



A GUIDE TO EMBEDDING CE IN REFURBISHMENT ACTIVITIES

UKRI Circular Economy Hub
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Introduction

Regular refurbishment and refit activities are part of doing business in the Hospitality sector, keeping customer-facing areas smart and on-trend and shaping customer experience. However, such activities come with a high material and carbon footprint, with long-life materials such as tiles, flooring, shower units and sinks often discarded long before they have reached their expected lifespan.


Applying the principles of a circular economy (CE) to refurbishment activities has the potential to reduce the long-term cost and material footprint of these activities, whilst continuing to meet high customer standards. This guide is designed to act as a starting point, questioning existing practice and providing examples of alternatives currently available. As the CE becomes more mainstream, new business models, products, materials will become available, shaping expectations internally (within the business and design team) and externally (amongst customers). As such, it is hoped that this guide will quickly become redundant as the CE becomes business-as-usual.

The guide is split into two sections, with Section 1 focussed on construction and refurbishment activities and Section 2 focussed on day-to-day operations. Each section provides action points to consider and links to existing products and services to provide ideas and inspiration on how the CE can be applied and the changes you could explore within your supply chains¹.



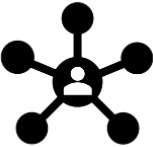

Section 1: Refurbishment

Phase 1: Planning



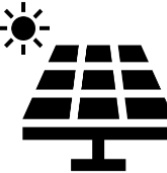
Design is at the heart of the circular economy - everything around us is designed, from the food we eat to the chairs we sit on. Decisions made at the design phase influence how long something lasts, what it is made of, if it can be repaired, and what happens to it at the end of life. In fact, 80% of a product's environmental impact is influenced by decisions made at the design stage. (Ellen MacArthur Foundation, 2022)

1. Understand your impact	
	<ul style="list-style-type: none">• Carry out a pre-refurbishment audit – understand usage of products and space, so that you can maximise these in your redesign and design out unused or little used items.• Create a materials inventory so you are clear on what you currently have.• Create a resource management plan – build on your materials inventory and plan how value will be retained, either internally or by collaborating with others.




¹ The use of brand names and/or any mention or listing of specific products or services is solely for illustrative purposes and does not imply endorsement by the CE-Hub, nor discrimination against other circular initiatives not mentioned.

	<ul style="list-style-type: none"> • Identify problem materials which cannot be reused, remanufactured or recycled. Look to avoid these in the redesign.
2. Work with your supply chain	
	<ul style="list-style-type: none"> • Include circular principles in the design brief and apply a weighting to these. • Map key suppliers against circular principles to identify where you currently stand and what needs improvement. Identify key strategic suppliers. • Engage suppliers in your CE strategy. Identify changes you would like to make and set their importance and time constraints (i.e. you might consider zero to landfill as an immediate requirement, items made from recycled and recyclable materials as a near future requirement and product as a service options as a future requirement).
3. Enable value capture through local networks	
	<ul style="list-style-type: none"> • Develop a sustainable clearance policy to support the reuse of items as and when they are no longer needed by the business. • Build local networks and develop a strategy for items which have become redundant or cannot be refurbished to front-of-house standard, but which could be reused by others. Third parties can be key here.
4. Engage workers with CE initiatives	
	<ul style="list-style-type: none"> • Embed a strong understanding of circular principles among employees – engage in process, consider how benefits can be shared, i.e. by offering used items to staff or enabling staff members to bring their own unwanted items into reuse schemes. Create a space where employees can share their own ideas.
5. Case studies and resources	
<p>Case study: Bluestone resort partner with Pembrokeshire frame to extend the life of used sofas</p> <p>Resources: Reuse platforms for fixtures, fittings and furnishings: Revooz, Collecteco Reuse platforms for construction materials: Enviomate, Excess Materials Exchange Refurbished and remanufactured furniture and ceiling tiles: Ministry of Furniture, Armstrong Engagement (employees and customers): Greenredeem</p>	

“Employee pride and advocacy are boosted when there are visible improvements in green performance, particularly sustainable buildings.” Business in the Community, Environment Report

1. Design out waste	
	<ul style="list-style-type: none"> • Retain, reuse and refurbish as much as possible from the existing building. • Take a life cycle approach to your materials – how easy will it be to deconstruct them at end of life, retaining their value and keeping them in use? • Prioritise durability and timeless style to reduce the need for future updates.
2. Maximise your space	
	<ul style="list-style-type: none"> • Use your space audit to understand how to maximise your space – build flexibility and efficiency into your design to minimise future work. This could include thinking about cabling, using modular, deconstructable or repositionable components.
3. Utilise and protect natural resources	
	<ul style="list-style-type: none"> • Can renewable energy opportunities be included and maximised to reduce the need for fossil fuels? • Can greywater, rainwater and/or stormwater be harvested and its use built into the system to reduce reliance on this resource?
4. Case studies and resources	
<p>Case study: Object.Space.Place apply CE principles to the refurbishment of London restaurant Apricity, Bluestone becomes the first hospitality resort in Wales to switch to 100% renewable BioLPG</p> <p>Resources: Sustainable building materials: ECOR Global, Adaptavate, Toolkits and frameworks for low-carbon, circular buildings: BREAMM, Arup Circular Buildings Toolkit, Arup Transforming Existing Hotels to Net Zero Carbon</p>	




