CD	Frozen Foods
CE	Groceries
CF	Catering, Bar Equipment and Accessories
CG	Catering Equipment Maintenance and Repair
CH	Meat, Poultry, Offal
CJ	Soft and Non-alcoholic Drinks
CK	Tableware, Crockery, Cutlery, Table Coverings etc
CL	Vending Equipment, Consumables and Charges
CM	Fruit and Vegetables
CN	Table and Room Decorations
CP	Fish and Seafood
CQ	Confectionery, Sweet and Savoury
CR	Watercooler Equipment, Services and Consumables
CS	Catering Entertainments, Discos etc
CT	Catering Services, Outsourced, inc. Pre-prepared Meals
CZ	Other and General Catering
D	Medical, Surgical, Nursing Supplies & Services
DA	Medical, Surgical, Nursing Capital Equipment >£10k
DB	Medical, Surgical, Nursing Small Apparatus, Equipment, Purchase, Maintenance, Repair and Hire
DC	Medical, Surgical, Nursing Consumables and Disposables
DD	Medical, Surgical, Nursing, Dressing and Bandages
DE	Medical, Surgical, Nursing, Clothing
DF	Equipment Maintenance and Repair (suspended)
DG	Waste Disposal Clinical (suspended)
DH	Medical, Surgical, Nursing, Patient Diagnostic Services and Clinical Trials
DK	Physiotherapy and Sports Science Equipment and Consumables
DZ	Other and General
E	Agricultural/Fisheries/Forestry/Horticultural/Oceanographic Supplies & Services
EA	Livestock and Animal Services and Supplies
EB	Livestock, Animal and Farm Feeds
EC	Agricultural, Fisheries, Forestry, Oceanographic Capital Equipment >£10k
ED	Agricultural, Fisheries, Forestry, Oceanographic, Small Equipment and Tools
EF	Equipment Maintenance and Repair
EG	Equipment Hire
EH	Agricultural, Fisheries, Forestry, Oceanographic, Purchase of Plants, Crops, Trees etc

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
EJ	Veterinary and Farrier Services
EK	Fertilisers, Pesticides, Composts, Soils
EL	Fencing Supplies and Associated Services
EM	Horticultural Consumables (pots, seed trays etc)
EN	Oceanographic Supplies and Services
EP	Kennels, Catteries, Stabling, Supplies and Services
ER	Spare
ES	Agricultural, Fisheries, Forestry, Horticultural: Pasturage, Purchase, Lease, Maintenance
EZ	Agricultural, Fisheries, Forestry, Horticultural, Oceanographic, Geology: Other and General
F	Furniture, Furnishings & textiles
FA	Electrical White Goods and Domestic Kitchen Equipment
FB	Laboratory Furniture - Fixed and Free-standing
FC	Furniture – Office, Purchase and Hire
FD	Floor Coverings
FE	Textiles, Fabrics, Soft and Loose Furnishings
FF	Furniture – Residential
FG	Window Coverings
FH	Sports, Recreational and Nursery Materials and Equipment
FJ	Furniture – Removal and Storage
FK	Furniture – Repairs
FL	Furniture – Classroom and Lecture Theatre
FM	Drama Production Requisites (deleted Oct 2002 – use AG)
FN	Furniture: General Storage, Racking, Shelving (inc. library)
FO	Boards, Notice, Pin, Chalk, Easels, Mirrors
FP	Security Furniture
FQ	Clocks and Timepieces
FR	Office Seating
FS	Hair and Beauty Equipment, Services, Suppliers, Purchase, Maintenance and Repair
FT	Outdoor furniture
FZ	Other and General Furniture, Furnishings and Textiles
H	Janitorial & Domestic Supplies & Services
HA	Detergents
HB	Cleaning and Maintenance Machines and Consumables
HC	Gloves, Cleaning and Industrial
HD	Personal Hygiene and Vending Supplies and Services
HE	Paper Disposables
HF	Protective Clothing and Safety Workwear
HG	Laundry and Dry Cleaning Services and Equipment
HJ	Janitorial and Domestic: Washing Materials
HK	Janitorial and Domestic: Waste Sacks and Bags
HL	Disinfectants

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
HN	Soaps
HP	Dusting and Polishing Consumables (rags, brushes, mops)
HQ	Window Cleaning
HR	Clothing and Tailoring Supplies and Services
HS	Footwear Supplies
HZ	Other and General Cleaning and Janitorial
J	Utilities
JA	Electricity Supply and Services
JB	Gas Supply and Services
JC	Oil Supply and Services
JD	Solid Fuel, Supplies and Services
JE	Water and Sewerage Services
JZ	Other/General Utilities
K	Computer Supplies & Services
KA	Continuous Stationery (suspended)
KB	Printer Purchase, Maintenance and repair
KC	Printer Consumables, Toners, Ink, Ribbons etc
KD	Magnetic Media and Storage, Optical Media and Storage
KE	Software Purchase, Licences, Maintenance, Development, Royalties
KF	Workstation and Mini-computer Purchase and Maintenance
KG	Server and related items Purchase and Maintenance
KH	Desktop Computer Purchase and Maintenance, PC, Apple Macintosh, Monitors
KI	Computing SPARE
KJ	Network Equipment Installation and Maintenance
KK	Portable and Laptop Computer Purchase and Maintenance
KL	Plotter and Scanner Purchase and Maintenance
KM	Computer Consumables, Peripherals, Upgrades and Add-ons
KN	Internet and Intranet Services
KO	Web Design
KP	Computer Teaching Aids and Materials
KQ	Apple Mac Desk Top Computer Purchase, Maintenance, Repair, Hire
KR	Sun/Unix Equipment Purchasing, Maintenance, Repair and Hire
KS	Spare
KZ	Other and General Computer
L	Laboratory/Animal House Supplies & Services
LA	Laboratory Support Equipment, Accommodation, Accessories
LB	Laboratory Animals
LC	Laboratory Small Apparatus and Equipment Purchase and Hire
LD	Other Sciences (Astronomy, Sports Science, etc) Supplies and Services
LE	Laboratory Blood Products
LF	Laboratory Bonded Alcohol
LG	Laboratory, Capital Equipment >£10,000

