

## Office of Triodos Bank in Malaga

by Paloma Suárez / 2017-06-16 00:00:00 / España / 15758 / ES



Renovation

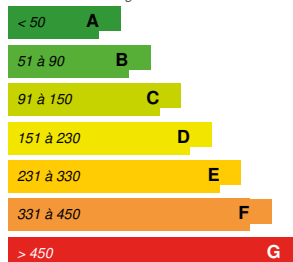
Primary energy need :

**42** kWhpe/m<sup>2</sup>.year

(Calculation method : RD: 47/2007 )

### ENERGY CONSUMPTION

Economical building



Building

**A**

Energy-intensive building

**Building Type** : Other commercial buildings

**Construction Year** : 2016

**Delivery year** : 2016

**Address 1 - street** : CÓRDOBA, 9 29001 MÁLAGA, España

**Climate zone** : [Csb] Coastal Mediterranean - Mild with cool, dry summer.

**Net Floor Area** : 185 m<sup>2</sup>

**Construction/refurbishment cost** : 361 485 €

**Number of Visitor** : 3 Visitor

**Cost/m<sup>2</sup>** : 1953.97 €/m<sup>2</sup>

Proposed by :



### General information

The project consists of the adaptation of part of a commercial space located on the ground floor of a housing building in 1954, to open the new office of Triodos Bank.

The property, protected in GRADE 1, had a good state of conservation. A geoenvironmental analysis was carried out in which a strong electric field was identified in the southeast corner of the premises due to the building's accountant chart, which was determinant in the distribution of the program for the office space.

The project respects the external configuration of the facade, intervening only in the interior space. The reformed surface is of 237,35 m<sup>2</sup> constructed distributed in a single floor. The premises are divided into 4 main areas: the Welcome Zone, the Networking space, the Personalized Attention Zone and the Service Space. These spaces are united by an inner skin that defines each one of them. Particular design of furniture, lighting, signage and landscaping was made.

Passive and active design criteria have been taken into account, ranging from natural lighting to the lighting control system, with the aim of achieving a healthy, non-toxic, friendly and beautiful space for people who work there or visit it. The constructive solutions used have been chosen considering three values of the materials: the low impact of their emissions, the non-toxicity and the enhancement of the characteristic Mediterranean identity of the place.

We have created an office idea that forever changes the experience of visiting a bank. The first 100% sustainable Bank Office designed listening to people. Their spaces have to convey the values and innovation of the leader of ethical banking, and meet 3 requirements:

- To be sensitive to the needs of people and their neighborhood: their environment and context.
- Generate content, community and action. Help foster empathy in a more sensitive, kind and respectful society with people.
- To be 'effectively', environmentally friendly offices.

Concepts of work:

GLOCATION is a term that comes from the fusion of the words globalization and localization: think globally and act locally. Although there is a global concept for the development of the new offices, a number of differentiating elements are identified that confer the local character of each of them depending on the geographical situation of the project, the urban environment, the construction tradition and the Aesthetic values.

In the case of Malaga, the pebble pavement in the welcome area, is a local material that adapts to the urban interior character of this space. The design of the tile motif is made specifically for this office with a very Mediterranean character. The facings lining and interior carpentries are made of mud and chestnut wood, respectively. An orange tree and several ferns are the native plants chosen for the planters of the office. The insulation is of cork, thermocal and projected cellulose, chosen according to the characteristics of the premises and the traceability. The exterior cladding of the cashier, by Dibond, conforms to local regulations.

COMMUNITY: We have developed a process of designing what will be the new offices of Triodos Bank. The project includes two parts: a new "service design", which enables a new way of relating to customers; And on the other hand, a new space that is no longer just a bank office for transactional use, but allows other kinds of conversations and meetings with added value, an office that builds community around Triodos Bank.

A space where relationships between people linked to the bank are built and strengthened in order to build networks. A flexible and versatile meeting place that can accommodate different activities throughout the day or week. Thus, to date, there have been events and talks such as those related to the Malaga Film Festival or meetings of the NESI Forum.

