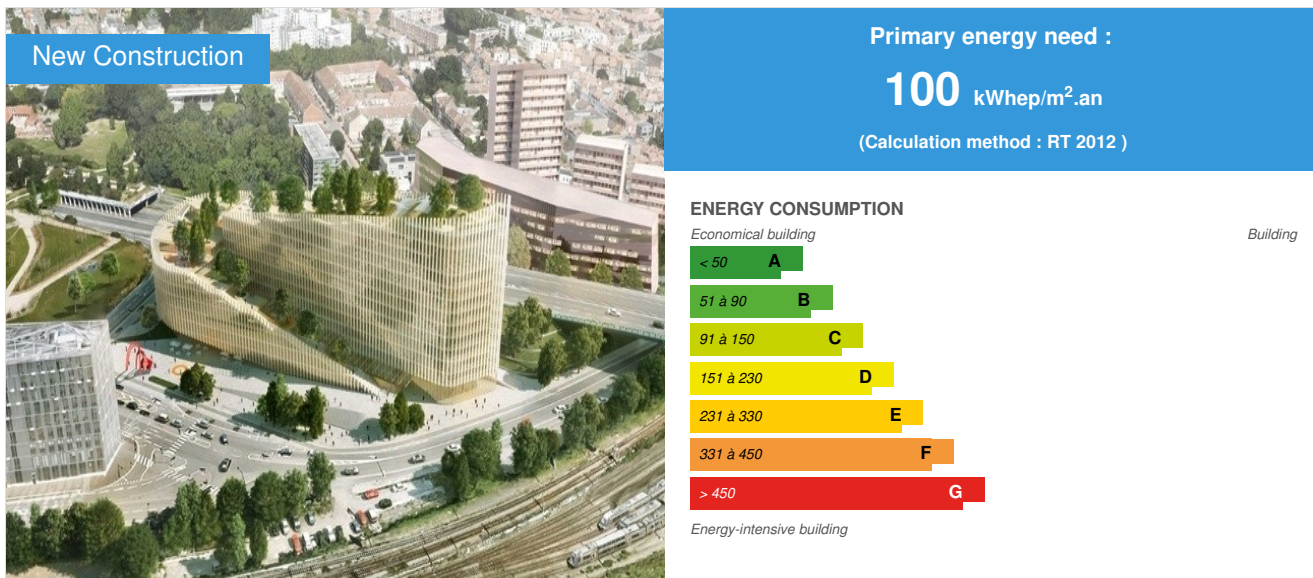


## Shake - Lille (59)

by [Camille Thiriez](#) / 2023-05-09 11:18:23 / France / 299 / FR



**Building Type** : Office building < 28m  
**Construction Year** : 2023  
**Delivery year** : 2023  
**Address 1 - street** : Avenue Willy Brandt 59777 LILLE, France  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

**Net Floor Area** : 30 000 m<sup>2</sup> SU  
**Construction/refurbishment cost** : 100 000 000 €  
**Number of Work station** : 1 500 Work station  
**Cost/m<sup>2</sup>** : 3333.33 €/m<sup>2</sup>

**Certifications :**



### General information

**Located in the heart of Euralille**, 3rd business district in France, ShAKe is much more than an architectural project, ShAKe carries a philosophy: well-being at work. ShAKe is revolutionizing the way of thinking about business real estate by relying on three major societal trends: the decartmentalization between private and professional life; the transition to a logic of use and sharing; and finally, the development of the notion of community.

30,000 m<sup>2</sup> at your service - **The architecture of ShAKe reinvents the codes** to decartmentalize offices and offer its occupants, as well as the actors of the district, a flexible, open and welcoming ecosystem. A space of services and resources for personal and collective fulfillment and development. A philosophy that fits with today's nomadic work interspersed with multiple times of life.

The building accommodates:

- 13,000m<sup>2</sup> of dedicated office space at Caisse d'Epargne regional headquarters
- 7,000 m<sup>2</sup> of office space occupied by the Tisserin group, the PWC firm...
- 3500 m<sup>2</sup> of coworking space

- 2,000 m<sup>2</sup> of space for a start-up incubator
- A hotel, restaurants, a fitness club, shops, a vegetable terrace...

The circular economy has been one of the areas of work and is part of Nacarat and the Tisserin group's desire to reduce the environmental impact of projects. Several actions have been carried out, including a particularly innovative experiment on the reuse of electric cables.

## BIM approach

BIM Design (GO model + technical lots) / for execution, only synthesis of technical lots and facades / BIM in-house operation of the Caisse d'Epargne.

