June 2016

Procuring for: Repair, Re-use and Remanufacturing

Category and Commodity Guidance

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Inspiring change for Scotland's resource economy

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A. BACKGROUND SECTION

A.1 Introduction

A.1.1 Aims and objectives of this guidance

This guidance, which supports the transition to a more 'Circular Economy', is intended to help those responsible for the commissioning, specifying and procurement of products, equipment and services embed the benefits arising from a relevant and proportionate focus on:

- **Repair** (including durability),
- **Re-use** (preparing for re-use which may involve minor refurbishment) and
- **Remanufacturing**
  and related intervention measures, which may include consideration of alternative procurement and business models.

This focus concentrates on extending the useful life of these products or equipment procured or used within services procured and delivering the required function in the most effective manner.

It should also be stressed that such a focus should not, and is not intended to, compromise quality, safety and legal considerations.

A.1.2 Benefits for procurement

A focus on these activities can bring the following benefits:

Table 1: Available benefits

Benefits from a focus on Repair, Re-use and Remanufacturing	
Enhancing value	Extending the initial and/or subsequent service life of a product or commodity will increase the value that can be derived from the product's embedded content.
Avoiding costs	Avoidance of unnecessary or costly procurement, process costs, transfer costs, inventory management costs, waste and utility costs.
Enhancing resource efficiency	Reducing resource inputs either through waste reduction or greater efficiency.
Enhancing economy	Improving productivity, creating new jobs, education and skills, opening up new markets and improving resilience of businesses, which may have been supply constrained. Based on research by WRAP net job creation in circular economy activity to 2030 at current growth rate, as a percentage of labour force, is predicted to be 0.07% for Scotland[1].
Security of supply	Improving security of supply of critical products or commodities. By keeping products and materials in use in Scotland for longer we will be more resilient to global resource pressures. Remanufactured products can have reduced or negligible lead times, minimising disruption to services due to failure of key systems.
Cost savings	Refurbished and remanufactured products can be lower cost than new products. The cost differential varies from sector-to-sector and also within product lines but, usually, a remanufactured product demands between 50% and 90% of the cost of a new product.

[1] http://www.green-alliance.org.uk/resources/Employment%20and%20the%20circular%20economy.pdf

Environmental improvement	Waste prevention, less waste to landfill, less material consumption and fewer carbon emissions. Increasing the utilisation of a product including re-use of a product or component can reduce the demand for physical products and associated material energy and water requirements in production.
Socio-economic	Supporting the repair and re-use sector, which is often dominated by Small and Medium Enterprises (SMEs) and third sector organisations, with social, economic and environmental objectives. Enhancing skills and employability of those involved in relevant supply chains by creating training and employment for marginalised people. Product service systems promote repair, refurbishment and remanufacturing rather than disposal and tend to lead to better relationships with customers and a more skilled and adaptable workforce. This can also lead to a reconfiguration of the supply chain to service the new business model.
National and organisational outcomes	Delivering policy outcomes – such as National Outcomes, Circular Economy outcomes, organisational sustainable procurement objectives, meeting regulatory requirements.

A.1.3 Guide contents

The guidance clarifies:

- Prioritised commodities and services that the public sector procures where opportunities for circular economy outcomes potentially exist and the benefits to procurers and end users that are available;
- The importance of early consideration of intended circular economy outcomes, procurement need and delivering the required function;
- Market commentary for prioritised commodities and services, opportunities for market expansion and the role of public procurement in driving innovation and collaboration.

The main body of this Guide (**CATEGORY/COMMODITY GUIDANCE)** comprises:

- Practical guidance on embedding relevant requirements in public procurement specifications and other stages of the procurement cycle;
- Examples of how contracting authorities have delivered intended the intended outcomes.

The Guide provides category specific guidance on procurement specifications and other requirements for the categories in Table 2 below. These categories have been selected based on

- Prioritisation of Scottish Public Sector procurement categories and consideration of spend.
- Scope for relevant outcomes.
- Scope for potential expansion of procurement requirements and markets, either within the procurement of specific commodities or within the procurement of services.

Table 2: Procurement Categories

Procurement Categories	
Catering equipment and services	Outdoor play
Cleaning equipment and services	Power and hand tools
Construction	Textiles
Electronic equipment	Tyres

Flooring	Vehicles
Furniture	Waste services
Medical devices and equipment	

A.1.4 Note to users:

- Contracting authorities should obtain legal advice in the event of uncertainty regarding the suitability of suggested specifications/clauses contained within this Guide. Procurers must ensure the relevance and proportionality of procurement requirements, according to the subject matter of a contract.
- It is recognised that the focus on repair, re-use and remanufacturing may reflect only some of the potential environmental and socio-economic risks and opportunities that may be relevant to a particular procurement and there may be other categories for which guidance provided may be appropriate and transferable.
- There may be other categories of procurement that are not included in this Guide for which relevant circular economy outcomes may be relevant, and the guidance provided may be potentially replicable to these, but procurers should ensure relevance at all times.
- A range of good practice exists within public sector bodies within Scotland, the UK and Europe and this is highlighted. We would also encourage bodies to share good practice with others.

A.2 Who is this Guide for?

The guidance provides procurement specifications and examples which procurers within contracting authorities may consider. However, executives, senior managers, sustainability leads, budget-holders, commissioners, specifiers, end users and decision-makers normally have the greatest opportunity to change or influence for the better, while staff at various levels and departments or functions can make a difference and will find useful information in this document.

Consideration of opportunities for repair, re-use and remanufacturing can be challenging as it can include rethinking the need for procurement and a shift to a focus on required functionality, so it is important that organisational objectives support relevant outcomes while all relevant stakeholders are involved in consideration of how to achieve those intended outcomes. This includes understanding the market for the commodities that are being considered, and the potential for extending their useful life throughout a relevant focus.

Stakeholders may include:

- Finance and Budget holders – to understand life cycle costs and benefits of a focus on repair, re-use and remanufacturing and the potential shift to alternative business models;
- End users – to determine the required functionality and how a focus on the intended outcomes can achieve this in a sustainable and cost effective manner;
- Executives – to support a corporately beneficial focus on relevant outcomes;
- Procurement – to ensure a focus on repair, re-use and remanufacturing is embedded in the Organisational Procurement Strategy as well as commodity/category strategy where relevant and proportionate and opportunities for its application are identified in conjunction with others;
- Facilities and Waste Management – to identify related life cycle costs such as waste disposal and asset management that may be mitigated through such a focus.

A.3 Policy context

As indicated in Section 2 it is important that organisational objectives reflect the legislative and policy context, as the following emphasises:

A.3.1 Circular Economy Policy

- In Scotland's 2016 Circular Economy Strategy[2], there is an ambition to create a more circular economy in Scotland:

  > "In a world of finite resources, where global population and consumption growth are driving increased volatility and vulnerability in the supply of raw materials, the circular economy offers a new and exciting perspective. This creates a variety of opportunities from making goods to last longer, ready to be upgraded and repaired, to reducing our need for raw materials and helping us get smarter at recycling….the circular economy is about the environment, the economy, and people. And above all it is about the moral imperative to reduce our demand on the planet's resources….
  >
  > Scotland's Economic Strategy, and our new strategy for manufacturing - A Manufacturing Future for Scotland launched by the First Minister in February 2016 - clearly set out the economic opportunities of a more circular approach. From a business perspective, the circular economy agenda is one of innovation, seeking new ways to reduce our call on natural resources and keeping materials flowing through the economy at as high a value as possible for as long as possible…. Remanufacturing alone has the potential to create an additional £620 million turnover and 5,700 new jobs by 2020.".

- This policy is replicated in the EU Action Plan for a Circular Economy[3] and this work-stream is part of a transition to a more Circular Economy.
- The Scottish Model of Procurement[4] embeds as a core 'Sustainability in all that we do'.
- National Outcomes contained within the National Performance Framework[5], which all parts of the public sector are required to deliver and report progress against, include those that are relevant to circular economy outcomes and related socio-economic benefits, such as:
  - 'We reduce the local and global environmental impact of our consumption and production;
  - We realise our full economic potential with more and better employment opportunities for our people'.

A.3.2 Regulations

A range of regulations are also relevant, which include:

- The **Waste Regulations (Scotland) 2012** have strengthened the requirement to prevent waste to landfill and extend the useful life of materials.

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[2] **Making Things Last. A Circular Economy Strategy for Scotland:** http://www.gov.scot/Resource/0049/00494471.pdf

[3] **An EU action plan for the Circular Economy:** http://ec.europa.eu/environment/circular-economy/index_en.htm

[4] **Scottish Model of Procurement:** http://www.gov.scot/Topics/Government/Procurement/about/spd-aims

[5] **National Performance Framework:** http://www.gov.scot/About/Performance/scotPerforms

- The **Procurement Reform (Scotland) Act 2014** requires obligated public bodies to comply with the Sustainable Procurement Duty which requires bodies to consider in their procurement:

- Statutory Guidance has been developed by the Scottish Government to support the Act's implementation. As part of this tools (Prioritisation Methodology, Sustainability Test) have been developed to help public bodies comply with the Sustainable Procurement Duty and embed sustainable, and good, procurement practice. These include a focus on Circular Economy outcomes including Repair, Re-use and Remanufacturing. The Act will create opportunities for public sector buyers to allow innovative solutions that increase the re-use of goods, for example through leasing or product service systems, through public contracts.
- Public Contracts (Scotland) Regulations 2015 and Procurement (Scotland) Regulations 2016 reinforce the importance of early consideration of intended sustainability outcomes and advertising these to the market clearly and in detail.

A.4 Outcomes

A.4.1 Definition

The following provides clarification of Re-use, Repair and Remanufacturing and how this applies to procurement:

Re-use		
Definition	**Description**	**How this applies to procurement**
'A generic term covering all operations where 'an end-of-life (EoL) product is put back into service, essentially in the same form, with or without repair or remediation'.6	Re-use can represent: **Direct re-use:** A non-waste activity, re-use of products occurs directly between the two parties, with no third party checking and where re-use is 100% guaranteed. **Redeployment:** Use of a product in the same application, within the same organisation, probably subject to some level of preparation for re-use process. **Repurposing:** Use of product wholly or partly in another application. In all situations value retention is maximised by first examining re-use of the product, then the re-use of parts, and finally the re-use of raw materials. 'Preparing for re-use' refers to checking, cleaning, repairing or recovery operations,	▪ Rethink the need for procurement – can items be re-used first internally or externally, are asset registers in place and up to date? What infrastructure exists or is required to deal with this? ▪ Can re-used or refurbished commodities be procured? ▪ Specifying for Optimum Life (through re-use, durability, disassembly, repair during the original life and upgrade). ▪ Are commodities procured designed for re-use, including components within them? ▪ Focus on ownership as well as need – shift perspective from product ownership

6 **Parker 2007**:6

	which enable whole products or components of products that have become waste to be re-used without any other pre-processing. Any site considering undertaking preparation for re-use should consult with the relevant regulatory to ascertain the regulatory requirement applicable to their sites and activities. It is also worth noting that re-use can be components not necessarily whole items, and specifying for disassembly and modularity can help enormously with that. Products are designed and constructed in such a way that at the end of the period of usage, the destruction of value is avoided to the fullest extent possible or the value is maximised (for instance because the products are suitable for disassembly or are easy to separate).	towards product utility. Can the required function be delivered in a better way – e.g. shared/ leased ownership models/ managed service? Public bodies pay for the use of the products (their function), not for their ownership. At the end of its life cycle, the product goes back to the supplier.
Repair		
'The correction of specified faults in a product'.[78]	Repair can be a routine process for many commodities but may also mean: **Refurbishment:** The restitution of major components to a working condition rather than as new (it may include an emphasis on cosmetic appearance). A level of warranty lower than the Original Equipment Manufacturer (OEM) performance is characteristic. Refurbishment rather than Repair in terms of Preparing for Re-use (i.e. a second or third life) in the waste hierarchy parlance (i.e. this is typically the third sector and minor work done on product returns in the retail sector). **Reconditioning:** As refurbishment, the restitution of major components to a working condition rather than as new. A level of warranty lower than the OEM performance is characteristic. Reconditioning may place less emphasis on cosmetic appearance than refurbishment. BS 8887-2, does not differentiate between these two terms but considers them to: 'Return a used product to a satisfactory working condition by rebuilding or	▪ Focus on design for repair/ disassembly/ upgrade. ▪ Design for life extensive/ longevity/durability. ▪ Procurement of maintenance and repair services. ▪ Require regular maintenance and service. ▪ Procurement of refurbished products subject to quality and safety standards. ▪ Extended warranties can encourage repair, rather than replacement. ▪ Business models based on hiring and leasing products incentivise extending the product life through repair and the availability of affordable spare parts and information on how to repair products.

[7] **Parker 2007**: 16

	repairing major components that are close to failure, even where there are no reported or apparent faults in those components.'	
Remanufacturing		
'Return a used product to at least its original performance with a warranty that is equivalent or better than that of the newly manufactured product'.[9]	It is typically applied to complex manufactured products that possess significant embedded material, energy and labour resources, most of the value of which can be recovered by suitable remediation techniques. From the perspective of the purchaser or user, the product behaves like new and is backed up by an appropriate warranty from the seller or remanufacturer. Often, remanufacturers take the opportunity to upgrade the products from old to current performance standards of energy efficiency or productivity. This is one way that they can be differentiated from simple repair items and other end-of-life treatments.[10]	▪ Design for remanufacturing ▪ Procurement of remanufactured products and services. ▪ Leasing and maintenance models.

Repair, Re-use and Remanufacturing and Circular Economy models

As indicated in the above definitions a focus on Repair, Re-use and Remanufacturing may include consideration of alternative business models. These may include leasing, services in lieu of commodity procurement, managed services although these on their own may not deliver the intended outcomes without a clear focus on repair, re-use and remanufacturing and related interventions being included in these models.

It is important to stress that, as with any 'treatment' that waste or a commodity goes through, public sector procurers will be primarily concerned with obtaining assurance of the required level of quality, product warranty, safety standards and compliance with environmental regulations.

As a result of the above, there may be potential opportunities for the application of relevant outcomes in certain categories/commodities (products):

A.4.2 Procurement scenarios

P1	**Products**	Purchase of **repaired/refurbished/reusable/re-used products** within a domestic or workplace setting (e.g. furniture, appliances, IT, for Social Welfare fund or similar, or offices).
P2	**Products**	Purchase of **refurbished technical products/ equipment** (e.g. cleaning equipment, machine tools and hand tools).
P3	**Products**	Purchasing or leasing of **remanufactured product/ equipment** instead of new (e.g. vehicles, laboratory equipment and medical equipment).
P4	**Products**	Purchasing products/ equipment that are specified to incorporate a **re-usable design and for easy upgrades** (e.g. IT equipment and furniture).
P5	**Products**	Purchasing products/ equipment that are specified to incorporate **durability, repair** to prevent unnecessary purchase (e.g. IT and furniture).

9 **BS8887** http://shop.bsigroup.com/en/ProductDetail/?pid=000000000030205839
10 **Circular Economy Evidence** Building Programme: Remanufacturing Study March 2015.

P6	**Products**	Purchasing products/ equipment that are specified to incorporate easy **disassembly, component upgrade or replacement, repair as well as recycling** (e.g. IT and furniture).
S1	**Services**	Purchase of **re-use services** by local authorities and other public sector bodies **as part of waste services**, recycling services, at Household Waste Recycling Centres.
S2	**Services**	Purchase of **repair or maintenance services** for day to day or high cost equipment (e.g. catering equipment, machine tools, MRI scanners, vehicles and office furniture).
S3	**Services**	**Purchasing equipment on a leased basis** with maintenance, repair, re-use, remanufacturing included as a circular model (e.g. vehicles and furniture).
S4	**Services**	**Purchase of a managed equipment service or similar** with maintenance, repair, re-use, remanufacturing included as a circular economy model (e.g. carpet tiles, flooring, medical equipment, furniture and catering equipment).
S5	**Services**	Purchase of a **service which incorporates use of equipment or materials capable of re-use, repair, remanufacturing** (e.g. Facilities Management (FM) contracts and Construction).
S6	**Services**	Purchase of **void clearance service, where re-use could be maximized** (e.g. domestic goods - furniture and white goods).

A.4.3 Standards associated with re-use procurements

A number of standards exist that seek to address repair, re-use and remanufacturing outcomes, at least in part. These include the following:

- **BS EN 13429:2004**[11] - BS EN 13429:2004 provides a framework within which this and four other standards (BS EN 13427, BS EN 13430, BS EN 13431, and BS EN 13432) may be used together to support a claim that packaging is in compliance with the essential requirements for it to be placed on the market as required by the Directive. The purpose of packaging is the containment, protection, handling, delivery and presentation of products. Reuse of used packaging is one of several recovery options within the overall life cycle of packaging. In order to save resources and minimize waste, the whole system in which the packaging takes part should be optimized. This includes prevention as well as re-use and recovery of packaging waste.
- **BS8887-220:2010**[12]**.** Design for Manufacture, assembly, disassembly and end of life processing. The process of remanufacture. Specification. BS 8887-220 specifies requirements for the process of remanufacture. It lists the steps required to change a used product into an as-new product, with at least equivalent performance and warranty of a comparable new replacement product. This remanufacturing process can include parts or components to be used in subsequent assembly.
- **C2C**[13] - 'The Cradle to Cradle design principles provide a positive agenda for continuous innovation around the economic, environmental, and social issues of human design and use of products and services. Specifically, the purpose of the product certification program is to improve the way we make, use, and re-use things recognizing two metabolisms, the biological metabolism and the technical metabolism, with a goal to leave a beneficial footprint for human society and the environment'.

[11] **BS EN 13429:2004:** http://shop.bsigroup.com/en/ProductDetail/?pid=000000000030094797
[12] **BS8887-220:2010:** http://shop.bsigroup.com/en/ProductDetail/?pid=000000000030205839
[13] **C2C Cradle to Cradle Product Standard:**
http://www.c2ccertified.org/images/uploads/C2CCertified_V3_Overview_121113.pdf

- **EPEAT**[14] - EPEAT is a standard that includes a range of environmental and social procurement criteria. US based it applies to electronic products with standards varying according to location but includes some focus on end of life management.
- **The European Ecolabel**[15] – this applies to a range of products within Europe and helps procurers identify products and services that have a reduced environmental impact throughout their life cycle, from the extraction of raw material through to production, use and disposal.
- **Furniture Reuse Network (FRN)**[16] – the Approved Re-use Centre certification, available to member organisations, dedicated to products such as furniture and electricals.
- **Government Buying Standards**[17] – managed and developed by Defra these are a set of sustainable specifications, that have been market tested in the UK. The 'Mandatory' level must be used by Scottish Government core family, while underlying criteria are recommended for review by the rest of the public sector.
- **GPP**[18] - the European Green Public Procurement criteria provide sustainability specifications for a range of commonly procured goods and services, together with case studies. Increasingly GBS and GPP are aligned.
- **IEEE Standard for Environmental Assessment of Imaging Equipment**[19] - A clear and consistent set of environmental performance criteria for the design of imaging equipment products is established, providing an opportunity to secure market recognition for efforts to reduce the environmental impact of electronic products.
- **PAS 141**[20] – this is a process management specification for the re-use of used and waste electrical and electronic equipment (UEEE and WEEE). It set out to improve the standards for the re-use and refurbishment of electrical and electronic equipment that has reached the end of its first useful life in the UK; and address the demand from consumers for assurance that the used electrical products they buy are electrically safe to use and functionally fit for purpose.
- **PAS 3100:2014**[21] - PAS 3100:2014 specifies requirements for a process control system which will ensure that remanufactured automotive parts match the standard of the original parts and sets out the content of the required warranty.
- **Revolve**[22] – the Scottish re-use quality standard, managed by Zero Waste Scotland, focusing on domestic goods, including white goods and which includes 43 criteria focusing on customer service, retail, continuous business improvement, quality systems and processes, legal compliance, personnel and health and safety and preparation for re-use specifications.
- **UKCRA**[23] - trade association to encourage procurers to use remanufactured UKCRA cartridges – use of the UKCRA Collective Mark is designed to confirm cartridges are remanufactured.
- **WRAP Waste Quality Protocol**[24] - this is a quality protocol which clearly sets out the steps that must be taken for the waste to become a non-waste product or

[14] **EPEAT**: http://www.epeat.net/
[15] **The EU EcoLabel:** http://ec.europa.eu/environment/ecolabel/
[16] **FRN, Approved Re-use Centre:** http://www.frn.org.uk/approved-re-use.html
[17] **GBS:** https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs
[18] **GPP:** http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm
[19] **IEEE Standard for Environmental Assessment of Imaging Equipment**: https://standards.ieee.org/findstds/standard/1680.2-2012.html
[20] **PAS141:** http://www.wrap.org.uk/content/pas-141-re-use-standard
[21] **PAS3100:2014:** http://shop.bsigroup.com/ProductDetail/?pid=000000000030288696
[22] **Revolve:** http://www.revolvere-use.com/
[23] **UK Cartridge Remanufacturers Association:** http://ukcra.com/
[24] **Waste Quality Protocols**: http://www.wrap.org.uk/content/quality-protocols

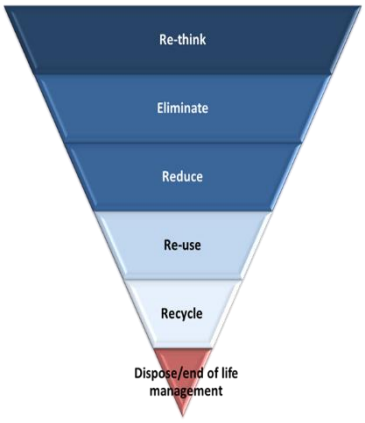
material that can be either re-used by business or industry, or supplied into other markets, enabling recovered products to be used without the need for waste regulation controls. For example, PAS107 now deals with the production and use of tyre derived materials[25].

N.B. As standards (that suppliers *may* operate to) are voluntary, contracting authorities must be prepared to accept equivalent evidence of meeting contract requirements, and so must therefore look behind the standards to focus on relevant criteria suppliers must meet. In that way a particular standard may be accepted as evidence of having met those criteria as will other equivalent evidence. The category guidance provides details of standards, or equivalent, that may apply to categories.

A.5 Key principles

In order to consider a focus on repair, re-use and remanufacturing within a procurement process the following key principles should be followed:

Policy and behaviour	Ensure that organisational procurement strategy and policy includes a focus on the intended outcomes and supports demand management
Sources and assets	Understand the sources of waste through what is procured, what assets are owned, used and why and how this is linked to the procurement, ownership and use of commodities.
Supply Market	Understand the market for categories/commodities and scope for repair, re-use and remanufacturing.
Inventory/Stock management	Manage stock effectively providing clarity on who orders what, on what systems, what stock is held, how quickly it is replaced, repair and maintenance cycles moves and whether stock lines can be rationalised.
Demand management	Consider whether the planned procurement is essential – can the required function be delivered in an alternative, more efficient, manner? Can products/equipment be re-used, repaired or remanufactured? Engage with relevant internal and external stakeholders. There may be alternative business models available.
Whole Life Costs	Inform procurement decisions by all relevant whole life costs, including purchase, operation and maintenance and related end of life costs, for commodities and particularly single use vs re-usable items.
Criteria	Understand the criteria behind standards that exist and how they are relevant to what is being procured. Be prepared to accept equivalent evidence if they are relevant. Ensure that contract/framework requirements include a relevant and proportionate focus on the intended outcomes and ensure



[25] **Tyre Derived Rubber Materials:** http://tyrerecovery.org.uk/specification/pas-107/

that evaluation criteria reflect this. Also ensure that those evaluating have the understanding and skills to be able to assess circular economy submissions within bids.

A.6 Barriers to repair, re-use and remanufacturing within procurement

All public sector bodies have policies in place to support sustainable procurement and waste prevention. Despite this a number of key, real or perceived challenges to embedding the intended circular economy outcomes exist regardless of commodity or role.

The barriers highlighted are addressed where relevant in this guidance. Public bodies should ensure that a careful analysis is undertaken and communicated to relevant stakeholders of clearly articulated intended procurement outcomes (e.g. functionality, quality, usability, budgets and consideration of all relevant financial, time and other savings available while delivering these requirements).

Public procurement has the potential to capture a range of circular economy outcomes while enhancing market potential to deliver these. Procurement Regulations as indicated above require public bodies to consider how such outcomes, and others, can be delivered. Consideration, and relevant addressing, of the following barriers will enable positive outcomes.

A.6.1 Culture

- **Leadership:** A lack of understanding of the role and benefits of repair, re-use and remanufacturing and buy-in from executives and senior managers.
- **Lack of policy commitment to support relevant outcomes.**
- **Reluctance to explore alternative business models:** e.g. preference for procurement of a product rather than a service, perhaps due to a capital/revenue disconnect.
- **Lack of awareness of relevant opportunities:** Lack of knowledge about alternative products and ability to evaluate alternative products.
- **Concerns about quality and safety, and perception that buying new is best**: For example, ‘Remanufactured’ is sometimes considered to be synonymous with ‘inferior quality’, limiting the appeal of the industry. It is accepted that there can be relevant reasons why re-use is not considered or has to be considered very carefully (for example, to prevent infection and to consider all relevant implications of a move to re-usable items, such as Central Sterile Services resources, within NHS organisations).
- **Resistance to change:** Steps to challenge the need for a particular procurement and consider alternatives which deliver the required function in a more sustainable manner require new attitudes and approaches which may contradict ‘received wisdom’ – especially in large organisations. This may include end users’ preferences for particular models or products.
- **Lack of staff engagement or buy-in**: Engagement of staff at all levels is critical but time pressures are often a challenge with a focus on service delivery and staff unable to take on, what may be perceived to be, additional tasks.
- **‘Culture of use and dispose’**: The relatively low cost of some items including domestic white goods and furniture may give the impression it is cheaper to purchase new rather than repair items due to the cost of tradespeople, transportation time and manual handling risks.

A.6.2 Capability

- **Technical constraints:** a shortage of necessary technical knowledge or skills may be a barrier (e.g. for repairing products).
- **Options appraisal:** organisations may not have the full capability to explore the business case for shifting towards a more circular business model, or circular economy service. This is sometimes the result of uncertainty regarding Whole Life Costs of differing service models.
- **Procurement and supply chain**: Although public bodies are significant purchasers of goods and services, they may not always have the ability to influence suppliers (or switch to new ones) due to existing policies, regulations and contractual arrangements. There may also be a lack of understanding of where priorities for repair, re-use and remanufacturing lie within procurement. This may be partly addressed through enhanced collaborative procurement.
- **Design restricts the ability to disassemble/repair/refurbish.** To give an example, the increasing drive for thinner and thinner mobile devices often means that the battery and screen are fully integrated and cannot be replaced without return to the OEM.

A.6.3 Budgets

- **Financial constraints:** certain circular economy measures (e.g. modernization or upgrade of Central Sterile Services Department to allow for introduction of re-usable products) may require significant capital investment and may fail to compete with alternative funding requests, while meeting regulatory requirements.
- **Disconnect between capital and revenue budgets**: This is a long standing issue which enlightened Finance Managers can help address through Standing Financial Instructions/Standing Orders.
- **Short-termism:** 31st March every year 'spend it or lose it' dilemma around budgets is a long standing and recurring problem.

A.6.4 Supply Market

- **Insufficient capital:** to bring solutions to the public sector market.
- **Demand:** Lack of demand by public sector of products or services that may meet circular economy outcomes or lack of clarity in public sector requirements. This may be due to a number of reasons, including an immature supply chain with limited track record with the public sector or insufficient market analysis by the public sector.
- **Technical knowledge:** The knowledge necessary to remanufacture products effectively is not readily available to non-original equipment manufacturers.
- **Lack of technically skilled engineers and technicians**: Skills shortages affect the industry as they do in the manufacturing sector.
- **Competition from lower cost products:** Widely cited as an issue across most remanufacturing sectors. The sale of anecdotally inferior new products undercuts the market for remanufactured products.

A.6.5 Regulations

- **Regulations placing constraint on re-use, repair or remanufacturing**: for example, regulations applying to Medical Devices within the EU can be seen as a constraint.
- **Ambiguity**: There is no clear guidance on the use of remanufactured components in new products or whether remanufactured products need to be declared as 'second hand'. Also, issues over the effect of legislation such as: the WEEE Directive, the Waste Framework Directive, the End of Life Vehicles Directive, the Sales of Goods

Act, the REACH Regulation, the RoHS Directive and the Energy Using Products Directive on remanufactured products.

A.7 Market commentary

The following is a short synopsis of the supply market for repair, re-use and remanufacturing outcomes. This is not a full economic analysis. Procurers should always ensure they consider the market for what they are seeking to procure:

A.7.1 Repair

The Repair market is well established across a range of sectors and categories. For example, there are Standard Industrial Classifications (SIC) for the following:

SIC Code	Relevance to Public Procurement
33160 : Repair and maintenance of aircraft and spacecraft	Aerospace
33110 : Repair of fabricated metal products	Catering equipment
95290 : Repair of other personal and household goods	Domestic furnishings
33130 : Repair of electronic and optical equipment	Electrical & Electronic Equipment
33140 : Repair of electrical equipment	Electrical & Electronic Equipment
95110 : Repair of computers and peripheral equipment	Electrical & Electronic Equipment
95120 : Repair of communication equipment	Electrical & Electronic Equipment
95210 : Repair of consumer electronics	Electrical & Electronic Equipment
95220 : Repair of household appliances and home and garden equipment	Electrical & Electronic Equipment
95240 : Repair of furniture and home furnishings	Furniture
33150 : Repair and maintenance of ships and boats	Marine
33190 : Repair of other equipment	Misc.
33120 : Repair of machinery	Pumps and compressors

95230 : Repair of footwear and leather goods	Textiles
33170 : Repair and maintenance of other transport equipment	Vehicles
45200 : Maintenance and repair of motor vehicles	Vehicles
45400 : Sale, maintenance and repair of motorcycles and related parts and accessories	Vehicles
95250 : Repair of watches, clocks and jewellery	n/a

There is also routine repair and maintenance of equipment used in public procurement – e.g. repair of Information & Communication Technology (ICT) products, catering equipment, construction equipment and buildings and others.