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
LH	Laboratory Chemicals – Organic and Inorganic
LJ	Laboratory Clothing
LK	Laboratory Consumables and Sundries (inc. disposables)
LL	Laboratory Diagnostic Testing and Calibration Services
LM	Laboratory Equipment Maintenance and Repair
LN	Laboratory Gases Purchase and Associated Rentals
LP	Laboratory Glassware
LQ	Pharmaceuticals – Non-veterinary
LR	Pharmaceuticals – Veterinary
LS	Laboratory Plasticware
LT	SPARE/UNUSED
LU	Laboratory Refrigerants (including liquid nitrogen)
LV	Scintillation Fluids
LW	Stable Isotopes and Radiochemicals
LX	Tissue Culture and Bacteriological Media
LY	Laboratory Waste Disposal – Clinical and Chemical
LZ	Other and General Laboratory
M	Workshop & Maintenance Supplies (lab & estates)
MA	Batteries
MB	Electrical Sundries and Components
MC	Fasteners inc. Nuts, Bolts, Rivets etc
MD	Hand Tools
ME	Handling and Storage Equipment Purchase, Maintenance, Repair and Hire
MF	Machine Tools and Accessories Purchase, Hire
MG	Workshop Equipment and Tool Maintenance and Repair
MH	Mechanical Components and Spare Parts
MJ	Metals
MK	Other Raw Materials inc. Lubricants and Road Salt
ML	Plastics, Glass and Ceramics
MM	Wood
MN	Electronic Components and Test Equipment Purchase, Maintenance, Repair and Hire
MP	Plumbing Sundries
MQ	Ironmongery, Door Furniture, Locksmiths Supplies and Services
MR	Adhesives, Fillers and Sealants
MS	Workshop Consumables, Rags, Cleansers etc
MT	Workshop Teaching Aids and Materials
MZ	Other General Workshop and Maintenance Supplies
P	Printing
PA	Printing Binding and Finishing Services
PB	External or Outsourced Printing
PC	Printing Consumables, Sundries and Inks
PD	Printing – External Design and Artwork

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
PE	Printing Equipment Purchase, Lease, Hire and Maintenance
PF	External Typesetting, Colour Separation etc
PG	Printing Paper and Specials (NOT PHOTOCOPY PAPER - SEE S)
PH	Printing Card and Board
PK	
PZ	Other and General Printing
Q	Telecommunications, Postal & Mail Room Services
QA	Mail Services
QB	Mail Room Equipment Purchase, Lease & Maintenance
QC	Courier Services
QD	Freight, Carriage & Haulage Services
QE	Mail Services Overseas/International
QF	Spare
QG	Telephony & Switchboard Capital Purchase >£10,000
QH	Telephony & Switchboard Maintenance
QJ	Telecoms Transmission Equipment Purchase & Maintenance
QL	Radios, Mobile, Encrypted
QM	Phone Cards, Swipe Cards, Equipment & Supplies
QN	Communications Equipment & Accessories (hubs, modems, routers)
QP	Freight Carriage & Haulage Services (suspended)
QR	Telephony – Land & Mobile, Line Rental, Call Charges, Equipment
QS	Telephony – Mobile Line rental, call charges, equipment
QZ	Other Postal & Telecommunications
R	Professional & Bought-in Services
RA	Advertising (course, recruitment & other)
RB	Conferences & Meetings
RC	Data Information Services
RD	Accountancy Services (inc. audit, consultancy)
RE	General Consultancy
RF	Insurance Services
RG	Legal Services
RH	Banking Services
RJ	Patents, IPR, Trademarks, Royalties, Copyright
RK	Temporary Staff & Employment Agencies
RL	Promotions & Publicity (inc. exhibitions and fairs)
RM	Speakers & Presenters
RN	Subscriptions (learned society, professional etc)
RP	Training Courses
RQ	Marketing & Recruitment Services (not advertising)
RR	Debt Collection Services
RS	Market Research Services
RT	Auction Services
RU	Translation, Interpreter, Transcription & Procedural Writing Services

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
RV	Archival and Storage Services
RW	Student Placement Programmes, Costs and Expenses
RZ	Other/General Professional & Bought-in Services
S	Stationery & Office Supplies
SA	Envelopes (suspended)
SB	Files, Filing Folders, Binders (suspended)
SC	Office Equipment Purchase, Lease, Hire and Maintenance
SD	Diaries, Calendars (suspended)
SE	Spare
SF	Papers (photocopying) etc
SG	Photocopying – Rental, Lease, Purchase, Maintenance, Charges
SH	Pre-printed Stationery
SJ	General Stationery
SK	Desktop Sundries (suspended)
SL	Education Packs and Materials Specific to Teaching and Learning (not media – use AC)
SZ	Other and General Stationery and Office Supplies
T	Travel & Transport inc. Vehicle Hire & Subsistence
TA	Accommodation & Hotels, inc. Room Bookings and Restaurants
TB	Air Travel
TC	Ferry Travel
TD	Taxi Hire
TE	Mileage (private vehicles)
TF	Rail Travel
TG	Subsistence
TH	Car Hire
TJ	Van Hire
TK	Coach Hire
TL	Boat Hire & Charter
TM	Travel Agency Services
TN	Aircraft & Helicopter Hire
TO	Storage & Warehouse Services
TP	Student Travel Arrangements
TQ	Conferences, Meetings and Room Bookings
TR	Relocation and Household Removal Expenses
TS	Spare
TT	Package Travel, Field Trips
TZ	Other/General Travel & Transport
U	Safety & Security
UA	Confidential Waste Disposal
UB	Fire Protection/Fire Fighting Equipment & Services
UC	First Aid Supplies
UD	Safety & Personal Protection Equipment



