

Biodiversity



Protecting and promoting biodiversity



Innovate

Offer

Involve

BOUYGUES
CONSTRUCTION

Shaping a **Better Life**



Reconciling nature restoration, sustainable construction and the quest for well-being.

Aware of the growing pressure that human activities are placing upon natural resources and balances, Bouygues Construction believes it has a responsibility as a builder and operator to understand and limit the ecological footprint of its structures.

Through its many business activities (building, civil works, energy & services, concessions), Bouygues Construction encounters all forms of biodiversity and faces major challenges relating to them.

Through its actions, the Group seeks to reconcile nature **restoration, sustainable construction and the quest for well-being.**

Our business activities



BUILDING

Housing, schools and universities, hospitals, hotels, office buildings, stadiums, airports, exhibition and leisure centres...



CIVIL WORKS

Tunnels, bridges, trams, metros, rail and port infrastructure...



ENERGY AND SERVICES

Energy network infrastructures, street lighting, mechanical, electrical and HVAC engineering, facility management...



CONCESSIONS

Management and operation of transport, sports, and entertainment facilities, port areas...



3 strategic priorities for biodiversity: innovate, offer, involve

For Bouygues Construction, the aim is to take into account all the various forms of biodiversity and related ecological services throughout the lifecycle of projects.

This approach revolves around three strategic priorities in each of the Group's business activities.

Meeting the challenges and requirements of biodiversity by innovating and developing our expertise



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Innovate

Listening to clients **to offer new products** and services relating to biodiversity



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Meeting the expectations of our stakeholders by getting involved in collective action



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Innovate

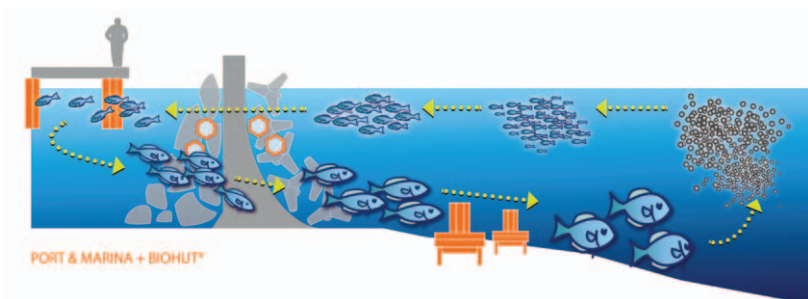
Conservation measures for the ocellated lizard (*Timon lepidus*) monitored by Biositiv within the framework of the Nîmes-Montpellier Rail Bypass project.

INNOVATE

Meeting the challenges and requirements of biodiversity by innovating and developing expertise

Eco-design of marine infrastructure

As part of its marine infrastructure projects, Bouygues Construction undertakes R&D work in partnership with Ecocean* on the design and construction of artificial reefs. These are deliberately submerged structures intended to create, protect and restore a marine ecosystem.



* ECOCEAN is a company that has developed unique expertise around the early life stages of coastal fish (post-larval and juvenile), for the sustainable management of marine resources and the preservation of marine biodiversity.

“Amenities, uses and biodiversity services in and around buildings”

Amenities are a new issue for the property sector. They depend heavily on expectations, nature and its practice by city-dwellers, and the use of buildings by their users (“biophilia” concept, E.O. Wilson).

Elan (Bouygues Construction) addresses this topic in its guide entitled “Aménités, usages et services de la biodiversité autour et dans le bâtiment”.



Crédit : droits réservés



/ Offer

A rooftop forest, an experimental garden for children, a green living wall for the new Rives de Seine school in Boulogne-Billancourt.

OFFERING NEW PRODUCTS AND SERVICES

Listening to clients in order to offer new products and services relating to biodiversity



Socio-ecological observatory for urban biodiversity

Founded in partnership with non-profit organisation Noé, the socio-ecological observatory for urban biodiversity aims to improve knowledge of local biodiversity and the relationship between this biodiversity and city-dwellers. It also aims to improve the sharing of experiences, seek out the expectations and questions of users, and make collective progress on the theme of urban biodiversity and services provided.

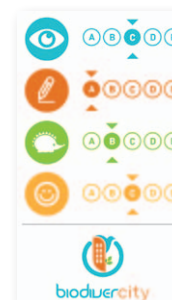


Biositiv, a support structure for development project operators

Biositiv helps infrastructure project teams comply with the regulatory "Avoid/Reduce/Offset" approach and implements actions that protect wildlife and natural environments. The aim is to research technical and ecological innovations that help projects integrate into their natural environment.



BiodiverCity® label



Bouygues Construction, a founding member of the International Biodiversity and Property Council (IBPC), supports the BiodiverCity® label. This first international label in this domain commits all participants in property developments to evaluating and promoting biodiversity.



/ Involve



INVOLVE
Meeting the expectations of stakeholders
by getting involved in collective action

The non-profit organisation Noé demonstrates the Propage protocol (a protocol for counting butterflies) to work teams.

Bouygues Construction is involved:



with Noé :

- "Jardins de Noé" programme
- Socio-ecological observatory for urban biodiversity
- "Nuit de Noé" programme



with WWF :

- Responsible Wood Sourcing programme
- GFTN (Global Forest & Trade Network)



with LPO (the French bird protection league):

- Urban planning, Building and Biodiversity programme



with UNAF (the French beekeeping association):

- "Abeille, sentinelle de l'environnement" programme

These organisations support our work:

- Membership of Natureparif
- Drafting of an educational guide on "positive biodiversity" buildings with Université Catholique de Lille.

natureparif

Agence régionale pour
la nature et la biodiversité

îledeFrance



UNIVERSITÉ
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DE LILLE 1875

“ Aware that over two-thirds of the world’s population lives in cities, LPO decided to further contribute to the integration of biodiversity in the cities of tomorrow. It did so, among other things, by creating the U2B Club in September 2013, dedicated to supporting and raising the awareness of all the major players in construction and land development. ”

Allain Bougrain Dubourg,
President of LPO.

