

Una manera de hacer Europa



BUENAS PRÁCTICAS

Actuaciones Cofinanciadas

"Installation in one of the frontages of the City Council of Ciudad Real of a vertical garden that contributes to the improvement of the air conditioning"

City Council of Ciudad Real

**Programa Operativo
Plurirregional de España**

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Fondo Europeo de Desarrollo Regional

The action "Installation in one of the frontages of the City Council of Ciudad Real of a vertical garden that contributes to the improvement of the air conditioning" is presented as a Good Practice.

This action has consisted of the construction of a vertical garden equipped with 2,500 plants of about fifteen different species, which acts as a bioclimatic thermal envelope for part of the building's frontage. This is the second phase of the Ciudad Real City Council's Energy Rehabilitation works, which have allowed for comprehensive action.



Taking advantage of the need to carry out improvements to the façade of the Municipal Tourist Office, a modular system of easy maintenance that houses the plantations has been installed. It has a recirculated irrigation system to optimize water consumption, and sensors to check the state of the vegetation. This 62 square meters vertical garden is fully automated to improve its performance through a control system with remote access that allows to adapt the detected needs of water or nutrients of the plants.



Works have allowed the adaptation of the existing interior patio at the back of the Tourist Office to locate the necessary technical installation, as well as the passage of water pipes through a false ceiling.

It also includes the integral maintenance of the system through specialized personnel to guarantee the control and supervision of the installation, fertilization, phytosanitary treatments, pruning or the replacement of plants that need it.

The eligible cost of this action is 99,800 euros, the ERDF aid being 80,000 euros, and the impact of this translates into the reduction of air conditioning needs in the building by 25%.

It is considered a good practice since:

1.- The role of the ERDF in the action has been spread properly among the beneficiaries, potential beneficiaries and the general inhabitants:

Citizens has been well informed since the action has been broadcast in compliance with the communication obligations set out in the Regulations, with its corresponding poster, plaque, and informing about it on the single portal (<http://edusiciudadreal.es>).



During the execution of the works, a fence with information of the works and the contribution of the ERDF was installed, as well in the bidding procedure.



The project has been conveniently disseminated among the beneficiaries, potential beneficiaries and the general inhabitants thanks to different communication actions focused on the publication of news and reports in newspapers and digital newspapers:

Una de las fachadas del Ayuntamiento de Ciudad Real se cubrirá con un jardín vertical

Eusebio García del Castillo - 4 noviembre, 2019 - 11:43 32 Comentarios

Presentación jardín vertical del Ayu...

Ver en YouTube

La alcaldesa de Ciudad Real ha presentado esta mañana una estructura bioclimática aislante, "es decir, un jardín vertical", que se instalará en una de las fachas del Ayuntamiento, como parte de las obras de rehabilitación energética y acondicionamiento de la Casa Consistorial a cargo de la Estrategia de Desarrollo Urbano y Sostenible Integrado (EDUSI).

Por último, el jefe de servicio de Parques y Jardines, José Arrieta, ha señalado que las plantas que se emplearán serán las que se adaptan a este tipo de instalaciones, y que se ha tenido en cuenta para su elección la orientación de la fachada o la climatología de la zona. Se ha optado por una combinación de especies, "rústicas" y que requieren bajo mantenimiento, que garanticen la presencia de flores durante la mayor parte del año, principalmente de marzo a noviembre.

Contrataciones

En relación también a la Estrategia de Desarrollo Urbano Sostenible e Integrado, la Junta de Gobierno Local ha aprobado la contratación de aparejador, de un arquitecto y de un ingeniero superior industrial, que será financiada a través de los fondos FEDER. Un equipo de trabajo que realizará tareas de redacción y supervisión de diferentes proyectos urbanísticos enmarcados en la EDUSI. La contratación se hará por un período máximo de tres años.