<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
UE	Security Equipment & Consumables
UF	Security Services
UG	Waste disposal & Treatment, Recycling, Hazardous, Non-laboratory
UH	Occupational Health Supplies & Services (inc. physio)
UJ	Surveillance Equipment, Installation & Maintenance (CCTV)
UK	Access Control, Keys, Security Passes
UL	Counselling Services
UM	Alarms (including fire, smoke, gas, intruder) Purchase, Maintenance, Repair and Hire
UN	Special Needs/DDA Suppliers, Services Equipment Purchase, Maintenance, Repair and Hire
UZ	Other/General Safety & Security
V	Vehicles, Purchase, Lease, Contract Hire
VA	Vehicle Purchase
VB	Motoring Association Charges
VC	Vehicle Lease Hire
VD	Road Tax
VE	Vehicle Repair, Maintenance & MOT
VF	Tyres
VG	Fuels & Lubricants
VH	Vehicle Parts & Accessories
VJ	Garage Equipment
VK	Specialist Vehicle Purchase – Motor Cycle & Bicycles
VL	Specialist Vehicle Purchase – Marine Craft
VM	Specialist Vehicle Purchase – Aircraft & Helicopters
VZ	Other/General Vehicle Purchase & Lease Hire
W	Estates & Buildings
WA	Building Materials
WB	Capital Projects
WC	Decoration Materials, Works & Services
WD	Conservation Projects
WE	Electricity Supply & Services (suspended)
WF	Fencing – Property & Specialist
WG	Gas Supply & Services (suspended)
WH	General Building Repairs & Maintenance
WI	Specialist Building Services (scaffolding, plumbing, carpentry, roofing)
WJ	Grounds Maintenance Equipment
WK	Ground maintenance, Supplies & Services (inc. landscaping)
WL	Testing & Calibration Services
WM	TBC
WN	Plant Purchase, Hire & Maintenance, inc. Lifts, Air-conditioning, Boilers, Generators etc
WP	Temporary & Mobile Buildings, Hire & Purchase
WQ	Waste & Refuse Disposal

<b>2 letter Proc-HE Code</b>	<b>Proc-HE Description</b>
WR	Solid Fuel
WS	Water & Sewerage Services
WT	Cleaning Services
WU	Professional Services, Architects, Estates Agents, QS, Construction Management, Surveying Equip & Services
WV	Pest & Vermin Control Services
WW	Estates Tool & Plant Hire
WX	Signs & Signposting
WY	Tent & Marquee Purchase, Hire & Maintenance
WZ	Other/General Estates & Buildings
X	Miscellaneous/Unclassified
XA	Fees for Lecturing, Teaching, Examining, Moderating, Supervision, Research, Tutor
XB	Credit Card Charges
XC	Customs & Excise – VAT
XD	Fees – Students
XE	Hospitality/Entertainment/Courtesy Expenses
XF	Works of Art
XG	Building/Premises/Land – Rent, Lease, Hire, Fuel Duties
XH	Welfare
XJ	Other Educational Establishments
XK	Other Public Bodies
XL	Rates
XM	Awards, Gifts, Trophies, Souvenirs
XN	Bursaries, Scholarships, Endowments, Donations
XP	Purchase Card Purchases
XQ	Identity Access Cards (suspended)
XR	Interdepartmental Trading
XY	Other/General Unclassified
XZ	Identity Access Cards (suspended)
Y	Not relevant to Purchasing or Procurement
YY	Not relevant to Purchasing, Procurement
Unclassified	
<b>Totals</b>	

**Table A1: ProcHE input codes**

<b>Family</b>	<b>Family Title</b>
10000000	Live Plant and Animal Material and Accessories and Supplies
10100000	Live animals
10110000	Domestic pet products
10120000	Animal feed
10130000	Animal containment and habitats
10140000	Saddlery and harness goods
10150000	Seeds and bulbs and seedlings and cuttings
10160000	Floriculture and silviculture products
10170000	Fertilizers and plant nutrients and herbicides
10190000	Pest control products
10200000	Live rose bushes
10210000	Live plants of high species or variety count flowers
10220000	Live plants of low species or variety count flowers
10230000	Live chrysanthemums
10240000	Live carnations
10250000	Live orchids
10300000	Fresh cut rose
10310000	Fresh cut blooms of high species or variety count flowers
10320000	Fresh cut blooms of low species or variety count flowers
10330000	Fresh cut chrysanthemums
10340000	Fresh cut floral bouquets
10350000	Fresh cut carnations
10360000	Fresh cut orchids
10400000	Dried cut roses
10410000	Dried cut blooms of high species or variety count flowers
10420000	Dried cut blooms of low species or variety count flowers
10430000	Dried cut chrysanthemums
10440000	Dried cut carnations
10450000	Dried cut orchids
10500000	Fresh cut greenery
11000000	Mineral and Textile and Inedible Plant and Animal Materials
11100000	Minerals and ores and metals
11110000	Earth and stone
11120000	Non edible plant and forestry products
11130000	Non edible animal products
11140000	Scrap and waste materials
11150000	Fibres and threads and yarns
11160000	Fabrics and leather materials
11170000	Alloys
11180000	Metal oxide
11190000	Metal waste and scrap
12000000	Chemicals including Bio Chemicals and Gas Materials
12130000	Explosive materials
12140000	Elements and gases
12160000	Additives

