

## New project of the Faubourgs d'Anfa

by Marvin Mouton / 2018-06-13 17:35:15 / Maroc / 9312 / FR



Primary energy need :

**39** kWh<sub>ep</sub>/m<sup>2</sup>.an

(Calculation method : Other )

### ENERGY CONSUMPTION

*Economical building*

*Building*

< 50 **A**

**A**

51 à 90 **B**

91 à 150 **C**

151 à 230 **D**

231 à 330 **E**

331 à 450 **F**

> 450 **G**

*Energy-intensive building*

**Building Type** : Collective housing < 50m

**Construction Year** : 2018

**Delivery year** : 2018

**Address 1 - street** : Bd Sidi ABdellah Ben Cherif , 20000 Casablanca Maroc 20000 CASABLANCA, Maroc

**Climate zone** : [Csa] Interior Mediterranean - Mild with dry, hot summer.

**Net Floor Area** : 14 660 m<sup>2</sup>

**Construction/refurbishment cost** : 43 550 000 €

Cost/m<sup>2</sup> : 2970.67 €/m<sup>2</sup>

## Certifications :



## General information

- The Faubourgs d'Anfa is a real estate transaction carried out by Bouygues Immobilier Maroc, located in a developing district. The operation is located in the heart of a developing city in the heart of a 100Ha park, the SWC tower, and Other offices, this space is called Casa-Anfa.
- Qualified HQE operation which is delivered by CERWAY, which has in its scope of environmental labels concerning the Green Site OfficePlatinum and ECOSITE clean building.
- The project accounts for 2 separate buildings, accounting for 108 dwellings in total. Several configurations are available: from the small area (studio) to the Duplex.
- The choice is one of the project's strengths, timeless (marble and wood joinery) or modern (anthracite gray tiles and white upholstery)
- On the outside of the buildings there are green areas, secure design paths and delimited by common fences and a playground for children in the heart of the island, which allows a high quality of life together in the residence. The footprint of the residence and bounded by fences and access are secured by codes or badges, a guardian is present 24/24 in each building, It is necessary to have unbadge to be able to move from zone to zone.
- The accommodations are compact and functional. The comfort inside is ensured by various dispositions taken by the Master of Operation. First of all, the very high performance acoustic and thermal insulation systems on the front and between the apartments ensure great peace of mind.
- Also, the layout of the buildings on the plot as well as the orientation of the apartments was studied by the architect Omar Alaoui to provide the future occupants with the most appreciable views, in addition to a maximum natural brightness in the accommodations for optimal visual comfort.
- In terms of equipment and services, the apartments are equipped with a home automation system that can manage either for the easement assembly or for each room the position of the shutters, the lighting, the temperature, and allows a continuous follow-up of energy

consumption relaxation.

· A self-adjusting VMC system is also installed (air intake above the exterior joinery and extraction openings in the damp rooms), which allows the continuous renewal of the indoor air to avoid harmful odors and mildew during prolonged absence of occupants. The sanitary equipment (showers, taps, bathtubs ...) are of good quality certified and has a system of reduction of water consumption to improve the energy performance of housing.

## Data reliability

3rd part certified

## Stakeholders

### Contractor

Name : ANFA 3B2I - BOUYGUES IMMOBILIER MAROC

Contact : BOULAFRA (06 61 08 91 56) / Jérémiah COZAR (07 62 75 30 29)

<https://www.bouygues-immobilier.com/>

### Construction Manager

Name : Bouygues immobilier

Contact : 06 61 08 91 56 Karim BOULAFRA

<https://www.bouygues-immobilier.com/>

### Stakeholders

Function : Designer

Omar Alaoui Architecte

<http://www.omaralaoui.ma/>

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Function : Assistance to the Contracting Authority

Bureaux Veritas

AMO HQE

<http://www.bureauveritas.ma/>

## Owner approach of sustainability

Subscription and obtaining environmental labels HQE

Excellent 10-star passport and ILTIZAM

Respect of the environmental procedures specific to the Bouygues Construction sites around the world, namely Green Site Office Platinum, and Ecosite.

## Architectural description

The Faubourgs d'Anfa is a very high-class Residential Residence, consisting of 391 dwellings developed over three building blocks, for a total of 7 separate buildings. The architecture is part of a modern architectural register.

Designed in R + 8 with 2 levels of parking common to each slice. The facades are coated white to remind the city of Casablanca. A spirit of greenery has been duplicated so that the surroundings of the residence is pleasant for both residents and passersby.

This project was designed to reduce its impact on the environment by obtaining the HQE Passport Excellent certification with a 10-star level.

The accommodations have been designed to meet the needs of various and varied, ranging from studios to spacious T4, all homes are compact for an optimisation of the living space. They are also equipped with several complexes of thermal and acoustic insulation for an optimal comfort of the residents. Moreover, the services chosen by the Client comply with outstanding of the operation, thanks to equipment and materials of quality. was also chosen to position the air conditioning units on the roof to avoid damaging the aesthetics of buildings.

