

UKGBC Circular Economy Policy Asks

May 2020

1.0 Introduction

This document has been prepared to enable UKGBC to set out an updated set of circular economy policy asks of UK Government. The aim is for the asks to draw links with the net zero carbon agenda to create alignment between policies and set a bold direction that enables systemic change across all industries and sectors. This policy asks document also links to the [Resources & Waste Strategy](#), supporting the overarching [Zero Avoidable Waste ambition - zero avoidable waste by 2050](#).

The document brings together the policy asks originally developed through a UKGBC roundtable in 2018, the briefing from which can be found [here](#). It builds on these from research gathered as part of the development of [UKGBC's recent circular economy guidance documents](#), as well as researching best practice from international policies. It also links with the [UKGBC Advancing Net Zero programme](#). The policy asks are in line with the Architects Journal [Retrofirst campaign](#), and the EU Circular Economy [Action Plan](#).

We would like to see alignment between environmental policies including energy and carbon so that they are complementary, but we are also looking for bolder direction to enable the systemic change needed.

2.0 Summary of Policy Asks

This section contains a summary of the policy asks. Further details relating to evidence and examples of successful policy implementation are explained in more detail below in section 3.0 Policy Context and Examples.

2.1 Explore fiscal mechanisms for increasing circularity

- Policy Ask #1: Reduce the VAT rate on refurbishments from 20% to 5%.
- Policy Ask #2: Introduce a tax on non-recyclable or non-reusable materials and products. Explore a possible further tax on those materials going to incineration.
- Policy Ask #3: Reduce the VAT on materials and products made of reused materials and circular solutions, based on a sliding scale to reflect the proportion of embodied carbon saved over the whole life of the material or product.

2.2 Alignment with the EU post-Brexit

- Policy Ask #4: Ensure that regulations are updated where appropriate in order to promote circular principles, for example, aligning the UK Construction Product Regulations with the EU Construction Products Regulation.
- Policy Ask #5: Adopt the key elements of the EU Circular Economy package into UK law.

2.3 Mandatory recycled and reused material considerations in the Building Regulations and National Planning Policy Framework (NPPF)

- Policy Ask #6: To help create a market for construction and deconstruction materials and products, develop targets for reused and recyclable materials and those that can be disassembled within the Building Regulations that complement existing parts of the regulations.

- Policy Ask #7: Require consideration of the waste hierarchy in the NPPF for planning applications.

2.4 Promote material passports and a centralised database for circular resources.

- Policy Ask #8: Support the development and promotion of a standardised format for material passports in the UK and require the use of material passports in new buildings.
- Policy Ask #9: Fund, support and endorse a means of centrally collecting consistent and robust data about construction resources and waste.

2.5 Mandatory pre-demolition waste auditing and encouragement of selective demolition

- Policy Ask # 10: Require pre-demolition and pre-refurbishment audits to be applied to projects above a certain size. These should include a clear demarcation of where unused materials from the site are going, to ensure better traceability of resources.

2.6 Developing circular procurement criteria

- Policy Ask #11: Introduce a requirement that publicly funded construction projects should a) be assessed on total life cycle costs and carbon; b) look to retrofit solutions first and c) look to procure circular products (reused, designed for disassembly, recyclable).

2.7 Ensure local governments are supporting circularity

- Policy Ask #12: The Government should require local governments to develop local or city level policy requirements for larger developments and/or referable schemes to adopt circular principles and demonstrate these at planning application stage, as per the [GLA Circular Economy statement](#).

3.0 Policy Context and Examples

The policy recommendations are proposed to further promote and increase circularity in the UK built environment. This section sets out the detail behind the proposed UKGBC policy asks – the current UK context, evidence for why action is needed, and examples of where policy has been successfully implemented (if available).