ECOLOGY: The Malaga office is the first bank branch in the process of obtaining the BREEAM sustainable building certificate in Spain, with a rating between very good and excellent.

It has the ECOMETRO Life Cycle Analysis certificate and by offsetting the CO2 emitted in the construction process and by avoiding emissions in its operation, we can consider it a ZERO CO2 space. Has energy rating A.

In the design process, the most demanding sustainability standards have been followed, taking into account criteria of bio-construction, energy efficiency, life cycle analysis, environmental psychology, geoenvironmental analysis, renewable energies and environmental quality.

So we can say that the office uses 100% energy of renewable origin and is monitored energy consumption so that it is reduced by 50-70

## See more details about this project

[http://satt.es/portfolio\\_page/las-nuevas-oficinas\\_networking-de-triodos-bank/](http://satt.es/portfolio_page/las-nuevas-oficinas_networking-de-triodos-bank/)

## Data reliability

Assessor

<https://www.triodos.es/es/conozca-triodos-bank/noticias/notas-de-prensa-triodos/apertura-oficina-malaga/>

## Stakeholders

### Stakeholders

Function : Developer

TRIODOS BANK N.V. ESPAÑA

Óscar Sanz Broncano

<https://www.triodos.es>

Function : Construction Manager

ALTAVE

Ramón Prous

<http://www.altave.es/index.php?lang=es>

Function : Designer

sAtt Arquitectura Abierta

## Contracting method

Other methods

## Owner approach of sustainability

Triodos Bank has proved during 35 years that it is possible to do banking in another way. An ethical and sustainable bank, which takes into account the well-being of people and the environment. It is transparent, close and with long-term vision. The offices that have developed so far took into account the sustainability in its construction, but the Malaga office is the beginning of a new concept. The society is undergoing a transformation with two values that are going to be essential in the coming years, new technologies and sustainability. The new offices are going to face these challenges from the values and the ways of doing of the bank. The relationships will be hybrid and will combine the digital and face-to-face relationship; there will be a space of pure banking operations to be a meeting space where the community is strengthened. These relationships must be carried out in healthy, toxic, friendly, beautiful and energy-efficient spaces and responsible consumption.

## Architectural description

We have developed a process of the design that will follow the new offices of Triodos Bank. The project includes two parts: a new "service design", which enables a new way of relating to customers, and on the other hand, a new space that is no longer just a bank office for transactional use, but allows other kinds of conversations and meetings with added value, an office that builds community around Triodos Bank. The premises are divided into 4 main areas: the Welcome Zone, the Networking space, the Personalized Attention Zone and the Service Space. These spaces are united by an inner skin that defines each one of them. Particular design was made of furniture, lighting, signage and landscaping. The life cycle analysis of the materials in their phases of manufacture, construction, use and end of life has been carried out; calculating the impacts of global warming, depletion of the ozone layer, photochemical oxidants, acidification, eutrophication, depletion of abiotic resources and energy consumption. The tool used for this is Ecómetro, which was born to measure and visualize the impacts on architecture and urbanism on Earth, on ecosystems and on human health, as well as being a collaborative, open and accessible tool. Through this analysis, the amount of CO<sub>2</sub> emitted in the construction process has been determined and subsequently compensated with reforestation projects in Nicaragua. CO<sub>2</sub> has also been compensated for the work visits of the facultative management and the construction company. The contracted energy is through a contract with Gesternova, which guarantees that its sources are 100% renewable. Materials have been used according to this life cycle analysis, such as hydraulic tile and mud, which have no energy cost in their manufacture. A vertical garden has been installed, with a fan that causes the air to pass through the roots of the plants. Adequate vegetation has also been chosen for the geographic location. A geoenvironmental study has been carried out to determine the electromagnetic fields, underground currents or crossings of Hartmann lines, in order to place the workers in the areas of least affection. Both the furniture designed specifically for the office, as well as the selected catalogs, has followed the ergonomic criteria established according to the corresponding regulations. Lighting is a determining factor in the design. The spaces are optimized for natural lighting, which can be controlled by manual darkening systems. The artificial lighting is controlled by a DALI system, which the program and regulates adapting at any time to the situation. The space is zonified thermally, so that the air conditioning is optimized and the comfort of the users is favored.

