



# Re-using the Rubble

## How can cities close the loop on C&DW?

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### Introduction:

Materials from construction, renovation, and demolition activities represent around 40% of total EU solid waste. Closing the loop on Construction and Demolition Waste (C&DW) is particularly relevant in urban centers where population density and a lack of space increasingly hamper access to raw materials.

By advancing circularity and optimizing the availability of secondary raw materials from urban mining as an alternative source, cities could surpass the EU's 70% target for recycling and reuse of C&DW by 2020 by a significant margin and improve their environmental footprint and their citizen's health and wellbeing even further.

Members of GLOBE EU and the Bee Group support the Circular Economy Package and the revised legislative proposal on waste. They welcome the European Commission's support for key enabling concepts (e.g., pre-demolition assessment guidelines, C&DW management protocol) but believe that much more can be done to encourage city administrations to take on the challenge of reusing and recycling C&DW at scale.

The following recommendations show how EU policies and funding could do more to help cities take the lead in closing the loop on C&DW by creating incentives to drive demand for secondary raw materials and facilitate the adoption of new business models.

### How can EU policies help cities create a big enough market for secondary building materials?

#### Existing buildings:

Insufficient economic and regulatory incentives and a lack of trust in the quality and availability of secondary materials are stifling demand for recycled building material. A **strictly imposed ban on the landfill of building materials** in all EU Member States would stimulate the supply side whereas applying circularity principles to building and construction practice would boost demand.

The latter could, for instance, be accomplished through **fast-track approval of construction permits and easier access to capital**. **Cities should set high thresholds for recycled content in their public tenders and encourage the use of reusable and recyclable materials and products**. **Regular training of public purchasers should be mandatory**.

The use of secondary raw materials should be encouraged by assuming, for instance, that buildings at their end-of-life are not a pile of waste but a **material bank**. GLOBE EU and the Bee Group encourage the Commission to **issue guidelines on the conditions to be fulfilled for recovered or reclaimed materials to be considered a “non-waste”** (similar to the conditions for by-products of manufacturing processes) so that materials such as bricks, fittings, doors, window panes, beams, etc., can be transported, stored, processed, and sold as products provided these conditions are met.

### Future buildings:

Better information on what entails a building would help close the loop on C&DW and lower costs as worst case scenarios need no longer apply. Registration with a cloud-based platform of comprehensive data on buildings —chemical composition and properties of goods and materials used, construction methods, maintenance plans and safety records— would provide information for the next phase of a building and create and sustain virtual market places for used building materials.

GLOBE EU and the Bee Group would welcome measures to encourage the use of these digital passports by progressively introducing at EU level a requirement **to generate a passport for every new building or renovation project**. This would contribute to developing a database of available products and materials with instructions for safe handling and information on status: e.g., materials of which composition and risk have been sufficiently identified and further use is guaranteed are considered products.

## How can the EU encourage companies to develop new business models to close the loop on secondary building materials?

### Existing buildings:

Budget constraints can increase the likelihood of building companies operating under time pressure. Many building components that can be re-used or recycled when carefully removed thus fall victim to the crusher instead. Specialized companies are available, however, to remove certain components within an agreed timespan and at a fixed cost.

**A legal requirement or incentive for buildings to be stripped before their frames can be demolished** following an assessment (pre-demolition audit) would create an entire service sector of SMEs with expertise in the removal of tiles, flooring, window frames, insulation material, sanitary items, lighting, etc.

### Future buildings:

The reuse and recovery of building components and materials is a key principle of modular and reversible building design. By allowing separate ownership of components with various life spans —such as lighting, flooring, windows, electrical wiring, inner walls— and facilitating their replacement and repair, modular and reversible building design greatly extends the life of a building and enables repurposing. The introduction of reversible buildings in Japan, for example, has resulted in less C&DW and helped the development of a new business sector providing individual components for use and re-use.

Encouraging innovation by **adding standardized modular and reversible design to the conditions for competitive bidding on public works contracts** and the development of **EU-wide indicators and standards for modular and reversible building design** would go a long way towards more sustainable, flexible and directly reusable building design and use.