



We guarantee
a more beautiful
tomorrow

TECHNICAL MANUAL V6.1.1

BREEAM-NL Area

For sustainable area development and redevelopment

BREEAM® | NL



Code for a Sustainable Built Environment
www.breeam.com
www.breeam.nl

© BRE Global Ltd. 2021

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Dutch Green Building Council

Benoordenhoutseweg 46
2596 BC The Hague

Email: info@dgbc.nl for general information
Email: helpdesk@dgbc.nl for substantive questions/comments
Telephon +31(0)88 55 80
e: 100

www.dgbc.nl
www.breeam.nl

Photo front page: Wisselspoor, Utrecht. Developer Synchron B.V..

TECHNICAL MANUAL

BREEAM-NL Area

Technical Manual for Area Development and Redevelopment

VERSION 6.1.1

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

EDITION.

Dutch Green Building Council
Benoordenhoutseweg 46
2596 BC The Hague

Table of contents

Changes BREEAM-NL Area.....	7
Disclaimer	7
Copyright.....	7
Trademarks.....	7
Dutch Green Building Council.....	8
BRE Global Ltd. BREEAM.....	8
Scheme operator	8
Colophon.....	9
1. Introduction.....	11
1.1 What is BREEAM?	11
1.2 BREEAM-NL quality marks	12
1.3 BREEAM-NL Area	12
1.4 When to start with BREEAM-NL?.....	13
1.5 How to use the BREEAM-NL Area Technical Manual?	13
2. Scope of BREEAM-NL Area.....	16
2.1 Areas that can be assessed with BREEAM-NL Area	16
2.2 Area typologies.....	17
2.3 Area and system boundaries	17
2.4 Scope.....	17
3. Score and qualification.....	18
3.1 BREEAM-NL Area Qualification	18
3.2 Score determination	19
3.3 Category Weighting.....	20
3.4 Calculating a BREEAM-NL Area score.....	21
4. Evidence requirements.....	23
4.1 Level of evidence	23
4.2 Mandatory evidence of project data	25

5.	Certification	27
5.1	Registration and certification.....	27
5.2	Recertification with a dynamic approach.....	27
5.3	Moment of certification.....	28
5.4	BREEAM-NL Area and BREEAM-NL certified buildings	29
5.5	BREEAM-NL Area and the Environment and Planning Act	29
6.	Glossary	30
7.	How to read the issue	31
Management.....		33
MAN 1	Management	35
MAN 2	Participation	38
MAN 3	Management- and User Manual	42
MAN 4	Sustainable project organisation	45
Synergy.....		47
SYN 1	Characteristics of the area	49
SYN 2	Visionary plan	52
SYN 3	Adaptive capacity	54
SYN 4	Urban planning programme	56
SYN 5	Ownership	58
SYN 6	Sustainable Return on Investment	60
Sources.....		63
BRO 1	Primary building-related energy consumption	65
BRO 2	Energy performance of public space	70
BRO 3	Renewable energy use	72
BRO 4	Waterconsumption	75
BRO 5	Circular use of materials	79
BRO 6	Environmentally harmful materials	82
BRO 7	Responsible sourcing for materials	85
BRO 8	Robust design	88
BRO 9	Local food production	90
BRO 10	Prevention and management of waste	92

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Spatial Planning..... 97

RO 1	Soil structure	100
RO 2	Land use	102
RO 3	Contaminated soil	104
RO 4	Reuse of existing works	107
RO 5	Cultural heritage	109
RO 6	Geologic values	112
RO 7	Ecological values	114
RO 8	Effective space use	120
RO 9	Underground infrastructure	123
RO 10	Sustainable buildings.....	126
RO 11	Flood risk	128
RO 12	Extreme rainfall	130
RO 13	Mobility	134

Well-being & Prosperity 139

WELL 1	Liveability and Safety Experience	141
WELL 2	Social cohesion	144
WELL 3	Environmental experience	146
WELL 4	Regional vitality	149
WELL 5	Corporate social responsibility and housing	152

Area climate.....155

KLI 1	Thermal climate	157
KLI 2	Wind climate	160
KLI 3	Air Quality	162
KLI 4	Water quality	164
KLI 5	Soil quality	167
KLI 6	Noise pollution	170
KLI 7	Accession of daylight	173
KLI 8	Light nuisance	175
KLI 9	Radiation risk	177

Changes BREEAM-NL Area

VERSION	DATE OF ISSUE	COMMENTS
V6.1	January 13, 2025	First publication
V6.1.1	February 10, 2025	Textual changes

Disclaimer

Dutch Green Building Council (DGBC) has an exclusive license from BRE Global Limited to apply the BRE Environmental Assessment Method (BREEAM) in the Netherlands. DGBC adapts BREEAM, originally developed by BRE Global Limited, to improve its relevance and applicability in the Netherlands (BREEAM-NL). This Review Guideline is owned by DGBC and is publicly accessible for informational purposes.

All testing, assessment, certification, or approval activities for this Technical Manual (direct or indirect) must be carried out in accordance with the processes approved by DGBC. Such activities may only be performed by authorized employees and representatives of DGBC, or those who have been approved or licensed by DGBC.

Any party wishing to use this Technical Manual to offer testing, assessments, or certifications must apply to DGBC for training and assessment and obtain the necessary licenses. Please note that a fee will normally be charged. DGBC and its licensors assume no responsibility for any unauthorized use or distribution of this schedule document. They may take legal action to prevent such use by unauthorized persons.

Copyright

The information and images contained in this document are the property of DGBC and its licensors, unless explicitly stated otherwise, and are protected by copyright laws. The information and images in this document can be downloaded and printed without specific permission. However, they remain the intellectual property and copyrighted material of DGBC and its licensors. Such material must not be used in a derogatory or misleading manner, in a manner that may disparage the names of BRE Global or DGBC. It may also not be used for commercial purposes. We may ask you to register your details before downloading certain information or documents. In addition, this document may not be distributed to third parties without the express written consent of both DGBC and BRE Global.

Trademarks

"BRE", "Building Research Establishment", "BRE Global", "BREEAM", "BREEAM" and "Green Book Live" are registered trademarks owned by Building Research Establishment Limited ("BRE") or BRE Global Limited. They may not be used without the prior written permission of BRE or BRE Global Limited. "DGBC" is a registered trademark of Dutch Green Building Council.

Dutch Green Building Council

The Dutch Green Building Council (DGBC) is an independent foundation that has developed the BREEAM-NL sustainability label for Dutch buildings and areas. It issues certificates to projects whose degree of sustainability has been assessed according to predetermined criteria laid down in a Technical Manual (BRL). The BREEAM-NL family of quality marks largely follows the BREEAM international, developed by the BRE in Great Britain (see further under BREEAM).

In the present Technical Manual, called BREEAM-NL Area v6.1.1, you will find all information about the Dutch version of the quality mark for the development of areas. There is also a quality mark specifically for the new construction of non-residential buildings called BREEAM-NL New Construction and Renovation, and for residential called BREEAM-NL New Construction and Renovation Residential. The quality mark for existing buildings is called BREEAM-NL In-Use and is available in a version for residential and a version for non-residential buildings.

For more information about BREEAM-NL and the quality marks, please visit www.breeam.nl.

BRE Global Ltd. BREEAM

BREEAM stands for 'Building Research Establishment Environmental Assessment Method' and is a measuring instrument for assessing the sustainability of projects. With its development in 1991, BREEAM was the first sustainability label for the built environment. BREEAM was developed by the Centre for Sustainable Construction, part of the UK's Building Research Establishment Global (BRE Global England).

Scheme operator

DGBC manages BREEAM-NL under license from BRE Global Ltd. DGBC is formally recognized by the BRE as a 'National Scheme Operator'. DGBC is the only party in the Netherlands entitled to manage this quality mark. As a Scheme operator, DGBC is responsible for the content and proper functioning of the BREEAM-NL system, of which the Technical Manuals are a part. The internal organisation is divided into a project office, a board, an advisory group and an independent Board of Experts (CvD). The primary task of the CvD is to monitor the quality and functioning of the BREEAM-NL quality marks. The CvD is independent of both the project office and the advisory group and the board. Both the CvD, the Advisory Group and the Board are composed on the basis of the 'all parties concerned' principle and therefore represent the relevant stakeholders.

To guarantee the independence of testing, a three-party certification system is used for the BREEAM-NL quality marks. The project (building or area) builds the file and substantiates the intended score with evidence; an independent Assessor checks the accuracy and completeness of the file and determines the qualification of the project; DGBC randomly tests the work of the Assessor.

DGBC is supported in its activities by a large number of organisations that all have a sustainability ambition and endorse DGBC's objectives. These partners are actively involved in the development and continuous improvement of the seals. More information about DGBC and partner opportunities can be found on our website www.dgbc.nl.

Colophon

DGBC owes a great debt of gratitude to BRE Global for their continued commitment to international, relevant quality marks. But also to our partners, who make the further development of BREEAM-NL possible, and to all the people who provided feedback and recommendations. Much of this has been incorporated into the credit texts. You can (continue to) provide input through helpdesk@dgbc.nl as this Technical Manual is largely established through an 'open source' approach, using knowledge and expertise from the market. At the time of the completion of this version, a large number of expert and experienced people were involved. Not least the Board of Experts and the Advisory Group Area, which continuously guarantee the quality of the quality mark throughout the year and give direction in the development process:

Board of Experts

Guido den Teuling	Royal Haskoning DHV (chairman)
Hannah van der Leij	Build2live
Harm Valk	Nieman Raadgevende Ingenieurs B.V
Marius Schoppink	Sweco
Marleen Spiekman	TNO
Ritzo Holtman	SHAPE

Area Advisory Group

Anouk Stefess	Stegehuis
Ingrid van Leeningen	Municipality of Almere
Jacco Zwerver	Development Agency Utrecht
Jeroen Stegehuis	Stegehuis
Marius Schoppink	Sweco (chairman)
Patrick Folmer	Procap
Richard Koek	Municipality of The Hague
Willemijn Drok	Royal Haskoning DHV

Dutch Green Building Council

Anna Verbrugge	Project Manager
Anouk Freriks	Editor and copywriter
Bastiaan Versteeg	Project Manager
Brigit Gerritse	Managing Director
Hidde Vroman	Project Manager
Leonie de Boer	Project Manager
Lidewij Hiestand	Junior Project Manager
Maartje Juffermans	Junior Project Manager
Maikel de Laat	Project Manager
Martine Pijl	Project Manager
Rudy van der Helm	Manager certification
Thomas Heye	Program Manager

The content of this Technical Manual has been reviewed and approved by the Area Advisory Group, the Board of Experts and BRE Global.

In addition, there have been several parties who have provided substantive support for the translation and development, or who have provided substantial input. The following people were involved in the development of this version of the Technical Manual:

Edwin Daemen	Environment Agency Central and West Brabant
Fred Hartendorf	TNO

Fred Prins
Hannah Kleemans
Herbert Smeenk
Jorg Boerma
Jos Schild
Manuela Lambie
Marian Bertrums
Rene Frinks
Runa Lentz
Yvonne de Rijck

GEP water
Royal Haskoning DHV
TRAJECT
MAT25
Royal Haskoning DHV
Kragten
Municipal Platform for Cables and Pipelines
Heijmans
Merosch
Bouwend Nederland

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

1. Introduction

1.1 What is BREEAM?

BREEAM-NL has been the certification method for a sustainably built environment since 2009. With this method, projects can be assessed for integral sustainability. BREEAM-NL has four quality marks. For new construction and renovation projects, there is BREEAM-NL New Construction (and Renovation). Existing buildings are assessed with In-Use and complete areas with BREEAM-NL Area. On [breeam.nl](https://www.breeam.nl) you will find more information about the method, the link with, for example, the Sustainable Development Goals (SDGs) or the EU Taxonomy. You will also find useful documents, such as the BREEAM-NL fact sheets.

Goals of BREEAM

BREEAM assesses, stimulates and values ecological, social and economic sustainability in the built environment. The BREEAM quality marks:

- Challenge the market to come up with innovative solutions that optimise the sustainability performance of buildings and areas.
- Raise awareness among building owners, occupiers, developers and managers about the benefits of buildings and areas with limited environmental impact.
- Develop trust and value by providing independent certification that demonstrates the added value for individuals, businesses, society and the environment.

Objectives of BREEAM

- To provide market recognition for buildings and areas with low environmental impact.
- Ensuring that sustainable best practices are incorporated into buildings and areas.
- Challenging the market to provide innovative, cost-effective solutions that reduce the environmental impact of buildings and areas.
- Enabling organisations to showcase their environmental goals and improvements in a unified way.

Core principle/values BREEAM

- Determining environmental quality through an accessible, holistic and balanced methodology.
- BREEAM is based on objective criteria that value good sustainable performance.
- Using a flexible approach that focuses on positive output without prescribing measures.
- Performance is based on scientific evidence whenever possible.
- Certification in an independent way, which increases reliability.
- Where possible, adopt existing tools and standards in the market, to promote the development of policy and technology and reduce costs.
- Drafting technical and operational issues with relevant international and national standards, including the standards of the European Commission's CEN/TC 350.
- Collaboration with a representative range of stakeholders to stay informed of developments that endorse these principles.

The sustainability objectives exceed the legal minimum as laid down in the BBL or other laws and regulations. BREEAM-NL certification is therefore 'non-statutory'. BREEAM-NL is always a voluntary choice of the client. The BREEAM-NL objectives are based on current practice guidelines (best practices). There is freedom of choice in most subjects (issues). This allows development and construction teams to choose for which issues they want to earn the credits, in order to build up the intended total score. For a number of criteria, there is a minimum standard that you must achieve. This means that you are required to meet certain criteria in order to arrive at a certain total score. These criteria are called minimum requirements and mandatory credits.

1.2 BREEAM-NL quality marks

The Dutch Green Building Council Foundation is the NSO (National Scheme Operator) for BREEAM in the Netherlands. DGBC manages several BREEAM-NL quality marks in the Netherlands, developed to assess the sustainability performance of developments over the different stages of life.

The Dutch issue lists focus on Dutch laws and regulations, practice guidelines and construction practice. In doing so, consistency with the international BREEAM version is monitored by BRE Global. This allows the user, through the BREEAM-NL Assessor and the certification process, to measure, evaluate and reflect on the performance of the project in an independent and robust way based on current best practices.

The issue lists are bundled together in Technical Manuals. The operational Technical Manuals are:

- BREEAM-NL Area for (re)developments at area level;
- BREEAM-NL New construction and renovation for non-residential buildings;
- BREEAM-NL New construction and renovation for homes and residential buildings;
- BREEAM-NL In-Use for existing non-residential buildings;
- BREEAM-NL In-Use for existing homes and residential buildings;
- BREEAM-NL In-Use for Sustainable Housing and Business Operations.

Sustainability performance can be quantified with a number of individual measures and associated criteria, which extend across several different sustainability categories. You will eventually find this expressed as a single certified BREEAM-NL qualification on the certificate. The credits to be awarded may differ per type of building or use. In his file, the applicant indicates which use function applies to each part of the building. The current version of this Technical Manual can be consulted and downloaded at www.breeam.nl. In the recently published Technical Manuals, the context and value of the category in question has been explained at the beginning of each category.

1.3 BREEAM-NL Area

BREEAM-NL Area is a performance-based assessment method and a certification system for areas where a development or redevelopment is taking place.

The BREEAM-NL Area scheme considers sustainability in a broad sense (holistic approach). This means that areas with BREEAM-NL Area are assessed on a wide range of topics, which are reflected in the 6 different categories: management, synergy, sources, spatial planning, well-being and prosperity and area climate.

The outcome of a BREEAM-NL Area assessment is a certified BREEAM-NL Area score. This score shows the performance of the area in the different categories, as shown in Table 1. This allows the performance to be compared with other areas on both total score and category score. Moreover, this provides insight on the basis of which the sustainability performance can be optimized. Within each category, an area is assessed on different aspects ('issues'). These issues have been elaborated in detail in this Technical Manual.

Table 1: BREEAM-NL Area categories

CATEGORY	PURPOSE
Management	The (re)development process is set up in a socially responsible manner. In such a way that together with stakeholders, the realization of as many sustainability measures as possible can be achieved.
Synergy	Achieving economic, ecological and social added value on the basis of an integral coherence of the area's own qualities.
Sources	Reducing CO2 emissions and using natural resources efficiently.
Spatial Planning	Maximizing safety, environmental quality, ecological quality and efficient land use.
Well-being and prosperity	Achieving a safe, attractive and socially cohesive environment and a healthy economy.
Area climate	Achieving a healthy and future-proof physical living environment.

1.4 When to start with BREEAM-NL?

In order to integrate the BREEAM-NL methodology efficiently and effectively into the development to be carried out, it is advisable to engage a BREEAM-NL Expert or Assessor as early as possible in the process. They have experience in integrating the BREEAM-NL methodology into developments. Involving an Expert and Assessor at an early stage helps to achieve the desired qualification and reduces the risk of undesirable consequences of design decisions and possibilities.

Table 2 emphasises the relationship between the BREEAM-NL assessment and assessment phases and the usual phases in an area development. This figure provides insight into the phase in which BREEAM-NL Area is relevant to apply in line with the (re)development. It also helps to determine when a BREEAM-NL Expert and Assessor should be appointed in the process. Clients can view current lists of BREEAM-NL Assessors and Experts on the website of www.breeam.nl.

Table 2 BREEAM-NL Assessment certification phases

	BREEAM-NL CERTIFICATION PHASES				
01 Initiative	Self-assessment				
02 Feasibility and project definition		Project phase			
03 Preliminary Design			Assessment phase	Control phase	(Re)certification
04 Final Design					
05 Output Phase					
06 Management and use					

It is important to take into account the fact that BREEAM-NL mainly reflects the overall performance of the project. The methodology is not specifically intended to indicate the existing opportunities or limitations for stakeholders, planning or design. In particular, the client, the design team, the developer, the BREEAM-NL Expert and any other specialist disciplines play an important role in achieving the desired BREEAM-NL qualification.

The ambition and objective to focus on sustainability must first and foremost come from the client. To make this possible, DGBC recommends that clients and their project teams start working with a BREEAM-NL Assessor and/or Expert no later than Step 2 of the Feasibility and Project Definition. Ideally, this should happen sooner. This will help you set and achieve realistic goals, define appropriate responsibilities and, where possible, apply low-cost or cost-free solutions to environmental impacts. This phase is also defined in BREEAM-NL as the Project Phase in which the application of issues and criteria will be integrated into the project plan of the area.

The next phase, the Assessment phase, is so called because it collects the necessary evidence with which the criteria are demonstrated. This corresponds to Step 3 Preliminary Design, as the phase in which the design plans are made concrete and the burden of proof is sufficiently present to substantiate the BREEAM-NL requirements.

The Assessment Phase concludes the Assessment Phase when the assessor checks all the evidence and the report. This can take place during or after completion of Step 3 Preliminary Design. The report is then submitted for Q.A. and the certificate can be obtained. Each three-year recertification cycle (H5.2) takes place during the (re)development process during which issues, criteria and burden of proof are added, changed or updated. This can take place at any later stage of development, and can then also be reassessed as an addition to the initial certification.

1.5 How to use the BREEAM-NL Area Technical Manual?

With this BREEAM-NL Technical Manual:

- Qualified and licensed BREEAM-NL Assessors can complete a BREEAM-NL assessment and obtain a final qualification.
- Can DGBC have a Quality Assurance (QA) assessment carried out on an Assessor's assessment report, in line with the procedures that have been drawn up.
- BREEAM-NL Experts receive help in supporting project teams in defining, monitoring and successfully achieving the desired final qualification.
- Do clients and project teams have a reference on how the intended area is tested with BREEAM-NL?

The Technical Manual is divided into eight parts:

- Introduction to BREEAM.
- Scope of BREEAM-NL assessment direction
- Score and qualification.
- Evidence
- Certify and register.
- Glossary.
- Reading guide
- Assessment criteria.

Introduction

Chapter 1 shows which version of BREEAM-NL can be applied for different project types and further discusses the application of the Technical Manual for Site and when to use it.

Scope

The section 'Scope of BREEAM-NL Area' (chapter 2.) describes types of buildings, user functions and stages of assessment to which you can apply this BREEAM-NL quality mark. Clients and BREEAM-NL Assessors can use this scope to check whether the correct BREEAM-NL quality mark has been applied for the specific project.

Score and qualification

The section 'Score and qualification' in chapter 3 illustrates how to measure and assess the assessed performance of an area. It outlines the weighting percentages per category, the minimum scores per final qualification, minimum requirements, mandatory issues and exemplary performances. Here you can see how the performance against this is calculated and expressed in the BREEAM-NL qualification.

If all issues within a category have been assessed, a category score can be determined. He then applies a category weighting. The weighted category scores are added up. These give an overall score, with any additional scores for awarded innovation issues and so-called 'exemplary performances'. This total score ultimately leads to a qualification: for example, Good, Excellent, Outstanding.

Evidence

An important aspect of BREEAM-NL is that the sustainability performance of a building is demonstrable. The performance must be traceable and demonstrable. Evidence is needed to ensure that. Chapter 4 "Evidence" contains all the information about the different types of evidence, the suitability and robustness of evidence needed for certification.

Certify

The 'Certification' section in Chapter 5 indicates how the Technical Manual is applied within the certification process of BREEAM-NL. The main features of this are described in the user manual, but have specific characteristics for each Technical Manual. The features for this version of the guideline are described here and deal with the validity of the registration of an assessment centre and the validity of a certificate.

Glossary

Common concepts in this guideline are included in chapter 6, these concepts are reflected in several issues as important components.

Reading guide

Each BREEAM-NL issue is structured in the same way. This describes the criteria and goals that a project must meet in order to be eligible for the issues linked to the issue. For a further description of the structure of a issue, see chapter 7 Reading guide.

Assessment criteria

The assessment of an area takes place in the design, development and delivery phases, based on topics in six different categories as previously mentioned in the introduction of the Technical Manual.

Each category and each subject (called 'issue') is elaborated in this Technical Manual. For each issue, sustainability objectives are defined and criteria that must be met. If the criteria are demonstrably and traceably met, an Assessor can award credits.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

2. Scope of BREEAM-NL Area

The BREEAM-NL Area Technical Manual (BRL) can be used to assess the sustainability performance of areas where a development or redevelopment is taking place. Is the result of the assessment positive and has it been independently tested? Then a BREEAM-NL Area certificate is issued with the qualification applicable to the area.

All BREEAM Area assessments in the Netherlands must be carried out with the BREEAM-NL Area Technical Manual. This has been agreed between DGBC and BRE Global.

It is possible to perform a self-assessment in the assessment tool. Allows you to calculate a non-independently verified score. The scores resulting from this self-assessment may not be published or used for external purposes until certification has taken place.

2.1 Areas that can be assessed with BREEAM-NL Area

The BREEAM-NL Area Technical Manual can be used for the assessment of areas that are being (re)developed in the Netherlands. According to this Technical Manual, an area is under development or redevelopment if the majority of the following characteristics are met:

- There is a master plan or an area vision (or a plan or vision is being drawn up/updated);
- There are spatial choices to be made, in contrast to an existing situation that remains unchanged;
- There is a central organisation or a collaboration of organisations responsible for area development: the project organisation;
- The area contains buildings, public space and infrastructure;
- The (re)development has a significant impact on mobility;
- The (re)development stimulates additional or new availability of care centres, schools, shops, places of worship, playgrounds or other similar facilities or services;
- The (re)development is expected to have a significant impact on existing communities.

This Technical Manual considers the planned situation after the (re)development and the process to get there. The existing situation is used as a starting point and the existing works are an integral part of the certification. For each issue, it is made clear what is being assessed, this can be the final vision of the area, or the current situation of the energy performance of the area.

The manual is suitable for the redevelopment of areas with existing works, such as buildings, roads and civil engineering structures. Under "additions to the criteria requirements" additional requirements may be imposed on existing works.

The BREEAM-NL Area Technical Manual is less suitable for certifying the 'Status Quo' of an area if there is no development. Not all parts of the Technical Manual are relevant to existing, unchanged situations. For example, if a municipality would like to know how a certain neighbourhood performs in terms of sustainability in its current state. Many parts of the manual require a projection of the area in the future situation. If the area has an active multidisciplinary management organisation and is working on improving the area, it becomes easier for a project to collect evidence. In the case of an existing situation, it is advisable to contact DGBC.

2.2 Area typologies

Areas in the Netherlands can differ typologically in their nature and geographical location, in the degree of urbanisation and in use. We know residential areas, office parks, business parks, multifunctional city centers and of course many other types of areas. The issues in this Technical Manual are set up in such a way that they apply to all area types, so all types of built environment can be assessed with this Technical Manual. A certain amount of construction is a requirement. For example, the Technical Manual is not intended to assess nature parks or nature reserves.

2.3 Area and system boundaries

It is important to unambiguously determine the size and boundaries of the area to be assessed, together with the intended final situation of the development to be assessed. The area is spatially demarcated in advance with area boundaries on a map. The assessment is about that limited area. The client is free to determine the area boundary at the start of the assessment. As an example, the boundary of land development can be used.

In addition to the area boundary, the concept of system boundary has been introduced for some issues. The system boundary indicates a larger area than the predefined area. This is necessary because for some aspects an area cannot be seen separately from the adjacent areas. If one has to assess on the basis of a system boundary, this is stated in the issue, if not, the area boundary always applies. The system boundary can differ per issue, the area boundary is fixed for the entire assessment.

2.4 Scope

The criteria requirements set in BREEAM-NL Area influence the development process of an area at different scale levels. The levels can be distinguished into the planning choices of the client, the spatial choices and structures in the area, the layout and buildings in the area and the social structures and processes of users, residents and businesses in the area.

The most important share is determined by the choices that the client has in mind in the area, the sustainability requirements become part of the planning process to (re)develop an area. This includes the way in which the project organisation is organised, how participation is carried out and how the spatial processes are anchored in the development plans. These policy aspects have a lot of overlap with the municipal processes and the Environment and Planning Act, more on this in Chapter 5.5. The development plans have an impact on the spatial structures in the area, areas are assessed on the choice of materials used in the area, reuse of materials and structures, ecological values, rainwater collection and green areas.

In addition to the process and structures, the assessment of the area is also partly determined by the sustainability performance of the buildings, such as the energy performance of the buildings, whether water reuse systems have been applied and whether buildings are also demonstrably sustainable. The main impact of the area affects the users of the area, with which spatial interventions and organisational processes can the social and societal structures in the area be strengthened. In this way, a good quality of life and social connection with the area is stimulated.

The Technical Manual approaches the sustainability performance of an area from multiple angles and from different disciplines, in order to arrive at an integrated assessment.

3. Score and qualification

The performance of an area that is assessed in accordance with the BREEAM-NL Area is established on the basis of a number of elements, namely:

1. BREEAM-NL Area qualification;
2. Weighting factor per category;
3. Issues and credits.

The way in which a BREEAM-NL Area qualification is calculated is summarised below.

3.1 BREEAM-NL Area Qualification

A score is calculated with BREEAM-NL Area. To obtain the associated qualifications based on the score. The qualifications and corresponding scores are shown in Table 3.

Table 3 BREEAM-NL Area qualification

QUALIFICATION	% SCORE	CERTIFICATE	STARS
Outstanding	≥ 85	Yes	5 stars
Excellent	≥ 70	Yes	4 stars
Very Good	≥ 55	Yes	3 stars
Good	≥ 40	Yes	2 stars
Pass	≥ 25	Yes	1 star
Unclassified	< 25	No	0 stars

The BREEAM-NL Area qualification makes it possible for the client or other stakeholders to compare the performance of the area with other areas.

