



# LIFE BooGI-BOP:

The economic, social and ecological benefits of biodiversity to the business.

Best practices. Plataforma Central IBERUM. Spain

Boosting Urban Green
Infrastructure through
Biodiversity-Oriented Design
of Business Premises
LIFE BooGI-BOP

LIFE17 GIE/DE/000466

Financiado por el Programa LIFE de la UE



LIFE17 GIE/DE/000466





# ECONOMIC AREA





#### **ECONOMIC AREA**

#### **DEVELOPING AGENT**

Entity chosen by a system of free competition, in charge of promoting the execution of the planning, carrying out the actions and investments necessary for it, and that assumes the urbanization expenses, without prejudice to its subsequent impact on the owners.









Direct agents: project and

development

AD-HOC working groups

Interest in research: R&D projects







# O2 LOCATION







## **LOCATION**









#### LOCATION

PCI is a logistics and industrial area of some 500 ha located south of Illescas, just 35 kilometers from Madrid and Toledo. It is located at the convergence of the A-42 Highway and the CM-41 Road, and on both sides of the Madrid-Talavera-Portugal railway line.

Phase I, with a total extension of more than 250 ha, has clients currently operating as FM Logistics, HEXCEL, Michelin, Panificadora Milagros Díaz, Toyota, Amazon, Airbus, XPO, Carreras, Zalando, DHL, Correos Express, Ehlis, Seur, CBL, most of them from real estate agents such as Mountpark or P3 Logistic Parks.

Phase II of the development, of more than 180 ha of intermodal vocation, will integrate a railway terminal designed to serve the exportimport frame of the Central Peninsular Zone and, more specifically, the South of Madrid.







Road accesibility



Services



Sustainability













# 3 URBANIZATION. PROJECT AND DEVELOPMENT. PHASE







#### SUSTAINABLE STRATEGIES FROM DESIGN, PHASE I

#### **CONVENTIONAL SYSTEM**

#### PCI SYSTEM

# CONSTRUCTION SYSTEM AND MAINTENANCE

PAVER SIDEWALKS AND CURB

(+TIME // + COST //-DURABILITY)

**SCUPPER** 

(+TIME // + ADAPTABILITY// - DURABILITY)

#### **BURIED DEPOSITS**

(+COST // -SUSTAINABILITY)

#### **URBAN FURNITURE AND CONVENTIONAL TREES**

(+COST // - SUSTAINABILITY // - DURABILITY // -DESIGN)

100% DESIGN, EXECUTION AND EXTERNAL MAINTENANCE

# CONSTRUCTION SYSTEM AND MAINTENANCE

PREFABRICATED SIDEWALKS

(-TIME // - COST //+ DURABILITY)

#### PREFABRICATED DITCHES

(-TIME// - ADAPTABILITY // + DURABILITY)

#### NATURAL WETLANDS

(-COST // + SUSTAINABILITY)

# RECYCLED URBAN FURNITURE AND NATIVE TREES

(-COST // + SUSTAINABILITY // + DURABILITY // -MAINTENANCE)

100% DESIGN, EXECUTION AND INTERNAL MAINTENANCE 10





# Plataforma Central Iberum. Sustainable industrial area. RECYCLED AND PREFABRICATED URBAN FURNITURE







# Urbanization implies an impact on the environment

Transformation of land and landscape uses

- WATER CYCLE
- BIODIVERSITY

## **PCI Environmental Objectives:**

Water resource control: water cycle
Generation of biodiversity and a linear park
Habitat recovery
Reduction of expenses in resources
Creation of C02 sinks
Optimization of maintenance costs







## Strategies in urbanization - Water cycle

# **Conventional System**

% waterproof floor

100 % vials = 435.375 m2 100 % Indus. land. = 1.904.914 m2

M2 waterproof floor 2,35 millones de m2

M3 water to manage 42.400 m3/h

100% necesidad de gestión externa

# **PCI Strategy**

% waterproof floor

**50** % vials = **217,687** m2 **90** % ind. land= **1.714.422** m2

M2 waterproof floor 1,93 millones de m2

M3 water to manage 34.000 m3/h M3 ponds 67.220 m3

20% less volume managed 100% volume managed on-site





Plataforma Central Iberum. Sustainable industrial area.

NBS. WATER CYCLE CONTROL







# Urbanization needs – Transformation of the territory and loss of biodiversity Biodiversity associated with green spaces

Multifunctional spaces for recreational use, maintenance of traditional agricultural systems and promotion of biodiversity.

R&D project "Research on ecological restoration and promotion of biodiversity in PLATFORMA CENTRAL IBERUM"

# **NbS Implementation**

Restoration of ecosystems
Research interest.
Promotion of the participation of the different

# Multidisciplinary:

- Different areas of the Town Hall
- Environmental Techniques
- Local Farmers
- University: R&D "Research on ecological restoration and promotion of biodiversity in PCI"





# **Urbanization needs – Transformation** of the territory and loss of biodiversity

#### Creation of habitats

Native plants: to promote the recovery of degraded ecosystems.