A.7.2 Re-use

The Re-use in Scotland market is established for many domestic and other categories and commodities, with the Re-use sector dominated by third sector organisations, charities and SMEs. These include:

Re-use categories	
Children's equipment: Toys	Furniture: Domestic furniture
Electrical & Electronic equipment: Large electrical	Furniture: Office furniture
Children's equipment: Nursery and baby equipment	Leisure equipment: Sporting goods
Electrical & Electronic equipment: White goods (excluding refrigeration)	Media (e.g. DVDs)
Electrical & Electronic equipment: Small electrical goods	Stationery: Books
Electrical & Electronic equipment: Computers and peripherals	Textiles: Clothing
Electrical & Electronic equipment: Mobile phones	Textiles: Household linen
Electrical & Electronic equipment: Power tools	Textiles: Mattresses
Electrical & Electronic equipment: Hand tools	Transport: Bicycles

Internal re-use within and between public sector organisations can take place, including through the use of re-use portals such as the Materials Exchange[26] and 'WarpIt'[27].

A.7.3 Remanufacturing

Remanufacturing can take place by OEMs, who have access to all the technical design drawings and have the ability to include design upgrades to facilitate resale.

Contracted remanufacturers perform remanufacturing on behalf of an OEM and usually have access to technical drawings and the original designers and have some restrictions on how they operate commercially. They specialise in remanufacturing and offer the service where OEMs provide a maintenance, repair and supply service and understand the benefits of contolling the supply chain and ensuring customer loyalty but do not want to invest in capital be distracted from their core business. This is common in the automotive sector.

Independent remanufacturers (third parties) usually directly compete with OEMs with their product. They usually have little formal relationship with the OEMs and have garnered technical information through reverse engineering and understanding of the product. This is common for ICT equipment and printer cartridges, but also for wider equipment, including air conditioning units and compressors and within the automotive sector.

Within Scotland remanufacturing takes place, at least in part, within:

Remanufacturing categories	
Aerospace	Games consoles
ATM	Lifting and handling equipment
Vehicles	Machine tools
Boilers	Marine equipment
Carpet tiles	Medical devices and equipment
Cartridges	Off road equipment
Catering and food preparation equipment	Printing presses
Construction	Pumps, fans and compressors
Defence	Rail equipment
Electrical & Electronic Equipment	Refrigerator displays

[26] **Construction Material Exchange:** http://www.resourceefficientscotland.com/tools/construction_material_exchange

[27] **warpit re-use network**: https://www.warp-it.co.uk/ (other commercial portals exist)

Energy production	Textiles
Furniture	Tyres

As part of the transition to a more Circular Economy, businesses that provide lease services as well as Managed Services are increasingly involved in the above and other categories of procurement.

A.8 Priority categories

Within this Guide, procurement guidance is provided for the following major categories. This reflects the following factors:

a. Categories/commodities commonly procured by the public sector, by value;
b. Research into the scope for relevant repair, re-use and remanufacturing outcomes within categories/commodities;
c. Research into the potential for expansion in relevant supply markets;
d. Excluding those categories/commodities where a focus on relevant outcomes is routinely embedded as part of quality requirements (for example within Aerospace there is significant remanufacturing activity that takes place in this sector as MRO (Maintenance, Repair and Operations) and this will be in accordance with stringent OEM quality requirements);
e. Changes in sectors where the focus of circular economy outcomes has shifted (for example Printing is increasingly digital so is considered as part of Electrical and Electronic Equipment).

As previously indicated the guidance provided is also potentially relevant for other procurement categories/commodities. There may also be other opportunities to embed circular economy outcomes and related socio-economic outcomes in the procurement of the following and other commodities.

	Priority categories	
1	Catering	■ Including procurement of catering services and equipment. ■ Includes focus on re-use, repair and refurbishment of catering equipment
2	Cleaning equipment	■ Including procurement of cleaning services and equipment. ■ Includes focus on re-use, repair/refurbishment of cleaning equipment.
3	Construction	■ Includes procurement of construction projects, equipment and materials. ■ Includes focus on re-use of materials, repair, refurbishment and remanufacturing of equipment.
4	Electrical & Electronic Equipment	■ Includes procurement of ICT products, business machines, cartridges, printers, audio-visual equipment and associated equipment and relevant services. ■ Includes procurement of large domestic appliances. ■ Includes focus on re-use, repair, refurbishment and remanufacturing of devices and components.

5	Flooring	■ Includes procurement of carpets and other flooring. ■ Incudes focus on re-use of flooring.
6	Furniture	■ Includes procurement of office, specialist and domestic furniture and related services. ■ Includes focus on repair, re-use and remanufacturing of furniture.
7	Power and hand tools	■ Includes procurement of hand tools, horticultural tools, small equipment and tools. ■ Includes a focus on repair and refurbishment of tools.
8	Medical devices and equipment	■ Includes procurement of a range of new and refurbished medical devices and equipment by NHS Scotland. ■ Includes focus on repair, re-use and remanufacturing.
9	Outdoor play	■ Includes procurement of playgrounds and related equipment. ■ Includes focus on re-used, refurbished materials and equipment.
10	Textiles	■ Includes procurement of uniforms, linen, PPE and others. ■ Includes focus on re-use and repair.
11	Tyres	■ Include procurement of tyres. ■ Includes focus on re-use and re-treading.
12	Vehicles, include Heavy Duty Off Road vehicles	■ Includes procurement of cars, vans, LGVs and HGVs and specialist vehicles and vehicle parts. ■ Includes procurement of marine services and equipment. ■ Includes procurement of rail services and equipment. ■ Includes focus on repair and remanufacturing of vehicles etc and parts.
13	Waste services	■ Includes procurement of waste services, WEEE end of life, re-use services and household waste recycling centres. ■ Includes focus on re-use of waste.

Public bodies who have successfully implemented relevant circular economy outcomes measures are highlighted to inspire good practice across the wider public sector. There will be other examples within public bodies and we would encourage the sharing of good practice, through relevant networks including:

- Scottish Procurement,
- NHS National Procurement,
- Advanced Procurement for Universities and Colleges (APUC),
- Scotland Excel,
- Scottish Public Sector Collaborative Leads Group,
- Sustainable Scotland Network (SSN),
- Zero Waste Scotland,
- Regional and sectoral networks.

A.9 Bibliography

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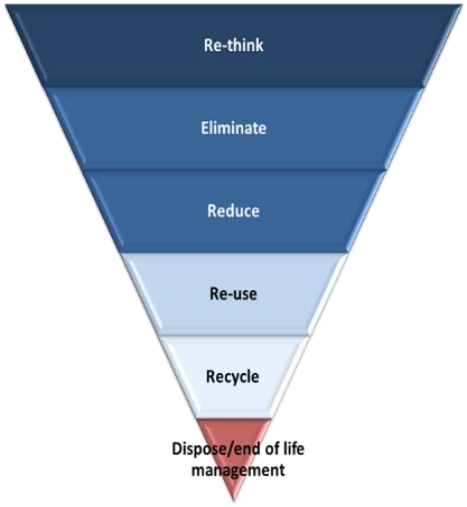
2. **BS8887-220:2010.** http://shop.bsigroup.com/en/ProductDetail/?pid=000000000030205839
3. **C2C Cradle to Cradle Product Standard:** http://www.c2ccertified.org/images/uploads/C2CCertified_V3_Overview_121113.pdf
4. **Circular Economy Evidence** Building Programme: Remanufacturing Study March 2015. http://www.zerowastescotland.org.uk/sites/default/files/Remanufacturing%20Study%20-%20Summary%20Report%20-%20March%202015.pdf
5. **Construction Material Exchange:** http://www.resourceefficientscotland.com/tools/construction_material_exchange
6. **Employment and the Circular Economy**: http://www.green-alliance.org.uk/resources/Employment%20and%20the%20circular%20economy.pdf
7. **Electronic Product Environmental Assessment Tool (EPEAT)**: http://www.epeat.net/
8. **EU EcoLabel:** http://ec.europa.eu/environment/ecolabel/
9. **FRN, Approved Re-use Centre:** http://www.frn.org.uk/approved-re-use.html
10. **Government Buying Standards (GBS):** https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs
11. **Green Public Procurement (GPP):** http://ec.europa.eu/environment/gpp/eu_gpp_criteria_en.htm
12. **IEEE Standard for Environmental Assessment of Imaging Equipment**: https://standards.ieee.org/findstds/standard/1680.2-2012.html
13. **Making Things Last. A Circular Economy Strategy for Scotland:** http://www.gov.scot/Resource/0049/00494471.pdf
14. **PAS141:** http://www.wrap.org.uk/content/pas-141-re-use-standard
15. **PAS3100:2014:** http://shop.bsigroup.com/ProductDetail/?pid=000000000030288696
16. **Parker 2007**:6. An Analysis of the Spectrum of Re-use. http://www.remanufacturing.org.uk/pdf/story/1p374.pdf
17. **Revolve:** http://www.revolvere-use.com/
18. **Tyre Derived Rubber Materials:** http://tyrerecovery.org.uk/specification/pas-107/
19. **UK Cartridge Remanufacturers Association:** http://ukcra.com/
20. **Warpit re-use network**: https://www.warp-it.co.uk/
21. **Waste Quality Protocols**: http://www.wrap.org.uk/content/quality-protocols

B. CATEGORY/COMMODITY GUIDANCE

Important – read this first

First considerations:

As the procurement hierarchy stresses, the public sector should firstly consider:



- **Is there a need to procure anything?** For example, are there options to re-use equipment from elsewhere?
- **Procurement alternatives:** This may include the procurement of a service instead of a commodity or it may include leasing. A lease should include maintenance and repair and there is the opportunity to encourage the lease company to re-use and refurbish equipment.
- **Stakeholder engagement:** Ensure that all relevant stakeholders have been engaged with – both internal and external. The contribution that effective supplier and stakeholder engagement can make to successful procurement should not be underestimated, not least in helping to ensure competition, it must however be conducted in an open and transparent manner. Once the procurement begins all informal conversations with potential suppliers must stop.
- **Costs:** Consider all relevant life cycle costs.
- **Socio-economic:** There may also be opportunities for socio-economic outcomes through a focus on enabling SMEs, third sector organisations and supported businesses to compete for business and relevant community benefits, particularly in service contracts but also potentially in equipment contracts.

Procurement Category - Commodity (hyperlinked)

1. Catering
2. Cleaning
3. Construction
4. Electrical & Electronic equipment
5. Flooring
6. Furniture
7. Medical devices and equipment
8. Outdoor playground equip.
9. Power and hand tools
10. Textiles
11. Tyres
12. Vehicles
13. Waste services

- **Clarity in Intended outcomes:** Consider the contracting authority's intended outcomes, risks and opportunities throughout the lifespan of the contract – National, Local Outcomes Improvement Plans, Environmental, Socio-economic. Is there a clearly articulated policy focus on Circular Economy outcomes, including alternative business models, closed loop systems, end of life options and repair, re-use and remanufacturing? A focus on circular economy outcomes has the potential to influence the following National Outcomes: 'We realise our full economic potential with more and better employment opportunities for our people'–'We live longer, healthier lives'–'We reduce the local and global environmental impact of our consumption and production'.

Important, please note:

1. Only set specifications or contract conditions that you are prepared and are resourced to enforce through contract management.
2. Contract requirements must be relevant and proportionate and must be quantifiable and measureable; otherwise there is a risk that enforcement may be impossible. The buyer must also consider whether this requirement is core to the contract or a secondary issue, as any remedy for breach of these clauses may be difficult to quantify. In these circumstances a pre-agreed service credit or rebate would enable recompense for non-performance as termination of the contract would not be an option. Efficient contract management not only ensures that the contract is performed according to detailed requirements but also allows for continual improvement over the life of the contract, through relationship management, ongoing stakeholder engagement and providing a focus for innovation. This is particularly the case for remanufacturing where the market may initially be constrained but opportunities develop over time.
3. Details of services or options provided by certain suppliers are included as examples only and no recommendation is made regarding specific suppliers.

Commodity Overview	B.1 Catering
Commodities and services In 2013/14 Scottish public sector procurement of Catering Equipment amounted to £10,170,282 (Scottish Procurement Information Hub)	Catering represents a major investment by the public sector, including Local Authorities, Scottish Prison Service, Further and Higher Education, NHS Boards, Scottish Government and NDPBs, and may comprise a range of food and catering products and services. These include: ■ Catering FM Services. ■ Catering Consumables – including food, dishwashing, packaging, paper towels and food preparation. ■ Catering Equipment - for cooking, refrigeration, washing and hot beverage production. ■ Catering Equipment Maintenance and Repair. ■ Catering accessories. For example, APUC contract: 'Catering Light and Heavy Equipment' and 'Kitchen Equipment Maintenance'. In 2011 'Catering for Change' set out food procurement guidance with a focus on – 'delivering the benefits of good nutritional quality - promoting good health and education - protecting the environment - avoiding unnecessary use of natural resources, and contributing towards economic development'.
Procurement hierarchy:	Consider first: ■ Is there a need to procure anything? For example, are there options to re-use equipment from elsewhere? ■ Can the required function be provided in an alternative way? For example, leasing of catering equipment is quite common and may be a feasible alternative to procuring the equipment. The lease should include maintenance and repair (e.g. by Catering Equipment Suppliers Association (CESA)) or equivalent members) and it should encourage the lease company to re-use and refurbish equipment. This may be also achieved through rental or hiring equipment or a managed equipment service, as long as intended outcomes are part of the requirement.
Market commentary:	The market for catering in Scotland ranges from large Catering and Food suppliers and FM providers, to SMEs supplying specialist or local supply or services and third sector organisations. Much of general catering equipment is procured direct from manufacturers (who may specialise in specific types of equipment, often manufactured overseas) or from dealers. There is a large refurbished equipment market. The public sector also use vending machines which may be procured or, more often, leased with the lease covering the machine, goods and servicing. The public sector may also procure Refrigerated Display Cabinets (RDCs), which are increasingly manufactured overseas. This can result in lower cost and, sometimes, lower quality units.

Commodity Overview	B.1 Catering
Scope for economic and environmental improvement in circular economy within this commodity:	**Re-use** – Re-usable catering items (such as plates, cups), re-usable packaging, re-use of catering equipment that reaches the end of its life within the contracting authority but may be re-used elsewhere. Food production re-use can be restricted to components made from stainless steel, intricately fabricated components, equipment for processing meat, bakery equipment (often excluding ovens due to gains in energy efficiency) and oil, fat and dairy production (tanks and heat exchangers). At present this equipment can be relatively cheap to produce, and refurbishment is enough to extend its lifespan almost indefinitely. This favours re-use and refurbishment over remanufacturing. The Scottish re-use market is estimated to have a value of £1 million per annum, which avoids 213 tCO_{2e} per annum. In addition, there is a market for the sale and purchase of pre-owned catering equipment through auction sites, such as Hilditch Group[28]. This includes used, reconditioned, second hand and clearance catering equipment. Equipment will range from "as new" ex-display catering equipment to stock being replaced under refurbishment or for parts. Zero Waste Scotland also recently published a report which showed the circular economy presents up to an £803m opportunity for the beer-whisky and fish sector[29]. **Repair** – repair and refurbishment of catering equipment, through maintenance and repair services (these may be part of a service or a separate contract). **Remanufacturing** – at present the remanufacturing market in Scotland for catering equipment is small (£1m per annum across 30 small businesses). Most catering equipment is heavily used and is built to last. With the correct servicing and repairs this equipment will have a long lifetime of many years; in some cases, equipment is still in use after 20 years. The cost of remanufacturing may, on occasion, preclude it as a purchasing option and procurers may prefer to buy pre-owned refurbished equipment at a lower price than buying a (perceived or actual) higher cost, remanufactured item. The remanufacturing market is constrained by its size, lowering costs of catering equipment and perceived barriers for growth. In the short term there may be limited opportunity to expand the market but public sector procurers should engage with the market to encourage this and so realise longer term benefits.

[28] **Hilditch Group:** http://www.hilditchgroup.co.uk/CateringEquipment
[29] **Circular Economy, June 2015, Sector Study on Beer, Whisky and Fish, Final Report.** http://www.zerowastescotland.org.uk/BeerWhiskyFish

Procurement guidance	Catering	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure a Catering FM service [Equipment] should reflect: ■ Consideration of alternatives – do you really need to procure (e.g. re-use catering equipment); can the required function be delivered in a better way (e.g. leasing/managed service)? ■ Intended outcomes ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders.	Catering FM Service Or Catering Equipment
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Sustainable Catering Services [Equipment]**'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements:	Catering FM Service Or Catering Equipment
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **repair, re-use and remanufacturing** of equipment which are relevant to the service to be delivered.'	Catering FM Service Or Catering Equipment
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of total packaging weight derives from re-used and recycled content.'	
Specification	Sustainable catering service [equipment] requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to sustainable catering services [equipment] including the application of circular	Catering FM Service

Procurement guidance	Catering	Applicable to procurement of:
	economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of catering equipment [supplied] used in the delivery of this service, through relevant **re-use, repair, refurbishment or remanufacturing** including through sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ That equipment used is selected for its durability, as well as efficiency; ■ That equipment is regularly maintained and serviced (this could be a separate contract); ■ That equipment used may include re-used, refurbished or remanufactured equipment that meets quality and safety standards; ■ That equipment used may be re-used or refurbished either for internal re-use or externally (for example though exchanges or auctions); ■ That catering accessories such as plates and cups are washable and re-usable or biodegradable; ■ That packaging is re-usable and re-used as much as possible; ■ That equipment that is capable of cost effective remanufacturing goes to a relevant contractor for this purpose and redeployment; ■ Mapping of internal and external stakeholders involved including sub-contractors, service users, facilities managers, sustainability lead and others; ■ Suggested KPIs to include %packaging that is re-used/reusable, %of redundant equipment that is re-used/refurbished/remanufactured, service records.	Or Catering Equipment
	An example below can be used in a specification to highlight the requirement to meet sustainability criteria within the catering equipment used. It is important to establish that the market for a particular product can meet these requirements before incorporating them; Government Buying Standards (GBS) criteria have been tested against market capabilities. In order to reduce waste generation, food and beverages must be served using cutlery, glassware, crockery and tablecloths which are **reusable** or based on renewable raw materials. (EU GPP)	Catering FM Service Or Catering Equipment

Procurement guidance	Catering	Applicable to procurement of:
	Packaging waste in delivering food for the catering service is minimised. ■ tertiary and secondary packaging consists of at least 70% recycled cardboard; and ■ where other materials are used, the tertiary packaging must either be reusable or all materials contain some recycled content. Food and drink to be consumed in restaurants and canteens must be served using cutlery, glassware, and crockery which are **reusable** and washable. (GBS)	
Supplier selection	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses. As an example to incorporate within your documents for a catering service contract you could include: 'Please provide a copy of your Environmental Policy and highlight how it relates to the sustainable values and objectives of the contracting authority.' When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful. In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **circular economy outcomes**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.' For a **services contract**, to assess the capability of suppliers in enabling circular economy outcomes the following could be asked: Detail your experience in delivering a catering service that includes the use of re-used, repaired, refurbished or remanufactured catering equipment or the **re-use, repair or remanufacturing** of redundant equipment, packaging and accessories used. An **ideal response** would provide the following: ■ Evidence of having used re-used or refurbished catering equipment in the delivery of a contract similar in	Catering FM Service Catering FM Service Or Catering Equipment Catering FM Service

Procurement guidance	Catering	Applicable to procurement of:
	nature to the service required; ▪ Evidence of the re-use, regular maintenance and repair of equipment, refurbishment and where practical remanufacturing; ▪ Evidence of the management of repair, re-use and remanufacturing within its supply chain including sub-contractors and links to SMEs, third sector or supported businesses involved; ▪ Evidence of understanding the key circular economy opportunities and management requirements, including an example Management Plan.	
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract. 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out [**the re-used** proportion content of packaging used], [the proportion of otherwise redundant equipment that is **re-used, refurbished or remanufactured**].' and / or 'The supplier hereby agrees to increase the recycled and or **re-used content** of packaging by X% after 12 months and by a further Y% after 24 months.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.) Monitoring the contract will be essential to ensure that the service quality, cost and sustainability objectives are achieved and that this can be evidenced. It may be appropriate to ask that suppliers use a Computer Aided Facilities Management (CAFM) tool to capture their performance and this can incorporate the sustainability requirements that have been included in the contract.	Catering FM Service Or Catering Equipment
Snapshot example:	**Monitoring low carbon, sustainable catering services City of Turin, Italy:** Bidders were encouraged to favour low environmental impact packaging, including reusable, refillable or biodegradable products. One requirement for contractors to shift from using plastic to reusable dishes will result in an estimated reduction of 157 tonnes/year of plastic waste - as this criterion was applied to over five million meals delivered annually. Source: EU Green Public Procurement http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue47_Case_Study100_Turin.pdf	

Back to Commodity List

Commodity Overview	B.2 Cleaning
Commodities and services In 2013/14 Scottish public sector procurement of **Cleaning** amounted to: Cleaning & Janitorial Equipment & Supplies Providers £39,334,261 Commercial Cleaners £19,586,237 Specialist Hygiene Service Providers £12,235,753 Window Cleaners £791,638 Other Cleaning & Janitorial Service Providers £171,476 Graffiti Removers £133,339 Carpet & Upholstery Cleaning Service Providers £124,209 Dry Cleaners £65,354 (Scottish Procurement Information Hub)	Cleaning represents a major investment by all parts of the public sector, ranging from office cleaning to specialist NHS which will be subject to NHS Scotland national cleanliness specifications and hospital cleaning and disinfection policies. Contracts tend to be procured direct by public bodies with few Framework agreements (e.g. 'Kitchen Deep Clean', 'Commercial Cleaning Programmes of Work. Halls of Residence' etc). As the data opposite indicates cleaning procurement is classified under various categories. Some cleaning expenditure is included in other 'soft' Facilities Management classifications. Some cleaning will be undertaken by public sector in-house personnel although much of the services are part of an out-sourced cleaning or FM service. This will involve use of a range of cleaning equipment, including: ▪ Cold and hot water pressure washers; ▪ Sweepers; ▪ Vacuums; ▪ Buffers and polishers; ▪ Carpet cleaners; ▪ Chemical fogging equipment; ▪ Hydrogen peroxide vaporiser robotic cleaners to reduce infections in hospitals. These will operate from the mains electricity although some can be battery operated.
Procurement hierarchy:	Consider first: ▪ Is there a need to procure anything? For example, are there options to re-use cleaning equipment from elsewhere? Have cleaning requirements been reviewed and managed according to risk? Have cleaning requirements been considered as a result of changes in estate, ICT requirements, hot-desking, 'clean desk' policy, home working and others? ▪ Can the required function be provided in an alternative way? For example, rather than producing equipment is a practical option leasing, hiring or renting, according to length and nature of requirement.

Commodity Overview	B.2 Cleaning
Market commentary:	The cleaning market in Scotland comprises: ▪ Large FM providers such as Arthur McKay, SCS, Mitie, BAM and others; ▪ A range of SMEs and micro businesses; ▪ Some thirdsector organisations. The Cleaning market is transitory, with high workforce turnover and relatively low pay. There are a large number of environmental and social risks and opportunities relating to cleaning, but circular economy is not routinely considered a priority. Manufacturers of cleaning equipment are based in Italy, some in the UK, such as Truvox and Numatic, and increasing supply from China and Taiwan. Servicing, maintenance and repair of cleaning equipment is routinely undertaken. In practice although there are different markets many of the principles applying to cleaning equipment also apply to other FM services.
Scope for economic and environmental improvement in circular economy within this commodity:	**Re-use** – re-use of cleaning equipment will take place through the sale of re-used equipment and is readily available. In addition, equipment may be leased, rented or hired. Direct procurement of cleaning equipment offers an opportunity for a potential focus on purchase of second hand (re-used) equipment.
	Repair – repair and refurbishment of cleaning equipment, through maintenance and repair services (these may be part of a service or a separate contract). Direct procurement of cleaning equipment offers an opportunity for a potential focus on maintenance and repair of equipment to extend their useful life. However, this must be proportionate given the involvement of many SMEs and third sector organisations in this market.
	Remanufacturing – There is little evidence of widespread remanufacturing of cleaning equipment. The relatively low costs of some equipment relative to remanufacturing costs act as a barrier. The remanufacturing market for equipment is constrained by its size, lowering costs of cleaning equipment, limited influence of the Scottish public sector on manufacturers and perceived barriers for growth. In the short term there may be limited opportunity to expand this market but public sector procurers should engage with the market and FM providers to encourage this and so realise longer term benefits.

Procurement guidance	Cleaning	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure a Cleaning FM service [Equipment] should reflect: ■ Consideration of alternatives – do you really need to procure (e.g. re-use cleaning equipment); can the required function be delivered in a better way (e.g. leasing/renting/hiring)? ■ Intended outcomes including Repair, Re-use and Remanufacturing ■ Budget and life cycle costs ■ Views of internal and external stakeholders.	Cleaning FM Service Or Cleaning Equipment
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Sustainable Cleaning Services [Equipment]**'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements:	Cleaning FM Service Or Cleaning Equipment
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the supply of quality controlled **re-used cleaning equipment, and maintenance and repair of equipment** which are relevant to the [equipment] service to be delivered.'	Cleaning FM Service Or Cleaning Equipment
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of total packaging weight derives from re-used and recycled content.' Or 'A requirement of this contract is that second hand or re-used cleaning equipment is provided with a warranty or certificate of assurance of quality'.	Cleaning Equipment Packaging

Procurement guidance	Cleaning	Applicable to procurement of:
	Or 'A requirement of this contract is that the supplier of cleaning equipment will provide training to the [public body's] staff on maintenance and non-complex repair of equipment'	
Specification	Sustainable cleaning service [equipment] requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to sustainable cleaning services [equipment] including the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will: Extend the useful life of cleaning equipment [supplied] [used in the delivery of this service] and minimise environmental impacts, through relevant **re-use, repair and refurbishment of equipment** and packaging including through sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ That equipment used is selected for its durability, as well as efficiency; ■ That equipment is regularly maintained and serviced (this may be a separate contract); ■ That equipment used may include re-used, refurbished or remanufactured equipment that meets quality and safety standards; ■ That equipment used may be re-used or refurbished either for internal re-use or externally (for example though exchanges or auctions); ■ That cleaning packaging is re-usable and re-used as much as possible; ■ That equipment that is capable of cost effective remanufacturing goes to a relevant contractor for this purpose and redeployment; ■ Mapping of internal and external stakeholders involved including sub-contractors, service users, facilities managers, sustainability lead and others; ■ Suggested KPIs to include %packaging that is re-used/reusable, %of otherwise redundant equipment that is	Cleaning FM Service Or Cleaning Equipment

Procurement guidance	Cleaning	Applicable to procurement of:
	re-used or refurbished, maintenance, service and repair records.	
	Primary packaging for cleaning products used must meet the Green Public Procurement (GPP) or equivalent criteria – see the Weight Utility Ration (WUR) formula in the criteria for Cleaning Products and Services at http://ec.europa.eu/environment/gpp/pdf/toolkit/cleaning_product/en.pdf: 'The primary packaging shall be easily separable into single-material parts'. (GPP) 'The contractor should use reusable microfiber cloths and apply dry- cleaning techniques for linoleum flooring where appropriate (Best Practice)' (GBS) 'The service provider must use refillable containers (including spray bottles) and minimise the amount of waste generated as part of the provision of the cleaning service'. (GPP) 'Use of reusable microfiber cloths by cleaning staff, wherever possible'. (GPP)	Packaging of cleaning products.
Supplier selection	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	
	As an example to incorporate within your documents for a catering service contract you could include: 'Please provide a copy of your Environmental Policy and highlight how it relates to the sustainable values and objectives of the contracting authority.'	Cleaning FM Service
	When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **circular economy outcomes to cleaning equipment**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Cleaning Equipment
	For a **services contract**, to assess the capability of suppliers in enabling circular economy outcomes the following could be asked: Detail your experience in delivering a cleaning service that includes the use of re-used, repaired, refurbished or remanufactured cleaning equipment and how you have extended the useful life of cleaning equipment used	Cleaning FM Service

Procurement guidance	Cleaning	Applicable to procurement of:
	through **re-use, maintenance and repair or refurbishment o**f equipment as well as packaging associated with cleaning products used An **ideal response** would provide the following: ■ Evidence of having used re-used or refurbished cleaning equipment in the delivery of a contract similar in nature to the service required, which meet quality standards; ■ Evidence of the re-use, regular maintenance and repair of equipment, refurbishment and where practical remanufacturing; ■ Evidence of the management of repair, re-use and remanufacturing within its supply chain including sub-contractors and links to SMEs, third sector or supported businesses involved; ■ Minimisation, take back and where practical re-use of associated packaging; ■ Evidence of understanding the key circular economy opportunities and management requirements, including an example Management Plan.	
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out [**the re-used** proportion content of packaging used], [the proportion of otherwise redundant equipment that is **re-used, refurbished or remanufactured**], [the proportion of cleaning equipment used that is re-used (second hand) and meets relevant quality standards].' and / or 'The supplier hereby agrees to increase the recycled and or **re-used content** of packaging by X% after 12 months and by a further Y% after 24 months.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	Cleaning FM Service Or Cleaning Equipment
	The benefits of the contractual requirement must be **quantifiable and measureable**; otherwise there is a risk that enforcement may be impossible. The buyer must also consider whether this requirement is core to the contract or a secondary issue, as any remedy for breach of these clauses may be difficult to quantify. In these circumstances a pre-agreed service credit or rebate would enable recompense for non-performance as termination of the contract would not be an option.	