## Photo credit

Samuel DHOTE

## Stakeholders

### Contractor

Name : NACARAT  
Contact : Maxime BLANQUART  
<https://nacarat.com/>

### Construction Manager

Name : PCA-STREAM  
Contact : Philippe Chiambaretta  
<https://www.pca-stream.com/fr/>

### Stakeholders

Function : Company  
Cegelec Nord Grands Projets  
Felix BUTRUILLE  
<https://www.cegelec-nord-grands-projets.com/>  
Electricity package

---

Function : Thermal consultancy agency  
BARBANEL  
<https://www.barbanel.fr/>

### Type of market

Realization

### Allocation of works contracts

Build and sell construction

## Energy

### Energy consumption

Primary energy need : 100,00 kWh<sub>ep</sub>/m<sup>2</sup>.an  
Calculation method : RT 2012

### Envelope performance

Air Tightness Value : 1,20

### Systems

#### Heating system :

- Heat pump
- Fan coil

#### Hot water system :

- Heat pump

#### Cooling system :

- Water chiller

#### Ventilation system :

- Double flow heat exchanger

#### Renewable systems :

- Solar photovoltaic

150 m<sup>2</sup> PV panels for SG in self-consumption + recovery of rainwater for drip supply of outdoor plantations

## Environment

### Biodiversity approach

Biodiversity is at the heart of the project's landscaping. In particular, the building incorporates 4,000 m<sup>2</sup> of terrace and vegetable terraces.

### Urban environment

The project is located in the heart of the EuraLille business district and in the immediate vicinity of the Lille Flandres and Lille Europe stations.

With a design that responds to an in-depth reflection on contemporary changes in terms of workspace, combining quality of use, economy of functionality and well-being of occupants, ShAKe offers an unprecedented tertiary offer in the Lille metropolis.

The project integrates a multitude of spaces to reconcile the multiple activities of each: 3,600 m<sup>2</sup> of co-working space, 2,000 m<sup>2</sup> of start-up incubators, 300 m<sup>2</sup> of retail, a concierge, a fitness room, an aparthotel, a crèche, an inter-company restaurant...

## Costs

### Construction and exploitation costs

Total cost of the building : 100 000 000 €

#### Additional information on costs :

The reuse was implemented at iso cost. Savings on purchases were offset by additional logistics and testing costs.

## Circular Economy

### Circular economy strategy

Phase in which reuse has been integrated : Execution studies

#### Type of circular economy strategy implemented :

- Targeting a few diversified products for testing
- Choice of non visible products
- Maximization of the carbon gain

#### Type of circular economy strategy implemented :

The reuse project was proposed by the company (Cegelec Nord Grands Projets), supported by the promoter (Nacarat) and the thermal consultancy agency (Barbanel) and the investor/operator (Caisse d'Epargne)

Validation protocol for reused materials : Yes

Validation protocol for reused materials :

Visual checks

Electrical controls

## Reuse : same function or different function

Batches concerned by reuse :

- Electricity

For each batch : Reused Materials / Products / Equipments :

Electricity package:

- 100 cables of 10 linear meters. Type H07
- Origin: Demantec company (TRACE group) in charge of reprocessing batches from the army.

Reused materials rate :

- The reused cables were used to power the exterior lights on the "thorns" of the building.
- Implementation identical to a new cable.
- Part of the laying of the cables for this use could not be done with reused cables because lengths of more than 10 meters were necessary.

## Logistics

Storage of materials from external supply :

- No problem of storage, supply correlated to the progress of the works

## Insurance

Specific mission given to the technical controller :

A cable sample was given to DEKRA for testing.

Discussion with the insurer :

The insurer has been informed of the process.

## Environmental assessment

Impacts avoided : water, waste, CO2 :

Savings thanks to reused cables (100 cords of 10m):

- 785 kg of CO2
- 810 m3 of water
- 1,750 kg of waste

The reuse operation saved the equivalent of:

- 6,278 kilometers traveled by a small car, i.e. 7 Paris-Nice journeys;
- 5,402 rectangular bathtubs filled with water;
- 3 years of household waste from a Frenchman.

## Economic assessment

Reuse quantified in the companies' offers? : No

Purchasing process for reused materials :

- Purchase by the company from a reuse platform

Purchasing process for reused materials :

Direct purchase from a reuse actor

More details on the economic balance :

No economic impact for the site.

The savings made on the purchase of reused cables (approximately 30%) were offset by logistics costs (approximately 10%) and testing costs (approximately 20%).

In a perspective of massification, the additional costs of logistics and tests should be lower.

New business model and financial balance :

Reflection in progress to implement a sector to consolidate the collection, inspections, tests and reconditioning of reused cables.

## Communication

Communication on the process : No

If so, please specify :

Communication to come later.

## Social economy

Social economy and professional integration :

The installation on the Shake of reuse cable did not allow collaboration with an SSE or professional integration company, but we are working on several projects which include removal in which SSE actors and insertion are integrated (Vitamin T, ID'EES groups).

## Contest

### Reasons for participating in the competition(s)

Towards an electrical cable reuse sector - Shake 1st pilot project!