The qualification 'Unclassified' indicates that the performance does not meet the requirements of BREEAM-NL Area. This may be because the characteristics of paragraph 2.1 are not met, or that the score achieved does not exceed the threshold value of 25%. Both are necessary if you want to obtain a formal BREEAM-NL Area certificate.

BREEAM Assessment – issues and credits

BREEAM-NL Area v6.1.1 consists of 47 individual issues divided into six environmental categories, plus an 'Innovation' category. Chapter 3.2 provides more information on innovation issues and exemplary performance. Each issue assesses a specific development-related environmental impact or issue. Think of topics such as air quality or criteria about the participation of users in the development of the area. A certain number of credits is available for each issue.

A project receives BREEAM-NL credits if you demonstrate that it meets the 'best practices performance levels', associated with a specific issue. This means that an environmental impact has been reduced. Or, in the case of the area climate category, that a specific environment-related problem has been addressed. Consider, for example, good thermal comfort, sufficient daylight for buildings or the prevention of noise pollution.

The number of credits available for an individual assessment criterion varies. In general, the more credits a project can earn for a given issue, the more important that issue is for reducing the area's environmental impact. If you can achieve multiple credits for a issue, the number of credits awarded is usually based on an ascending scale or

benchmark. The BREEAM-NL methodology rewards a higher performance in the field of sustainability with more credits.

In addition to the BREEAM-NL total score and qualification achieved, the area performance also provides insight into a series of important sustainability indicators. Examples are the environmental effects during construction and in the use phase. It means that you can use BREEAM-NL to set general goals, but it is also possible to use the method to define performance levels of an area. These can then be used to support specific organisational policy objectives for individual environmental criteria. Just be careful when setting design goals based on individual issues and credit levels. It can limit design flexibility. This can have an impact on project costs.

3.2 Score determination

In order to maintain a flexible system, BREEAM-NL uses a 'balanced scorecard' approach to the assessment of a project. It means that in order to reach a certain level of performance, you can trade the most BREEAM-NL credits. This means that you can compensate sustainability performance on one subject with performance on another subject, in order to achieve the intended BREEAM-NL score.

BREEAM-NL sets minimum performance standards for relevant process-related topics, such as the organisation of the project, participation and the use of the area characteristics. To achieve a certain BREEAM-NL qualification, the project must achieve the minimum overall percentage score, plus the minimum standards that apply. There are two types of minimum standards, namely the 'minimum requirements' (see Table 4) and the 'mandatory issues' (see Table 5).

Minimum requirements

The minimum requirements apply to different issues. They indicate criteria that a project must achieve as a minimum. If these are not achieved, no BREEAM-NL qualification is possible. No credits can be earned by meeting these requirements. In the issues you will find the minimum requirements as a separate section.

Table 4 Overview of issues with minimum requirements

ISSUE	MINIMUM REQUIREMENTS
BRO 7	✓
RO 13	✓

Mandatory issues

The mandatory issues give a minimum standard per issue, with which you can obtain a certain BREEAM-NL qualification. This means that a minimum number of credits has been achieved for a number of issues per qualification level.

Table 5 Overview of mandatory issues

ISSUE	PASS	GOOD	VERY GOOD	EXCELLENT	OUTSTANDING
MAN 1 Management	-	2	3	3	3
MAN 2 Participation	-	2	2	3	4
SYN 1 Area Nature	-	-	2	2	2
SYN 2 Area Vision	-	-	4	4	4
Case study material	-	-	-	-	✓

Innovation issues and exemplary performance

With innovation issues, you can additionally value innovations that increase the sustainability performance of an area. These are innovations, on top of the achievements that are already appreciated in BREEAM-NL. Innovation credits encourage clients and construction and design teams to make their area extra sustainable. Moreover, they increase knowledge, techniques and applications in the market. You can obtain an innovation issue if a technique, method or other application has been assessed as innovative. You can apply for innovation issues with Instruction 101 (see BREEAM-NL).

For each innovation credit awarded, the Assessor can add 1% to the total score, with a maximum of 10%. Innovation credits are independent of the BREEAM-NL qualification. An Assessor can therefore award them for any qualification (from PASS).

An area can also earn extra credits if it meets Exemplary Performance. It is an 'exemplary performance criteria' in a BREEAM-NL issue. These Exemplary Performances also have a value of 1% on top of the total score. The BREEAM-NL qualification is capped at 100%. Innovation credits and Exemplary Performance are awarded only as whole percentage credits. See table 6 for an overview of the Exemplary Performances (EP) present.

Table 6 Overview of issues with Exemplary Performance

ISSUE	EXEMPLARY PERFORMANCE
MAN 2 Participation	1%
BRO 3 Share of renewable energy	1%
RO 7 Ecological value	1%
RO 9 Underground infrastructure	1%

3.3 Category Weighting

The number of credits approved by an Assessor determines the final total score. In order to arrive at a total score, a number of settlement factors must be taken into account, such as the weighting and the number of credits obtained per category. The Assessor does not have to do this himself. The Assessment Tool makes this calculation automatically.

The weighting factors were determined on the basis of research by BRE, in which various parties were involved, such as the government, suppliers, manufacturers and knowledge institutions. This research determines the relative weight of each sustainability category. In the Netherlands, these factors are used to draw up a procedure for a local weighting, which is coordinated with the Advisory Group of this Technical Manual. This is qualitative research and not an exact scientific calculation. The weighting for each of the six categories within the BREEAM-NL Area assessment is included in Table 7.

Table 7 Weighting of categories within BREEAM-NL Area

CATEGORY	WEIGHTING
Management	12%
Synergy	14%
Sources	22%
Spatial Planning	21%
Well-being and prosperity	15%
Area climate	16%

3.4 Calculating a BREEAM-NL Area score

A competent BREEAM-NL Area assessor must validate the score of an area. In doing so, he or she can use the assessment tool and must comply with the current user manual for BREEAM-NL assessments, which can be found on www.breeam.nl.

There is a maximum number of credits to be earned per category. The number of credits obtained in relation to the maximum number of credits to be achieved yields a percentage. This percentage is multiplied by the weighting percentage of each category. By adding up the category scores, you get a total score. That is the score on the certificate.

The process of determining a BREEAM-NL Area score is described below. Table 8 shows an example calculation.

1. Determine the number of credits obtained per category.
2. Determine the percentage per category based on the maximum number of credits to be earned in each category; For example, achieved 25 credits out of 50 = 50%.
3. Multiply the category percentages by the weighting factors; This results in the category score.
4. Add up the category scores, including any innovation issues present; This results in a draft final score.
5. Check that the mandatory issues for the preliminary qualification have been obtained. If so, the draft qualification is the same as the final qualification.

Table 8 Example calculation of final score and qualification

CATEGORY	CREDITS EARNED	MAXIMUM CREDITS	% OF CREDITS OBTAINED	WEIGHTING CATEGORY	SCORE CATEGORY
Management	6	11	55%	12%	6,55%
Synergy	12	17	71%	14%	9,88%
Sources	28	56	50%	22%	11,00%
Spatial Planning	16	53	30%	21%	6,34%
Well-being and prosperity	15	18	83%	15%	12,50%
Area climate	15	30	50%	16%	8,00%
BREEAM-NL Score					54,27%
Innovation issues applied?					1 %
Mandatory issues for qualification					Achieved?
MAN 1 - 3 credits					✓
MAN 2 - 2 credits					✓
SYN 1 – 2 credits					✓
SYN 2 – 4 credits					✓
Minimum requirements achieved?					✓
Final score					55,27%
BREEAM-NL Final Qualification					Very Good

* Please note that the number of available and obtained credits mentioned here is just an example.

In the example above, the temporary qualification 'Good' is not equal to the final qualification because the innovation issue has led to a step to the next level ('Very Good' is from 55%).

BREEAM-NL qualification 'Outstanding'

In order to obtain a BREEAM-NL qualification 'Outstanding' for an area, the following requirements must be met:

1. The final score must be $\geq 85\%$;
2. The mandatory issues must have been obtained;
3. A case study should be delivered according to the guidelines below.

Case study

One of the most important aspects of a BREEAM-NL qualification 'Outstanding' is the exemplary function of these projects for the rest of the market. It is therefore very important that other developers and clients have access to a good case study. The case studies are shared via www.breeam.nl.

The client of the area that has achieved the BREEAM-NL qualification 'Outstanding' must therefore provide a ready-made case study. This information must be submitted together with the final report of the assessor. The 'Outstanding' project has an exemplary function, so that others can learn from it. As a guideline, leaving the actual interpretation to the project team, you can think of the following:

- Detailed description of the project, including building plot and surroundings
- Design principles and innovations
- Sustainability aspects (techniques, processes and measures)
- Special features in the BREEAM-NL certification process
- Scores
- Costs and benefits of the sustainability objective - Key figures (per m² GFA, FTE, etc.)
- What can others learn from this project?
- Recommendations for further sustainability in the future

After approval from the client, DGBC will be allowed to use the case study on its websites and possibly for various publications. If no case study is provided, the area will receive the BREEAM-NL qualification 'Excellent'.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

4. Evidence requirements

BREEAM-NL is an independently tested assessment and certification methodology that works in accordance with national and international guidelines. Working in accordance with international guidelines ensures that certification systems, such as BREEAM-NL, function in a consistent and reliable manner. The BREEAM-NL assessment report drawn up by the assessor, and the quality assurance by DGBC, is fundamental for BREEAM-NL to guarantee the quality of the BREEAM-NL score and the confidence in it.

To ensure consistency and reliability, all assessments within the certification must be based on verifiable and reliable information, which is traceable and relevant to the project being assessed. This is important because it ensures compliance with the international BREEAM standard. But this is also important from the point of view of risk management towards customers and BREEAM-NL assessors, for example if the outcome of a certification is disputed.

4.1 Level of evidence

Evidence in an area development has a wide variety of evidence. Therefore, this Technical Manual does not provide a very specific description of the evidence required, although specific documents will continue to be required for some issues

The level of evidence is important, because it says something about the plausibility that something has actually been or will be realized or guaranteed. The following different levels of proof can be identified, with a number of examples of evidence for each level:

Level 1 – Ambition/promise: "We want/will meet this requirement", for example:

- A statement from one party.
- A development vision/vision document with an administrative decision/agreement.
- Commitment of those involved by means of a signed letter.
- Letter of intent, signed by several stakeholders, including the municipality.
- Government programmes and Green Deals have the status of a letter of promise.

Level 2 - Definition/requirements: "It is a requirement/we require that this requirement be met", for example:

- Zoning plan, Program of requirements, structural vision.
- Masterplan, urban development program with administrative decision/agreement.
- Budget.
- Development contracts, project planning.
- Management program.
- Public Space Handbook.
- Anterior agreement, purchase contract (land), leasehold deed.

Level 3 - Analysis/preliminary design: "How to meet this requirement", for example:

- Analysis: SWOT, Stakeholder.
- Urban plan.
- Drawings: established sketch plan.
- Organisational plan, strategy.
- Statement from independent expert.
- Results calculations/modelling.
- Third-party studies (ecology, pollution, flood risks).

Level 4 - Final/Preparation: "This is how we will meet this requirement", for example:

- Building and furnishing plans, specifications.
- Drawings and requirements for tenders.

- Building application (architectural parts).
- Detailed plans (management, maintenance, etc.).
- Rent/purchase contracts, Green Lease contracts.
- Formal statement by tenant/buyer/user (that they commit to criteria).
- Letters of appointment (e.g. appointment of the person in charge).
- Area management plan.

Level 5 - Realization: "This is how we realize that we meet this requirement", for example:

- Working drawings (architectural and/or civil engineering).
- Build inspection report.
- Photos are in line with design drawings.
- Subcontractor contracts, start of construction, etc.

Level 6 – Delivery and management: "The project realized by us meets and continues to meet this requirement", for example:

- Quality assurance.
- Inspection report all facilities.
- Statement from independent expert.
- Information from third parties (time tables OV, details of the manufacturer, google maps).
- Measurement data (current).
- Management organisation minutes.
- Maintenance plan (current).
- Monitoring.

Examples of requirements include energy neutrality, social cohesion, reuse, etc.

Levels 1 to 6 concern the elaboration level. The examples per level are indicative, for each situation an example could also fall under a different level.

In addition to the elaboration level, the 'status' is also important, for example whether or not a document has been adopted and by which party. The status must provide sufficient certainty that the aforementioned will actually be followed up or realized.

The necessary evidence in the issues is primarily written at levels 3 and 4: the design phases. In some cases, level 2, the definition phase, also occurs. Level 1 evidence, respectively ambition and promise, serves at most as additional substantiation, but is insufficient to meet the requirements.

Demonstrating that one meets with evidence from a higher (heavier) level is always allowed. Of course, with the heavier evidence, all requirements must still be met. It may be that the project has ambition for a certain issue, but that this cannot yet be demonstrated with evidence, because the level 4 drawings are not yet there for that issue, for example. Then those credits cannot (yet) be awarded. It is then advisable to recertify the (re)development process at a later stage.

Explanation of evidence of references

Under issue descriptions, under the required evidence, reference is made to the criteria requirements with figures. The evidence refers to one or more claims, which may include:

- Separate requirements: 1.1, 3.1, refers to 1.1 and 3.1.
- Logical sequence: 1.1 - 3.1, refers to 1.1, 2.1 and 3.1.
- Full range: 1.1 to 3.1, refers to 1.1, 1.2, 2.1, 2.2, 2.3 etc.... and 3.1.

The evidence itself is indicated by a letter. Within the assessment process, it is advisable to copy these letters into the file names of the evidence to avoid unnecessary searching.

Principles to be used for evidence

In determining the appropriateness and robustness of the evidence for each issue, the Assessor should apply the principles set out in Table 9. If the evidence complies with these principles, it is admissible for the assessment. The principles below are not in a hierarchical order, they are all equally important in approving the evidence.

Table 9 Principles of solid evidence

	SUMMARY	PRINCIPLE	PURPOSE	QUESTION TO ASK
1	Evidence provided for all criteria for all credits to be obtained	Evidence must show that ALL relevant criteria and sub-criteria for the credit obtained are met	Completeness	Are all criteria and sub-criteria covered? Have all relevant definitions been addressed?
2	Unambiguous assessment	The assessment must demonstrate that compliance is made in an unambiguous manner. Evidence (and explanations) must make it clear to the reviewing party that the requirements are met	Comparability of independent assessment	If a third party reviews my report with the attached evidence, is they able to confirm that the requirements are met, and award the same marks as me?
3	Robust	Always ensure that the evidence is robust and relevant to the assessment. The evidence contains all the relevant basic information.	The evidence is demonstrably robust and from a reliable source	Is this the most robust form of evidence available to show compliance with the requirements? Does the evidence contain all the relevant basic information? Is it fully controllable?
4	Make use of existing and available evidence	Use available and existing information to demonstrate compliance. In most cases, evidence will not have to be 'created'	By using existing and available evidence, I minimize time and costs	Is evidence that meets the previous principles already present and usable? If I have to ask for more evidence, does the project look for credits that they cannot sufficiently demonstrate that they meet?

4.2 Mandatory evidence of project data

Certain supporting documents are mandatory in order to be able to carry out an assessment. These documents are part of the project data and determine the scope of the assessment. They also provide the necessary insight into the situation, in order to arrive at a correct assessment at issue level. These are (in so far as relevant):

- Demarcation of the area, the area boundary drawn on an overview map.
- Overview of existing and new works: preservation, demolition, renovation and new construction.
- Describe developments and the phases in time.
- Substantiated moment that is used as the start of development in relation to the assessment.
- Overview of plan documents and/or decision-making over time.
- Appointed: 1. Project organisation 2. Key stakeholder(s) 3. (Other) Stakeholders.

The assessment is about the area described in these documents. All evidence and substantiation must apply to that demarcation. It is not possible to use a different demarcation for a specific issue, unless this is required in the issue (e.g. system boundary). Even if work takes place in phases, it must be clear which sub-topic of assessment is and at what time.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

5. Certification

The formal certification process is described in detail in the User Guide. This describes the certification process, including the various certification conditions for each step. This includes registration deadlines, conditions for releasing a certificate and the site visits carried out by an Assessor. For each Technical Manual, there are scheme-specific conditions that apply at the Technical Manual and project level. This chapter describes the conditions for the BREEAM-NL Area.

5.1 Registration and certification

Register

A new BREEAM-NL Area project must be registered against the current version. This is done in the Assessment Tool by registering an Assessment. A registration is valid for one year after an Technical Manual has been replaced by a new version. If a certificate is not obtained within the period of registration, a new registration must be made against the then current version.

Upon the release of a new version of the Technical Manual, a new BREEAM-NL Area Assessment or recertification may be registered against the previous version up to three months after the release date. Example: If version V6.1.1 is operational on 1 January 2026 and version V7.0 is also launched on that date, then registration against version V6.1.1 or version V7.0 is allowed until 1 April 2026, after that only against version V7.0. The registration is then valid for one year until after the version has been replaced, in this example the registration of V6.1.1 is valid until March 31, 2027.

Certification

The certificate obtained with BREEAM-NL Area V6.1.1 is valid for a maximum of three years. After three years, the status of the certificate expires. In order to maintain the certified status, a project must recertify.

After successful completion of the assessment process a BREEAM-NL Area certificate is issued with the applicable qualification and percentage score. The version on the basis of which the assessment took place is displayed on the certificate. Other project-specific information on the certificate concerns the certification date, the Assessor of the project and the client.

5.2 Recertification with a dynamic approach

The average lead time for an area (re)development is 7 to 15 years. Sustainability policy is constantly evolving and is constantly being adapted, expanded and made concrete. By continuously monitoring and assessing the sustainable ambitions, the most up-to-date status of an area is made visible at the end of each certification cycle. Recertification takes place within each 3-year period that the certificate is valid, it is recommended to start the recertification process in time before a certificate expires. To support certifying projects, the dynamic certification methodology is described in this Technical Manual. The dynamic certification encourages projects to be able to monitor stacked ambitions over several years and keep them up to date. It also encourages the addition of phased developments to each subsequent phase of certification, an expansion of the area for which there was no previous elaboration can simply be added.

Reassessment issues

To ensure that a project in the certification process can go through the recertification process as efficiently as possible, the dynamic approach applies. This identifies so-called source issues that remain unchanged in the process. The project team names these as unchanged, in the event of recertification they do not need to be fully checked by the Assessor. Other issues can be updated, supplemented or adjusted and are therefore fully checked.

By having the assessment take place every three years, small changes, additions or updates are easy to check, and thus easy to certify. The certified development is an up-to-date representation of sustainability performance

on an ongoing basis. Please note, the QA audit by DGBC is always a full check, source issues may also be included in the sample.

Improvement module

To support projects in this recertification process, the Improvement Module is available. The Improvement module identifies the source issues, indicating whether they have been changed or will change, and therefore do not need to be checked again.

The improvement module is a printout of the issues entered in the Technical Manual. It shows the current score of the selected assessment. In addition to the current score, the potential of issues to be obtained can be selected, which provides insight into which additional issues will be obtained in the next cycle and what effect this will have on the score. The overview of issues can thus be filled in per recertification cycle so that it is clear what will be the focus in the next phase of certification.

Modular update Technical Manual

The modular updates of BREEAM-NL ensure that a project will have to further recertify against a newer version of the guideline during the development process, to which additional or new requirements apply. DGBC aims to focus changes to the Technical Manual on themes per new version. For example, it may happen that all issues labelled as climate-adaptive issues will be updated, improved or added in the next version of the directive.

Here too, the improvement module provides insight into the issues that remain unchanged, or which changes will have that require additional attention from the project. The improvement module helps a project organisation to report on progress, and thus offers opportunities to continuously monitor the status of certification.

Dynamic certification has several starting points

- I. Certification is not a one-off exercise but rewards the continuous monitoring of making the sustainability ambitions concrete
- II. BREEAM-NL Area is used as a monitoring tool, the improvement module provides insight into the required next steps per certification cycle
- III. The initial certification lays the foundation for the further course, these components are kept up to date and hardly change in a subsequent assessment of recertification
- IV. Components that are added, changed in the process or made concrete (change in burden of proof) are added to the recertification assessment
- V. Changes to the guideline take place by theme, and are updated with each new version of the guideline or added to the recertification assessment
- VI. Annual monitoring and reporting to investors, mayor and aldermen or other stakeholders is part of the process

5.3 Moment of certification

The Technical Manual focuses on the design phase of a (re)development. The requested evidence is tailored to the Preliminary Design phase of a (re)development. In this phase, the project team will complete the assessment file. However, it is always possible to comply with evidence from a later phase.

As an example: proof that facilities are being realized (based on established documentation) is sufficient, but if it can be demonstrated that the facilities have already been realized, an inspection report and/or photos will of course also suffice, unless otherwise indicated in the issue criteria. This makes certification possible if the development phases are strongly intertwined, or if the area is to be recertified in order to achieve an even higher ambition or to properly safeguard the ambition.

Recertification takes place in later phases of a development, given the long average duration of an area (re)development, an area is years further before it is completely finished. A certification will also have to be updated in the realized phase of management and use so that the management and maintenance of the area can be continuously monitored by the manager. In this way, the quality of the area can be permanently guaranteed.

5.4 BREEAM-NL Area and BREEAM-NL certified buildings

BREEAM-NL Area and the BREEAM-NL schemes that focus on buildings, such as BREEAM-NL In-Use and New Construction and renovation, have a different scope, but do find each other in the overlap of themes. As a result, a building within a certified area according to the BREEAM-NL Area is expected to be able to obtain a BREEAM-NL certificate at building level more easily. Many BREEAM-NL certified buildings within an area also help to obtain an area certificate. The score of buildings on issues on energy, ecology, mobility, water use and climate adaptation can be used to meet issues within this guideline.

5.5 BREEAM-NL Area and the Environment and Planning Act

Area development, redevelopment and transformation areas are inextricably linked to the Environment and Planning Act, municipalities draw up the direction, vision and rules with which development is allowed. Many themes in the Environment and Planning Act correspond to the sustainability aspects in the BREEAM-NL Area. BREEAM-NL aims to raise the bar higher than legislation. In addition, rules and legislation are aligned in the BREEAM-NL Area, so that what is required for certification does not conflict with what must be done under legislation.

BREEAM-NL Area offers opportunities to extensively include sustainability aspects in and development. The choice lies with the client.

Within the Environment and Planning Act, the municipality is responsible for drawing up an Environmental Vision, the policy document on the strategy for the living environment. Themes in this are reflected in the Technical Manual but are made concrete. If the goal is to focus on climate adaptation, the guideline offers issues on how municipal policy can be made measurable. By focusing on the issues for flooding, land use, and heat stress. The Environmental Plan is the instrument that describes the rules for carrying out activities in the municipality, i.e. being allowed to build. The rules form the basis, but in BREEAM-NL Area these rules may be included even more strictly. For example, a development from the Environmental Plan will always be assessed on keeping the Natura 2000 rules instant. In addition, ecology requirements can be imposed, but with BREEAM-NL Area you know that there are always additional requirements attached to the ecological values in the area that go beyond the basics.

Participation is also an important part of the application requirements of an Environmental Plan, but it does not prescribe from the basis how or at what level it should be applied. BREEAM-NL Area stimulates projects by using the highest possible way of participation and thus creating added value for the entire area.

For more information, visit the BREEAM-NL website.

6. Glossary

The definitions below relate to the way in which the concepts have been applied in the present Technical Manual.

Area

The area that is the subject of assessment is demarcated by area boundaries. Indicated on a map, unambiguously demarcated built-up or to be built on area (not a nature park or nature reserve). The area is the combination of all buildings, public and private spaces, underground and above-ground infrastructure within the area boundaries. The actual boundaries of the (to be developed) area must be clearly indicated on a map in advance. If the area contains existing works, this must be indicated.

Existing works

All constructions or establishments created or made by human activity, including buildings, infrastructure, and remnants thereof. Existing works within the area boundaries are always part of the assessment, unless otherwise stated in the issue.

Competent authority

In the Netherlands, the competent authority in a particular case is the administrative body that is competent to take decisions or issue decisions in that case. Often it concerns the government, the province, the municipality or the water boards.

In some issues, a declaration or approval from the competent authority is requested, such as a decision or proposal showing that the (official) organisation agrees or a letter of intent with the competent authority that endorses the main features of the area (re)development.

Project organisation

The organisation that deals with the (re)development of the area. Usually, in the initial phase, a steering committee and a project group are set up in the (re)development. At the time of signing the cooperation agreement, a separate entity can also be created. Preferably, this organisation is represented by a municipality, real estate owners, developers and users of the area.

Stakeholder

Organisation, group or individual that is influenced by or has a relationship with the (re)development, or that may be of significance for the (re)development. This may include, but is not limited to: (future) residents, companies, users, managers, local residents, developers, tenants, local nature organisations, (social) interest representatives, business organisations, environmental organisations, investors, local, provincial and national governments, within and outside the area. At issue level, it is determined which stakeholder is relevant. By definition, relevant stakeholders of issue X do not have to be determined as relevant stakeholders in issue Y.

Key Stakeholder

A select group of stakeholders that emerged from the stakeholder analysis as parties that have the most interest in or influence on the area. This includes in any case, but not exclusively, the parties that participate risk-bearing in the process of realising the proposed (re)development.

Area boundary

The spatial demarcation of the area which is clearly indicated on a map for the purpose of the assessment.

System boundary

A system boundary is the boundary of a system. The (spatial) demarcation is not determined in advance because it is variable per issue. It is about the connection of the system to the environment.

7. How to read the issue

The light green area contains general information about the issue, such as how many credits are available and whether it is a minimum requirement.

Each issue has a unique **code** and **name**.

A goal is defined for each issue.

For each issue, one or more **criteria** are shown with the value of each criterion in **credits**.

It also shows whether multiple criteria can be achieved or whether only one criterion can be chosen.

The **criteria requirements** describe the requirements that must be met in order to be able to award the credits described under the criteria.

Here are **additions to the criteria requirements**, required tables and explanations of methods to be used that apply to the criteria requirements.

MAN 4
MANAGEMENT

Duurzame projectorganisatie

Het stimuleren van een duurzaam en maatschappelijk verantwoorde werkwijze in de bedrijfsvoering van de projectorganisatie

Beschikbare punten : 2

Exemplaire performance : ✗

Bevat minimale vereiste : ✗

Verplicht vanaf : ✗

Criteria

Er kunnen maximaal 2 punten toegekend worden. Er moet onderbouwd worden aangetoond dat:

#	CRITERIUM	PUNTEN
1	De projectorganisatie stuurt actief en integraal op duurzaam en maatschappelijk verantwoorde bedrijfsvoering.	2

Criteria-eisen

Het volgende toont aan dat aan de criteria wordt voldaan:

#	CRITERIA
1.1	De projectorganisatie stuurt actief op duurzaam en maatschappelijk verantwoorde bedrijfsvoering, waarbij zowel milieu-, sociale- en economische aspecten in de bedrijfsvoering worden gedekt
1.2	De projectorganisatie borgt een integrale werkwijze voor duurzaam en maatschappelijk verantwoorde bedrijfsvoering

Aanvulling op de criteria-eisen

Bestaande werken
Geen aanvullende eisen.

Duurzaam en maatschappelijk verantwoorde bedrijfsvoering
Onderleggers voor het duurzaam en maatschappelijk verantwoorde bedrijfsvoering of maatschappelijk verantwoord ondernemen kunnen zijn (niet-uitputtend):

- MVO prestatieladder
- Sustainable Development Goals (SDG)
- Corporate Sustainable Reporting Directive (CSRD)

Borging in bedrijfsvoering
Om de werkwijze voor duurzaam en maatschappelijk verantwoorde bedrijfsvoering integraal te borgen, dient het volgende onderdeel te zijn van de werkwijze:

- A. De projectorganisatie heeft inzichtelijk gemaakt op welke milieu-, sociale- en economische aspecten zij de meeste impact hebben
- B. De projectorganisatie heeft hierop doelstellingen geformuleerd die ingebed zijn in het beleid
- C. De projectorganisatie heeft kpi's vastgesteld waarop gestuurd kan worden
- D. De projectorganisatie heeft een evaluatieplan opgesteld, die laat zien hoe de resultaten worden gemonitord

BREEAM-NL GEBIED V6.1 | PAGINA 42 VAN 177
DUTCH GREEN BUILDING COUNCIL

This document is for informational purposes only and should not be used for certification. The Dutch Green Building Council prevails.