Procurement guidance	Cleaning	Applicable to procurement of:
	Efficient contract management not only ensures that the contract is performed according to the detailed requirements but also allows for **continual improvement** over the life of the contract, through relationship management, ongoing stakeholder engagement and providing a focus for innovation. This is particularly the case for remanufacturing where the market may initially be constrained but opportunities develop over time. Monitoring the contract will be essential to ensure that the service quality, cost and sustainability objectives are achieved and that this can be evidenced. It may be appropriate to ask that suppliers use a Computer Aided Facilities Management (CAFM) tool to capture their performance and this can incorporate the sustainability requirements that have been included in the contract.	
Snapshot example:	**The Estonian Police and Border Guard Board - green cleaning products and services** Over 5,000 people are employed at the Estonian Police and Border Guard Board (PBGB), which is the authority responsible for internal security in Estonia. The PBGB is one of the largest state agencies in the Country. The cleaning products and services tender included a requirement that: 'The service provider must use refillable containers (including spray bottles) and minimise the amount of waste generated as part of the provision of the cleaning service'. GPP 'In practice' October 2014: http://ec.europa.eu/environment/gpp/pdf/news_alert/Issue45_Case_Study95_Estonian_police.pdf	

Back to Commodity List

Commodity Overview

Commodities and services

Construction Flooring Suppliers	£203,298
Timber Merchants & Sawmills	£12,937,962
Tile Suppliers	£417,571
Sheet Metal & Fabrication Suppliers	£15,221,917
Roofing Materials Suppliers	£2,274,173
Road Construction Equip Suppliers	£2,214,638
Quarry & Aggregates Suppliers	£73,031,211
Power & Hand Tool Suppliers	£6,231,830
Portable Toilet Suppliers	£241,149
HVAC Equipment Suppliers	£30,451,772
Plant & Construction Equip Suppliers	£56,214,434
Paving & Kerbstone Suppliers	£856,493
Paint & Coating Suppliers	£2,633,663
Other Construction Materials	£3,633,478
Metal Stockholders & Distributors	£2,379,814
Fork Lift Truck Suppliers	£2,156,174
Electrical Wiring & Parts Suppliers	£38,887,538
Do-It-Yourself (DIY) Stores	£5,243,027
Decorating Materials Suppliers	£1,066,374
Crane Providers	£607,576
Construction Flooring Suppliers	£203,298
Cement & Concrete Suppliers	£5,477,654
Builders Merchants	£38,757,864

B.3 Construction:
Buildings and Infrastructure, building products and materials

Scotland's construction industry is worth approximately £10 billion to the economy (roughly 10% of Scotland's GDP)[30]. Construction is procured by many parts of the public sector in Scotland. Available data from 2011/12 shows a total of £3.2 billion, although it excludes expenditure by registered social landlords. The overall figure is likely to be nearer £4billion, as indicated in the Review of Scottish Public Sector Procurement in Construction October 2013[31]. Services can include:

- Demolition / reclamation;
- New build;
- Refurbishment;
- Hard FM Services e.g. building maintenance.

Based on the Scottish Procurement Information Hub, expenditure on materials and equipment suppliers are shown opposite. This does not include relevant construction services and consultancy.

There are a number of re-use, repair and remanufacture principles relevant to construction, these are:

Buildings & Infrastructure, building products and materials

- Retaining existing buildings or infrastructure through refurbishment and repair.
- Designing new buildings or infrastructure, refurbishment, or maintenance works for deconstruction and flexibility; procurement of products that are durable and facilitate disassembly, repair and refurbishment.
- Remanufacture of building components or equipment.
- Construction material reclamation and redeployment at end of the building's or infrastructure's life i.e. re-used in its existing or modified size and shapem

[30] **Building for the Future The Scottish Construction Industry's Strategy 2013-16** http://www.scottish-enterprise.com/knowledge-hub/articles/publication/scotlands-construction-strategy

[31] **Review of Scottish Public Sector Procurement in Construction October 2013:** http://www.scotland.gov.uk/Publications/2013/10/2688

Commodity Overview		B.3 Construction: Buildings and Infrastructure, building products and materials
Bricks & Blocks Suppliers	£48,260	Scotland has a range of legislation and policies focusing on construction environmental management including Creating Places[32], Building Standards[33], Construction Procurement Manual[34] but these include a limited focus on circular economy outcomes.
Bitumen & Surface Dressing Suppliers	£23,508,864	
Adhesive & Sealant Suppliers	£464,541	
Procurement hierarchy:		Early consideration of intended outcomes from a construction project is embedded in the Construction Procurement Manual and reinforced by the revised Procurement Regulations. This should include consideration of the application of circular economy outcomes. For example, is there a need to procure anything? Can construction materials be re-used/reclaimed?
Market commentary:		Employing over 170,000 people, in more than 31,000 businesses across Scotland, with 2,431 architects, the construction market in Scotland is heavily dependent on SMEs. In 2013-14, £1.45 billion was spent on construction with SMEs out of a total spend of £2.9 billion. Whilst the construction sector is significant in Scotland; and building refurbishment services within this are well established, the more innovative and complex repair, re-use and remanufacturing commodity and services are often under developed and niche.
Scope for economic and environmental improvement in circular economy within this commodity:		**Retaining existing buildings and infrastructure through refurbishment and repair** - There is no one-size-fits-all refurbishment vs. new build strategy as much depends upon a particular development's existing structure. There are potentially a range of risks and technical challenges associated with refurbishment in terms of the condition of the existing structure, contingency requirements, safety issues (e.g. asbestos), procurement and costing for the work. Whilst this procurement guide doesn't focus on this important design led decision making process, a framework for determining the level of refurbishment that a building may require in order to raise it to an acceptable standard can be used. GVA Grimley's report[35] sets out such an approach. Traditional development appraisal techniques, incorporating lifecycle costing methods, can then be used to estimate the commercial viability of a range of potential options, from basic refurbishment through to complete redevelopment.
		Designing for deconstruction and flexibility - Design for deconstruction and flexibility is essentially the outcome of extensive design for re-use. Designers need to consider how materials

[32] **Creating Places:** Scottish Government. http://creatingplacesscotland.org/
[33] **Building Standards:** http://www.gov.scot/Topics/Built-Environment/Building/Building-standards/techbooks/techhandbooks
[34] **Construction Procurement Manual**: http://www.gov.scot/Topics/Built-Environment/Building/Building/procurement-manual
[35] **UK Offices: Refurbishment vs. redevelopment**, GVA Grimley, 2010

	can be recovered effectively during the life of the building when maintenance and refurbishment is undertaken or when the building comes to the end of its life. Challenges include detailing building assemblies so that materials/ components can be easily disassembled, allowing adaptation for a variety of purposes during its lifespan and recovery at end of life, along with providing adequate information for future designers to do this.
	Remanufacture of building components or equipment - Remanufacture or refurbishment of some built environment products and plant does occur, but is relatively limited. As an example, Caterpillar (CAT)[36], the world's largest maker of off-road vehicles, construction and mining equipment, has been remanufacturing its vehicles since 1972. In the short term the use of remanufactured building components or equipment may be constrained by a small number of suppliers, or current opportunities, while engagement with the market may encourage the development of this and so realise longer term benefits.
	Construction Material Reclamation - Reclaimed materials include materials that have been used before and are re-used as construction materials without reprocessing. The Construction Material Exchange from Resource Efficient Scotland provides a portal aiming to challenge the 7.4 million tonnes of construction waste produced in Scotland annually[37]. There is already a significant market for certain reclaimed products of architectural and historic significance such as of doors, door and window furniture, frames, flooring, ducting, roof tiles, bricks etc. Such products can be utilised with relatively little modification or further work[38].
	Construction Material Redeployment - A significant yet under-exploited element is that of construction material redeployment. Some elements of buildings offer the potential for re-use in a modified size or shape or for a different purpose, but are typically sent directly to recycling. This includes steel beams and structural timbers.
	Repairability and refurbishment of building products and plant, through maintenance and repair services (these may be part of a service or a separate contract, such as Hard Facilities Management contract services).

[36] **Croner, Circular Economy in Practice:** https://app.croner.co.uk/feature-articles/circular-economy-practice?topic=3571&product=15&section=3503#WKID-201305211424110436-76150038

[37] **Construction Material Exchange from Resource Efficient Scotland**: http://cme.resourceefficientscotland.com/

[38] **Remanufacturing in the UK**, Resource Recovery Forum, 2009

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure either **Demolition/ Refurbishment strip out services; or Design/ Construction/ Building Maintenance Services** should reflect: ■ The contracting authority's intended outcomes and risks and opportunities throughout the lifespan of the contract. Is there a clear policy focus on Circular Economy outcomes, including procuring closed loop systems, end of life options and specifically repair, re-use and remanufacturing? ■ Budget and all relevant life cycle costs. ■ Views of internal stakeholders. The decision to procure a **Demolition/ Refurbishment strip out contract** (i.e. generating potential reclaimable material) should reflect: ■ Consideration of alternatives - are there materials of value that have potential for reclamation either for use on your own future developments or the wider market, rather than just maximising recycling? ■ Market - Where **demolition/ refurbishment strip** out contract procurements are not a regular undertaking then a market intelligence gathering exercise should be undertaken before any procurement is started, this should include identifying and engaging with potential suppliers and relevant trade and sector bodies.	Demolition/ Refurbishment strip out services Or Design/ Construction/ Building Maintenance Services (inc. Hard FM) Demolition/ Refurbishment strip out services
	When procuring a **New Building, Refurbishment Design and Construction service or Maintenance contract**, the intended outcome of the procurement would be that the new building, refurbishment or maintenance had included consideration of alternatives: ■ **Designing for deconstruction**, enabling the building to be efficiently dismantled at end of life. Allowing salvaged materials at the end of first life to be re-used, re-manufactured or recycled-recovering some of their inherent value. For example, considering: ○ Can building elements and components be maintained, upgraded or replaced without creating waste? ○ Can a Building Information Modelling (BIM) system or building handbook be used to record which and how elements/components/materials have been designed for disassembly? ○ Are the building elements/components/materials easily disassembled?	Design/ Construction/ Building Maintenance Services (inc. Hard FM)

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	■ **Designing for flexibility**, enabling significant changes to be made to the building during the course of its life. This can help to delay or avoid the building's obsolescence. For example, considering: ○ Is the design adaptable for a variety of purposes during its life span? ■ **Design to include reclaimed or redeployed building material**. Does your development need to be constructed from all new materials, could some reclaimed or redeployed materials (either from your own development or from the market) be used? In line with the waste hierarchy, can the following preferred approach be applied? ○ the use of reclaimed or redeployed materials; ○ the use of materials with higher levels of recycled content; and ○ the use of primary materials.[39] **Reclaimed material market and practicalities** - Where reclaimed material procurements are not regular commissioned then a market intelligence gathering exercise should be undertaken before any procurement is started, this should include identifying and engaging with potential suppliers and relevant trade and sector bodies. Specific considerations should include: 1. Early discussions with the reclaimed materials dealers, salvage experts or your development's demolition contractor (if demolition is required) will help to identify materials that are easily available at the right quality and quantity. 2. Reclaimed materials are usually obtained from different suppliers to new building products. Buyers will often need to set up relationships with new suppliers in the salvage trade. 3. Early design information helps in the sourcing of reclaimed materials. Lead times for ordering materials often need to be longer than for new off-the-shelf materials. 4. It can be helpful to identify one or more demolition projects near to the construction project, whose phasing is a little ahead of the construction programme. Reclaimed materials can then be selected and extracted from the demolition project as required. (It can be difficult to plan phasing as site delays are common and timings change.) 5. Storage space either on site, nearby or else at the demolition site can be extremely helpful in matching up phasing. 6. Material specifications for the project need to be flexible enough to allow for the variations in reclaimed materials. Specifications should outline the essential performance properties required of a material but not over define the details. 7. It can be helpful to agree on a sample of the reclaimed material such as a brick or a length of	

[39] **Sustainable design and construction supplementary planning guidance**; London Plan Implementation Framework, 2014

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	board. This sample can be used to show clearly the quality that is expected in order to meet the design requirements. Sometimes a selection of samples will be needed to show a range of colours or states of wear that are acceptable.[40] ▪ **Design for remanufacture of some building products/ equipment at end of first life (cradle to cradle).** Whilst there are some manufacturers providing these services on the market, it is currently relatively limited, therefore identifying opportunities can be difficult. To address this, the decision to procure a designer/ construction contractor should reflect: ○ Consideration of alternatives – can the design and construction team be required to gather market intelligence on building products where the manufacturer offers end of first life options such as take back schemes and remanufacturing into new products, closing the loop?	
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example: ▪ **Sustainable [Demolition/ Strip out] Services.** ▪ **Sustainable [Design/ Construction/ Building Maintenance] Services.** If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	Demolition/ Refurbishment strip out services Or Design/ Construction/ Building Maintenance Services
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the: ▪ 'use of the Demolition Protocol, Refurbishment Survey (or equivalent), with considered deconstruction in a way that maximising reclamation and reusability of material which are relevant to the service to be delivered.' (delete if not applicable) ▪ 'design for deconstruction and flexibility of the building which is relevant to the service to be delivered'. (delete if not applicable) ▪ 'use of recycled aggregates, materials or building products which are relevant to the service to be delivered'. (delete if not applicable)	Demolition/ Refurbishment strip out services Or Design/ Construction/ Building Maintenance Services

[40] **Greenspec:** http://www.greenspec.co.uk/building-design/reclaimed-materials/

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	▪ the use of cradle to cradle building products that can be refurbished or remanufactured at end of first life, which are relevant to the service to be delivered.' Where relevant you may refer to the 'Power and Hand Tools' Category.	
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that reclaimed or redeployed materials shall make up at least [XX%, e.g. 5%] of the total project materials as a percentage of the total value of materials used in construction activities' This would typically be in inserted alongside any recycled content requirements you might have.	Demolition/ Refurbishment strip out services Or Design/ Construction/ Building Maintenance Services (inc. hard FM)
Specification	**Sustainable demolition/ strip out service** requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender: Where the [demolition of a building or strip out of existing building components] cannot be avoided, every effort should be made to either re-use materials on-site or salvage appropriate materials to enable their re-use or recycling off-site. Where materials cannot be salvaged whole, and where aggregate is required on-site, this demolished [or stripped out] material should be crushed on-site for re-use, with measures taken to minimise dust and noise. **[Pre-demolition/ strip out] audit** The [Contracting Authority] is committed to the principles of sustainable construction, to improve the environmental performance of its built environment projects. As part of this commitment, the [Contracting Authority] aims to increase the efficiency of the use of material resources through: ▪ Maximising the material reclaimed and re-used from the demolition of existing buildings [or strip out prior to refurbishment]; ▪ Implementing Site Waste Management Plans to minimise waste generation and to maximise waste	Demolition/ Refurbishment strip out services

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	recovery, re-use and recycling in both the demolition [and new build phases of projects] (delete if no new build); ■ [Meet or exceed targets for the proportion of reclaimed or redeployed and recycled content used in a new building phase] (delete if no new build) To assist in meeting these aims, an assessment is required of the potential for the materials contained within the [existing building name] to be re-used and recycled. The successful contractor will be required to use [the Demolition Protocol or a Refurbishment Survey] as the basis for maximising resource efficiency in the project, by providing improved data on the types and quantities of materials available for re-use and recycling. See the WRAP good practice guidance on Refurbishment Surveys[41] and ICE Demolition Protocol 2003[42] and 2008[43] versions. Key resource efficiency related outputs required from the pre-demolition audit include: ■ The production of a bill of quantities for all materials that are likely to be produced through the demolition of the buildings (please refer to ICE Demolition Protocol 2003 Chapter 5, in particular Table 5.2 within the Demolition Protocol); ■ Assessment of the possible management options for materials generated during demolition, which would maximise reclamation and recycling; ■ Cost benefit analysis of managing demolition materials (ICE Demolition Protocol 2003 Table 5.6); ■ Risk assessment of the likely chemical and physical contamination within materials, and the impact of this on the re-use and recycling options for the material (ICE Demolition Protocol 2003 Chapter 6 and 7) ■ Calculation of the Demolition Recovery Index (DRI) for the project	
	Design for [deconstruction, flexibility, remanufacture or reclaimed/ redeployed material] requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	Design/ Construction/ Building Maintenance Services

[41] **Refurbishment:** http://www.wrap.org.uk/category/subject/refurbishment
[42] A Report on the Demolition Protocol, 2003, Envirocentre
[43] Demolition Protocol 2008, ICE

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	'As part of our commitment to reducing resource use in all of our developments and cutting the associated costs, we require all new build and refurbishment projects to pursue carbon efficiency. This in particular involves reducing the lifetime embodied carbon impact of the building by: ■ Designing for deconstruction, enabling the building to be efficiently dismantled at end of life. Allowing salvaged materials at the end of first life to be re-used, re-manufactured or recycled; recovering some of their inherent value. (delete if not applicable) ■ Designing for flexibility, enabling significant changes to be made to the building during the course of its life. This can help to delay or avoid the building's obsolescence. (delete if not applicable) ■ Including building products and materials where manufacturers operate cradle to cradle or closed loop remanufacturing schemes, where products at the end of their life can be returned and remanufactured into new product. (delete if not applicable) ■ Including reclaimed or redeployed materials, with comparable performance and availability and which are cost-neutral and represent 'Quick Wins'. The preferred prioritised material selection approach should be: ○ the use of reclaimed or redeployed materials; ○ the use of materials with higher levels of recycled content (with products meeting relevant standards, such as ISO 14021); and finally ○ the use of primary materials. In accordance with the good practice, reclaimed or redeployed materials shall make up at least [XX%, e.g. 15%] of the total project materials as a percentage of the total value of materials used in construction activities. (delete if not applicable) This will require: ■ The identification of the [5-10] most significant and cost-effective opportunities associated with the project, such as ensuring spaces are flexible for future use, dismantling the building at the end of its life (including major building elements e.g. structural frame, substructure) and building components to be re-used or resold. (delete if not applicable; also amend major building element examples based on your project brief) ■ The identification of the [1-5] most significant and cost-effective cradle to cradle, closed loop recycling or remanufacturing opportunities associated with the project. (delete if not applicable) ■ The identification of the [1-5] most effective cost-neutral opportunities to increase the value of materials deriving from reclaimed or redeployed content, where technically and commercially viable,	

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	and that the targeted improvements made in the total reclaimed or redeployed content for the project have been quantified. (delete if not applicable) ■ Presentation of the impact of implementing the Design for [Deconstruction, Flexibility, Remanufacture, Reclaimed/ Redeployed Material] on the design, project cost and programme. Quantifying the financial and embodied carbon impacts made through these individual design changes, and report actions and outcomes as part of the Design for [Deconstruction, Flexibility, Remanufacture, Reclaimed/ Redeployed Material] Plan. ■ Ensure any [Deconstruction, Flexibility, Remanufacture] elements are recorded in the BIM or building handbook, detailing their location, means of disassembly, re-use/recycling notes and any special considerations required.'	
Supplier selection	When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful. These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	
	Demolition/ Refurbishment strip out services As an example, to incorporate within your documents for a [Demolition/ Refurbishment strip out] contract, you could include: ■ 'Please provide a copy of your Environmental Policy and highlight how it relates to the sustainable values and objectives of the contracting authority.' ■ Detail your experience in delivering a [sustainable demolition service; or sustainable refurbishment services] that includes the use of the [Demolition Protocol or refurbishment survey], or equivalent procedures, to identify and extract reclaimable building materials for re-use'. An **ideal response** would provide the following: ■ Evidence of having used the Demolition Protocol in the delivery of a contract similar in nature to the service required;	Demolition/ Refurbishment strip out services

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	■ Evidence of the reclamation, storage and management of building materials for re-use in the construction phase of the same development; ■ Evidence of the management of reclaimed or redeployed materials within its supply chain including sub-contractors and links to reclamation yards, third sector or sector or supported businesses involved, where material couldn't be re-used in the construction phase of the same development; ■ Evidence of understanding the key circular economy opportunities and management requirements, including an example Site Waste Management Plan.	
	Design for [deconstruction, flexibility, remanufacture or reclaimed/redeployed material] As an example to incorporate within your documents for including design for deconstruction and flexibility into the procurement of a designer/ contractor for a new build or refurbishment, your Pre-Qualification Questionnaire (PQQ) could include: 'As part of our commitment to reducing resource use in all of our developments and cutting the associated costs, we require all [new build, refurbishment or building maintenance] projects to pursue carbon efficiency. This in particular involves reducing the lifetime embodied carbon impact of the building by: ■ Designing for deconstruction, enabling the building to be efficiently dismantled at end of life. Allowing salvaged materials at the end of first life to be re-used, remanufactured or recycled; recovering some of their inherent value. (delete if not applicable) ■ Designing for flexibility, enabling significant changes to be made to the building during the course of its life. This can help to delay or avoid the building's obsolescence. (delete if not applicable) ■ Including building products and materials where manufacturers operate cradle to cradle or closed loop remanufacturing schemes, where products at the end of their life can be returned and remanufactured into new product. (delete if not applicable) ■ Including reclaimed or redeployed materials, with comparable performance and availability and which are cost-neutral and represent 'Quick Wins'. (delete if not applicable) Detail your understanding and experience in achieving design solutions that: ■ Facilitate [deconstruction and flexibility] in buildings and evaluating the potential embodied carbon impact'. (delete if not applicable) ■ Incorporate [cradle to cradle products or reclaimed/ redeployed material] in buildings and evaluating	Design/ Construction/ Building Maintenance Services

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	the potential embodied carbon impact'. (delete if not applicable) An ideal PQQ response would provide the following details: ■ Evidence of how the bidder has previously identified design opportunities for deconstruction, building flexibility, use of cradle to cradle or reclaimed/ redeployed products (for example, as part of BREEAM or CEEQUAL); and ■ Evidence of having developed a Design for Deconstruction, Flexibility, Remanufacture, Reclaimed/ Redeployed Material Plan (or similar) to inform clients of the options available to them to maximise the life-cycle financial and carbon savings.	
	At Invitation to Tender (ITT) stage the following wording could be included: 'As part of our commitment to reducing resource use in all of our developments and cutting the associated costs, we require all [new build, refurbishment and building maintenance] projects to pursue carbon efficiency. This in particular involves reducing the lifetime embodied carbon impact of the building by: ■ Designing for deconstruction, enabling the building to be efficiently dismantled at end of life. Allowing salvaged materials at the end of first life to be re-used, re-manufactured or recycled- recovering some of their inherent value. (delete if not applicable) ■ Designing for flexibility, enabling significant changes to be made to the building during the course of its life. This can help to delay or avoid the building's obsolescence. (delete if not applicable) ■ Including building products and materials where manufacturers operate cradle to cradle or closed loop remanufacturing schemes, where products at the end of their life can be returned and remanufactured into new product. (delete if not applicable) ■ Including reclaimed or redeployed materials, with comparable performance and availability and which are cost-neutral and represent 'Quick Wins'. (delete if not applicable) This will require: ■ The identification and implementation of the [5-10] most significant and cost-effective opportunities associated with the project, such as ensuring spaces are flexible for future use, dismantling the building at the end of its life (including major building elements e.g. structural frame, substructure) and building components to be re-used or resold. (delete if not applicable; also amend major building element examples based on your project brief)	Design/ Construction/ Building Maintenance Services

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	■ The identification of the [1-5] most significant and cost-effective cradle to cradle or closed loop remanufacturing opportunities associated with the project. (delete if not applicable) ■ Reclaimed or redeployed materials will make up at least [XX%, e.g. 5%] of the total project materials as a percentage of the total value of materials used in construction activities. With the identification of the [1-5] most effective cost-neutral opportunities to increase the value of materials deriving from reclaimed or redeployed content, where technically and commercially viable, and that the targeted improvements made in the total reclaimed or redeployed content for the project have been quantified. (delete if not applicable) ■ Presentation of the impact of implementing the Design for [Deconstruction, Flexibility, Remanufacture, Reclaimed/ Redeployed Material] on the design, project cost and programme. Quantifying the financial and embodied carbon impacts made through these individual design changes, and report actions and outcomes as part of the Design for [Deconstruction, Flexibility, Remanufacture, Reclaimed/ Redeployed Material] Plan. ■ Ensure any [Deconstruction, Flexibility, Cradle to Cradle] elements are recorded in the BIM or building handbook, detailing their location, means of disassembly, re-use/recycling notes and any special considerations required.' Please describe your approach to: 1. Achieving our minimum requirements; and 2. Preparing a [Deconstruction, Flexibility, Remanufacture, Reclaimed/ Redeployed Material Plan?] (or equivalent) in line with the requirements set out in the specification. Please identify any factors you believe to be significant to the cost-effective achievement of the objectives of this requirement. An ideal ITT response would provide the following details: ■ An outline of their proposed approach to planning for deconstruction and flexibility, cradle to cradle and reclaimed or redeployed products, which should include all of the areas listed in the specification; ■ How the bidder will evaluate capital, lifecycle costs to justify value for money in terms of prioritised quick wins; and ■ A clear method for developing the most cost-effective combination of deconstruction and flexibility measures to meet the project minimum requirements, and for quantifying and evaluating	

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	opportunities to go beyond the minimum requirements where these provide value for money to the client.	
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded.	
	Demolition/ Refurbishment strip out services For example: **Preliminaries** The contractor shall adopt the methodologies established by [the ICE Demolition Protocol[44] or WRAP Refurbishment Survey Good Practice[45]] to facilitate the recovery of materials (in particular reclamation for re-use) from the demolition works. The contractor shall: 1. Determine the potential to reclaim and re-use materials for future applications in the permanent works or for other high value applications, including off-site. 2. Establish targets for the recovery of demolition materials 3. Set out a mechanism by which the recovery of [demolition or strip out] material can be monitored against the targets. The Contractor will be responsible for monitoring and reporting against the agreed targets.	Demolition/ Refurbishment strip out services
	Design for [deconstruction, flexibility, remanufacture or reclaimed/ redeployed material] **Main Construction Contract (general conditions)** This clause should be inserted into the main contract. It could form part of a broader requirement to work in accordance with the Employer's objectives for "resource efficiency" or "sustainable construction", provided the requirements are clearly defined (e.g. in the Project Brief). 'The Contractor and supply chain shall carry out and complete the works in compliance with the Employer's objectives for carbon efficiency over the buildings life cycle.' **Preliminaries**	Design/ Construction/ Building Maintenance Services

[44] A Report on the Demolition Protocol, 2003, Envirocentre

[45] http://www.wrap.org.uk/category/subject/refurbishment

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	These clauses set out the contractor's responsibilities for achieving and reporting on design for deconstruction and flexibility. 'As part of our commitment to reducing resource use in all of our developments and cutting the associated costs, we require all [new build, refurbishment and building maintenance] projects to pursue carbon efficiency. This in particular involves reducing the lifetime embodied carbon impact of the building by: ■ Designing for deconstruction, enabling the building to be efficiently dismantled at end of life. Allowing salvaged materials at the end of first life to be re-used, re-manufactured or recycled; recovering some of their inherent value. (delete if not applicable) ■ Designing for flexibility, enabling significant changes to be made to the building during the course of its life. This can help to delay or avoid the building's obsolescence. (delete if not applicable) ■ Including building products and materials where manufacturers operate cradle to cradle or closed loop remanufacturing schemes, where products at the end of their life can be returned and remanufactured into new product. (delete if not applicable) ■ Including reclaimed or redeployed materials, with comparable performance and availability and which are cost-neutral and represent 'Quick Wins'. (delete if not applicable) The contractor must: ■ Determine the potential of and implement where financially viable the: ○ [5-10] most significant and cost-effective opportunities associated with the project, such as ensuring spaces are flexible for future use, dismantling the building at the end of its life (including major building elements e.g. structural frame, substructure) and building components to be re-used or resold. (delete if not applicable; also amend major building element examples based on your project brief) ○ [1-5] most significant and cost-effective cradle to cradle or closed loop remanufacturing opportunities associated with the project. (delete if not applicable) ○ [1-5] most effective cost-neutral opportunities to increase the value of materials deriving from reclaimed or redeployed content, where technically and commercially viable, and that the targeted improvements made in the total reclaimed or redeployed content for the project have been quantified. (delete if not applicable) ■ Report actions and outcomes as part of the [Deconstruction, Flexibility, Remanufacture, Reclaimed/ Redeployed Material] Plan.'	

Procurement guidance	**Construction - Procuring Design/ Construction/ Building Maintenance Services**	Applicable to procurement of:
	Completion and handover ■ Upon completion of the project, the contractor will be required to: ○ Provide necessary data and documentation (e.g. for products or equipment installed, results of tests conducted etc.) to the client or occupier, demonstrating the solutions implemented and performance against targets. ○ Ensuring any Design for [Deconstruction, Flexibility or Cradle to Cradle] elements are recorded in the BIM or building handbook, detailing their location, means of disassembly, re-use/recycling notes and any special considerations required.	
Snapshot examples:	**London 2012 Olympics** Adaptable Code for Sustainable Homes L4 - The housing for over 17,000 athletes during London 2012 Code for Sustainable Homes (CfSH) Level 4 residential units, was also Designed with deconstruction and flexibility in mind. A range of approaches were adopted. ■ The structural frame was fixed together with the access and service cores. ■ The cladding panels were generally full storey height and were mostly interchangeable. ■ Games use temporary bathrooms and partitions were designed for re-use after the Games. ■ Off-site manufacture was adopted for bathrooms; kitchens; facades; and balconies. Wiring was prepared off site and installed on site. ■ Built elements such as partitions could be moved to reconfigure space if required. ■ All temporary partitions could be re-used. British Gypsum accepted back all these panels after the Games. ■ If a unit was over two floors, a knock out panel in the floor ensures a lift could be installed at some point in the future – a 'Life Time Homes' requirement.	
	In this example the General Electric project team conducted a full pre-refurbishment audit to determine what materials could be retained, and what should be replaced. The Ark building refurbishment project saved over £1 million through extensive re-use of products and materials thanks to pre-refurbishment surveying and continual monitoring of waste minimisation options throughout the design and specification stages. ■ 100% of existing ceiling tiles were re-used and set into a replacement ceiling grid; ■ 100% (4,861m^2) of the raised floor access was re-used; and ■ 100% of the carpet tiles were segregated onsite to be used by charities for re-use or recycling.	

