Redevelopment of boulevard Aubanel in Miramas

by Mathilde PECNARD / 2021-03-26 19:26:20 / France / 5638 / FR

Year of commitment : 2019

Green energies : Energy Efficiency
Sustainable mobility : Intra-urban mobility, Greenways, Pedestrian Mobility, Urban roads, Soft modes of transport, Bicycle path
Water cycle : Rain water, Other
Circular economy and waste management : Circular economy, Eco-Design, Optimization of ressources, Bio-based materials
Biodiversity & Ecosystems : / Urban ecosystem, Green and blue corridor, Ecosystem restauration, Ground recovery, Environment education /

3 800 000 €

Builder
LAQUET, EIFFAGE TP

Manager / Dealer
City of Miramas

GENERAL INFORMATIONS

This redevelopment consisted of transforming a 2x2 city entrance lane into a 2x1 lane by maximizing the waterproofing of the roadway and transforming it into a green promenade.

The project has been the subject of environmental optimization on 6 axes: water management, energy savings, urban biodiversity, circular economy, soft mobility, adaptation to climate change.

Progress Status

Delivered

Data Reliability

Self-declared

Funding Type

Public

Website Enterprise / Infrastructure

https://www.cylea.fr/actualites/livraison-du-chantier-zac-de-la-peronne/

Sustainable Development

Attractiveness :

Offer new urban spaces for new uses:

The main challenges: In recent decades, urban spaces have given a predominant place to automobile mobility to the detriment of the quality of a qualitative social meeting space with sidewalks often non-existent at the entrances to towns. Systematic use of the car was thus induced, which does not encourage meetings or physical exercise.

The solutions implemented: Local residents and users benefit from an urban space dedicated to pedestrians and to soft modes of transport for the benefit of an outdoor activity with:

- a wide and shaded pedestrian promenade;

- an educational garden;

- an event space for neighborhood associations.

Well Being :

Living well in the city by facilitating soft mobility:

The main challenges: Daily mobility practices have a significant impact on the well-being of city dwellers and the environment; promoting soft mobility is an effective alternative to the private car relieve congestion on saturated traffic axes, requiring no other energy than that provided by physical effort, makes it possible to limit the carbon footprint appearing among the measures envisaged to fight against global warming .

The solution implemented: Taking into account soft modes with the creation of a greenway of 800m linear independent of general traffic. This greenway provides access to the city center and contributes to the neighborhood's soft modes network.

Social Cohesion :

In line with the elements exposed in the attractiveness section:

The solutions implemented:

- Creation of a new meeting place space for better social cohesion.

Preservation / Environmental Improvement :

Promote the development of urban biodiversity:

The main issues:

Preserving biodiversity is an integral part of reducing environmental damage. Preserving existing vegetation helps mitigate the impacts of infrastructure while preserving the quality of the landscape.

The creation of a nature education zone educates residents and children about the place of these animals in our environments, and allows these species to be reintegrated into an urbanized environment.

The reduction in light pollution also promotes the richness of the ecosystem made up of nocturnal fauna.

The solutions implemented:

- Preservation of existing vegetation;

- Creation of a nature education zone: a botanical garden, a bird garden and shelters for insects;

- Decrease in light pollution.

Resilience :

Contribute to the mitigation of the effects of climate change:

The main issues:

The development of a wooded park in the heart of an urban island, by reducing mineralized surfaces, makes it possible to lower the temperature in the adjacent streets. With the conservation of the rows of umbrella pines and plane trees and the planting of 50 new trees, the project helps to strengthen the island of freshness effect.

The choice of draining coatings with a higher albedo than conventional asphalt also contributes to the fight against urban heat islands.

The rainwater sewerage network is saturated and no longer faces heavy rains.

The solutions implemented:

- Creation of the urban park;

- Draining coatings with a higher albedo than conventional mixes;

- Disconnection of the rainwater network and water infiltration.

Responsible use of resources :

The responsible use of resources was **a structuring approach of the project, developed under 3 axes** :

1 - the establishment of a circular economy on the site scale;

2- restore water to its natural cycle;

3- contribute to reducing the consumption of electrical energy.

1 / Circular economy:

The main issues:

Avoiding the landfill of materials resulting from site deconstruction lengthens their life cycle and preserves non-renewable natural resources, one of the main challenges of the circular economy which aims to increase the efficiency of the use of resources.

The construction of street furniture and mud walls made it possible to avoid the evacuation of 1,200 m3 of materials.

In addition, significant overall energy savings: reduction in materials to be transported, materials to be landfilled (therefore a reduction in indirect impacts, inconvenience to users and residents) and fatigue of the road network adjacent to the building. construction site.

The solutions implemented:

- raw earth structures (walls and urban furniture) built with soil from the site,

- pebble structures from the site.

2 / The water cycle:

The main issues:

The draining properties, very important of the materials chosen, and the execution of the drainage basins provide a response to the needs of sustainable urban development avoiding the waterproofing of surfaces and effectively contributing to the major ecological issues of reconstitution of the natural water cycle by promoting its in-situ infiltration, also contribute to the fight against heat islands.

The solutions implemented:

- De-waterproofing of the road with a stabilized sand coating and revegetation of the old road;

- Longitudinal parking was carried out in a mixture of stone and earth covered with GNT;

- An alternative management of rainwater: execution of the basins allow infiltration directly into the water table.

3 / Energy saving:

The main issues:

The road lighting technique makes it possible to limit the installed lighting power to obtain the level of illumination required for an urban road.

Already planned with LED lanterns, this lighting has made it possible to reduce energy consumption for street lighting by an additional 30%.