Duurzame projectorganisatie

Bewijsvoering

#	CRITERIA	VEREISTEN BEWIJSVOERING
A	1.1, 1.2	Beleidsrapport en/of certificaat/erkenning waarin duurzaam en maatschappelijk verantwoorde bedrijfsvoering door de projectorganisatie is geborgd

Definities

Corporate Sustainable Reporting Directive (CSRD)

De Corporate Sustainability Reporting Directive (CSRD) is een Europese richtlijn die bedrijven verplicht om uitgebreid te rapporteren over hun impact op milieu, maatschappij en governance (ESG). De CSRD stelt strengere eisen aan transparantie en verslaglegging, waardoor duurzame gebiedsontwikkeling beter kan worden beoordeeld op basis van meetbare duurzaamheidscriteria.

Duurzaam en maatschappelijk verantwoorde bedrijfsvoering

Het bewust inrichten van de organisatie, betreffende de bedrijfsvoering en ketenactiviteiten, op waarde creatie. Deze waarde spitst zich toe op sociaalmaatschappelijk, toekomstbestendig en economisch niveau (People, Planet, Profit), en is gericht op de langere termijn.

Maatschappelijk Verantwoord Ondernemen (MVO)

Het bewust richten van de ondernemingsactiviteiten op waardecreatie op langere termijn in de drie dimensies People, Planet en Profit, gecombineerd met de bereidheid de dialoog met de samenleving aan te gaan. MVO behoort tot de core business van ondernemingen. [Bron: Sociaal-Economische Raad].

MVO-prestatieladder

De MVO Prestatieladder is een Managementsysteem en certificatiernorm voor Maatschappelijk Verantwoord Ondernemen.

Sustainable Development Goals (SDG)

De Sustainable Development Goals (SDG's) zijn een set van 17 mondiale doelen, opgesteld door de Verenigde Naties, die gericht zijn op het bevorderen van duurzame ontwikkeling, het uitroeien van armoede, het beschermen van de planeet en het waarborgen van welzijn voor iedereen tegen 2030. Deze doelen bieden richtlijnen voor duurzame gebiedsontwikkeling door te focussen op thema's als milieubescherming, sociale inclusie en economische groei.

Aanvullende informatie

Geen

Referenties

- MVO prestatieladder: (www.mvoprestatieladder.nl);
- IMA MVO-norm (www.mvonorm.com)
- MVO-Wijzer: (de-mvowijzer.nl)

Specific **evidence requirements** are described for each issue. The first column indicates the criteria requirement for which the evidence

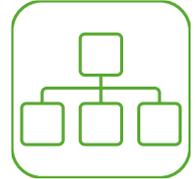
Definitions describe how important concepts are interpreted.

Some issues provide more background information about the topics.

References or sources of information that can be used in achieving the criteria.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Management



SUMMARY

This category encourages sustainable organisational processes within the project. Attention is paid to the organisation of the project organisation and the continuous monitoring and adjustment of the objectives and ambitions of the sustainability performance. The influence and role of important stakeholders, users and residents and other stakeholders is central to the involvement in the process. Everything is aimed at the optimal organisation of sustainable area (re)development. It is also important to look through the transfer of design and development to management and good use of the area.

CONTEXT

The level of sustainability achieved upon completion starts early in the process. It is important that the sustainability ambitions are known early on and are fully adapted by the project team and stakeholders. The Management category focuses on safeguarding sustainability performance. Attention is paid to the design, construction, delivery and management process. Not only sustainability plays a role in this, but also social aspects such as the impact of the development on the local community and how those stakeholders can optimally contribute to the process. An organisation that looks further at its own interests and works in a socially responsible manner can ensure sustainable development processes.

By a clear focus on the sustainability ambition, making demonstrably good choices, involving everyone and delivering what has been promised, a high-quality and sustainable project is ultimately realized (which can also be used as is).

Value of the issues

MAN 1	Management	3 credits
Value:	<ul style="list-style-type: none">- Continuous monitoring and adjustment of the ambitions and objectives within the project organisation contribute to a sustainable process.- Keeping the sustainability ambitions and achievements up to date and reporting contributes to a transparent process.	
MAN 2	Participation	4 credits +1 EP
Value:	<ul style="list-style-type: none">- Identifying key stakeholders at each stage of the development process continuously provides important insights into the importance of the project- Involving the important stakeholders in the development contributes to support and connection with the area.- Involving an independent party to carry out the participation contributes to the process.	
MAN 3	Management and user guide	2 credits
Value:	<ul style="list-style-type: none">- With care and attention after delivery, ensure that optimal management and use conditions are possible.	
MAN 4	Sustainable project organisation	2 credits
Value:	<ul style="list-style-type: none">- Stimulating a socially responsible working method of the project organisation.	

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Management

Securing the responsibility for achieving and maintaining the sustainability ambition and performance objectives

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: ✓

Assessment criteria

A maximum of 3 credits can be awarded. There should be substantial evidence that:

#	CRITERIA	CREDITS
1	The realisation of the sustainability ambition and performance objectives are secured in the project organisation (mandatory from Good).	2
2	The responsibilities for monitoring the performance objectives during management are secured in the project organisation (mandatory from Very Good)	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	A sustainability ambition with performance targets has been set and this has been formally approved by the board of the project organisation.
1.2	The achievement of the set objectives is guaranteed within the board of the project organisation, whereby decisions can be taken by persons with the powers or voting rights provided for this purpose.
1.3	The progress with regard to the realization of the objectives is monitored at least annually, the progress is reported to the board of the project organisation so that any adjustments are made.
1.4	For the execution of the work, the sustainability ambition and performance objectives are secured by the (main) contractor. If the contractor is not yet identified, it must be made plausible that this is part of the selection process or schedule of requirements and that the performance targets must be part of their contractual obligation.
1.5	The sustainability ambition and performance objectives are kept up to date and have been made (publicly) available to all stakeholders. There is a contact and/or information point for this.
2.1	Criterion 1 is met.
2.2	In the management of the project organisation, responsibilities are assigned for the continuous monitoring of the performance objectives during the management phase. The responsible person(s) has decision-making power or at least voting rights.
2.3	The responsible person(s) monitors the progress of the set performance objectives during management at least annually and formally reports the progress to the board of the project organisation.

Addition to the criteria requirements

Existing works

No additional requirements.

Phased development

In the case of an area development in which the realisation and management phases run parallel, both responsibilities must be assigned. The contractor will also secure the performance objectives and ambitions in the realisation phase.

Management

In the case of an area development in the realisation phase, the second credit can only be achieved if it is demonstrated that the responsibilities are properly allocated in the management phase.

Performance targets

The performance targets relate to the BREEAM-NL qualification and the required minimum standards. When agreeing on a BREEAM-NL goal, it is advised to pursue or prioritize separate BREEAM-NL issues, credits and criteria. This way, it can be ensured that the agreed goal is achievable. This also helps, so that goals can be achieved without having to make potentially expensive adjustments to the design during a later phase.

Reporting progress

Reporting on the progress of achieving the objectives focuses on gaining insight into the status and the next steps that need to be taken, this is in the light of a recertification and improvement process. In the assessment tool, the improvement module has been made available for use. The improvement module shows the certification process in achievable issues over time, on which the project can provide insight into the ambitions.

Responsibilities progress

It is not necessary that the role of 'controller', as mentioned in criteria 1 and 2, is filled by the same person. It can also be different people or positions within the board.

This can be addressed by all parties involved at any point in the process to answer questions and can help to realize possible new sustainable measures or initiatives within the area. With the appointment of a responsible person, the project organisation has insight into the state of affairs regarding the realisation of the sustainability ambitions and performance objectives at all times and can make adjustments if necessary.

Evidence

	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Organisational chart of the project organisation, containing the responsibilities and powers.
B	1.1	Minutes, report or other documentation showing sustainability ambition and performance targets with formal approval from the board.
C	1.2, 2.2	Letter of appointment, employment contract or other formal document from the person or persons held responsible.
D	1.3, 2.3	Progress report.
E	1.4	Documentation from which sustainability ambition and performance objectives are secured by the (main) contractor.
F	1.5	Proof of the presence of, for example, a website, newsletter or a physical Ticket window.

Definitions

Project organisation

The organisation that deals with the (re)development of the area. Usually, in the initial phase, a steering committee and a project group are set up in the (re)development. At the time of signing the cooperation agreement, a separate entity can also be created. Preferably, this organisation is represented by a municipality, real estate owners, developers and users of the area.

Management

Additional information

No

References

No

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Participation

Stimulating an integrated design process with the involvement of all relevant stakeholders in order to optimise the area for the users and stakeholders

Available Credits	: 4
Exemplary performance	: ✓
Includes minimum requirement	: ✗
Mandatory from	: ✓

Assessment criteria

A maximum of 4 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The influence and involvement of stakeholders in the area is safeguarded during the development.	1
2	Participation takes place according to step 3 on the participation ladder: Advising. (Mandatory from Good)	1
3	Participation takes place according to step 4 on the participation ladder: Co-producing. (Mandatory from Excellent)	2
4	Participation takes place according to step 5 on the participation ladder: Co-decision-making. (Mandatory from Outstanding)	3
5	An independent participation expert is involved in the process and this process is secured in a participation plan.	Exemplary Performance

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	A stakeholder analysis for the area has been carried out in accordance with the requirements under the 'additions to the criteria requirements'.
1.2	A participation plan has been set out in accordance with the requirements under the 'additions to the criteria requirements'. The plan explains how the participation process takes place and the degree of and influence of stakeholder participation in the area.
1.3	The analysis and participation plan are kept up to date during the (re)development process.
2.1	Criterion 1 is met.
2.2	The stakeholders are involved in the (re)development as discussion partners, where they are at least consulted in accordance with step 3 of the participation ladder and are regarded as advisors.
2.3	In principle, the project organisation commits itself to the advice of the directly interested parties, but can deviate from them in a reasoned and transparent manner in the decision-making process.
2.4	Participation is guaranteed in the participation plan.
3.1	Criterion 1 is met.
3.2	The project organisation draws up an agenda for the area together with the key stakeholders, after which solutions are sought together.
3.3	The project organisation commits to these solutions with regard to the final decision-making. The stakeholders are cooperation partners.
3.4	Participation is guaranteed in the participation plan
4.1	Criterion 1 is met.

Participation

#	CRITERIA-REQUIREMENTS
4.2	The project organisation leaves decisions about the area to the key stakeholders, with the project organisation playing an advisory role. The stakeholder is a co-decision-maker
4.3	The project organisation adopts the results, after testing against predetermined preconditions
4.4	Participation is guaranteed in the participation plan
5.1	Criterion 1 is met.
5.2	An independent participation expert is involved in setting up the stakeholder analysis and setting out and implementing a participation plan. The expertise, experience and involvement of the participation expert must be demonstrated.

Addition to the criteria requirements

Existing works

No additional requirements.

Independent participation expert

The stakeholder analysis and the participation plan are carried out by an independent external party that has not contributed to the design process and is not involved in the stakeholder analysis with demonstrable knowledge and experience in supervising participation processes.

Participation plan

The role and possible input of the stakeholders for each phase (design, realisation, management) are laid down in the plan. The following themes are reflected in the plan and have been coordinated with the stakeholders:

- A. End-user requirements
- B. Sustainability goals
- C. Frameworks and preconditions (legal, organisational, political-administrative, financial, capacity)
- D. Strategy and goals by audience type
- E. Milestones for decision-making
- F. Ambition level of Forms of Participation per stakeholder (group)
- G. Results and anchoring
- H. Communication and organisation. How stakeholders are informed during the development process
- I. Planning and budget

Stakeholder analysis

Inventory and identification of stakeholders and their role and involvement in the area development.

The stakeholder analysis is drawn up in accordance with the principles of the GDPR. The analysis shall explain at least the following:

- A. How the stakeholder analysis was established and embedded in the area development
- B. Identification includes the unambiguous naming, including contact details, of the stakeholders in accordance with GDPR.
- C. Coordination with the municipality and/or province or all stakeholders were included in the analysis;
- D. An estimate of the relationship of the stakeholders with the area, expressed on a scale from very strong (++) to very weak (--) with the following:
 - Identification of the key stakeholders;
 - The way in which the stakeholders are (or may be) influenced by the area;
 - The degree of nuisance or benefit that the interested parties (may) experience as a result of the area;
 - The degree of power and/or influence that the stakeholders can exercise with regard to the area.
- E. The potential input of the stakeholders on the process, including:
 - The level of participation (step of the participation ladder);

Participation

- The way in which this level is implemented;
 - A planning of the participation (which stakeholder is asked for input and when).
- F. The stakeholders and their relations in previous years and expected relationships in the future during the Management and Use phase of the area.
- G. The goals of the 'key stakeholders' with regard to the area have been laid down, for the purpose of an evaluation afterwards
- H. How the stakeholder analysis is kept up to date

Evidence

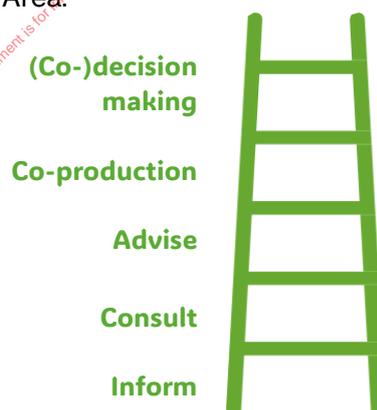
#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	The (current) stakeholder analysis
B	1.2	A signed assignment from the person responsible for updating the stakeholder analysis.
C	1.3 to 5.2	The participation plan
D	2.2 to 5.2	The participation plan and documents showing the involvement of the key stakeholders.
E	5.2	CV or portfolio of the participation expert that demonstrates independence, experience and expertise.

Definitions

Participation ladder

The way in which the stakeholders are involved in the area development is divided into different steps as further explained below.

The degree of participation can vary from informing (step 1) to (co-)decision-making by the stakeholders (step 5). The participation ladder commonly used in this Technical Manual distinguishes 5 steps, the top three steps of which are assessed in the BREEAM-NL Area:



Step 1 = Inform

The project organisation itself determines the agenda for decision-making and keeps those involved informed. Stakeholders have no input in the development. The participant is an observer.

Step 2 = Consult

The project organisation largely determines the agenda for decision-making, but sees those involved as discussion partners in the development. The project organisation does not commit to the results of the discussions. The stakeholder has been consulted.

Participation

Step 3 = Advise

In principle, the project organisation compiles the agenda, but those involved are given the opportunity to propose problems and formulate solutions, with these ideas playing a full role in the development. The stakeholder is an advisor. Resources, for example: advisory councils, district and village councils, expert meetings, round table discussions.

Step 4 = Co-producing

Project organisation and stakeholders jointly agree on an agenda, after which solutions are sought together. The stakeholder is a cooperation partner. Resources, for example: consultation groups, covenants, workshops, project groups.

Step 5 = co-decision-making

The project organisation leaves the development and decision-making to the parties involved, with the project organisation playing an advisory role. The stakeholder is a co-decision-maker. Resources, for example: steering committee, participation council, (binding) referendum.

Stakeholder

Organisation, group or individual that is influenced by or has a relationship with the (re)development, or that may be of significance for the (re)development. This may include, but is not limited to: (future) residents, companies, users, managers, local residents, developers, tenants, local nature organisations, (social) interest representatives, business organisations, environmental organisations, investors, local, provincial and national governments, within and outside the area.

Key Stakeholder

A select group of stakeholders that emerged from the stakeholder analysis as parties that have the most interest in or influence on the area. This includes in any case, but not exclusively, the parties that participate risk-bearing in the process of realising the proposed (re)development.

Additional information

It is important that the project organisation has insight into the persons and institutions that have influence in or are influenced by the area. By involving them as purposefully as possible in the development and ambition of the sustainability aspects or the realization of the sustainability ambition, plans are better implemented and resistance is reduced. In addition, synergy benefits can be achieved when working more closely together. See also www.breeam.nl/hulp for additional information

References

- Participation plan via Kennisknooppunt Participatie, via www.kennisknooppuntparticipatie.nl/aan-de-slag/participatieplan/default.aspx.
- Stakeholder analysis via Kennisknooppunt Participatie, via <https://www.kennisknooppuntparticipatie.nl/aan-de-slag/stakeholderanalyse/default.aspx>.
- Example Stakeholder Analysis, DGBC has a sample analysis available to make use of. The Excel document can be downloaded from richtlijn.breeam.nl.

Management- and User Manual

Making information available to both the managers and users of the area to enable them to understand and interact with the area efficiently.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Assessment criteria

A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	A technical management manual is provided for the managers of the area	1
2	A non-technical user manual is provided for the users of the area	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	A technical management manual is available and accessible to technical managers in the area.
1.2	The availability and updating of the manuals is guaranteed in the development and management phases.
2.1	A non-technical user manual for users of the site is publicly available and accessible on the site's website or a central information point
2.2	The availability and updating of the manuals is guaranteed in the development and management phases.

Addition to the criteria requirements

Existing and future works

For existing works that are part of the area, the manager's and/or user manual must be definitive with regard to these existing works.

Works to be realized

For works yet to be realized in the area, a draft version of the management and/or user manual may be used as evidence. Supplemented by a formal letter from the project organisation confirming that the content of the draft version is being worked out in accordance with the criteria mentioned in this issue.

Content technical management manual

Additional information about the specific area aspects & installations and contact details that are required in the event of malfunctions or suboptimal functioning. Information to be provided:

- A. Information about 'unusual' (rare), sustainable or otherwise special technical area installations, facilities and systems.
 - An instruction on the management and maintenance of these installations, facilities and systems and information about the producers, suppliers and installers thereof.
- B. Water in public spaces:
 - Location of water collection systems, information about groundwater levels upon completion, principles on the main lines of the local water system (pumping stations, pumps, overflows, connections, etc.), contact details of the local Water Board, destination of surface waters (whether or not for recreation), irrigation facilities for the public spaces.

Administration and User Guide

- C. Ecological values:
 - A list of special ecological values and protected species in the area with references to the Environment and Planning Act and associated General Administrative Orders.
 - Guidelines for the management and maintenance of special ecological values, biotic (flora and fauna) and non-biotic (e.g. nature-friendly banks).
 - Guidelines for mowing (if applicable) (for example, whether or not phased in connection with breeding birds), dredging activities in relation to the ecological impact.
- D. Acting in the event of an emergency:
 - Locations to avoid in the event of emergencies such as storage of fire and explosive substances, references to the locally applicable emergency plan
 - National and local emergency numbers of police, fire brigade and ambulance.
- E. References:
 - Include links to websites, publications, and organisations that are relevant to users and administrators.
- F. Training for administrators:
 - Training in the use of existing special facilities, supplemented with information about the (re)adjustment of installations.

Non-technical user manual contents

General information about the (sustainable) facilities in the public space. Information to be provided:

- A. Information about sustainable or special systems
 - An explanation of the installations, facilities and systems present in the area and their functions, in non-technical terms, such as local generation, energy storage and distribution systems, water treatment or treatment plants, bicycle paths with lighting on presence detection, automatic sun blinds or automatic lighting, energy metering; locations for waste storage, car sharing, wadis, public space, etc.
- B. Water in public spaces:
 - An indication of the waters that are and are not intended for recreational purposes
- C. Ecological values:
 - A list of special ecological values and protected species in the area with references to the Environment and Planning Act and associated General Administrative Orders.
- D. Acting in the event of an emergency:
 - Locations to avoid in the event of emergencies such as storage of fire and explosive substances, references to the locally applicable emergency plan
- E. Notification procedures for pollution, nuisance, maintenance, repairs, waste, etc.
 - Contact details of the Municipal Counter, the regional measurement service and the area manager and information on how to make reports.
- F. References:
 - Relevant references to websites, publications and organisations.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	The (draft) technical management manual
B	2.1	The (draft) non-technical user manual
C	2.1	Declaration, method of publication
D	1.2, 2.2	Area management plan or a formal declaration from the person responsible for availability and updating.

Managemen- and Users manual

Definitions

Users

For this issue, the users are defined as 'long-term users'. In addition to residents, this also concerns working people. Passers-by are not meant by this.

Additional information

It is important for sustainability to succeed that users and managers are familiar with the sustainability aspects in the area. Achieving sustainability is important, but maintaining/managing the ambition is even more important. It is important for the managers to know how to manage the area as well as possible. For users, it is particularly important, in addition to the educational aspect, that they make the most efficient use of the sustainability measures in order to make the ambition a success. By making this information easily available by means of a manual, the chance that optimal use is made of the sustainability aspects is greatest. The scope of the issue is determined by the elements present in the public and semi-public area from the points under 'additions to the criteria requirements', installations on private sites or private buildings are not included.

References

No

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Sustainable project organisation

Encouraging a sustainable and socially responsible working method in the business operations of the project organisation

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Assessment criteria

A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The project organisation actively and integrally steers towards sustainable and socially responsible business operations.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA
1.1	The project organisation actively steers towards sustainable and socially responsible business operations, covering environmental, social and economic aspects in business operations
1.2	The project organisation guarantees an integrated working method for sustainable and socially responsible business operations

Addition to the criteria requirements

Existing works

No additional requirements.

Sustainable and socially responsible business operations

Foundations for sustainable and socially responsible business operations or corporate social responsibility can be (non-exhaustive):

- CSR performance ladder
- Sustainable Development Goals (SDG)
- Corporate Sustainable Reporting Directive (CSRD)

Safeguarding in business operations

In order to fully safeguard the working method for sustainable and socially responsible business operations, the following part of the working method should be:

- The project organisation has provided insight into the environmental, social and economic aspects on which they have the most impact
- The project organisation has formulated objectives that are embedded in the policy
- The project organisation has established KPIs that can be managed
- The project organisation has drawn up an evaluation plan, which shows how the results are monitored

Sustainable project organisation

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Policy report and/or certificate/accreditation in which sustainable and socially responsible business operations are guaranteed by the project organisation

Definitions

Corporate Sustainable Reporting Directive (CSRD)

The Corporate Sustainability Reporting Directive (CSRD) is a European directive that requires companies to report extensively on their environmental, social and governance (ESG) impact. The CSRD sets stricter requirements for transparency and reporting, so that sustainable area development can be better assessed on the basis of measurable sustainability criteria.

Sustainable and socially responsible business operations

Consciously setting up the organisation, with regard to business operations and chain activities, on value creation. This value focuses on social, future-proof and economic level (People, Planet, Profit), and is aimed at the longer term.

Corporate Social Responsibility (CSR)

The conscious focus of the company's activities on long-term value creation in the three dimensions of People, Planet and Profit, combined with the willingness to enter into dialogue with society. CSR is part of the core business of companies. [Source: Social and Economic Council].

CSR performance ladder

The CSR Performance Ladder is a Management System and certification standard for Corporate Social Responsibility.

Sustainable Development Goals (SDG)

The Sustainable Development Goals (SDGs) are a set of 17 global goals, set by the United Nations, that aim to promote sustainable development, eradicate poverty, protect the planet, and ensure well-being for all by 2030. These goals provide guidelines for sustainable area development by focusing on themes such as environmental protection, social inclusion and economic growth.

Additional information

No

References

- CSR performance ladder, via www.mvoprestatieladder.nl;
- IMA CSR standard, via www.mvonorm.com
- CSR Guide, via www.de-mvowijzer.nl

Synergy



SUMMARY

This category stimulates an optimal process in which all knowledge, characteristics and values of the area form the basis of an integral interpretation of the sustainable elements. In collaboration with the important stakeholders, this will be laid down in an area vision and urban development plan. In order to ensure the involvement of stakeholders in the area, the parties are also encouraged in the management and use phase to become responsible for the area, for example by means of management, and that they jointly come to constructions to increase the sustainable value of the area as a whole.

CONTEXT

An integrated approach to all individual sustainability themes starts with proper assurance in the process. The Synergy category encourages projects to map out all the characteristics and values of the area early in the process and to use this knowledge to further record the sustainability components in an area vision and an urban development programme. This must be based on changing market conditions in order to allow the area to respond flexibly. The stakeholders in the area play a major role in propagating and strengthening the sustainability value of the area in the use phase, which is why in the initial phase it is also necessary to think about how certain constructions and collaborations can be set up to increase the relationship with the area. This can be done, for example, by involving the users in the management and financing constructions among themselves to dedicate themselves to the area.

Value of the issues

SYN 1	Characteristics of the area	2 credits
Value:	<ul style="list-style-type: none">- The use of the area characteristics strengthens the character of the area.- Involving the important stakeholders in the development contributes to support and connection with the area.	
SYN 2	Area vision	4 credits
Value:	<ul style="list-style-type: none">- Increasing the sustainable value of the area by drawing up an integrated area vision.- Involving the important stakeholders in the development contributes to support and connection with the area.	
SYN 3	Adaptive capacity	2 credits
Value:	<ul style="list-style-type: none">- An area that can adapt to changing circumstances offers flexibility in the interpretation of the area.	
SYN 4	Urban planning program	3 credits
Value:	<ul style="list-style-type: none">- An urban development programme that meets the needs of the stakeholders is balanced and future-proof.	
SYN 5	Ownership	3 credits
Value:	<ul style="list-style-type: none">- Administrative and financial participation of users in management and use stimulates responsibility for the area.	
SY 6	Sustainable return	3 credits
Value:	<ul style="list-style-type: none">- Mutual cooperation structures between stakeholders ensure that sustainability ambitions are increased.	

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Characteristics of the area

Determining and using the characteristics of the area and its context.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: ✓

Assessment criteria

A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The characteristics of the area are inventoried and analysed with stakeholders to form the basis of the area design. (Mandatory from Very Good)	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA
1.1	The characteristics and properties of the area are inventoried. The inventory examines the properties in accordance with the additions to the criteria requirements. If topics do not apply, this is substantiated.
1.2	A SWOT analysis is carried out on the basis of the inventory.
1.3	The analysis was drawn up in co-production with relevant stakeholders, other than (the parties in) the project organisation. The choice for the stakeholders involved is substantiated.
1.4	The knowledge of the area resulting from the inventory and SWOT analysis is safeguarded as a precondition in the plan design and/or vision of the area.
1.5	A summary of the area inventory and SWOT is publicly available.

Addition to the criteria requirements

Current

Current in this issue means that the area inventory and the SWOT analysis are not older than 5 years at the start of the certification process and have been revised at least at the time that changes take place or have taken place in the area or area development that affect this inventory or analysis.

Existing works

No additional requirements.

Area inventory

The area inventory provides insight into the 'individuality' of the area and the relationship of the area to its surroundings. It consists of a combination of characteristics as indicated in the points below. The compilation can consist of several separate documents, for example if there are already existing studies or inventories on a specific subject.