## Energy

### Energy consumption

Primary energy need : 39,00 kWh<sub>ep</sub>/m<sup>2</sup>.an

Primary energy need for standard building : 50,00 kWh<sub>ep</sub>/m<sup>2</sup>.an

Calculation method : Other

Final Energy : 53,00 kWh<sub>ef</sub>/m<sup>2</sup>.an

Breakdown for energy consumption :

Heating: 0.959 kWh / m<sup>2</sup>

Air conditioning: 17.53 kWh / m<sup>2</sup>

Lighting: 20.20 kWh / m<sup>2</sup>

Water system: 9.91 kWh / m<sup>2</sup>

Auxiliaries: 3.98 kWh / m<sup>2</sup>

Pumps: 0.66 kWh / m<sup>2</sup>

[More information :](#)

Delivery in progress, we have no operating data yet.

## Envelope performance

Envelope U-Value : 0,44 W.m<sup>-2</sup>.K<sup>-1</sup>

[More information :](#)

Complexes of thermal and acoustic insulation have been set up for the outer walls of the apartments, the dividing walls of the dwellings, the internal walls of the dwellings and also in the floors of the buildings

Building Compactness Coefficient : 0,17

Indicator : EN 13829 - n50 » (en 1/h-1)

Air Tightness Value : 0,80

## Real final energy consumption

Real final energy consumption/functional unit : 53,00 kWh<sub>ef</sub>/m<sup>2</sup>.an

Year of the real energy consumption : 2 018

## Renewables & systems

### Systems

[Heating system :](#)

- Fan coil
- Others

[Hot water system :](#)

- Individual electric boiler
- Solar Thermal

[Cooling system :](#)

- VRV Syst. (Variable refrigerant Volume)

[Ventilation system :](#)

- compensated Air Handling Unit

[Renewable systems :](#)

- Solar Thermal

Renewable energy production : 43,00 %

## Smart Building

### BMS :

A home automation system is installed at the entrance of the housing to control the position of the shutters, the lighting of the rooms and their temperatures.

It allows a regular monitoring of the energy consumption of the apartment.

### Users' opinion on the Smart Building functions :

Customers very satisfied with this adjustment system during frequent visits of their property throughout the construction site.

## Environment

### GHG emissions

#### Methodology used :

HOURS

GHG before use : 44,00 KgCO<sub>2</sub> /m<sup>2</sup>

Building lifetime : 100,00 an(s)

### Life Cycle Analysis

Several studies were conducted by various stakeholders and verified by

### Water management

Consumption from water network : 44,00 m<sup>3</sup>

Water Consumption/Dwelling : 0.11

### Indoor Air quality

The housing has a VMC system with air intakes at the levels of the exterior joinery and extraction vents in the damp rooms. This VMC operates continuously and is self-adjusting as needed. In addition the units are equipped with a reversible air-conditioning concealed in the

false ceiling of the dry rooms, which allows on the one hand a better visual comfort (no apparent radiator), and an ease of use with a thermostat of atmosphere positioned in each dry room. This equipment allows a great thermal comfort, and does not evolve in an environment subject to mold and degradations

## Comfort

### Health & comfort :

All equipment, materials and services have been carefully selected to provide comfortable and sustainable housing. Indeed the comfort and health of future occupants were at the center of discussions when choosing all these parameters: thermal / acoustic insulation (high-performance insulation complexes), visual comfort (implementation of buildings and exhibition reflected by architects) quality of life (materials and finishes of good quality and high-end equipment).

### Acoustic comfort :

High-performance acoustic insulation complexes on the facade, between apartments horizontally and

vertically. Acoustic tests were also carried out throughout the construction site at different times of the day and place of the buildings so that no situation was forgotten, and these tests were conclusive on all the slice 1 (being delivered), for optimum acoustic comfort for future residents

## Products

### Product

Solar panels and sanitary hot water tanks

Ariston et Chaffoteau

Pas de contact, contacter par le site internet

<http://www.ariston.com/fr/>

**Product category :** Table 'c21\_italy.innov\_category' doesn't exist SELECT one.innov\_category AS current,two.innov\_category AS parentFROM innov\_category AS oneINNER JOIN innov\_category AS two ON one.parent\_id = two.idWHERE one.state=1AND one.id = '3'

Solar panels and BECs were installed on the roof for the panels and in the flats for the balloons. The panels cover 40% of the DHW needs future occupants. Once this 40% is reached, the water is heated by electricity.

It was necessary to find solar panels and BEC compatible for this association works the best possible, Ariston equipment and Chaffoteau being compatible for this kind of installation we chose these suppliers.

[https://www.construction21.org/maroc/data/sources/user \(...\)](https://www.construction21.org/maroc/data/sources/user (...))

## Costs

### Construction and exploitation costs

Renewable energy systems cost : 3 484 000,00 €

### Urban environment

On the outskirts of the city center, future business district

### Green space

Green space : 3,00

## Building Environmental Quality

### Building Environmental Quality



- acoustics
- waste management (related to activity)
- energy efficiency
- renewable energies
- maintenance

## Contest





# Reasons for participating in the competition(s)



## Building candidate in the category




Energy & Climats Chauds



Bas Carbone



Santé & Confort





Smart Building



Coup de Cœur des Internautes

Date Export : 20230405042453