SUSTAINABLE BUILDINGS IN BRUSSELS

BATEX RESULTS AFTER 6 CALLS
You are holding a calling card of the Brussels-Capital Region, as it were, enriched with images of the report on the six “Exemplary Building” calls for projects and illustrating the sustainable buildings created within this framework since 2007. These six calls aimed to demonstrate that achieving excellent energy and environmental performances is possible and relevant, within a reasonable financial budget. Every time, a panel of professionals has selected the best renovation or construction projects.

Today, delegations of construction professionals and authorities from the country’s other regions and abroad visit these exemplary sustainable buildings. The delegations come from near such as cities in the Flemish and Walloon Regions and neighbouring countries, but also from afar including Ireland, Canada, New York and even China. In order to acquaint them with the projects, they will meet the Brussels architects, engineers, contractors and developers involved.

After 6 calls for Exemplary Buildings, the time has come to renew our approach with a call for Be.Exemplary projects, a collaboration between Brussels Environment and Brussels Urban Development.

We will continue this wonderful journey and keep our attention focused on social, architectural and environmental aspects, but at the same time we are adding a new objective, which is to stimulate the implementation of the principles of circular economy.

This album can inspire more professionals - architects, engineers and contractors alike - and provide ideas for public and private project owners, in a firm commitment to build a sustainable future, which I invite you to discover through the following pages.

CÉLINE FREMAULT,
Minister responsible for Housing, Quality of Life, the Environment and Energy in the Brussels-Capital Region
At the beginning of 2007, BatEx was simply a “great idea”. A few months later, the first call for tenders for “Exemplary Building” (BatEx) projects appeared. After 6 calls, let’s take a moment to outline some of the characteristic features of this “great idea”, which has become an established reality.

The aim of this call for tenders is to stimulate demand, through a voluntary approach, in the market for sustainable buildings. It is therefore a question of demonstrating by example that it is completely possible and relevant to achieve excellent energy and environmental results within a reasonable financial budget. The projects selected must be noteworthy according to 4 criteria of equal importance: the highest energy performance, the lowest environmental impact, the reproducibility and profitability of the solutions envisaged and, finally, the urban and architectural integration of the building in its urban context. The last call in this format was launched in 2013 and the last Exemplary Buildings are scheduled to be completed in 2018.

BATEX IN 6 CALLS FOR TENDERS

A passive Exemplary Building, along the canal, which accommodates a business incubator for sustainable projects.
IT’S NOT JUST GRANTS
IT’S MUCH MORE …

€33 million granted in 6 calls for tenders to 243 projects, clearly, is no mean feat – compared to the total area of 620,000m², that represents a budget, for which the BCR (Brussels-Capital Region) is responsible, of €54 per m² of Exemplary Building. For an investment by the winners estimated at nearly €815 million, we can confidently say that a grant representing less than 5 % of the total cost is definitely worth it!

The mechanisms for allocating the grants (taking account of ceilings and the “de minimis” rule) have the effect of limiting the grants such that the “major players” do not walk away with everything. As a result, the average grant received per m² falls as the size of the project grows, which makes it possible to reach a greater number of players still with the same budget and to establish a critical mass. This proves that certain larger projects aspire recognition rather than focusing on obtaining a grant.

Average grant by category (€/m²)

<table>
<thead>
<tr>
<th>Category</th>
<th>average grant</th>
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</thead>
<tbody>
<tr>
<td>INDIVIDUAL HOUSING</td>
<td>97</td>
</tr>
<tr>
<td>COLLECTIVE HOUSING</td>
<td>53</td>
</tr>
<tr>
<td>OFFICES – SHOPS</td>
<td>38</td>
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<tr>
<td>FACILITIES</td>
<td>73</td>
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</tbody>
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[635] Avenue du Marly
In order to prevent overheating, this office project opted for passive cooling by introducing night cooling and a Canadian wall.
It’s also
TECHNICAL ASSISTANCE

More than 10 research bureaus analyse and/or support the BatEx projects, providing free technical assistance throughout the project tender process in order to help the designers and contractors achieve the quality objectives. This close involvement by these hands-on players plays an important role in developing and disseminating good construction practices and in matching and integrating the best skills in the matter.