Procurement guidance	**Construction - Procuring Products**	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	When the principles of the repair, re-use and remanufacturing are applied at a **product level for utilities (heating, water and lighting)**, the intended outcome would be that product design for durability, , repair, refurbishment, remanufacture and disassembly were taken into account during the procurement process. The decision to procure using the principles of design for durability, repair, refurbishment remanufacture and disassembly should also reflect: ■ The contracting authority's intended outcomes and risks and opportunities throughout the lifespan of the contract. Is there a clear policy focus on Circular Economy outcomes, including procuring a service rather than a product, hire or lease of equipment, closed loop systems, end of life options and specifically repair, re-use and remanufacturing. ■ Budget and life cycle costs. ■ Frameworks available. ■ Market - Where applying these principles is not regularly undertaken as part of a product procurement then a market intelligence gathering exercise should be undertaken before any procurement is started, this should include identifying and engaging with potential suppliers and relevant trade and sector bodies. **Note:** EU Ecolabels and/or EU Green Public Procurement Criteria for a number of building products/ equipment (listed below) include some durability, , repair, refurbishment, remanufacture and disassembly related requirements. These should therefore be focused on in any procurement related to these product groupings: ● Sanitary ware (Sanitary fittings/ tapware[46, 47], toilets and urinals[48, 49])	Construction products or equipment

[46] http://ec.europa.eu/environment/ecolabel/documents/Sanitary%20Tapware%20Factsheet.pdf
[47] http://ec.europa.eu/environment/gpp/pdf/criteria/sanitary/EN.pdf
[48] http://ec.europa.eu/environment/ecolabel/documents/Flushing%20Toilet%20Factsheet%20Template.pdf
[49] http://ec.europa.eu/environment/gpp/pdf/criteria/toilets/criteria_Toilets_en.pdf

Procurement guidance	**Construction - Procuring Products**	Applicable to procurement of:
	• Heat pumps[50] • Water based heaters[51] (inc Central heating boilers and CHP) • Indoor Lighting[52] • Street light and traffic signals[53] ▪ Views of internal stakeholders.	
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example '**Durable, Repairable and Cradle to Cradle Building Products and Equipment**– [insert building product type e.g. Sanitary Ware]'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	Construction products or equipment
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **durability, disassembly, repairability, refurbishment and remanufacture** of building products which are relevant to the contract to be delivered.' It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'Requirements of this contract are that: ▪ Key products and equipment are identified, evaluated and where financially viable are selected for improved durability, disassembly, repairability, refurbishment and remanufacture. ▪ A minimum of [X] % of total packaging weight derives from re-used and recycled content.'	Construction products or equipment

[50] http://ec.europa.eu/environment/ecolabel/documents/heat_pumps_en.pdf
[51] http://ec.europa.eu/environment/ecolabel/documents/Water-based%20heaters_Factsheet.pdf
[52] http://ec.europa.eu/environment/gpp/pdf/criteria/indoor_lighting.pdf
[53] http://ec.europa.eu/environment/gpp/pdf/criteria/street_lighting.pdf

Procurement guidance	**Construction - Procuring Products**	Applicable to procurement of:
Specification	Sustainable construction product service [equipment] requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	Construction products or equipment
	'XYZ public body is committed to sustainable construction product use including the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of construction products and equipment [supplied] used in the delivery of this service, through relevant **durability, repair, re-use, refurbishment or remanufacturing** during or after the contract period. This may include lease arrangements, sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered, together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ Identification of key products or equipment that have potential for durability, repair, re-use, refurbishment or remanufacturing; ■ That these key products or equipment are selected for their durability and repairability; ■ That key products or equipment are regularly maintained and serviced (this may be a separate contract the contractor has); ■ That key products or equipment used may include re-used, refurbished or remanufactured parts and materials that meets quality and safety standards; ■ That, where possible, key products or equipment will be re-used after being refurbished, during and/or after the contract has expired, either for internal re-use or externally (for example used on other contracts or sold); ■ That key products or equipment, at the end of their useful life, that are capable of cost-effective remanufacturing goes to a relevant contractor for this purpose and thereafter is redeployed/sold; ■ That packaging contains more than 70% recycled content, that at least 90% of this is recyclable at end of life and is re-usable and re-used where possible; and	Construction products or equipment

	▪ Potential KPIs to include: • Expected useful life of the product/equipment, extended by upgrade and maintenance where appropriate, before replacement is required. Evidence to be provided in terms of testing and/or simulation/design calculations; • % of product packaging that is re-used/reusable.	
	Included below are example specifications which can be used to highlight the requirement to meet sustainability criteria within the construction products and/or equipment used. It is important to establish that the market for a particular product can meet these requirements before incorporating them. Where noted as from Government Buying Standards (GBS), these criteria have been tested against market capabilities. Other criteria may need market testing. **Warranty and service agreements:** The applicant shall provide a warranty for covering repairs or replacement for a minimum of 5 years. This warranty shall cover repair or replacement and include a service agreement with a pick-up and return option. The warranty shall guarantee that the goods are in conformity with the contract specifications at no additional cost. Verification: A copy of the warranty and service agreement shall be provided by the tenderer. They shall provide a declaration that they cover the conformity of the goods with the contract specifications, including all indicated usage. **Recycled and re-used content:** Any wood (including solid, woodchip and woodfibres) shall be sustainable certified virgin material and/or recycled material. This criterion shall only apply if the total content of these materials in the product exceeds 5% of the total product weight (excluding packaging).[54] A minimum of 70% of the total packaging weight should derive from re-used and recycled content (pre- and post-consumer). Verification: Suppliers should provide evidence covering both the source of the timber (Chain of Custody) and proof that it is legally and sustainably managed, or licensed by the FLEGT (Forest Law Enforcement	Construction products or equipment

[54] Defra GBS for Wood Products https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/339920/GOV.UK_GBS_for_wood_products.pdf

Governance and Trade) Voluntary partnership. This evidence can come in two forms, Categories A (forest certification) and B (other type of evidence), as set out in the UK Government Timber Procurement Advice Note[55].

The tenderer should indicate the percentage by weight of recycled content and/or refurbished and re-used components and materials.

Verification: Suppliers must provide documentation confirming the percentage by weight of recycled, refurbished and re-used content in the product and its packaging.

Durability:

All construction products must comply with the relevant BS/EN or ISO technical and quality standards (applicable to the usage of the product), for serviceability/durability.

Verification: Suppliers must provide appropriate documentation to demonstrate compliance with these standards.

Repair, refurbishment and availability of spare parts:

The product shall be designed in such a way that the end-user or a professional service engineer, as appropriate, can replace its exchangeable components easily.

Verification: Information about which elements can be replaced shall be clearly indicated in the information sheet attached to the product.

Original spare parts should be available for at least 10 years from the date of purchase, and the warranty shall cover the product for a minimum of 5 years.[56]

Products shall be supplied with recommendations on the proper use and maintenance of the product, including information on which spare parts can be replaced, and instruction concerning replacement of parts and other fittings.

Exchangeable components shall be replaceable by service personnel. The exchangeable components shall be listed in the information sheet of the product.

Verification: Suppliers must provide technical documentation that demonstrates that their product can be

[55] Defra GBS for Wood Products https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/339920/GOV.UK_GBS_for_wood_products.pdf
[56] EC Ecolabel, including heat pumps and water based heaters http://ec.europa.eu/environment/ecolabel/

Procurement guidance	Construction - Procuring Products	Applicable to procurement of:
	disassembled with standard tools, thereby allowing repair and refurbishment. **Re-use and recycling:** The tenderer should demonstrate that they have a take-back scheme for repairing and refurbishing products for re-use and otherwise reprocessing of products that have reached the end of their useful lives, e.g. cradle to cradle certified products[57] Verification: Suppliers must provide documentation to demonstrate that they have the capacity to meet this requirement. Products must be designed to facilitate dismantling and recovery for re-use and recycling of components and materials. Verification: Suppliers must provide technical documentation that demonstrates that their product can be disassembled with standard tools, thereby allowing re-use and recycling of components.	
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	
	As an example to incorporate within your selection criteria for a construction product/ equipment contract you could include: • The percentage by weight of recycled, refurbished, remanufactured and/or re-used materials and components in construction products and equipment. • Each additional year of warranty and service agreement offered that is more than the minimum technical specification. • Additional durability tests. • Provision of a 'dismantling test report' recording and providing a detailed description of the dismantling sequence, extraction steps and timing for the target parts and components. • A higher % of re-use (of redundant equipment) than that set out in the technical specifications. • The supplier's Environmental Policy and how it relates to the sustainability values and objectives of	Construction products or equipment

[57] http://www.c2ccertified.org/

Procurement guidance	Construction - Procuring Products	Applicable to procurement of:
	the contracting authority.	
	When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **circular economy outcomes**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Construction products or equipment
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority [on a [quarterly basis] providing: ▪ Necessary durability, repair, re-use, refurbishment or remanufacturing data and documentation (e.g. for products or equipment installed, warranties/ service agreements/ certificates, [detailing their location], means of disassembly, re-use/ remanufacturing information and any special considerations required.) ▪ [The re-used proportion content of packaging used], [the proportion of otherwise redundant equipment that is re-used, refurbished or remanufactured].'	Construction products or equipment
	Monitoring the contract will be essential to ensure that the service quality, cost and sustainability objectives are achieved and that this can be evidenced. It may be appropriate to ask that suppliers use a Computer Aided Facilities Management (CAFM) tool to capture their performance and this can incorporate the sustainability requirements that have been included in the contract.	

Procurement guidance	**Construction - Procuring Products**	Applicable to procurement of:
Snapshot example:	**Construction Product Case Study: Ark Building, London** Significant emphasis was placed on construction product and material sustainability during the fit out phase of a major £20M refurbishment programme. Key considerations included: The re-use of existing materials – re-use was prioritised over purchasing new materials which helped to avoid producing unnecessary waste and saved a total of £1M for the project as a whole. 100% of existing ceiling tiles were re-used and set into a replacement ceiling grid (80% of the total), generating £0.5M savings. Recycled content and end-of-life considerations - Blocks used in internal walling were made from 80% recycled content. Carpet tiles contained 44.5% recycled content and were 100% recyclable at end of life. Vinyl flooring installed was 100% recyclable, and contained 20% recycled content. In addition off-cuts that were not used are recycled back into the product to be used as backing. Take-back - Building services insulation (Kingspan Tarec) was A+ rated under the Green Guide to Specification and the manufacturer offered a zero waste to landfill take-back scheme. http://www.wrap.org.uk/node/12753	
	C2C Centre provides a list of building products that have been cradle to cradle certified[58]	

[58] **C2C Centre:** http://www.c2c-centre.com/products

Commodity Overview	B.4 Electrical & Electronic Equipment: ICT, Printers, Appliances
Commodities and services: In 2013/14 Scottish public sector procurement of ICT comprised: ■ IT Resellers £54,724,868 ■ Computer Hardware £49,033,711 ■ Audio & Visual Equipment £20,110,328 ■ IT Consumables £11,424,202 ■ Printers, Copiers & MFDs £1,101,398 (Scottish Procurement Information Hub)	ICT (the main focus of this section), electricals and electronics more widely, represents a major investment by the public sector and comprises a range of equipment and services, including: ■ ICT Services ■ Computers – desktops, workstations, cloud computing, mobile devices and tablets – e.g. National ICT Devices Framework ■ Network equipment ■ Photocopiers and multi-functional devices (MFDs) ■ Desk phones and mobile phones ■ Appliances / white goods – such as fridge-freezers, washing machines and dishwashers, microwaves, kettles, toasters ■ Accessories and consumables – such as printer cartridges.
Procurement hierarchy:	Consider first: ■ Demand management using asset management systems and communication channels allows forecasting and planning for demand, reducing consumption where feasible. ■ Life extension through repair and upgrade, to avoid procurement. ■ Procurement of (or even obtaining free of charge) re-used / pre-owned equipment. This should be at a lower cost than new, although care has to be taken to obtain suitable certifications (e.g. on data cleansing) and warranties. ■ Managed services (where provision of the assets is part of the arrangement) or leasing of the electronic and electrical equipment (EEE). Any such arrangement should include maintenance and repair, and there is the opportunity to encourage the lease company to re-use, refurbish and repair ICT.
Market commentary:	The public sector in Scotland is a major procurer of ICT equipment and services. The Scottish Procurement Devices Framework for example is estimated to be valued at £250m over 4 years and additional procurement may take place directly by other public bodies. In global ICT procurement context this may appear relatively small. However, experience suggests that there are opportunities for public sector contracting authorities to expand re-use, repair, refurbishment and remanufacture of equipment through procurement requirements. ICT and other EEE is either bought, or more often leased, from manufacturers directly or via an intermediary such as an internet service provider (ISP), an IT Asset Management (ITAM) company or broker. The market is a UK/global market, although some refurbished EEE is available from Scottish companies such as Haven Products, CCL (North), Belmont Trading, Re-tek, Redeem, Regenersis, Retronix and Hewlett Packard's

Commodity Overview	B.4 Electrical & Electronic Equipment: ICT, Printers, Appliances
	Centre in Erskine. Based on evidence from ICT suppliers the market is subject to intense price competition and consolidation (2016). This offers a potentially restricted market in the future but also opportunities to influence key suppliers.
Scope for economic and environmental improvement in circular economy within this commodity:	**Repair** – Life extension with EEE can be delivered through specifying for durability, upgradability and repairability, as well as ensuring that the product is repaired and maintained during its life (which may be part of a separate service contract). Durable and robust designs, with easy to replace components for example, and with the ability to upgrade or add functionality, can help to extend useful life and reduce user costs considerably. Leasing and managed service arrangements generally ensures that the product is a) a more durable type and b) is maintained properly, although you should ensure that circular economy outcomes are part of the lease arrangement. Some EEE devices may be currently less easy to disassemble, repair and upgrade (e.g. some tablets).
	Re-use – EEE is generally still working when it comes to the end of its first life, but can often be discarded as it is seen as obsolete. Most items can be easily re-used or resold into lower-specification markets, in the UK or overseas, after only minor refurbishment (e.g. data cleansing). While EEE, and ICT technology in particular, is fast moving in some areas (e.g. mobile phones and laptops), servers and network equipment are much slower moving and can often be refurbished and put back into service in the UK very cost-effectively. HP, at their Renewal site in Erskine, carry refurbished network equipment that is up to 25 years old for example. Buying pre-owned equipment can be far cheaper than buying new, although care has to be taken to ensure that the supplier provides the appropriate certifications (e.g. for data destruction) and warranties. Leasing, of course, ensures that equipment will be replaced regularly and re-used where possible within the lease company's client base.
	Remanufacturing – Remanufacturing, and less comprehensive refurbishment, of EEE is already happening in Scotland at the various companies noted earlier, including Haven Products, Belmont trading, HP, Re-tek, Retronix etc. Remanufacturing (rather than lighter touch refurbishment) only tends to be undertaken for the very high value network equipment. As with buying pre-owned equipment, there are cost benefits although care still has to be taken to ensure that the supplier provides the appropriate certifications (e.g. for data destruction) and warranties. Suppliers such as Ricoh lease photocopiers to its clients as part of its Total Green Office Solution. At the end of the lease period the copiers are fully refurbished, with replacement of key components and installation of new software, re-entering service as part of the 'Green Line Range'[59]. Digital presses **-** While remanufacturing of traditional printing presses is limited due to their residual value and ongoing maintenance, the digital press market presents potential for remanufacture. Some activity already exists in this area as digital press OEMs have traditionally been involved in the remanufacture of photocopiers.

[59] https://app.croner.co.uk/feature-articles/circular-economy-practice?topic=3571&product=15&section=3503#WKID-201305211424110436-76150038

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure ICT/EEE products or a related FM service [Products] should reflect: ■ Consideration of alternatives – e.g. can you extend the life of existing equipment? Can you procure pre-owned or remanufactured equipment? Can the required function be delivered in a better way (e.g. leasing/managed service)? ■ Intended outcomes ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders.	Services Or Equipment
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Sustainable ICT Services [Equipment]**'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	Services Or Equipment
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **durability, repair/refurbishment, re-use and remanufacturing** of equipment which are relevant to the [service to] be delivered.'	Services Or Equipment
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of total packaging weight derives from re-used and recycled content.'	Equipment

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
Specification (minimum requirements)	This may include a focus on procurement of refurbished products as an alternative to new products. Sustainable ICT/EEE requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to sustainable ICT services/equipment, including the application of circular economy outcomes where relevant and proportionate, while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of ICT equipment supplied/used in the delivery of this service, through relevant **durability, repairability and upgradability** features of the equipment, and through **repair, refurbishment, remanufacturing and re-use,** during or after the contract period. This may include lease arrangements, sub-contracting arrangements, the supply of remanufactured product and other innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ That the EEE meets the minimum technical specifications (see the next row of this table); ■ The durability, repairability and upgradeability of the equipment; ■ How equipment will be maintained and serviced (this may be under a separate contract); ■ Where equipment includes re-used, refurbished or remanufactured whole items or components, and that these meet quality and safety standards and are properly certified as appropriate; ■ That, where possible, equipment will be re-used after being refurbished/data-destruction, during and/or after the contract has expired, either for internal re-use or externally (for example used on other contracts or sold); ■ That equipment, at the end of its useful life, that is capable of cost-effective remanufacturing goes to a relevant contractor for this purpose and thereafter is redeployed/sold; ■ That packaging contains more than [for example] 70% recycled content, that at least 90% [for example] of this is recyclable at end of life and is re-usable and re-used where possible; and ■ Potential KPIs to include: Expected useful life of the equipment under the contract (in months), extended by upgrade and maintenance where appropriate, before replacement is required. Evidence to be provided in	Service Or Equipment

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	terms of testing and/or simulation/design calculations; % of redundant equipment from the contract that is re-used/refurbished/remanufactured, rather than recycled as WEEE, with appropriate evidence from service records; and % of product packaging that is re-used/reusable.	
	The example specifications below can be used to highlight the particular sustainability requirements (based on the latest draft EU GPP Requirements (May 2015), modified in some areas in accordance with other criteria including GBS, Blue Angel, EPEAT and WRAP guidance[60]. It is important to establish that the market for a particular product can meet these requirements before incorporating them. **Warranty and service agreements (including buying re-used EEE):** The tenderer shall provide a minimum 3 year warranty for new equipment effective from delivery of the product. This warranty shall cover repair or replacement and include a service agreement with a pick-up and return option. The warranty shall guarantee that the goods are in conformity with the contract specifications at no additional cost. It shall cover battery defects. Pre-owned, refurbished and remanufactured EEE should be supplied with an appropriate warranty [which may be shorter than the original warranty, unless fully remanufactured] and must have been supplied by a PAS141 or equivalent certified company. Verification: A copy of the warranty and service agreement shall be provided by the tenderer. They shall provide a declaration that they cover the conformity of the goods with the contract specifications, including all indicated usage. Where refurbished or remanufactured, a PAS141 certificate or equivalent should be provided for the company undertaking the preparation for re-use. It is recognised that PAS141 may not be widespread. Therefore procurers should seek evidence that preparation for re-use requirements have been fully satisfied (this *may* include the application of the Revolve[61], or equivalent, standard which fulfil safety and function testing requirements). For mobile phones, the supplier should provide handset-specific ratings using the Vodafone/O2/Orange Eco-Rating scheme or an equivalent to allow handset comparisons. **Recycled and re-used content:**	Equipment

[60] **WRAP Buying Specification Guides for Durability and Repair:** http://www.wrap.org.uk/sites/files/wrap/Buying%20spec%20-%20laptop%20AG.pdf

[60] **WRAP Better Appliances:** http://eproducttechguide.wrap.org.uk/ contains guidance (around whole appliances and key components) to help organisations procure better, more durable and repairable products.

[61] Revolve: **Revolve:** http://www.revolvere-use.com/

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	A minimum of 70% by weight of the total EEE packaging should derive from re-used and recycled content (pre- and post-consumer). The tenderer should indicate the percentage by weight of recycled content and/or refurbished and re-used components in the EEE. Verification: Suppliers must provide documentation confirming the percentage by weight of recycled, refurbished and re-used content in the final item and its packaging. **Durability/longevity:** All products should be provided with clear and concise hardcopy user manuals, including appropriate Quick Start Guides and trouble-shooting information, and telephone/online support. Verification: Example manuals, telephone helpline numbers and web links EEE should be designed to be durable mechanically (e.g. for laptops; hinges, screens, keyboards and connector blocks; e.g. for fridge-freezers; compressors, door hinges, shelves and trays etc.) and electrically/electronically to avoid failure in use (e.g. printed circuit boards, screens, backlights). All Printed Circuit Boards (PCBs) to comply with IPC610E and IPC-J-STD-001 concerning PCB build quality. For further information specific to notebooks/laptops see WRAP [62]: For further information specific to appliances/white goods see WRAP [63]: Verification: Manufacturers declaration and supporting test information; preferably from an independent laboratory. Notebook/laptop computer drives should be tested and verified to meet at least one of the following requirements: • The HDD drive shall withstand a half sine wave shock of 400 G (operating) and 900 G (non-operating) for 2 ms without damage to data or operation of the drive. • The HDD drive head should retract from the disc surface in less than or equal to 300 milliseconds upon detection of the notebook having been dropped.	

[62] **WRAP Buying Specification Guides for Durability and Repair:** http://www.wrap.org.uk/sites/files/wrap/Buying%20spec%20-%20laptop%20AG.pdf

[63] **WRAP Better Appliances:** http://eproducttechguide.wrap.org.uk/ contains guidance (around whole appliances and key components) to help organisations procure better, more durable and repairable products.

- A solid state storage drive technology, such as SSD or eMMC, is used.

Verification: The applicant shall provide a specification for the drive or drives integrated into the product. This shall be obtained from the drive manufacturer and for option (i) shall be supported by a test report according to IEC 62131 or equivalent and for option (ii) IEC 60068, Part 2-31: Ec (Freefall, procedure 1)

For ICT equipment and 'smart devices' (i.e. those with significant processing capacity/internet capability), upgrading of key components must be possible, as a minimum in regard to memory (RAM and drives) and processing speed, by a professional repair service provider.

Verification: Manufacturer's declaration.

Rechargeable batteries shall have an endurance greater than 300 cycles (with 80% capacity retention). The minimum battery life in hours to be set according to the Contracting Authority's requirements.

Verification: The tenderer shall provide a test report for the battery cells or packs showing compliance according to the IEC EN 61960 'endurance in cycles' test carried out at 25^0C and at a rate of either 0.2 It A or 0.5 It A (accelerated test procedure). Partial charging may be used to comply as long as the software is factory installed as the default setting and the tender requirements on battery life are met at the partial changing level complying with the cycle requirement.

Repair and Availability of Spare Parts:

Basic fault diagnostics advice to be available in the manufacturer's instruction booklet and online.

Machine repair manual and exploded parts diagrams to be available on the brand or manufacturer's website (free of charge).

The following components of equipment, if applicable to the equipment, shall be easily accessible and replaceable by the use of universal tools (i.e. widely used commercially available tools as screwdriver, spatula, plier, or tweezers):

HDD/SSD, memory, rechargeable battery, screens/displays and backlight/s, power and control circuit boards, audio speakers, cooling fans, heating elements (e.g. washing machines), thermostats, stands/mounts/feet, catches, hinges, motors (e.g. washing machines), compressors (e.g. fridges), seals, moving mechanisms (e.g. paper feeds in copiers), user interfaces (keyboards, mouse pads etc.) and electrical connectors/assemblies.

The tenderer shall provide clear disassembly and repair instructions (e.g. hard or electronic copy, video) to enable a non-destructive disassembly of products for the purpose of replacing key components.

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	Verification: A manual shall be provided by the tenderer which shall include an exploded diagram of the device illustrating the parts that can be accessed and replaced. It shall also be confirmed which parts are covered by service agreements under the guarantee. The tenderer shall guarantee the availability of spare parts, including as a minimum those identified above, for at least 5 years after the item ceases to be manufactured. Parts with improved specifications shall be backwardly compatible. All parts should be clearly listed on the manufacturer's website with relevant pricing and information on parts stockists. Spare parts and sub-assemblies should be reasonably priced to facilitate repair outside of warranty. Verification: The tenderer shall provide a declaration concerning the availability of spare parts and their cost and that backwardly compatible spare parts, including rechargeable batteries (if applicable), will be made available to the contracting authority or through a service provider. Rechargeable batteries shall not be glued or soldered into portable products. Simple instructions on how the rechargeable battery packs are to be removed shall be marked on the base cover of the product or provided in the user instructions. The rechargeable battery shall be easy to extract and replace by a professional repair service provider. Verification: The tenderer shall provide photographic evidence of how the battery is installed in the product, the steps required to remove and cover markings. A copy of relevant user instructions shall also be provided. The Contracting Authority reserves the right to visually inspect a random selection of supplied products. Imaging equipment must accept remanufactured toner and/or ink cartridges. Devices and practices that would prevent re-use of toner and/or ink cartridge (i.e. anti-reutilisation devices/ practices) should not be present or applied. Toner cartridges must also be refillable by the user. Imaging equipment must also accept paper containing recycled fibres that meets the requirements of EN12281. Verification: The tenderer shall provide proof that such cartridges and paper have been tested in the device and shown to function adequately in the equipment. **Re-use and Recycling:** Tenderers shall provide a re-use and recycling service for equipment that has reached the end of its service life under the contract or otherwise become redundant. The tenderer shall demonstrate how they will extend the service life of the equipment through refurbishment; e.g. for ICT equipment by sanitising data storage, repair/servicing and then supplying it for re-use.	

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	For redundant equipment, a minimum re-use target of X% [to be defined by the procuring authority based on the typical age/condition of used equipment] (by number of units and after any refurbishment) of the provided equipment is to be met. In terms of computers, equipment dating back to prior to Energy Star v4.0 for notebooks and v5.0 for stationary computers and monitors is exempt from this target and shall be recycled unless it can be refurbished to meet, as a minimum, these requirements. Equipment that is not possible to re-use shall be delivered to permitted recycling facilities so it is recycled in full compliance with the requirements in Annex VII of the WEEE Directive. 90% or greater by weight of materials and components shall be recyclable or re-usable within the current infrastructure and using demonstrated technologies. Verification: The successful tenderer shall provide a report on the status of the equipment collected once a year to confirm compliance. The report shall: identify the proportion of items re-used or recycled; provide certificates verifying the proper treatment according to the WEEE Directive of the equipment that could not be re-used. In relation to printers/copiers/MFDs, tenderers shall provide a toner/ink cartridge take-back and refill/remanufacture service as part of the contract. Remanufactured cartridges must meet the standards of UK Cartridge Remanufacturers Association Quality Mark. Verification: Declaration of conformity with the take-back requirement and a certificate from the UK CRA. Plastic parts with a mass of over 50 grams shall not contain moulded-in or glued-on metal parts or parts of different polymers, unless they can be removed easily with commonly available tools at end of life. In this event, disassembly instructions shall show how to remove them. Verification: The tenderer shall detail the tools required to remove any plastic parts containing metal inserts. Visual evidence shall be provided to support compliance. The presence of paints, coating and flame retardants and their synergists and additives shall not significantly impact upon the recyclability of the plastic when tested according to ISO 180. Verification: The tenderer shall provide valid mechanical/physical test reports carried out according to ISO 180 or equivalent. Third party test reports obtained from plastics recyclers, resin manufacturers or independent pilot tests shall be accepted. Plastic parts with a mass greater than 50 g shall be marked in accordance with ISO 11469 and ISO 1043-1 or equivalent. Printed wiring boards, extruded plastics and plastics in the display unit of monitors are exempted.	

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	Verification: The tenderer shall identify the plastic parts by their weight, their polymer composition, and their ISO 11469 and ISO 1043, or equivalent, markings. The dimension and position of the marking shall be visually illustrated. Packaging must be at least 90% recyclable or compostable (to BS EN 13432) under in-vessel conditions. Verification: The tenderer shall provide a declaration and relevant test certificates.	
	Finally, it is important to bear in mind that particularly in service contracts, social considerations may be applicable in terms of the third sector, social enterprises, skills, employment and training, together with options to reserve contracts for supported businesses where appropriate. This is likely to be as part of the sourcing requirement.	Service
Supplier selection **(and award criteria)**	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	
	As an example to incorporate within your documents for ICT/EEE contracts you could award extra points according to: • The percentage by weight of recycled, refurbished, remanufactured and/or re-used materials and components in the final item of equipment. • Each additional year of warranty and service agreement offered that is more than the minimum technical specification. • Demonstration of overall product life; number of years' operation in accelerated testing without failure. • Durability tests carried out on circuit boards and components according to IEC 60068 standards: e.g. EN 60068-2-6:2008 (environmental testing Part 2-6: Test Fc: Vibration (sinusoidal)) and EN 60068-2-64 (environmental testing Part 2-64: Test Fh: Vibration, broadband random) for vibration resistance for circuit boards. The tests applicable shall be specified in the ITT to reflect the conditions of use defined for the product. • Battery endurance (of portable devices) greater than 500 cycles (with 80% capacity retention). • Other durability features such as IP54 or above rating of keyboards, touchpads and displays. • Provision of a 'dismantling test report' recording and providing a detailed description of the dismantling sequence, extraction steps and timing for the target parts and components. The disassembly test shall be carried out by a specialized recycling firm that is a permitted treatment operation in accordance with Article 23 of the Waste Framework Directive. • A higher % of re-use of redundant equipment than that set out in the technical specifications. • The supplier's Environmental Policy and how it relates to the sustainability values and objectives of the	Equipment

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	contracting authority.	
	When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **circular economy outcomes**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	
	For a **services contract**, to assess the capability of suppliers in enabling circular economy outcomes: Detail your experience in delivering an ICT service that includes the use of **re-used, repaired, refurbished or remanufactured equipment** or the **repair, re-use or remanufacturing** of redundant equipment, packaging and accessories used. An **ideal response** would provide the following: ▪ Evidence of having used pre-owned, refurbished or remanufactured equipment in the delivery of a contract similar in nature to the service required; ▪ Evidence of the re-use, regular maintenance and repair/refurbishment of equipment, and where practical remanufacturing; ▪ Evidence of the management of repair, re-use and remanufacturing within its supply chain including sub-contractors and links to SMEs, third sector or supported businesses involved; ▪ Evidence of a focus on durability, longevity in service, and end-of-life options to optimise re-use, repair and remanufacture; ▪ Evidence of application of relevant standards (e.g. Government Buying Standards, PAS141) and relevant eco label criteria (e.g. the EU Ecolabel); ▪ Evidence of adoption of lean manufacturing processes in the supply chain; ▪ Evidence of analysis of carbon impacts of differing manufacturing options in the supply chain;	ICT Service

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	▪ Evidence of an in-use assessment tool or methodology to identify interventions that would limit equipment damage and extend the life of in-use furniture; ▪ Evidence of understanding the key circular economy opportunities and management requirements, including an example Management Plan.	
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out [**the re-used** proportion content of packaging used], [the proportion of otherwise redundant equipment that is **re-used, refurbished or remanufactured**].' and / or 'The supplier hereby agrees to increase the proportion of otherwise redundant equipment that is **re-used, refurbished or remanufactured** by X% after 12 months and by a further Y% after 24 months.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	ICT Service Or ICT Equipment
	The benefits of the contractual requirement must be **quantifiable and measureable**; otherwise there is a risk that enforcement may be impossible. The buyer must also consider whether this requirement is core to the contract or a secondary issue, as any remedy for breach of these clauses may be difficult to quantify. In these circumstances a pre-agreed service credit or rebate would enable recompense for non-performance as termination of the contract would not be an option. Efficient contract management not only ensures that the contract is performed according to the detailed requirements but also allows for **continual improvement** over the life of the contract, through relationship management, ongoing stakeholder engagement and providing a focus for innovation. This is particularly the case for remanufacturing where the market may initially be constrained but opportunities develop over time. Monitoring the contract will be essential to ensure that the service quality, cost and sustainability objectives are achieved and that this can be evidenced. It may be appropriate to ask that suppliers use a Computer Aided Facilities Management (CAFM) tool to capture their performance and this can incorporate the sustainability requirements that have been included in the contract.	