“The modern hospitality property is subject to ongoing change as a response to the ever-shorter life cycles of fashion, technology and product service content, as required for brand compliance in an ever-increasing competitive environment to acquire customers’ discretionary spending.” (Ransley, 2022)


1. Embed CE in design decisions	
	<ul style="list-style-type: none"> • Design for longevity – how can the room be designed to stay on trend with minimal updates? Think ahead to future uses and design in flexibility. Include the results of your space/usage audit – can the space be used differently to decrease time spent empty? • Consider psychological/emotional attachment to products as a way to increase longevity – i.e. through use of local, artisanal products. • Consider the full product lifecycle – how long will you use it for and where will it go next? Including this in the design stage is key to ensuring materials stay in use for as long as possible.
2. Apply CE strategies to enable value capture	
	<ul style="list-style-type: none"> • Repair and reuse items where possible. Consider refurbishment over buying new products. • Identify new homes for redundant items, with recycling services as a last resort. • Are new materials (including paints, flooring, ceilings) recycled and recyclable? Prioritise non-toxic, responsibly sourced renewable materials. Can materials from your own processes be used? • How can water use be minimised and greywater recycled?
3. Connect with third parties and supply chains	
	<ul style="list-style-type: none"> • Establish links with businesses who collect and recycle products at end of life and consider product as a service models where available. <p>Note: soft furniture can only be reused when the fire labels are still attached. Extend useful life by ensuring these remain in place.</p>
4. Resources	
<p>Case study: The Bull Inn, Totnes</p> <p>Resources:</p> <p>Second-hand and refurbished product clearance and sales: Ramco, Rype Office, Recorra</p> <p>Organisations using waste as a resource: Interface, Paint360, SaxaGres, Econyl, Circular Flooring, Niaga</p> <p>Product as a service: Bundles</p>	

Toolkits and frameworks: [FIRA Benchmarking carbon footprint of furniture](#), [Cradle2Cradle certified products database](#), [ReLondon](#), [Food that doesn't cost the earth](#)

Increasingly, stakeholders at every level are putting pressure on businesses to take action toward reducing their waste, emissions, and environmental impact. Present and future employees expect companies to show leadership and bold action on climate change mitigation, biodiversity protection, emissions reductions, and environmental stewardship. (Zero Carbon Forum)

Section 2: Circular Operations

1. Chemicals and cleaning regimes	
	<ul style="list-style-type: none"> • Can you reduce the need for harsh chemicals, i.e. by using closed loop cleaning processes through collaboration and partnerships. • Look for products with plant-based ingredients. <p>Resources: Ecover, Delphis Eco</p>
2. Company uniforms	
	<ul style="list-style-type: none"> • Be smart about branding. Can logos be removable so that garment life can be extended beyond business use? • Track uniforms and operate return schemes and recycling for end-of-life garments. • Design: choose recycled and recyclable fabrics, or sustainably sourced natural fabrics. Work with suppliers who operate along circular principles. Be mindful that blended fabrics are difficult to recycle at end of life. <p>Resources: JMP Wilcox, Rapanui</p>
3. Responsible food stewardship	
	<ul style="list-style-type: none"> • Source food sustainably – local, regenerative/agroecological farms, organic, in-season – all reduce the pressure agriculture places on our soil and help to increase biodiversity by decreasing the use of pesticides and herbicides and preventing soil run-off. • Design menus to decrease the environmental impact of each dish and to reduce food waste (i.e. by including leftover ingredients from one dish in another). Decrease the size of meat portions, offer more plant-based alternatives. • Measure food waste at each stage of the use cycle and seek to design waste out. There are various smart technologies available to help with this. • Design menus to use the whole food, decreasing waste from peelings etc.

	<ul style="list-style-type: none"> • Establish connections with community groups and social businesses who can use leftover food. • Ensure the value of food waste is retained through composting, anaerobic digestion and nutrients are ultimately returned to the soil. <p>Case studies: IKEA and Winnow,</p> <p>Resources: Winnow, WRAP, EMF Big Food Redesign challenge, Olio, Too Good to Go, Guardians of Grub, Olleco</p>
4. Packaging	
	<ul style="list-style-type: none"> • Work with suppliers to remove or reduce disposable, single-use packaging. • Redesign essential packaging so that it can be reused through product take-back schemes, or composted. • Buy in bulk and use refill schemes where available. • Consider incentives and rewards for customers who bring their own cups or takeaway boxes. <p>Case studies: BioPak, Deliveroo & Wahaca</p>