The inventory takes into account the following points (if applicable for the area):

1. Area character in general
 - a. Brief description of the history of the origin, including historical use of space.
 - b. A description of the nature or 'character' of the area based on all the items listed below for this point.
2. Spatial structure and program

Characteristics of the area

- a. Brief description of the existing landscape and urban structures, the public spaces and existing buildings (system boundary).
 - b. Brief description and characterization of how the area connects to its surroundings in terms of transport and transport (system boundary).
 - c. Current program and use of space including shops, social and cultural facilities, services, industry, housing, etc.
 - d. Inventory of existing public transport facilities and traffic infrastructures, including routes for car traffic, expedition traffic, cyclist, pedestrian and water routes, including any bottlenecks and facilities associated with these traffic systems (including parking facilities, public transport points, parking space for bicycles) (system boundary).
 - e. Brief description of the cultural heritage present as far as known; description of its material and intangible cultural-historical values.
3. Nature and resources
- a. Inventory of the legal and policy frameworks with regard to the area, including the Environment and Planning Act, ecological main structure, local frameworks.
 - b. Brief description of the characteristics of the local green and blue structures (parks, lakes, rivers, forests, green areas, corridors, etc.) (system boundary).
 - c. Brief description of the flora and fauna present.
 - d. Brief description of the earth's surface including the predominant characteristics of the first 3 metres of subsoil (use the appropriate terms such as flat, hilly, sloping, calcareous, sandy, woody, predominantly clay, hard/soft subsoil, etc.).
 - e. Inventory of the available used and potential sources of energy, water and (building) materials (raw material and/or production), including waste streams.
4. Environment and well-being
- a. Predominant air quality, expressed in NO₂, PM₁₀ and PM_{2.5}, based on climate atlas.
 - b. Predominant soil quality.
 - c. Prevailing noise situation (traffic and operational noise, ambient noise, for example a nearby airport).
 - d. Potential c.q. radiation risks.
 - e. Brief description of aspects relating to external safety, for example transport routes for hazardous substances in or near the area and high-risk establishments.
5. Social
- a. Inventory of social policy frameworks (including policy on social services, employment, housing differentiation).
 - b. Interpretation of the population structure (number of inhabitants, forecast population growth/shrinkage, age structure, family composition, relocation, education level, ethnicity).
 - c. Interpretation of the social safety experienced by the users, possibly on the basis of the themes from the Integral Safety Monitor (IVM) that are relevant to the area.
6. Financial frameworks
- a. Average disposable income per family in surrounding neighbourhoods.
 - b. Interpretation of economic activity.
 - c. Interpretation of the financial situation of the municipality or area manager of the area, with a prognosis of 5 years, in relation to management and maintenance of the area in the Realisation phase.

Characteristics of the area

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	The inventory of the area with source references.
B	1.2 to 1.4	The SWOT analysis.
C	1.2 to 1.4	Substantiation of the choice of the stakeholder and relevance and role in the creation of the analysis.
D	1.5	The summary is publicly available, for example on the website of the project organisation, via the information centre or other channels.

Definitions

SWOT Analysis

The SWOT analysis translates the data from the area inventory into strengths, weaknesses, opportunities and threats (SWOT) of the area in terms of sustainability (including future-proof, continuing to meet the needs of users). From this, strategies can be drawn up on how the characteristics are reflected in the development process.

System boundary

The system boundary for this issue is not defined because it is variable. It is always about connecting the area with the environment. Examples:

- A public transport hub that is just outside the area is relevant and should be named for the mobility aspect.
 - If the area is located in the noise of an airport, the airport is relevant for the aspect of "noise".
 - The perception of the social safety of a neighbourhood is partly determined by the people in the neighbourhood/village/city.
-

Additional information

The ultimate purpose of this issue is to encourage the development and management of areas to be based on the 'individuality' of the area in question. This with respect for the users, and the flora and fauna present within the area. The 'individuality' is made up of a summary of data, facts, observations (the inventory), followed by a strength-weakness analysis (SWOT). The inventory and analysis form an important basis for management and development, so that the potential of the place and its surroundings is used in an optimal way, and bottlenecks are addressed. This issue is therefore related to SYN 2 - Area Vision and SYN 4 - Urban Development Programme. The careful inventory and analysis of the 'properties' and 'characteristics' of the area and its context is a prerequisite for vision and program.

References

Background SWOT analysis, via <https://nl.wikipedia.org/wiki/Sterkte-zwakteanalyse>.

Visionary plan

Recognizing the sustainable value of the area and the possibilities to increase it.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: ✓

Assessment criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 4 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	There is an integrated area vision, aimed at preserving and (where possible) increasing the sustainable value of the area.	3
2	The area vision has been drawn up together with key stakeholders and is periodically evaluated. (Mandatory from Very Good)	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The criteria of SYN 1 have been met, the results of which are addressed in the area vision.
1.2	The area vision offers an integral vision of the sustainability to be achieved within the area, in which the components from the additions to the criteria requirements are reflected.
1.3	The area vision has been approved by the municipality and is available for public consultation.
2.1	Criterion 1 is met.
2.2	The area vision has been drawn up in co-production with at least two key stakeholders, other than (the parties in) the project organisation.
2.3	The area vision is periodically evaluated with the stakeholders.

Addition to the criteria requirements

Area vision

The area vision is an integral vision of the sustainability to be achieved within the area and builds on the characteristics of SYN 1 in order to make optimal use of the possibilities for the long term. The following components are reflected in the area vision:

- The area vision is an integrated approach to future sustainability in the area in the broad context of sustainable area development (people, planet, profit).
- At least two alternative (re)development directions have been considered in the area vision.
- The chosen (re)development directions or elements from them are substantiated, as well as the omitted (elements from the) (re)development directions.
- Solutions are sought for bottlenecks in the area without passing them on to others or in time.
- The area vision describes the rules of the game and the bandwidth within which a development strategy operates, both in terms of content and process, without detracting from the ambitions formulated in the area vision.

Area vision

Existing works

The existing works must be explicitly included in the area vision.

Key stakeholder

A select group of stakeholders that emerged from the stakeholder analysis as parties that have the most interest in having influence on the area. This includes in any case, but not exclusively, the parties that participate risk-bearing in the process of realising the proposed (re)development.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	The area vision (report(s)).
B	1.3	Statement or decision from the municipality.
C	2.2	A note from the project organisation with, for each stakeholder involved, a brief description of their relevance and their role in the development of the analysis.
D	2.3	Paragraph in the Area Vision describing the process for evaluation and revision of the vision.

Definitions

People, Planet, Profit

The principle of People, Planet and Profit is based on the right balance between People, Environment and Resources:

- People: attention to people (well-being: mental, physical, social and therefore not profit).
 - Planet: attention to the environment/planet.
 - Profit: attention to prosperity (economic value).
-

Additional information

Drawing up an area vision is about identifying and being able to capitalise on opportunities, reversing and redressing weaknesses and threats, and using the characteristics and strengths of the area. Obtaining the necessary knowledge and information for this is stimulated with the issue Area Nature (SYN 1) in this category. An area vision is formulated to make optimal use of the possibilities of the area for the long term. It forces those involved to look beyond their horizons in order to gain insight into the possibilities of the area in the long term. If the area vision is properly implemented, it is then possible to make optimal use of the qualities of the area and to plan further development of the existing area. This is also important for increasing adaptive capacity (SYN 3) and drawing up a future-proof urban development programme (SYN 4).

References

No.

Adaptive capacity

To enable the area to adapt to changing conditions in use.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Assessment criteria

A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	In terms of buildings and infrastructure, possible changing market conditions are taken into account.	1
2	Space is provided for temporary use of buildings and locations.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The possible changing market conditions were investigated and at least three growth and contraction scenarios were examined in accordance with additions to the criteria requirements.
1.2	Substantiation of how the area is able to respond to the above growth and shrinkage scenarios.
2.1	Temporary use of buildings and locations is possible in the area.
2.2	Information is shared publicly about temporary buildings and locations available within the area and potential users are proactively informed.

Addition to the criteria requirements

Growth and contraction scenarios

Three scenarios are worked out in relation to the projected development. The three scenarios take into account:

- At least a growth and a shrinkage scenario of the urban development program of at least 20%.
- A time span of at least 15 years ahead.
- The effects on spatial structures and mobility.
- The modal split: division between slow transport (cycling and walking), public transport, freight transport and individual transport.

Existing works

If existing works are present in (part of) the area, they must be assessed against the above requirements. Even if the project organisation cannot directly influence existing works, vacancy in these parts, for example, has an impact on the area as a whole.

Temporary use of buildings and locations

With the temporary use of buildings and locations, an attempt is made to be able to pay attention to parts that would normally be empty or unused during the construction and use phase of the area. Temporary and flexible use of vacant locations prevents decay and is good for the quality of life in the area. The supply of temporary facilities may vary during the life of an area.

Adaptive capacity

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Research report with the possible changing market conditions and the detailed scenarios.
B	1.2	Design or management plan.
C	2.1	The current environmental plan or contracts with possibilities for temporary use of functions or agreements that show temporary use.
D	2.2	Screenshot of a website, newsletter, or other means of communication.

Definitions

No.

Additional information

If the existing area elements, such as structures and buildings in an area, can easily be adapted to changes in the needs of its users, these elements will be less likely to need to be replaced. This flexibility increases the usability and therefore the value. In addition, less energy and material will be needed to make changes possible. To increase the flexibility of existing elements, flexible policy frameworks are an important precondition. They can also help to enable the temporary use of buildings so that they are used optimally and opportunities are created for new (future) users.

References

No.

This document is for informational purposes only and cannot be used for certification. The original English version prevails.

Urban planning programme

Drawing up and maintaining a balanced urban development programme.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Assessment criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	There is an urban development programme that meets the programmatic wishes and needs of the key stakeholders.	2
2	The urban development programme is future-proof and fits in with the area's own qualities.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An urban development programme has been drawn up that is based on all relevant policy documents, including at least the applicable Environmental Vision.
1.2	The urban development programme is based on the programmatic wishes and needs of key stakeholders (see MAN 2).
2.1	Criterion 1 is met.
2.2	The urban development programme is in line with: <ul style="list-style-type: none"> A. The nature of the area and the SWOT analysis (in accordance with SYN 1). B. The area vision (in accordance with SYN 2). C. The changing market demand (in accordance with criterion 1 of SYN 3).
2.3	The urban development programme is based on system boundaries, such as: <ul style="list-style-type: none"> A. Water systems (surface and underground). B. Ecological structures. C. Social structures. D. Spatial structures such as sightlines, rows of trees, infrastructures, etc.

Addition to the criteria requirements

Existing works

No additional requirements.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 to 2.3	The relevant paragraphs from the urban development programme.
B	1.1 - 2.2	Memorandum on the urban development programme in relation to the components of MAN 2, SYN 1, SYN 2 and/or SYN 3.

Definitions

Urban planning program

An overview of all the different functions within the area and their space taken up in gross square metres. A distinction must be made between functions that are already present and those that will be added in the planned area development. This concerns both buildings and areas (such as: squares, parks, water features, forest, recreational areas, sports facilities, parking facilities).

Additional information

The urban development programme must be able to meet the needs of both current and future generations in the area. This issue therefore values a future-proof urban development interpretation or programme that meets the needs of key stakeholders in the area and that can deal flexibly with future changing circumstances in and around the area.

References

Omgevingsloket – Regels op de kaart, via <https://omgevingswet.overheid.nl/regels-op-de-kaart/viewer/locatie?regelsandere=regels>

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Ownership

Encouraging administrative and/or financial participation of the users during the management and operational phase of the area in order to increase involvement with and responsibility for the area.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Assessment criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	Co-creation has been achieved from the users.	1
2	Co-organisation has been achieved from the users.	2
3	Co-investment has been achieved from the users.	3

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	Several times a year (ad hoc) consultations take place between a significant part of the users regarding the organisation, management and operation of the area.
1.2	The consultation leads to joint initiatives.
2.1	There is a formal entity that represents the users and in which users also hold an administrative function.
2.2	Several times a year, (periodic and formalised) consultations of the entity take place regarding the organisation, management and exploitation of the area.
2.3	The consultation leads to joint initiatives.
3.1	Criterion 2 is met.
3.2	The formal entity from criterion 2 is jointly responsible for the operation of and/or investments in the area or parts thereof.
3.3	The entity has its own budget and finances joint initiatives from it.

Addition to the criteria requirements

Existing works

No additional requirements.

Users

Users in the area include both current users and users who are expected to use the area after development.

Joint initiatives

The joint initiatives, as mentioned in the criteria requirements, should preferably have a substantial effect on the scale level of the area, but at least together. The result must be visible.

Ownership

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Reports, minutes, agendas of meetings, gatherings, workshops, etc.
B	1.2	Website, project plans, evaluations, press releases, etc.
C	1.2, 2.3, 3.3	Substantiation of the extent to which the users are administratively and/or financially involved in the initiatives.
D	1.2, 2.3, 3.3	Overview of joint initiatives.
E	2.1	Articles of association, internal regulations, Chamber of Commerce registration, notarial deed, etc.
F	2.2	Meeting planning, agendas or minutes.
G	3.2, 3.3	Budget, profit and loss account, annual accounts, contracts, etc.

Definitions

Co-creation

Concerns ad hoc non-formalized consultations in which all participants have an influence on the process and the outcome of the process. Examples are meetings or workshops organised by municipalities, developers and other organisations to jointly discuss neighbourhood plans, layout of public areas, inventory of other forms of energy, tackling nuisance, crime in the neighbourhood, etc.

Co-organisation

Occurs when consultation between users is periodic and formally organized. The users have organized themselves into an entity (foundation, BV, NV, co-operation, committees, neighborhood councils, etc.). This creates a clear point of contact and 'face' for the users of the area.

Co-investment

Occurs when the local entity has a financial participation within the area in addition to administrative influence. Economic management is also determined by the entity and/or the entity invests or attracts investment. Financial participation can also lead to ownership. Think of funds for financing activities and/or projects, where part of the investment comes from or has been attracted by the users (e.g. residents, entrepreneurs, etc.). Examples are local renewable energy companies that are (partly) managed by local users and where local co-investment takes place for projects for energy saving or sustainable energy generation. But also joint food production and cultural events.

Additional information

When ownership is stimulated, users will feel more involved and/or bear responsibility (administratively and/or financially) for the quality and economic maintenance (management and use) of the area. Collaboration by users in the area has different levels that follow each other in constructive succession: co-creation, co-organisation and co-investment. Compared to the participation in MAN 2, this issue focuses on the management and use phase of the area, in which stakeholders organise themselves together with the project organisation.

References

Background co-creation, through <http://nl.wikipedia.org/wiki/Co-creatie>

Sustainable Return on Investment

Stimulating cooperation and financing constructions between stakeholders to increase the feasibility of the sustainability ambition in the area.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Assessment criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	Cooperation and financing constructions have been drawn up between stakeholders to increase sustainability ambitions.	1
2	The cooperation and financing constructions have been worked out and formally established with relevant stakeholders.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An inventory was made of relevant stakeholders who are willing to invest in sustainability and those with the opportunity to implement sustainability measures.
1.2	Potential cooperation and financing constructions have been drawn up on the basis of the inventory.
2.1	Criterion 1 is met.
2.2	One or more cooperation and financing constructions have been worked out with the relevant stakeholders.
2.3	Formal agreements have been made by the stakeholders involved about the financial and legal obligations for the cooperation and financing construction(s).

Addition to the criteria requirements

Inventory of cooperation and financing construction

Not all stakeholders need to be involved. The cooperation and financing constructions must have an impact on the scale level of the area. This is at the discretion of the Assessor.

Financing construction

Constructions are separate from the general financing construction of the project organisation. It is explicitly about increasing the sustainability ambition through new cooperation and financing constructions. The financing construction contains the following agreements:

- How is financing done, to what extent (equity/debt), at which institution, at what interest rate?
- How are investments covered?
- How are the benefits distributed?

Collaboration construction

Constructions are separate from the general financing construction of the project organisation. It is explicitly about increasing the sustainability ambition through new cooperation and financing constructions. The

Sustainable return

cooperation structure primarily includes the way in which the cooperation will be carried out to implement the financing construction, and also includes details regarding:

- A. The parties involved; decision-making powers;
- B. The method of recording (contractual, notarial, etc.);
- C. The method of management of the structure (administrator, manager, internal or external);
- D. The method of reporting on the results;
- E. Minimum frequency of meetings to discuss progress.

Existing works

No additional requirements.

No potential financing constructions

If there are no new potential financing or cooperation constructions apart from the general financing structure of the project organisation, no credits can be awarded.

Relevant stakeholders

Relevant stakeholders are parties that have a great interest in or influence on the area, but are not part of the project organisation. These can be key stakeholders identified from the MAN 2 stakeholder analysis. The relevant stakeholders have been specifically selected for this issue.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Reporting with the inventory and the potential cooperation and financing constructions.
B	2.2	Detailed project plans with cooperation and financing structures.
C	2.3	Signed cooperation agreement or legal statement.
D	2.3	Budget, annual accounts or multi-year investment plan, etc.

Definitions

Yield

The difference between costs and benefits of an investment, investment or effort over a certain period of time. There can also be social benefits, where the benefits are what benefits society: the improvement of the sense of safety, the health of the residents, etc. These benefits can also increase stakeholder engagement and their willingness to invest. These are also sometimes referred to as direct and indirect returns.

Additional information

Sustainable returns often do not fall to one party and there is a shared return, especially in the social benefits. By means of a financing construction and concrete cooperation, the investments are divided on the basis of the expected share that the party in question has in the return. This will create new business models and increase the willingness to invest in sustainability measures.

References

No.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Sources



SUMMARY

This category stimulates the design and implementation of spatial measures that contribute to reducing CO2 emissions from the area. This is done through energy-efficient area and building solutions, energy systems, choice of materials for the design and the (re)use of raw materials and waste materials.

CONTEXT

Climate change is one of the biggest challenges the world is currently facing. Climate change is already resulting in higher temperatures, a higher risk of flooding and extreme weather events. One of the causes is the high concentration of carbon dioxide and other greenhouse gases, such as methane, which is causing global warming. Globally, the construction and real estate sector is jointly responsible for 39% of energy-related CO2 emissions, with the majority of energy use coming from the use phase. The impact of climate change on the population must be recognised. This contributes to poor health, higher mortality rates and higher risks of serious damage from extreme weather events.

The Paris Agreement reflects the desire to accelerate a global response to the threat of climate change. It has been agreed to limit global warming to a maximum of 2°C this century, but preferably to 1.5°C to prevent serious consequences of climate change. To achieve this, CO2 emissions must be reduced by 45% by 2030 compared to 2010. In addition, CO2 emissions must be reduced to virtually zero by 2050. Efficient energy use, renewable energy, reuse of materials and less damage and waste from material flows are important contributions to reducing CO2 emissions.

It is essential to substantially reduce energy use in buildings and increase the generation of renewable energy sources where possible. Tackling climate change and changing the way energy is produced and used can help to address issues such as energy poverty. In addition, this can help to provide a healthy environment for all demographic and economic populations. Especially for the groups that are part of less prejudiced or disadvantaged communities.

The use of materials in construction has a huge impact on the environment. Moreover, this is a source of waste at the end of the useful life phase. Many important materials are non-renewable and are becoming scarcer, more expensive and riskier to extract. In addition, the extraction and production of raw materials in particular leads to social and ecological degradation. Therefore, it is essential that the real estate sector does everything it can to draw attention to these challenges. This can be done by choosing reused or recycled materials instead of primary materials and by using raw materials that cause less harm to society and the environment, preserving or increasing the value of materials and facilitating reuse in the future.

Value of the issues

BRO 1	Primary building-related energy use	7 credits
Value:	- Encourages buildings in the area with the lowest possible energy consumption and CO2 emissions.	
BRO 2	Energy performance of public space	3 credits
Value:	- Encourages lighting and systems in the area with the lowest possible energy consumption and CO2 emissions.	
BRO 3	Renewable energy use	8 credits + 1 EP
Value:	- Encourages the use of renewable energy and systems to match energy supply and demand.	
BRO 4	Water	4 credits
Value:	- Reduction of drinking water use so that water supplies are preserved for times of scarcity. - Stimulating innovations and developments for water storage and reuse.	
BRO 5	Circular use of materials	5 credits
Value:	- Encouraging the reuse of materials in public spaces reduces the demand for new materials.	
BRO 6	Environmentally harmful materials	6 credits
Value:	- Using an LCA calculation, encourage the choice of materials with a low environmental impact.	
BRO 7	Responsible sourcing for materials	7 credits
Value:	- Encourages materials with a substantiated origin to promote a transparent chain.	
BRO 8	Robust design	3 credits
Value:	- Taking measures to reduce the impact of damage and wear during construction and use phase.	
BRO 9	Local food production	5 credits
Value:	- Stimulates local food production to minimize CO2 emissions.	
BRO 10	Prevention and management of waste	8 credits
Value:	- Resource efficiency and waste management plans to minimize waste streams and encourage waste reuse.	

Primary building-related energy consumption

Restricting primary building-based energy use.

Available Credits	: 7
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 7 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. There should be substantial evidence that:

#	CRITERIA	CREDITS
1	The average energy performance of the buildings in the area is 1 point.	1
2	The average energy performance of the buildings in the area is 2 points.	2
3	The average energy performance of the buildings in the area is 3 points.	3
4	The average energy performance of the buildings in the area is 4 points.	4
5	The average energy performance of the buildings in the area is 5 points.	5
6	The average energy performance of the buildings in the area is 6 points.	6
7	The average energy performance of the buildings in the area is 7 points.	7

Criteria requirements

#	CRITERIA-REQUIREMENTS
1.1 – 7.1	Inventory of the gross floor area of the buildings in the area and the energy performance per building, both existing and under development
1.2 – 7.2	The energy performance calculations have been carried out by a qualified energy specialist.
1.3 – 7.3	Energy labels are included on the websites of the central government, see 'Checking deregistered energy label and provisional energy label' under 'Additions to the criteria requirements'.
1.4 – 7.4	Determination of the average energy performance with the calculation tool 'energy performance points', see the explanation "additions to the criteria requirements"

Addition to the criteria requirements

Existing buildings

The energy label or energy performance calculation used to demonstrate the energy performance of existing buildings is not older than 10 years.

Primary building-related energy use

Check deregistered energy label and provisional energy label

Buildings for which a valid energy label has been issued can be found on the website www.ep-online.nl. This website lists all buildings in the Netherlands that have been deregistered for the energy label, including the Energy Index. Flat-rate energy labels (energy labels according to the methodology of after 1 January 2015) can be found on www.zoekuwenergielabel.nl.

Buildings for which no energy performance can be determined

There are buildings for which there is no energy performance calculation method, such as industrial buildings. For these buildings, the Checklist A5 of the BREEAM-NL New Construction and Renovation Technical Manual V6.1.1 must be used or the energy performance must be demonstrated by means of an energy performance calculation in accordance with NTA 8800 with a sports function as a reference (See issue ENE 01 in the aforementioned guideline). If the checklist is used, look for the score in the "Checklist A5" column of Table 10. If an energy performance calculation is made, look for the score in the column "Existing non-residential construction" of Table 10.

Equivalence of energy performance of buildings

In the tables below, a comparison table has been drawn up for the purpose of awarding points for the various applicable methods to determine the energy performance. This is in line with comparisons used by the national government and with the BREEAM-NL In-Use scheme. Nevertheless, it is a simplified equation, which is only intended for this issue.

Scope of buildings to be included in this issue

Only buildings that fall within the scope of BREEAM-NL New Construction and Renovation guidelines (both utility and residential) or can fall (through a spoke procedure) must be included in this issue.

Software EP calculations

Software used to make energy performance calculations must be attested in accordance with BRL9501.

Buildings to be built

For buildings yet to be built, the fixed performance must be used or, if no performance has yet been recorded, the legal minimum must be adhered to.

Calculation of energy performance points

The weighted average energy performance of all buildings is determined in proportion to the gross floor area. To support this, the calculation tool 'energy performance points' is available on the richtlijn.breeam.nl help page. The calculation of the number of points is done as follows:

1. The gross floor area of the buildings in the area is inventoried.
2. For the buildings for which the energy performance is known, energy performance points can be awarded on the basis of the tables below for non-residential construction (Tables 10 and 11) and residential construction (Table 12). For the buildings for which no energy performance is known, the GFA must also be included in the calculation tool 'energy performance points'.
3. The summed gross floor area of buildings with an equivalent energy performance for which the same number of points can be awarded is entered into the calculation tool. A distinction was requested between residential and non-residential construction and whether it concerns buildings that are yet to be built or existing buildings.
4. The calculation tool adds up all floor areas and points and based on this comes to a weighted average number of points, rounded to a whole number.
5. This number of points can be used. Part of the evidence is the printout of the calculation tool.

Primary building-related energy use

Table 10 Points awarded non-residential construction

POINTS	NON-RESIDENTIAL CONSTRUCTION TO BE REALIZED	EXISTING NON-RESIDENTIAL BUILDINGS		
		Basic method (X = EI)	Detail method (x = ep; to/Ep; admin or Qpres; to / Qpres; toel)	Checklist A5
0	No or less than 25% better requirement from the Bbl	None or higher than 1.30	No	No
1		1.15 – 1.30		≤ 3
2		1.05 – 1.15	X >1.35	4 of 5
3		≤ 1.05	1.15 < X ≤ 1.35	6 of 7
4			1.00 < X ≤ 1.15	8 of 9
5	25% better Bbl-requirement*		0.65 < X ≤ 1.00	10
6	50% better than Bbl-requirement*		0.30 < X ≤ 0.65	
7	75% better than Bbl-requirement*		X ≤ 0.30	

*Legally required minimum energy performance when applying for a permit for buildings (Bbl).

Table 11 Points awarded for Existing Non-Residential Construction based on Energy Label BENG 2

POINTS	EXISTING NON-RESIDENTIAL BUILDINGS									
	Energy label according to BENG 2 (NTA8800) kWh/m2/year (x=BENG2)									
	Office	Lodging	Retail	Education	Sport	Cell	Meeting without daycare	Meeting with daycare	Health without bed	Health with bed
0	>225	>285	>355	>295	>195	>370	>285	>330	>260	>530
1	200 < X ≤ 225	255 < X ≤ 285	315 < X ≤ 355	260 < X ≤ 295	170 < X ≤ 195	330 < X ≤ 370	255 < X ≤ 285	290 < X ≤ 330	230 < X ≤ 260	470 < X ≤ 530
2	180 < X ≤ 200	230 < X ≤ 255	285 < X ≤ 315	235 < X ≤ 260	155 < X ≤ 170	300 < X ≤ 330	230 < X ≤ 255	265 < X ≤ 290	210 < X ≤ 230	430 < X ≤ 470
3	160 < X ≤ 180	200 < X ≤ 230	240 < X ≤ 285	200 < X ≤ 235	140 < X ≤ 155	240 < X ≤ 300	200 < X ≤ 230	220 < X ≤ 265	180 < X ≤ 210	360 < X ≤ 430
4	120 < X ≤ 160	150 < X ≤ 200	180 < X ≤ 240	150 < X ≤ 200	105 < X ≤ 140	180 < X ≤ 240	150 < X ≤ 200	165 < X ≤ 220	135 < X ≤ 180	270 < X ≤ 360
5	80 < X ≤ 120	100 < X ≤ 150	120 < X ≤ 180	100 < X ≤ 150	70 < X ≤ 105	120 < X ≤ 180	100 < X ≤ 150	110 < X ≤ 165	90 < X ≤ 135	180 < X ≤ 270
6	40 < X ≤ 80	50 < X ≤ 100	60 < X ≤ 120	50 < X ≤ 100	35 < X ≤ 70	60 < X ≤ 120	50 < X ≤ 100	55 < X ≤ 110	45 < X ≤ 90	90 < X ≤ 180

Primary building-related energy use

POINTS	EXISTING NON-RESIDENTIAL BUILDINGS									
7	≤ 40	≤ 50	≤ 60	≤ 50	≤ 35	≤ 60	≤ 50	≤ 55	≤ 45	≤ 90

Table 12 Points allocated to housing

POINTS	HOUSING TO BE BUILT	EXISTING HOUSING			
		Primary fossil energy use (NTA8800 kWh/m ²)	Energy Index after 1/1/2015 (NEN7120)	Energy label after 1-1-2015	Year
0	No or less than 25% better requirement from the Bbl		None or higher than 1.4	None or higher than B	Earlier than 1998
1					1998 to 1999
2		160 < X ≤ 190	1.2 < EGG ≤ 1.4	B	2000 to 2001
3		105 < X ≤ 160	0.8 < EGG ≤ 1.2	A	2002 and later
4		75 < X ≤ 105	0.6 < EGG ≤ 0.8	A+	
5	25% better Bbl-requirement*	50 < X ≤ 75	0.3 < EGG ≤ 0.6	A++	
6	50% better than Bbl-requirement*	0.00 < X ≤ 50	0.0 < EGG ≤ 0.3	A+++	
7	75% better than Bbl-requirement*	EI ≤ 0.00	EI ≤ 0.00	A++++	

*Legally required minimum energy performance when applying for a permit for buildings.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 – 7.1	Inventory of buildings in the area with the GFA, energy performance and the number of points awarded
B	1.2 – 7.2, 1.3 – 7.3	Substantiation of energy specialist qualification, deregistration number energy label or equivalent
C	1.4 – 7.4	Printout calculation tool containing the calculation of the energy performance of the weighted average and the substantiation.