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
Snapshot example:	**Scottish Procurement ICT Devices Framework** This is the latest iteration of the Framework which is estimated to be valued at up to £250m over 4 years over the following Lots: • Desktop devices • Workstation devices • Mobile devices • Thin Client Devices • Cloud Computing and Proprietary Devices. • Tablet devices Framework requirements included a focus on: The end of life management of devices to extend their useful life while ensuring compliance with WEEE and data security requirements – it is recognised that the market has developed in recent years so that there is now greater emphasis on repair, refurbishment and re-use of devices but the Framework sought to embed this as a key requirement and encourage the market to go further. Innovative packaging – to embed a focus on waste minimisation and a more circular approach innovative packaging solutions were sought that included take back, pallet or crate systems and alternative packaging materials. Circular economy: Contractors demonstrated how they will extend the useful life of devices through re-use of components and devices. While this is readily available for certain devices from the manufacturer or its 'end of life' partner it is variable for Tablet devices, which can be difficult to disassemble and repair/repair components/upgrade. Users of the Framework are provided with a Buyer's Guide setting out the criteria the devices meet so that they can make an informed purchasing decision. http://www.gov.scot/Topics/Government/Procurement/directory/IThardware	
	Crown Commercial Service (CCS) Mobile Phone Procurement Via Wallace Environmental and WRAP consultants from Eunomia, CCS were supported in the development of their mobile phone procurement for Government Departments in 2015. WRAP recommended a series of questions for inclusion within the tender documentation based on corporate environmental performance and the use of Eco-Rating 2.0 (the Vodafone/O2 scheme) or equivalent for handsets. In circular economy terms the Eco-rating 2.0 rating covers such aspects as: ▪ Use of sustainable materials (e.g. recycled content); ▪ Durability and life extension (e.g. through repair and upgrade); ▪ Functionality (to reduce the need for other devices); and ▪ End of life management (e.g. take-back, re-use and recycling). It was proposed that potential tenderers would be asked to include details within their bid on the use of Eco-Rating 2.0, or equivalent, which rated devices based on the above key principles. WRAP proposed that once the contract had been awarded, the service provider	

Procurement guidance	Electrical & Electronic Equipment (ICT, Printers, Appliances)	Applicable to procurement of:
	would support each procuring department to identify the most suitable, yet sustainable device, for their needs. Unfortunately, the procurement did not proceed for unconnected reasons and hence could not be evaluated as to its success. Further information: http://www.wrap.org.uk/sites/files/wrap/Case%20study%20-%20mobile%20phone%20procurement.pdf	

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Commodity Overview	B.5 Flooring
Products and services In 2013/14 Scottish public sector procurement of flowing comprised: Floor Covering Suppliers £17,975,562. Construction flooring suppliers £203,297. (Scottish Procurement Information Hub)	The Scottish public sector procures a significant quantity of flooring products each year. These include carpeting, vinyl, rubber, linoleum, wooden and potentially stone (e.g. 'Floor Coverings', APUC). As well as flooring for offices the NHS procures significant quantities of flooring products and services, which must meet strict safety and quality requirements. The environmental impacts of producing, using and disposing of flooring are substantial, including energy, material, water, and waste impacts with much going to landfill. Floor finishes are a significant element of a building and contribute around 12% towards a building's environmental impact. It should be noted that carpets are often included under 'textiles'.
Procurement hierarchy:	Consider first: ▪ Is there a need to procure anything – is there potential to re-use in your own refurbishment? Are there options to re-use or extend useful life of flooring products? ▪ Can the required function be provided in an alternative way? For example, rather than procuring carpets is a practical alternative to utilise a lease model or carpet tiles, in a circular economy model?
Market commentary:	Carpets are the largest product group by production tonnage, with 190,000 tonnes manufactured in the UK, although this only accounts for approximately a third of UK consumption. This may offer opportunity for either closed loop or take-back procurement models64. As well as the procurement of carpet tiles as an alternative to carpeting some suppliers, such as Interface Interfloor, Milliken, Tarkett (incorporating Desso), offer a closed loop model with old tiles or carpeting put back into the manufacturing process (Interface has previously claimed 87% re-use of old tiles). Other organisations such as Branagan Flooring seek to re-use or recycle carpets (in conjunction with Anglo Recycling carpet offcuts are recycled into underlay). They and others are also part of the Recofloor[65] Vinyl Take Back Scheme (this has 4 drop off sites currently in Scotland and focuses on recycling rather than re-use). There are also an increasing number of carpet lease models (e.g. Desso[66]) and Interface FLOR sell 'flooring services' through their evergreen lease option. Determining the most appropriate route for used carpet involves consideration of carpet condition, fibres, backing as well as the economics. Some flooring has received Cradle to Cradle certification ('C2C'[67]) although this may be

[64] **WRAP (2013) Textiles Flow and Market Development Opportunities:** http://www.wrap.org.uk/content/uk-textile-product-flow-and-market-development-opportunities
[65] **Recofloor**: http://www.recofloor.org/
[66] **Desso:** http://www.desso-businesscarpets.com/services/carpet-take-back%E2%84%A2-programme/
[67] **C2C:** http://www.c2ccertified.org/products/registry

Commodity Overview	B.5 Flooring
	restricted geographically and public procurers must accept equivalent evidence of satisfying relevant criteria. There are 24 carpet recyclers and re-use companies in the UK and the number of facilities is on the increase. Each reprocessor has different acceptance criteria – for example, some accept underlay and others do not.
Scope for economic and environmental improvement in circular economy within this commodity:	**Re-use** – Key opportunities exist for increasing carpet and re-use and recycling. The recycling and re-use of carpet is an expanding industry, with a number of innovative recycling and re-use methods. WRAP[68] have developed a guide for facilities management professionals on how to prepare used carpets for re-use and recycling, which includes sample specification clauses for use within tenders. There is flooring re-use activity in Scotland (e.g. Spruce Carpets[69]) but this is limited and the majority of circular economy focus is on carpet tile closed loop model. There is increasing recycling activity in flooring[70]. Some third sector organisations will supply re-used carpets (for example that which has been taken to Household Waste Recycling Centres and is suitable for re-use or is donated), and may be suitable for flooring in some domestic premises, although this will inevitably be limited in scale and available sizes. Steps public bodies can take at Household Waste Recycling Centres (HWRC) to divert more carpet from landfill and improve quality of supply include: ▪ providing a separate container; ▪ preventing carpets from becoming contaminated by other materials; ▪ keeping carpets dry, using a tarpaulin over a container if necessary; and ▪ bulking carpets up wherever possible, perhaps at a centrally located HWRC or a transfer station for a network of HWRCs. The market for donated and re-used carpets is constrained at present by limited demand (for example Spruce Carpets is currently unable to take further donations due to warehouse space). Investment to expand capacity will only be feasible with certainty over market demand.
	Repair – repair of flooring will take place as part of routine maintenance and refurbishment.
	Reprocessing and Recycling of Materials – as indicated above there is an established market for the remanufacturing of carpet tiles, as well as recycling of carpets and vinyl. This is primarily available from large suppliers such as Interface, Milliken and Desso but has increased in availability as a closed loop model. A great advantage of

[68] **WRAP Carpet Guide:** http://www.wrap.org.uk/carpetguide
[69] **Spruce Carpets**: http://www.sprucecarpets.org.uk/
[70] **Carpet Recycling UK:** http://carpetrecyclinguk.com/

Commodity Overview	B.5 Flooring
	tiles is that they can be taken up and re-used, either in the existing building, on the same site or in properties at other locations. Carpet tiles are engineered to perform well in the harshest commercial locations. Often, their design life of 15 years is well in excess of their fashion-led actual life of 7 to 10 years. This means a second life is well within their asset lifetime.

Procurement guidance	Flooring	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure flooring products should reflect: ■ Consideration of alternatives – do you really need to procure; can the required function be delivered in a better way (e.g. carpet tiles rather than carpets, leasing/managed service)? ■ Intended outcomes ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders.	Flooring products
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Sustainable Flooring Solutions [Products]**'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **durability,** maintenance, **refurbishment, re-use and end of life recycling** of flooring which are relevant to the service to be delivered.'	Flooring products Or Flooring service
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of carpet tiles supplied are derived from re-used and remanufactured content.'	Flooring products
Specification	Sustainable flooring service [products] requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	Flooring products Or Flooring service

Procurement guidance	Flooring	Applicable to procurement of:
	Included below are example specifications which can be used to highlight the requirement to meet sustainability criteria for either flooring products or flooring services – this may include a services contract with the OEM. It is important to establish that the market for a particular product can meet these requirements before incorporating them. **Flooring service provision** Detail your understanding, experience and achievements in: • Cost-effectively providing flooring services which maximises, where practical, the durability of flooring and minimises the use of materials, resources and reducing the whole life costs of flooring service delivery; • Maximising inclusion of recycled content, the re-use and the repair, refurbishment and remanufacturing of flooring at the end of life; • Working with third sector organisations to enhance re-use of flooring. Verification: the supplier should provide evidence of experience in delivering these outcomes through contracts. **Warranty and service agreements:** The tenderer shall provide a minimum [XX] year (this will be product specific) warranty for new flooring products effective from delivery of the product. Refurbished and remanufactured products should be supplied with the same warranty and meet Scottish Revolve standards for re-use as a minimum, or equivalent. This warranty shall cover repair or replacement and include a service agreement with a pick-up and return option. The warranty shall guarantee that the goods are in conformity with the contract specifications at no additional cost. Verification: A copy of the warranty and service agreement shall be provided by the tenderer. They shall provide a declaration that they cover the conformity of the goods with the contract specifications, including all indicated usage.	
	'XYZ public body is committed to sustainable flooring including the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of flooring supplied, through relevant **durability, repair, re-use, refurbishment or remanufacturing**	Flooring products Or Flooring service (inc.

Procurement guidance	Flooring	Applicable to procurement of:
	including through sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' Specific requirements for carpet tiles **re-use** may include: Carpet tile re-use specification clause[71] ■ Carpet tiles to be uplifted by the removal contractor at the earliest possible stage in the refurbishment process to ensure that they stay clean and uncontaminated; ■ Carpet removal contractor must supply pallets and shrink wrap; ■ Pallets must be in good condition; ■ Full carpet tiles should be stacked 4 tiles per layer to a maximum height of 120 layers or 1. 2m. This is approximately 480 tiles per pallet; ■ Every 40 layers a single full tile to be placed in the centre of the stack overlapping each of the four piles to lock in the separate stack; ■ Tiles must be shrink wrapped securely to the pallet to ensure they do not move during transport; and ■ Off cuts from the installation process should be placed in bulk bags on pallets ready for collection. For broadloom carpets: ■ Carpet removal contractor to contact the recycler in the project planning stages to: ■ Establish suitability of the carpet for the recycling process. Some recycling organisations may require a small sample of the carpet to be sent to them for testing, others may only require photographs of the carpet; ■ Agree best collection container for the carpet; ■ If carpets are rolled when uplifted you should ensure that there is no debris or contamination in the rolls; ■ Uplifted carpet should be kept out of the general waste stream and in a separate container on site; and	lease model)

[71] **WRAP Carpet Guide:** http://www.wrap.org.uk/carpetguide

Procurement guidance	Flooring	Applicable to procurement of:
	▪ Carpet to be kept dry for shipping and processing. An ideal response would demonstrate: ▪ That flooring products meet minimum technical specifications ▪ That flooring products are selected based on durability and repairability; ▪ That products supplied may include re-used, refurbished or remanufactured products that meets quality and safety standards; ▪ That, where possible, flooring products used may be re-used, repaired, refurbished or remanufactured; ▪ Suggested KPIs to include: % of products that are re-used/remanufactured, % of products that is re-used/repaired/remanufactured, with appropriate evidence from service records.	
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	
	As an example to incorporate within your documents for a flooring service contract you could include: ▪ Please provide a copy of your Environmental Policy and highlight how it relates to the sustainable values and objectives of the contracting authority.	
	When selecting suppliers, it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **circular economy outcomes**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Flooring products Or Flooring service
	For a **services contract**, to assess the capability of suppliers in enabling circular economy outcomes the following could be asked:	Flooring products

Procurement guidance	Flooring	Applicable to procurement of:
	Detail your experience in delivering flooring that includes the **use of durable, repairable, re-usable, or remanufacturable products, or the re-use, repair or remanufacture of flooring products**. An **ideal response** would provide the following: ▪ Evidence of experience of the management of repair, re-use and remanufacturing within its supply chain including sub-contractors and links to SMEs, third sector or supported businesses involved; ▪ Evidence of having used re-used, repaired or refurbished flooring in the delivery of a contract similar in nature to the service required; ▪ That packaging is re-usable and re-used as much as possible.	Or Flooring service
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out [the proportion of flooring products supplied that is **re-used, refurbished or remanufactured**].' and / or 'The supplier hereby agrees to increase the recycled and or **re-used content** of flooring by X% after 12 months and by a further Y% after 24 months.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	Flooring products Or Flooring service
Snapshot example:	**Aberdeenshire Council** The Interface ReEntry® carpet tile take-back scheme has been run in partnership with social enterprises, including Spruce Carpets from Glasgow. They sort, grade and clean old carpet tiles, which are then made available to charity and community groups at prices they can afford. InterfaceFLOR has previously removed around 70 pallet-loads of old carpet tiles from the Council's office for repurposing. New carpet containing pre-consumer recycled content was then installed.	

Back to Commodity List

Commodity Overview	B.6 Furniture
Commodities and services In 2013/14 Scottish public sector procurement of furniture comprised: ▪ Domestic Furniture Suppliers £13,156,021 ▪ Office (Commercial) Furniture Suppliers £11,052,566 (Scottish Procurement Information Hub)	Furniture represents a major investment by the public sector and mainly comprises the following products and services: ▪ Office furniture - purchase and hire – e.g. 'Education and Office Furniture' (Scotland Excel), 'Furniture Supply Delivery and Installation', APUC; ▪ Door Maintenance, repair, inspection and supply; ▪ Furniture fittings and office equipment; ▪ Residential furniture (e.g. care homes); ▪ Furniture furnishings and textiles – supplies and services; ▪ General Storage, racking and shelving (including library). Office furniture comprises the majority of furniture spend in the public sector, which generally encompasses seating, desks and pedestals, steel or wooden storage units, and a small percentage of miscellaneous items, including partitions. The majority of this has a long service life of around 9 to 12 years, but is often replaced for reasons other than damage or other loss of function.
Procurement hierarchy:	Consider first: ▪ Is there a need to procure anything? Are there options to re-use or extend useful life of furniture products? ▪ Can the required function be provided in an alternative way? For example, changes in ICT requirements can impact on furniture needs, home working and hot desking impacts on the requirement for furniture. Can furniture be leased or hired? The lease should include maintenance and repair, and there is the opportunity to encourage the lease company to re-use, refurbish and repair furniture. This may be also achieved through a managed furniture service, as long as intended outcomes are part of the requirement. ▪ Demand management using asset management systems and communication channels allows forecasting and planning for demand, reducing consumption where feasible.
Market commentary:	The domestic and commercial furniture industry in the UK is considerable – the fourth largest manufacturing industry in the country – valued at around £10 billion. Of this, the office furniture sub-sector accounts for approximately £680 million equating to a mass of between 165,000 and 200,000 tonnes. Furniture is a nationwide market, with the Scottish furniture market represented by a relatively small number of SMEs in the office furniture and furnishings, wholesale and furniture services sectors. At a national level, the size of the office furniture sector in Scotland is estimated to be £61 million. In Scotland the office furniture market includes office furniture manufacturers, wholesale office furniture and fittings suppliers, agents involved in the supply of furniture, and the contract furniture and furnishings sector. A significant proportion of furniture procurement across the public sector in Scotland is undertaken via frameworks,

Commodity Overview	B.6 Furniture
	including Scotland Excel's Education and Office Furniture Framework, and the Public Contracts Scotland Framework Agreement for Supported Factories and Businesses (Lot 1 Furniture and Associated Products). As well as office furniture this includes domestic furniture which may be supplied as part of the Scottish Welfare Fund.
Scope for economic and environmental improvement in circular economy within this commodity:	**Repair** – Repair and life extension, through design for durability and maintenance/repair services (these may be part of a service or a separate contract) offers significant potential to extend the lifespan of furniture and therefore to prevent waste and deliver against best value procurement drivers. The financial and environmental drivers for consideration of repair over replacement with new furniture are considerable.
	Re-use – Re-used office furniture has the same utility as new furniture but is available at a fraction of the price. Buying re-used avoids the purchase of new office furniture, thus saving both energy and resources. Direct re-use of office furniture is a relatively active market with many smaller companies and third sector organisations serving local needs (for example, within Scotland, organisations certified to the Revolve re-use quality standard, and others). OEMs rarely engage; however, several are involved in take-back schemes through third parties. Approximately 200,000 desks of office desks and 295,000 office chairs are re-used in some way in the UK every year, equating to approximately 8,500 tonnes of furniture. This is approximately 14% of desks and chairs reaching the end of their life each year[72] with the remainder sent for recycling, energy recovery, or landfill. Research has identified that 27% of soft furniture, 24% of large hard furniture and 43% of all hard furniture is suitable for re-use in their current state. Broadly, 50% of all commercial furniture is suitable for direct re-use. Prices for high quality re-used furniture are approximately 30% - 50% of the recommended retail price of the same items new. WRAP estimate that an organisation with 200 staff can save over 200 tonnes of CO_2 over 15 years if it buys re-used office furniture instead of buying new every 5 years, and that by avoiding the manufacture of new furniture, the water savings are over 1,600 tonnes[73].
	Remanufacturing – Remanufactured office furniture (i.e. fully rebuilt rather than undergoing minor refurbishment) items are attractive for customers either for their environmental credentials (displacing large volumes of material from landfill) and/or for the economic value: remanufactured office furniture may cost up to 50% less than purchasing equivalent new items[74]. The market for office furniture remanufacturing is nationwide, with remanufacturers operating in England selling products into Scotland. However, there are relatively few operations in the UK active in office furniture remanufacture even though many office furniture products are well-suited to remanufacturing, due to their durable design, configurability and low rate of technology evolution. Barriers highlighted by furniture stakeholders in the repair and remanufacturing market include a lack of demand for products and services. Public sector procurement in Scotland accounts for a significant fraction of the Scottish furniture market, with significant scope to expand the repair, re-use and remanufacturing of furniture through a focus on this within contracts.

[72] WRAP (2011) Benefits of Reuse: Office Furniture http://www.wrap.org.uk/sites/files/wrap/Office%20Furniture_final.pdf
[73] WRAP (2010) Purchasing reused office furniture
[74] ZWS (2015) Circular Economy Evidence Building Programme Remanufacturing Study, Full Report

Procurement guidance	Furniture	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure furniture products or a related FM service [Products] should reflect: ■ Consideration of alternatives – do you really need to procure (e.g. re-using furniture); can the required function be delivered in a better way (e.g. leasing/managed service)? ■ Intended outcomes ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders.	Furniture FM Service Or Furniture Equipment
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Sustainable Furniture Services [Equipment]**'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	Furniture FM Service Or Furniture Equipment
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **durability, repairability, re-use and remanufacturing** of furniture which are relevant to [the service to] be delivered.'	Furniture FM Service Or Furniture Equipment
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of total packaging weight derives from re-used and recycled content.'	Furniture Equipment
Specification	Sustainable furniture service [equipment] requirements need to be incorporated into the specification and	

Procurement guidance	Furniture	Applicable to procurement of:
	must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to sustainable furniture use including the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of furniture equipment [supplied] used in the delivery of this service, through relevant **durability, repair, re-use, refurbishment or remanufacturing** during or after the contract period as well as the supply of re-used or remanufactured furniture. This may include lease arrangements, sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered, together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ That equipment offered is selected for its durability and repairability; ■ That equipment is regularly maintained and serviced (this may be a separate contract the contractor has); ■ That equipment used may include re-used, refurbished or remanufactured furniture, parts and materials that meets quality and safety standards; ■ That, where possible, equipment will be re-used after being refurbished, during and/or after the contract has expired, either for internal re-use or externally (for example used on other contracts or sold); ■ That equipment, at the end of its useful life, that is capable of cost-effective remanufacturing goes to a relevant contractor for this purpose and thereafter is redeployed/sold; ■ That packaging contains more than 70% recycled content, that at least 90% of this is recyclable at end of life and is re-usable and re-used where possible; and ■ Potential KPIs may include: a. Expected useful life of the equipment under the contract (in months), extended by upgrade and maintenance where appropriate, before replacement is required. Evidence	Furniture FM Service Or Furniture Equipment

Procurement guidance	Furniture	Applicable to procurement of:
	to be provided in terms of testing and/or simulation/design calculations; b. % of redundant equipment from the contract that is re-used/refurbished/remanufactured, rather than recycled as WEEE, with appropriate evidence from service records; and c. % of product packaging that is re-used/reusable.	
	Included below are example specifications which can be used to highlight the requirement to meet sustainability criteria within the furniture equipment used. It is important to establish that the market for a particular product can meet these requirements before incorporating them. Where noted as from Government Buying Standards (GBS), these criteria have been tested against market capabilities. Other criteria may need market testing. **Warranty and service agreements:** The tenderer shall provide a minimum 3 year warranty for new furniture effective from delivery of the product. Remanufactured furniture should be supplied with the same warranty and meet the Revolve re-use quality standard, or equivalent, as a minimum. This warranty shall cover repair or replacement and include a service agreement with a pick-up and return option. The warranty shall guarantee that the goods are in conformity with the contract specifications at no additional cost. Verification: A copy of the warranty and service agreement shall be provided by the tenderer. They shall provide a declaration that they cover the conformity of the goods with the contract specifications, including all indicated usage. **Recycled content:** The average recycled content of plastic parts (not including packaging) shall be at least 30% by weight. This criterion shall only apply if the total content of plastic material in the furniture product exceeds 20% of the total product weight (excluding packaging).[75] Any wood (including solid, woodchip and woodfibres), cork, bamboo or rattan material, as appropriate, shall be sustainable certified virgin material and/or recycled material. This criterion shall only apply if the total content of these materials in the furniture product exceeds 5% of the total product weight (excluding packaging). A minimum of 70% of the total packaging weight should derive from re-used and recycled content (pre-	Furniture FM Service Or Furniture Equipment

[75] **Draft EU eco-label** voted criteria 2016

Procurement guidance	Furniture	Applicable to procurement of:
	and post-consumer). Verification: Suppliers should provide evidence covering both the source of the timber (Chain of Custody) and proof that it is legally and sustainably managed, or licensed by the FLEGT (Forest Law Enforcement Governance and Trade) Voluntary partnership. This evidence can come in two forms, Categories A (forest certification) and B (other type of evidence), as set out in the UK Government Timber Procurement Advice Note. It and further advice are available at www.cpet.org.uk.[76] The tenderer should indicate the percentage by weight of recycled content and/or refurbished and re-used components of wood based materials, plastics, and/or metals and covering materials (textiles/leather etc.) Verification: Suppliers must provide documentation confirming the percentage by weight of recycled, refurbished and re-used content in the final piece of furniture and its packaging. As part of this, suppliers must provide appropriate documentation indicating the proportion of the textile by weight made from recycled fibres, i.e. fibres originating only from cuttings for textiles and clothing manufacturers or from post-consumer waste (textiles or otherwise). The supplier must also provide evidence of the origin of the recycled fibres used.[77] **Durability:** All furniture must comply with the relevant BS/EN or ISO technical and quality standards (applicable to the usage of the product), for serviceability/durability as set out in FIRA's "Technical Requirements for Furniture. Produced for Defra by FIRA International Ltd. October 2011". Verification: Suppliers must provide appropriate documentation to demonstrate compliance with these standards. Upholstery materials should comply with: EN 13336 requirements for furniture leather. Any textiles or coated fabrics used as upholstery covering material shall comply with the physical quality requirements presented in Table A1 and A2 of the Appendix [78]. Verification: The supplier shall provide a declaration covering the above, where appropriate from the	

[76] **Defra GBS** https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-furniture
[77] **Defra GBS** https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-furniture
[78] **Draft EU eco-label** voted criteria January 2016

Procurement guidance	Furniture	Applicable to procurement of:
	leather/textile fabric supplier or coated fabric supplier, supported by relevant test reports. **Repair, refurbishment and availability of spare parts:** All furniture must be designed for disassembly to facilitate repair, refurbishment, re-use, remanufacturing and ultimately recycling, either in part or as a whole[79]. Bonding or welding of parts, where this would inhibit refurbishment and re-use, should be avoided. The supplier must make available diagrams and appropriate details of the way the furniture has been assembled so as to facilitate its disassembly and refurbishment. Components and spare parts will be made available by the supplier for at least 5 years after sale to extend the product's lifetime through repair, as far as reasonably practical [80]. Verification: Suppliers must provide technical documentation that demonstrates that their product can be disassembled with standard tools, thereby allowing remanufacture, repair, refurbishment, re-use and recycling of components. **Reuse and recycling;** The tenderer should demonstrate that they have a take-back scheme for repairing and refurbishing products for re-use and otherwise recycling of products that have reached the end of their useful lives. [81] The tenderer shall demonstrate how they will extend the service life of the equipment by supplying it for re-use in the EU. Verification: Suppliers must provide documentation to demonstrate that they have the capacity to meet this requirement. A minimum re-use target of 50% (by weight) of the provided equipment is to be met. 90% or greater by weight of materials and components shall be recyclable or reusable within the current infrastructure and using demonstrated technologies. The use of fastening methods (such as bonding of dissimilar materials) and coatings that would inhibit recycling or re-use must be avoided in regard to the 90% target noted above. Verification: The successful tenderer shall provide a report on the status of the equipment collected one	

[79] **Defra GBS** https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-furniture
[80] **Defra GBS** https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-furniture
[81] **Defra GBS** https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-furniture

Procurement guidance	Furniture	Applicable to procurement of:
	year after collection. The report shall: Identify the proportion of items re-used or recycled; Provide information on the fate of the equipment that could not be re-used. Plastic parts of greater than 50g in weight shall be marked for recycling according to ISO 11469 or an equivalent and must not contain additions of other materials that may hinder recycling. For such parts of 50g in weight or more, where a marking will adversely affect the consumer acceptance and aesthetic reasons, information regarding recycling may be included in the user's manual or similar literature. [82] Verification: Suppliers should provide evidence that plastics included within the product are clearly labelled for recycling. Alternatively, this information should be included within the User's Manual or similar literature. Suppliers should also declare where materials within the product may hinder recycling.	
	Finally, it is important to bear in mind that particularly in service contracts, social considerations may be applicable in terms of the third sector, social enterprises, skills, employment and training together with options to reserve contracts for supported businesses where appropriate. This is likely to be as part of the sourcing requirement.	Furniture FM Service Or Furniture Equipment
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	
	As an example to incorporate within your documents for a furniture contract you could include: • The percentage by weight of recycled, refurbished, remanufactured and/or re-used materials and components in the final piece of furniture. • Each additional year of warranty and service agreement offered that is more than the minimum technical specification. • Additional durability tests as follows (from [83]): • EN 16139: Furniture - Strength, durability and safety - Requirements for non-domestic seating (after testing, the components shall not be damaged and shall still function as intended). • EN 12720. Furniture – Assessment of surface resistance to cold liquids (after testing the surface shall not be marked). • EN 15186. Furniture – Assessment of the surface resistance to scratching (after testing the surface	Furniture FM Service Or Furniture Equipment

[82] **Defra GBS** https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-furniture

[83] **Draft EU eco-label** voted criteria January 2016

Procurement guidance	Furniture	Applicable to procurement of:
	shall not be marked). • Provision of a 'dismantling test report' recording and providing a detailed description of the dismantling sequence, extraction steps and timing for the target parts and components. The disassembly test shall be carried out by a specialized recycling firm that is a permitted treatment operation in accordance with Article 23 of the Waste Framework Directive. • A higher % of re-use (of redundant equipment) than that set out in the technical specifications. • The supplier's Environmental Policy and how it relates to the sustainability values and objectives of the contracting authority.	
	When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **circular economy outcomes**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Furniture FM Service Or Furniture Equipment
	For a **services contract**, to assess the capability of suppliers in enabling circular economy outcomes the following could be asked: Detail your experience in delivering a furniture service that includes the use of **re-used, repaired, refurbished or remanufactured furniture equipment** or the **repair, re-use and/or remanufacturing** of redundant equipment, packaging and accessories used. An **ideal response** would provide the following: ▪ Evidence of having used re-used or refurbished furniture in the delivery of a contract similar in nature to the service required; ▪ Evidence of the re-use, regular maintenance and repair of equipment, refurbishment and where practical remanufacturing;	Furniture FM Service

Procurement guidance	Furniture	Applicable to procurement of:
	▪ Evidence of the management of repair, re-use and remanufacturing within its supply chain including sub-contractors and links to SMEs, third sector or supported businesses involved; ▪ Evidence of a focus on durability, longevity in service, and end-of-life options to optimise re-use, repair and remanufacture; ▪ Evidence of application of relevant standards (e.g. Government Buying Standards, Revolve) and relevant eco label criteria (e.g. the EU Ecolabel); ▪ Evidence of adoption of lean manufacturing processes in the supply chain; ▪ Evidence of analysis of carbon impacts of differing manufacturing options in the supply chain; ▪ Evidence of an in-use furniture assessment tool or methodology to identify interventions that would limit furniture damage and extend the life of in-use furniture; ▪ Evidence of understanding the key circular economy opportunities and management requirements, including an example Management Plan.	
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out [**the re-used** proportion content of packaging used], [the proportion of otherwise redundant equipment that is **re-used, refurbished or remanufactured**].' and / or 'The supplier hereby agrees to increase the proportion of redundant furniture that is **re-used** by X% after 12 months and by a further Y% after 24 months.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	Furniture FM Service Or Furniture Equipment
	The benefits of the contractual requirement must be **quantifiable and measureable**; otherwise there is a risk that enforcement may be impossible. The buyer must also consider whether this requirement is core to the contract or a secondary issue, as any remedy for breach of these clauses may be difficult to quantify. In these circumstances a pre-agreed	

	service credit or rebate would enable recompense for non-performance as termination of the contract would not be an option. Efficient contract management not only ensures that the contract is performed according to the detailed requirements but also allows for **continual improvement** over the life of the contract, through relationship management, ongoing stakeholder engagement and providing a focus for innovation. This is particularly the case for remanufacturing where the market may initially be constrained but opportunities develop over time. Monitoring the contract will be essential to ensure that the service quality, cost and sustainability objectives are achieved and that this can be evidenced. It may be appropriate to ask that suppliers use a Computer Aided Facilities Management (CAFM) tool to capture their performance and this can incorporate the sustainability requirements that have been included in the contract.	
Snapshot examples:	**Scotland Excel Domestic Furniture and Furnishing Framework** The Domestic Furniture and Furnishing Framework enables councils to carry out their obligations under the Scottish Welfare Fund, to provide goods and services directly to those in crisis situations. The Framework was awarded a Highly Commended in the GO Sustainability / Corporate Social Responsibility Initiative of the Year category in 2015 to recognise the substantial efforts made to deliver a wide range of social, economic and environmental benefits. Building on this success discussion took place at the renewal of the Framework in 2016, which had required the supply of new goods, between Scotland Excel and councils regarding the addition of a second Lot for 'Re-used' goods. Discussions with the market, led to the scope of goods to be supplied comprising: • Electrical goods, including electric cookers, fridges and freezers and washing machines; • Floor coverings, including carpet and vinyl; • Hard Furnishings, including beds, beside cabinets, chest of drawers, coffee tables, dining table sets, headboards, TV units, and wardrobes; • Soft furnishings, including armchairs, sofas and mattresses. A focus on preparing goods for re-use included: 'The Contractor must ensure that items are prepared for re-use in an appropriate manner, involving checking, cleaning or repairing items so that they can be re-used for their original purpose without further processing. This shall include the collection and transportation of items, sorting of items into those that are suitable for re-use or recycling, preparing them for re-use and training of staff.'	