It’s also
PROMOTION OF THE PROJECT AND ITS DEVELOPERS

“Exemplary Building” publications, brochures and building site tarpaulins, organisation of visits and presentation of projects at seminars and to the media are all elements provided to the winners in order to share their experiences.

Online, there is a page dedicated to the call for project tenders which draws together all the information on the BatEx initiative and the winners:

www.environnement.brussels/batimentsexemplaires

Petite Senne

A structure in entirely prefabricated, cross-laminated timber panels.

[17] Today, delegations of Belgian and foreign construction professionals come to visit the Exemplary Buildings and meet their Brussels counterparts. Here, a New York delegation visits the Croix-Rouge project.
Thermal insulation, airtightness, solar heat gains, energy recovery from mechanical ventilation and bioclimatic strategy are just some of the means of reducing energy needs (in heating or cooling) highlighted in the concept of passive construction, supported in the BatEx projects.

Of all the 243 winning projects, more than half are passive (56%), which is equivalent to a total surface area of 350,000 m². Those that are not passive meet the low, or even very low, energy criteria.

In order to prepare the workers who are not always used to this type of construction, the contractor created a mock-up of a facade element of ± 5 m².

Not-passive BatEx projects
Passive BatEx projects
It’s also
A SPECIAL FOCUS ON HEALTH AND COMFORT, ON WASTE, ON WATER, ON BIODIVERSITY... ON OUR ENVIRONMENT

Ecoconstruction, and everything that underpins it, is one of the 4 selection criteria. These parameters, which are often perceived as hard to quantify, are given special attention in the BatEx buildings. Indeed, the performance in itself is not the goal: the building must be pleasant to live in, an aim which the BatEx projects tackle fervently.

It’s also AN ECONOMIC RELEVANCE

“Comfort and saving energy is prohibitively expensive?” - not quite. Look at the 300 co-owners of the Héliport building, winners of the 2013 call for tenders. Or the many winners in the area of public housing, involving a total of 505 passive housing units, a sector imposing strict cost/m² requirements.

Here, there is no prototyping or high-tech approach, but instead a fine balance between the effort expended and the result obtained. In a word – efficiency.

It’s also
ARCHITECTURE AND HERITAGE

Can we talk of grand or modest heritage, or of grand or modest architecture? Whatever the answer, the BatEx projects and sustainable construction together encompass the entirety of our built environment.
IT'S NOT JUST FOR A PRIVILEGED FEW
IT'S MUCH MORE ...

It’s also SOCIAL HOUSING

Social housing tenants whose charges are higher than their rent? Not in the Exemplary Buildings! The public housing sector has fully understood the significance of this with no fewer than 762 “social” housing units of which 66% are passive units!
It’s also
PUBLIC FACILITIES

More than a quarter of the winning projects are intended to improve the daily lives of Brussels citizens. In particular, by improving the reception environment in the health care sector, such as the Brugmann Trauma Centre or the 4 winning nursing homes resulting from these 6 calls for tenders. Or by working together, like the SIAFU forward emergency post, the Brugmann hospital on the Brien site and the La Cerisaie nursing home, whose heat production is communal. (Young) childhood is not forgotten either, thanks to the 21 schools and 23 nurseries (private and public) which have appeared since 2007 as part of the BatEx programme.

It’s also
“MAINSTREAM”

When major private players such as Art & Build, Jaspers and Eyers or Elia invest in the field opened up by BatEx, we can allow ourselves to think that the exemplary role performed by the public authority since 2009 is bearing fruit. It’s also a sign that the image of a ‘select’ group of players associated with BatEx has had its day, and that sustainable recovery is gaining ground … sustainably in terms of the methods of designing and constructing our city today. The 800,000 m² of passive buildings under construction or on the drawing board today in the Brussels Region are another illustration of the influence of a voluntary programme such as BatEx.