Ciudad Real: El jardín vertical está casi listo

La obra del jardín vertical en la fachada de la Casa Consistorial donde se ubica la Oficina de Turismo está muy avanzada y ya puede apreciarse el resultado. Una actuación que ha generado cierta controversia, pues no son pocos los vecinos, al igual que algunos grupos políticos de la oposición, que se trata de un desperdicio innecesario en una situación de crisis sanitaria y económica como la actual. No obstante, desde el equipo de Gobierno insisten que el proyecto está financiado con fondos europeos destinados a la rehabilitación energética del Ayuntamiento.



La obra, que ha supuesto una inversión cercana a los 100.000 euros, ha sido cofinanciada por el FEDER, lo cual supone para la ciudad un ahorro del 80% de su importe. Se trata de un proyecto que, tomando como referente a la naturaleza, contribuye a mitigar el efecto isla de calor, consigue estructuras como ésta ayudan a bajar las altas temperaturas, aseguró días atrás la concejala de Sostenibilidad, Mariana Boadella.

Boadella: «El jardín vertical es muy innovador y puede convertirse en un elemento icónico que atraiga visitantes hasta el centro de la ciudad»



La concejala de Sostenibilidad, Mariana Boadella, ha hecho estas declaraciones a preguntas de Lanzadigital, en relación a la controversia que ha surgido en las redes sociales por parte de algunas personas que indicaban que el dinero invertido en el Jardín vertical se podía haber destinado a paliar los efectos de la Covid-19, ha querido dejar claro que del total de la inversión (cerca a los 100.000 euros) "el Ayuntamiento ha puesto 20.000 euros, mientras que todo el dinero restante proviene de Europa, a través de fondos FEDER, dentro de una partida dedicada íntegramente a ese fin, por lo que no nos podemos salir de ahí"

Noticias relacionadas

- Castilla-La Mancha**
Entrevista con un robot o cómo interactuar con la inteligencia artificial para una selección de personal exitosa
- Provincia**
Bajan considerablemente los nuevos contagios por Covid-19 en la provincia y aumentan levemente las hospitalizaciones durante las últimas 24 horas
- Provincia**

The inauguration of the Vertical Garden by the mayoress of Ciudad Real, Pilar Zamora, had a lot of repercussion in the media:

La Tribuna de Ciudad Real

Ciudad Real ya luce su Jardín Vertical

Pilar Zamora inaugura el Jardín Vertical instalado en la fachada del Ayuntamiento de Ciudad Real

La alcaldesa de Ciudad Real, Pilar Zamora, ha inaugurado esta mañana el Jardín Vertical del Ayuntamiento de Ciudad Real, acompañada de dos de las alumnas del IES Hernán Pérez del Pulgar, que en el programa "Proponemos" abogaron porque también Ciudad Real contara con uno de estos jardines verticales, como otras ciudades españolas.

Dentro de la EDUSI "Ciudad Real 2022 Eco-Integrador", cofinanciada con fondos FEDER, se está llevando a cabo un proyecto de rehabilitación integral energética del edificio del Ayuntamiento de Ciudad Real, en cuatro fases, y este Jardín Vertical actúa como envolvente térmico bioclimático.

INAUGURACIÓN JARDÍN VERTICAL AYUNTAMIENTO DE CIUDAD REAL

La alcaldesa de Ciudad Real Pilar Zamora Bastante ha inaugurado esta mañana el Jardín... Ver más

Jardín vertical en Ciudad Real

En colaboración con el centro de Ciudad Real donde se ha colocado el primer jardín... Ver más

Informa: MARIÁN GASCÓN

Asi ha quedado en nuevo jardín vertical del Ayuntamiento de Ciudad Real

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Dentro del proyecto EDUSI "Ciudad Real 2022 Eco-Integrador", cofinanciada con fondos FEDER, se está llevando a cabo un proyecto de rehabilitación integral energética del edificio del Ayuntamiento de Ciudad Real, del que forma parte este Jardín Vertical que actúa como envolvente térmico bioclimático.