- Restoration methodologies and monitoring: work in different strata.
- ➤ Selection of seeds use of seed banks: irrigation 0 when using species adapted to the local climate and soil.

# **NbS Implementation**

Restoration of ecosystems. Research interest.

Promotion of the participation of the different

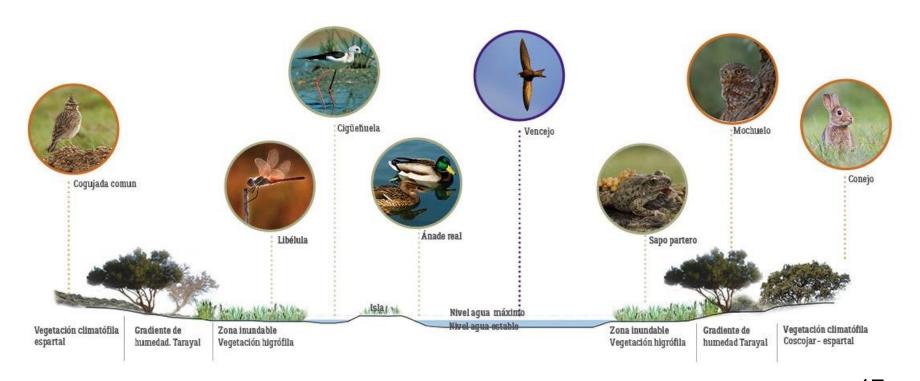
# Three layers:

- > Herbaceous: **Meadows**
- Shrub: Bushes, subshrubs and larger shrubs.
- Arboreal: Olive trees and existing trees on plots for industrial use. TRANSPLANT.

CLIMATIC COMFORT IN THE PERURBAN PARK







Typical section in a park with plant communities to be restored and target fauna groups











# 1 LEARNED LESSONS







# MAINTENANCE. Need for training and adaptation of methods

Satisfactory aesthetic effect: short-term image - long-term.







# MAINTENANCE. Need for training and adaptation of methods

Plowed / Mowed







# **MAINTENANCE.** Need for training and adaptation of methods

Plowed / Mowed







# MAINTENANCE. Need for training and adaptation of methods

> Pest control (insects) and herbivores (rabbits, hares)







# EROSION. Incorporation of systems that mitigate water erosion

**Drought river / Stream** 

Need to incorporate stone material: gravel, nose, breakwater.
Fine decanting areas, easy to clean







Plataforma Central Iberum. Sustainable industrial area. EROSION. Incorporation of systems that mitigate water erosion

**Drought river / Stream** 

> Elements to reduce speed and area exposed to erosion







# EROSION. Incorporation of systems that mitigate water erosion

- > Hillside
  - > Coconut blanket
  - > Forced runoff/ditch routes







# BREEAM VERY GOOD CERTIFICATION. PHASE II.







# ONE MORE STEP. WE MADE PROGRESS IN OUR URBANISM PROJECT CERTIFYING.

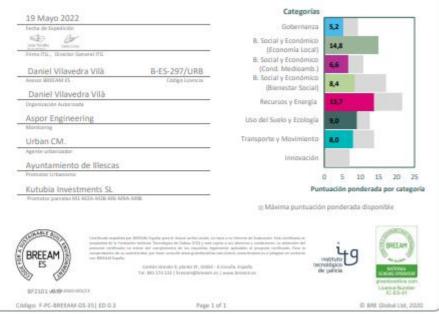
- > We order ideas and protocols.
  - We incorporate public consultations.
  - Governance Works.
- > Analysis of the economic impact of the urban planning that we develop.
- Resources and Energy
  - ➤ On top of the previous actions, the incorporation of a "Co2 Sink" project is implemented with documentation to be registered with the Spanish Ministry of the Environment.
- > Ecological Strategies. In addition to actions to create biodiversity.
  - ➤ Improvements are incorporated in the Sustainable Urban Drainage Systems.
- > Transport study. Public, private, bicycle, scooter, railway.





# Plataforma Central Iberum. Sustainable industrial area. CERTIFICADO BREEAM VERY GOOD. PLATAFORMA CENTRAL IBERUM PHASE II





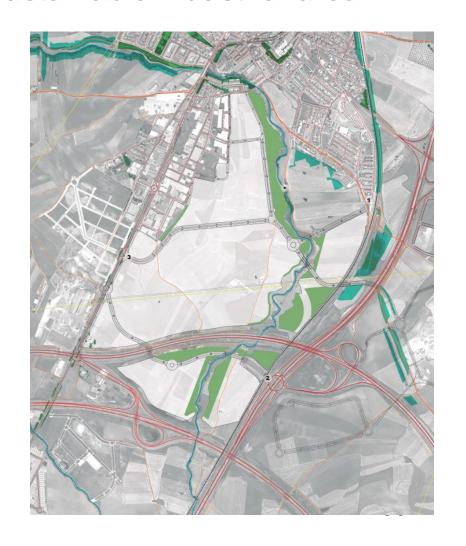




#### Governance

Before the design using the premises already known by our experience.

