

Evaluation ENERBUILD-Tool – existing buildings

Les Jardins d'Eden



1 Basic information about the building

Name of the building	Les Jardins d'Eden (OPAC) Aix-les-Bains
Address of the building	Rue des Moellerons 73100 AIX LES BAINS, Savoie, France
Owner/investor	OPAC de Savoie (Social housing)
Year of construction	2008-2009
Building type	Social housing
Building method	Concrete with exterior insulation
Number of buildings	1
Number of levels above earth	R+4
Number of levels underground	1
Kind of the public use	44 apartments
Effective area for public use in m ² (net)	
Additional private uses	
Effective area for private use in m ² (net)	
Total effective area in m ²	4 990,38 m ²
Source of energy for heating	Gas
Heating system	Collective condensing gas boiler with heating floor
Water heating system	Solar thermal with auxiliary condensing gas boiler
Date of the building evaluation	16/12/2010

2 Execution of the building evaluation with the ENERBUILD tool

Responsible Organisation: ASDER (Association de Développement des Energies Renouvelables),
Local energy agency

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Temperature for thermal comfort in summertime: 28 °C

Local limits for heating demand: 50 kWh/m² for heating, hot water, lighting and auxiliaries

3 Results

Nr.		Title	Must criteria (M)	max. points	evaluated points
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A		Quality of location and facilities		max. 100	100
A	1	Access to public transport network		50	50
A	2	Ecological quality of site		50	50

B		Process and planning quality		max. 200	110
B	1	Decision making and determination of goals		25	25
B	2	Formulation of verifiable objectives for energetic and ecological measures	M	20	0
B	3	Standardized calculation of the economic efficiency	M	40	0
B	4	Product-management - Use of low-emission products		60	0
B	5	Planning support for energetic optimization		60	60
B	6	information for users		25	25

C		Energy & Utilities (Passive house)		max. 350	243
C	1	Specific heating demand (PHPP)	M	100	76
C	2	Specific cooling demand (PHPP)	M	100	100
C	3	Primary energy demand (PHPP)	M	125	24
C	4	CO2-emissions (PHPP)		50	43

D		Health and Comfort		max. 250	0
D	1	Thermal comfort in summer		150	0
D	2	Ventilation - non energetic aspects		50	0
D	3	Daylight optimized (+ lightening optimized)		50	0

E		Building materials and construction		max. 200	162
E	1	OI3 _{TGH-ic} ecological index of the thermal building envelope (respectively OI3 of the total mass of the building)		200	162
Sum				max. 1000	615



4 Conclusions from the building evaluation with the ENERBUILD-Tool

a) Generally

Collecting data is the longest phase for the evaluation of the ENERBUILD tool.

b) About the planning process

Evolution positive of the project: a good coordination (listening, discussion, propositions) between the project owner and the team of the project manager enabled the evolution of a "a little bit ambitious" project (the initial objective was only of the THPE (RT2005-20 %) because the program started in 2006 thus at the beginning of the application of the RT2005) towards BBC. There was a strong mobilization of companies working on the construction site and the raising awareness of all the workers to the approach (participation of all the corporate associations during the tests of airtightness: companies showed a real interest noticed by the owner).

c) About the building itself

This project had for objective to reach an energy performance but it did not take into account environmental criteria. So, no natural material except the wood in facade was used for its conception.

d) About the evaluation process

No access to data for criterion D2

5 Suggestions for improvement of the ENERBUILD-Tool

Criterion A1: Access to public transport network access

Proposal to extend this criterion to other infrastructures valuing friendly transport (cycling and train station in particular).

Criteria B: project management

Proposition to consider the social aspect: coeducation of housing, nearness of the businesses or the creation of spaces reserved for the business / service industry aiming, among others, to reduce the environmental impact of the movings, the work in partnership with the municipality for the opening up of the district, on the management of the waste, the integration of the renovation of the school. In this project: integration in a program ANRU (National agency for urban renovation) with general reflection on all these points.

Criterion B5: energy Optimization

Proposition to widen this criterion to the specific electricity. For example, proposition to take into account equipments allowing the reducing of the consumptions of lighting in common sections: lighting by bright button and timer; the number of levels ordered simultaneously does not exceed 3 levels or every floor is independent from the others, above the ground floor. There is also lighting by detector of presence including a crepuscular switch.

Criterion D2: ventilation Air quality

- Proposition to decompose this criterion into 2 sub-levels:
- Preservation of the criterion on the acoustic measures by softening and by simplifying the indicator criteria.
- Addition of a line on the quality of the ventilation, according to the activity of the building.
- Proposition to insist more on the evaluation of the air quality by an analysis of the air quality on site for example.