Definitions

Primary fossil energy consumption (BENG 2)

The primary fossil energy indicator (EwePTot) determined in accordance with the NTA 8800. It concerns the sum of the annual primary energy consumption for heating, cooling, hot water preparation, fans, lighting and humidification. Energy generated by, for example, solar panels or other renewable energy sources is deducted from this.

Additional information

No.

Primary building-related energy use

References

- Netherlands Enterprise Agency: information about EPC, Energy Index and energy label, via www.rvo.nl.
- Checking energy labels, via www.ep-online.nl.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Energy performance of public space

Stimulating sustainable energy use for lighting and systems in public spaces.

Available Credits	: 3
Exemplary performance	: ✗
Includes minimum requirement	: ✗
Mandatory from	: ✗

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The outdoor lighting along roads, in the public realm and in residential areas is energy-efficient and linked to a telemanagement system.	1
2	More than 50% of the energy consumption of the significant energy users in the public space use 100% renewable energy generated in the area.	1
3	More than 90% of the energy consumption of the significant energy users in the public space use 100% renewable energy generated in the area.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	Inventory of the lighting in the public space (OVL) of the area, both existing and under development.
1.2	The outdoor lighting is energy efficient: In new situations and when replacing/renewing in existing situations, light sources with at least energy class C according to EU Regulation 2019/2015 are used.
1.3	The outdoor lighting along roads, in parking lots, in the public realm and residential areas is linked to a telemanagement system. The telemanagement system of the lighting is: <ul style="list-style-type: none"> - Remotely readable - switchable, - programmable dimming, - energy consumption is monitored.
2.1	More than 50% of the energy consumption of the significant large energy users, both existing and under development, in the area uses renewable energy generated in the area. Think of lighting, traffic lights, (sewer) drainage, bridges, locks, lighting of (parking) areas, bus stops, etc. Public charging points for electric cars may be disregarded.
2.2	Energy consumption is monitored and reported annually to the project organisation
3.1	Criterion 2 is met.
3.2	More than 90% of the energy consumption of the significant large energy users, both existing and under development, in the area use renewable energy generated in the area. Think of lighting, traffic lights, (sewer) drainage, bridges, locks, lighting of (parking) areas, bus stops, etc. Public charging points for electric cars may be disregarded.

Addition to the criteria requirements

Lighting in public spaces (OVL)

Lighting in public spaces includes lighting such as tunnel lighting, illuminated lampposts, signage, traffic signs and their maintenance. All lighting for optimal safety of drivers, cyclists and walkers.

Energy performance of public space

No significant energy users in public spaces

It is up to the energy specialist to substantiate which energy users have been considered to be 'significant energy users' in such a way that the assessor can assess that no energy users have been missed or wrongly included. If there are no significant energy users, such as lighting, (sewer) drainage, pumps, movable bridges or locks, no credits can be awarded for the second or third criterion if the other energy users use locally generated renewable energy.

Renewable energy sources

Renewable energy sources are: wind energy, solar energy, biomass, geothermal energy or geothermal energy.

Telemangement system

Telemangement systems are intended for monitoring, controlling, measuring and managing public lighting. The remote management system must connect to each luminaire. Via an (online) platform, the administrator can read information or influence and control the system. Because BREEAM-NL considers future-proofing important, it is not enough to connect every power supply box or per street or group.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Plan drawings and overview list of lighting/luminaires
B	1.1 to 1.3	Specifications of the lighting and documentation on the operation of the remote management system.
C	2.1, 3.2	Overview of the (significant) energy users and their consumption data and specifications and installed capacity of the locally generated renewable energy sources (if measurement data available).
D	2.2	Way of monitoring and reporting

Definitions

No.

Additional information

No.

References

- European database of energy labels for products, via <https://eprel.ec.europa.eu/screen/home>.

Renewable energy use

Stimulating the local generation of renewable energy for the buildings in the area.

Available Credits	: 8
Exemplary performance	: ✓
Includes minimum requirement	: ✗
Mandatory from	: ✗

Criteria

A maximum of 8 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	At least 10% of the energy demand of the area is met by generating renewable energy within the area.	2
2	At least 25% of the energy demand of the area is met by generating renewable energy within the area.	3
3	At least 50% of the energy demand of the area is met by generating renewable energy within the area.	4
4	At least 75% of the energy demand of the area is met by generating renewable energy within the area.	6
5	At least 100% of the energy demand of the area is met by generating renewable energy within the area.	8
6	Supply and demand of building- and user-related energy are matched with an energy management system.	Exemplary Performance

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1 – 5.1	A feasibility study has been carried out by an energy specialist into the possibilities for generating renewable energy in and around the area. The feasibility study must meet the requirements as included under 'Additions to the criteria requirements'.
1.2 – 5.2	The following is inventoried of each building in the area: Existing buildings: <ul style="list-style-type: none"> - The gross floor area - Energy use (the building- and user-related energy use together) - The share of locally generated renewable energy New buildings: <ul style="list-style-type: none"> - (an estimate of) the gross floor area - The expected primary fossil energy use - The expected user-related energy consumption - The share of locally generated renewable energy. This share can be laid down in the Environmental Vision or arise from the feasibility study.
1.3 – 5.3	The percentage of renewable energy in and around the area is calculated using the following formula: $\frac{E_{\text{her}}}{E_{\text{tot}}} \times 100\% = \text{aandeel hernieuwbare energie}$ E _{her} = Total renewable energy generated per year E _{tot} = Total energy consumption of the area per year

Renewable energy use

#	CRITERIA-REQUIREMENTS
6.1	An energy system, virtual grid or similar system is used to match the supply and demand of grid capacity and renewable energy for all buildings in the area.
6.2	By actual monitoring and management the energy system distributes the stored and renewable energy generated by the users among themselves to prevent peak loads.

Addition to the criteria requirements

Calculation of energy demand

The energy consumption concerns the total energy consumption 'on the meter' as can be expected or measured over a year of all buildings within the area (e.g. in accordance with the WEii protocol).

To calculate the energy demand of the buildings within the area boundary, the values of primary energy use indicated on the energy labels (in accordance with NTA 8800) can be used, supplemented by an estimate of the user-related part. There are several websites available where energy labels and energy consumption in areas are made transparent, see references.

For new buildings to be built or buildings with an energy label in accordance with NTA8800, the primary fossil energy use must be supplemented with an estimate of the user-related energy use. The new total share can be determined on the basis of the share of renewable energy in relation to primary fossil energy use and an estimate of the user-related energy use.

Please note: for new buildings, the percentage of BENG3 alone is not sufficient because it is only determined on the building-related energy consumption.

Energy system

An energy system, Virtual Grid or smart grid is an electricity system that influences the demand for electricity based on the instantaneous supply. The conventional electricity grid, which has hardly any storage options, is demand-driven and hierarchically structured, at the top is electricity production that is driven by instantaneous consumption. Renewable energy is often generated by external conditions such as sun and wind: production takes place independently of demand. By controlling demand with a Virtual Net, it can be better aligned with the current supply. The Virtual Net can use information, two-way traffic, communication technologies and computer intelligence for this purpose.

Feasibility study

The feasibility study must meet the following requirements:

- A. The study examines the feasibility of using renewable energy sources, including the possibilities of supplying renewable energy to the public grid.
- B. Within the study, the energy demand within the area boundary was determined and the amount of energy that is or can be extracted from renewable sources.
- C. Within the study, an analysis was carried out of the system costs (such as investment costs, maintenance costs and energy costs) and of the energy savings or CO2 emission reduction during the technical lifespan.
- D. The return on investment (ROI), payback periods or other commercially customary criteria are calculated, taking into account the possibility of obtaining subsidies.
- E. The study includes the environmental and spatial effects in the overall assessment and cost calculation in terms of land use, integration into the current local zoning plan and noise nuisance.
- F. The study argues the choice for one or more specific renewable energy techniques and/or why other applicable techniques for renewable energy generation have not been chosen.

Renewable energy use

- G. The following sources should in any case be included:
- Solar energy:
 - The current and potential use of roof surface for solar energy within the area has been mapped. When determining the potential, technical and other factors, such as wealth, must be taken into account.
 - The current and potential use of surface area within the area for solar parks.
 - Windenergy:
 - The current and potential application of wind energy for the benefit of the area.
 - Distances to residential areas, high-pressure gas pipelines and distances between them
 - Possibility of applying wind energy on the basis of municipal, provincial and national policy.
 - Biomass:
 - The current and potential application of biomass for the benefit of the area.
 - Possibility of generating energy from biomass on the basis of municipal, provincial and/or national policy.
 - The temperature level and energy demand for the area.
 - Geothermal energy:
 - The current locations for Heat and Cold Storage (ATES) and possible new locations have been mapped.
 - Possibility of pumping hot water of at least 45 degrees Celsius (substantiated by ThermoGIS software or equivalent).

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 – 5.1	Feasibility study.
B	1.2 – 5.2	Inventory of buildings in the area with the GFA, energy performance, user-related energy use, share of renewable energy and the number of credits awarded.
C	6.1, 6.2	Energy system, virtual grid or similar.
D	6.1, 6.2	Reporting and/or monitoring data and method of publication.
E	6.1, 6.2	Planning and contracting for application systems for users.

Definitions

Renewable energy

Energy produced from renewable energy sources as defined in the Renewable Energy Directive (2009/28/EC) of the European Parliament and of the Council of 23 April 2009, such as geothermal heat and geothermal energy, solar, wind and water.

Additional information

No

References

- www.klimaatmonitor.databank.nl

Waterconsumption

Stimulating circular water use by minimizing drinking water use for facilities where rainwater or graywater can be used.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 4 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	Objectives have been set and measures have been laid down to limit the use of drinking water in the communal facilities and public spaces.	1
2	On private plots, collection is used for the watering of outdoor green areas.	1
3	Circular water systems are used for non-high-quality applications for domestic and/or business use.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	Objectives for limiting the use of drinking water from communal facilities and public spaces have been set in consultation with the manager of the greenery and existing facilities
1.2	The objectives take into account: <ol style="list-style-type: none"> The current availability and need for water The availability of water in the situation after the area development, taking into account the consequences of climate change. The water demand in the situation after the area development, based on expected growth and climate change.
1.3	(Management) measures are applied to prevent the drinking water use of communal facilities and public spaces. Measures are applied for the year-round maintenance and management of green areas, sports fields, public sanitary facilities, and other public consumption groups that are present in the area. Think of shelter, filter, design measures, etc.
2.1	(Collective) rainwater collection facilities will be available to meet the water demand for outdoor use of private users. This concerns both domestic (private residents, owners' association, housing corporation) and business users with green areas, gardens, green roofs, green walls.
2.2	Storage facilities for private users can be offered in various ways. This can be done by providing a joint water collection system, private collection systems such as rain barrels for households or underground collection for large plots, obligation to apply rainwater collection for watering gardens, green walls, green roofs and/or other landscaping.
3.1	Circular water systems, such as rainwater collection and use systems or greywater purification and reuse systems, are used to provide for the water use of all household and/or business users. The use is applied for non-high-quality application of water.
3.2	Grey and stormwater harvesting systems must be specified and installed in accordance with the provisions of NEN-EN 16941-1, 2024 and 16941-2:2021 (design).
3.3	The storage facility for rainwater must be large enough to: <ul style="list-style-type: none"> - During a period of drought (20 calendar days), to provide for the non-high-quality application of water per resident (home) or building user (utility).

Waterconsumption

#	CRITERIA-REQUIREMENTS
	See Additions to the criteria requirements.
3.4	Points of interest: <ol style="list-style-type: none"> If there are no households in the area, the requirements focus on business users and vice versa. If there are or will be both households and business users in the area, the requirements focus on both user groups. Water systems may be used individually, site-specific or collectively.

Addition to the criteria requirements

Number of residents

The number of residents of a home is determined on the basis of the number of bedrooms per home. It is assumed that 1 person per bedroom will take place.

For studios, one must assume 2 people.

Number of building users for utility

The number of building users is very difficult to determine early in a development. If the data of expected building users are not yet known, an assumption will have to be made. Another way is to include the collection requirement per person as an land release condition.

Existing works

All existing works must be included in the calculation. Both in terms of the impact on the use of drinking water and measures to reduce the use of drinking water.

Circular water systems.

Circular water systems are aimed at using reused water in buildings, which can be rainwater collection and use systems or greywater purification and reuse systems. In this issue, individual, location-specific and collective systems are possible.

Water demand for non-high-quality applications

The average water demand for a toilet flush per person in a home per day is 30 liters.

The average water demand for washing machine use per person in a home per day is 15 liters

The average water demand for a toilet flush per person in a utility building per day is 16 litres.

Reducing drinking water use in communal and public facilities

Measures to minimize drinking water use of communal and public facilities are:

- Planting, soil supplies that do not require additional watering.
- Designing irrigation systems that are as efficient as possible and require as little water as possible.
- Reuse of rainwater, condensation water and greywater as a replacement for drinking water for maintenance and management.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2, 3.2	Reporting of the analysis for the purpose of the objectives.
B	1.3	Documentation or statement from the project organisation or competent authority.
C	2.1 to 3.4	PoR, design plans, municipal regulations or other obligations that show that the facilities are safeguarded.

Definitions

Collective circular water systems

Are systems that collectively provide and distribute water collection to each individual user. Additional attention to water quality, use and maintenance is necessary here. Few such systems have been used in the Netherlands, but could offer economies of scale in specific areas.

Drinking water

Water of very good and controlled quality, suitable for drinking without further processing.

Rainwater

Precipitation/rainwater collected from roofs of buildings, streets and other paved surfaces.

Domestic and business users

Household users are the residents of the area, where the application of reused water focuses on non-high-quality application of water.

The business users are the companies in the area, from small-scale entrepreneurs to large companies. The application of the reused water also focuses on the non-high-quality application of water. But it can also be relevant for companies when the reuse of water focuses on business processes such as cooling, washing, etc.

Greywater

Slightly contaminated grey residual water from showers, baths, washbasins, washing machines and condensation water from heat pumps, air conditioning and tumble dryers that is collected and can be reused after purification and disinfection for non-high-quality applications.

Location-based and individual circular water systems

Systems and techniques that are used within the boundaries of buildings and gardens, both individual houses and apartment buildings, office buildings, sports facilities, hotels, etc.

Non-high-quality application of water

All applications that do not require drinking water quality, such as toilet flushing, washing machine.

Additional information

Drinking water supplies are under pressure due to scarcity, high demand and risk of pollution. A large part of the use of water is filled by clean drinking water, but a large part of this use can be met by reusing water such as rainwater and greywater. The reuse of water offers great opportunities to maintain the quality of our drinking water in the Netherlands and to be able to meet the demand. The majority of the water demand is claimed by households, where there is also a lot to be gained. In Europe, a lot of practical experience has been gained with the responsible use of alternative water sources for non-high-quality applications.

The Circular Water Expert Group of the Water Alliance endorses the need for a new way of dealing with drinking water and the importance of clear quality requirements that must be met. The NEN-EN standards included here are a good basis for the desired water quality. In addition, the government and regulations must encourage more to shape the water transition and to use circular water use. With this issue, local governments, developers and consumers are encouraged to reduce the demand for drinking water in the Netherlands for new construction and renovation projects.

References

Selection of literature:

- Dealing with rainwater within the plot boundary, Isso publication 70.1, 2008.
- Dealing with rainwater at industrial and industrial estates, STOWA report 2004-23.
- Use of Rainwater, Reed Business Information, 2004.
- Influence of system choice on emissions from the wastewater system, STOWA report 2009-31.

Web pages:

- Compendium for the living environment, via www.clo.nl.
- Royal Netherlands Meteorological Institute, via www.KNMI.nl.
- CBS, Water use via statline.cbs.nl.
- Wateralliance.nl/eg-circulairwater/ - Circular Water Expert Group of the Water Alliance.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Circular use of materials

Encouraging the use and reusability of products and raw materials in public spaces.

Available Credits	: 5
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 5 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The amount of recycled material in public spaces is at least 20%.	1
2	The amount of recycled material in public spaces is at least 40% and at least 20% of the material use is circular.	2
3	The amount of recycled material in public spaces is at least 60% and at least 40% of the material use is circular.	3
4	The amount of recycled material in public spaces is at least 80% and at least 60% of the material use is circular.	4
5	The amount of recycled material in public spaces is at least 80% and at least 80% of the material use is circular.	5

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1 – 5.1	A calculation with substantiation has been made containing: <ol style="list-style-type: none"> The total volume (m3) of material used in public space, specified per component. The total volume (m3) of materials from the existing chain that is reused in public space, specified per component. The percentage of the reused materials in relation to the total volume of materials in the public space.
1.2 – 5.2	Policy/maintenance documents stipulate that at least the same volume percentage of recycled material is used for maintenance/replacement of existing components.
1.3 – 5.3	The volume percentage of circular materials used in public space has been calculated, whereby: <ol style="list-style-type: none"> The location, type and examples of possibilities for reuse are documented for the circular materials used, such as in a material passport. Storage of the material passport or equivalent is such that availability and usability in the future is plausible in an accessible manner, at the discretion of the assessor.

Addition to the criteria requirements

Volume of material

The total volume (m3) may be determined with a margin of uncertainty of $\pm 5\%$. This mainly concerns the materials that are used in large quantities in public spaces, such as concrete, soil, asphalt, etc. Elements in the public space that are negligible in terms of material volume (less than 1%) do not have to be included in this issue. Not all materials or products are expressed in volume by default, but in pieces, weight, m2, etc. To calculate the

Circular use of materials

share of reuse, the calculation must be made to the same unit, If that is a unit other than m³, then that is allowed but everything will have to be converted to the same unit.

Reused materials

The reused materials referred to in the issue come from the existing chain and are used to a high standard where possible. Preferably at product level, if that is not possible at component level and otherwise at raw material level. This issue also includes recycled aggregates.

Circular material

Material that can be reapplied at the same quality level after use. This means the use of a material as a second life, at the same level (possibly - but not exclusively - in the same application as originally), without demonstrable environmental impact as a result of additional processing or treatments. If the material can safely flow back to nature after use (biological cycle), this is also considered circular.

Materials in public spaces

This includes at least all materials that fall within the following categories:

- Roads and foundations.
- Paving materials and ground level pavements.
- Fountains, water features, canals and wadis.
- Civil engineering works (such as quay walls, jetties, bridges, locks)
- Underground infrastructure (such as cables and pipes, sewers, substations, culverts, settling basins, pumping stations and pumps)
- Public lighting, signage, traffic control systems
- Solar panels and wind turbines
- Other furnishing elements (such as various street furniture, tree grids, bus shelters, bus shelters and playground equipment)
- If one of these categories is not present in the area, it can be disregarded.

Existing works

Existing works may be included in the calculation for recycled material if the development leads to a significant lifespan extension (at least 50% longer than the original lifespan).

Buildings are not included in this issue.

Buildings are not part of this issue.

Inventory, overlap BRO 5, BRO 6 and BRO 7

The BRO 5, BRO 6 and BRO 7 issues all focus on the use of materials in public spaces and the criteria are based on the volume percentage. It may therefore be useful to draw up the inventory of the materials and associated data and the calculation of the volume percentage in such a way that it is applicable to all three issues.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 – 5.1	Overview of all relevant components in the public space, including material volumes (m ³).
B	1.1 – 5.1	Calculation with substantiation of the volume of reused material used.
C	1.2 – 5.2	Policy documents for management and maintenance, such as park management policy, contracts with management organisations.
D	2.3 – 5.3	Calculation with substantiation of the volume of circular material used

Circular use of materials

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
E	2.3 – 5.3	Documentation with location, type and examples of reuse for circular material, such as raw materials passport.

Definitions

No.

Additional information

No.

References

- BRL 2506 Recycling granulates for use in concrete, road construction, earth construction and works.
- An overview of BRL 2506-certified suppliers can be found via, <https://www.brl2506.nl/certificaatregister/>.
- Central Government; Programme 'The Netherlands Circular in 2050'.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Environmentally harmful materials

Encouraging the use of materials in public spaces with a low environmental impact.

Available Credits	: 5
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 5 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The choice of at least 20% of the volume of materials to be used in public spaces is based on a comparison of life cycle analyses.	1
2	The choice of at least 40% of the volume of materials to be used in public spaces is based on a comparison of life cycle analyses.	2
3	The choice of at least 60% of the volume of materials to be used in public spaces is based on a comparison of life cycle analyses.	3
4	The choice of at least 80% of the volume of materials to be used in public spaces is based on a comparison of life cycle assessments.	5

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1 – 4.1	In the LCA comparison, alternative materials with similar functional properties were examined, with the (composite) material with the lowest environmental impact being chosen. The equation consists of 2 or more (composite) materials.
1.2 – 4.2	The LCA comparisons are performed by a person with demonstrable experience in making LCA comparisons based on tools, such as DuboCalc, and this person can identify the points of attention in the comparisons and substantiate the choices.
1.3 – 4.3	During the design phase, it was ensured that the materials mentioned are used during the construction phase.

Addition to the criteria requirements

Existing works

The use of materials for the existing works is not included in the calculation of the percentages, but the policy documents for management and maintenance guarantee the selection and application of materials with the lowest possible environmental impact. The policy documents include an inventory of the relevant materials/components already used in the public space. The following is indicated for each component:

- How to deal with the choice of using materials with the lowest possible environmental impact in the event of maintenance or replacement.
- How is it ensured that the criterion chosen for this issue is met when replacing or adding new parts in the public space?

Environmentally harmful materials

Volume of material

The calculation of the volume should be carried out in cubic meters (m³). Deviating is allowed, but must be substantiated. See below the additions in BRO 5 Volume material.

See BRO 5 'Materials in public space' for the margin of uncertainty to be used.

Materials in public spaces

See BRO 5 'Materials in public space' for which materials are part of the public space.

Inventory, overlap BRO 5, BRO 6 and BRO 7

The issues BRO 5, BRO 6 and BRO 7 all focus on the use of materials in public space and the criteria are based on the volume percentage. It may therefore be useful to draw up the inventory of the materials and associated data and the calculation of the volume percentage in such a way that it is applicable to all three issues.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1-4.1	An inventory of the relevant materials/components to be used in the public space: <ul style="list-style-type: none"> - Overview of the total volume of materials to be used in the public space. - Overview of all materials in public space for which an LCA is available. - A calculation of the percentage of materials for which an LCA is available. - A report showing that the results of the comparison based on LCAs influenced the final choice of materials and showing the use of those materials. - Overview of the LCAs used (certificates or calculation)
B	1.1-4.1	Management and maintenance policy documents (if relevant)
C	1.2-4.2	Explanation and substantiation of the person's experience.
D	1.2-4.2	Documentation showing that the choice of materials is guaranteed, such as a technical list of materials or specifications description.
E	1.3-4.3	Documentation showing that the choice of materials is guaranteed, such as a technical list of materials or specifications description.

Definitions

LCA (Life Cycle Assessment)

Life cycle assessment is an analysis method that quantifies the environmental impact of products and services over their entire life cycle. The different stages (raw material extraction, production, transport, use and waste processing) are carefully mapped and for each stage an inventory is made of all environmental impacts.

Lifetime

For the service life, the following standard service life is used for different types of constructions:

- Civil engineering structures: 100 years
- Infrastructure: 50 years

Environmentally harmful materials

Additional information

The DuboCalc instrument has been accepted as an instrument for determining the environmental impact of an earth, road and hydraulic engineering work. The calculation of DuboCalc is based on LCA data that is in the database behind this software instrument. No separate LCAs are required for the (composite) material use that has been assessed using DuboCalc.

References

- For more information about dubocalc see www.dubocalc.nl.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Responsible sourcing for materials

Encouraging the use of materials with a responsible origin in public spaces.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: ✓
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 4 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	All wood used has a responsible origin (Minimum requirement).	0
2	In addition to the wood, at least 20% of the volume of the materials to be used has a responsible origin.	2
3	In addition to the wood, at least 50% of the volume of the materials to be used has a responsible origin.	3
4	In addition to the wood, at least 80% of the volume of the materials to be used has a responsible origin.	4

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	All timber processed in public spaces is certified by a certification system approved by the Timber Procurement Assessment Committee (TPAC).
2.1	Criterion 1 is met.
- 4.1	
2.2	The following applies to materials that are still to be used in public spaces:
- 4.2	<ul style="list-style-type: none"> a. Inventory of the producer of the end product and his supplier(s). b. Overview of the volume percentage of the materials in the chain for which an EMS is present for the producer and the supplier(s). c. Stipulated in the purchasing policy that only products with a responsible origin are allowed for the materials in question.
2.3	The following applies to materials that have already been used:
- 4.3	<ul style="list-style-type: none"> a. Information available about the origin. b. The management and maintenance ensure that the requirements of this issue are met in the event of maintenance or replacement.

Addition to the criteria requirements

Recycled material

When reusing products, product parts or raw materials from the Netherlands, the supplier does not require EMS for the volume in question.

Volume of material

Responsible sourcing for materials

The calculation of the volume should be carried out in cubic meters (m³). Deviating is allowed, but must be substantiated. See BRO 5 'Materials in public space' for the margin of uncertainty to be used.

Materials in public spaces

See BRO 5 'Materials in public space' for which materials are in any case part of the public space.

Inventory, overlap BRO 5, BRO 6 and BRO 7

The issues BRO 5, BRO 6 and BRO 7 all focus on the use of materials in public space and the criteria are based on the volume percentage. It may therefore be useful to draw up the inventory of the materials and associated data and the calculation of the volume percentage in such a way that it is applicable to all three issues.

Supplier

The supplier(s) from the criteria requirements is only the supplier to the producer. So not the supplier's supplier. As an example, the contractor with its own asphalt plant must have an EMS, but also the supplier of the products for the asphalt plant.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Certificates or purchasing policy that show that 100% responsible wood is purchased.
B	2.2 -4.2	An inventory of the materials including a calculation of the volumes.
C	2.2 – 4.2	For each type of material other than wood, demonstrate how requirements about the responsible origin are laid down in the tendering process, the specifications and any contracts with contractors. Think of: ISO 14001 certificate, EMS certificate, Chain of Custody certificate.
D	2.3 – 4.3	Management plan(s)

Definitions

Responsible sourcing

Materials have a responsible origin if the producer produces his product legally, without child labour, etc., and also obtains his raw materials from producers who work in this way (chain management). Environmental impact is dealt with in BRO6 'Environmental impact of materials'.

Temporary wood

Reused wood that is temporarily used on the construction site is outside the scope of this issue. Only the wood that is permanently processed in the area and temporary wood that is purchased new for the project must be assessed.

