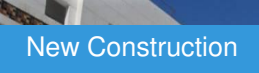



# Hanaa EL ALF - Rte Unit, Ain Sbaa, Casablanca

by Zakaria SADIK / 2015-02-08 11:23:05 / Maroc / 21482 / FR

**Primary energy need :**

53 kWhep/m<sup>2</sup>.an

(Calculation method : Other )

**ENERGY CONSUMPTION**

Consumption Range (kWhep/m <sup>2</sup> .an)	Grade
< 50	A
51 à 90	B
91 à 150	C
151 à 230	D
231 à 330	E
331 à 450	F
> 450	G

*Economical building* (A-C) | *Energy-intensive building* (D-G)

**Building Type** : Collective housing > 50m  
**Construction Year** : 2012  
**Delivery year** : 2015  
**Address 1 - street** : ain sbaa CASABLANCA, Maroc  
**Climate zone** : [Cfb] Marine Mild Winter, warm summer, no dry season.

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**Net Floor Area** : 33 000 m<sup>2</sup> Autre type de surface nette  
**Construction/refurbishment cost** : 12 534 286 €  
**Number of Dwelling** : 640 Dwelling  
**Cost/m<sup>2</sup>** : 379.83 €/m<sup>2</sup>

## General information

The "32 Hanaa El Fal buildings in Ain Sbaa" worn by the Sponsors Corporation Immobilière Labem, is among the projects selected by the Delegation of the European Union. The project incorporates energy efficiency provisions and aims to comply with the minimum guardrails future the code of Energy Efficiency in the Construction (CEEb).

In addition the project has a strong social connotation that this project, as part of its innovative financial arrangements in partnership with local institutions, helped to rehouse 440 families originally living in town tins, in decent, comfortable and consistent with residential standards in force.

### Data reliability

Assessor

## Stakeholders

Stakeholders

Function : Assistance to the Contracting Authority

Bureau Veritas Maroc

Zakaria SADIK

Support to the Call for demonstration project "Energy Efficiency - EuropeAid". Under the National Programme for Energy Efficiency in the building, ADEREE receives from the European Commission for financial support

## Contracting method

Separate batches

## Owner approach of sustainability

Committed to sustainable development, the promotion of Real laben Company has chosen to make the housing in an integrated energy efficiency approach from design, when making and along the farm. In this sense, laben "Client" has commissioned Bureau Veritas as a controller of the technical provisions related to EE for compliance with EU requirements and to accompany the energy efficiency of processes applied to the project .

## Architectural description

Note that bioclimatic architecture greatly helps reduce energy requirements for heating, cooling and lighting. The project of El Fal integrates architectural provisions to take advantage of free solar gains through windows of prolonged occupation spaces (living room, kitchen and bedroom), to protect themselves from their disadvantageous effects (overheating, glare) by the establishment shutters cranes in the living room and bedrooms and natural ventilation of the stairwell (heat circulation and natural lighting). This environmental approach is maintained throughout the project. Indeed, the following were verified along the project implementation period: -Setting up of dual flow flush (6/3 liters), -Robinetterie the sink-type mixer with aerator (aerator) - equipped with mixer tap type shower and water jet venturi, -Revêtement wall and floor tiles easily washable, -Revêtement the walls of the bathroom and kitchen tiles full height.

## Energy

### Energy consumption

Primary energy need : 53,00 kWhep/m<sup>2</sup>.an

Primary energy need for standard building : 110,00 kWhep/m<sup>2</sup>.an

Calculation method : Other

## Renewables & systems

### Systems

Heating system :

- No heating system

Hot water system :

- Solar Thermal

Cooling system :

- No cooling system

Ventilation system :

- Humidity sensitive Air Handling Unit (Hygro B)

Renewable systems :

- Solar Thermal

Renewable energy production : 60,00 %

## Products

### Product

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DesignBuilder Software



<http://www.designbuildermaroc.com/>

Product category :