And the completion of the garden, a video that summarizes the actions that have been carried out was edited:



EDUSI Ciudad Real 2022 Eco-Integrador. Jardín Vertical



In addition, a special program about the vertical garden was broadcasted on a local radio station, and advertisements were published in provincial newspapers:



Also on the municipal website and in all the press releases that have been prepared by the City Council, it has been announced that the action is co-financed by the European Regional Development Fund (ERDF).



NOTA DE PRENSA

Un jardín vertical contribuirá al aislamiento térmico y acústico del Ayuntamiento de Ciudad Real

Ciudad Real, 4 de noviembre de 2019. La alcaldesa de Ciudad Real, Pilar Zamora, ha presentado el proyecto de Jardín Vertical para la fachada lateral del Ayuntamiento, en concreto, donde se ubica la Oficina de Turismo. Su necesidad ha sido aprobada en la sesión de la Junta de Gobierno de hoy y es otra de las actuaciones de la obra de rehabilitación integral energética y energías renovables enmarcada dentro de la Estrategia de Desarrollo Urbano Sostenible (EDUS) "Ciudad Real 2022 Eco-Integrador", y cofinanciada por el Fondo Europeo de Desarrollo Regional.

La alcaldesa detallaba el proyecto de estructura bioclimática aislante, del que ha dicho "serán 82 metros cuadrados de zona ajardinada, lo que supone un innovador aislamiento natural, con un presupuesto cercano a los cien mil euros". El plazo de ejecución será de un mes, aunque se esperará a la primavera realizar la plantación.

El jardín tendrá un sistema de riego reciclado y reciclado mediante el cual el agua baja, se recoge y se recicla, y no supone prácticamente gasto de este tipo, como la introducción de un elemento verde en la zona urbana para incrementar la masa de vegetación de la ciudad. El aislamiento térmico y también el acústico que proporciona, además de influir en la calidad del aire.

Zamora recordaba cómo este proyecto nace de las sugerencias de alumnos de institutos de la capital en el marco del programa "Nosotros proponemos", cuestión de la que se ha mostrado muy orgullosa.

In addition, a diptych has been published with information on the vertical garden, its characteristics and benefits for the Environment, which is available to citizens and tourists who come to the Tourist Office.



2.- This action has incorporated innovative elements.

In the execution of the vertical garden, a new modular textile system called "Fytotextile" has been used, which is innovative for housing the plants. It is a technology that consists of some modules that are connected to a structure anchored to the support wall, formed by pockets in which the plants are housed. It has a capacity for 40-49 plants per square meter.

This system is made up of three layers of synthetic, organic and flexible material with an openable upper flange to include the drip irrigation line. Each of them has a function: to isolate, to optimize irrigation in a homogeneous way, and to allow the plants to breathe.

It is a special module adapted to European fire regulations. The entire garden has a recirculated irrigation system with its tanks, pumps, PH and conductivity control, and solenoid valves that allow the water to be recovered to be reused once it has been treated.

It is an automated system with various probes that measure humidity, PH and temperature, which can be controlled telematically, so that the entire operation can be controlled from a mobile phone or a computer.



Another novelty is that a study of the hours of sunshine has been carried out in the specific area where the Garden is installed to assess the suitability of the plants to be installed, so that they adapt better, and have less maintenance. As a result of this study, 17 different species have been planted with different types of flowering throughout the year.

A specific landscape design has also been made adapted to the shape of the frontage, which divides the surface into different strips with species of different textures and colors.

3.- Adequacy of the results obtained to the established objectives.

With the installation of the vertical garden, it was intended to install an efficient, innovative and environmentally friendly system that would improve the exterior cladding of this facade, improve the thermal insulation of the building, as well as generate a high ecological, landscape, architectural and social space in the city center.