Supply chain management of the environmental management system (EMS)

The EMS system does not certify the materials but the producing organisation. It covers all important aspects of the process and distinguishes what is needed in the supply chain management of end products. Note that it is not necessary to set up a chain management environmental management system (EMS) for recycled materials.

TPAC

The Timber Procurement Review Committee (TPAC) assesses timber certification systems against the Dutch procurement criteria on behalf of the Ministry of Housing, Spatial Planning and the Environment. See www.tpac.smk.nl for wood that meets the Dutch purchasing criteria.

Responsible sourcing for materials

Additional information

No

References

No

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Robust design

Protecting vulnerable site layout during the development, work and use phase.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	Protection has been applied to the vulnerable objects in the area with an increased risk of damage.	3

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An inventory has been made of all vulnerable site layout in the area. This concerns both site layout of existing situations and the projected layout that is under development.
1.2	All vulnerable site layout is/will be provided with suitable protective measures or will be replaced by less vulnerable objects.
1.3	Vulnerable site layout and objects are protected for the work that takes place during the construction phase against damage, accidents and dangerous situations.

Addition to the criteria requirements

Existing works

Existing works in the area must meet the requirements. An inspection report with photos can be used as evidence that is met.

Vulnerable site layout

Vulnerable site development concerns elements in the area that are susceptible to damage by users, pedestrians, vehicles or other forms of traffic and transport. These include, for example:

- Electricity boxes and houses, sewage pumping stations, high-voltage lines.
- Waste collection points.
- Trees (incl. tree grids) along the roadway or in vulnerable places.
- Buildings and building parts (e.g. in narrow passages and loading and unloading situations).
- Traffic elements, such as traffic lights and bollards
- Setting up petrol stations, charging points for electric cars and bicycles.
- Furnishing elements such as bicycle racks, 'advertising columns', public transport stops.
- In temporary situations such as construction traffic routes, protection of ground level design.
- Vulnerable parts within buildings are not part of the assessment.

Appropriate protective measures

Suitable robust and protective measures for sensitive objects include:

- Poles or columns, thresholds, raised curbstones at delivery points and unloading areas.
- Robust construction of the outer walls up to a height of 2 meters.

Robust design

- Tree protection by means of poles or other constructions.
 - Protective guides on walls or in the corridors.
 - Create sufficient distance from vulnerable elements.
-

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Inventory and summary document reporting
B	1.2	Documentation that includes requirements for site layout to be realized and/or; <ul style="list-style-type: none"> - Inspection report with photos for protective measures that have already been implemented - Drawings indicating protective measures and/or; - Specifications confirming the application of protective measures on the site of the vulnerable parts.
C	1.3	Documentation applying the protective measures at the time of construction work

Definitions

No.

Additional information

No.

References

- CROW publication 156 - Nomenclature of road and traffic.
- CROW publication 164a - Road design manual - Basic criteria.
- CROW publication 164c - Handbook road design - Area access roads.
- ASVV 2012 - Recommendations for traffic facilities in built-up areas.

This document is for preliminary purposes and cannot be used for certification. The official Dutch version prevails.

Local food production

Stimulating the local production of food and its local consumption.

Available Credits	: 5
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 5 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The possibilities and needs for the local production of food have been mapped out and a significant part of the local production possibilities of food is being realised.	2
2	Most of the local production potential of food is realized.	2
3	The production/consumption of locally produced food is actively encouraged.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An analysis was carried out by an independent organisation or person with sufficient knowledge and experience into the spatial possibilities and needs for the local production of food. At a minimum, the following are taken into account: <ul style="list-style-type: none"> - The economic and social value; - (Negative) consequences for soil and water quality and water storage capacity; - Location of facilities in relation to contaminated locations; - Residual flows and local waste processing; - The possibilities of consuming locally produced food within the area.
1.2	The analysis results in application possibilities for food production in the area, which are feasible and meet the needs.
1.3	The application possibilities of food production are substantial and have an effect on the scale of the area
1.4	At least 40% of the applications of food production from the analysis will be realized.
2.1	Criterion 1 is met
2.2	At least 80% of the applications of food production from the analysis will be realized.
3.1	Criteria 1 and 2 are met
3.2	Locally produced food is distributed or sold to users within the area and to the community, such as restaurants, schools, hospitals.
3.3	The local production of food and its consumption has been stimulated by active promotion. This promotion is specifically focused on the field and aimed at: <ol style="list-style-type: none"> a. Increasing the visibility of locally produced food b. Increasing the attractiveness of locally produced food. c. Increasing the availability of locally produced food. d. Encouraging the users of the area to make use of the available space for food production by offering a manual on the location and how it can be used for producing food.
3.4	At least 50% of the opportunities to consume locally produced food in the area will be realized.

Local food production

Addition to the criteria requirements

Existing works

Existing space for food production can be considered as a realized application possibility.

Local food production

To determine the potential space suitable for producing food, possibilities at ground level and roofs and possibly surface area within buildings (basement, first floor) can be assumed. Basically, the possibilities and the realized are expressed in surface area (m²). Credits can only be awarded if the possibilities for food production are substantial and have an effect on the scale level of the area and at least 1% of the total area area is used for food production.

Temporary use

Temporary use is not part of the issue, temporary use is already valued at SYN 3.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1-1.3	Analysis including a map/map of the area showing the available applications for food production.
B	1.1	Substantiation of expertise and experience of expert.
C	1.4, 2.2	including design/management plan, contracts, partnerships.
D	3.2	Agreement with the (future) operator/manager.
E	3.3	Marketing/business plan, supplemented with a plan of action on how the marketing plan will be implemented
F	3.4	Examples of promotion carried out and calculated amounts of locally consumed food.

Definitions

Locally produced food

Food for human consumption produced within a maximum of 1 km of the area and processed within a maximum of 10 km.

Independent organisation or person

An independent organisation or person with sufficient knowledge and experience of spatial possibilities and needs for the local production of food, for example working at a knowledge or research institution.

Additional information

No.

References

No.

Prevention and management of waste

Encourage waste management with the aim of reducing waste and its disposal and minimising negative environmental impacts.

Available Credits	: 8
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 8 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	A waste management plan is drawn up prior to the construction work to efficiently separate, dispose of and reuse waste streams.	2
2	All relevant waste streams that arise in the area are collected separately and processed (recycling).	2
3	Waste generated in the area is reused within the system boundary at an equivalent quality level or used as a 'medium of exchange' between parties within the system boundary (reuse).	2
4	Measures are being taken in the area to reduce waste flows that leave the area (prevention).	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	Prior to the work on public space, civil engineering and building developments, a waste management plan is drawn up in collaboration with the contractor(s) involved in which objectives for waste streams are aligned.
1.2	During the (re)development of the area, sufficient facilities were secured to store relevant waste streams as a result of construction work separately and to offer them separately to and in accordance with the requirements of the waste processing company in question.
1.3	The waste streams are monitored and the objectives are reported and evaluated to the project organisation at least monthly.
2.1	Within the area boundary, according to the guideline "Waste bins in the public space" of the C.R.O.W, sufficient facilities are included for the separate storage of relevant waste streams in the public space.
2.2	Organisations include waste separation in their business operations. Appropriate agreements are made for each company with regard to the separate delivery of waste streams to the waste processing company in question. These agreements are in accordance with the minimum standard of the CMP1.
3.1	Within the system boundary, waste is used as a value to achieve reuse. To achieve this, forms of cooperation between organisations have been entered into
3.2	A residual flows manager is appointed, who is responsible for finding or establishing forms of cooperation to use residual flows as value
4.1	For residents in the area, a differentiated rate (DIFTAR) is used with regard to waste collection and waste processing.
4.2	All organisations in the area include waste prevention in their business operations. Appropriate agreements are made for each company with regard to the prevention of waste flows.
4.3	The various waste streams that are transported from the area (area boundary) are quantified per waste stream. This information is publicly accessible and is updated annually.

Addition to the criteria requirements

Criterion 1 focuses on the construction processes of public space, civil engineering and building developments within the area development. The other criteria focus on the use phase of the area. If the area is still under development, credits can be awarded for the parts that are under development if there is sufficient certainty that the criterion will be met with formal and recorded documentation.

Waste management plan

The waste management plan shall consist of at least:

- A. Inventory of the expected amount of hazardous and non-hazardous waste material (indicated in tons and/or m³) per waste category.
- B. Inventory of the expected amount of demolition material released from existing infrastructural works, roads, structures or paved areas.
- C. Targets for the reduction of waste generated and
- D. Objectives for maximizing the reuse and/or transformation of these facilities and/or waste materials. If this is not possible, targets for maximising the reuse of these materials are set, with priority given to high-value applications.

The waste management plan also takes into account:

- A. All relevant construction, demolition and industrial waste streams released on the construction site.
- B. Environmental impact of all the waste generated.
- C. Plan of action and monitoring for the construction phase to secure objectives.

Relevant waste streams from civil engineering and public spaces

This refers to all waste streams that arise within the area boundary during work on public space, civil engineering, such as:

- Building materials: concrete, asphalt, brick, and other minerals that are released;
- Asphalt and bitumen: waste streams that are released as a result of the maintenance and construction of asphalt roads;
- Soil and raw materials: soil movement and excavation cleaning and reuse;
- Other materials: metals, plastics and other materials.

Relevant waste streams from building developments

This refers to all waste streams that arise within the area boundary, both during (re)development and in the management phase, such as:

- Wood waste (particularly relevant for construction work);
- Stony materials (particularly relevant in construction work);
- Metal;
- Plastic (foil);
- Glass;
- Paper and cardboard;
- Organic waste, Swill and frying fat;
- Small chemical waste (RCA);
- Gypsum (particularly relevant for construction work);

- Insulation material (particularly relevant for construction work);
- Residual waste.

Collaborative form of waste as value

Waste from one organisation can be a raw material for another organisation in the area. For example: a company offers its organic waste to the waste processing company on the condition that compost is returned to users within the area.

Residual heat and/or energy and waste water are not assessed within this issue.

Waste separation organisations

Criteria 2.2 do not require 100% of the organisations to comply. It is sufficient if it is demonstrated that at least the organisations responsible for 80% of the waste demonstrably meet this requirement.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	The waste management plan.
B	1.2, 1.3	Substantiation of how waste separation takes place and monitoring and reporting.
C	2.1	A report with substantiation of the facilities including a plan map.
D	2.2	Plan of action, established agreements with companies.
E	3.1	A cooperation agreement between at least two parties in the area
F	3.2	Contract or other documentation showing the appointment of a residual flow manager or that he or she will be appointed.
G	4.1	Municipal documents showing that DIFTAR is applicable or established documents or contracts showing that it will be applied.
H	4.2	Overview of appointments per company.
I	4.3	Publicly available reporting of the monitored waste streams.

Definitions

DIFTAR

Diftar stands for differentiated rates in which it is registered per household how much waste is offered and the more waste a citizen offers, the higher the waste levy will be. Conversely, better waste separation and the provision of less waste results in a lower waste levy

System boundary

The system boundary for this issue is 10 km outside the area boundary.

CMP1

The Circular Materials Plan 1 replaces the National Waste Management Plan 3 (LAP3) and provides the frameworks with which companies must deal with waste, raw materials and products within a circular economy. It helps companies make more circular choices in their business operations with more attention to material flows throughout the chain.

Additional information

The criteria of this issue follow the 'waste hierarchy' as mentioned in the European directive (2008/98/EC - waste framework directive). The 'waste hierarchy' is a priority order in the drafting of legislation and policy initiatives for the prevention and management of waste. The 'waste hierarchy' concerns the following:

- a. Prevention;
- b. Preparation for reuse;
- c. Recycling;
- d. Other recovery applications, e.g. energy recovery (by incineration);
- e. Removal.

The waste hierarchy establishes an order of priorities for what is the best environmental option overall. In the overview above, option 'a' is the most environmentally friendly, option 'e' the least. In the Netherlands, Lansink's Ladder is also used as a standard for waste management. This is based on the same principle.

In this issue, credits are only awarded for the first three steps. Step 'd' and step 'e' are not an improvement on what is already standard in the Netherlands.

References

- Circular Materials Plan (CMP), via www.circulairmaterialenplan.nl.
- Separating waste, via <https://www.milieucentraal.nl/minder-afval/afval-scheiden/afval-scheiden-nut-en-fabels/>.
- Waste hierarchy Ladder van Lansink, via http://nl.wikipedia.org/wiki/Ladder_van_Lansink.
- Publication "Waste bins in public spaces" C.R.O.W (2023)

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Spatial Planning



SUMMARY

This category stimulates a future-proof design of the area by taking into account the impact of buildings on the soil, subsoil and existing structures. By providing space for area-specific qualities, reused buildings, cultural, geological and ecological values become an integral part of a development. In addition, the integrated and stakeholder design of the infrastructure, below and above ground and efficient use of space, ensure a future-proof design. By further taking into account the water-resilient design in the area, nuisance from flooding and extreme precipitation can be minimised and the area can be made climate-adaptive.

CONTEXT

The Spatial Planning category focuses on ensuring a sustainable, efficient and future-proof design of areas. The 13 issues, including soil conditions, ecological values and intensive use of space, assess various aspects that contribute to the quality and usability of the physical living environment. These topics emphasize the importance of responsible land use, preservation of natural and cultural heritage values, and minimizing negative impact from soil contamination or inefficient use of space. By integrating existing structures and cultural elements, this category contributes to a harmonious and resilient area design.

Including these issues in the directive encourages a balance between human use and environmental conservation. For example, the reuse of existing infrastructure and the protection of ecological and geological values ensure the sustainable use of natural resources. In addition, the category focuses on innovation, such as intensive use of space and sustainable mobility solutions, to meet the needs of future generations. This integrated approach helps developers and planners create living environments that are resilient, environmentally friendly and attractive to society

Value of the issues

RO 1	Soil conditions	2 credits
Value:	- Knowledge of the soil conditions encourages land use to be in line with the soil structure as much as possible.	
RO 2	Land use	3 credits
Value:	- By using existing, previously developed sites, the available space in the area is used efficiently.	
RO 3	Contaminated soil	2 credits
Value:	- By tackling all cases of contaminated soil, the entire area becomes available for developments without the risk of diversion.	
RO 4	Reuse of existing works	4 credits
Value:	- The reuse of buildings and structures minimizes the use of new raw materials, energy and transport.	
RO 5	Cultural heritage	3 credits
Value:	- By emphasizing the cultural-historical value of an area, identity, involvement and awareness, among other things, are strengthened.	
RO 6	Geologic values	3 credits
Value:	- Emphasizing the geological values in the area improves identity and awareness and helps to protect natural resources and ecosystems.	
RO 7	Ecological values	7 credits + 1 EP
Value:	- The early involvement of ecologists in the design process stimulates an integrated approach to ecological values throughout the area. - By protecting, increasing biodiversity and applying good management, the ecological value of the area is strengthened.	
RO 8	Intensive use of space	3 credits
Value:	- Efficient use of space contributes to reducing the spatial footprint and stimulates innovation in multiple use of space.	
RO 9	Underground infrastructure	3 credits + 1 EP
Value:	- The process-based design and construction of underground infrastructure stimulates management and minimizes risks.	
RO 10	Sustainability performance of buildings	5 credits
Value:	- Demonstrably sustainable buildings contribute to the sustainability ambitions of an area.	
RO 11	Flood risk	2 credits
Value:	- Developments in low-risk areas reduce the risk of damage in the event of flooding.	

RO 12	Extreme precipitation	4 credits
Value:	- The degree of water resilience shows the future-proofing of an area in relation to the expected intensity of rain showers.	
RO 13	Mobility	12 credits
Value:	- An optimal system for transport ensures the lowest possible environmental impact.	

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Soil structure

Stimulating the optimal use of soil conditions and encouraging the preservation of the soil structure.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A minimum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	At least 50% of the land use has been carried out in accordance with the potential of the physical soil conditions.	1
2	Interventions, construction and underground interventions (foundations, basements, thermal energy storage installations, etc.) prevent negative consequences on the groundwater system.	1

Criteria requirements

#	CRITERIA
1.1	At least 50% of the (intended) use of the land surface in the area is geared to the soil conditions. The Soil Classification follows the main soil classes as used in the soil map of the Netherlands.
1.2	<p>The following situations involve tuning to the soil conditions, which prevents unnecessary structural facilities from being created:</p> <ul style="list-style-type: none"> D. Higher sandy soils: Heavier construction and high-rise buildings (>5 floors). E. Clay soils: Average buildings. F. Peat soils: Light extensive (timber frame) construction. G. Poorer-bearing soil: Nature/green. H. Wet areas: Buildings on a floating foundation. I. Low-lying areas and/or in wet areas: Water features. <p>This requirement applies to buildings including infrastructure, green nature, water features (such as blue nature, water storage, watercourses) and agricultural land.</p>
2.1	<p>Interventions and/or construction as a result of the area development, such as the preparation and construction of foundations, basements and thermal energy storage systems of both infrastructure and buildings, will prevent negative consequences for the groundwater system, such as:</p> <ul style="list-style-type: none"> A. Prevention of, for example, brackish/salty seepage. B. Flooding of existing cellars. C. Drying out of wooden pile foundations.

Addition to the criteria requirements

Existing works

Existing works are part of the calculation and must be added to the land use to be realised.

Soil conditions

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	An overview or inventory of the total surface area (flat surface) of both the land use to be realized and the existing land use.
B	1.2	Substantiation that shows alignment with soil conditions.
C	2.1	Where relevant: <ul style="list-style-type: none"> - Report on soil mechanical research. - Foundation advice. - Drawings of foundations in relation to groundwater flow. - Plan basement construction(s). - Advice TES.

Definitions

Bottom

The solid part of the earth with the liquid and gaseous components and organisms contained in it. This means, for example, that the groundwater belongs to the soil, as well as 'the subsoil'.

Soil conditions

Physical quality of the soil: soil structure, stratification and geohydrology.

Soil map

The soil classification to be used follows the main classes as included in the soil map of the Netherlands, and is closely related to that of the System of Soil Classification for the Netherlands (De Bakker & Schelling 1989). The publication of this version of the current soil map can be found via <https://bodemdata.nl/basiskaarten>.

Soil structure

The soil structure is the mutual arrangement and cohesion of the solid soil particles: soil particles consist of minerals (sand, clay, etc.) and dead organic matter. In a good soil structure, the solid soil particles are glued together to form aggregates and form a crumb structure that is more or less separate from each other with pores, which can contain air and water. With a good soil structure, excess water is quickly drained away in wet periods and sufficient water is left behind for dry periods. Good soil ventilation is also possible.

Additional information

Optimizing soil conditions

The aim of optimising soil conditions is to stimulate area developments to make an inventory of data on the existing soil conditions and to come up with solutions that are as close as possible to the existing soil structure and geohydrology. In practice, for example, in low-lying peatlands, the area is prepared for construction for residential areas by raising the ground level with sand and lowering the groundwater level. As a result, the subsoil settles, which means that the groundwater level must be lowered further or the area must be raised again. Underground inner-city developments can also cause groundwater to be pushed up upstream and residents' basements to flood. Downstream, the groundwater level drops, causing wooden pile foundations to dry out and be affected.

References

- <https://legenda-bodemkaart.bodemdata.nl/bodemclassificatie>
- <https://bodemdata.nl/basiskaarten>

Land use

Making optimal use of vacant and unused/vacant built-up areas.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The development takes place on at least 50% vacant and/or unused/vacant built-up land.	1
2	The development takes place on at least 70% vacant and/or unused/vacant built-up land.	2
3	The development takes place on at least 90% vacant and/or unused/vacant built-up land.	3

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1 – 3.1	It has been determined what percentage of the total area development (ha ground level) will take place on undeveloped land and/or unused/vacant built-up land, which will be (re)developed as part of the area development.
1.2 – 3.2	The percentage of vacant and/or unused/vacant built-up land was determined prior to the area development.

Addition to the criteria requirements

Existing works

The part of the area development (ha ground level) that has already been built on and is in use can be disregarded when determining the percentage of the total area development in the context of this issue. Example: in the case of an area development of 10 hectares, of which 8 hectares are already built on and in use, 2 hectares can be used as the area of total area development for the calculation of the percentage. The percentages from the criteria therefore apply to these 2 hectares.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1-3.1	A map/plan indicating the area (at the start of the area development) indicating the parts that are vacant or built-up but vacant or unused.
B	1.1-3.1	Inspection report
C	1.2-3.2	Calculation in which the area of undeveloped land and the long-term unused/vacant built-up land is totalised and determined as a percentage of the total area.

Definitions

At the start of the area (re)development

The situation found at the time of the final choice of location or prior to the start of activities related to the area development to be assessed.

Vacant lot

Wasteland intended for human activities. In this context, often site that has not yet been built on. This may be pending construction or furnishing. Land that has been prepared for construction for the purpose of the area development may not be included as undeveloped land. Then the situation for preparation for construction (prior to area development activities) must be maintained.

Vacant land is not considered 'undeveloped land' for the purposes of this issue, as defined in the definition below.

Unused/vacant built-up land

Land that was once built on for industrial, commercial or social purposes but is no longer used, or is only used to a very low standard. These are built-up areas that have been empty for a long time and where rental in its current form is not obvious in the short term.

Undeveloped land

Land that has not been built on. This means:

- Urban green and blue such as parks, recreation areas, allotments, lakes, canals, rivers and cemeteries.
- Cultural landscape such as agricultural areas, estates, recreational areas, water (storage).
- Forest and natural landscape (forests and nature reserves, with or without ancillary functions (recreation, water storage).

These areas can include elements such as buildings, roads, and paths.

Additional information

This issue is aimed at efficiently dealing with existing areas and buildings that have already been developed. By redeveloping and making optimal use of, or preventing, undeveloped areas and (unused) built-up areas, we save our undeveloped space and use our land sparingly. By dealing consciously and efficiently with the existing, urbanised areas, we can ultimately preserve more green areas inside and outside the built-up area.

References

No

Contaminated soil

Stimulating area development at contaminated locations, whereby the new development forms a (financial) carrier for the remediation of contaminated soil.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	If contaminated soils are present within the project demarcation, all cases are remediated.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	A preliminary soil survey of all development locations is carried out for the area by a recognised expert to determine the quality of the soil.
1.2	The soil investigation identifies one or more soil contaminations in accordance with the description of the environmentally harmful remediation activity in paragraph 4.121 of the Ball.
1.3	The method of remediation of the 'cases of soil contamination' is described in the Schedule of Requirements. All 'cases of soil contamination' are at least remediated in a manner that is in accordance with paragraph 4.121 of the Ball.
1.4	In the consideration and choice of the remediation objective(s) and the remediation technique(s) to be applied, the aspect of 'sustainability' is taken into account as a normative criterion.

Addition to the criteria requirements

Existing works

If remediation has taken place in accordance with the criteria requirements in a period of five years prior to the project development, this may be included in the criteria requirements.

Sustainability in remediation

Sustainability as a normative criterion in the choice of the remediation goal and remediation technique(s) means that the impact of the choice on sustainability aspects such as the use of space, water consumption, material consumption, energy consumption, air emissions, water emissions and the safety and health of operational personnel, both at the remediation site and at the processing site(s), is decisive. Sustainability considerations such as:

- Applications with soil are realized as much as possible with local land, for which an opportunity scan is carried out at an early stage for released soil in the area.
- Focus on risk management and monitoring that applies remediation methods that break down the contaminants in situ.

Asbestos

If asbestos is present in the soil, its remediation is eligible for this issue.

Contaminated soil

Opportunity scan

An opportunity scan is carried out in the case of soil remediation, the aim is to identify released soil at other locations in the area to be used for application at soil remediation locations. In the opportunity scan, the requirements for the required soil are drawn up based on the application requirements of the remediated location.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1- 1.4	Soil investigation (paragraph 5.2.2 of the Living Environment Activities Decree (Bal)), inventory.
B	1.3, 1.4	Program of Requirements and/or, Remediation Plan and/or Plan of Action and/or Aftercare Plan

Definitions

Competent authority

The competent authority, generally a municipality or province, assesses soil remediation initiatives and/or action plans regarding the handling of contaminated soils.

Function-oriented remediation

Remediation method with the aim of achieving the intended reuse. The environmentally hygienic end situation is no longer leading or decisive in the remediation effort.

Multifunctional remediation

Method of remediation, in which all contamination is removed from the soil and all (potential) functions of the soil are restored.

Contaminated soil

Contaminated soil is when the concentration of a substance in the soil or groundwater exceeds the intervention values in Appendix 1 of the Soil Remediation Circular.

Additional information

For the soil quality aspect, it is laid down by law that cases of soil contamination are addressed. It is also stipulated that construction may not simply be carried out on contaminated soils. Finally, there are regulations for the reuse of surplus soil that is released during earthmoving.

In many areas to be developed, there will generally be clean soil, or soil with some 'area-specific' diffuse background load. Furthermore, one or more 'cases of soil contamination' may be present. As far as the general soil quality is concerned, it is in practice extremely expensive to perform above the statutory requirements. If there is a slight background load and it is legally permitted to build on it, no developer will consider excavating the slightly contaminated topsoil in the entire area and replacing it with clean soil. One may also wonder whether this would be a sustainable intervention. In this issue, therefore, building on slightly contaminated soil and the reuse of secondary soil flows are not taken into account.

With regard to the approach to 'cases of soil contamination', there is room to encourage developers to perform in a sustainable way in excess of the statutory requirements. From a legal point of view, there is room in area development to shift functions in such a way that contaminated sites are not built on. For these locations,

Contaminated soil

remediation costs are then avoided, but soil problems are passed on to the future. This issue therefore encourages that 'all cases' within the plan area are inventoried and addressed.

References

- IPLO. Remediation of soil, via <https://iplo.nl/regelgeving/regels-voor-activiteiten/milieubelastende-activiteiten-hoofdstuk-3-bal/activiteiten/saneren-bodem/>.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Reuse of existing works

The efficient and optimal reuse of buildings, roads and civil engineering structures.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	At least 20% of the existing works will be reused.	1
2	At least 40% of the existing works are reused.	2
3	At least 60% of the existing works will be reused.	3

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1, 2.1 and 3.1	There is an overview map and substantiation of the current situation and the situation after the area (re)development, indicating all existing works to be reused (including buildings and infrastructure)
1.2, 2.2 and 3.2	The percentage of the existing works that are reused is determined: (surface area of existing works that are reused/surface area of all existing works in the area at the time of certification) x 100%.
1.3, 2.3 and 3.3	Cases of the transformed and reused works are promoted through (online) media to share the success stories.

Addition to the criteria requirements

Redevelopments

Only that part of the area that is part of the redevelopment is considered in this issue. In this case, this means that the existing situation changes. Within this, the percentage of the existing works that are reused must be determined.

No existing works

If the area does not have any existing buildings, roads or civil engineering works (anymore), no credits can be awarded.

Reuse of existing works

Reuse of existing works includes both reuse and transformation of buildings, for example with the help of a large-scale renovation.

Reuse of existing works

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1-3.1	An overview map with additional substantiation such as photos/plans/drawings.
B	1.2-3.2	The calculation with explanation.
C	1.2-3.2	Assurance in, for example, an urban development plan, building application or contract with a developer.
D	1.3-3.3	Website, press releases and/or other means of communication.

Definitions

Existing works

Buildings, roads or civil engineering structures.

Civil engineering structures

Buildings other than those intended for housing made of masonry, concrete, wood, steel or plastic. For example, bridges, viaducts, tunnels, jetties, quay walls, and sheet piling. A road section or, for example, a railway track is not considered to be a civil engineering structure.

