



Renovate: repair, reuse and recycle

A step towards a circular economy

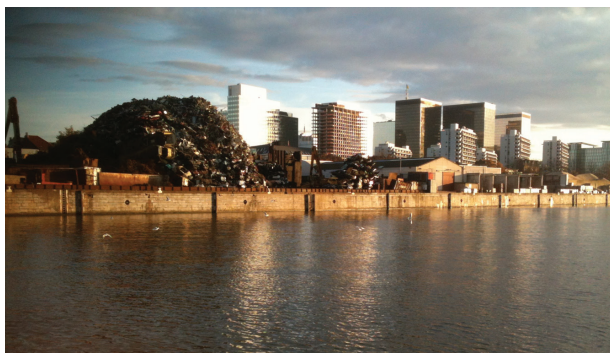
In Brussels, the dismantling and renovation of existing buildings constitute a real deposit of material and resources of building materials which can be put back into circulation and exploited again. The reuse or recycling of these materials gives them a new life, avoids waste and saves the production of new raw materials.

*It is the principle of the **circular economy**, nothing is lost, nothing is created, everything is transformed.*¹

The circular economy, as opposed to the traditional model of linear development “extract, manufacture, throw” is part of sustainable development by promoting a closed loop and extending the life of materials through repair, reuse, recycling ...

The aim of this brochure is to highlight solutions that promote the reuse of building materials and architectural elements in individual renovations.

Preserving a floor, moving doors, recovering tiles, maintaining and preserving window frames, repairing a balcony, etc. are all actions that enhance your home, extend the life of the materials and limit the need to “change everything” to satisfy new needs.



¹ Formula of Lavoisier quoted by BRUSSELS ENVIRONMENT, “Transition vers une économie circulaire”, august 2016 in www.environnement.brussels/thematiques/dechets-ressources/des-dechets-aux-ressources

Step 1: Preparation – Inventory

Before starting renovation works, it is ideal to draw up an **inventory** of the present materials in order to evaluate their potential. Identify elements with character, those that have heritage value, those that are simply in good condition, those you would like to keep, those you could resell or give.

The inventory will help you to determine the elements that could be:

- **Repaired or reused on site** for the same or a different use. Do not rely on your first impression, old items can often be repaired and shine with a new radiance!
- **Disassembled for reuse elsewhere.** You no longer see any utility for a material, and yet it is still in good condition? Consider to give it a new life in another place, by giving or reselling it. There are solutions!
- **Recycled.** When the material is too damaged and its reuse is no longer possible. The last recourse consists then in recycling it via adapted recycling networks.

Inventory: what questions should be raised?

- Is the material or element in good shape?
- Can it easily be removed?
- Does it have a heritage value?
- Is it present in sufficient quantity?
- Is it healthy? Beware of materials that may contain harmful substances, such as asbestos (partitions, window sills, vinyl tiles, glues, slates etc.) and lead paint.

Please note :

- Homegrade (formerly Centre Urbain) can help you to draw up this inventory, which will be a useful tool when you will be facing an architect or a contractor.
- If you undertake a major renovation, the choice of an architect and a company having an experience (or a motivation) in reuse, will enhance respect for the approach and its outcome.
- In 2016, a call for projects “be circular” was launched to support companies wishing to introduce circular economy practices. In all, 41 award winners were selected, including some in the building sector.

For more information, see the website of “be circular”:

www.circularprojects.brussels



“Key” materials or elements of reuse for individuals:

- Bricks and stones
- Doors, frames and ironmongery
- Panels and timber
- Tiled floors
- Floors
- Beams
- Kitchens
- Sanitary devices
- Radiators
- Tiles and wall coverings

study of CDR Construction, “Enquête sur les attentes en matière de matériaux de construction de seconde main en Région de Bruxelles Capitale”, Brussels, May 2015.

Some examples



A floor can easily be sanded and renovated.

If it is nailed or floating and assembled without glue, it will also be **removable** without damaging the boards for **reuse** or resale.



Cement tiles can be **disassembled and reused**.

The tiling laid on a bed of sand (traditional laying) can be dismantled without too much break. If the tiles are laid by gluing (glue mortar, levelling layer, etc.), dismantling them could turn out to be difficult, if not impossible without breakage.



A wooden door, subject to a meticulous dismantling and some possible repair works, can be **reused on site** in another room of the same accommodation, or may even find a new use (dividing wall, table, etc.).

Step 2: Valorisation of the existing elements

After the inventory, the next step consists in valorising the elements retained in the 3 categories “repair, reuse, recycle”.

Renovate and repair

According to your experience and material, interventions will be made by yourself or a professional.

Also consider regular maintenance to prolong the life and maintain a certain quality of the material.

Examples of commonly repaired / renovated elements:

- Wooden frames and doors (grafting, wood pulp, sanding, repairing joints, etc.)
- Solid wood floors (sanding, varnish or wax, etc.)
- Kitchen furniture
- Natural stones (graft, staple, repair mortar etc.)

For your information:

- Homegrade (formerly Centre Urbain) has published several specific brochures with practical tips to help you maintain various elements such as old wooden and steel windows, cellar windows, old wooden and metal doors, balconies, cornices, stained-glass windows, elevators as well as floor coverings: www.homegrade.brussels.
- Find a craftsman or a company specialized in repair and restoration works, check out Répertoire des Métiers du Patrimoine architectural: www.patrimoine-metiers.be.

Disassemble for reuse

As opposed to demolition (coarse destruction of materials without presorting), dismantling (deconstruction of an element, so that the constituent materials can be preserved) allows reuse.