Procurement guidance	Furniture	Applicable to procurement of:

As part of the ZWS mentoring project discussion took place on the 'Revolve re-use quality standard'.

The Revolve standard is a Zero Waste Scotland Programme and focuses on quality with Revolve businesses having to meet strict levels of legislative compliance, health and safety, quality and safety procedures, customer care, visual merchandising and retail standards.

The standard includes 43 criteria and the development of the Lot involved consideration of the relevance and proportionality of requiring this standard from potential suppliers. Market engagement identified that the majority of potential suppliers were operating to or working towards 'Revolve'. As with any voluntary standard the public sector must be prepared to accept equivalent evidence of meeting relevant criteria.

Perth & Kinross Council:

Perth & Kinross Council has been particularly effective at reducing the procurement of new furniture, as the figures below shows.

It changed its policy on the procurement of furniture for its own use. The adoption of this policy has been reinforced by the messages delivered through the Marrakech Approach training which staff from Perth & Kinross Council attended in March 2011.

Applying procurement hierarchy principles:

1. Reducing the need to buy comes first, so close examination of what is already available helps to reduce overall demand. This included a stationery amnesty to determine unnecessary storage space.
2. Re-use comes next, so if surplus furniture is available within the Council, this will be used first. Perth & Kinross Council has been able to use a third party facilitator to store and catalogue what they have in surplus. A flat-rate fee is charged for storage of these items, which are then made available whenever they are required.
3. Re-use can also involve using other people's surplus furniture. In the case of Perth & Kinross Council, this has meant that the Council was able to make use of furniture that was surplus to the requirements of a large financial institution. It is fit-for-purpose and meets users' requirements, while at the same time allowing Perth & Kinross Council to avoid the need to buy new.
4. The next option was to buy re-used furniture through an existing framework.
5. Finally, the 'buy new' option is reached but only after all of the alternatives have been explored.

Year	Expenditure
2009/10	£292, 904
2010/11	£131,499
2011/12	£ 61,300
2012/13	£ 33,000
Now	£ 7,000 (approx.)

Glasgow Asset Share Network

Glasgow City Council is seeking to establish a network that enables a Glasgow-wide public sector re-use initiative involving WarpIt software, with the aim of enabling easier exchange of furniture in particular.

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Commodity Overview	B.7 Medical Devices and Equipment
Commodities and services In 2013/14 Scottish public sector procurement of medical devices/equipment amounted to: ■ Medical & Surgical Equipment Suppliers £452,058,981 ■ Medical & Surgical Consumables Suppliers £6,252,630 (Scottish Procurement Information Hub)	Medical devices and equipment represents a major investment by the NHS in Scotland with £452m spent on medical devices and equipment in 2013/14. *(It should be noted that Medical Devices and Equipment are part of the Medical Technology sector – which includes services such as clean rooms, engineering and lab services as well as devices and equipment).* The core legal framework for **medical devices** in the European Union (EU) consists of three Directives, these are: • Directive 90/395/EEC regarding active implantable medical devices (AIMD) • Directive 98/79/EEC regarding in-vitro diagnostic medical devices (IVDD) • Directive 93/42/EEC regarding medical devices (MDD) The Medical Devices Directive 93/42/EEC defines a "medical device" as 'any instrument, apparatus, appliance, material or other article, whether used alone or in combination, including the software necessary for its proper application, intended by the manufacturer to be used for human beings for the purpose of: ■ Diagnosis, prevention, monitoring, treatment or alleviation of disease ■ Diagnosis, monitoring, treatment, alleviation of or compensation for an injury or handicap ■ Investigation, replacement or modification of the anatomy or of a physiological process ■ Control of conception ■ and which does not achieve its principal intended action in or on the human body by pharmacological, immunological or metabolic means, but which may be assisted in its function by such means'. This covers over 10,000 product groups[84] ranging from simple disposable devices (e.g. plasters, syringes, needles) to more complex capital equipment (e.g. CTs, MRIs, X-rays). Within the medical device sector, a distinction is made for **medical equipment**. The World Health Organisation (WHO) classifies "medical equipment" as any 'device that requires calibration, maintenance, repair, user training and decommissioning' – activities that are typically carried out by clinical engineers. It does not include implantable, disposable or Single-Use-Devices (SUDs)[85].

[84] **European Commission, *Improving safety of Medical Devices*,** accessed at: http://ec.europa.eu/unitedkingdom/press/frontpage/2013/13_104_en.htm
[85] **WHO, Medical Devices, Definitions,** accessed at: http://www.who.int/medical_devices/definitions/en/ [13/11/15]

Commodity Overview	B.7 Medical Devices and Equipment

While the Scottish Procurement Information Hub provides broad expenditure for 2013/14, a 2012 analysis of expenditure by NHS National Procurement on 'healthcare equipment' (which encompasses medical equipment) showed a total of £399m, broken down as follows:

Dental Equipment & Supplies	£13,704,757
Disability Equipment - Mnfr & Supply	£6,758,363
Hearing Aids	£8,746,247
Hospital Equipment & Supplies	£53,120,828
Medical Equipment Maint & Repair	£1,051,802
Medical Equipment Mnfrs	£201,852,361
Medical Equipment Rental & Leasing	£2,697,804
Medical Instruments - Mnfrs	£16,715,735
Mobility Equipment	£5,922,454
Optical Goods - Mnfrs	£7,221,528
Optical Goods - Retail	£26,701
Optical Goods - Wholesale	£1,416,601
Orthopaedic Care Equipment	£54,509,454
Surgical Appliances & Equipment	£25,296,603

The MHRA[86] has issued guidance and an **informative check list on procuring medical devices** which starts with the need to ensure safety, quality and performance:

- The safety, quality and performance, as well as the acquisition cycle;
- That the selection process takes into account care objectives and priorities of the healthcare organisation, and the needs of patients;
- Whole life costs, where this results in best value for money;
- Takes into the needs of all parties, including those involved in use, commissioning, decontamination, maintenance and decommissioning; and
- Consumables associated with the device are cost effective. This includes the cost of the device, its maintenance and the lifetime costs of consumables

[86] **MHRA (2015) Managing Medical Devices,** Guidance for healthcare and social services organisations, accessed at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/421028/Managing_medical_devices_-_Apr_2015.pdf

Commodity Overview	B.7 Medical Devices and Equipment
	There is also an informative check-list ▪ The service life of the product and warranty details. It may be more cost effective to purchase a device that will last for 10 years but costs twice as much than a device designed to last for 3 years, as long as the maintenance and replacement parts and consumables are available for the lifetime ▪ Whole life costs ▪ Maintenance costs ▪ Could management/deployment of existing equipment negate the need to purchase replacement equipment ▪ Do they have sufficient inventory of existing devices to meet requirements? ▪ Rationalising the range of models versus diversity ▪ Reliability and previous performance
Procurement hierarchy:	Consider first: ▪ Is there a need to procure anything? Are there options to extend the useful life of equipment? ▪ Can the required function be provided in an alternative way? For example, is a lease or managed equipment service a practical alternative to procurement of the equipment? ▪ Do you understand what assets are owned and used? Is there a well maintained comprehensive asset register? Demand management using asset management systems and communication channels allows forecasting and planning for demand, reducing consumption where feasible. Ineffective inventory management is a known source of potential waste within the NHS.
Market commentary:	The medical devices and equipment market is very international with many global companies dominating supply. US companies have a particularly strong presence such as GE Healthcare, Philips Healthcare, Siemens Healthcare, and Toshiba Medical System Corporation. OEM refurbishers/remanufacturers tend to serve the higher end of the market, focusing on the quality of their systems and the service they can provide to customers (e.g. spare parts and warranty). Some OEMs have changed their business model to reprocess their own medical devices in an effort to control the economics of reprocessing (e.g. control margins and level of reprocessed goods in the market). The majority of these OEMs have a strong presence in Scotland. Medical technologies, which includes medical devices and equipment, is seen as a strategically important sector in Scotland, contributing over £500 million Gross Value Added (GVA) and £1 billion turnover annually with around 5,779 employees in 185 firms in 2013[87]. Large companies with operations in Scotland include LifeScan Scotland and Ethicon (part of Johnson & Johnson).

[87] **Scottish Enterprise,** ***Market insights – Life Sciences,*** accessed at: https://www.scottish-enterprise.presscentre.com/imagelibrary/downloadMedia.ashx?MediaDetailsID=852

Commodity Overview	B.7 Medical Devices and Equipment
	Within Scotland the therapeutic medical devices and surgical/research equipment sub-groups are important, although there is limited data on other devices and equipment in Scotland. The medical devices and equipment market has also changed to incorporate Managed Equipment Service (MES) contracts. These can involve the provision of devices, their update, maintenance and end of life management or contracts where ownership of the devices remains with the supplier and the NHS organisations secures the required function.
Scope for economic and environmental improvement in circular economy within this commodity:	Medical devices are often complex and expensive, with a high level of turnover. There are in theory therefore a potentially large number of devices available for refurbishment and remanufacturing, which may provide significant savings. However, it is recognised that there are barriers to repair, re-use and remanufacturing of devices and equipment. These include user awareness, safety concerns, NHS procurement policy and regulatory requirements. Directive 93/42/EEC regarding medical devices[88] defined in 2010 the reprocessing of medical devices as: "reprocessing' means the process carried out on a used device in order to allow its safe re-use including cleaning, disinfection, sterilisation and related procedures, as well as testing and restoration of the technical and functional safety of the used device" (Commission of the European Union, 2012, p.32). The information is specified further on the next page outlining that: "If the device is reusable, information on the appropriate processes to allow re-use, including cleaning, disinfection, decontamination, packaging and, where appropriate, the validated method of re-sterilisation. Information should be provided to identify when the device should no longer be re-used, e.g. signs of material degradation or the maximum number of allowable re-uses." (Commission of the European Union, 2012, p.114). The EU GPP Criteria for Electrical and Electronic Equipment used in the Health Care Sector (Health Care EEE) focus on key equipment and a range of environmental measures, such as energy and water efficiency, chemical and refrigerant management. It also includes a focus on longevity.
	Re-use – In practice there is already a range of re-use taking place in NHSScotland. For example, the CDU Contingency Planning Status 2012 Report estimated that 56 million re-usable medical devices are reprocessed in Scottish Central Decontamination Units annually. In addition, a range of devices and equipment and passed on for re-use through auction sites[89]. There are likely to be opportunities for enhancing the re-use of devices. This requires an analysis of costs associated with re-use as well as management of inventory.

[88] **Commission of the European Union (2010): Report from the Commission to the European Parliament and the Council: Report on the issue of the reprocessing of medical devices in the European Union,** in accordance with Article 12a of Directive 93/42/EEC, information downloaded from http://ec.europa.eu/health/medical-devices/files/pdfdocs/reprocessing_report_en.pdf

[89] **Hilditch Group**: http://www.hilditchgroup.co.uk/MedicalEquipment

Commodity Overview	B.7 Medical Devices and Equipment
	Repair – the repair of medical devices and equipment is an established market with many suppliers in Scotland and the UK providing relevant services. In-house Medical Engineering teams within NHS Boards will also repair and potentially undertake minor refurbishment of equipment. This extends their useful life. Managed Equipment Services involve the maintenance and repair of devices, with ownership of the devices with the NHS organisation or the supplier. This may improve the transparency and accountability of financial liabilities; there may be a shift from capital to revenue budgets, requiring close liaison between finance, procurement and users.
	Remanufacturing – Globally remanufacturing of medical devices is widespread, especially in the US and parts of Europe. The refurbishment (while there is a distinction in the EU between refurbishment and remanufacturing these terms tend to be used interchangeably in the US) of medical imaging equipment is one area that is a strong market in the USA and a growing market in Europe, with activities undertaken by OEM or third parties, with the latter often supplying refurbished equipment to markets in developing countries. A survey of Scottish manufacturers shows that they see opportunities for remanufacturing in high value devices where the costs of decontamination, retesting, and recertification need to be considered[90]: ▪ Surgical instruments ▪ Medical imaging/ultrasound equipment and materials ▪ Assistive technology ▪ Hospital hardware including ambulatory ▪ Orthopaedic devices ▪ Mobility access ▪ Ophthalmic devices/equipment ▪ Anaesthetic and respiratory technology At present however, in Scotland there is little use of refurbished or remanufactured medical equipment, although there is some sale of devices to US third party refurbishers which are then sold on the global market. The NHS tends to buy new devices and equipment for the following reasons: ▪ Preconceptions about refurbished products; ▪ Restrictions on import of reprocessed devices;

[90] Question: "In which sub-sectors of Scottish medical devices sector are there significant opportunities for increased refurbishment, remanufacturing, reuse and recycling to take place?" ZWS Medical Technology report.

- NHS procurement rules;
- Liability concerns - NHS Scotland does not routinely purchase refurbished/remanufactured equipment, although some repairs or maintenance may be carried out on site. This is due in part to concerns within the UK that, should the device malfunction, the original hospital would remain liable[91]. As a result, end-of-life devices are either sent to auction houses or sold for scrap.

Despite these barriers there is some activity, extensive global experience and significant opportunities for savings and extending the useful life of devices and equipment, once safety and quality factors have been carefully considered.

Others: This Guide concentrates on medical devices and equipment. However, it should be noted that within the NHS there are also potential opportunities for other items:

- Strategic role of Procurement function to coordinate with Theatres and others to identify and review opportunities for more effective procurement routes and alternative products.
- Concentrate on standardisation of products to take advantage of price breakpoints.
- Ensure that business case for procurement includes waste costs and all other relevant and proportionate whole life costs, particularly for single use vs re-usable items. There may be opportunities to switch from single use to re-usable consumables. This may include the following (a full assessment of all impacts – financial, health and safety, quality and infection control is essential with all key stakeholders so that an objective assessment may be made and consensus reached):
  - Re-usable surgical gowns and drapes.
  - Re-usable surgical equipment.
  - Re-usable steel Bowls/kidney dishes in lieu of pulp or plastic.
  - Sterilisation Wraps: Trusts often use a disposable wrap, secured with autoclave tape, to ensure that sterilised equipment remained sterile before use. Moving to a containerised system whereby dirty items are placed in closed metal containers in which the items are cleaned, sterilised and re-issued, avoids the need for the wrap and tape.
  - Re-usable sharps containers: Re-usable sharps systems avoid waste and may save money but need a full whole life cost analysis.
  - Re-use of Patients Own Drugs (PODs) on admission and discharge as part of a dispensing for discharge policy.

The majority of Single Use Devices manufactured in Scotland are either sent to landfill or incinerated due to the costs associated with and availability of reprocessing[92].

[91] '**Triple win: the social, economic and environmental case for remanufacturing',** inquiry chaired by Rt Hon Caroline Spelman MP and Barry Sheerman MP, accessed on 17/02/14 at: http://www.policyconnect.org.uk/apsrg/sites/site_apsrg/files/report/535/fieldreportdownload/triplewin-thesocialeconomicandenvironmentalcaseforremanufacturing.pdf

[92] Interviews with Scottish SUD manufacturers (Medtech report)

Procurement guidance	Medical Devices and Equipment	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders	The decision to procure medical Devices and Equipment should reflect: ■ Consideration of alternatives – do you really need to procure; can the required function be delivered in a better way (e.g. leasing/managed service)? ■ Intended outcomes, including sustainability ■ Budget and life cycle costs ■ Frameworks available ■ Legal considerations ■ Safety considerations ■ Quality considerations ■ Views of internal and external stakeholders As the overview to the Medical Devices and Equipment category highlighted there are a range of barriers that may exist to embedding circular economy outcomes at present. However, the guidance below assumes that the identified outcomes are achievable – procurers should ensure that requirements are relevant and proportionate and reflect all relevant considerations.	Medical Devices and Equipment
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example 'Sustainable Medical Devices'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose: 'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **repair, re-use and remanufacturing** of medical devices which are relevant to the contract to be delivered.' It is also good practice to notify suppliers early in the process of particular conditions of the contract	Medical Devices and Equipment

	and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of total packaging weight derives from re-used and recycled content.'	
Specification	Sustainable medical devices requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender: 'XYZ public body is committed to sustainable medical devices including the application of circular economy outcomes where relevant and proportionate [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of medical devices supplied, through relevant **re-use, repair, refurbishment or remanufacturing** including through sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would provide assurances regarding safety, quality and performance of devices supplied together with suggested performance measures which are capable of monitoring and reporting through contract management.' Or: 'XYZ public body is committed to sustainable medical devices including the application of circular economy outcomes where relevant and proportionate [include other environmental and socio-economic outcomes as appropriate]. XYZ public body will therefore consider proposals from bidders that include the supply of refurbished or remanufactured medical devices, but only where the following assurances can be provided: ■ Safety, quality and performance of devices supplied. Products supplied are expected to be refurbished or remanufactured in accordance with quality control processes under ISO13485 and in accordance with COCIR Good Refurbishment Practice[93] and DITTA Refurbishment of Medical Devices requirements[94], or equivalent;	Medical Devices and Equipment

[93] **COCIR**: http://www.cocir.org/index.php?id=136
[94] **DITTA Refurbishment of Medical Devices**: http://globalditta.org/2014/12/ditta-publication-refurbishment-of-medical-devices/

- At least a 1-year warranty and guarantees that spare parts will be available for a minimum of 5 years;
- Suggested performance measures which are capable of monitoring and reporting through contract management that demonstrates the ongoing safety and quality of refurbished or remanufactured devices supplied.'

An ideal response would demonstrate:

- That EU, MHRA requirements and relevant safety and quality concerns are adhered to;
- That equipment is regularly maintained and serviced (this may be a separate contract);
- That equipment used may include re-used, refurbished or remanufactured equipment that meets quality and safety standards;
- That otherwise redundant equipment is re-used, repaired, refurbished or remanufactured in a legally compliant and relevant manner;
- That packaging is re-usable and re-used as much as possible;
- Mapping of internal and external stakeholders involved including clinical and surgical leads, sub-contractors, service users, facilities managers, sustainability lead and others;

It may also be appropriate to include a training requirement:

'XYZ public body requires suppliers to train in-house medical engineering staff in the repair and maintenance of their products as part of the purchase agreement rather than entering into an on-going maintenance contract'[95].

The importance of effective inventory management is as important for medical devices as it is for consumable items. It may be appropriate therefore for the supplier to work with the contracting authority to help manage inventory records.

'XYZ public body requires suppliers of medical devices to provide if required and maintain for XYZ public body full details of medical devices supplied. This shall comprise:

- Device details
- Date supplied

[95] **WRAP. 2014a.** Demonstrating the Value of Waste Prevention in the NHS and (draft unpublished Waste Prevention Guide)

Procurement guidance	Medical Devices and Equipment	Applicable to procurement of:
	■ Warranty period expiration date ■ Maintenance and repair records, where relevant ■ Devices that have been refurbished or remanufactured ■ Confirmation that the device has been supplied in accordance with required quality standards, whether new or refurbished/remanufactured Managed Equipment Services are increasingly procured within the NHS. Such a service may retain ownership with the supplier and therefore encourages long term management of devices made available, including maintenance, repair and possible refurbishment and remanufacturing. The nature of such a service does not guarantee enhanced circular economy outcomes as it will depend on how the supplier deals with 'end of life' devices. As a result, it may be appropriate to include the following requirement: 'XYZ public body is committed to sustainable medical devices including the application of circular economy outcomes where relevant and proportionate [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of medical devices supplied in this managed equipment service. This should include relevant **re-use, repair, refurbishment or remanufacturing** including through sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would provide assurances regarding safety, quality and performance of devices supplied together with suggested performance measures which are capable of monitoring and reporting through contract management.'	Managed Equipment Services
	'Repair or replacement of the product shall be covered by the warranty terms given by the manufacturer. The tenderer shall further ensure that genuine or equivalent spare parts are available (direct or via other nominated agents) for the expected service life of the equipment, at least for 5 years over warranty'. (EU GPP) Verification: The tenderer has to declare that the above clause will be met.	Medical equipment
Supplier selection	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both **proportionate and relevant** and there	

must be a clear methodology to evaluate responses.

As an example to incorporate within your documents for a catering equipment contract you could include:

'Please provide a copy of your Environmental Policy and highlight how it relates to the sustainable values and objectives of the contracting authority.'

When selecting suppliers, it is essential to assess the technical capabilities which will be required for the equipment you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.

In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include:

'Detail your experience in extending the useful life of medical devices supplied through the **maintenance and repair of devices or re-use, refurbishment or remanufacturing** of otherwise redundant devices and associated packaging, including good practice refurbishment practices.'

Given the safety and quality concerns regarding medical devices (whether new or refurbished/remanufactured) it will be important to obtain evidence of the technical capability of suppliers. For example:

'If your organisation holds UKAS (or equivalent) accredited independent third party certificate of compliance in accordance with BS EN ISO 13485[96] (or equivalent) which covers the profile of XYZ public body's requirement please attach a copy of your certificates or other supporting information here' (public procurers should be prepared to accept equivalent evidence).

[You should confirm that certification to ISO13485 includes medical devices supplied that are refurbished or remanufactured].

[96] While ISO 13485 is based on the ISO 9001 process model concepts of Plan, Do, Check, Act, it is designed for medical devices manufacturing regulatory compliance. It is more prescriptive in nature and requires a more thoroughly documented quality management system. http://www.bsigroup.com/en-GB/medical-devices/our-services/iso-13485/

Procurement guidance	Medical Devices and Equipment	Applicable to procurement of:
Contract management and performance	Ongoing improvement throughout the contract can be achieved by **building requirements into the contract** and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract. For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out full details of all medical devices which are repaired and rendered fit for re-use, refurbished or remanufactured including full details of end destination of such devices and warranties provided.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.) Monitoring the contract will be essential to ensure that the service quality, cost and sustainability objectives are achieved and that this can be evidenced. It may be appropriate to ask that suppliers use a Computer Aided Facilities Management (CAFM) tool or equivalent to capture their performance for medical devices, and this can incorporate the sustainability requirements that have been included in the contract.	
Snapshot examples:	**Cambridge University Hospitals NHS Foundation Trust** In England, Cambridge University Hospitals NHS Foundation Trust has been exploring alternative procurement approaches for its pressure therapy mattresses. The Trust is working with Ricardo-AEA to assess the cost and benefits of three options – leasing, managed service contract and a hybrid mattress contract. Their work suggests the Trust could save over £200,000 through alternative service approaches[97].	
	Siemens - remanufacturing of medical imaging equipment (Europe) Siemens Healthcare manufacturers a range of medical imaging equipment and its Refurbished Systems Division offers refurbishment for their whole medical imaging product portfolio, including: angiography, imaging for cardiology, and surgery; CT scans; MRI; X-ray, molecular imaging PET/CT, SPECT.	

[97] Ricardo AEA (2015): The future of the NHS – Is it circular? Article available at: http://ee.ricardo.com/cms/the-future-of-the-nhs-is-it-circular/#.Vlh3Er_Y7X8

Procurement guidance	Medical Devices and Equipment	Applicable to procurement of:
	Their refurbishment/remanufacturing process includes basic refurbishment (including cleaning, disinfection and safety and performance updates), optional new components (e.g. new coils and cushions for MR, or new X-ray tubes for CT), optional aesthetic refurbishment (e.g. whole surface painting or paint touch ups so the system will look completely new), optional technical refurbishment (technical updates with additional tested components), and optional IT refurbishment (i.e. latest software and hardware). Siemens' refurbishment is undertaken in accordance with the COCIR Good Refurbishment Practice[98] and DITTA Refurbishment of Medical Devices requirements.[99] It is also approved under ISO 13485. Benefits - for clients - of Siemens' refurbished systems include the fact they perform like new (indeed, the same tests are performed on the refurbished products as are performed on new systems), that they cost less (prices are around 20% to 30% lower) and therefore provide a faster return on investment and that Siemens provides a 1-year warranty and guarantees that spare parts will be available for a minimum of 5 years.	

Back to Commodity List

[98] **COCIR:** http://www.cocir.org/index.php?id=136
[99] **DITTA**: http://globalditta.org/2014/12/ditta-publication-refurbishment-of-medical-devices/

Commodity Overview	B.8 Outdoor Playground Equipment (and artificial surfaces)
Commodities and services In 2013/14 Scottish public sector procurement of furniture comprised: ■ Playground equipment Suppliers £10,557,596 (Scottish Procurement Information Hub)	Playground equipment represents a major investment by Local Authorities in Scotland as well as some other public sector bodies and may comprise the following products and services: ■ Playground furniture and equipment – benches, play equipment; ■ Play and leisure surfaces – artificial pitches, playground surfaces.
Procurement hierarchy:	Consider first: ■ Is there a need to procure anything – is there an opportunity to re-use materials or equipment from elsewhere (internally or externally)?
Market commentary:	Whilst the playground equipment market includes large international manufacturers such as Hags SMP it also includes a large number of Scottish businesses, some of which are SMEs, such as Caledonian Play and Scotplay. The Scottish public sector therefore has a good level of potential influence over the market. Such equipment falls under the 'Play Strategy for Scotland[100]', which highlights the importance of play to children's health and wellbeing. As well as procurement of equipment directly by Local Authorities Scotland Excel has developed an Outdoor Playground Equipment Framework for Scottish Local Authorities as well as other parts of the public sector. The scope of this Framework is: ■ supply and delivery of play equipment ■ design and build of play equipment and safer surfaces ■ installation, maintenance, inspection of play equipment and safer surfaces ■ supply, delivery and installation of MUGAs ■ supply, delivery, installation and maintenance of safer surfaces ■ supply, delivery and installation of outdoor gym equipment ■ supply and delivery of play area furniture ■ supply, delivery and installation of educational play equipment ■ design, build and maintenance of synthetic surfaces and 3G pitches

[100] **Play Strategy for Scotland:** http://www.gov.scot/Resource/0042/00425722.pdf

Commodity Overview	B.8 Outdoor Playground Equipment (and artificial surfaces)
	This has involved market engagement to determine the scope for sustainable outcomes. There has been significant activity within the market on the use of sustainable and recycled materials for playground equipment. Recycled materials are always sourced - e.g. Recycled Rubber Chips for playground safety surfaces. All wood comes from forests which are being actively sustained and regrown Products must comply with the British and European Standards EN1176 for Playground Equipment and EN1177 for Impact Absorbing Playground Surfacing.
Scope for economic and environmental improvement in circular economy within this commodity:	While the Play Strategy does not focus on circular economy outcomes it does reinforce the importance of play to children's and adult's health and wellbeing. Opportunities for circular economy outcomes may at present be limited given the extent of use of sustainable and recycled materials used. However, there is the potential for greater focus on re-use of reclaimed materials and the end of life management of outdoor play equipment.
	Repair – Repair and life extension, through durability and maintenance/repair services (these may be part of a service or a separate contract) offers significant potential to extend the lifespan of playground equipment. This will be down to the design of equipment and materials contained therein.
	Re-use – opportunities for enhancing re-use include the following: ▪ Reclaimed building materials are used whenever possible - e.g. Bricks and Cobble Stones for use in design. ▪ Re-use of construction and other materials - e.g. tractor tyres and bringing into design, steel for construction of BMX or skate parks. ▪ End of life of artificial pitches to separate and re-use/recycle carpeted material from the sand/rubber infill (not routinely available yet) and ensuring that materials and equipment are capable of re-use or recycling at the 'end of life'. This is an addition to: ▪ Recycled materials used in products such as chairs, seating, play equipment, bins etc.
	Remanufacturing – while playground equipment may be, or should be, recyclable at the end of its life there is little remanufacturing of 'end of life' equipment. The majority of sustainable outcomes will focus on the use of sustainable or recycled materials and use of re-used materials or equipment.