## If you had to do it again?

In order to visualize and support sustainable construction, a Breeam certification is being processed, and the decision to do so in the post-construction phase generates more difficulty in facing it. For future offices, this aspect should be improved by deciding to include them in the design phase.

## Building users opinion

After the opening of the office, visits have been made to know its status, as well as talks with the director of the branch and exchange of opinions with users. So far, the response is very good and more and more events are being held in the office, proving that the idea of community reinforcement is being carried out satisfactorily.

## Energy

### Energy consumption

Primary energy need : 42,00 kWhpe/m<sup>2</sup>.year

Primary energy need for standard building : 74,00 kWhpe/m<sup>2</sup>.year

Calculation method : RD: 47/2007

CEEB : 0.0001

Breakdown for energy consumption :

Primary energy heating = 1.17

Primary energy refrigeration = 10.29

Primary energy ACS = 12.26

Primary Energy Lighting = 18.39

More information :

The consumption of ACS is determined by the calculation program, but in practice it is much smaller since there is only a 25 liter deposit to service the office.

## Renewables & systems

## Systems

### Heating system :

- VAV System

### Hot water system :

- Individual electric boiler

### Cooling system :

- VRV Syst. (Variable refrigerant Volume)

### Ventilation system :

- Double flow

### Renewable systems :

- Other, specify

Renewable energy production : 100,00 %

### Other information on HVAC :

The air conditioning of the premises is carried out in a way that ensures at all times the conditions of comfort and healthiness in all the areas of the projected premises. The necessary cold and heat production is carried out by means of a heat pump: a VRV type machine located on the roof of the building, as discussed in the previous section. This is an outdoor unit of Variable Refrigerant Volume series VRV IV of Daikin model RXYQ10T. The ducts are raised by an existing skid located in the forging of the distributor.

Refnet seals are placed, and the refrigeration pipes are insulated with elastomeric shell of variable thickness depending on the diameter of the pipe. The following indoor units are used, adapted to the type of space required for air conditioning:

The power supply is contracted with Gesternova, which ensures that 100% of the energy has a renewable origin. The supporting documents have been attached.

## Environment

### GHG emissions

GHG before use : 67 000,00 KgCO<sub>2</sub> /m<sup>2</sup>

### Life Cycle Analysis

Life Cycle Analysis (LCA) is a method to evaluate the environmental impacts of a system, taking into account its complete life cycle, "from cradle to grave". This means taking into account all the impacts associated with p

**Eco-design material :** Soil insulation with SUROLITA (cork + cement) Wall and ceiling insulation with PROJECTED CELL Roof insulation with THERMOCAL Flooring and wall coverings of MOSAISTA HYDRAULIC FLOOR (handmade) Flooring of NATURAL GUIJARRO Flooring and cladding of ceramic tiles of MATIMEX (with recycled aggregates) FSC certified chestnut wood for furniture, luminaires and carpentry EMBARRO thin-walled wall cladding Wallcovering with clay paint by ECOCLAY KNAUF Plasterboard VERTICAL GARDEN

### Indoor Air quality

The hygienic renewal of the air will be carried out in a continuous way, varying the flow between a minimum value (closed branch) and a maximum (maximum capacity). To do this, two twin fans with low sound pressure are used, one to introduce external air (intake) and the other to remove the vitiated air (expulsion). The air inlet line begins in a grid located in the upper fringe of one of the openings in Vendeja street, through which air is introduced to the intake fan, passing first through two type F6 and F8 filters. The already filtered air continues to several air supply ports, or they are integrated into the air conditioning diffusers of the air conditioning system. The return is made through integrated grilles in the false ceiling of Heraklith. There is an environment sensor with display for CO2 model SCHAT-AD of the S & P brand located in the entrance pillar (where the tree is located), since this is the environment of the area of the premises subject to the patterns of More unpredictable or variable occupations. This detector activates or deactivates the ventilation according to the particles per million (ppm) existing in the interior environment.