Additional information

By reusing elements in the area, less new construction is needed, saving raw materials, energy and transport. Reuse occurs if existing buildings, roads or civil engineering works in the area do not disappear as a result of the area development. For some elements, this requires renovation or sometimes even transformation to meet current and future standards. Examples of transformation are: factories that are transformed into cultural buildings; warehouses to residential and office buildings to student housing. But also old railway embankments that are reused as cycling or walking paths. An example of reuse are, for example, office buildings that are completely renovated for a new office use.

This issue is related to issue BRO 5 'Circular use of materials'. Where BRO5 focuses on the reuse of materials and material flows, this issue focuses on the reuse of entire objects.

References

No

Cultural heritage

To preserve cultural-historical values and increase access to these cultural-historical values.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The cultural-historical values within the area are mapped out and preserved.	2
2	Access to the cultural-historical values within the area will be increased.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The cultural-historical values are mapped out by means of an exploration.
1.2	A project-wide strategy is being drawn up aimed at protecting and preserving the cultural-historical values, which includes the following aspects: <ol style="list-style-type: none"> A heritage strategy based on the classifications aimed at protecting, preserving and limiting any damage to the cultural-historical values, also at the time of development. Strategy on how developers are informed of the cultural-historical values present and how they should take this into account during construction. Utilization of cultural-historical values for and through the development, such as branding of a neighborhood/building or city marketing around cultural-historical values.
1.3	The strategic plan will result in measures, both at object and structural level, to protect, preserve and limit the damage to the cultural-historical values.
1.4	The above measures are included in an area vision document for the area adopted by the municipality OR recorded in a statement from the developer and future manager showing that the required measures will be implemented.
2.1	Criterion 1 is met.
2.2	Access to the existing cultural-historical values will increase during the area development. This is done on the basis of the advice of a recognised body.

Addition to the criteria requirements

Existing works

No additional requirements.

Cultural-historical exploration

In the cultural-historical exploration, the elements and structures present are valued in the categories 'no value', 'value', 'high value' and 'very high value'. Based on the classification, the strategic plan can be drawn up for the important and/or relevant values.

- The exploration will at least address:
- The persons and institutions involved in the exploration
- The pre-consulted, existing information about existing values, both tangible and intangible
- The demarcation of the explored area with both area and system boundaries

Cultural heritage

- E. The cultural-historical appreciation of elements
- F. The results are expressed in the classifications 'no value', 'value', 'high value' and 'very high value'
- G. Assessment of the effect of interventions on cultural-historical values

The following selection criteria were used for the evaluation of the elements and structures:

- Characteristic/representativeness: characteristic is often the criterion on the basis of which an initial selection takes place. After all, an object, element or structure is important if it is characteristic of historical architecture, historical urban planning or the landscape-forming functions within historical geography.
- Coherence: the extent to which the objects, elements and structures present have a spatial and/or functional relationship with each other (ensemble value).
- Visibility: the extent to which an object, element or structure is perceptible or recognizable.
- Intactness: the extent to which an object, element or structure is still present in its main form and detail.
- Rarity: the extent to which an object, element or structure has always been scarce or has become scarce in a municipal context.

No cultural-historical values

If it has been established that there are no cultural-historical values in the area with the classification 'value' or higher, no credits can be awarded.

Increasing cultural-historical values

Increasing value can be achieved, for example, by one of the following measures, which are committed to increasing visibility and contact with the values:

- I. To make the result available through a local, regional or national public institution that has been set up for this purpose, such as a city or municipal archive, a regional or national cultural-historical center
- II. Capturing it in a monument
- III. Have it included in a historical collection and/or museum
- IV. Have it included in a local cultural-historical yearbook
- V. Recording in a publication
- VI. Publishing on a publicly known and publicly accessible website (see also References)
- VII. Propagating through visualizations, virtual and augmented reality applications, events or story telling.
- VIII. Different design of public space/architecture
- IX. Branding of a neighbourhood (historical story of using the place for its identity), city marketing and tourist-recreational applications

Approved body or qualified person

An institution or person who has demonstrable knowledge of and experience with cultural-historical values, the relevant legislation and the way in which an inventory should be carried out and in which cultural history can be valued. This can be a policy officer of the municipality, cultural historian, a cultural history advisor or a KNA certified company for archaeology.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	A cultural-historical exploration drawn up by a competent/recognized body.
B	1.3, 2.2	Strategic plan.
C	1.3, 2.2	Reporting and safeguarding measures.
D	1.4, 2.2	Established area vision, signed cooperation agreement or contract.
E	2.2	Statement or advice from a competent/recognized body.

Definitions

Competent authority

The local, provincial, regional or national authority that has the relevant cultural-historical values in its portfolio. This does not have to be a government agency; A (semi-)private institution can also be recognised as a controlling body, for example a private museum or knowledge institute, due to its position, its own history or built-up authority.

Cultural history values

Cultural history values includes historical (urban) architecture and above-ground monument conservation, as well as archaeology, as well as cultural landscape and historical geography. The elements of cultural history to be valued can differ from tangible (material) elements, such as landscape, urban and architectural elements, to non-tangible (immaterial) elements such as stories and customs.

Object and structure level

Not only individual objects (such as buildings, monuments, ruins, or objects in public space), but also the connecting structures (such as roads, water and greenery) and 'the story' of the area, are part of the inventory. The structure and the story relate separate objects in time, to each other, and to the environment.

Additional information

The idea behind this issue is that future generations should have the same or better access to cultural-historical values as the current generation ("equality between generations"), while equal access to cultural-historical values should also be realized within the current generation.

References

- Cultural Heritage Agency of the Netherlands, via <http://www.cultureelerfgoed.nl/>.
- Archaeological, landscape and building-historical information, via <http://www.atlasleefomgeving.nl/>.
- Practical information for dealing with archaeology, such as various sources and maps, via <https://archeologiein nederland.nl/>.

Geologic values

Preservation of the geological values in the area.

Available Credits : **3**

Exemplary performance : **X**

Includes minimum requirement : **X**

Mandatory from : **X**

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The geological values within the area are mapped out and preserved.	3

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The above and below ground geological values are mapped out on the basis of source research.
1.2	The research into the geological values includes: <ul style="list-style-type: none"> - Inventory of above- and below-ground geological values within the area prior to development. - Assessment of the effect of the area development on above- and below-ground geological values. This can be based, for example, on an up-to-date map/aerial photograph of the area that shows the above-ground geological values, plus a soil map and geomorphological map of the area. - Measures to be taken to prevent damage to above- and below-ground geological values and, if possible, to make them visible within the area development.
1.3	The geological values are included in a strategic plan that results in measures, both at object and structural level, to protect and preserve the geological values and to limit the damage. The proposed measures from the study, to prevent the damage and to make the geological values visible within the area development, will be implemented.

Addition to the criteria requirements

Existing works

If (part of) the area exists, it must be assessed on the basis of the above requirements.

No geological values present

If it is determined on the basis of the research that there are no geological values in the area, no credits can be awarded.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Research report on geological values.
B	1.3	Strategic plan on how geological values are preserved and protected, including the assurance of how measures are realized.

Geologic values

Definitions

Geologic values

Geological values are those parts of the landscape that tell something about the natural origin of an area. These can be, for example, important landscape forms or variation in geology. The term includes geomorphological, geological, soil and geohydrological phenomena, such as drifting sand areas, cover sand ridges, peat bogs and glacial tills.

Geological values relate to non-living nature and form the geological heritage. The terms geological values or geological heritage are regularly used interchangeably. In Europe, we talk about geoheritage.

Special groups of geological values are called geologically valuable areas. These are rare areas that have hardly been touched by human developments or that are important as scientific references.

Source research geological values

An inventory of the geological values is carried out on the basis of possible existing sources, when these are not present, the research is carried out by a recognized earth scientist, landscape architect or geologist. For the purposes of this issue, 'acknowledged' means that the person carrying out the research has sufficient knowledge and experience to be able to determine the presence of geological values. This can be demonstrated with a CV showing a relevant field of study and work experience with similar studies.

Additional information

No.

References

- Topographical maps (current and historical).
- Soil maps and water board maps.
- Links to geological values per province: nl.wikipedia.org/wiki/aardkundige_waarden

This document is for informational purposes only and cannot be used for certification. The official Dutch version is available.

Ecological values

Encourage ecological values to be provided and an integral part of the project plan.

Available Credits	: 7
Exemplary performance	: ✓
Includes minimum requirement	: ✗
Mandatory from	: ✗

Criteria

A maximum of 7 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	Ecological values become an integral part of the planning from the start by involving an ecologist.	2
2	The biodiversity and ecological value and function of the area, including local and regional focus species, will be preserved.	2
3	Measures are implemented to increase biodiversity and ecological value and function on a local and regional scale by creating a minimum of six habitats.	2
4	The biodiversity and ecological value and function of the area is part of the long-term management.	1
5	The ecological values are implemented integrally at plot level by the building users.	Exemplary Performance

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The client/developer appoints a recognised ecologist for the start of the work and the preparation of the project site so that it becomes an integral part of the planning process. In this way, regenerative design is stimulated throughout the development.
1.2	The ecologist draws up a nature report prior to the work. Early enough to influence the preparatory work, layout and, where necessary, strategic design decisions. See Additions to the criteria requirements for the Nature Report.
1.3	<p>Coordination between ecologist and project team takes place in the Preliminary Design phase, at the start of the design process. This continues throughout the project when important decisions are made that affect the ecological possibilities.</p> <p>There is cooperation early on in the project to make optimal use of the potential, opportunities or risks of ecological values in the project development.</p> <p>The ecologist is actively involved in the project team to discuss the optimal possibilities and how they can be realized.</p> <p>Project team members include, but are not limited to:</p> <ul style="list-style-type: none"> • Client; • Developer, design team, contractor; • Landscape architect, ecologist; • Relevant advisors, as hydrologists. <p>Where relevant, the project team also consults with other stakeholders such as:</p> <ul style="list-style-type: none"> • Local authorities, municipalities, province or water boards. • (Local) biodiversity or nature conservation authority.

Ecological values

#	CRITERIA-REQUIREMENTS
2.1	Criterion 1 is met.
2.2	On the basis of the nature report, measures are taken to: <ul style="list-style-type: none"> a. To preserve the existing biodiversity and ecological significance and function of the area. b. An ecological work protocol is established to minimize damage to biodiversity and ecological value and function during the development phase. c. When damage to biodiversity and ecological value and function is unavoidable, a mitigation and compensation plan is drawn up with the approval of the competent authority. d. When elements of ecological values have been removed or relocated as part of the construction work or the preparation of the site, compliance can only be made on the basis of mitigation measures.
2.3	The work protocol is aimed at sparing elements of ecological value during the planning, preparation and implementation of the project plan. It may prescribe concrete measures to preserve ecological values. The certified ecologist ensures that these are carried out in a proper manner and draws up a report on this after completion.
2.4	Elements of ecological value must be prevented from disappearing as part of the construction work or preparation for construction. The ecologist should always be involved and advise if there are situations that could cause harm. In those cases, it is possible to apply mitigation measures. This means that values are moved, restored or compensated in accordance with the ecological work protocol (Additions to the criteria requirements – Nature Report H.). See Additions to the criteria requirements for mitigation measures.
2.5	Time of reporting If work has already been carried out, such as preparing for construction when the land was owned by another party, the accredited ecologist bases his research for the nature report on the situation before the start of the work. This can be desk research, in which at least photographic material is used of the landscape layout and surroundings of the construction site from before the work. If the development and transformation or redevelopment, the situation prior to the demolition or dismantling work is also part of the report, as are protective measures.
3.1	Criterion 2 is met.
3.2	It is substantiated by the nature report that the potential of the area is used by creating a suitable habitat in the public area for at least six animal species on the basis of the five Rs in order to increase the ecological values and the associated biodiversity. This is done in consultation with a recognized ecologist.
3.3	In the area to be developed, nature-inclusive construction will be stimulated by integrally coordinating measures at area and (private) plot level. This should take into account at least the following elements: <ul style="list-style-type: none"> a. The measures are in accordance with the accredited ecologist or the nature report drawn up; b. The measures are applied from the ideas of the Five Vs: food, reproduction, safety, connection and variety; c. Nature-inclusive construction is applied by encouraging as much as possible that developments such as buildings, infrastructure, works of art, etc. are an integral part of the ecological measures. This can be done by integrating facilities into the works (nesting boxes, etc.), around the facilities (green partitions, etc.) or in the neighbourhood (green connecting routes, etc.).
4.1	Criterion 3 is met.
4.2	A management plan drawn up by the ecologist forms the basis for maintenance and management, see additions to the criteria requirements.
4.3	The management plan must be kept up to date and is evaluated and revised every three years.
5.1	Criterion 3 is met.
5.2	The ecologist, in consultation with identified stakeholders and the project organisation, draws up ecological preconditions for the (private) plots in the area. These are related to the ecological development plan and the nature report.

Ecological values

#	CRITERIA-REQUIREMENTS
5.3	Every development or user at plot level demonstrates with a 'Value Added Plan' (VAP) or ecological report how they integrally align measures for ecological values with the ecological values of the environment. The responsible (building) developer of the plots to be issued or given will comply with this.
5.4	The project organisation ensures by means of evaluation and monitoring of each VAP drawn up whether the measures will be implemented.

Addition to the criteria requirements

Management plan

The management plan serves as a manual for the maintenance and management of the applied ecological facilities and green areas. The plan includes (but is not limited to):

- a. Overview of applied green and ecological facilities and their desired condition.
- b. Active and responsible for the management of ecological facilities and green spaces.
- c. Objectives have been added up to maintain or increase the ecological value of the plan area for the next three years.
- d. A monitoring and evaluation plan, to protect or preserve the added natural values (see 'Monitoring').
- e. No harmful and/or artificial means are used for the management of green areas and ecological facilities.
- f. Implementation of the management plan is in line with local and national policy.

Existing works

No additional requirements.

Nature report

The nature report describes the area from coarse to fine, and it includes at least the following:

- a. An overview of the species (flora and fauna) that are protected under the Nature Conservation Act and that (may) use the plan area during the work. All species (flora and fauna) have a duty of care at all times, which prevents and reduces adverse consequences.
- b. An overview of rare Red List species (threatened to critically endangered) that (could) make use of the plan area.
- c. The current location of the plan area and its surroundings: inside or outside the Natura 2000 areas and parts of the Netherlands Nature Network.
- d. A reference to municipal green plans (or building envelopes) for the plan area, which contain specific regulations for the development of green areas in the plan area.
- e. Potential of measures for habitats that may be significant, for special or rare natural values on a regional scale.
- f. Current qualities and potential of ecological value of the development location and related areas within the sphere of influence. Taking into account (direct and indirect) risks and feasibility for strengthening (local) biodiversity.
- g. A description of the current and future layout of the plan area. All elements of ecological value (flora, fauna and habitats) that are present in the area prior to the work are named. It also states what will happen to these elements in the future situation.
- h. An ecological work protocol aimed at protecting the existing qualities, protecting and dealing with potential risks to the work must be included (see also 'Protecting ecological values'). This mainly concerns the layout of the public area, preconditions are included for the developments on the building plots for the developers/builders.
- i. If mitigating measures are applied, the substantiation for this must be included in the ecological work protocol, as well as the way in which they must be implemented (see also 'Mitigating measures in the event of loss of ecological value').

Ecological values

Mitigating measures in the event of loss of ecological value

The ecological work protocol prescribes how existing values must be protected. But despite taking measures to prevent and protect against negative effects, it may be possible for harm to be applied or unavoidable. In those special cases, it is possible to move ecological values on or from the location. The following levels may be maintained hierarchically for this purpose. The ecologist determines which measures are realistic and feasible for the project.

1. **Move and preserve**
mitigation measure so that the original values can be preserved. An ecologist must confirm that the ecological value, including the long term, remains unaffected after the relocation. At a minimum, changing conditions in soil, light and climatic conditions must be taken into account.
2. **Repair**
The mitigation level of repair is applied if relocation and preservation is not possible and there is a loss of value due to the work. An ecologist must confirm and advise on how to restore an equivalent permanent provision for the lost value at the site.
3. **Compensation**
Ecological compensation is the last resort to counteract the negative impact of construction activities. This remedy is only used after what is possible in the mitigation hierarchy has been done, in order to prevent negative impact on ecological qualities. Compensation can consist of permanent improvements to existing habitats. Or a replacement habitat is provided, which is comparable in terms of biological characteristics and ecological functions to the habitats that have been lost or damaged. Compensation can take place both inside and outside the project location, in accordance with the following order of precedence:
 - I. At the development site
 - II. Adjacent location of the development location

Monitoring

Monitoring takes place to protect or preserve added natural values. Monitoring can be applied in different ways:

- a. An ecological expert engaged for this purpose is responsible for monitoring and carrying out any improvements to the facilities.
- b. Monitoring takes place as part of a citizen science project at the location, coordinated by a responsible body, municipality or organisation. Participants are actively involved in the monitoring, guided and feedback takes place (see definitions).

Scope

The issue and requested criteria with regard to the ecological values present in the area, the potential of the area and the facilities that are made are aimed at the entire plan area. The implementation and addition of new facilities focuses primarily on ecological facilities in the public space and green parts of the area. In addition, the issue specifically makes the link with existing private plots with which the ecological values must be harmonized, in the philosophy of Nature-Inclusive Building. Measures only at the building level will have less impact than if they are coordinated in harmony with the environment. The responsibility for ecological measures on the private plots lies with the clients, developers and builders of these plots, but must adhere to the preconditions set for the plan area, and they will have to demonstrate to a Value Added Plan drawn up by themselves how they adhere to the preconditions and make provisions.

Five Vs

The Five Vs stand for reproduction (voortplanting), safety (veiligheid), food (voedsel), connection (verbinding), and variation and are the basic principles for creating a habitat. Without a balanced balance in the various Vs, it is difficult for species to make use of the measures offered. Because without food nearby, a species does not use the location as a place to stay.

Ecological values

- **Reproduction:** nesting facilities for animal species, enclosure boxes, nesting boxes, insect boxes, breeding heaps and stones so that species can nest here.
- **Safety:** hedges, shrubs and trees that provide shelter, safe zones are created by different height levels, including soil shoring.
- **Food:** the installation of facilities as plants that are used directly as food such as nectar, pollen, seeds and kernels. Or that attracts insects that are interesting as food. Good soil quality for soil life.
- **Connection:** realising green-blue structures to connect locations. Think of flight paths or a connecting route with tree or shrub species to and from the location.
- **Variation:** variation in planting, difference in flowering time, use of height and level differences, deciduous and non-deciduous.

Value Added Plan (VAP)

The Value Added Plan offers additional conditions that area users will commit to. This will draw up measures that will be implemented by the user on their own plot in order to meet the objectives of the area organisation. These measures are based on the integrated area plan, from which the concepts of the Five Rs and nature-inclusive construction are reflected. Measures for nature-inclusive construction are integrated in, around and near buildings (see 'nature-inclusive construction'). The sustainability conditions relate to the layout and facilities on the users' own plots and thus go beyond the scope of the BREEAM-NL Area Technical Manual. The conditions are specifically about the use of the plot and its layout, and not about the buildings on the plots.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Appointment and involvement of a recognized ecologist.
B	1.1 to 4.3	Nature report prepared by a recognized ecologist.
C	2.2	Work protocol, mitigation and/or compensation plan.
D	1.3 to 3.3	Design/management plan supplemented with drawings, maps showing that required measures are included in the design/specifications/further elaboration.
E	3.3	Written commitment by the developer and future manager that the required measures from the nature report will be implemented.
F	4.2	Management plan (+ possibly declaration of approval by ecologist).
G	4.2	Documentation or recording of agreements showing that the management is being carried out or will be carried out in accordance with the management plan.
H	4.3	Documentation in relation to keeping the management plan up to date and monitoring
I	5.2	Preconditions for ecological added value of plots.
J	5.3	Issue conditions, VAP obligation for users or examples thereof.
K	5.4	Design, agreement and additional documentation on how evaluation and monitoring are guaranteed.

Definitions

Certified ecologist

A licensed ecologist is a person who:

- Has received an education at higher professional or university level with a focus on (Dutch) ecology AND/OR
- Is working as an ecologist for an ecological consultancy that is affiliated with the Green Offices network AND/OR

Ecological values

- Demonstrably actively committed to the field of species protection and is affiliated with the existing organisations in the Netherlands (such as Das en Boom, VVZ, RAVON, Vogelbescherming Nederland, Vlinderstichting, Natuurhistorisch genootschap, KNNV, NJN, IVN, EIS Nederland, FLORON, SoortenNL, SOVON, etc.).

Biodiversity

The complex of species, numbers and species composition on location. This concerns all species: both general species and special/rare/protected species.

Habitat

A habitat describes the conditions that an area must meet in order for a certain animal species to survive there. The habitat is a description of the resources that a particular species needs. For this issue, the designation 'the Five Rs' explains in more detail what these resources are.

Citizen science

Science in which citizens are involved in managing, monitoring and controlling the existing green and natural values. User involvement is stimulated and management can take place under the guidance of a (scientific) body.

Regenerative design

Regenerative design focuses on a design process in which further design is based on existing ecological and natural values, in this way ecology is approached from a holistic way. And multiple themes can be connected, such as social, climate-adaptive, circular, urban and other spatial aspects that are integrally linked to each other to arrive at a valuable interpretation that strengthens each theme. It is important to think about the requirements and design requirements at an early stage, which makes it necessary to involve ecologists in the design process at an early stage in order to arrive at a good interpretation.

Additional information

This issue approaches ecology from coarse to fine. In which it starts or falls with an integral design process in which ecology is part of the design process at an early stage. The entire plan area is reflected in an integrated plan in which the connection is sought with other themes. A project adds value if it is approached from an integrated approach in the context of regenerative design. To this end, existing values are protected and preserved. Part of the nature report to be drawn up is that a work protocol ensures that the values present are protected during the construction work.

Specific provisions are made in the plan area to create habitats suitable for animal species. This is based on strengthening the existing structures and adding something for the animal species on the basis of the 5Rs well-thought-out facilities.

Beyond the measures applied at the area level, the parties to be established or established are expected to become an integral part of the ecological plan. On the basis of a Value Added Plan, it is demonstrated how the plots are part of the idea good and strengthen the ecological values. An optimal connection with the environment is found through nature-inclusive construction. In this way, the building, plot and environment can come into relation to each other and add quality to the area.

References

- Ball. Chapter 11 Activities that concern nature. Living Environment Activities Decree.
- Green Offices Network (NGB), via <https://www.netwerkgroenebureaus.nl>.

Effective space use

Stimulating intensive and multifunctional use of space in order to use land as efficiently as possible.

Available Credits	: 3
Exemplary performance	: ✗
Includes minimum requirement	: ✗
Mandatory from	: ✗

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	In the area, the focus is on intensive use of space with an FSI value > 0.7 in combination with multifunctional use of space or on intensive use of space with an FSI value > 1.3.	1
2	The degree of intensive use of space for the area expressed in FSI will be greater than 1.8.	2
3	The degree of intensive use of space for the area expressed in FSI will be greater than 2.3.	3

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1, 2.1, 3.1	The FSI for the area is determined in accordance with the formula under Additions to the criteria requirements and is greater than the respective values of 0.7, 1.3, 1.8 or 2.3.
1.2	Multifunctional use of space is an integral part of the area, measures are applied on building plots (on the roof or plot) and in the area.

Addition to the criteria requirements

The situation after development must be used, whereby it must be sufficiently established that this situation will also be realized.

Existing works

If existing works are present, they are also part of the calculation.

Calculations FSI

The FSI is calculated in accordance with NEN 9300:2013 at the scale level of the building block:

$FSI = GFA / \text{area area}$

- GFA: gross floor area (m²) of buildings within the area. This concerns the 'GFA of a building' in accordance with NEN2580. Building-related outdoor spaces of a building are not part of the BVO.
- Sound surface: Gross Building Block (chapter 5.1 from NEN 9300:2013). This is the sum of the (a) net building block PLUS (b) the outcrop and other tare.
 - Determine the surface area of the gross building block as follows:
 - a. Determine the surface area of the net building block
 - The surface area of the net building block is equal to the sum of the related gross plots (building plot NEN 2580);

Effective space use

- b. Add to this the surface area of the relevant tare areas;
- Access to the net building block;
 - The surface area of linear elements with an average width smaller of 30m and;
 - The surface area of surfaces with an area of less than 0.4 ha.
- See also Appendix C of NEN 9300:2013 for a detailed explanation and examples.

Multifunctional use of space

In the area, measures for multifunctional use of space on the roof or plot are demonstrably applied collectively and/or on all building plots. The measures are not exhaustive, and must demonstrably contribute to the area for assessment by the Assessor.

A. Multifunctional roof use examples are:

- Topping up (topping up existing facilities with a new storey);
- Parking function, roof connection on roof;
- Green facilities such as cooling, biodiversity, recreation, food, etc.;
- Blue facilities for cooling, water buffering, reuse, etc.

B. Multifunctional plot use is aimed at facilities that look beyond one's own needs and are therefore available to third parties, such as:

- Shared parking facilities for users other than your own;
- Recreational facilities for wider use;
- Green and blue facilities (climate-adaptive for broader needs than one's own demand);
- Making private facilities on the plot available for wider use, such as making recreation available (e.g. hall space, canteen, shack, relaxation room), sports (e.g. sports fields, attributes, equipment);
- Parking facility with energy roof;
- Collective offer of parking spaces on a plot or elsewhere in the area.

*Energy is not seen as a stand-alone solution for multifunctional use of space, but can be used in combination with other facilities.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 – 3.1	A calculation of the FSI, with the total number of m2 GFA within the area and area based on floor plans, NEN 2580 and NEN 9300.
B	1.2 – 3.2	Safeguarding multifunctional use of space in the area in sales, rental contracts, plan design, policy rules, etc.

Definitions

FSI (Floor Space Index)

The Floor Space Index, or FSI for short, is the measure that compares the total number of square metres of buildings, including the floors, within an area with the total area of the same area, both built and unbuilt. The following formula is used:

$$FSI = GFA / \text{area area}$$

Multifunctional use of space

Multifunctional use of space is the smart use of used space or buildings for multiple purposes or functions. In this way, space that has already been used can serve multiple purposes. The aim is to make efficient use of space for facilities that take up valuable or valuable space that can be used for social or shared facilities for the area. The measures are aimed at using more space for social or collective facilities such as greenery, recreation, climate adaptation, social or a combination of these by intensifying.

Effective space use

Additional information

Intensive use of space limits the expansion of the built-up area, so that the green space is protected from development. In areas with compact construction, there is generally less energy loss, transport distances are shorter and the share of public transport and the use of bicycles is relatively high and car use is relatively low. Intensive use of space is expressed in this issue in the ratio between the total built area to the area or FSI (Floor Space Index). In addition, measures for multifunctional use of space are needed to use the space as efficiently as possible. This encourages areas or spaces to be filled with functions or functionalities that can be used to achieve multiple goals. Such as using roof surface for parking areas, space is saved at ground level that can be used for more greenery, for example. Or by not only making private design, such as green areas, available to the building's own users, social interaction with the environment can be stimulated.

References

- NEN 9300 – Areas and densities in urban planning – Terms, definitions and determination methods.
- NEN 2580 – Surfaces and densities in buildings – Terms, definitions and determination methods.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Underground infrastructure

To stimulate an optimal process for the construction and management of underground infrastructure in the area.