Procurement guidance	Outdoor Playground Equipment (and artificial surfaces)	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure playground equipment should reflect: ■ Consideration of alternatives – do you really need to procure – for example are materials available for re-use? ■ Intended outcomes ■ Budget and life cycle costs ■ Frameworks available – e.g. Scotland Excel ■ Views of internal and external stakeholders.	Playground equipment
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Sustainable Playground Equipment**'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **durability, repair and re-use** of playground equipment supplied.'	Playground equipment
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of playground equipment are derived from re-used or recycled content.'	Playground equipment
Specification	In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to sustainable outdoor playground equipment including the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they	Playground equipment Or

Procurement guidance	Outdoor Playground Equipment (and artificial surfaces)	Applicable to procurement of:
	will, in the design and manufacture of equipment supplied [used] maximize the use of recycled /sustainably sourced materials or those that have been re-used. Bidders should also demonstrate how they will extend the useful life of equipment supplied, through **durability and repair of equipment as well as re-use, refurbishment or remanufacturing** of equipment or parts contained therein, including through sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ That outdoor equipment meets minimum technical specifications (e.g. British and European Standards EN1176 for Playground Equipment and EN1177 for Impact Absorbing Playground Surfacing.) ■ That equipment is selected based on durability, repairability, recycled/sustainable or re-used content while meeting quality and safety standards; ■ That, where possible, equipment or parts thereof, may be re-used, repaired, refurbished or remanufactured at the 'end of life'; ■ Suggested KPIs to include: % of equipment supplied that are re-used/recycled/sustainably sourced, % of products or parts that is capable of re-use/refurbishment or remanufacture.	Outdoor playground equipment services
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	
	As an example to incorporate within your documents for a flooring service contract you could include: ■ Please provide a copy of your Environmental Policy and highlight how it relates to the sustainable values and objectives of the contracting authority.	
	When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	For a **services contract**, to assess the capability of suppliers in enabling circular economy outcomes the following could be asked:	Playground equipment

Procurement guidance	Outdoor Playground Equipment (and artificial surfaces)	Applicable to procurement of:
	Detail your experience in designing playgrounds [pitches] [others] that includes the use of equipment and materials that is **re-used/recycled/sustainably sourced** and which is **durable, repairable, re-usable, or remanufacturable**. An **ideal response** would provide the following: ▪ Evidence of experience of the management of repair, re-use and remanufacturing within its supply chain including sub-contractors and links to SMEs, third sector or supported businesses involved; ▪ Evidence of having used re-used, recycled, sustainably sourced, repaired or refurbished equipment or materials in the delivery of a contract similar in nature to the service required.	Or Outdoor playground equipment services
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out the proportion of equipment and materials used in the supply of [outdoor playground equipment] [playground design and installation services] that is **re-used, recycled or sustainably sourced and which is capable of being re-used, refurbished or remanufactured at the end of its life**.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	Playground equipment Or Outdoor playground equipment services
Snapshot example:	**Scotland Excel Outdoor Playground Equipment Framework** The development of this framework has included consideration of the potential to include re-used materials and ensuring where possible end of life re-use of materials. This includes: 1. Possible innovation in separating the carpeted material from the sand/rubber infill and recycling and re-using, although it is unclear how widespread this is. 2. Use of materials and equipment which has been recycled (e.g. chairs, benches etc.). 3. Ensuring that materials and equipment are capable of re-use or recycling at the 'end of life'. 4. Re-using materials e.g. tractor tyres and bringing into design instead of landfill.	

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Commodity Overview	B.9 Power and Hand Tools
Products and services In 2013/14 Scottish public sector procurement of Textiles comprised: ▪ Power & Hand Tool Suppliers £6,231,829	The Scottish public sector procures a reasonable quantity of power and hand tools for suppliers, although it is not clear whether this is the procurement of tools or hire of them. Most tools used within the public sector are by contractors working on behalf of public bodies, within construction services/projects. Direct procurement will be undertaken by building service teams, grounds maintenance and others. Many of these services are now outsourced. This is often construction related but may also relate to grounds maintenance and other use and includes non-powered tools such as adzes, axes, crow bars, pry bars, screw drivers, wrenches and powered tools such as electric which are classified as pneumatic, liquid fuel, hydraulic and powder-actuated. This may be procured directly or hired (e.g. Crown Commercial Service Small Tool and Plant Hire Framework)[101]. Procurement categories include: ▪ Hand Tools ▪ Horticultural ▪ Small equipment and tools. Suppliers of hand tools include large retailers (e.g. B&Q) or local hirers /sellers. Parts of the public sector hire rather than procure hand tools – for example Scottish Canals hired ground clearing equipment rather than procuring.
Procurement hierarchy:	Consider first: ▪ What is the length of the requirement for power and hand tools – is it more cost effective to hire? ▪ Are tools available from within the public body? ▪ Is the purchase of approved second hand tools part of procurement policy and relevant?
Market commentary:	There are relatively few hand tool manufacturers in Scotland. There are some manufacturers in the UK of garden tools and many distributors of hand tools. Most are manufactured in China, Taiwan or Germany, such as DeWalt, Hitachi, Makita, Black & Decker, Skil, Sinotools, TTI and others so there is limited ability to influence circular economy outcomes. The public sector should however encourage major distributors to work with manufacturers to design for disassembly and piggy back on lessons being learnt from the retail sector. Products range in price with some cheap alternatives potentially less durable.

[101] **Crown Commercial Service Small Tool and Plant Hire Services**: http://ccs-agreements.cabinetoffice.gov.uk/contracts/rm3747

Commodity Overview	B.9 Power and Hand Tools
	Repair of power and hand tools, apart from large expensive items, is limited as it may not be economically viable. Re-use organisations will take some power and hand tools and prepare for re-use and resale (e.g. Revolve certified organisations[102]).
Scope for economic and environmental improvement in circular economy within this commodity:	**Re-use** – preparing for re-use and resale of power and hand tools which may have been discarded by the public at Household Waste Recycling Centres takes place by a number of re-use organisations. Hiring of power and hand tools is common by public bodies and the general public and trade. This has been extended in Edinburgh with the UK's first Tool Library making tools available to rent by the public (not aimed at the public sector)[103]. In addition, retailers such as B&Q will hire a range of tools[104]. B&Q has also been working with manufacturing partners on designs that enhance the ability to disassemble, repair and replace components. Screwfix customers are incentivised to return used power tools and it has an arrangement with iForce to process, grade and segregate items returned from Screwfix and refurbish some tools. In addition, rechargeable batteries for power and hand tools may be 're-celled' so that their useful life can be extended, which may be cheaper than new batteries[105]. Alternatively, batteries may be replaced, with waste batteries dealt with in accordance with relevant regulations.
	Repair – a number of organisations provide repair and refurbishment services to extend the useful life of power tools. However, this can be limited due to the design of tools which are not designed for disassembly or disassembly of them is not economically viable. Some retailers will however sell second hand tools alongside new ones.
	Remanufacturing – very limited due to the relatively low cost of power and hand tools.

[102] **Revolve re-use quality standard:** http://www.revolvereuse.com/
[103] **Edinburgh Tool Library:** http://edinburghtoollibrary.org.uk/
[104] **B&Q Hire:** https://diy.hirestation.co.uk/tool-hire/
[105] **European Power Tool Association:** http://www.epta.eu/environment/collection-and-reuse

Procurement guidance	Hand and Power Tools	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure power and hand tools should reflect: ■ The scale and length of requirements – is hiring or renting a more suitable alternative? ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders – is it clear what the market for re-used power and hand tools is and is this appropriate? Is there an opportunity to engage with power tool distributors and retailers to influence design of tools?	
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example: (a) **'Re-used power and hand tools**', (b) **'Hire of sustainable power and hand tools'** If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	Tools procurement
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including **maximising the re-use, repair and refurbishment of durable power and hand tools** which are relevant to the service to be delivered.'	
Specification	Re-use requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to the waste hierarchy and the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will, in the supply of power and hand	Tools procurement Tools hire

	tools: ■ Include the supply of re-used tools that meet relevant safety and quality (including durability) standards. ■ Maximise relevant and proportionate circular economy outcomes, including through re-celling of rechargeable batteries, [the supply of tools that can be disassembled and repaired] and relevant repair and refurbishment services. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ A clear understanding of how to extend the useful life of tools through re-use, repair and refurbishment; ■ A process to identify tools that may be repaired and refurbished and undertake this in accordance with relevant safety and quality requirements (e.g. Revolve requirements); ■ Potential links with or supply from re-use organisations (e.g. Revolve certified); ■ Suggested KPIs to include: % of tools supplied that are re-used, % of batteries re-celled, % of tools repaired and refurbished. Bidders that operate to the Revolve or equivalent quality standards would be expected to be able to provide appropriate evidence that they have systems and processes in place to prepare hand tools for re-use. This would include, meeting safety and quality requirements, ensuring that items are prepared for re-use in an appropriate manner, involving checking, cleaning or repairing items so that they can be re-used for their original purpose without further processing (the tender must seek evidence of how they will meet requirements in the delivery of the contract).	
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses. When selecting suppliers, it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what	

Procurement guidance	Hand and Power Tools	Applicable to procurement of:
	will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of circular economy outcomes through relevant supply of re-used power and hand tools and the repair and refurbishment of tools supplied, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.' Or 'The contractor should demonstrate how they have applied circular economy outcomes in the supply of power and hand tools through partnership arrangements with manufacturers to enhance the ability to disassemble and repair tools, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Tools procurement
	Given the safety and quality concerns regarding re-use it will be important to obtain evidence of the technical capability of suppliers. For example, re-used tools may be available from re-use organisations: 'It is expected that Contractors that operate to the Revolve re-use quality standard, that covers the profile of this Framework Lot, shall be recognised as providing evidence of compliance, as will other evidence of equivalent management measures. The Contractor must maintain Revolve or equivalent and provide continual assurance to Scotland Excel and Framework users regarding relevant Quality, Safety and Re-use requirements. If your organisation holds Revolve certification which covers the profile of XYZ public body's requirement, please attach a copy of your certificate or other supporting information here' (public procurers should be prepared to accept equivalent evidence).	Re-used tools
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out % of tools supplied that are re-used, % of	Tools procurement

Procurement guidance	Hand and Power Tools	Applicable to procurement of:
	batteries re-celled, % of tools repaired and refurbished. (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	

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Commodity Overview	B.10 Textiles
Products and services In 2013/14 Scottish public sector procurement of Textiles comprised: ■ Staff Uniform & Clothing Suppliers £4,961,658 ■ Linen & Blanket Suppliers £4,721,617 ■ Other Clothing & Accessory Suppliers £1,995,745 ■ Clothes Making Equipment & Service Providers £675,954 ■ Baby & Children's Clothing Suppliers £10,214 (Scottish Procurement Information Hub)	The Scottish public sector procures a significant quantity of textile products each year. The environmental impacts of producing, using and disposing of textiles are substantial, including energy, material, water, and waste impacts. Broadly, procurement of textiles by the Scottish public sector comprises the following products and service: ■ Protective and workwear clothing (e.g. 'PPE', Scotland Excel); ■ Linen and bedding; ■ Textiles FM service (including textile laundry or uniform services); ■ Mattresses; ■ Other soft furnishings. The associated significant environmental impacts attributed to clothing production and consumption in particular, has resulted in textiles being identified as a priority resource stream by the Scottish Government[106].
Procurement hierarchy:	Consider first: ■ Is there a need to procure anything? Are there options to re-use textile products from elsewhere, for example? ■ Can the required function be provided in an alternative way? For example, leasing of uniforms is quite common and may be a feasible alternative to procuring the equipment. The lease should include maintenance and repair, and there is the opportunity to encourage the lease company to re-use and refurbish/repair clothing. This may be also achieved through rental or hiring textiles or a managed equipment service, as long as intended outcomes are part of the requirement. ■ Demand management using information technology and communication channels allows forecasting and planning for demand, reducing consumption where feasible.
Market commentary:	Although the textiles industry is the fourth largest manufacturing sector in Scotland[107], England produces the largest proportion of textiles, with over 80% of UK textile production; the majority of which, by mass, is carpets and mattresses. Approximately 80% of all textile products consumed in the UK are produced overseas. The fact that most textiles are imported has a significant impact on both the level of control over textile production processes and on end-of-life options[108]. A significant proportion of textiles and clothing procurement across the public sector in Scotland is undertaken

[106] **Scottish Government's Zero Waste Plan** http://www.scotland.gov.uk/Publications/2010/06/08092645/0
[107] **Briefing Paper on the Scottish Textiles and Clothing Industry (2000**) Scottish Executive, Enterprise and Lifelong Learning Department and Scottish Textiles Network
[108] **WRAP (2013) Textiles Flow and Market Development Opportunities**: http://www.wrap.org.uk/content/uk-textile-product-flow-and-market-development-opportunities

Commodity Overview	B.10 Textiles
	via frameworks, including the Public Contracts Scotland Framework Agreement for Supported Factories and Businesses (Lot 3 – Textiles / Personal Protective Equipment (PPE).
Scope for economic and environmental improvement in circular economy within this commodity:	**Re-use** – Recovery and re-use of workwear clothing and associated items can often by challenging. There are several barriers associated with the re-use and recycling of corporate clothing, ranging from corporate risk, material composition and 'uniformity' reducing aesthetic appeal and limiting re-use options. Although small in volume, there is an established infrastructure for corporate clothing collection, with niche re-use markets. Currently only 9% of total workwear clothing in the UK is recovered for re-use, with a role for improved design and procurement specifications, to improve options at end-of-life and allow for higher value end applications[109]. Key opportunities exist for increasing mattress re-use and recycling.
	Repair – Appropriate consideration or product specification requirements at the procurement stage can ensure that textile product purchases are more durable and have a longer first and second life. Considerations may include design for re-use, including easy-care, and specifying for durability/longevity and easily repairable textile products. Examples include purchase of uniforms with detachable logos which can be repaired or replaced with new ones at the end of first life.
	Remanufacturing – For the majority of textiles, there is limited remanufacture occurring.

[109] **WRAP (2015) Corporate workwear arisings and opportunities report**: http://www.wrap.org.uk/content/corporate-workwear-arisings-and-recovery-opportunities

Procurement guidance	Textiles	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure textiles products or a textiles related FM service [Products] should reflect: ■ Consideration of alternatives – do you really need to procure (e.g. re-using uniforms); can the required function be delivered in a better way (e.g. leasing/managed service)? ■ Intended outcomes ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders.	Textile products Or Textiles FM Service
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Sustainable Workwear Services [Products]**'. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	Textile products Or Textiles FM Service
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including the **durability, repair, re-use and remanufacturing** of equipment which are relevant to the service to be delivered.'	Textile products Or Textiles FM Service
	It is also good practice to notify suppliers early in the process of particular conditions of the contract and as such this should also be included in the Contract Notice rather than just in the specification. For example: 'A requirement of this contract is that a minimum of [X] % of total packaging weight derives from re-used and recycled content.'	Textile products
Specification	Sustainable textiles service [products] requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	

Procurement guidance	Textiles	Applicable to procurement of:
	‘XYZ public body is committed to sustainable textiles services [products] including the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will extend the useful life of textiles equipment [supplied] used in the delivery of this service, through relevant **durability, repair, re-use, refurbishment or remanufacturing** including through sub-contracting arrangements and innovative solutions. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.’ An ideal response would demonstrate: ■ That textile products meet minimum technical specifications (see example specifications below) ■ That textile products are selected based on durability and repairability; ■ That textile products are regularly maintained and repaired (this may be a separate contract the contractor has); ■ That products used may include re-used, refurbished or remanufactured products that meets quality and safety standards; ■ That, where possible, textiles products used may be re-used, repaired or remanufactured - either for internal re-use or externally (for example though exchanges or auctions); ■ That textile products, at the end of its useful life, that is capable of cost-effective repair or remanufacturing goes to a relevant contractor for this purpose and thereafter is redeployed/sold; ■ That packaging contains more than 70% recycled content, that at least 90% of this is recyclable at end of life and is re-usable and re-used where possible; and ■ Suggested KPIs to include: % of product packaging that is re-used/reusable, % of products that is re-used/repaired/remanufactured, with appropriate evidence from service records.	Textile products Or Textiles FM Service
	Included below are example specifications which can be used to highlight the requirement to meet sustainability criteria for either textiles products or textiles FM services. It is important to establish that the market for a particular product can meet these requirements before incorporating them. Where noted as from Government Buying Standards (GBS), these criteria have been tested against market capabilities. Other criteria may need market testing.	

Procurement guidance	Textiles	Applicable to procurement of:
	Textiles service provision Detail your understanding, experience and achievements in: • Cost-effectively providing textile services which maximises, where practical, the durability of textiles and minimises the use of materials, resources and reducing the whole life costs of textiles service delivery; • Providing key textiles materials and associated resource performance data to clients, providing analysis and advice for improvements to textiles services; • Maximising inclusion of recycled content, the re-use and the repair of textiles at the end of life; and • Helping clients to reduce environmental impacts associated with the provision of textile related services.[110] Verification: the supplier should provide evidence of experience in delivering these outcomes through contracts. **Warranty and service agreements:** The tenderer shall provide a minimum [XX] year (this will be product specific) warranty for new textile products effective from delivery of the product. Refurbished and remanufactured products should be supplied with the same warranty and meet Scottish Revolve standards for re-use as a minimum. This warranty shall cover repair or replacement and include a service agreement with a pick-up and return option. The warranty shall guarantee that the goods are in conformity with the contract specifications at no additional cost. Verification: A copy of the warranty and service agreement shall be provided by the tenderer. They shall provide a declaration that they cover the conformity of the goods with the contract specifications, including all indicated usage. **Durability:** Bidders should provide details of testing and performance standards for textile products, including details of testing and performance criteria relate to longevity and extension of the product lifecycle. • Shrinkage; • Resistance to fading from washing; • Colourfastness to perspiration; • Colourfastness to wet rubbing;	Textile products Or Textiles FM Service

[110] **WRAP 2015 FM Uniform and Laundry Services:** http://www.wrap.org.uk/content/uniforms-laundry-services

Procurement guidance	Textiles	Applicable to procurement of:
	• Colourfastness to dry rubbing; • Resistance to fading from light;[111] • Commercial laundering and dry cleaning; rubbing (wet and dry); • Chlorinated and sea water; • Hydrophobicity (drop test); and • Phenolic yellowing; and testing for print durability[112]. Verification: Manufacturers' declaration. Bidders should demonstrate how in-use phase impacts associated with the textiles service, will be managed, including the use of energy and water to wash and dry clothes, use of detergents and subsequent load on the wastewater treatment system. This can include information on and communication relating to clothing (particularly those articles that may be washed frequently) to usefully include, for example; guidance notes on best methods, correct temperature, detergent dosing and line drying.[113] Verification: The supplier must provide sufficient information to allow the effective evaluation of the innovative approaches proposed, including independently verified estimates of their potential benefits. **Repair and re-use:** Uniforms should not include logos or names that are difficult to remove, but should use removable badges (unless permanent identification for security or otherwise is required, when these should be as discreet as possible).[114] Verification: Suppliers' technical specification demonstrates easy-to-remove logos. **End of life management** Bidders are encouraged to demonstrate how this textiles product or service will be delivered in accordance with the waste hierarchy. This can include: • Product labelling or take back schemes to encourage sustainable actions at the end of life stage; • Avoidance of uniforms which include logos or names that are difficult to remove, or use of removable badges	

[111] GBS Textiles Standards v2.0: https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-textiles
[112] WRAP 2015 Clothing Longevity Protocol: http://www.wrap.org.uk/content/clothing-longevity-protocol-1
[113] GBS Textiles Standards v2.0: https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-textiles
[114] GBS Textiles Standards v2.0: https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-textiles

Procurement guidance	Textiles	Applicable to procurement of:
	(unless permanent identification for security or tax reasons is required, when these should be as discreet as possible); • Textiles management scheme to facilitate re-use or repair; • Product take-back schemes or partnerships with third parties who can re-use or recycle high proportions of the used textiles.[115] Verification: The supplier must provide sufficient information to allow the effective evaluation of the innovative approaches proposed, including independently verified estimates of their potential benefits.	
	Finally, it is important to bear in mind that particularly in service contracts, social considerations may be applicable in terms of the third sector, social enterprises, skills, employment and training together with options to reserve contracts for supported businesses where appropriate. This is likely to be as part of the sourcing requirement.	Textile FM Service (possibly products)
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses.	

	As an example to incorporate within your documents for a textiles service contract you could include:
	• The percentage by weight of recycled, refurbished, remanufactured and/or re-used materials and components in the final textile products.
	• Each year of warranty and service agreement offered.
	• Additional durability performance criteria on:
	  • Shrinkage;
	  • Resistance to fading from washing;
	  • Colourfastness to perspiration;
	  • Colourfastness to wet rubbing;
	  • Colourfastness to dry rubbing;
	  • Resistance to fading from light;[116]
	  • Commercial laundering and dry cleaning; rubbing (wet and dry);
	  • Chlorinated and sea water;
	  • Hydrophobicity (drop test); and
	  • Phenolic yellowing; and testing for print durability[117].
		Textiles FM Service

[115] GBS Textiles Standards v2.0: https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-textiles
[116] GBS Textiles Standards v2.0: https://www.gov.uk/government/publications/sustainable-procurement-the-gbs-for-textiles
[117] WRAP 2015 Clothing Longevity Protocol: http://www.wrap.org.uk/content/clothing-longevity-protocol-1

Procurement guidance	Textiles	Applicable to procurement of:
	• Please provide a copy of your Environmental Policy and highlight how it relates to the sustainable values and objectives of the contracting authority.	
	When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **circular economy outcomes**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Textile products Or Textiles FM Service
	For a **services contract**, to assess the capability of suppliers in enabling circular economy outcomes the following could be asked: Detail your experience in delivering a textiles service that includes the **use of durable, repairable, re-usable, or remanufacturable textile products, or the re-use, repair or remanufacture of textile products**. An **ideal response** would provide the following: ▪ Evidence that textiles commodity items meet minimum technical specifications; ▪ Evidence of application of relevant standards (e.g. Government Buying Standards, Revolve) and relevant eco label criteria (e.g. the EU Ecolabel); ▪ Evidence that products are selected based on durability, repairability and longevity (e.g. in textiles service provider's supply chain); ▪ Evidence of the management of repair, re-use and remanufacturing within its supply chain including sub-contractors and links to SMEs, third sector or supported businesses involved; ▪ Evidence of having used re-used, repaired or refurbished textiles in the delivery of a contract similar in nature to the service required; ▪ That packaging is re-usable and re-used as much as possible; ▪ Suggested KPIs to include %packaging that is re-used/reusable, %of products or equipment that is re-	Textiles FM Service

Procurement guidance	Textiles	Applicable to procurement of:
	used/repaired/remanufactured, service records. ■ Evidence of understanding the key circular economy opportunities and management requirements, including an example Management Plan.	
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out [**the re-used** proportion content of packaging used], [the proportion of textile products that is **re-used, refurbished or remanufactured**].' and / or 'The supplier hereby agrees to increase the recycled and or **re-used content** of packaging by X% after 12 months and by a further Y% after 24 months.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	Textile products Or Textiles FM Service
	Monitoring the contract will be essential to ensure that the service quality, cost and sustainability objectives are achieved and that this can be evidenced. It may be appropriate to ask that suppliers use a Computer Aided Facilities Management (CAFM) tool to capture their performance and this can incorporate the sustainability requirements that have been included in the contract.	
Snapshot example:	**Royal Mail Procurement of workwear** Royal Mail is an example of an organisation that has minimised 'end of life' corporate wear to landfill. This has been achieved through a focus on extending their useful life, design of uniforms, working with supplier to de-brand and sort for potential re-use/resale. Key lessons include the importance of considering intended outcomes early and establishing a focus on end of life workwear through design of items as well as working with the market to maximise end of life options. http://www.uniformre-use.co.uk/pdf/story/royal-mail.pdf	

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Commodity Overview	B.11 Tyres
Products and services In 2013/14 Scottish public sector procurement of Textiles comprised: ■ Tyre Dealers £5,168,032 ■ Tyre Manufacturers & Distributors £1,172,917 ■ Recycling & Disposal – Tyres £89,677 ■ Tyre Repairs & Retreading £18,164	Scottish public sector procurement of Tyres is inevitably linked to the procurement of vehicles. Leasing of vehicles rather than purchase will include tyre repair and replacement. As the expenditure data shows opposite tyres represent a significant expenditure by the public sector from dealers, manufacturers and distributors. Relatively little is spent on repairs and re-treading although this may not reflect the procurement of re-treaded tyres in lieu of brand new. A Framework agreement for Local Authorities and others exists: 'Tyres for Vehicles and Plant' (Scotland Excel) while there is also the Crown Commercial Service 'Supply and Fit of (new) Tyres' for cars, vans, trucks, heavy vehicles and motorcycles[118]. This guidance is concerned with: ■ Purchase of new tyres; ■ Purchase of re-treaded tyres; ■ Purchase of an alternative, such as lease of tyres.
Procurement hierarchy:	Consider first: ■ Does the public body's waste strategy express a commitment to re-use including a well-developed commitment to re-use embedded in its procurement system? Are all procurement requests fed through a centralised function that aims first to transfer items within the organisation and then, if this fails, to procure items second hand, before a new purchase can be authorised?
Market commentary:	There are a range of tyre manufacturers selling through a network of distributors, resellers and retailers and repairers. This includes independent tyre dealers such as Strathclyde Tyres, one of the Scotland Excel 'Tyres' Framework contractors. Around 70% of suppliers to Scotland Excel's frameworks are SMEs and more than half of these are Scottish based companies[119]. Strathclyde Tyres recycles all suitable casings into tyres for re-use or for selling on for other purposes such as aggregate in cement concrete, and rubber bark mulch for playgrounds, gardens or asphalt. They use a local SME, Alba Tyre Management to recycle and re-tread tyres which re-treads up to 22,000 tyres per year. Other re-treading companies include Caledonian Tyres and Redpath Tyres. The Truck re-treading market in Scotland is viable due to the economics of new versus re-treaded tyres and is estimated to employ 50 people and be valued at £3.5m[120]. Re-treading of car tyres is limited due in part to

[118] **Crown Commercial Service 'Supply and Fit of (new) Tyres'**: http://ccs-agreements.cabinetoffice.gov.uk/contracts/rm955
[119] **Scotland Excel:** http://www.scotland-excel.org.uk/web/FILES/ScotlandExcelNewsSpring2015.pdf
[120] **Circular Economy Evidence** Building Programme: Remanufacturing Study March 2015.

Commodity Overview	B.11 Tyres
	safety perceptions and the marginal cost differences between new and re-treaded tyres. Cheap 'single life' imports of tyres from Asia is having a potentially negative impact on re-treading and tyre waste.
Scope for economic and environmental improvement in circular economy within this commodity:	The key opportunities for extending circular economy outcomes through public procurement are: ■ To drive demand for material recovered from tyres (recycling); ■ To ensure that part worn and re-treaded tyre regulatory requirements are adhered to so that assurance regarding safety is provided and the use of compliant re-treaded tyres is enhanced. This should include consideration of relevant life cycle costs; ■ To ensure that 'single life' tyres are not procured; ■ Alternative business models – for example mileage / time contracts whereby under tyre rental/leasing truck and bus tyres are not sold to the user but are subject to a rent or lease contract, based on replacement after a certain number of kilometres driven or upon request by the user. They are most suitable for medium to large-size truck bus or truck fleets as they enable operators to outsource tyre management and focus on their core business. They also allow fleets to benefit from predictable tyre costs over an agreed contract period, backed by frequent fleet inspections, detailed performance reporting and 24/7 roadside assistance. Michelin has been leasing, rather than selling, its tyres to European truck fleets since the 1920s. Customers are offered a tyre management service that involves maintenance, upgrading, re-treading and collecting for recovery at end of life. There are clear incentives for the supplier to manage the tyre in such a way that extends the usable life (including re-treading) for as long as possible.
	Re-use - With effect from 31st March 2016, the Waste Management Licensing (Scotland) Amendment Regulations came into force meaning all operators will require a license to process tyres. SEPA will therefore be able to better monitor breaches of the law. 'Better regulation of operators, and the removal of unlicensed operators from the market, will make it easier for the Scottish Government to encourage recycling of tyres through [planned] initiatives such as producer responsibility schemes, as part of its overall policy objective of developing a more circular economy in Scotland'[121]. Tyre Recovery Association (TRA) members manage 80% of the UK's scrap tyres, from collection to sorting to

[121] **Making Things Last, A Circular Economy Strategy for Scotland:** http://www.gov.scot/Resource/0049/00494471.pdf

Commodity Overview	B.11 Tyres
	recycling, and tyres have for some time, been recycled into a range of products. Metal is recycled, and granulated rubber can be used to make sports surfaces, safety mats for children's play areas, carpet underlay and rubberised asphalt for roads. Old tyres which are not recycled are sometimes used within outdoor play areas. The TRA worked with the Environment Agency to update PAS 107 (Publicly Available Specification) recovery standards and norms for tyre-derived materials, adding a Quality Protocol option allowing responsible tyre recyclers to apply for accreditation and acquire 'new product' status for materials which otherwise would continue to be deemed waste[122]. Proposals by the European Tyre and Rubber Manufacturers Association (ETRMA) include promoting re-use by 'granting EU-wide product status for casings suitable for re-treading.' Re-treading significantly contributes to the extension of the service life of tyres. Tyres, if it is of a legal quality, can be resold as a "part worn tyre", and they must be marked as part worn and any repairs carried out to appropriate EU Standards. Feedback from industry suggests around 30% of used tyre arisings from End of Life Vehicle dismantlers are suitable for the part worn market[123].
	Repair – Repair of tyres is of course an established service in Scotland by large and small businesses.
	Remanufacturing – Re-treading of tyres is established and is subject to regulations and relevant EU Standard. There continue to be some concerns regarding compliance with these requirements and public procurers have an opportunity to enforce these and ensure continuing compliance. Re-treading involves: **Re-grooving:** New tread is cut into a specifically designed bald tyre. This is common practice for truck and bus tyres, with estimates as high as 60 % of all tyres going for re-grooving before re-treading. This practice is illegal for car tyres. **Re-treading and re-moulding:** Re-treads and re-moulds involve applying new rubber to the tyre to extend its life. Re-treading involves gluing a pre-vulcanised rubber tread onto a bald tyre casing, whereas re-moulding involves injection moulding rubber onto a tyre casing to form a new tread, then vulcanising the rubber tread in situ. Within the industry, re-moulding is considered to produce a higher quality product. Both terms are regularly interchanged and industry statistics are not available to differentiate between the two processes.