With the Covid-19 crisis dominating headlines and Brexit-related concerns about attracting business, the UK's political landscape can seem un conducive to circularity. Yet as the UK decides whether it will pursue a green recovery, and be more environmentally ambitious than the EU, committing to circularity in the built environment is an opportunity for a country that saw, [in 2016, 62% of its waste come from construction, demolition and excavation](#)¹. A key challenge identified in a 2018 workshop hosted by the UKGBC was a lack of incentives for every member of a supply chain to increase circularity. Regulatory and fiscal incentives, government support and buy-in, promotion, and more are thus needed to stimulate long-term, systemic change.

3.1 Explore fiscal mechanisms for increasing circularity

Context

- Construction of new buildings is generally taxed between 0-5%, whereas repair, refurbishment and maintenance are taxed at 20%. The [Architects Journal Retrofirst](#) campaign suggests that reducing the VAT rate is critical to reducing the amount of new construction being built, as do RIBA and other major buildings stakeholders.

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- The government could potentially increase the tax rate on new builds to help make up for revenue loss. However, this would need to be carefully analysed for equity and any unintended repercussions.
- The 2018 UKGBC workshop highlighted that VAT and regulatory reform was needed to further promote the circular economy.
- Producing virgin materials is often still cheaper than recycling or reusing products as there is a lack of incentives along the supply chain that promote reuse.
- If regulatory and fiscal mechanisms are to be pursued, it is important that the building industry is given the support and resources needed to avoid any unfair burdens placed on SMEs.
- Through government advocating for refurbishment and reusing products over new builds, there is a strong link to the carbon benefits associated with whole life carbon and, in particular, embodied carbon savings to be made - enabling the UK to meet its carbon targets.

Policy Asks

- **Policy Ask #1:** Reduce the VAT rate on refurbishments from **20% to 5%**
- **Policy Ask #2:** Introduce a tax on non-recyclable or non-reusable materials and products. Explore a possible further tax on those materials going to incineration. (See 3.3 and 3.5 for more information about why incineration ought to be discouraged).
- **Policy Ask #3:** Reduce the VAT on materials and products made of reused materials and circular solutions, based on a sliding scale to reflect the proportion of embodied carbon saved over the whole life of the material or product.

Examples

- The Netherlands supports up to a 36% decrease in VAT for circular economy innovations ([Environmental investment allowance](#)).
 - If you own a company in the Netherlands and you invest in environmentally friendly business assets, you may be eligible for the environmental investment allowance (*milieu-investeringsaftrek, MIA*). You can deduct up to 36% of your capital outlay from taxable profit in addition to the regular depreciation.
- The landfill tax in the UK has been shown to have a positive impact on reducing waste sent to landfill [[Eunomia and IEEP](#)].

3.2 Alignment with the EU post-Brexit

Context

- Post-Brexit, the Government must ensure that our regulatory regime encourages re-use and re-purposing. Aligning the UK Construction Product Regulations with EU regulations can promote an open supply chain for circular products.
- The government has not committed to following the EU Circular Economy package post-Brexit, but the 2018 DEFRA Resources and Waste Strategy outlines a commitment to transpose the package's recycling targets into law. Any commitments for recycling and waste from the package that are a part of UK legislation post-Brexit are expected to be maintained.

Policy Asks

- **Policy Ask #4:** Ensure that regulations are updated where appropriate in order to promote circular principles, for example aligning the UK Construction Product Regulations with the EU Construction Products Regulation.
 - There would need to be the development of technology which can rapidly and cost-effectively allow products and components for reuse to be inspected, tested, approved and CE marked. After 1 January 2021, when CE marking ceases, an equivalent form of UK certification will need to be put in place that advocates reused materials.

- **Policy Ask #5:** Adopt the key elements of the EU Circular Economy package into UK law.