Something that has been fulfilled with this project, since it allows to improve the thermal insulation of the City Council, achieving energy savings in the air conditioning of the same, since during the summer season the hot air is cooled by the green facade due to the evapotranspiration process of the plants that compose it. On the other hand, during the winter the thermal resistance of the vegetal layer prevents the heat from the interior of the building from being lost through the facade.

An action that complies with European requirements regarding the integration of green spaces in the built urban environment, promoting respect for the Environment.

4.- Contribution to the resolution of a problem or weakness detected in the territorial scope of execution.

In Ciudad Real during the summer the so-called "urban heat island" effect occurs, since the asphalt materials in streets and avenues, the concrete structures of the City Hall and the buildings in the center cause the surfaces to absorb and retain more heat. Therefore that increases the surface temperature, negatively affecting the well-being of the population.

The vertical garden on the facade of the Tourist Office acts as a natural thermal and acoustic barrier mitigating this "urban heat island" effect, reducing the ambient temperature of the surroundings, and also reducing the needs for air conditioning and heating, which supposes a reduction of greenhouse gases emitted into the atmosphere.

In addition, indirectly, many other associated benefits are obtained. Among them, the plants in the vertical garden purify the air by converting CO₂ into oxygen, creating a healthier environment, which allows citizens to promote the values of protection and respect for the environment. And together with this ecological value, it becomes a unique environment to be visited, so that with the attraction of tourism, the economic promotion of the city is increased.

5.- Degree of coverage of the target population.

This action has a high degree of coverage. Not only people who live in the center of the city benefit from it, because there are many people who have to pass through this area since it is located in the nucleus where are located many of the public administrations in which they have to make administrative managements, next to a pedestrian shopping area, and the passageway between two squares (Mayo Square and Cervantes Square) where numerous hotel, restaurants and bars establishments are located.

The garden is located on the facade of the Tourist Office, which is the official stop for all tourists and organized groups that visit Ciudad Real to obtain information about the monuments, and the origin of the guided tours that are done.

And also all the workers of the City Council of Ciudad Real who work in the Town Hall building also benefit from it, thanks to the thermal insulation that is achieved, and the greater comfort of their jobs.

6.- Consideration of the horizontal criteria of equal opportunities and non-discrimination, as well as social responsibility and environmental sustainability

This action is respectful of the regulations on equality between women and men and non-discrimination, promoting equality between men and women, since it has intervened without taking into account whether the improvement of isolation was carried out in areas occupied by men or by women, or those who will be able to enjoy the garden once it is built.



Regarding environmental sustainability, it has been possible to reduce the building's air conditioning needs by 25% and heating by 10%, with which this indirectly implies a reduction of greenhouse gases into the atmosphere. It is estimated that the improvement in air quality that occurs is equivalent to the emissions caused by 9 cars over a year.

8.- Synergies with other policies or instruments of public intervention:

The City Council of Ciudad Real is also carrying out a series of measures in terms of urban sustainability, such as in the pedestrianization of Toledo, Calatrava, Feria and Caballeros streets, where a draining green pavement has been installed in the old parking strips. It is a system that collects water in periods of very intense rains, and that is the first time it has been used in Ciudad Real.

Ecological paving stones have also been used. These are paving stones made with recycled concrete and titanium dioxide that, when in contact with sunlight, degrades the atmospheric pollutants in the air, mainly vehicle emissions.

In addition, actions are being carried out in the area of circular economy such as a Waste Plan to enhance the green waste generated in the Department of the Sustainability, and various projects to improve energy efficiency in other municipal buildings for an amount of 95,000 euros for the improvement of energy efficiency through photovoltaic cells in the Quijote Arena Pavilion, the Municipal Market or the López-Villaseñor Museum.

The Castilla-La Mancha Community Government has also presented the reform project of the old “El Carmen” Hospital to turn it into an Administrative City, which includes the cladding of the facade of this building with a ceramic “skin” in other tones so that it is more thermally efficient, and allows greater luminosity in the offices inside.



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