

Biodiversity

The value of diversity

As a leading construction technology group, we are aware of the inherent impact on biodiversity that is associated with our construction projects and activities. Although the work on our construction sites is dependent on our clients' specifications, we must nevertheless be mindful of this urgent matter. Biodiversity is a critical element of our planet's natural systems, providing essential ecosystem services that support the livelihood and well-being of every living thing on Earth, from people to animals and plants. Unfortunately, biodiversity loss has accelerated greatly in recent years, leading many scientists to warn that we are experiencing a sixth mass extinction.¹

The latest IPCC report on climate change, published in 2022, warns that we need urgent action to protect biodiversity and mitigate its loss.² More than 90% of biodiversity loss is caused by five drivers: 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. Addressing these factors is crucial to preserving biodiversity and protecting the delicate balance of life on Earth.³

Extreme climate conditions exceeding the adaptive capacity 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 loss and has reshaped cultural and recreational practices worldwide. According to the World Bank, more than 50% of global GDP, totalling \$44 trillion in economic value generation since 2020, is dependent on natural resources.⁴

We support the United Nations Decade on Ecosystem Restoration and believe that by taking a proactive approach to protecting biodiversity and working with our stakeholders, including governments, non-governmental organisations and local communities, we can have a positive influence in this regard. The construction sector has a significant impact on biodiversity, and various measures can be taken to mitigate these adverse effects. With proper planning and design, material sourcing, low-impact construction practices, post-construction activities, ecological compensation measures and awareness raising, we can promote biodiversity during and after construction. These efforts require the cooperation of all stakeholders, including clients, the authorities that specify or approve biodiversity requirements, 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

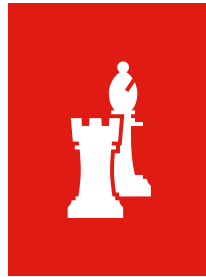
⁴ Securing our Future through Biodiversity, The World Bank, 2022

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Touchpoints with our business activities

Biodiversity covers a wide range of topics, including species diversity, genetic diversity and ecosystem diversity. As a leading construction technology group, we are aware that our activities potentially impact biodiversity in a variety of ways. We have therefore analysed our business activities and have identified the following factors that we can specifically address in order to improve biodiversity protection:

- **Choice of location:** The decision as to the location of a construction site is generally not our responsibility. We can, however, exert influence here by pointing out potential biodiversity impacts during the planning and execution of projects and proposing solutions to minimise negative consequences.
- **Design and planning:** The design and planning of a construction project can also influence biodiversity impact. Green roofs, the planting of native vegetation and the use of permeable surfaces are just some ways of helping to minimise the negative impact of construction work on local biodiversity. Suppliers can also be selected on the basis of biodiversity-promoting criteria.



- **Construction practices:** The construction process itself can impact biodiversity, e.g. through soil compaction, soil sealing, excavation and dust pollution. Minimising these impacts through practices such as the use of electrically powered excavation equipment, dust suppression measures, minimal sealing and the shortest possible construction time can help to reduce the impact on local biodiversity.
- **Activities after the construction phase:** Post-construction activities, such as landscaping and maintenance, can also have an impact on biodiversity. Selecting native plants, introducing green infrastructure solutions and limiting the use of pesticides on our properties and real estate can help to promote biodiversity in the area.
- **Education and awareness-raising for biodiversity:** Recognising that the protection of biodiversity can only be achieved through collective efforts, we can develop activities to educate and raise awareness of biodiversity among our employees and stakeholders. This document, for example, contributes to raising awareness of biodiversity and the vital role it plays in the livelihoods and well-being of people, animals and plants.
- **Biodiversity at our business locations:** An important starting point is to analyse the animal and plant species in the surrounding area. Specific types of vegetation and landscaping can also be introduced to support the presence of native animal and plant species. This can include the creation of flower strips, wildflower meadows or near-natural wooded areas. Setting up bee colonies or creating bee-friendly areas with nectar-rich plants contributes to the pollination of flowers and supports the preservation of local bee populations. Ecological compensation measures are another key point to consider.
- **Procurement of materials:** The use of sustainably sourced materials, such as FSC-certified wood, can help to minimise the negative impact on forest ecosystems. Such materials ensure that wood is obtained from responsibly managed forests, thereby protecting biodiversity and minimising ecological impacts.

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2nd June 2023



Aspects to be considered in construction projects:

- Proper soil handling
- Minimisation of land use
- Minimisation of emissions
- Proper disposal of waste and wastewater
- Reduction of nighttime lighting (if possible, only insect-friendly lamps with low radiation in the short-wave UV range)
- Site-appropriate soil recultivation/preservation of soil function through reutilisation of existing soil
- Prevention of pollution of and substance discharges into bodies of water
- Avoidance of soil erosion and soil displacement
- Measures to preserve habitat connectivity
- Establishment of exclusion zones during construction work
- Tree protection
- Observance of breeding seasons

Guidance on the protection and conservation of biodiversity and species protection in construction projects

As construction works often involve intrusions into natural habitats, it is crucial to develop a comprehensive plan to protect biodiversity and endangered species during the proposed construction project. The evaluation of potential impacts on biodiversity should include all necessary protection measures based on existing reports such as environmental impact assessments, permits and an evaluation of the as-is status of the site. This kind of guidance should be implemented as early as the site planning stage.

When implementing a biodiversity concept such as that of the German Sustainable Building Council (DGNB), the construction site must be inspected before work begins, all planned activities must be recorded and evaluated in detail along with the proposed protective measures, and any possible compensatory measures must be identified. Training (on measures to be taken, complied with and observed) must also be provided for anyone working on the construction site. The corresponding protective measures must be regularly reviewed for compliance during the construction phase.¹ It is only through joint efforts and coordinated action that we can ensure that construction projects are carried out with minimal impact on biodiversity while ensuring long-term ecosystem health. DGNB highlights biodiversity with factors such as habitat connectivity, long-term biodiversity strategies and maintenance guidelines.

In design 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 the sustainable construction site underscores 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](#)