<b>Family</b>	<b>Family Title</b>
12170000	Colorants
12180000	Waxes and oils
12190000	Solvents
12350000	Compounds and mixtures
13000000	Resin and Rosin and Rubber and Foam and Film and Elastomeric Materials
13100000	Rubber and elastomers
13110000	Resins and rosins and other resin derived materials
14000000	Paper Materials and Products
14100000	Paper materials
14110000	Paper products
14120000	Industrial use papers
15000000	Fuels and Fuel Additives and Lubricants and Anti-corrosive Materials
15100000	Fuels
15110000	Gaseous fuels and additives
15120000	Lubricants and oils and greases and anti corrosives
15130000	Fuel for nuclear reactors
20000000	Mining and Well Drilling Machinery and Accessories
20100000	Mining and quarrying machinery and equipment
20110000	Well drilling and operation equipment
20120000	Oil and gas drilling and exploration equipment
20130000	Oil and gas drilling and operation materials
20140000	Oil and gas operating and production equipment
21000000	Farming and Fishing and Forestry and Wildlife Machinery and Accessories
21100000	Agricultural and forestry and landscape machinery and equipment
21110000	Fishing and aquaculture equipment
22000000	Building and Construction Machinery and Accessories
22100000	Heavy construction machinery and equipment
23000000	Industrial Manufacturing and Processing Machinery and Accessories
23100000	Raw materials processing machinery
23110000	Petroleum processing machinery
23120000	Textile and fabric machinery and accessories
23130000	Lapidary machinery and equipment
23140000	Leatherworking repairing machinery and equipment
23150000	Industrial process machinery and equipment and supplies
23160000	Foundry machines and equipment and supplies
23180000	Industrial food and beverage equipment
23190000	Mixers and their parts and accessories
23200000	Mass transfer equipment
23210000	Electronic manufacturing machinery and equipment and accessories
23220000	Chicken processing machinery and equipment
23230000	Sawmilling and lumber processing machinery and equipment
23240000	Metal cutting machinery and accessories
23250000	Metal forming machinery and accessories
23260000	Rapid prototyping machinery and accessories
23270000	Welding and soldering and brazing machinery and accessories and supplies
23280000	Metal treatment machinery
23290000	Industrial machine tools

<b>Family</b>	<b>Family Title</b>
23300000	Wire machinery and equipment
24000000	Material Handling and Conditioning and Storage Machinery and their Accessories and Supplies
24100000	Material handling machinery and equipment
24110000	Containers and storage
24120000	Packaging materials
24130000	Industrial refrigeration
24140000	Packing supplies
25000000	Commercial and Military and Private Vehicles and their Accessories and Components
25100000	Motor vehicles
25110000	Marine transport
25120000	Railway and tramway machinery and equipment
25130000	Aircraft
25150000	Spacecraft
25160000	Non motorized cycles
25170000	Transportation components and systems
25180000	Vehicle bodies and trailers
25190000	Transportation services equipment
25200000	Aerospace systems and components and equipment
26000000	Power Generation and Distribution Machinery and Accessories
26100000	Power sources
26110000	Batteries and generators and kinetic power transmission
26120000	Electrical wire and cable and harness
26130000	Power generation
26140000	Atomic and nuclear energy machinery and equipment
27000000	Tools and General Machinery
27110000	Hand tools
27120000	Hydraulic machinery and equipment
27130000	Pneumatic machinery and equipment
27140000	Automotive specialty tools
30000000	Structures and Building and Construction and Manufacturing Components and Supplies
30100000	Structural components and basic shapes
30110000	Concrete and cement and plaster
30120000	Roads and landscape
30130000	Structural building products
30140000	Insulation
30150000	Exterior finishing materials
30160000	Interior finishing materials
30170000	Doors and windows and glass
30180000	Plumbing fixtures
30190000	Construction and maintenance support equipment
30240000	Portable structure building components
30250000	Underground mining structures and materials
30260000	Structural materials
31000000	Manufacturing Components and Supplies
31100000	Castings and casting assemblies

<b>Family</b>	<b>Family Title</b>
31110000	Extrusions
31120000	Machined castings
31130000	Forgings
31140000	Mouldings
31150000	Rope and chain and cable and wire and strap
31160000	Hardware
31170000	Bearings and bushings and wheels and gears
31180000	Packings, glands, boots and covers
31190000	Grinding and polishing and smoothing materials
31200000	Adhesives and sealants
31210000	Paints and primers and finishes
31220000	Dyeing and tanning extracts
31230000	Machined raw stock
31240000	Industrial optics
31250000	Pneumatic and hydraulic and electric control systems
31260000	Housings and cabinets and casings
31270000	Machine made parts
31280000	Stampings and sheet components
31290000	Machined extrusions
31300000	Machined forgings
31310000	Fabricated pipe assemblies
31320000	Fabricated bar stock assemblies
31330000	Fabricated structural assemblies
31340000	Fabricated sheet assemblies
31350000	Fabricated tube assemblies
31360000	Fabricated plate assemblies
31370000	Refractories
31380000	Magnets and magnetic materials
31390000	Machinings
31400000	Gaskets
31410000	Seals
31420000	Sintered parts
32000000	Electronic Components and Supplies
32100000	Printed circuits and integrated circuits and microassemblies
32110000	Discrete semiconductor devices
32120000	Passive discrete components
32130000	Electronic hardware and component parts and accessories
32140000	Electron tube devices and accessories
32150000	Automation control devices and components and accessories
39000000	Electrical Systems and Lighting and Components and Accessories and Supplies
39100000	Lamps and lightbulbs and lamp components
39110000	Lighting Fixtures and Accessories
39120000	Electrical equipment and components and supplies
39130000	Electrical wire management devices and accessories and supplies
40000000	Distribution and Conditioning Systems and Equipment and Components
40100000	Heating and ventilation and air circulation
40140000	Fluid and gas distribution

