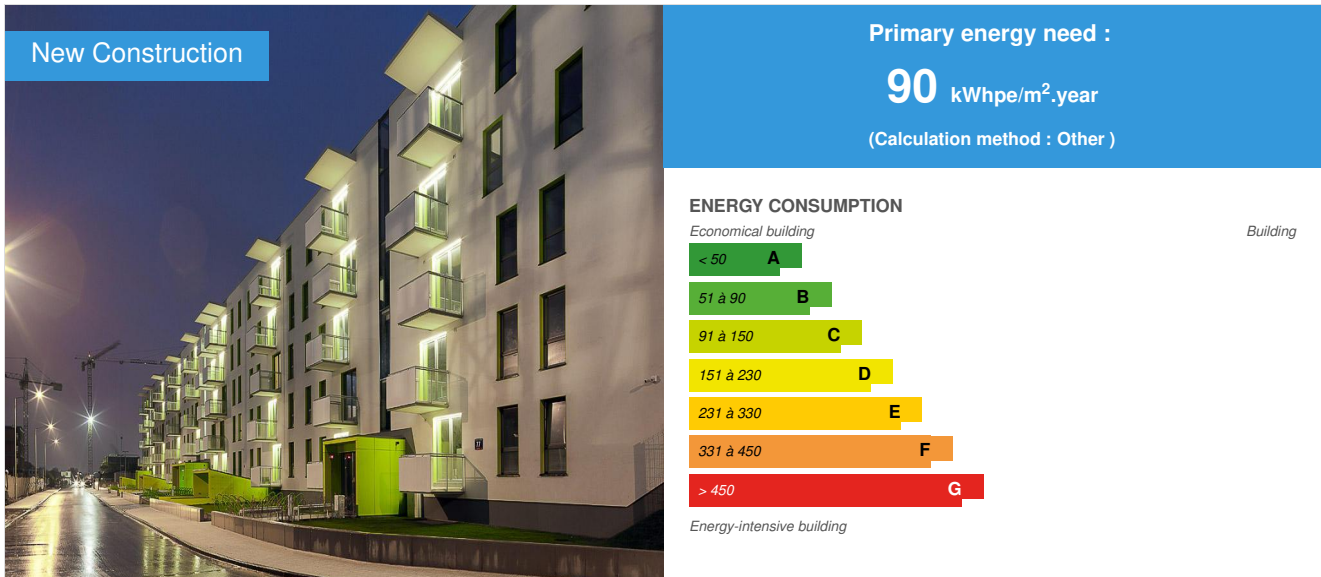


Accent Vert & Accent Eco

by Andrzej Soltysik / 2016-07-03 15:10:10 / International / 10658 / EN



Building Type : Collective housing < 50m
Construction Year : 2015
Delivery year : 2016
Address 1 - street : 01-305 WARSZAWA, Poland
Climate zone : [Dfb] Humid Continental Mild Summer, Wet All Year

Net Floor Area : 12 557 m² SHON (fr)
Construction/refurbishment cost : 9 000 000 €
Cost/m² : 716.73 €/m²

Certifications :



Proposed by :



General information

The **ACCENT VERT & ACCENT ECO** project is located on the outskirts of Warsaw on a former agricultural land, in a neighbourhood that is today rapidly developing and will soon be just next to the new metro line. The buildings are located just a few hundred metres from one of the main North-South motorways in Poland, making it easy to reach from the centre of Warsaw. Situated near Gorczewska Park, the project already benefits from all the infrastructure in the Bemowo district such as schools, businesses, shopping centres and service stations.

This scheme consists of two multi-family residential buildings with 292 apartments in total. Moreover, under each building there is an underground carpark and there are multiple places dedicated to storing bikes on the surface.

BOUYGUES IMMOBILIER POLSKA sp. z o.o. - a company from the French BOUYGUES S.A. Group, is the developer of this project. Sustainable development forms essential part of the Group's strategy, with a particular emphasis on the corporate social responsibility and environmental protection. BOUYGUES IMMOBILIER implements these policies in a formal and organized manner, in accordance with respecting all shareholders' interests, as well as maintaining employees' satisfaction. Group's efforts in this field have been visible in a variety of residential and office projects delivered within the last years, and also have been confirmed and appreciated by several prizes and certificates, including the HQE certificate.

