

Biodiversity

The value of diversity

As a leading construction technology group, we recognize the inherent impact on biodiversity associated with our construction projects and activities. Although work on construction sites depends on the specifications of our clients, we must nevertheless pay attention to this urgent matter. Biodiversity is a crucial element of our planet's natural systems, providing essential ecosystem services whose role is to support the livelihood and well-being of humans, animals and plants. Unfortunately, the loss of biodiversity has increased significantly in recent years, leading many scientists to characterise the current period as the sixth mass extinction¹.

The latest IPCC report on climate change, published in 2022, emphasises the urgent need for action to protect biodiversity and mitigate its degradation². Over 90% of biodiversity loss is due to five main factors: land degradation and habitat destruction, resource exploitation, climate change, pollution and invasive species. These factors contribute significantly to the decline of natural habitats, the depletion of resources, the disruption of ecosystems and the threat to native species. Tackling these factors is crucial to preserving biodiversity and protecting the delicate balance of life on Earth³.

Extreme climate conditions that exceed the tolerance of many species can be observed on all continents and have drastic consequences. Global climate change has led to significant changes in marine, terrestrial, and freshwater ecosystems worldwide. The number of areas devastated by forest fires or other natural disasters has increased. The impact of climate change on ecosystems has led to significant economic and livelihood losses and has altered cultural practices and leisure activities worldwide. According to the World Bank, more than to 50% of global GDP, totaling 44 trillion dollars in economic value since 2020, depends on natural resources⁴.

We recognize the United Nations Decade of Ecosystem Restoration and believe that by taking a proactive approach to protecting biodiversity and working with our stakeholders, including governments, non-governmental organizations and the private sector, we can help to protect biodiversity. The construction industry has a significant impact on biodiversity, and various measures can be taken to mitigate these negative impacts. With proper planning and design, material sourcing, low-impact construction practices, post-construction activities, ecological compensation measures and awareness raising, we can enhance biodiversity during and after construction activities.

These efforts require the cooperation of all stakeholders, including clients and authorities who have to specify or approve biodiversity requirements for subcontractors and local communities.

¹ Vertebrates on the brink as indicators of biological annihilation and the sixth mass extinction. Ceballos, Ehrlich, Raven, 2020

² IPCC Sixth Assessment Report. Impacts, Adaption and Vulnerability, 2021

³ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Global Assessment Report, 2019

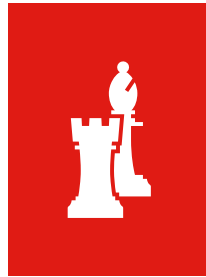
⁴ Securing our Future through Biodiversity, The World Bank, 2022

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Points of contact with business activities

Biodiversity covers a wide range of topics, including species diversity, genetic diversity and the diversity of ecosystems. As a leading construction technology group, we are aware that our activities have the potential to influence biodiversity in various ways. For this reason, we have analyzed our business activities and defined the following factors that we can specifically influence in order to improve the protection of biodiversity:

- **Limited influence on the choice of location:** The decision on a location is generally not our direct responsibility. However, we can exert our influence by pointing out potential impacts on biodiversity during the planning and implementation of projects and proposing solutions to minimize negative consequences.
- **Design and planning:** The design and planning of a construction project can also influence the impact on biodiversity. Measures such as green roofs, the planting of native vegetation and the use of permeable surfaces can help to minimize the negative impact of construction work on local biodiversity. Suppliers can also be selected according to biodiversity-promoting criteria.



- **Construction practices:** The construction process itself can have an impact on biodiversity, e.g. through soil compaction, sealing, excavation and dust pollution. Minimizing these impacts through practices such as the use of electrically powered excavation equipment, dust suppression, minimal sealing and the shortest possible construction time can help to reduce the impact on local biodiversity.
- **Post-construction activities:** Post-construction activities, such as landscaping and maintenance, can also have an impact on biodiversity. Selecting native plants, implementing green infrastructure and limiting the use of pesticides on our own properties and real estate can help to promote biodiversity in the area.
- **Biodiversity education and awareness:** We recognize that the protection of biodiversity can only be achieved through collective efforts and will therefore develop efforts to educate and raise awareness among our employees and stakeholders. This document raises awareness of the vital role biodiversity plays in the livelihoods and well-being of people, animals and plants.
- **Biodiversity at our company locations:** An important approach is to analyze the animal and plant species in the surrounding area. In addition, special planting can be carried out to support native animal and plant species. This can include the creation of flower strips, wildflower meadows or near-natural wooded areas. The provision of beehives or the creation of bee-friendly areas with nectar plants contribute to the pollination of plants and supports the conservation of the bee population. It is also important to consider ecological compensation measures.
- **Procurement of materials:** The use of sustainably sourced materials, such as FSC-certified wood, can help to reduce the negative impact on forest ecosystems. The use of such materials ensures that wood is sourced from responsibly managed forests, protects biodiversity and minimizes ecological impacts.

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Orientation for protection and conservation of biodiversity and species protection in construction projects

Aspects to be considered in construction projects:

- Careful handling of soil
- Minimising land use
- Minimisation of emissions
- Proper disposal of waste and wastewater
- Limiting nocturnal lighting (if possible, only insect-friendly lamps with low radiation in the short-wave UV range)
- Site-specific soil recultivation/ preservation of soil functions by reusing the existing soil material
- Prevention of pollution and substance discharge into water bodies
- Avoiding soil erosion and soil relocation
- Measures to preserve the biotope connectivity
- Establishment of protected zones during construction work
- Tree protection
- Compliance with breeding seasons

As construction work often includes an encroachment on natural habitats, it is crucial to draw up a comprehensive plan to protect biodiversity and endangered species during the planned construction project. The evaluation of possible factors influencing biodiversity should include all necessary protective measures based on existing reports such as environmental impact assessments, permits and an inventory of the current state of the site. The implementation of the measures should already be taken into account in the construction site planning.

If a biodiversity concept, such as that of the German Sustainable Building Council (DGNB), is followed, the construction site must be assessed before work begins, the planned interventions with the proposed protective measures must be recorded and evaluated in detail and possible compensatory measures must be determined. Furthermore, training (on measures to be taken, complied with and observed) must be provided for the people working on the construction site. The corresponding protective measures must be checked regularly for compliance during the construction phase¹. Only through joint efforts and coordinated measures can we ensure that construction projects with minimal impact on biodiversity are carried out and that the long-term health of ecosystems is guaranteed. The DGNB emphasizes biodiversity with factors such as habitat connectivity, long-term biodiversity strategies and maintenance guidelines.

In planning or construction phases where our influence is limited, we offer our advisory expertise. Our active involvement in the formulation of the DGNB certification process for sustainable building sites emphasizes this advisory capability.

¹ Concept for the protection and preservation of biodiversity and species conservation during construction projects, DGNB System — [Criteria Set New Construction Buildings](#)

