



PRO2.1

Construction site / construction process



Objective

Our objective is to minimise the negative impact on the local environment during the construction phase. In order to achieve this, the participants at the construction sites must be made aware of relevant environmental issues and receive training in this area.

Benefits

Trained people generally apply their knowledge to their everyday work and will also use this knowledge in the future to reduce the environmental impact of construction sites for other projects.

Contribution to overriding sustainability goals



	CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) OF THE UNITED NATIONS (UN)	CONTRIBUTION TO THE GERMAN SUSTAINABILITY STRATEGY
 Moderate	3.4 Reduction of premature death, Health promotion/well-being	3.2.a/b Air pollution
	3.9 Effects of chemicals, air, water and soil contamination	
	12.5 Waste reducing and prevention	
 Low	6.3 Improvement of water quality	
	12.4 Environmentally responsible handling of chemicals and waste	



Outlook

There are no planned tightening. Ideally, this criterion will no longer be needed in a few years' if the addressed topics have become standard practice.

Share of total score

	SHARE	WEIGHTING FACTOR
Office	1.6%	3
Education		
Residential		
Hotel		
Consumer market		
Shopping centre		
Business premises		
Logistics		
Production		

EVALUATION

In order to minimise the impact on the local environment, four indicators are used to evaluate the extent to which measures to reduce noise (indicator 1), dust (indicator 2), negative effects off soil and groundwater (indicator 3), and waste (indicator 4) have been implemented on the construction site and how much training the participants at construction site have received in this area. Measures to reduce noise and dust pollution that fall outside of the scope of the proposed topics can be credited as an alternative under the relevant Innovation areas. Innovative concepts, construction methods and technologies that reduce the amount of waste generated can be credited with an additional 10 points by means of the "Waste prevention on the construction site" circular economy bonus. In this criterion, a maximum of 100 points can be achieved in total without boni, or a maximum of 110 points including boni.

NO.	INDICATOR	POINTS
1	Low-noise construction site	
1.1	Low-noise construction site concept A concept was created that also identifies the relevant trades	5
1.2	Training for the parties implementing the construction work Training given to the relevant trades	10
1.3	Reviewing the work implemented Review/documentation provided for the work implemented	10
Re 1	INNOVATION AREA Explanation: Alternative innovative/new concepts, processes and technologies for significantly reducing the noise pollution to which construction site workers and the environment are exposed can also be credited.	 As in 1
2	Low-dust construction site	
2.1	Low-dust construction site concept A concept was created that also identifies the relevant trades	5
2.2	Training for the parties implementing the construction work Training given to the relevant trades	10
2.3	Reviewing the work implemented Review/documentation provided for the work implemented	10
Re 2	INNOVATION AREA Explanation: Alternative innovative/new concepts, processes and technologies for significantly reducing the dust pollution to which construction site workers and the environment are exposed can also be credited.	 As in 2



3 Soil and groundwater protection on the construction site		
3.1	Soil and groundwater protection concept Soil protection concept was created for the relevant construction site installations such as containers and construction machinery; concept integrated accordingly into tender specifications	5
3.2	Training for the parties implementing the construction work Training given to the relevant trades	10
3.4	Reviewing the work implemented Review/documentation provided for the work implemented	10
4 Low-waste construction site		
4.1	Low-waste construction site concept A concept was created for waste prevention on the construction site	5
4.2	Training for the parties implementing the construction work Training for those involved in the construction process focussed on the issues of waste prevention and sorting or commissioning waste logistics specialists	10
4.3	Reviewing the work implemented Review/documentation provided for the work implemented	10
4.4	CIRCULAR ECONOMY BONUS – WASTE PREVENTION ON THE CONSTRUCTION SITE Explanation: Innovative/new concepts, construction methods or technologies that significantly reduce the amount of waste generated are used on the construction site.	 <div style="background-color: #c8e6c9; padding: 5px; display: inline-block;">+10</div>



SUSTAINABILITY REPORTING AND SYNERGIES

Sustainability reporting

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NO.	KEY PERFORMANCE INDICATORS (KPIs)	UNIT
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Synergies with DGNB system applications

- **DGNB RENOVATED BUILDINGS:** Some of the aspects of indicators 1, 2, 3 and 4 can be used in criterion PRO2.1 of the scheme Renovated buildings.
- **DGNB DISTRICTS:** There are synergies with criterion PRO1.8 in the schemes UD (urban district) and BD (business district).