3.3 Mandatory recycled and reused material considerations in the Building Regulations and NPPF

Context

- The landfill tax has had a significant effect on reducing waste to landfill, and companies are improving their processes in this area.
- Waste can often be downcycled and/or incinerated which is a temporary solution that does not incentivize reuse of material, nor move suppliers away from a linear business model to a more circular model of products as a service or take-back of their products.
 - Incinerators also released 49-119 million tonnes of CO₂ in 2017 [[Zero Waste Europe](#)].
- Embodied carbon is not currently covered by Building Regulations.
- There will be a greater opportunity to reduce carbon through new circular policy measures being implemented within the built environment.
- Government currently advocates a [waste hierarchy](#) that supports prevention first and then reuse.

Policy Asks

- **Policy Ask #6:** To help create a market for construction and deconstruction materials and products, develop targets for reused and recyclable materials and those that can be disassembled within the Building Regulations that complement existing parts of the regulations.
- **Policy Ask #7:** Require consideration of the waste hierarchy in the NPPF for planning applications.

Examples

- See the WRAP guidance on setting requirements for recycled content in building projects [[WRAP Guidance](#)].
- Seattle, USA – minimum 20% reuse by weight in demolitions and deconstruction, excluding certain materials [[Seattle Department of Construction and Inspections](#)].
- An example of what can be done to overcome the perception that reuse is ‘high risk’ is the [Protocol for Reusing Structural Steel, produced by the Steel Construction Institute](#) (SCI). This protocol provides guidance around the reuse of steel, which will see greater potential to retain value from existing steel and support a growth market opportunity in the UK economy.
- There are a number of platforms available to access reuse material, see [UKGBC Innovation Insights](#).

3.4 Promote material passports and a centralised database for circular resources

Context

- There is limited traceability of buildings and construction products, which inhibits reuse and recycling possibilities.
- The European Strategy for Data wants to facilitate a ‘single market for data’ which would include product passports to track the manufacture and disposal of various products. However, it remains unclear how and when this will be enacted. As the UK will no longer be a part of the EU, pre-emptive action to determine what regulatory and legislative considerations will be needed for a fully functioning material passports scheme is needed [[A European Strategy for Data](#)].

Policy Asks

- **Policy Ask #8:** Support the development and promotion of a standardised format for material passports in the UK and require the use of material passports in new buildings.
 - No country has gone so far yet as to develop a standardized passport; however, [BAMB](#) and [BRE](#) are in the process of developing a tool that will enable the transfer of material information.

- The UK government can further support the development of a passport system in the UK by engaging with industry to determine what needs to go into the passports. The government could also work with partners to bring this technology into the UK (providing funding, technology procurement, etc.) to stimulate a healthy market for the use of passports and make it easier for producers to provide information about their products.
- Material passports are consistent with the Building Information Modelling (BIM) methodology. The UK Government could therefore set further requirements around the use of BIM on projects and capturing material and product information.
- The [UK's Industrial Strategy](#) should look to promote economic growth through the decarbonisation and prioritisation of the reuse of high carbon footprint construction materials, e.g. structural steel and precast and reinforced concrete.
- **Policy Ask #9:** Fund, support and endorse a means of centrally collecting consistent and robust data about construction resources and waste.
 - This would be a government-led centralised open access database of nationally available materials for reuse. Robust material passports or an Environmental Product Declaration (EPD) will be critical to the longevity of such a database.
 - The database should collect data on materials at all stages of life e.g. demolition commenced, recovery complete, refurbishment complete, offered for sale etc.