<b>Family</b>	<b>Family Title</b>
40150000	Industrial pumps and compressors
40160000	Industrial filtering and purification
40170000	Pipe piping and pipe fittings
40180000	Tubes tubing and tube fittings
41000000	Laboratory and Measuring and Observing and Testing Equipment
41100000	Laboratory and scientific equipment
41110000	Measuring and observing and testing instruments
41120000	Laboratory supplies and fixtures
42000000	Medical Equipment and Accessories and Supplies
42120000	Veterinary equipment and supplies
42130000	Medical apparel and textiles
42140000	Patient care and treatment products and supplies
42150000	Dental equipment and supplies
42160000	Dialysis equipment and supplies
42170000	Emergency and field medical services products
42180000	Patient exam and monitoring products
42190000	Medical facility products
42200000	Medical diagnostic imaging and nuclear medicine products
42210000	Independent living aids for the physically challenged
42220000	Intravenous and arterial administration products
42230000	Clinical nutrition
42240000	Orthopedic and prosthetic and sports medicine products
42250000	Physical and occupational therapy and rehabilitation products
42260000	Postmortem and mortuary equipment and supplies
42270000	Respiratory and anaesthesia and resuscitation products
42280000	Medical sterilization products
42290000	Surgical products
42300000	Medical training and education supplies
42310000	Wound care products
42320000	Orthopedic surgical implants
43000000	Information Technology Broadcasting and Telecommunications
43190000	Communications devices and accessories
43200000	Components for information technology or broadcasting or telecommunications
43210000	Computer equipment and accessories
43220000	Data, voice or multimedia network equipment or platforms and accessories
43230000	Software
44000000	Office Equipment and Accessories and Supplies
44100000	Office machines and their supplies and accessories
44110000	Office and desk accessories
44120000	Office supplies
45000000	Printing and Photographic and Audio and Visual Equipment and Supplies
45100000	Printing and publishing equipment
45110000	Audio and visual presentation and composing equipment
45120000	Photographic or filming or video equipment
45130000	Photographic and recording media

<b>Family</b>	<b>Family Title</b>
45140000	Photographic filmmaking supplies
46000000	Defence and Law Enforcement and Security and Safety Equipment and Supplies
46100000	Light weapons and ammunition
46110000	Conventional war weapons
46120000	Missiles
46130000	Rockets and subsystems
46140000	Launchers
46150000	Law enforcement
46160000	Public safety and control
46170000	Security surveillance and detection
46180000	Personal safety and protection
46190000	Fire protection
46200000	Defence and law enforcement and security and safety training equipment
47000000	Cleaning Equipment and Supplies
47100000	Water and wastewater treatment supply and disposal
47110000	Industrial laundry and dry cleaning equipment
47120000	Janitorial equipment
47130000	Cleaning and janitorial supplies
48000000	Service Industry Machinery and Equipment and Supplies
48100000	Institutional food services equipment
48110000	Vending machines
48120000	Gambling or wagering equipment
48130000	Funeral equipment and materials
49000000	Sports and Recreational Equipment and Supplies and Accessories
49100000	Collectibles and awards
49120000	Camping and outdoor equipment and accessories
49130000	Fishing and hunting equipment
49140000	Watersports equipment
49150000	Winter sports equipment
49160000	Field and court sports equipment
49170000	Gymnastics and boxing equipment
49180000	Target and table games and equipment
49200000	Fitness equipment
49210000	Other sports
49220000	Sports equipment and accessories
49240000	Recreation and playground and swimming and spa equipment and supplies
50000000	Food , Beverage and Tobacco Products
50100000	Nuts and seeds
50110000	Meat and poultry products
50120000	Seafood
50130000	Dairy products and eggs
50150000	Edible oils and fats
50160000	Chocolate and sugars and sweeteners and confectionary products
50170000	Seasonings and preservatives
50180000	Bread and bakery products
50190000	Prepared and preserved foods
50200000	Beverages