The project has been designed by ARCHITEKCI DAWIDCZYK & PARTNERZY firm and constructed by PBM POLUDNIE S.A. - general contractors. Accent Vert

has been handed to its inhabitants in December 2015, whereas the Accent Eco's commissioning is expected in Q4' 2016.

See more details about this project

<http://www.bi-polska.pl/o-firmie/inwestycje-zrealizowane/accent-vert>

Stakeholders

Stakeholders

Function : Designer

ARCHITEKCI DAWIDCZYK & PARTNERZY

<http://www.ad.waw.pl/>

Function : Construction company

PBM POLUDNIE SA

<http://www.pbmsa.pl/>

Contracting method

General Contractor

Type of market

Realization

Energy

Energy consumption

Primary energy need : 90,00 kWhpe/m².year

Primary energy need for standard building : 105,00 kWhpe/m².year

Calculation method : Other

Breakdown for energy consumption : 46% Heating and ventilation
54% Hot utility water

Envelope performance

Envelope U-Value : 0,23 W.m⁻².K⁻¹

More information :

No average U-value available. The number presented (0.23) concerns external U walls of reinforced concrete with styrofoam insulation in the Accent Vert part.

For other parts it looks as follows:

- Flat roof (reinforced concrete with styrofoam) - achieved 0.15 (required 0.2);
- External walls (Reinforced concrete with styrofoam and mineral wool) - achieved 0.23 / 0.25 (required 0.25);
- External windows (PVC) - achieved 0.9 / 1.3 (required 1.3);
- Windows and external doors (aluminium) - achieved 1.3 (required 1.3);
- Arcades (above the underground carpark ramp, made of reinforced concrete with styrofoam) - achieved 0.16 (required 0.2);
- Ceilings (reinforced concrete with styrofoam and mineral wool) - achieved 0.17 (required 0.25);

More information

Primary energy need for the building, as well as the one for standard building have been assessed by an independent auditor in accordance with Polish legal requirements regarding energy certificates for new buildings (EU compliant).

Renewables & systems

Systems

Heating system :

- Urban network

Hot water system :

- Urban network
- Solar Thermal

Cooling system :

- No cooling system

Ventilation system :

- Natural ventilation
- Free-cooling

Renewable systems :

- Solar Thermal

Environment

Urban environment

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This scheme consists of two multi-family residential buildings with 292 apartments in total. Moreover, under each building there is an underground carpark and there are multiple places dedicated to storing bikes on the surface.

The main target of project's team was to create a pleasant environment. Apartments exposure has been set on the advantageous east-west axis ensuring lots of natural daylight inside. Attractive greenery and small architecture, presence of a water reservoir and vegetable garden are other 'green' aspects of this scheme.

The developer has also implemented solutions targeted at promoting 'eco-mobility' - provision of multiple bicycle racks for inhabitants and the bike path on the adjacent Batalionow Chłopskich st. delivered few years ago by Bouygues Immobilier Polska.

Furthermore, simple and aesthetic shape of buildings, designed in line with local zoning constraints, create pleasurable entourage advantageous for inhabitants' rest. Buildings' visual attractiveness has been achieved by its proportions, eye-catching arrangement of windows on the façade and unique shape of balconies.

Land plot area : 16 269,00 m²

Built-up area : 25,00 %

Green space : 4 868,00

Products

Product

Viessmann solar heating system - DIS 50

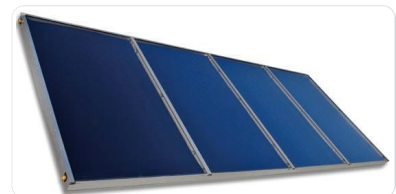
Viessman

<http://www.viessmann.com/com/en.html>

<http://www.viessmann.com/com/en.html>

Product category : HVAC, électricité / heating, hot water

There are ten solar heating system panels installed on the roof of Accent Eco, with nearly 5 sqm of surface each.



Because of its innovative character and contribution to decreasing the pollution, the product received an undivided acceptance of all members of the project team.

Dynamic thermal modelling by Arup

ARUP

Ove Arup & Partners International Ltd Sp. z o. o. Oddział w Polsce

<http://www.arup.com>

Product category : HVAC, électricité / ventilation, cooling

The DTM was used to analyse the building and its location (including sun path and shading analysis) and to provide a prediction of space temperatures and comfort conditions in the interior spaces.

The modelling has been carried out using the Warsaw weather data file to ensure that the model accurately reflects the location of the building.