Energy savings are one of the priority areas of the energy transition. While energy consumption has a certain cost, it also has a very significant environmental impact.

The solution implemented:

The coated spaces have been thinned out compared to a traditional layout.

Testimony / Feedback

The project has already been recognized for two reasons:

*- first, in 2019, by the **French** competition **Capitals of Biodiversity,** which since 2010, identifies, develops and disseminates best actions carried out by municipalities and intermunicipal French in favor of biodiversity. The project was selected in the catalog of exemplary actions of 2019.*

*- then, in 2020, by the Institute of Roads, Streets and Infrastructures for Mobility (IDRRIM) which awarded it the **Infrastructures for Mobility, Biodiversity and Landscapes prize with the Special Mention of the jury** ; the IMBP prize highlights the links between biodiversity and landscapes, rewards the best projects carried out, in France or internationally, by the actors involved in the design, construction, management, maintenance, development, requalification and operation of mobility infrastructures in favor of the preservation, restoration and enhancement of ecosystems and biodiversity.*

Governance

EPAD West Provence

Holder Type : Public Local Firm

LAQUET, EIFFAGE TP

Builder Type : Construction Industry

City of Miramas

Manager / Dealer Type : Public

The urban community has conceded the EPAD Ouest Provence. Governance is therefore tripartite between EPAD, SAN Ouest Provence and the city of Miramas.

Business Model :

Boulevard Aubanel is included in the ZAC de la Peronne; its financing is ensured in the balance sheet of the ZAC.

It has received grants from the Bouches du Rhône Department on the one hand and the RMC Water Agency on the other.

Sustainable Solutions

Site-wide stormwater management

Description :

The solutions implemented are:

- De-waterproofing of the road with a stabilized sand coating and revegetation of the old road;

- Longitudinal parking was carried out in a mixture of stone and earth covered with GNT;

- An alternative management of rainwater: execution of the basins allow infiltration directly into the water table.

The very important draining properties of the materials chosen, and the execution of the basins contribute to the reconstitution of the natural water cycle by promoting its in-situ infiltration.

These solutions make it possible to **respond effectively to the challenges of resilience of the community's stormwater networks** in the event of an episode of heavy rains. They also contribute **to the fight against urban heat islands** , conventionally encountered in city entrances.

- Water management

Company (es) Website :

Company (es) Website :

Promote the development of urban biodiversity

Description :

The solutions implemented are:

- Preservation of existing vegetation by conserving the existing trees on the site

- Reinforcement of the green network with the planting of more than 38,000 plants of all sizes, including meliferous plants

- Creation of a nature education zone: a botanical garden, a bird garden and shelters for insects to ensure respect for the spaces created by the users of the promenade;

- Reduction of light pollution with directional LED lighting and reduced thanks to the use of a lighter coating.

Preserving biodiversity is an integral part of reducing environmental damage. Preserving existing vegetation helps mitigate the impacts of infrastructure while preserving the quality of the landscape.

The creation of a nature education zone educates residents and children about the place of these animals in our environments, and allows these species to be reintegrated into an urbanized environment.

The reduction in light pollution also promotes the richness of the ecosystem made up of nocturnal fauna.

- Other

Use of materials from the circular economy and rehabilitation of existing structures

Description :

The solutions implemented are:

- raw earth structures (walls and benches) built with the earth from the site and pebble structures from the site have consequently avoided volumes (approximately 1200 m3 x2) of materials to be evacuated and delivered to the site , and therefore avoid CO2 emissions.

- the asphalt has been thinned out compared to a traditional arrangement to allow the level of night lighting to be lowered.

- the base of one of the existing pavements has been preserved (no deep earthworks), only the surface coating has been redone.

Avoiding the landfill of materials resulting from site deconstruction lengthens their life cycle and preserves non-renewable natural resources, one of the main challenges of the circular economy which aims to increase the efficiency of the use of resources.

- Low-carbon materials/ infrastructure

Photo credit

Suez Consulting

Contest

Reasons for participating in the competition(s)

L'excellence environnementale déclinée selon 6 grandes thématiques :

- la gestion de l'eau : La désimperméabilisation du boulevard a concerné plus de 8.000 m². La gestion alternative des eaux pluviales a également été mise en oeuvre avec une déconnexion partielle de la voirie du réseau d'eaux pluviales de la commune et la réalisation de bassins d'infiltration dimensionnés pour une pluie de retour 50 ans.

- les économies d'énergie : Au-delà des lanternes à LED, l'éclaircicement des revêtements a permis de réduire de 30% supplémentaire la puissance installée pour l'éclairage de la voirie pour une performance lumineuse égale

- la biodiversité urbaine : Avec la conservation des alignements de pins parasol, de platanes, la plantations de plus de 38.000 nouveaux plants de toutes tailles et l'installation d'abri à insectes permet de créer un véritable éco-système urbain. La zone d'éducation à la nature comprenant un jardin botanique et un jardin des oiseaux appuie cette démarche

- l'économie circulaire : la réalisation de bancs et de murs en terre crue a permis d'éviter l'évacuation de 1.200 m3 de matériaux argileux, impropres à l'usage en remblai de voirie

- la mobilité douce : la création d'une voie verte de 800ml indépendante de la circulation générale qui permet l'accès au centre-ville et participe au maillage modes doux du quartier

- l'adaptation au changement climatique : la création d'un parc urbain renforcant les plantations existantes et le choix de revêtements drainants possédant un albédo moins élevé permet de renforcer l'effet d'îlot de fraicheur et la résilience des plantations.

Building candidate in the category

Grand Prix Infrastructure Durable

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