<b>Family</b>	<b>Family Title</b>
50210000	Tobacco and smoking products and substitutes
50220000	Cereal and pulse products
50300000	Fresh fruits
50310000	Organic fresh fruits
50320000	Dried fruit
50330000	Dried organic fruit
50340000	Frozen fruit
50350000	Frozen organic fruit
50360000	Canned or jarred fruit
50370000	Canned or jarred organic fruit
50370000	Canned or jarred organic fruit
50380000	Pureed fruit
50400000	Fresh vegetables
50410000	Organic fresh vegetables
50420000	Dried vegetables
50430000	Dried organic vegetables
50440000	Frozen vegetables
50450000	Frozen organic vegetables
50460000	Canned or jarred vegetables
50470000	Canned or jarred organic vegetables
51000000	Drugs and Pharmaceutical Products
51100000	Anti infective drugs
51110000	Antineoplastic agents
51120000	Cardiovascular drugs
51130000	Hematologic drugs
51140000	Central nervous system drugs
51150000	Autonomic nervous system drugs
51160000	Drugs affecting the respiratory tract
51170000	Drugs affecting the gastrointestinal system
51180000	Hormones and hormone antagonists
51190000	Agents affecting water and electrolytes
51200000	Immunomodulating drugs
51210000	Miscellaneous drug categories
51240000	Drugs affecting the ears, eye, nose and skin
51250000	Veterinary nutritional supplement
52000000	Domestic Appliances and Supplies and Consumer Electronic Products
52100000	Floor coverings
52120000	Bedclothes and table and kitchen linen and towels
52130000	Window treatments
52140000	Domestic appliances
52150000	Domestic kitchenware and kitchen supplies
52160000	Consumer electronics
52170000	Domestic wall treatments
53000000	Apparel and Luggage and Personal Care Products
53100000	Clothing
53110000	Footwear
53120000	Luggage and handbags and packs and cases
53130000	Personal care products

<b>Family</b>	<b>Family Title</b>
53140000	Sewing supplies and accessories
54000000	Timepieces and Jewellery and Gemstone Products
54100000	Jewellery
54110000	Timepieces
54120000	Gemstones
55000000	Published Products
55100000	Printed media
55110000	Electronic reference material
55120000	Signage and accessories
56000000	Furniture and Furnishings
56100000	Accommodation furniture
56110000	Commercial and industrial furniture
56120000	Classroom and instructional and institutional furniture and fixtures
56130000	Merchandising furniture and accessories
56140000	Home furnishing adornments
60000000	Musical Instruments and Games and Toys and Arts and Crafts and Educational Equipment and Materials and Accessories and Supplies
60100000	Developmental and professional teaching aids and materials and accessories and supplies
60110000	Classroom decoratives and supplies
60120000	Arts and crafts equipment and accessories and supplies
60130000	Musical Instruments and parts and accessories
60140000	Toys and games
70000000	Farming and Fishing and Forestry and Wildlife Contracting Services
70100000	Fisheries and aquaculture
70110000	Horticulture
70120000	Livestock services
70130000	Land and soil preparation and management and protection
70140000	Crop production and management and protection
70150000	Forestry
70160000	Wildlife and flora
70170000	Water resources development and oversight
71000000	Mining and oil and gas services
71100000	Mining services
71110000	Oil and gas exploration services
71120000	Well drilling and construction services
71130000	Oil and gas extraction and production enhancement services
71140000	Oil and gas restoration and reclamation services
71150000	Oil and gas data management and processing services
71160000	Oil and gas well project management services
72000000	Building and Facility Construction and Maintenance Services
72100000	Building and facility maintenance and repair services
72110000	Residential building construction services
72120000	Nonresidential building construction services
72140000	Heavy construction services
72150000	Specialized trade construction and maintenance services
73000000	Industrial Production and Manufacturing Services

<b>Family</b>	<b>Family Title</b>
73100000	Plastic and chemical industries
73110000	Wood and paper industries
73120000	Metal and mineral industries
73130000	Food and beverage industries
73140000	Fibres and textiles and fabric industries
73150000	Manufacturing support services
73160000	Machinery and transport equipment manufacture
73170000	Manufacture of electrical goods and precision instruments
73180000	Machining and processing services
76000000	Industrial Cleaning Services
76100000	Decontamination services
76110000	Cleaning and janitorial services
76120000	Refuse disposal and treatment
76130000	Toxic and hazardous waste cleanup
77000000	Environmental Services
77100000	Environmental management
77110000	Environmental protection
77120000	Pollution tracking and monitoring and rehabilitation
77130000	Pollutants tracking and monitoring and rehabilitation services
78000000	Transportation and Storage and Mail Services
78100000	Mail and cargo transport
78110000	Passenger transport
78120000	Material packing and handling
78130000	Storage
78140000	Transport services
78180000	Transportation repair or maintenance services
80000000	Management and Business Professionals and Administrative Services
80100000	Management advisory services
80110000	Human resources services
80120000	Legal services
80130000	Real estate services
80140000	Marketing and distribution
80150000	Trade policy and services
80160000	Business administration services
81000000	Engineering and Research and Technology Based Services
81100000	Professional engineering services
81110000	Computer services
81120000	Economics
81130000	Statistics
81140000	Manufacturing technologies
81150000	Earth science services
81160000	Information technology service delivery
82000000	Editorial and Design and Graphic and Fine Art Services
82100000	Advertising
82110000	Writing and translations
82120000	Reproduction services

<b>Family</b>	<b>Family Title</b>
82130000	Photographic services
82140000	Graphic design
82150000	Professional artists and performers
83000000	Public Utilities and Public Sector Related Services
83100000	Utilities
83110000	Telecommunications media services
83120000	Information services
84000000	Financial and Insurance Services
84100000	Development finance
84110000	Accounting and bookkeeping services
84120000	Banking and investment
84130000	Insurance and retirement services
84140000	Credit agencies
85000000	Healthcare Services
85100000	Comprehensive health services
85110000	Disease prevention and control
85120000	Medical practice
85130000	Medical science research and experimentation
85140000	Alternative and holistic medicine
85150000	Food and nutrition services
85160000	Medical surgical equipment maintenance and refurbishment and repair services
85170000	Death and dying support services
86000000	Education and Training Services
86100000	Vocational training
86110000	Alternative educational systems
86120000	Educational institutions
86130000	Specialized educational services
86140000	Educational facilities
90000000	Travel and Food and Lodging and Entertainment Services
90100000	Restaurants and catering
90110000	Hotels and lodging and meeting facilities
90120000	Travel facilitation
90130000	Performing arts
90140000	Commercial sports
90150000	Entertainment services
91000000	Personal and Domestic Services
91100000	Personal appearance
91110000	Domestic and personal assistance
92000000	National Defence and Public Order and Security and Safety Services
92100000	Public order and safety
92110000	Military services and national defence
92120000	Security and personal safety
93000000	Politics and Civic Affairs Services
93100000	Political systems and institutions
93110000	Socio political conditions
93120000	International relations
93130000	Humanitarian aid and relief

