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. BOUYGES 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

Function : Designer
ARCHITEKCI DAWIDCZYK & PARTNERZ
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 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).
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

The ACCENT VERT & ACCENT ECO project is located on the outskirts of Warsaw on 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.

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 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.

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

Product category: HVAC, electricité / 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. Oddzial w Polsce
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
unnecessary partitioning the buildings in favour of a simple form, which cuts back the heat losses.

created in order to assess the possibilities of optimising the buildings' energy performance. Moreover, at the design stage, the architects have resigned from
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.
number of construction waste (i.e. using concrete waste to create concrete slabs for a temporary road for construction purposes), proper waste sorting and

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
handling 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 or machines, with a special emphasis on the elevators.

**Building candidate in the category**

![Energy & Temperate Climates](image)

**Users' Choice Award**

![Map of Warsaw](image)