- > Town planning revisions.
- Consultation and participation
- Community Design Review

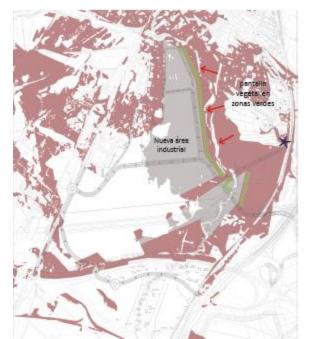






#### Social and economic welfare.

- > Improvement of the surrounding economy. Job creation and investment attraction.
- > Demographic needs. When the industrial investment is complete, we start working on residential developments.





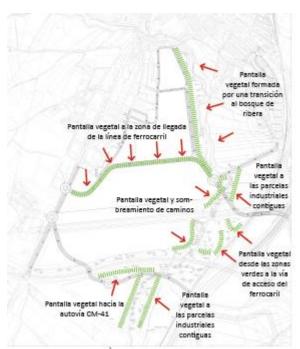


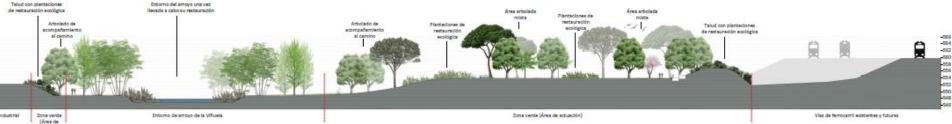


#### Social and economic welfare.

- > Flood risk assessment. Hydrological studies.
- > Noise pollution. Studies that guarantee the prevention of noise pollution.
- > Public space. Use for the good of the community.





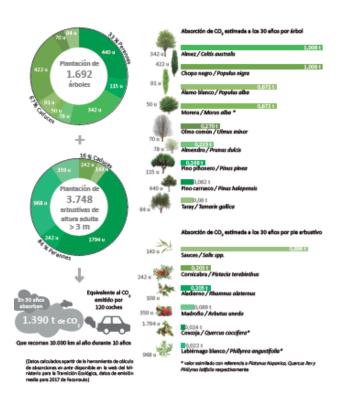


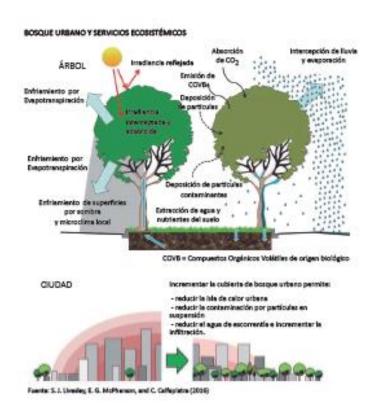




#### Social and economic welfare

- Adaptation to climate change. Temperature control. (Example of good practices in the LIFE SHARA project of the Spanish Climate Change Office)
- > Green infrastructure.



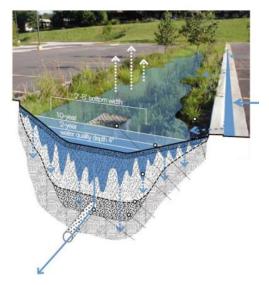


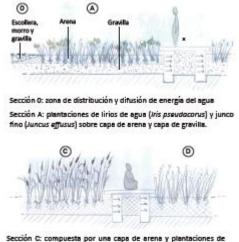




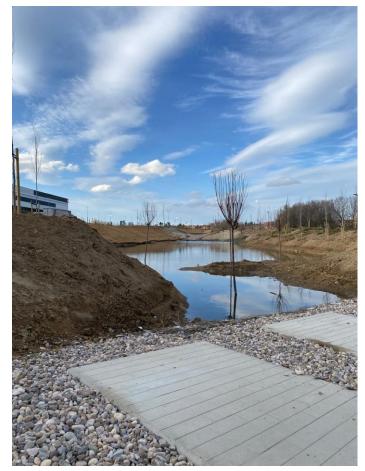
## Land use and ecology

- Protection of natural habitats.
- SUDS design to avoid water contamination
- Creation of green corridors and green infrastructure.
- > Ecological strategy in choosing species for water control.





espadaña (Typha latifolia)



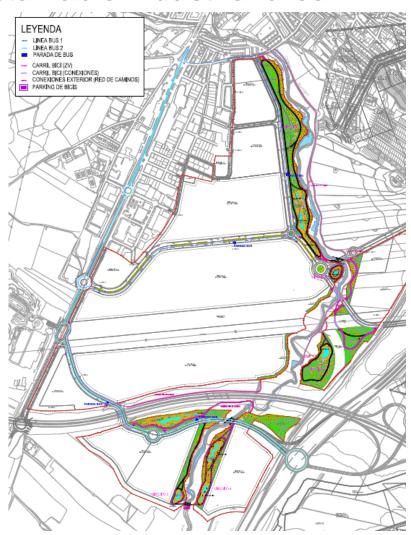




## **Transport study**

- > Reduce distance to public transport.
- > Travel by bicycle or on foot. Incorporation of bike lanes.
- Reduce parking spaces to favor public transport.
- Accessible and safe pedestrian routes.









## **Transport study**

> Promote the Illescas Intermodal Terminal within the sector.







# Thank you