It’s also
URBAN DEVELOPMENT

So where is BatEx? BatEx is everywhere! No, it’s not the new metro stop serving the “sustainable” area of Brussels, like a new Vauban, BasEco or BahnStadt in Heidelberg. BatEx is happening near you! And if you look more closely, you will notice that densely populated areas, with an acute need for residential renewal, are welcoming Exemplary Buildings in great numbers. Sustainable construction is therefore clearly meeting the needs and expectations of these areas. A great success! It can also be seen that it works on a larger scale. Indeed, districts and sections of city blocks are being (re)created in the context of the BatEx tenders.
IT’S NOT JUST A FEW FIGURES

IT’S MUCH MORE ...

6 calls for tenders
361 applicant projects
243 Exemplary Buildings
39% renovation projects
621,000 m² of which 350,000 m² is passive
100 projects with a public contracting authority
143 projects with a private contracting authority
18 communes
15,313 m² of individual dwellings
199,161 m² of collective dwellings, namely
1866 housing units
242,609 m² of offices and businesses
164,421 m² of collective facilities
3,752 m² of solar thermal panels
15,272 m² of photovoltaic panels
194 projects with green roofs

… so what?

These figures at least have the benefit of clearly illustrating the success, which was unexpected in 2007 then continuous until 2013, of this VOLUNTARY initiative based on the gamble of giving residents, businesses and the public sector the opportunity of achieving what they imagine to be beyond their reach, with the result that they will go even further.
There are also **TECHNOLOGICAL ADVANCES**

In 2007, the first passive building had barely emerged from the ground in the Brussels-Capital region. Today, airtightness is taken into account in each new build. And the initial prudent objectives are giving way to totally achievable ambitions, admittedly with a few areas requiring attention, but achievable nonetheless. This is the result of an experiment: you learn to walk… by walking! The evolution of the solution implemented in the Aéropolis building (a timber-framed shadow-box) towards that applied in the Elia-Monnoyer building is also a fine example of applied research, working closely in tandem with the reality of the context and integrating each parameter of the sustainable building. Bockstael primary school, was the first school to use a solid wooden frame, a technique imported directly from Austria, and not without some necessary adaptation by the Brussels builders. Today, the children play in these classrooms!

It’s also a **MOVEMENT**

Such a success could not remain without consequence. The recognition of the Brussels Region as “FrontRunner” in the development of sustainable construction is firmly established. The numerous national and European delegations visiting our BatEx projects (463 people in 2013 alone), and also a prize received from the European Commission and the various related programmes it finances are testament to this. Naturally, the BatEx projects do play a role. They have made it possible to establish the evolution of the EPB regulations and also to identify business sectors requiring more specific training and to provide these training courses in materials and specific examples. In addition, some substantive or technical issues have also appeared which need to be studied in more detail in collaboration with the sector. ArchiBatEx, an independent experience-sharing group in the construction of sustainable buildings in Brussels, has been created on the initiative of architects and contractors as a result of the issues encountered during their BatEx projects - mirroring the sector, so they say!

It is also **MEN & WOMEN**

While the winning projects are being carried out, the support teams realise how some projects are richer in more ways than simply producing a result (be it energy and/or environmental). Some projects, such as Brutopia, Biplan or Esprai, are rich in terms of meetings, sharing experiences and “free” collaborations. And that’s something that cannot be labelled one-, two- or three-star, or rated G to A++.