Examples

- To stimulate the use of materials passports, the Netherlands Enterprise Agency used an environmental investment rebate and the Arbitrary depreciation of environmental investments to allow companies to benefit from investment-related deductions of up to 75%. Companies need to register with and use an online platform such as [Madaster](#).
- Denmark is introducing a voluntary sustainability clause into their building regulations that is expected to increase resource efficiency and the value in reusing/recycling construction materials. While the exact format of this clause is not yet established, the purpose is to determine whether a building's embodied energy ought to be included in energy calculations [[Strategy for Circular Economy – Danish Government](#)]:
 - “Analyses will be commissioned related to embedded energy to be used in connection with the energy framework calculations for buildings... in view of improving the traceability for substances of concern...increasing the value of construction materials and reducing maintenance costs and environmental and human health risks...the government will commission an analysis to ensure early safeguarding of interest in connection with a future international standard for building passports.”
- The Dutch Green Building Council is going to start awarding credits in 2020 to the registration of material and building passports in BREEAM assessment methods. While this is a voluntary certification, material passports are now a prerequisite for obtaining the highest score [[Dutch Green Building Council](#)].
- Netherlands: Excess Materials Exchange – material exchange platform [[Website](#)].
- Netherlands: Madaster - material exchange platform [[Website](#)].

3.5 Mandatory pre-demolition waste auditing

Context

- Construction, demolition and excavation waste continues to make up a large component of the UK's total waste [[Defra](#)].
 - Construction, demolition and excavation (CD&E; including dredging) generated around three fifths (62%) of total UK waste in 2016, the most recent year for which data is available.
 - Recovery rates of CD&E waste: 91% recovery rate in the UK, 92.1% in England.

- Note that recovery is defined as ‘any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function.’ This waste can be downcycled and used for lower value purpose, i.e. crushing bricks for recycled aggregate, instead of creating the higher value that recycling or reuse can have.
 - Under the EU Waste Framework Directive, 70% of non-hazardous waste is expected to be recovered, which puts the UK ahead of the minimum.
 - For overall waste in the UK, recycling and ‘other recovery’ is the most common – [48.5%](#).
- There is a general lack of knowledge about the composition of materials and the number of chemicals/hazardous components in construction waste. It can often be unclear where waste is going and if it is being disposed of properly.

Policy Asks

- **Policy Ask # 10:** Require pre-demolition and pre-refurbishment audits to be applied to projects above a certain size. These should include a clear demarcation of where unused materials from the site are going, to ensure better traceability of resources.
 - The purpose of these audits would be to increase the amount of materials that are reused/recycled/recovered. Ideally, the waste hierarchy would be applied and there would be a focus on reuse and recycling before recovery.
 - The timing of these audits is also important and should be carried out as early as possible in the project lifecycle.

Examples

- BREEAM have guidelines for conducting a pre demolition audit, but it is not mandatory and also does not require assessments for circularity in the UK. There are three BREEAM indicators for circularity, well-being and whole life carbon that are awarded based on credits achieved in other key areas [[BREEAM](#)].
- In the Netherlands, Metabolic worked with the Dutch Green Building Council to produce a report on possible circularity indicators to include in BREEAM [[Report](#)].
- The Green Demolition Bylaw in Vancouver requires a deposit when demolishing pre-1950s homes; money returned depends on scale of building materials salvaged or managed appropriately [[City of Vancouver](#)].
- A Danish Environmental Protection Agency Project (2019-2021) aims to suggest a standardized demolition plan, provide relevant education and certification, and assess environmental and socio-economic consequences of increased selective demolition [[Danish Environmental Agency](#)]
 - Also working with local bodies to promote selective demolition [[European Commission](#)]
 - As a note: any buildings owned by the government must undergo selective demolition.
- Thresholds for mandatory audits in other countries – examples for size: -
 - Denmark: 10 m²
 - Finland: 100 m² (though municipalities can have their own requirements and there are exceptions)
 - Sweden: all buildings, no matter the size
 - Norway: 100 m²
 - [Sources: [presentation slides](#) from European Parade Seminar, [Nordic Report](#)]
- Netherlands: In the Buildings Decree 2012, authorities can ‘impose additional conditions regarding separating demolition waste into fractions and keeping those fractions separate. The goal in this respect would be to enable the demolition waste to be recycled’ [[Nauta Dutilh](#)].