DesignBuilder Version 4.1 is by far the most significant upgrade in the history DesignBuilder. It brings significant new features and enhancements 3D modeler that makes it incredibly flexible and even improves your productivité. Modeleur 3D Calcul surface quantity surveys, floor areas and volumes based on their true construction thicknesses of each item. Presets Convention geometric modeler offering new ways to define the geometry of the blocks. Boolean geometry, cuts, stretching now guarantee to systematically generate valid blocks. The Grid tool accelerates the placement of your components specifically for CFD components and assemblies. The tool Adding surface can reconfigure existing geometry in a very flexible way. A block of symmetry tool allows blocks or groups of blocks to be copied with a mirror effect. Improved import BIM charging each space as a block, includes BIM and thermal properties of building surfaces, materials and glazing. Linear thermal bridges at junction available with automatic calculations meters linéaires. Simulation EnergyPlus Dernier EnergyPlus v8.1. Simulation Manager allows EnergyPlus simulations be queued and launched in parallel on the computer or network servers. The results are loadable in DesignBuilder or consult with the Results Viewer tool. New Results Viewer software provides visibility of all EnergyPlus results and their comparison with other simulations. Includes temperature, mass flow rates, humidity HVAC Detailed systems for networks and air and eau. LEED ASHRAE 90.1 Des presets construction, glazing, lighting and activity allow you to easily create a baseline model. HVAC systems ASHRAE 90.1 baseline 1-10 inclus. Visualisation Outil offering cutting transverse views within the building. The shadows are now displayed in area and block as at the site and used bâtiment. CFDNouveau recirculation fan ceiling fans, server rooms, geothermal etc. CVC PAC with vertical drilling option and integration and GLHEPRO GLD. Systèmes solar thermal for heating and ECS. Ventilation controlled by demand including options for ASHREA 62.1 Distributions IAQP. Les VRP and air temperatures by Displacement Ventilation and blowing under the slab can be finely modélisées. Vue graphic HVAC performance curves in the Refroidissement Calculs modeleur. Dimensionnement cooling sizing several months. The peak loads of the synthesis report provides an option for a calculation coincide or not coïncident. Les loads systems / block / CTA can be calculées. Base or zero carbon emissions and Renouvelable Panneaux Photovoltaic. Éoliennes. Posts electricity production with batteries, inverters, etc. Climate wells for ventilation zone. Localisation and location data météo Base Data ASHRAE 2013 update - 6500 now places files disponibles. Derniers weather EnergyPlus - 2900 now inclus. Données sites monthly sizing cooling locations added to . Analyse condensation risk condensation Analyse based on ISO 13788. Financier Estimation costs construction. Analyse operational tariff for energy cost calculations with pricing options complexes. Analyse life cycle costs provides overall costs bâtiment. Gestion licences Nouveau of the more flexible licensing system allows the software to be used offline.

Dynamic Thermal Simulation Tool according to ASHRAE standards, RT2012 or CEEB of the EA code in Morocco, the software is adaptable and scalable as the context and location of the transaction that the user wants to know model and its performance énergétique. It is also recognized by the USGBC (LEED) by BRE (BREEAM) and Certivea and Cerway for HQE. C'est software with a calculation engine EnegyPlus, allowing calculation of the natural illumination (KRF) , BREEAM and LEED certifications, the calculation of the overall cost and carbon footprint, sizing and optimization of HVAC positions but also reported the cost per m2 for your entire project or a part of the project ... test yourself free for 30 days and judge for yourself ([http://www.designbuildermaroc.com/telechargements\\_version-4.php](http://www.designbuildermaroc.com/telechargements_version-4.php)) ou contact us at: designbuilder.maroc@gmail.com

## Costs

## Urban environment

Green space in the heart of the island.

## Parking spaces

Exterior

## Building Environmental Quality

### Building Environmental Quality

- comfort (visual, olfactive, thermal)
- water management
- energy efficiency
- renewable energies
- building process
- products and materials

## Contest

## Building candidate in the category





Energies renouvelables



**Green Building  
Solutions Awards 2015**

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