<b>Family</b>	<b>Family Title</b>
93140000	Community and social services
93150000	Public administration and finance services
93160000	Taxation
93170000	Trade policy and regulation
94000000	Organizations and Clubs
94100000	Work related organizations
94110000	Religious organizations
94120000	Clubs
94130000	Civic organizations and associations and movements
95000000	Land and Buildings and Structures and Thoroughfares
95100000	Land parcels
95110000	Thoroughfares
95120000	Permanent buildings and structures
95130000	Portable buildings and structures
95140000	Prefabricated buildings and structures

**Table A2: UNSPSC input codes**

## Annex B. Supply-chain (procurement) webinars Q&A

Two supply-chain (procurement) webinars were held as part of the consultation process with HEIs. The Q&A from these sessions is presented in Table B1 below.

<b>Lot A webinar – Supply-chain (procurement) Institutional Level</b>	
<b>May 27<sup>th</sup> 2011</b>	
<b>Questions from webinar participants</b>	<b>Responses/actions</b>
<ul style="list-style-type: none"> <li>To what extent do HEIs already submit this kind of coded data to consortia? Is this already a universal process?</li> </ul>	<ul style="list-style-type: none"> <li>Members of regional purchasing consortia usually report annually their spend data, so they can conduct a spend analysis and look for frameworks or agreements that can benefit all their members.</li> </ul>
<ul style="list-style-type: none"> <li>Will you be using CO<sub>2</sub> equivalent figures from Defra?</li> </ul>	<ul style="list-style-type: none"> <li>Yes, supply-chain emission factors Annex 13 for greenhouse gas emissions (CO<sub>2</sub>e)</li> </ul>
<ul style="list-style-type: none"> <li>It has been said that the spend information HEIs submit is not always complete. Using the Annual Return Database for scope 3 reporting will either encourage institutions to provide accurate data or it will have a negative effect on scope 3 figures. By negative effect I mean; if the data provided by HEIs is not accurate, we cannot see true picture of an institutions scope 3 emissions. Does that make sense?</li> </ul>	<ul style="list-style-type: none"> <li>The data is the best we have. From the analysis we have done the bottom-up data returns seem to capture 75% + of the total non-pay spend in the HE sector. In terms of allocation to commodity code, most of the bottom-up data ~75% is mapped to codes. This percentage is expected to increase through the use of this supply-chain (procurement) reporting tool, as HEIs will get a benefit from sending better coded data (i.e. a better breakdown of supply-chain (procurement) emissions).</li> </ul>
<ul style="list-style-type: none"> <li>Has any consideration been given to double counting as many UK based manufacturers will be covered by EU ETS or CRC and so will be reported nationally as will our HEI figures.</li> </ul>	<ul style="list-style-type: none"> <li>The EU ETS and CRC are carbon tax systems for scope 1 + 2 (energy) emissions, so there is no overlap with this scope 3 reporting system being developed for HEIs</li> </ul>
<ul style="list-style-type: none"> <li>Does that include stripping out waste figures as well?</li> </ul>	<ul style="list-style-type: none"> <li>Yes the waste spend (and associated emissions) will be identified separately so as not to overlap with the waste/water EMS reporting.</li> </ul>

**Lot A webinar – Supply-chain (procurement) Institutional Level**

**May 27<sup>th</sup> 2011**

<b>Questions from webinar participants</b>	<b>Responses/actions</b>
<ul style="list-style-type: none"> <li>I think I need more understanding on the methodology to be used. It is a very complex area and I feel that perhaps this session today is giving the broad overview. That was something I was wondering if you were linking in with the NHS work.</li> </ul>	<ul style="list-style-type: none"> <li>The approach of mapping supply-chain (procurement) spend to the Defra carbon intensity factors was used in a DMU Arup study which took place last year. Case studies which provide some background explanation of this study can be found on the SPCE website               <ul style="list-style-type: none"> <li>to All Participants: Please find the link just mentioned to the SPCE website, you will find the information on the 5th and 6th link down on the page: <a href="http://spce.procureweb.ac.uk/index/sustainable-projects">http://spce.procureweb.ac.uk/index/sustainable-projects</a></li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Is this using the Triple Bottom Line (TBL2) methodology?</li> <li>I have seen some ecological foot printing work done by the Stockholm Environment Institute at York University – is your methodology in any way related to that?</li> </ul>	<ul style="list-style-type: none"> <li>Based on experience, this methodology should also identify carbon hot-spots in the supply chain and therefore identify procurement's influence on reducing the emissions? I think!</li> <li>Yes that's exactly how we approach it at DMU with the study we completed with Arup.</li> </ul>
<ul style="list-style-type: none"> <li>Where universities have shared services, and one university runs the facilities and pays but charges back the other universities – how will this be drawn out in the data and either not double counted or the data and associated emissions equally shared?</li> </ul>	<ul style="list-style-type: none"> <li>This is an interesting point, and needs to be taken on board not only for the supply-chain (procurement) tool but also for EMS reporting where shared services skews data reporting. We will raise with HEFCE.</li> </ul>