2.6 Developing circular procurement criteria

Context

- There are minimum standards for sustainable procurement in the [Government Buying Standards](#) (GBS). However, there is no explicit focus on incorporating circular principles or reducing waste.
 - Eg. [Lighting system standards](#) - opportunity for a ‘best practice’ requirement for lighting as a service, but not required.
 - Eg. New build construction and refurbishments [\[UK Government\]](#) – nothing about considering reuse first, rely on BREEAM certifications for achieving minimum standards or achieving best practice.
 - *Note: Since 2012, the GBS have required that reused furniture be considered before purchasing new. They also have this consideration for some other interior furnishing products [\[GBS\]](#).
- While government departments and companies can go above and beyond and set their own sustainable procurement criteria, they must rely on third party procurement standards and guides.
- The Greening Government Commitment Targets (GGCs) are set to be updated for 2021-2026, with a report on progress that was expected to be released at the end of 2019. GGCs set out government environment impact reduction targets for water and waste, reducing emissions, etc. [\[GGCs\]](#)
- Clauses in current public procurement tender documents are outdated e.g. WRAP halving waste to landfill (workshop).
- Establishing total costs of procurement over a product’s lifetime in public contracts is not as robust as it could be [\[The Public Contracts Regulations 2015\]](#)

Policy Asks

- **Policy Ask #11:** Introduce a requirement that publicly funded construction projects should a) be assessed on total life cycle costs and carbon; b) look to retrofit solutions first; and c) look to procure circular products (reused, designed for disassembly, recyclable).
 - Updating procurement standards to include circular criteria can enable capital allowance savings through longer product lifetimes. This reduces the environmental impact of procured products and incorporates durability and designing for disassembly into procurement.
 - This goes beyond the current reuse and refurbish consideration for office furniture to include [Cradle to Cradle](#) or other certifications in new item and material procurement.
 - Benefits
 - Allows for more consistent incorporation of circular economy principles into procurement standards, rather than one-off projects.
 - Can drive the scale of innovation if new products are procured.
 - Material passports could also be incorporated into procurement requirements as a trial run.

Examples

- Netherlands: The Central Government Real Estate Agency and Rijkswaterstaat must make their operations circular by 2030. All government buildings constructed after 2018 must be energy neutral. As many recycled or recyclable materials and resources as possible will be used in the construction and redevelopment of real estate [\[Netherlands Government\]](#).
- In the Netherlands, any new buildings being constructed should contain 20% of reused materials and another 20% must be capable of reuse in the future.
- EU: Public Procurement for a Circular Economy [\[European Commission\]](#).
- Denmark advisory board recommends procuring based on total lifecycle costs [\[Denmark Advisory Board\]](#).
- Procura+ Manual [\[examples of sustainable innovation criteria\]](#).
- PACE: Scaling circular procurement [\[PACE\]](#).

- European Commission and ICLEI definitions of procurement
- Ellen Macarthur Foundation procurement case studies [[Case Studies](#)].
- UKGBC's recently launched guides on incorporating reuse and PaaS in construction projects [[Implementation Pack Products as a Service and Reuse](#)].
- Denmark – Partnership on Green Public Procurement [[Resource Efficiency and Circular Economy in Europe report](#)].

2.7 Ensure local governments are supporting circularity

Context

- Local governments often lead the way on sustainability but can be disadvantaged with uneven playing fields and a lack of clear direction from central governments.
- The planning process is important for enabling circularity in buildings as the design stage is the critical time to get circular design, processes and materials in place.

Policy Asks

- **Policy Ask #12:** The Government should require local governments to develop local or city level policy requirements for larger developments and/or referable schemes to adopt circular principles through a circular economy appraisal and demonstrate these at planning application stage, as per the [GLA Circular Economy statement](#).
 - During procurement there should be a link with Building Control to ensure the proposals are carried through into the construction stage.

Examples

- The new Greater London Authority (GLA) London Plan requires planning proposals to include a [circularity statement](#).