The disassembly must be carried out carefully to preserve the materials or elements to be reused as well as possible.

Some specialized companies (such as resellers of second-hand materials in particular) may also include dismantling in their services.

For practical advice, the CDR Construction (Centre de Référence Professionnelle Bruxellois pour le Secteur de la Construction) has provided manuals for the disassembly of various elements and materials illustrated with videos : www.reuse.brussels



Give or resell

The second-hand materials sector is relatively well developed in Belgium. Whether through specialized resellers, resale sites or donations, there are several solutions to enable you to put back into circulation the items you no longer use.

The “**Opalis**” listing includes resellers specialized in second-hand materials in Belgium.

The Opalis site offers the possibility of research by material type and by geographical area. It also includes practical advice, indicative prices and technical descriptions for possible specifications.

Attention: the announced prices may include sometimes the transport, sometimes not.

www.opalis.be

Websites selling from particular to particular also offer good solutions to resell or give materials.

Attention : in order to be reused, the materials or elements must meet certain quality criteria and be in relatively good state. Building materials found on second-hand markets are generally materials that do not require structural or thermal guarantee, or the guarantee of fire resistance, etc.

Send to recycling networks

If reuse is impossible, sending to recycling channels is the last resort. For an efficient and quality recycling and in order to limit costs, it is important to carefully sort on site.

In sorting centres, materials are grouped by type and used to make new ones. Sometimes transportation is also included in the service.

Waste collection centre of Bruxelles-Propreté: www.arp-gan.be

List of materials which are selectively picked up in the sorting centers:

- Bricks, rubble, pebbles, stones
- Tiled floors, slabs, tiles
- Concrete, cement
- Plaster (pitch, plates and plastering)
- Treated and untreated wood
- Doors, frames, shutters made of wood, metal or PVC
- Gutters and pipes
- Building glass
- Sanitary appliances



Wood elements recycled through sorting centers can be used to produce new elements, such as particle boards, insulation, melamine furniture, pulp, etc.

Step 3: Incorporating second-hand materials

Opting for the principles of **circular economy** also means limiting the production of materials, by integrating second-hand materials into the renovation project. With a little imagination, it's an operation accessible to all.

Before you start buying, check the quantities you need and check if they are fully available. Indeed, quantities can be very different from one reseller to another.

The state of the materials can also vary, they can be delivered whether or not cleaned and sorted.

The prices of second-hand materials are also highly variable according to their state, the quality of material, as well as their heritage value.



© Opalis

Companies specialized in the resale of second-hand materials generally have a large stock. Materials often meet quality criteria. These resellers can also advise you and provide additional services (delivery, maintenance, etc.).

The list of resellers on the **Opalis site** allows you to find a specialist of the item that you are looking for.

On **second-hand resale sites from particular to particular**, the proposed products are often cheaper but the research may take a long time.

Think of the reversibility of your interventions: when you place a material, choose an installation method that allows easy dismounting in the future, and therefore a possible reuse.

To go further

Anticipate your renovations

As for your expansion or transformation projects, consider your longer term needs (type of occupancy and use), which will avoid future major renovations.

For example, provide a chute awaiting future cable ducts, a removable partition for a child's room, a passage for future ventilation in your newly insulated flat roof, an easily removable floor covering (not glued for example), so that each building component at the end of its life can be dismantled, replaced, reused or recycled.

Financing your project

Some banks propose that savers' money finance sustainable development projects exclusively, guaranteed under strict criteria. Their investments are visible by everyone, the financed projects are selected on basis of sustainability criteria and can then be consulted by the public. Using their services (entering a credit deal) thus helps to foster exemplary projects, respecting the environment and a social economy.

New elements or materials

When choosing new materials, it is important to consider their environmental impact. Prefer lasting materials that can be reused or recycled.

Avoid materials with chemical compounds that are harmful to the environment and to your health, avoid hybrid elements (composed of several materials), that are hardly recyclable, and favour natural materials (plant, animal or mineral type).

An increasing number of natural building materials are available on the market, such as wooden structures, natural insulation (wood fiber, hemp fibre, cork, cellulose, etc.), finish (natural paints, clay coatings, cork parquets).

To enrich your knowledge, see the sustainable building guide by Brussels Environment: www.guidebatimentdurable.brussels

Some examples



- 1 **Dismantling** of cement tiles in another room of the house and **reuse** as wall tiles.
- 2 **Reuse** of an old glass partition, dismantled at another site and replaced as partition wall.
- 3 **Dismantling, reuse and adaptation** of kitchen furniture.



@Julie Antoine

Sources

- OPALIS , Le réseau pour le réemploi des matériaux de construction, www.opalis.be
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- CIFIUL – RESSOURCES asbl – CCW, "Guide pratique du réemploi-réutilisation des matériaux de construction", 2013.
- Recy-K – Plateforme régionale de l'économie circulaire et de l'économie sociale.

To know more...

Centre Urbain and Maison de l'Energie unite their efforts under a new banner: **Homegrade**. This integrated service is intended to accompany individuals wishing to improve their housing in Region of Brussels.

Contact Homegrade:

at the counter: Place Quetelet 7 - 1210 Saint-Josse-Ten-Noode
from tuesday to friday from 10 AM to 5 PM
saturday from 2 PM to 5 PM

on the phone: to **+322/219 40 60**
from tuesday to friday from 10 AM to 12 AM
and from 2 PM to 4 PM

by mail: info@homegrade.brussels

www.homegrade.brussels

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