APPENDIX A – DETAILED DESCRIPTION

I. Relevance

Construction sites and construction processes emit noise, dust and dirt into the local environment. General efforts to minimise the impact of dust and noise on the local environment promote good health and foster widespread acceptance from everyone directly affected by the construction site.

Not only this but eliminating waste and closing material cycles play a key role in achieving sustainability and in climate protection. It is therefore important to put the right conditions in place to facilitate the effective recycling of construction waste and, in particular, to minimise mixed waste.

II. Additional explanation

Indicator 1: Low-noise construction site

Noise has a significant impact on quality of life for people and animals. Constant exposure to noise can overstimulate the nervous system, which can be bad for your health. In densely populated areas with a high standard of infrastructure, construction noise is the second greatest source of noise, behind traffic noise. In accordance with the German Federal Immission Control Act (BImSchG), all construction sites should be planned, set up and operated such that the noise from the construction work does not exceed the background noise level in the surrounding area or is reduced by means of suitable measures.

Indicator 2: Low-dust construction site

"Dust" is defined as solid floating particulate matter suspended in gases or air or accumulated on a surface. In general, dust is generated on construction sites during a wide range of different activities that involve processing and working with construction materials. Depending on the material composition and size of the dust particles, breathing them in or absorbing them through the mucous membranes can result in adverse effects on health, sometimes with potentially serious (long-term) consequences. Measures to eliminate dust therefore serve to protect everyone who works on a construction site, as well as people who live and work in the immediate vicinity. They also serve to protect the environment from damage caused by contaminants.

Indicator 3: Soil and groundwater protection on the construction site

The soil and groundwater must be protected against the ingress of contaminants and against mechanical action. Chemical exposure occurs under normal construction site conditions as a result of processes that release gases, liquids and solid matter, which can then permeate into the soil and reach the groundwater. The objective must therefore protect the soil in the area from the effects of exposure to chemicals and mechanical action due to the building work, and to restore it as far as possible to its original condition once this work is complete. It is particularly important to protect natural, undisturbed soil layers.

Indicator 4: Low-waste construction site

When buildings are constructed, renovated, remodelled, converted or demolished, building rubble and debris, excavated soil, remnants of materials, packaging, scrap wood, etc. are generated. For planning and implementing construction work, the German recycling law (KrWG) stipulates that this waste should be largely eliminated or recycled. Waste that is unavoidable and cannot be recycled must be disposed of in an environmentally responsible manner. The objective is to separate the waste materials on the construction site – a necessary step to allow for recycling that effectively recovers the materials' value. Separation eliminates mixed waste, making it the most commercially viable and environmentally responsible – that is to say, the most sustainable – solution for unavoidable



waste materials.

III. Method

Indicator 1: Low-noise construction site

A noise prevention concept must be developed and implemented for the construction site. The noise prevention concept should incorporate the use of low-noise machinery in accordance with RAL-UZ 53 [ecolabel issued by RAL gGmbH] or low-noise working methods and should stipulate that noisy work should be planned such that it is carried out within the permitted hours only. Those working on the construction site must be given training in how to implement the noise prevention concept, and checks must be carried out to make sure that it is being implemented on the site.