**Lot A webinar – Supply-chain (procurement) Institutional Level**

**May 27<sup>th</sup> 2011**

Questions from webinar participants	Responses/actions
<ul style="list-style-type: none"> <li>Once the footprint has been calculated once what use will it have in the long term? Using the DEFRA codes the only way to reduce carbon will be to spend less. How often will the supply-chain (procurement) footprint be recalculated? It is very useful in the first instance but I'm not sure about its continued use.</li> <li>An issue was raised at the EAUC about how can we report on good practice. If all the figures are produced centrally how can we include figures where we have chosen to use a lower carbon supplier?</li> </ul>	<ul style="list-style-type: none"> <li>Emission factors are based on national averages and are derived from an Environmental Extended Input-Output Analysis (explained during the webinar). These emission factors do not capture the greenhouse gas emissions of one product compared to another. At this current point in time the figures are what is currently available and will not only provide an indication of emissions relating to supply-chain (procurement) activities but also show supplier that these emissions are being measured by the sector.</li> </ul>
<ul style="list-style-type: none"> <li>It also shows that People &amp; Planet have it wrong in the Green League Table by not focusing upon Construction considering the reported supply-chain (procurement) emissions table we're looking at.</li> </ul>	<ul style="list-style-type: none"> <li>Correct – this is because until now scope 3 (supply-chain (procurement)) has been the elephant in the room. Now that the size of the construction emissions are becoming clearer, P&amp;P and other green leagues may start to modify their systems to track performance in this sector. One to watch for the future!</li> </ul>
<ul style="list-style-type: none"> <li>We report refrigerant releases as a direct emission. Will refrigerants be treated the same as energy</li> </ul>	<ul style="list-style-type: none"> <li>Correct – the same category as gas emissions these are scope 1 emissions (on-site), so not reported in the supply-chain (procurement) scope 3 tool.</li> </ul>
<ul style="list-style-type: none"> <li>Will construction waste be treated as energy and stripped out – I wonder if it might be 'hidden' in the construction category depending on how it is coded.</li> </ul>	<ul style="list-style-type: none"> <li>Emissions relating to construction will be reported through the supply-chain (procurement) emissions however we will recommend that construction waste mass is still collected and reported through the EMS but not converted to CO<sub>2</sub>e emissions</li> </ul>



**Lot A webinar – Supply-chain (procurement) Institutional Level**

**9<sup>th</sup> June 2011**

<b>Questions from webinar participants</b>	<b>Responses/actions</b>
<ul style="list-style-type: none"><li>• If individual institutions use this same model for reporting spend and, hence, emissions, for the same categories, but including spend outside consortia contracts, is there a danger of double-counting?</li></ul>	<ul style="list-style-type: none"><li>• HEIs will be reporting spend through their annual procurement spend returns to the consortia. This information will be added and includes the spend through the consortia in regional agreements etc so there should be no double counting.</li></ul>
<ul style="list-style-type: none"><li>• Hi there, can I just ask at this time is there any indication as to the time of year when this procurement spend data will need to be inputted?</li></ul>	<ul style="list-style-type: none"><li>• This is provided at the same time as the data is coded by the HEI which is usually September/October.</li></ul>
<ul style="list-style-type: none"><li>• Sorry, just to clarify – how does this methodology cover corporate purchases, i.e. those not through consortia or frameworks? i.e. corporate/university contracts – not those that we work with the consortia on – i.e. we do our own tenders etc</li></ul>	<ul style="list-style-type: none"><li>• Procurement spend is reported back to the procurement consortiums using financial coding system which will include spend data on corporate and university contracts as well as spend through arrangements with procurement consortium.</li></ul>
<ul style="list-style-type: none"><li>• What is covered in the waste products category?</li></ul>	<ul style="list-style-type: none"><li>• The waste products category includes sewerage and refuse disposal services as well as sanitary wastes.</li></ul>

## Terms and acronyms

ARD	Annual Returns Database
AUDE	Association of University Directors of Estates
CenSA	Centre for Sustainability Accounting Ltd
CHP	Combined Heat and Power
CO <sub>2</sub>	Carbon Dioxide
DCSF	Department for Children, Schools and Families
DECC	Department for Energy and Climate Change
DEFRA	Department of Environment, Food and Rural Affairs
DMU	De Montfort University
EAUC	Environmental Association for Universities and Colleges
EEIO	Environmentally Extended Input-Output
EMS	Estates Management System
FMS	Financial Management System
GHG	Greenhouse Gas
GHG Protocol	Greenhouse Gas Protocol
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HEI	Higher Education Institutions
HESA	Higher Education Statistics Agency
ICT	Information Communication Technology
kgCO <sub>2</sub> e/£ spent	Kilograms of Co <sub>2</sub> emissions equivalent per pound spent
LCA	Life Cycle Assessment
LUPC	London Universities Purchasing Consortium
Mt	Metric Tons
NA	National Accounts
NEUPC	North East Universities Purchasing Consortium
NWUPC	North West Universities Purchasing Consortium
OJEU	Official Journal of the European Union
ProcHE	Higher education procurement coding system
SPCE	Sustainable Procurement Centre of Excellence for Higher Education
SUPC	Southern Universities Purchasing Consortium
TBL2	CenSA's Triple Bottom Line software
UNSPSC	United Nations Standard Products and Services Code
UUK	Universities UK
WRAP	Waste and Resources Action Programme