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THE BATEX PROJECTS PER YEAR

2007

[001] Maison de la jeunesse L'Avenir
Ch. d'Anvers 156, 1000 Bruxelles
[002] École Émile Bockstael
Rue du Heysel 104, 1020 Laeken
[003] Van Soust
Rue Van Soust 449, 1070 Anderlecht
[004] Créche Gauthier
Rue Rogier, 1020 Schaerbeek
[005] Créche n° 22
Rue du Gilden Bodem 2
1080 Molenbeek-Saint-Jean
[006] Téiser
Boulevard de l’imperatrice 17-19, 1000 Bruxelles
[007] Avenue Robinsch
Av. Robinsch, 1080 Schaerbeek
[008] Rue Fays
Rue Fays 20, 1020 Jette
[009] Rue Nys
Rue Antoine Nys 88, 1070 Anderlecht
[010] Hipostrat
Rue du Houlle 41, 1000 Bruxelles
[011] Fermes Nica Pils
Trasenweg 247-249
1130 Neder-Oever-Heimbeek
[012] Basse
Rue Basse 90, 1180 Uccle
[013] Waterlor
Ch. de Waterlor 1253, 1180 Uccle
[014] Vanscoy
Rue Vanscoy 50, 1190 Forest
[015] MRS-CRAS St Josse
Rue de la Côte 5, 1210 Saint-Josse-ten-Noode
[016] Louisaire
Rue Louisaire 42, 1090 Jette
[017] Wauters
Rue Joseph Wauters 61, 1030 Schaerbeek
[018] Dubroux
Av. J. Dubroux 222-224
1020 Molenbeek-Saint-Jean
[019] Archibald
Av. des Archibald 74, 1040 Etterbeek
[020] Bureau Etoile
Av. de Vilvorde 128, 1000 Bruxelles
[021] Montagne Saint-Joz
Rue Montagne de Saint-Joz 35, 1180 Uccle
[022] Atelier Mommaerts
Rue Comte de Flandre 43-51
1090 Molenbeek-Saint-Jean
[023] IML
Av. des Palais 51, 1070 Anderlecht
[024] Eerens
Rue Général Eerens 41, 1030 Schaerbeek
[025] Cannelon
Av. Ariane 15, 1200 Woluwe-Saint-Lambert
[026] Albatros Village
Ch. d’Heestert, 1130 Heestert
[027] Saulier
Av. Van Chai 1, 1120 Neder-Oever-Heimbeek
[028] Toutes les couleurs
Av. de toutes les couleurs 17
1200 Woluwe-Saint-Lambert
[029] Van de Wiskerseine
Rue Leon Van de Wiskerseine 29
1160 Auderghem
[030] Planhouse
Rue Richard Kips 20, 1040 Etterbeek
[031] Galaxie
Ch. d’Alsemberg 774-776, 1180 Uccle
[032] Van Volxem
Av. Van Volxem à 1190 Forest
[033] Diamant
Av. du Diamant 71, 1030 Schaerbeek
[034] Mô-Sûlade
Rue de Sûlade 24-30, 1080 Saint-Claes
[035] Pimme
Rue de la Pimme, 1080 Bruxelles
[036] CHU Brugmann
Rue du Foyer schaerbeekois 35
1020 Schaerbeek
[037] La Cerisaie
Av. Urbain Britsiers 1, 1030 Schaerbeek
[038] SMMU
Ch. d’Heestert, 1030 Schaerbeek
[039] Cygnes-Digue
Rue des Cygnes/Rue de la Digue
1050 Ixelles
[040] Astronord II
Av. Urbain Britsiers, 1030 Schaerbeek
[041] Diamantceaux
Av. Diamantceaux, 1070 Anderlecht
[042] Sauvonnier Heymans
Rue d’Anderlecht 135-147, 1000 Bruxelles
Avenue des Grands prix
This «golden» library is fully adapted for people with reduced mobility: accessible counter, elevator and customized signaling.

Bains des Laeken
The renovation of the pool and related gym will reduce energy consumption up to 90%.
More information

www.environnement.brussels/prosdubatiment

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Belle-Vue
This exemplary renovation transformed the former Belle-Vue brewery into a 4 star hotel complex with 150 rooms.