Electric cables have a significant impact on the environmental balance of a commercial building. Indeed, copper is a material that requires a lot of energy for its manufacture. The CO2 impact of a linear meter of sensitive cable (< 5 mm<sup>2</sup>) is evaluated according to the INIES database at 1.8 kg. For a project like Shake, hundreds of kilometers of cable were laid to complete the electrical installation.

Based on this observation, a reflection emerged to use reused cables and the Shake building hosts the first implementation! The company Cegelec Nord Grands Projets (VINCI group), in charge of carrying out the electrical installations, used a layer of 10m flexible cable (HO7 3G2.5mm<sup>2</sup>) to power the exterior lighting on the building. About 100 cables with a length of 10m were laid and generated a saving of about 1.8 tons of CO2 (evaluation according to INIES database).

This achievement is part of an ambitious and innovative project: to set up a sector for the reuse of electric cables. A sector makes it possible to simplify and systematize the actions for all the actors. The industrialization of the different stages should make it possible to supply reused cables at a competitive price compared to new cables.

The reuse of electric cable in the Shake project is therefore the first step in setting up this sector in Haut de France. In particular, this makes it possible to **validate the insurability of the laying of reused cables**. This insurability notably involves the validation of a qualification and inspection process for electrical cables.

A set of joint actions are undertaken:

- Identification of deconstruction site with Nacarat to design a methodology for the careful removal of electrical cables. 3 tertiary projects in the Lille metropolitan area, totaling 7,000 m<sup>2</sup> of floor space, have been identified for selective deconstruction in 2023.
- Establishment of partnerships with companies in the social and solidarity economy:

The ESAT, the white butterflies in Roubaix-Tourcoing, organized in a workshop, for the control, the tests, the reconditioning and the storage of the electric cables.

Vitaservice, a subsidiary of Vitamine T, for the selective removal of cables and cable trays.

The organization of a sector and the establishment of a partnership make it possible to envisage reused electric cables being put back on the market at a competitive price compared to new cables, while improving the remuneration of removal companies.

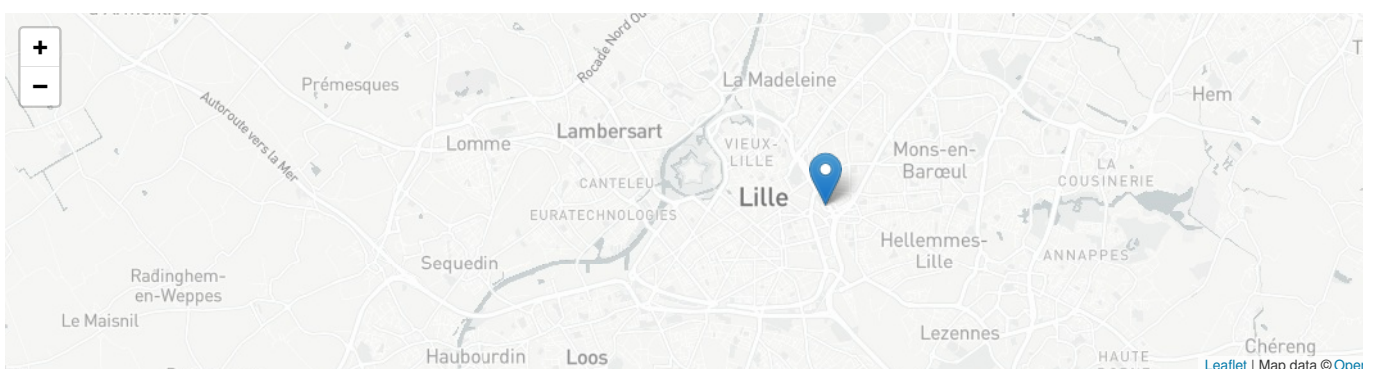
Ultimately, we believe that all deconstruction sites and construction sites could benefit from a channel for reusing electrical cables.

Other reuse actions

The genesis of the operation dates back 5 years, and in fact the reuse approach came as an additional ingredient and not as an initial strategic approach. This is why reuse approaches have focused on one-off, spontaneous initiatives during the more recent development phases of lessees.

Thus, during the development work of the tenants of the office part, and in particular the premises of the TISSERIN group, we proceeded to the selective removal of new carpets installed at the reception with a view to their reuse in the buildings hosting the Olympic Games. of PARIS 2024, via our partner TEXTIFLOR.

Still on this subject of flooring, we opted for a fitted carpet from a reuse sector (4000 m<sup>2</sup> approx.), via our developer TETRIS. The Rex that we can share is that approximately 2 out of 3 slabs on the reuse deposits transmitted could be laid, which allows a recovery of 65-70%, but does not seem sufficient to us in view of the expected massification on these subjects (track: better sorting at source to maximize the reuse rate).



Date Export : 20230713015341