[122] **PAS107: 2012:** http://www.tyrerecovery.org.uk/wp-content/uploads/2012/11/pas-107-2012-88.pdf
[123] **The Motor Vehicle Tyres (Safety) Regulations 1994** : http://www.legislation.gov.uk/uksi/1994/3117/regulation/7/made

Commodity Overview	B.11 Tyres
	There have been concerns about the impact on the re-treading industry as a result of the ‘dumping’ of cheap ‘single life’ tyres from Asia. These do not allow re-treading and as well as affecting the re-treading market can add to waste of tyres.

Procurement guidance	Tyres	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure tyres and related services should reflect: ■ Consideration of alternatives and relationships with procurement of vehicles – for example rather than purchase of new tyres is leasing of tyres potentially relevant or is the procurement of part worn/re-treaded tyres in accordance with regulations appropriate? ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders	
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example: **'Lease of bus and truck tyres'.** **'Supply of legally compliant part worn or re-treaded tyres'.** If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including **maximising the relevant re-use and remanufacturing** of tyres which are relevant to the service to be delivered.'	
Specification	In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to sustainable transport and the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will: ■ Supply tyres that are part worn and/or re-treaded, as long as they are in accordance with all relevant	Tyre supply, repair and re-treading

Procurement guidance	Tyres	Applicable to procurement of:
	requirements within the Motor Vehicle Tyres (Safety) Regulations 1994. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' or 'XYZ public body is committed to sustainable transport and the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will: ▪ Maximise the relevant re-use and remanufacturing of tyres supplied under the lease arrangement, while ensuring that all relevant requirements within the Motor Vehicle Tyres (Safety) Regulations 1994 and relevant EU Standards. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ▪ A process in accordance with Motor Regulations and according to ECE Regulations 108 (car tyres) and 109 (commercial vehicles tyres), which stipulates that tyres are tested to the same load and speed criteria as new tyres to supply part worn or remanufactured tyres including an ECE approval mark and appropriate wording on tyres; ▪ A process to identify and supply legally compliant part-worn or re-treaded tyres.	Bus and truck tyre lease
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses. When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	

Procurement guidance	Tyres	Applicable to procurement of:
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the **legally compliant supply of part worn and re-treaded tyres and re-use and remanufacturing of tyres**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Tyres
	Given the safety and quality concerns regarding part worn and re-treaded tyres it will be important to obtain evidence of the technical capability of suppliers. For example: 'The tenderer must demonstrate its capacity to carry out the service in a manner that supports the waste hierarchy and circular economy outcomes. This must include evidence of systems and processes that ensure the legally compliant supply of part worn or re-used tyres and re-use and re-treading of otherwise redundant tyres. Verification: Re-treading process that operates in accordance with ECE Regulations 108 (car tyres) and 109 (commercial vehicles tyres) which covers the profile of XYZ public body's requirement (public procurers should be prepared to accept equivalent evidence).	Tyres Tyre installation, repair, re-use and remanufacture services
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out the nature and quantities of tyres supplied that are part worn and remanufactured and tyres that would otherwise be redundant that have been re-used or remanufactured in accordance with all relevant legal requirements. and 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis confirmation of continuing compliance with relevant regulations relating to the supply of	Tyres

Procurement guidance	Tyres	Applicable to procurement of:
	part worn and remanufactured tyres.' (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	

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Commodity Overview	B.12 Vehicles
Products and services In 2013/14 Scottish public sector procurement of Textiles comprised: ■ Car Dealers £20,872,805 ■ Car Dealers – Used £36,516 ■ Vehicle Finance & Leasing Companies £28,032,809 ■ Car, Van & Truck Hire Companies £15,344,151 ■ Coach & Mini Bus Hire Companies £6,043,159 (Scottish Procurement Information Hub)	The Scottish public sector has moved away from purchasing many vehicles, and increasingly leases. However, procurement of vehicles is still undertaken by some public bodies and this may include procurement of cars, vans, LGVs and HGVs and specialist vehicles and vehicle parts. Examples of purchase and lease contracts include: 'Heavy and Municipal Vehicles', 'Light Vehicles' (Scotland Excel), 'Vehicle Purchases', 'Vehicle Lease' (APUC), 'Vehicle and Plant Hire', 'Vehicle Parts' (Scottish Procurement). In addition to the spend data opposite the 'Remanufacture, refurbishment, re-use and recycling of vehicles: Trends and opportunities' report in 2013 highlighted that Scottish Local Authorities may spend between £7m to £10m on parts to service their vehicle fleets (although a proportion of these will be larger vehicles, such as those used for waste collection), and it is estimated that wider Scottish public sector annual spending on vehicle parts could be double this[124]. This move away from buying fleet vehicles may be part of a transition to include leasing, renting vehicles by hour/day, buying mobility services or buying a 'mobility solution'.
Procurement hierarchy:	Consider first: ■ Should the public body be procuring or leasing a vehicle? Is there an option to rent vehicles rather than buy or lease? ■ Is there a policy to utilise refurbished vehicle parts as well as new, where appropriate?
Market commentary:	In Scotland over a quarter of automotive manufacturers produce commercial vehicles, there are 2 bus and coach manufacturers, one fifth of manufacturers supply components[125]. As well as vehicle retailers and a range of hire companies and vehicle servicing and repair companies there are around 140 registered end of life vehicle dismantlers (or Authorised Treatment Facilities) based in Scotland and four large mechanical shredders[86]. These enterprises are estimated to process a minimum of 100,000 end of life vehicles per annum, in addition to other metal containing products, such as waste electrical and electronic equipment. Some of these dismantlers work with compliance schemes operated on behalf of passenger and light van producers and importers to report on performance against targets set within the End of Life Vehicle Directive. From January 2015 the combined recycling and re-use rate was increased to 95%.
Scope for economic and environmental improvement in	It was estimated that the economic value generated through parts re-use and material recovery from end of life vehicles, in Scotland, (net of residue disposal costs) was around £32 million per annum in 2011, rising to £45 million per annum

[124] **Remanufacture, refurbishment, reuse and recycling of vehicles:** Trends and opportunities: http://www.gov.scot/Resource/0044/00440543.pdf
[125] **Automotive Council UK**: http://www.automotivecouncil.co.uk/mapping-uk-automotive/scotland-2/

Commodity Overview	B.12 Vehicles
circular economy within this commodity:	by 2030. Net environmental benefits of material recycling were estimated at around £9 million per annum in 2011, rising to over £13.5 million per annum by 2030. Public procurement of vehicles is also subject to the Cleaner Road Transport Vehicles (Scotland) Regulations 2010[126].
	Re-use – Re-use of vehicle parts does take place, but there are potential barriers to the use of re-used parts and components, relating to concerns about standardised quality and safety of parts, availability on short order times, uncertainty about returns policies and a lack of transparency about pricing structures[86]. A plastic wheel arch could be re-used (as it is not safety critical). The Automotive report suggested an increase in 50% in parts and components re-use above current levels and the development of a Publicly Available Specification on re-used parts to help reduce market concerns about quality, would result in an estimated additional annual gross economic impact of £4.72 million by 2030. PAS 3100:2014 has since been developed. A study estimated that public bodies in the North East of England could save over £1m p.a. by procuring remanufactured vehicle parts instead of new.
	Repair – servicing and repair of vehicles is of course routine in Scotland as elsewhere. However, there are concerns regarding the ability of repair organisations to repair certain vehicles due to their increasing complexity and reliance on computer hardware and software, some of which is the preserve of manufacturers or main dealers. The Automotive Parts Remanufacturers Association (APRA) has previously stated that the 'right to repair', including the access to technical information has to be extended for the automotive remanufacturing.
	Remanufacturing – Many automotive parts are remanufactured such as brake discs, gearboxes etc. PAS 3100:2014 specifies requirements for a process control system which ensures that remanufactured automotive parts match the standard of the original parts and sets out the content of the required warranty. It defines remanufacturing as: '… part that has been restored to original functionality in terms of fit, form, materials and performance through the application of a sequence of pre-identified process stages to components and assemblies.' This definition is supported by the European automotive component trade body (CLEPA), the European automotive manufacturers association (ACEA), the automotive parts remanufacturing association, APRA[127], and the European engine rebuilders association, FIRM. Within the UK there is also the Federation of Engine Remanufacturers[128].See the APRA remanufacturing

[126] **Cleaner Road Transport Vehicles (Scotland) Regulations 2010:** http://www.transport.gov.scot/system/files/documents/reports/Cleaner%20Road%20Transport%20Vehicle%20Guidance%20-%20web%20formatted%20mod.pdf
[127] **APRA represents remanufacturers, component manufacturers.** http://www.apra-europe.org/dateien/News/News2015/APRA_Position_Paper.pdf
[128] **Federation of Engine Re-Manufacturers** http://www.fer.co.uk/

terminology[129].

There is a potential opportunity to investigate whether public procurement can be used to drive the market for products containing plastics recovered from End of Life Vehicles. There may be the potential to use public procurement to drive the use of remanufactured content in new vehicles and the use of remanufactured parts and components in service and repair contracts. A policy of setting minimum levels of re-used, repaired, refurbished or remanufactured parts and components (as a percentage of total parts and components spend) could also be considered by the public sector as well as the private sector (where the latter is interested in improving its sustainability performance).

Only a small number of parts wear out in vehicles, including the engine and suspension, bumpers, wheels, battery and fluids. If these are replaced, the vehicle can continue to be driven at its full performance. 'In a circular economy, vehicles would be designed to allow easy, fast and inexpensive substitution of these components'[130].

[129] **APRA**: http://www.apra-europe.org/dateien/downloads/Reman_Term_Guideline_2012-03-06.pdf
[130] **Remanufacture, refurbishment, reuse and recycling of vehicles**: Trends and opportunities: http://www.gov.scot/Resource/0044/00440543.pdf

Procurement guidance	Vehicles	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure vehicles or vehicle parts should reflect: ▪ Whether procurement is necessary – is there an option to lease or rent as an alternative? ▪ Consideration of intended outcomes – is a focus on remanufactured components clearly articulated? ▪ Budget and life cycle costs ▪ Frameworks available ▪ Views of internal and external stakeholders	
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example **'Remanufactured Vehicle Parts'.** If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	Vehicle parts
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including **maximising the relevant re-use of vehicle parts and use of remanufactured parts** which are relevant to the service to be delivered.'	Vehicle parts
Specification	In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender (subject to soft market testing as relevant). This may apply to a mobility service, as opposed to purchase or lease of vehicles:	
	'XYZ public body is committed to sustainable transport and the application of circular economy outcomes where relevant and proportionate [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will: ▪ Maximise opportunities for relevant use of re-used and remanufactured vehicle parts and the re-use and remanufacturing of vehicle parts in the delivery of this mobility service; This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with performance measures which are capable of monitoring and reporting through contract management.'	Mobility service

Procurement guidance	Vehicles	Applicable to procurement of:
	The following is included in the Government Buying Standard for Transport: ■ Design to facilitate (maximise opportunities) to recycle or recover parts at the end of the vehicles life with the benefit of minimising waste to landfill, minimise energy consumption to dispose of vehicles, as well as reduce future demand for resources. ■ Design to enhance reparability and availability of more frequently used spares (for example: windows, bulbs, plugs, air and oil filters or batteries) which may prolong the useful life of products (GBS).	Vehicles
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses. When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of use of **re-used or remanufactured parts and re-use and remanufacturing of relevant parts**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	Vehicles Mobility services
	Given the safety and quality concerns regarding re-use and remanufacturing it will be important to obtain evidence of the technical capability of suppliers. For example: 'It is expected that Contractors will operate process control systems that ensure that remanufactured automotive parts match the standard of the original parts and are provided with a relevant warranty. Contractors that operate to PAS3100:2014, that covers the profile of this contract, shall be recognised as providing evidence of compliance, as will other evidence of equivalent management measures, whether as a standalone system or part of a Quality Management System. The Contractor must maintain PAS3100 or equivalent and provide continual assurance to the public body regarding relevant process control systems.	Vehicle parts

Procurement guidance	Vehicles	Applicable to procurement of:
	If your organisation holds PAS3100 certification which covers the profile of XYZ public body's requirement please attach a copy of your certificate or other supporting information here' (public procurers should be prepared to accept equivalent evidence). For engine remanufacturers in Scotland and the UK the British Standard Automobile Series Code of Practice BSI AU 257:2002 details how for spark and compression ignition (diesel) engines, components shall be inspected and checked against manufacturers tolerances so suppliers would be expected to operate to this standard, or equivalent.	
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example: 'The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out the nature and quantities of vehicles parts that are derived from re-used or remanufactured and those parts which have been re-used or sent for remanufacturing, including destination/organization utilized. (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	Vehicle parts
Snapshot example:	**Remanufacturing of vehicles** Caterpillar (CAT)[131], the world's largest maker of off-road vehicles, construction and mining equipment, has been remanufacturing its vehicles since 1972. A financial deposit system creates an incentive for customers to return worn-out products via the dealer network. In 2010, CAT remanufactured 70,000 tonnes of parts, up from 45,000 the previous year[132]: CAT REMAN.[133] Cat Reman also remanufactures for others such as Perkins and Alcoa (industrial), Ford (auto), and Honeywell (components).	

[131] **Croner, Circular Economy in Practice:** https://app.croner.co.uk/feature-articles/circular-economy-practice?topic=3571&product=15&section=3503#WKID-201305211424110436-76150038
[132] **Caterpillar**: http://www.caterpillar.com/en/company/sustainability/remanufacturing.html
[133] **Cat Reman:** https://parts.cat.com/en/catcorp/cat-reman-products

Procurement guidance	Vehicles	Applicable to procurement of:
	Renault also operates a dedicated remanufacturing plant near Paris producing 17 different types of assemblies, from engines to pumps. It is able to obtain used parts from a variety of sources including distributors and end-of-life vehicle disassemblers, and the business is currently worth €200m[134]**.** Within Scotland there are a number of remanufacturers of engines and components, including Pitcairn Engineering (see Federation of Engine Remanufacturers membership details[135]).	

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[134] **The Circular Economy Applied to the Automotive Industry: Ellen Macarthur Foundation:** http://www.ellenmacarthurfoundation.org/circular-economy/interactive-diagram/the-circular-economy-applied-to-the-automotive-industry
[135] **Federation of Engine Re-Manufacturers** : http://www.fer.co.uk/find.asp

Commodity Overview	B.13 Waste Services
Products and services	The Scottish public sector procures a significant quantity of waste services every year. Inevitably the application of the waste hierarchy plays an important role in the management of waste with waste avoidance, preparing for re-use and re-use to be considered in advance of recycling or recovery. Within the other categories there has been reference to the potential for re-use of, otherwise waste, commodities, equipment or materials. This section does not repeat this but highlights opportunities to re-use waste through: ■ Purchase of a void clearance contract, where re-use could be maximized (e.g. domestic goods – furniture, white goods). ■ Purchase of re-use services by local authorities and other public sector bodies as part of waste services, recycling services, at Household Waste Recycling Centre. ■ Purchase of waste services for the removal of a public body's waste.
Procurement hierarchy:	Consider first: ■ Does the public body's waste strategy express a commitment to re-use and a well-developed commitment to re-use embedded in its procurement system, with all procurement requests fed through a central office that aims first to transfer items within the organisation and then, if this fails, to procure items second hand, before a new purchase can be authorised. ■ Is there a link to re-use of waste within a potential waste contract? ■ Has waste exchange been considered first – internally or externally (e.g. Warp It, Construction Material Exchange or similar)
Market commentary:	The waste market in Scotland comprises international and national suppliers as well as SME suppliers, who may specialise in particular waste streams or act as sub-contractors to main contractors. There is also much work underway in the development of the Scottish Materials Brokerage Service[136] which seeks to match up the supply and demand for high value recycling and which will gradually provide this service for various waste streams from 2016. There is extensive presence of third sector organisations in the re-use of wastes market and many of these operate to the Revolve[137] re-use quality standard, with a focus in particular on white goods, furniture, ICT, textiles, bikes and carpets. Many of these organisations will have arrangements with councils to collect materials suitable

[136] **Scottish Materials Brokerage Service**: http://www.zerowastescotland.org.uk/brokerage#sthash.82mX0jX6.dpuf

[137] **Revolve re-use quality standard:** http://www.revolvereuse.com/

Commodity Overview	B.13 Waste Services
	for re-use from HWRCs. These may be on a rota basis or part of a contractual arrangement and there may be varying responsibilities for seeking to maximise re-use from HWRCs. Re-use of WEEE is routinely undertaken within large centres in Scotland such as the HP Erskine Renewal Centre, as well as SMEs, third sector organisations and supported businesses (such as Haven Recycling).
Scope for economic and environmental improvement in circular economy within this commodity:	**Re-use** – there is significant opportunity to enhance the re-use of various wastes with a particular focus on domestic goods as well as those arising from councils' own waste, including WEEE, furniture, white goods, textiles, building materials and others. For example, research by WRAP has indicated that 23% of electrical items disposed of at HWRC sites have re-use potential and market value, greater than that of their material value[138]. Re-use of WEEE is subject to the Publicly Available Specification (PAS) 141 which is a process management specification for the re-use of used and waste electrical and electronic equipment (UEEE and WEEE). The public sector has significant influence over the waste market in Scotland and there remain opportunities to enhance re-use across a range of categories. The third sector has a significant role to play in this and, as part of support provided under the Ready for Business programme and related initiatives, an enhanced focus on re-use within the categories above has the potential to support and expand the market. Previous research by ZWS has highlighted that businesses, third sector organisations and local authorities could collaborate to form 're-use and repair hubs' which could transform the scale and economic clout of re-use organisations in Scotland[139].
	Repair – a number of re-use organisations provide repair and refurbishment services to extend the useful life of items as part of 'preparing for re-use'.

[138] **Re-using and repairing electricals:** http://www.wrap.org.uk/content/re-using-and-repairing-electricals
[139] **Re-use and repair Centres/hubs:** http://www.zerowastescotland.org.uk/sites/default/files/Reuse%20and%20Repair%20Hubs%20Final%20Report.pdf

Procurement guidance	Waste Services	Applicable to procurement of:
Planning procurement:		
Clarify intended outcomes, engage internal and external stakeholders, consider alternatives	The decision to procure waste services should reflect: ■ Consideration of intended outcomes – is a focus on re-use clearly articulated? ■ Budget and life cycle costs ■ Frameworks available ■ Views of internal and external stakeholders – is it clear what the market for re-use of waste is in the relevant 'area'?	
Procurement process:		
Advertising	If sustainability is a core requirement and forms a key element of the subject matter of the contract, highlight this through the wording of the contract title, for example (a) **'Zero Waste Services**', (b) **'Void property clearance including maximising re-use of suitable items'**, (c) **'Maximising re-use of waste from Household Waste Recycling Centres'**. If suppliers are put on notice in the OJEU advertisement they will be alerted to look at the contract performance requirements and take an early view on whether they can satisfy the requirements. Below is an example of wording that can be used for this purpose:	(a) Re-use of public body's waste (b) Void clearance contract (c) HWRC re-use
	'The Contracting Authority has included obligations within the specification and contract conditions relating to social and environmental matters including **maximising the preparing for re-use and re-use of suitable items** which are relevant to the service to be delivered.'	
Specification	Re-use of waste requirements need to be incorporated into the specification and must be relevant to the particular procurement. In order to ensure that suppliers provide the intended outcomes of the contracting authority it may be appropriate to include the following in the tender:	
	'XYZ public body is committed to the waste hierarchy and the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will:	(a) Re-use of public body's waste

Procurement guidance	Waste Services	Applicable to procurement of:
	▪ Identify, prepare for re-use and arrange the re-use of suitable wastes arising so that they are safe for use and meet quality and performance requirements; ▪ Include opportunities for third sector organisations who have particular expertise in re-use including through sub-contracting arrangements. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested wastes suitable for re-use and performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ▪ A clear understanding of wastes that are suitable for re-use; ▪ A process for preparing waste for re-use that is legally compliant and ensures that safety and quality requirements are met; ▪ Suggested KPIs to include: % of waste-streams that are re-used, with detail of re-use organisations used. ▪	
	Electronic items for Re-use Re-use of WEEE is subject to the Publicly Available Specification PAS141 which is a process management specification for the re-use of used and waste electrical and electronic equipment (UEEE and WEEE) to: ▪ improve the standards for the re-use and refurbishment of electrical and electronic equipment that has reached the end of its first useful life in the UK; and ▪ address the demand from consumers for assurance that the used electrical products they buy are electrically safe to use and functionally fit for purpose. Contractors may be required to: 'Process WEEE in accordance with the PAS141 process management specification'.	(a) Re-use of public body's waste
	'XYZ public body is committed to the waste hierarchy and the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are	(b) Void clearance contract

Procurement guidance	Waste Services	Applicable to procurement of:
	therefore required to demonstrate in a method statement how they will: ■ Identify, prepare for re-use and arrange the re-use of suitable wastes arising so that they are safe for use and meet quality and performance requirements; ■ Include where relevant collaboration with businesses or third sector organisations who have particular expertise in re-use. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested wastes suitable for re-use and performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ■ A clear understanding of wastes that are suitable for re-use; ■ A process for preparing waste for re-use that is legally compliant and ensures that safety and quality requirements are met; ■ Suggested KPIs to include: % of waste-streams that are re-used, with detail of re-use destination/organisations used. Bidders that operate to the Revolve or equivalent re-use quality standard would be expected to be able to provide appropriate evidence that they have systems and processes in place to prepare for re-use and meet safety and quality requirements but the tender must seek evidence of how they will meet requirements in the delivery of the contract.	
	'XYZ public body is committed to the waste hierarchy and the application of circular economy outcomes where relevant and proportionate while enabling SMEs, third sector and supported businesses to compete for contracts [include other environmental and socio-economic outcomes as appropriate]. Bidders are therefore required to demonstrate in a method statement how they will: ■ Work with the HWRC management its operatives and users to maximise the separation of wastes that are suitable for re-use including through effective communication and engagement; ■ Collect, sort, store, prepare for re-use and arrange the re-use of suitable wastes arising from the HWRC so that they are safe for use and meet quality and performance requirements; ■ Include where relevant collaboration with businesses or third sector organisations who have particular	(c) HWRC re-use

Procurement guidance	Waste Services	Applicable to procurement of:
	expertise in re-use categories. This should include the key internal and external stakeholders involved and how you would seek to ensure cost effective and practical circular economy outcomes are delivered together with suggested wastes suitable for re-use and performance measures which are capable of monitoring and reporting through contract management.' An ideal response would demonstrate: ▪ A clear understanding of wastes that are suitable for re-use; ▪ A process for preparing waste for re-use that is legally compliant and ensures that safety and quality requirements are met; ▪ A process for working with the HWRC to promote and enable re-use of suitable wastes; ▪ Suggested KPIs to include: kg/items of waste-streams that are re-used, with detail of re-use destination/organisations used. Bidders that operate to the Revolve or equivalent re-use quality standard would be expected to be able to provide appropriate evidence that they have systems and processes in place to prepare for re-use and meet safety and quality requirements but the tender must seek evidence of how they will meet requirements in the delivery of the contract. 'The Contractor should ensure that items supplied and any related services including those provided by sub-contractors meet relevant quality and safety standards and regulations so as to ensure that they are fit for purpose and safe for use when sold by the Contractor. Where items are supplied which are defective the Contractor will make arrangements to repair or refurbish the items to a suitable standard for re-use. The Contractor shall ensure that appropriate Health and Safety policies and arrangements are in place to protect the workforce, end users of items and others who may be affected by the storage, delivery and installation of items. The Contractor must ensure that items are prepared for re-use in an appropriate manner, involving checking, cleaning or repairing items so that they can be re-used for their original purpose without further processing. This shall include the collection and transportation of items, sorting of items into those that are suitable for re-use or recycling, preparing them for re-use and training of staff.'	

Procurement guidance	Waste Services	Applicable to procurement of:
Supplier selection (and award criteria)	These are some suggested selection and award criteria that can be used within a supplier selection process. It needs to be emphasised that they must be both proportionate and relevant and there must be a clear methodology to evaluate responses. When selecting suppliers it is essential to assess the technical capabilities which will be required for the products or services you are procuring to meet your needs. Not only is this useful from the buyer's point of view as suppliers that can clearly not meet the requirement will be eliminated, but it is also useful for the suppliers as they have a very clear understanding of how serious you are about sustainability and what will be essential for their submission to be successful.	
	In order to assess the technical ability of a supplier to meet your requirements again as part of the 'selection stage' you may also want to include: 'The contractor should demonstrate that they have delivered the minimum environmental standards required of the 'services', including the application of **re-use of suitable items and circular economy outcomes**, in previous contracts similar in nature to that required by the contracting authority, through relevant specialist capability.'	(a) Re-use of public body's waste (b) Void clearance contract (c) HWRC re-use
	Given the safety and quality concerns regarding re-use it will be important to obtain evidence of the technical capability of suppliers. For example: 'It is expected that Contractors that operate to the Revolve re-use quality standard, that covers the profile of this Framework Lot, shall be recognised as providing evidence of compliance, as will other evidence of equivalent management measures. The Contractor must maintain Revolve or equivalent and provide continual assurance to Scotland Excel and Framework users regarding relevant Quality, Safety and Re-use requirements. If your organisation holds Revolve certification which covers the profile of XYZ public body's requirement please attach a copy of your certificate or other supporting information here' (public procurers should be prepared to accept equivalent evidence).	(b) Void clearance contract (c) HWRC re-use
Contract management and performance	Ongoing improvement throughout the contract can be achieved by building requirements into the contract and managing the contract appropriately once awarded. This approach is particularly useful where markets are developing quickly and the full performance requirement is not available to the buyer at the time of the procurement, thereby allowing the desired performance to be met over the term of the contract.	
	For example:	(a) Re-use of public body's waste

Procurement guidance	Waste Services	Applicable to procurement of:
	‘The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out the nature and quantities of wastes that have been identified for re-use and prepared for re-use, including destination/organization utilized. or ‘The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out the nature and quantities of wastes that have been identified for re-use and prepared for re-use, including destination/organisation utilsied together with details of other waste not suitable for re-use. or ‘The Supplier shall in the performance of the Contract provide a report to the Contracting Authority on a [quarterly] basis utilising the template (attached*) setting out the nature and quantities of wastes that have been collected from HWRCs, that which is identified for re-use and prepared for re-use and other waste not suitable for re-use including its final destination.’ (*In this example the template will be drawn up by the buyer and shared with the potential suppliers as part of the procurement process.)	(b) Void clearance contract (c) HWRC re-use
Snapshot examples:	**North Ayrshire Council Bulky Waste - Cunninghame Furniture Recycling Company** North Ayrshire Council took part in the Partners for Change (PfC) programme, a tried and tested process for securing better local outcomes through improved collaboration between the public and third sector. The programme, delivered by the Ready for Business consortium is part of the Developing Markets for the Third Sector Providers programme. This provided a framework for a number of joint initiatives with the third sector including a structured approach to the use of lots when procuring services. The contract for ‘Recovery re-use and recycling of household bulky waste’ provided an opportunity to test out this approach to splitting contracts into separate lots, with the aim of enabling the third sector to more successfully tender for public sector contracts. This was a 5 year contract with the option to extend for a further 2 years. Its scope included: • Amenity waste • Building services bulk waste • Special uplift waste – housing estates • Mixed waste delivered by Council vehicles Full details are available from: http://readyforbusiness.org/wp-content/uploads/2014/12/cs-pfc-North_Ayrshire_Recyling.pdf	
	Perth & Kinross Council Re-use Centre	

Procurement guidance	Waste Services	Applicable to procurement of:
	Perth and Kinross Council has secured £150,000 of funding from Zero Waste Scotland (ZWS) for the construction of a retail / warehouse style unit for the purposes of delivering a Reuse Shop project, which is to be newly built adjacent to the Inveralmond Recycling Centre. The Council is currently offering the opportunity to Reuse Organisations to submit a detailed submission including a business plan and commercial offer for the management and operation of the proposed Reuse Shop following building completion. The Council is required to identify a preferred bidder for the lease, prior to commencing building works in mid-2016. In November 2015 the Council advertised this lease opportunity through the Perth and Kinross Network of Charity Shops and Reuse Projects, the Community Resource Network Scotland (CRNS), Perth and Kinross Association of Voluntary Service (PKAVS) and Zero Waste Scotland (ZWS). On 15 December 2015, the Council's Waste Services Team hosted a bidder information day where details of the Reuse Shop project and the upcoming leasing process were shared. The Project Funding Agreement between the Council and ZWS requires that the Reuse Project ensures that as many items as possible from the Recycling Centre and those donated directly by the public are managed up the waste hierarchy by reusing, or recycling them rather than being sent for disposal. Veronica Formosa-Hamilton - Waste Services Coordinator (Contracts & Communication) Sheila Best (Waste Services Team Leader)	
	Waste exchange Warp It is an example of an online portal which provides a platform for organisations to redistribute resources. This system can be used for any unwanted resources including furniture, electrical items, specialist items (such as medical research and laboratory equipment), fixture and fittings and office consumables such as unused inkjet cartridges and stationery. The tool allows departments to locate and utilise spare or unwanted resources within the organisation, reducing procurement spend and waste disposal costs, as well as minimising waste and reducing associated carbon emissions. If they can't be re-used internally they can be made available to external organisations. An example of how the portal has been used is shown by NHS Tayside. In the first two weeks, NHS Tayside diverted 308kg of waste from landfill with savings of £1,291 (already saving more than the annual subscription fee). 'The system lets people share without the need for a matchmaker or a warehouse. It shows that we intend to re-use which is a key part of the procurement journey. When staff want to buy new, we want them to think "Do I need to buy this in the first place?' Andy Hay NHS Tayside http://nhsre-use.co.uk/ (Warp It is a commercial portal and other portals exist).	

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