Biodiversity
projects





Nature as a source for improving urban living environments

Providing a response to strong societal demand, urban biodiversity helps improve urban living environments through services provided by nature: urban climate regulation, aesthetics, social exchanges, and well-being and health for city-dwellers.

Building projects



City of Music on Seguin Island (Boulogne-Billancourt, France)

Built on a former brownfield site located on Seguin Island, the City of Music contributes to urban redevelopment while welcoming biodiversity. With its rounded forms, the large concert venue is perfectly integrated into the landscape. With the support of an environmental engineer, its layout has been specifically designed to promote local wildlife, which will be subject to scientific monitoring. A plant-lined hill covers a large portion of the building. A partnership has been established with a non-profit organisation to offer educational activities for the general public. The seasonality of its hanging gardens and the chirpings of the birds on the hill located opposite are particularly worth discovering.

The City of Music is one of the first projects to boast the BiodiverCity® label.





Credits: droits réservés



Credits: V. Jendly

Eikenøtt eco-neighbourhood (Gland, Switzerland)

The exterior facilities, which are aimed at fostering neighbourhood conviviality, help promote biodiversity with native meadows and plants accessible to everyone.

For example, the neighbourhood has 2.1 hectares of flower meadows.

The green roofs of the buildings have been designed to capture rainwater before directing it to a network of swales for fast and complete infiltration. The use of fertiliser and pesticides for maintenance is prohibited. A socio-cultural facilitator has been recruited to coordinate nature-themed activities in the neighbourhood, and an insect hotel has been set up with schoolchildren from the town. Eikenøtt is also the first eco-neighbourhood in French-speaking Switzerland to receive the "Nature & Economie" Foundation certification aiming to promote residential neighbourhoods that are close to nature.

Eikenøtt is one of the first projects to boast the BiodiverCity® label.





Innovation serving biodiversity in infrastructure projects

Incorporating biodiversity is currently a key component of infrastructure projects. Optimal solutions are sought out to reduce impacts and restore ecosystems.



Civil Works projects



Nîmes-Montpellier Rail Bypass (France)

Since the launch of the Nîmes-Montpellier Rail Bypass project, Oc'Via Construction has been implementing avoidance, reduction and offsetting measures for over 125 protected species: re-routing to avoid impacts, and adaptation of the work schedule, structures and facilities, making the project more transparent. An innovative method based on **ecological equivalence and compensation units** has been developed with the Biotope design office to define offsetting measures for restoring favourable conditions for the local Mediterranean wildlife. Over 1,800 ha have been purchased or certified, and restored with management plans implemented by Biositiv in partnership with local stakeholders: Conservatoire d'Espaces Naturels LR, Cogard, LPO, Chambre d'Agriculture, Safer, Fédération régionale des Chasseurs, CNRS.



Abidjan Bridge (Ivory Coast)

In order to preserve the remains of the mangrove that once covered Ébrié Lagoon, the initial course of the 1,500-metre-long bridge was adapted. A botanical inventory undertaken before work started identified the endangered species *Rhizophora racemosa* on a sandy island located within the worksite.

Additional actions have been taken to protect ordinary biodiversity on the site, such as replanting of the canal banks with endangered species, as well as the planting and alignment of several species of trees.



Biodiversity expectations in urban services

Efficient management of green spaces and sustainable lighting are just some of the solutions available for preserving and promoting ordinary biodiversity in cities.

Energy and services project



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Street lighting in Valenciennes (France)

Further to an assessment by non-profit organisation Noé, the city's gardens and squares are now lit up as efficiently as possible via lighting projects that preserve local biodiversity.



THE PARTNERSHIP WITH NOÉ AND THE SUSTAINABLE LIGHTING CHARTER

On the initiative of Noé, representatives of local authorities, non-profit organisations and businesses drew up the Sustainable Lighting Charter. Bouygues Energies & Services, a partner of the programme, is committed to promoting this charter. Its services for local authorities already include measures to limit the impact of lighting on the bio-rhythms of local wildlife.

Infrastructures that preserve biodiversity whilst being operated

After the construction stage, action taken to protect biodiversity through monitoring and awareness-raising continues during the operational phase.



Concessions project



A41 motorway (Villy-le-Pelloux, France)

The A41 North motorway route crosses through some particularly fragile environments, such as the Les Ebeaux wetland and the Ronzier grove, home to lady's-slipper orchids (*Cypripedium calceolus*), and therefore received special attention throughout the construction phase. These conservation measures are still being monitored by ongoing forest and farmland development procedures. Adelac had a specific structure built for crossing the La Ravoire stream, so as to preserve the whole body of water and its riparian vegetation, which is home to a population of white-clawed crayfish (*Austropotamobius pallipes*). Ever since, annual monitoring of crayfish populations has confirmed the merits of this work.

In addition, to enable the yellow-bellied toad (*Bombina variegata*) to maintain its breeding area located under the Ussets viaduct, a set of pools and ponds was created by Adelac. Population monitoring has confirmed the legitimacy of this work.



Challenger, the headquarters of Bouygues Construction, is labelled:



Bouygues Construction
Innovation and Sustainable Development Department

www.bouygues-construction.com
blog.bouygues-construction.com



In the same collection:



The paper used (PEFC Condat Silk) comes from sustainably managed forests

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