

INTERNATIONAL BEST PRACTICE FACTSHEETS ON POLICY  
INSTRUMENTS THAT PROMOTE ENABLING ENVIRONMENTS  
FOR GREEN AND CIRCULAR BUSINESSES

# Circular Construction

SCOTLAND\_

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# Circular Construction

## BEST PRACTICE FACTSHEET

The construction sector is the biggest user of materials and has a large carbon footprint. Therefore, circular approaches are key to increase reuse and recycling of construction and demolition materials, but also to improve design and renovation of buildings.

“Making Things Last” is the title of Scotland’s circular economy strategy, defining its ambitions to keep products and materials in high value for as long as possible. One of the priority sectors is construction since this sector represents about 50% of all waste in Scotland. Through a partnership with the Government, the Scottish construction sector is developing new construction practices based on circular economy principles.

## OBJECTIVES AND BACKGROUND

In 2016, the government published its circular economy strategy: “[Making things last](#)” to promote the circular economy as the main approach to help protect the environment and to deliver social and economic benefits. There are four priority sectors where the Scottish Government states it can achieve the biggest impact: food & drink and bioeconomy, construction, remanufacturing, and energy infrastructure. The ambition is to focus particularly on preventing food waste and waste generated from the construction and demolition sector. Improving reuse and recovery of materials in the built environment not only leads to resource-efficiency but also reduces greenhouse gas emissions<sup>1</sup>.

Scotland has adopted the EU target to reuse or recycle 70% of construction and demolition waste by 2020 as defined in the Waste Framework Directive. The main goal of the Directive is to avoid depletion of primary aggregates and timber resources through enhanced recycling of demolition materials.

In order to achieve these targets, the Scottish Government created Zero Waste Scotland (ZWS), a publicly funded organization that aims to help accelerate circular economy and resource efficiency of small and medium-sized enterprises (SMEs) in Scotland. Its role is to deliver on the Scottish Government’s policies and strategies for circular economy, waste reduction and resource efficiency

working closely with businesses, public bodies and communities in Scotland. Regarding the construction sector, ZWS defines a circular construction approach starting from designing out waste so that materials specified and used (natural or processed) can have a future purpose beyond the life of the building; buildings can be easily adapted for different future uses without generating waste; and buildings can be easily maintained and repaired without generating waste and can be easily deconstructed so materials can be reused.

<sup>1</sup> EEA: [Greater Circularity in the Buildings](#)

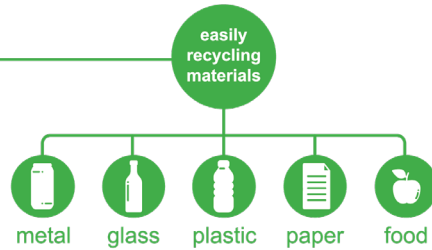
## RECYCLING IN SCOTLAND



In 2011 4.7m tonnes of waste was sent to landfill in Scotland



including



Sending these key materials to landfill cost Scottish councils more than £100m...

... if recycled, these could be worth

£100m

## SCOTLAND IS MAKING PROGRESS

Waste recycled in 2011



Broken down by sectors:

1 million tonnes Household waste

4.6 million tonnes Non-household waste (inc. construction and demolition)

That's equivalent to:



In a line, that would cover the distance from Edinburgh Castle to beyond the Empire State Building

## IMPLEMENTATION



The priority for ZWS for the construction sector is to promote building designs that consider waste reduction in both new construction and renovation, while also enabling more reuse and recycling of building materials at end of life. This includes supporting SMEs to implement building projects with the potential to deliver significant environmental impacts that can be scaled up. To achieve this, the government-built capacity to accelerate change in the construction sector in collaboration with the Construction Scotland Innovation Centre and other partners. This work focused on providing free consultancy services (technical support, sharing best practices and new technologies) in two main areas:

- Energy Efficiency: “Resource-Efficient Scotland” was a programme developed by Zero Waste Scotland, launched in 2013. In 2020, the programme was relaunched as ZWS’s Business Energy Efficiency Service with a focus on reduction of energy consumption.
- Waste prevention: Zero Waste Scotland has a specialized team that provides consultancy services for the construction sector to help explore opportunities, collaborate and implement solutions and identify circular options for future construction projects.

Another aspect of the program is research to produce a horizon scan of planned construction, demolition and renovation projects in Scotland through 2020, to identify potential priority areas for action, also based on stakeholder consultation.

This program is financed by the Scottish Government and the European Regional Development Fund with over £70 million of investment. From this total, £18 million are allocated for the Circular Economy Investment Fund (CEIF) administered by ZWS which offers grants to support the exploration of new markets for circular economy products and services, developing and adopting innovative business models and developing innovative technologies to support a circular economy.

## RESULTS



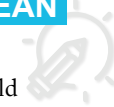
The circular construction program has been an effective catalyser for the Scottish construction sector to start testing and implementing circular economy principles in order to decrease not only operational costs, but also environmental impacts. On average, the ZWS actions focused on energy efficiency for businesses and reduction of their carbon footprint, resulting in a reduction in business energy bills by 24%<sup>2</sup> and the generation of £200 million in overall saving. Other main results included 18 offers of funding made to SMEs through the CEIF to encourage circular business models, 77 businesses received support through C.E Business Support Service, 67 audits were carried out between 2017 and 2018 by the Resource Efficiency Service on Construction and the Waste Prevention Implementation Fund invested more than £700,000 in projects.

## SUCCESS FACTORS



Making Things Last provided a strong policy framework for the sectoral approach to construction. Furthermore, Zero Waste Scotland, especially established by the Scottish government, was a crucial organisation accelerating the transition to a circular economy, as it was delegated the responsibility and resources to support the construction sector all along the supply chain. Zero Waste Scotland now maintains a user-friendly website with a searchable database of case studies that span a wide range of sectors and business sizes<sup>3</sup>.

## CONSIDERATIONS FOR THE MEDITERRANEAN



As a start, governments should perform an in-depth analysis of the construction sector in their countries, the main obstacles and challenges for the transition to a circular economy as well as opportunities. Furthermore, the program requires the close involvement and participation of all stakeholders within the industry.

Secondly, it is also important to dedicate a specialized team with the expertise needed to identify circular solutions for challenges regarding design, use and waste management, and effectively support companies with the implementation.

To create additional incentive for construction companies to invest in circular strategies, resource-efficiency could be made mandatory as a licensing requirement.

In the case of Scotland, companies receive expert advice free of charge as ZWS is financially supported by the government. In case this is not possible in the Mediterranean, co-financing is also a possible scenario in which consultancy is offered at a reduced cost, partly financed by local governments.

## REFERENCES

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<sup>2</sup> Energy Zero Waste Scotland: [Support for Scottish businesses](#)

<sup>3</sup> Energy Zero Waste Scotland: [Case studies](#)