Indicator 2: Low-dust construction site

The machinery and equipment used must have an effective dust extraction system. If dust is generated, as much of it as possible must be collected where it is generated and it must be safely disposed of. Appropriate measures must be implemented to prevent the dust from propagating to uncontaminated work areas as far as is technically possible. Deposits of dust should be avoided. To remove dust, semi-dry methods, wet methods or suction is/are used. Those working on the construction site must be given training in how to implement the dust prevention concept, and checks must be carried out to make sure that it is being implemented on the site.

Indicator 3: Soil and groundwater protection on the construction site

It is particularly important to protect natural, undisturbed soil layers. Valuable soil or biotopes on the construction site can be protected, for example, by fenced-off protection areas that people cannot access. Valuable topsoil layers can be shifted and the piled-up soil (excavated soil) can be greened for the construction phase. Those working on the construction site must be given training in how to implement the soil and groundwater protection concept, and checks must be carried out to make sure that it is being implemented on the site.

To protect the soil and groundwater against the ingress of contaminants, substances that pollute the soil, water and the environment must be avoided. To this end, the designation "environmental hazard" described in chemical regulations can be used as an exclusion criterion for the tender documents.

In accordance with chemical regulations, materials that are hazardous to the environment must be identified by the symbol below on the container and the safety data sheet as a minimum.



Construction materials that are hazardous to the environment should be avoided. This applies in particular to areas of the construction site at the edges of bodies of water and in water protection zones.

For hazardous but unavoidable construction materials, such as uncured epoxy resins, measures must be taken on the construction site to ensure that these substances do not come into contact with the environment.



Indicator 4: Low-waste construction site

In addition to complying with the statutory minimum requirements of the German recycling law (KrWG), a concept must be developed to eliminate construction site waste. Those working on the construction site must be given training in how to implement the concept, and checks must be carried out to make sure that it is being implemented on the site (in the form of waste prevention and separation into individual material types).



APPENDIX B – DOCUMENTATION

I. Required documentation

A range of different forms of documentation is listed below. The documentation submitted must comprehensively and clearly demonstrate compliance with the requirements for the target evaluation of the individual indicators.

In general, tender documentation and other documentation must address the following measures:

- Noise protection measures
- Dust emission protection measures
- Soil and groundwater protection measures

In addition, plans showing the construction site facilities and installations must be documented – these plans must provide information regarding waste disposal concepts, noise protection measures, and soil and groundwater protection measures.

Indicator 1: Low-noise construction site

- Tender documentation
- Detailed noise prevention concept
- Measurement logs for the sound pressure level during the construction phase
- Photo documentation
- Site inspection reports
- List of construction machinery used plus documentation of the sound pressure level LWA in relation to the requirements in accordance with RAL-UZ 53
- Documentation of training/instruction provided to the relevant construction site workers

Indicator 2: Low-dust construction site

- Tender documentation
- Site inspection reports
- List of low-dust construction machinery and equipment used in accordance with the requirements of the German Construction Industry Trade Association (BG BAU)
- Documentation of training/instruction provided to the relevant construction site workers

Indicator 3: Soil and groundwater protection on the construction site

- Tender documentation
- Soil protection concept for protecting natural, undisturbed soil layers
- Construction site facility plans, particularly paths, roads, entrances and the like
- Site inspection reports
- Requirements regarding handling construction chemicals that are hazardous to soil and water
- Photo documentation showing how substances that are hazardous to the environment are stored
- Documentation of training/instruction provided to the relevant construction site workers



Indicator 4: Low-waste construction site

- Tender documentation
- Construction site facility plans
- Detailed waste disposal concept
- Site inspection reports
- Photo documentation
- Documentation of training/instruction provided to the relevant construction site workers

or alternatively

- Agreement with a waste logistics specialist
- Declaration/explanation by the waste logistics specialist



APPENDIX C – LITERATURE

I. Version

Change log based on version 2018

PAGE	EXPLANATION	DATE
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II. Literature

- Sustainable Development Goals icons, [United Nations/globalgoals.org](https://www.un.org/sustainabledevelopment/globalgoals/)