The weather data used by IES include 8760 hourly records which enable the software to carry out dynamic building performance simulations.

The three-dimensional detailed thermal model has been created using plans, sections, elevations and general arrangement drawings provided by the project architects. The building's orientation has been adjusted according to the site plan.

The results indicate that for this project, external conduction losses are only 6% of the total energy consumption for heating purposes. Improvement of external fabrics insulation resulted in unnoticeable energy savings when compared to increased investment costs.

not applicable



Costs

Carbon

GHG emissions

GHG in use : 30,22 KgCO₂/m²/year

Methodology used :

Assessed by an independent auditor in accordance with Polish legal requirements regarding energy certificates for new buildings (EU compliant).

Contest

Reasons for participating in the competition(s)

Going green - To begin with, these are the very first residential buildings to be HQE certified in Europe (outside France). With this project, Bouygues Immobilier Polska is demonstrating its expertise and commitment to sustainable development. The developer is a true pioneer in Poland, the first to use the HQE tool to certify the quality and comfort of its housing units. The quality of these buildings highlights the effectiveness of the HQ Schemes dedicated to residential buildings. Benefiting from a forty-years-experience in housing in France, they keep evolving to meet needs, contexts and scientific and technical innovations.

Delivering attractive product - what is crucial for the customers - in line with the budget of future buyers, project certification did not result in any price increase. The project's team target in the beginning was to deliver to clients high-quality flats in good location at a price which would be competitive for first-time buyers and Bemowo residents willing to move to a new and comfortable home. In the end, the developer managed to deliver a place with a definitive competitive advantage compared to many projects of other developers in this part of Warsaw. For the same price, the customers have received a product which is consistent with the group's values: respect for the environment and improvement in the residents' quality of life.

Building and its neighbourhood - the main target of location's analysis was to create a pleasant environment. Apartments exposure has been set on the advantageous east-west axis ensuring lots of natural daylight inside. Attractive greenery and small architecture, presence of a water reservoir and vegetable garden are other 'green' aspects of this scheme.

The developer has also implemented solutions targeted at promoting 'eco-mobility' - provision of multiple bicycle racks for inhabitants and the bike path on the adjacent Batalionow Chlopskich st. delivered few years ago by Bouygues Immobilier Polska.

Furthermore, simple and aesthetic shape of buildings, designed in line with local zoning constraints, create pleasurable entourage advantageous for inhabitants' rest. Buildings' visual attractiveness has been achieved by its proportions, eye-catching arrangement of windows on the façade and unique shape of balconies.

Technical, sanitary and environmental quality of materials, works and finished elements - thanks to implementation of a procedure regarding design, material choice and approach for execution of works, only the certified and attested materials have been approved for use on construction site. As a result, the risk of using materials affecting users' health or of carcinogenic potential has been significantly mitigated. In the end, thanks to the analysis and comparison of technical qualities of available materials, only those of highest quality and durability have been selected, with no negative influence of the apartments' price.

To conclude, the use of high quality anti-dusting paints and finishing materials as well as long ventilating of apartments before their handover, have all contributed to the better quality of living space and sanitary quality of air.

Responsible construction - in this field main have been focused on regular monitoring of water and electricity consumption for construction purposes, limiting the number of construction waste (i.e. using concrete waste to create concrete slabs for a temporary road for construction purposes), proper waste sorting and handing it for recycling to specialised firms, as well as responsible storing of materials and rubbish targeted at diminishing the risk of polluting the environment.


Energy management - in cooperation with ARUP, the appointed international engineering consultancy firm, a dynamic thermal simulation model has been created in order to assess the possibilities of optimising the buildings' energy performance. Moreover, at the design stage, the architects have resigned from unnecessary partitioning the buildings in favour of a simple form, which cuts back the heat losses.

In part of the building, there is a solar panel installation to heat the utility water which contributes to decreasing the demand for energy in summer months. In

common parts, there is a movement activated lighting system, with some twilight sensors and external LED lighting. In addition, the used elevators in the buildings are also energy efficient.

Acoustic comfort - the design team has paid particular attention to implement solutions targeted at protecting apartments from unnecessary noise, which concerned in particular the activities related to design and execution of sound insulation between apartments and installation of machines, with a special emphasis on the elevators.


Building candidate in the category



Energy & Temperate Climates



Green Building Solutions Awards 2016
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Users' Choice Award

