



Demonstration box for circular construction within De Potterij

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More information: [link](#) (in Dutch)

Introduction

De Potterij in Mechelen is a former laundry and dry cleaning shop. Due to these former activities, the soil beneath the shop is heavily contaminated. In 2015, OVAM, the Public Waste Agency for Flanders, bought the site for the symbolic sum of one euro to remediate the pollution. As the cost for this remediation is almost 2 million euros, it greatly surpasses the value of the land and building. OVAM is determined to translate this vast investment into societal benefit. A concession for 25 years was granted to the city of Mechelen to transform the site into a local circular hub, together with OVAM. While this transformation process is ongoing, temporary occupation was sought, keeping the circular character in mind.

Miss Miyagi and BUUR won a Circular Flanders Open Call grant for their project proposal to design a circular, temporary occupation for the site. With help from DMOA Architects, VUB, VITO, Thomas More, VDAB, de Klusbib and over 19 circular

suppliers, the demonstration box for circular construction was built within the Potterij building. This was also the basis for OVAM's Interreg NSR ProCirc pilot, that focussed on an unconventional procurement, trading circular materials for exposure. With this pilot scheme, OVAM wants to lead by example and hopes to inspire professional procurers and citizens to opt for circular alternatives. Furthermore, it is a laboratory for the suppliers of circular construction materials, where they can examine how their products can be connected in situ. The box also provides comfortable conditions for the temporary occupants of the Potterij.

The demonstration box can also be visited online via a [virtual tour](#). This allows for a broad exposure of the circular materials and techniques that were used. The texts are in Dutch only, but even without reading them the virtual tour might offer an inspiring experience.



Procurement process

The construction and materials were not procured through a classical procedure. A market exploration and dialogue were conducted to identify relevant parties. The 15 suppliers engaged in the pilot, offered the use of their circular products in exchange for the exposure that the project would give them, and circular construction as a whole. Furthermore, some urban mining was done at the nearby Zwartusters site, an abandoned hospital.

An architectural firm was appointed to design the box according to the guidance for flexible construction design, making sure all the circular products fit together. Initially, the aim was to organise workshops for the public to construct the box, yet this had to be forfeited due to the Covid pandemic. Volunteers from the Klusbib, a library for tools to be used around the house and garden, offered their time to put the living lab together according to the plans drafted by the architects.

Results

- The circular construction demonstration box was constructed inside the 'De Potterij' building and is used by the 'Klusbib'. This makes for great exposure to local citizens

that are in the market for circular construction alternatives.

- Suppliers engaged in the project learned how their products could be aligned with those of others in a real construction site context. This will help them to write stronger offer documents and form consortia.
- With the support of Interreg NSR ProCirc, a virtual tour through the box was created, offering detailed information about the circular construction materials and principles. This will allow for broad exposure, including to professional procurers and builders.
- The box was constructed by the circular principle of maximising reusability. All the products are easily detachable. The lifetime of the box is flexible. When the time comes to dismantle it, materials will be returned to the suppliers who can give them a second life.
- Taking the above into account, it can be argued that virtually no waste is created by this project, especially compared to a classical construction for temporary occupation.

Lessons learned

- Over the last couple of years, the Flemish market for circular construction materials has evolved massively. The challenge remains in joining these materials in situ. This requires architects to start their design from the materials, rather than the other way around. The end-of-life solutions should be considered from the start. This should be taken into account in tenders, describing a starting point rather than an end result.
- Although the offer has grown and the Flemish Green Deal on Circular Construction has over 350 members, there is still a lot of potential for designers and builders to make the shift to circularity. There is also room for improvement in temporary occupation regulations, to stimulate a circular approach.
- A strong, interdisciplinary partnership with motivated individuals is key to make projects like these work.
- Dare to question if traditional procurement is the means to answer your needs and consider other possibilities such as reuse.