### Comfort

**Health & comfort :** A geoenvironmental study has been carried out to determine the electromagnetic fields, underground currents or crossings of Hartmann lines, in order to place the workers in the areas of least affection. Lighting is a determining factor in the design. The workstations are placed in such a way as to favor natural lighting, which can be controlled by polyscreen blind dimming systems. The artificial lighting is 100% LED and is controlled by a DALI system, which programs and regulates it adapting according to the hours of operation of the office and the levels of natural lighting that receives through sensors placed in ceiling. The air conditioning of the premises is carried out in a way that ensures at all times the conditions of comfort and healthiness in all the areas of the projected premises. Thermal modeling of the room has been carried out. VRV equipment is placed on the deck and distributed through indoor units that fit into each space they serve. The space is zonified thermally, so that air conditioning is optimized: -SALA 1: Cassette-type split. It has a thermostat. You can manipulate the temperature from it. -SALA 2: Cassette split. It has a thermostat. You can manipulate the temperature from it. -OFFICE: Split type wall. The occupants can manipulate the temperature by means of control. -ALL FACILITIES: Split type wall. Can be programmed or manipulated by command. - PERSONALIZED ACCESSORIES: Split type conduit with rotational diffusers. It has thermostat. You can manipulate the temperature from it. -WARNING AND PATIO

(NETWORKING): Split type conduit with multi-toothed water. It has thermostat. You can manipulate the temperature from it.

Calculated thermal comfort : Invierno\_máx.21º Verano\_mín.25º

Acoustic comfort : The possibility of noise coming from the new building and affecting nearby buildings sensitive to noise within a radius of 800m distance is reduced. To verify this, tests have been carried out by a laboratory accredited by ENAC.

## Products

### Product

Hydraulic tile

Mosaista

info@mosaista.com

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

Product category :

Hydraulic tile with artisan production technique.

It allowed the design by the creative team and advised on the way to do it, which carried out a very helpful collaborative work. They were in charge of the treatment of the pavement after the placement in work. Chosen after performing the life cycle analysis comparison.



Ceramic tile

Matimex

vtraver@matimex.es

<http://www.matimex.es/>

Product category :

Ceramic tile with recycled aggregates

Chosen after performing the life cycle analysis comparison



Vertical garden

Vertiarte

patriciaharing@gmail.com

<http://vertiarte.com/>

Product category :

Vertical garden created by vegetated panels of 50x50cm "biofiver".

It is an element that allows to improve the quality of the air since its panels leave the plants' rhizosphere exposed in a chamber through which the air circulates.

## Costs

### Construction and exploitation costs

Total cost of the building : 361 484 €

## Urban environment

The office is located in Cordoba Street, 9, in Malaga, in a neighborhood considered the Arts District (Soho Malaga), an initiative carried out by the citizens themselves to rehabilitate the area betting on a cultural dynamization. It is a building of 1954, rehabilitated and with the ground floor destined to commerce. Cordoba Street is one of the main communication routes of the city center with the port. In the same door of the premises there is a urban bus stop that connects it with both the center as with the station of regional and national trains and buses. In the same sidewalk of the premises is also the taxi stop space. At 100m, there is the Alameda Principal and 500m Paseo España, two of the main green areas of the city. Within a radius of no more than 600m are pharmacies, sports centers, health centers and other banking offices. The office has spaces to park 3 bicycles in the welcome space. The General Urban Plan of Malaga and the Special Plan for Protection and Interior Reform (PEPRI) of the Historic Center has taken into account for the realization of the project.

## Land plot area

Land plot area : 237,00 m<sup>2</sup>

## Parking spaces

There is indoor parking for 3 bicycles.

## Building Environmental Quality

### Building Environmental Quality

- indoor air quality and health
- consultation - cooperation
- comfort (visual, olfactive, thermal)
- energy efficiency
- integration in the land
- products and materials

## Contest

### Building candidate in the category



Salud & Comodidad



Premio de los Usuarios



Date Export : 20230620140613