Available Credits	: 3
Exemplary performance	: ✓
Includes minimum requirement	: ✗
Mandatory from	: ✗

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	During all groundworks in the area, work is and will be carried out in accordance with the CROW 500 to prevent damage to cables and pipelines and NPR 7171-2 to set up the planning process.	1
2	All new underground infrastructure that will be built and added in the future will be constructed in accordance with NEN 7171-1.	1
3	Above and below ground infrastructure takes into account tree structures in accordance with CROW 280 (SIKB soil energy guidelines) in the design, realization and future management.	1
4	Groundworks that takes place on plots for building developments in the area are carried out in accordance with the CROW 500 and NPR 7171-2.	Exemplary Performance

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	In accordance with the CROW 500, the project organisation or client reserves sufficient time and budget for a good process of interventions in the subsurface of the public area. To this end, the required stakeholders are identified in the SO phase and involved in the design, the required parties are the client, landowner, government, excavator and network operators.
1.2	The parties involved commit to the working method in accordance with CROW 500 publication and the NRP 7171-2 code of practice for all soil disturbances and work in the subsurface during the construction and management phase of the area.
2.1	All new underground infrastructure that will be built and added in the future will be constructed in accordance with aspects of NEN 7171-1 'Underground planning of networks - part 1: Criteria', with which the prescribed distances, depths and standards for each component are realised.
2.2	The client, excavators and network operators commit to the design aspects of the NEN 7171-1 for each development in the public area.
3.1	The design aspects and maintenance components from the CROW 280 publication 'Combining underground and above-ground infrastructure with trees' are part of the design and management of the public area.
3.2	The client, excavators, ecologists involved and other stakeholders commit themselves to working in accordance with CROW 280.
4.1	All developments that take place on the allotted and/or private plots with the associated earthworks will be carried out in accordance with the CROW 500 publication 'Preventing damage to cables and pipelines – Guideline for careful excavation from the initiation to the user phase' and the NPR 7171-2 'Regulation of underground networks – Part 2: Process description'.

Underground infrastructure

#	CRITERIA-REQUIREMENTS
4.2	Every client of building development in the area demonstrates that it will work in accordance with the CROW 500 publication and NPR 7171-2.

Addition to the criteria requirements

Existing works

For existing underground infrastructure where no changes are taking place, it is relevant that the location in the event of excavation is clear and accurate. Part of the CROW 500 is that the location of existing structures is localized, this must be well documented.

For existing underground infrastructure that remains untouched, the criteria of this issue focus on the management phase, so that it can be guaranteed that maintenance and attached pipelines will also be carried out in accordance with the aforementioned guidelines in the future.

Design and vision underground infrastructure

For the proper implementation of the underground infrastructure in which processes, design, implementation and management are optimally coordinated, it is important that all parties involved commit to the process. In the first place, the initiative lies with the client who has ambitions for a sustainable process. In order to implement this on the basis of the set guidelines, the client or initiator will also have to take an active role in the process. For each phase, from Initiative Phase, Research Phase, Design Phase, Work Preparation Phase, Implementation Phase to Use Phase, the parties involved are jointly responsible for proper implementation. The development of and responsibility for each phase will differ per project, but will have to be guaranteed for the entire process with the initiator, designer, excavator and network operator. The guidelines endorse which processes apply in which phase.

Underground infrastructure

The criteria relate to the total of underground pipes and cables in the area, i.e. cables, pipes and sewerage for the transport or facilitation of gas, electricity (high, medium and low voltage), drinking water, district heating, thermal energy storage (ATES), geothermal energy, public lighting, telecom, sewerage, geothermal energy and other (future infrastructure).

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 to 4.2	Safeguarding in the implementation decree, PVE, design and management plans.
B	1.2, 2.2, 3.2	Contracts and agreements with parties involved.
C	4.1, 4.2	Assurance in the terms of issue.

Definitions

CROW 280

CROW 280 is a publication that provides guidance on how to combine underground and above-ground infrastructure with trees, ensuring a good alignment between infrastructure construction and tree conservation and health. Important points are integral design principles, guidelines on how trees (roots) affect infrastructure and vice versa how tree roots are disturbed, recommendations for management and maintenance and how the client, municipality, network operators and ecologists can work together successfully.

CROW 500

Underground infrastructure

The CROW 500 publication 'Preventing damage to cables and pipes' provides guidelines and recommendations for the safe handling and protection of underground cables and pipes during earthworks. The purpose of this directive is to minimize damage to this infrastructure, which can lead to dangerous situations, delays, and high costs. For each project phase, it describes what needs to be done and defines roles and responsibilities. The client, excavator and grid operator work closely together to achieve a good process and implementation from the initiative to the use phase. The guideline bridges the gap between legislation (Wibon) and practice and has been developed by the most important organisations in the excavation chain.

Ground stirring

Mechanical work in the subsurface, This includes a wide range of work, such as the construction, relocation and removal of cables and pipes; construction work such as pile driving; the driving of sheet piling; directional drilling; rocket drilling and digging with an excavator. Ploughing, dredging and the mechanical driving of anchors also fall under excavations. Work in structures located on the subsurface, where the subsoil under these structures is not 'stirred', does not fall under excavation.

NEN 7171-1

NEN 7171-1 is a standard that provides guidelines for the underground arrangement of networks, especially for utilities such as sewerage, heat networks, electricity, gas, water and telecommunications. This standard focuses on the criteria that must be used when constructing, managing and maintaining underground infrastructure. Planning, safety, accessibility and sustainability are important points in this. Overlap in the CROW 500 lies in the fact that good documentation is essential for future maintenance.

NPR 7171-2

NPR 7171-2 'Regulation of underground networks – Part 2: Process description' is a Dutch Code of Practice that explains the process in the design and arrangement of the subsurface (both public and private) and the construction of underground networks. These parties involved jointly set up the process and the various project phases and determine the associated responsibilities. The NPR 7171-2 and the CROW 500 support each other for a good organisation and process for careful handling of the soil and subsurface.

Wibon

The Above-ground and Underground Networks and Networks (Above-Ground and Underground Networks (Exchange) Act (Wibon) contains rules for the protection of above-ground and underground networks and networks.

Additional information

An optimal underground infrastructure is important for the proper functioning of an area. It is sustainable if this infrastructure meets the wishes and needs of the users in the area. It is also sustainable if this infrastructure is set up in a smart and flexible way, so that changes and expansions can easily be implemented in the future without major breakdowns. It is also valued as sustainable if all underground infrastructure is mapped so that damage and accidents are prevented in the event of changes to the structure.

References

- CROW 500 publication 'Preventing damage to cables and pipelines – Guideline for careful excavation from the initiation to the user phase'.
- CROW 280 publication 'Combining underground and above-ground infrastructure with trees'.
- NEN 7171-1 'Regulation of underground networks – part 1: Criteria'.
- NEN 7171-2 'Regulation of underground networks – part 2: Process description'.
- Wibon.

Sustainable buildings

Stimulating the presence of sustainable buildings in the area.

Available Credits	: 5
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 5 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The sustainability performance calculation of buildings results in 1 point.	1
2	The sustainability performance calculation of buildings results in 2 points.	2
3	The sustainability performance calculation of buildings results in 3 points.	3
4	The sustainability performance calculation of buildings results in 4 points.	4
5	The sustainability performance calculation of buildings results in 5 points.	5

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1, 2.1, 3.1, 4.1 and 5.1	The DGBC calculation tool is used to calculate the sustainability performance of buildings in the area.
1.2, 2.2, 3.2, 4.2 and 5.2	Existing sustainability labels can be used to demonstrate the sustainability performance of buildings, if the certificate is not older than 10 years, see 'Additions to the criteria requirements'.

Addition to the criteria requirements

Existing works

The score of the sustainability labels of both existing and new buildings is entered into the tool.

Determining BVO

If it is unclear what the total GFA of the future situation is, this can be determined by maximizing the building rules (building height, building areas and building percentage) from the current environmental plan.

DGBC Calculation Tool RO 10

The calculation of the sustainability performance of buildings in the area must be carried out using the most recent DGBC calculation tool RO 10 at the time of registration. However, you can always opt for a new version. The calculation tool is available [via richtlijn.breeam.nl](http://via.richtlijn.breeam.nl).

Sustainability performance of buildings

In addition to the BREEAM-NL quality marks at building level, other instruments (LEED or GPR-Building) can also be included with a certain allocation key. Buildings that do not have a recognised sustainability label, but are or have been demonstrably built sustainably fall under 'Other'.

Sustainability performance of buildings

Other sustainability performance of buildings

"Other" bundles other sustainability performance that is not assessed by a certification system, but where a higher sustainability performance is demonstrably achieved than is required by regulations. Think of building in accordance with recognised covenants such as 'Future-proof Construction Covenant', 'Climate Adaptive Construction Covenant' or similar. It is up to the expert to demonstrate that the buildings have a demonstrably higher sustainability performance. See the RO 10 calculation tool on how to fill in these buildings.

Issuance of building certificate

If, given the phase, it is not possible to provide a certificate, it can be met with established documents that provide sufficient certainty that the requirement will be met.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 – 5.1	Completed RO 10 calculation tool with explanation.
B	1.2 – 5.2	Certificates of existing buildings, or a pre-assessment or design certificate of buildings yet to be realized.
C	1.2 – 5.2	Program of requirements, contracts or policy documents with regard to the buildings that have not yet been realized.

Definitions

No.

Additional information

The BREEAM-NL Area quality mark is an integral quality mark in design. When we talk about an area, we are talking about both the buildings and the space between them. Within the BREEAM-NL Area Technical Manual, many criteria and requirements emphasise the space between the buildings. In this criterion, the sustainability qualities of the buildings themselves are specifically valued.

References

No.

Flood risk

Minimizing the risk of flooding in the area after development.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	There is a 'medium' or 'high' chance of flooding and measures have been applied to limit the consequences of flooding.	1
2	There is a 'low' chance of flooding.	1
3	There is a 'low' probability of flooding, which takes into account possible changes due to climate change for the next 50 years.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The risk of flooding after the area development must be determined by a specialist or relevant water manager.
1.2	The area is flood-resistant.
2.1	Criterion 1 is met.
2.2	It has been determined that there is a 'low' chance of flooding within the area.
3.1	Criterion 1 is met.
3.2	An inventory has been carried out into the possible impact of climate change on the probability of flooding in the area for the next 50 years.
3.3	If the risk of flooding becomes greater than 'low' due to climate change, an action plan is drawn up with measures to keep the risk of flooding 'low' or the area is set up as a flood control area.

Addition to the criteria requirements

Low risk

The government makes information available about the current situation through atlasleefomgeving.nl, which can be used to determine the probability of flooding in a simple way. If this can be used to establish that the area has a low risk of flooding and it is plausible that this also applies to the situation after development, no qualified person needs to be involved. A low probability is atlasleefomgeving.nl represented as 'small probability – extent of flooding' that is labelled as protected.

Flood risk

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Documentation from the relevant agency/expert or based on nederland.risicokaart.nl or equivalent showing the flood risk for the area.
B	1.1	Qualifications advisor or data water manager.
C	1.2, 3.2	Plan drawings or draft plan in which required measures are included.
D	3.2	Inventory report.

Definitions

Flood-resilient

An area is designed in such a way that no damage occurs in the event of a flood (as a result of the collapse of a barrier). This can be done through various measures. For example, by raising the height of the buildings, or constructing them in such a way that they are resistant to water. The location of cables at a minimum of 60 cm above the (design) high water level or the location of main access roads at a maximum of 20 cm below the (design) high water level can also be considered.

Specialist

A specialist with qualifications and at least 2 years of experience in calculating surface run-off and designing sustainable urban wastewater systems and flooding mitigation measures. When complex flooding calculations and mitigation measures are required, this must be a specialized civil engineering or hydrological engineer at least HBO or WO level.

Relevant water manager

Refers to the body responsible for determining flooding risks, such as the water board, province or Rijkswaterstaat and, to a limited extent, the municipality.

Flood risk assessment

A flood risk is the product of the probability that a flood will occur and the consequences that such a flood can have. An assessment requires a study to assess the risk (explicit probability and consequence) of a flood on the developments, as well as the consequences that any changes or developments of the location will have on the risk of flooding of the location and elsewhere.

Additional information

To prevent the need for energy and materials to restore or rebuild an area after a flood as a result of the collapse of a flood defence, it is valued if the area is located in a place where there is no or a low risk of flooding. If the probability of a flood is medium or high, it is valued if the area is designed to be flood-resilient. As a result, there is no or minimal damage after flooding and hardly any materials and energy are needed to make the area function again.

References

- Flood risk maps, via www.atlasleefomgeving.nl/kaarten.

Extreme rainfall

Preventing damage to the built environment and vital and vulnerable functions as a result of extreme precipitation.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 4 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	Inventory of water resilience and vital and vulnerable functions are at least moderately water-robust.	1
2	Real estate and infrastructure are at least moderately water-resilient and vital and vulnerable functions are at least on average water-resilient.	2
3	Real estate and infrastructure are at least on average water-resilient and vital and vulnerable functions are at least very water-resilient.	3
4	At a minimum, real estate and infrastructure are very water-resilient and vital and vulnerable functions are extremely water-resilient.	4

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An inventory of the robustness of the area with regard to damage from extreme precipitation has been carried out by a qualified expert, including: <ol style="list-style-type: none"> A subdivision of the area according to the degree of water resilience as described under 'additions to the criteria requirements'. An overview of the vital and vulnerable functions in the area with a risk profile of the possible consequential damage and chain effects in the event of failure. Overview of areas with a high risk of drainage of pollutants such as gasoline, oil or other chemical agents. Measures to improve the degree of water resilience in the public area and on the private plots.
1.2	Measures have been or will be implemented within 5 years so that a shower of 90 mm in an hour (moderately water-resilient) does not cause damage to the vital and vulnerable functions within the area.
1.3	Maintenance and effectiveness of the measures is guaranteed for the long term in a management and maintenance plan.
2.1	Criterion 1 is met.
2.2	Measures have been or will be implemented within 5 years so that a shower of 90 mm in an hour (moderately water-resilient) does not cause damage to real estate and infrastructure in the area.
2.3	Measures have been or will be implemented within 5 years so that a shower of 120 mm in an hour (on average water-resilient) does not cause damage to the vital and vulnerable functions within the area.
3.1	Criterion 1 is met.
3.2	Measures are implemented within 5 years so that a shower of 120 mm in an hour (on average water-resilient) does not cause damage to real estate and infrastructure in the area.
3.3	Measures have been or will be implemented within 5 years so that a shower of 150 mm in one hour (very water-resilient) does not cause damage to the vital and vulnerable functions within the area.

Extreme rainfall

#	CRITERIA-REQUIREMENTS
4.1	Criterion 1 is met.
4.2	Measures have been or will be implemented within 5 years so that a shower of 150 mm in an hour (very water-resilient) does not cause damage to real estate and infrastructure in the area.
4.3	Measures have been or will be implemented within 5 years so that in the event of any possible form of extreme precipitation, system or social disruption is prevented and chain effects are reduced by damage to vital and vulnerable functions.

Addition to the criteria requirements

Existing works

No additional requirements.

Water resilience of an area to extreme precipitation

In 2017, the Rioned Foundation (umbrella organisation and knowledge centre for sewerage and urban water management) uses the following levels of water resilience (referred to by Rioned as 'climate-proof') (Table 13). As an example: If a shower of 90 mm does not cause any damage in an hour, it is called 'Moderately water-resilient.'

Table 13 Water robustness and intensity of rain shower

DEGREE OF ROBUSTNESS IN THE FACE OF EXTREME PRECIPITATION	INTENSITY OF RAIN SHOWER
Not water-resilient	60 mm in an hour
Moderately water-resilient	90 mm in an hour
Average water resilient	120 mm in an hour
Very water-resilient	150 mm in an hour

Qualified expert

A specialist with qualifications and at least 2 years of relevant experience in the field of run-off rainwater and design of sustainable urban wastewater systems and flooding mitigation measures. Expert judgement is self-evident, the use of model systems is relevant when necessary and motivated. If complex flooding calculations and mitigation measures are required, this must be a specialized civil engineering or hydrological engineer (at least HBO/WO level).

The SWOT analysis translates the data from the area inventory into strengths, weaknesses, opportunities and threats.

Measures to improve water resilience

There are several possible solutions. In general, local infiltration, buffering and reuse of rainwater is the first preference because it can directly solve local problems. This can prevent desiccation and strain on sewers and drainage. At the same time, infiltration is not the solution in the event of extreme precipitation. Infiltration is a slow process, the extreme precipitation just the opposite. Infiltration therefore requires a combination with other measures, such as local storage volumes.

Examples of local improvement measures are:

- Storage ponds;
- Bioswales;
- Wetlands;
- Permeable pavement: in areas where local geological and hydrological conditions allow it, for example, paved surfaces on a permeable underlayment on a gravel bed to store the water and allow it to penetrate

Extreme rainfall

the soil. For less permeable soils, the gravel layer may be deeper and may transfer the water to an infiltration facility, although this may not be possible in some areas;

- Drainage water collected from roofs as part of a rainwater harvesting system;
- Drainage water from roofs carried to infiltration facilities or other storage facilities such as tanks, ponds, wadis, etc.;
- Green roofs.

Good drainage and distribution of water outside the area can prevent nuisance, damage and pressure during heavy rainfall. Examples of measures are:

- Separate sewer system for rainwater;
- Good veining of the area with surface water, which means that distance to surface water is short, and brings in extra buffer capacity of water.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Inventory, for example a climate stress test that meets the criteria.
B	1.1	Substantiation of knowledge and experience of the person or organisation that has carried it out.
C	1.2, 2.2 – 4.2	Inspection report with photos of realized measures or established documentation, contract documents in which the realization of measures to improve water resilience is guaranteed.
D	1.2, 2.2 – 4.2	Recording and approval of water resilience measures by the relevant water manager.
E	1.3	Maintenance plan.
F	4.3	Substantiation of principles and measures.

Definitions

Vital and vulnerable functions

Vital and vulnerable functions require extra attention. Failure of vital functions such as energy networks can have far-reaching consequences, communication failure, limited accessibility, failure of industrial installations (chain effects). In addition, the consequences can be more serious for functions where vulnerable groups are concentrated than when it concerns functions with self-reliant citizens (compare: nursing home versus office).

Vital functions are, for example, the main road network, transformer and distribution stations for the energy networks, telecom facilities (data centres), drinking water pumping stations, sewage disposal and sewage treatment infrastructure, control centres.

Vulnerable functions include hospitals and care institutions, schools and penitentiary institutions.

Additional information

Measures

The approach to rainwater is first of all to retain, then store it and, if that is not possible, drain it. And that at different levels of scale.

Temporary shelter (retention) can be done, for example, on roofs, in basins or ponds, etc. This prevents a lot of rainwater from having to be drained (through the sewer) in a short time and the sewer from overflowing elsewhere. If the sewer overflows, untreated sewage ends up in the surface water, which is very bad for the water quality.

Extreme rainfall

After retention, the desired step is to allow the rainwater that falls in an area to infiltrate into the soil as much as possible (storage). Sometimes sufficient (rapid) infiltration is impossible. In polder areas, for example, there is little room in the soil for rainwater to infiltrate. It is also possible, for example, that the area is located in a groundwater protection area, where the Provincial Environmental Ordinance does not allow infiltration.

That is why it is sometimes necessary to opt for drainage. For example, by disconnecting rainwater from the sewer system and draining it directly to surface water. There must be enough surface water to collect the rainwater that falls on pavements. A point of attention when disconnecting is that the paved surfaces on which the rainwater falls should not add substances to the water, causing the groundwater or surface water quality to deteriorate or pollute the soil. Such surfaces include: zinc gutters, copper roofs, car washes, etc. This is part of issue KLI 4 'Water quality'.

Inventory of water resilience, risk of flooding

For flooding, previous stress tests or climate scans have often been carried out in connection with the Municipal Sewerage Plan. Hydrodynamic calculation tools such as 3Di, InfoWorks SD, Storm Water Management Model (SWMM), Cityflood or GIS ground level analyses such as WOLK have already been used to investigate where and to what extent frequent flooding will occur. Conclusions do require a test of this digital data against the practical knowledge of relevant managers in the area. The Delta Plan on Spatial Adaptation provides standardisation recommendations for stress tests.

References

- Thematic study Rainproof Area Development, 11 January 2018 (draft).
- Guide to the implementation of a Climate Resilience Stress Test, 2014.
- Delta Plan on Spatial Adaptation 2018.
- www.knmi.nl.
- Sites v2 rating system.
- LEED BD&C.
- WELL Community Standard.

This document is for informational purposes only and cannot be used for certification. The official Dutch version is available at www.breem.nl.

Mobility

Stimulating an optimal system for the transport (people) and transport needs (products) of an area and its surroundings with the lowest possible environmental impact.

Available Credits	: 12
Exemplary performance	: ✗
Includes minimum requirement	: ✓
Mandatory from	: ✗

Criteria

A maximum of 12 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	An inventory has been made of the aspects of the mobility plan. (Minimum requirement)	0
2	The area is easily accessible by public transport.	2
3	There are sufficient local facilities in (the vicinity of) the area.	2
4	The area is easily accessible via cycling and walking routes and facilities have been built to stimulate these forms of transport.	2
5	Actions or collaborations have been initiated to enhance the sustainability and efficiency of fossil-fuel-powered transport modes.	2
6	An integrated mobility plan has been drawn up and effective measures have been taken to reduce the environmental impact of the transport of people and goods to and from the area.	4

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An inventory has been made of the aspects of the mobility plan as described under 'Additions to the criteria requirements'. The inventory describes the situation of the area within the system boundary prior to the development.
2.1	There is a bus/train/tram/metro stop within a distance of 1,000 meters from each main entrance and this stop has at least the following timetable: <ol style="list-style-type: none"> A frequency of at least every 30 minutes during peak hours. A frequency of at least every 60 minutes outside peak hours.
2.2	The distance is measured as the walking distance via a safe walking route.
3.1	At least three of the following facilities are available within a distance of 500 meters from each main entrance: <ol style="list-style-type: none"> Canteen or lunchroom; Supermarket; Sports facility; Childcare/crèche; Other facilities, such as one of the following: bookshop, kiosk, pharmacy, drugstore, hairdresser, bicycle repair shop, dry cleaning, weekly market, flower shop.
3.2	The distance is measured as the walking distance via a safe walking route.
4.1	An inventory has been made of the existing cycling and walking routes to and from the area. New destinations have been added and/or new connections have been made.
4.2	The routes are attractively designed for users and meet the following aspects: <ol style="list-style-type: none"> The lighting level of the routes complies with the police quality mark safe area;

Mobility

#	CRITERIA-REQUIREMENTS
	<ul style="list-style-type: none"> b. Clear routes through the use of materials and clear signage; c. Bicycle routes have distance to and speed inhibitors in confrontations with pedestrian flows; d. The routes have safe layouts at intersections with car traffic; e. Main bicycle routes separate from car traffic at 50 km/h roads; f. Walking areas are designed for use by the blind and visually impaired.
4.3	A calculation has been made for the number of parking spaces required for bicycles in the area, based on key figures, see references (CROW).
4.4	There are sufficient parking spaces for bicycles in front of the area.
4.5	At least 50% of the parking spaces meet at least 2 of the following aspects: <ul style="list-style-type: none"> a. Parking spaces are sufficiently lit and are clearly visible from the public road; b. Storage spaces are covered; c. Parking spaces have facilities to attach bicycles to by means of a lock.
5.1	Together with the municipality, the possibilities for electric transport or other sustainable means of transport, such as hydrogen, have been examined. Public transport was also considered.
5.2	There are plenty of charging options for electric transport: <ul style="list-style-type: none"> a. Residential locations: At least 1% of the public parking spaces are equipped with a charging option. b. Visiting locations (longer than 2 hours): At least 3% of the public parking spaces are equipped with charging facilities. c. Work locations: At least 3% of the public parking spaces are equipped with a charging facility.
5.3	Measures have been taken or collaborations have been entered into for sharing mobility. At least 2 of the following aspects have been realized by the project organisation: <ul style="list-style-type: none"> a. Facilities for car sharing have been added; b. Facilities have been realized for collective transport such as a neighborhood bus, shuttle bus or carpool facilities. These facilities have a fixed timetable and/or are tailored to demand. In addition, agreements have been made with users of the area regarding the use of these facilities; c. Facilities have been realized to limit the transport movements of goods (including parcel delivery companies), such as a central collection point or parcel machine. Agreements have been made with, for example, postal companies about the use of these facilities; d. There is an organised collective after and/or before the transport of goods. Measures other than those described above may be submitted to the Assessor for assessment.
6.1	An integrated mobility plan has been drawn up for the area with a time horizon of at least 10 years. The mobility plan has been drawn up by a recognised traffic engineer.
6.2	Effective measures are being taken to reduce the environmental impact of traffic flows to and from the area. It must be substantiated how and to what extent the measures reduce the emission of harmful substances (CO ₂ , particulate matter, NO _x) from traffic in the area.
6.3	The mobility plan and the measures have the approval of the relevant municipality.
6.4	The surrounding traffic structures are not overburdened. It should be taken into account that: <ul style="list-style-type: none"> a. No insurmountable bottlenecks will arise for the surrounding traffic structures. b. If adjustments are necessary, these adjustments are part of the land development. c. Studies into traffic intensities and possible adjustments to the traffic structure have been approved by the municipality concerned.

Addition to the criteria requirements

Existing works

No additional requirements.

System boundary

The system boundary for this issue is at least 500 meters outside the area boundary

Mobility

Integral mobility plan

The mobility plan has been drawn up by a recognised traffic engineer and contains at least:

1. An inventory with:
 - a. A plan map, to scale, with current traffic intensities for the area and the immediately surrounding traffic structures with regard to road traffic, with any bottlenecks indicated.
 - b. A plan map, to scale, with the current cycle routes for the area and the immediately surrounding areas with any missing connections with any bottlenecks indicated. The plan map indicates existing parking facilities with the number of places, type (covered, public, guarded) and degree of social control/safety for each location.
 - c. A plan map, to scale, showing the existing public transport routes for the area (indicating the nearest main public transport hub) with any bottlenecks indicated. For each type of public transport, the intensity, frequency of public transport movements and the facilities present at the stops are described (presence of canopy, wind protection and the degree of social control/safety).
 - d. A plan map or description of the current transport patterns and movements with regard to the transport of products/goods to and from the area, with any bottlenecks indicated.
 - e. A plan map, to scale, with the locations of the various facilities as described in criteria 2 to 4.
 - f. The possibilities for sharing mobility and the expected improvement in the environmental performance compared to traditional forms of transport have been described.
2. For all aspects mentioned in the inventory, the future situation in the event of the realisation of the area vision, such as from SYN2.
3. A plan of action, vision or measures implemented to reduce the number of transport movements on the road and to encourage the use of public transport and bicycles, in which the measures to be taken are described.
4. A plan of action, vision or realized measures for sharing mobility and the intended improvement of environmental performance.
5. A plan of action, vision of how the bottlenecks indicated in the inventory will be solved and future bottlenecks will be avoided, describing the measures to be taken.
6. Agreements with the transport companies and authorities involved regarding the realisation of the mobility plan.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Inventory of mobility plan.
B	2.1, 2.2	Plan map adopted by the municipality or plan map from established area vision (SYN2) to scale with all public transport stops with distances.
C	2.1	Overview of the public transport services.
D	2.2	Design plan, floor plan and/or photo material.
E	3.1, 3.2	Plan map adopted by the municipality or plan map from established area vision (SYN2) to scale with all facilities and the distances from the main entrance of all buildings to these facilities.
F	4.1	A map to scale or aerial photograph, indicating: <ol style="list-style-type: none"> a. The situation prior to the development with existing cycling and walking routes to and from the area where missing connections are indicated. b. The proposed development with any new connections and new destinations indicated on it.
G	4.2	Development plan or image quality plan.
H	4.3, 4.4	Report with calculation, design drawings and locations on a map.
I	4.5	(Technical) description of which aspects are met, documentation, details, calculation.

Mobility

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
J	5.1, 5.2	Substantiation, assurance or proof of realisation of charging options and calculation of the percentage.
K	5.3	Description of which aspects are met with the letter of intent signed by the municipality and project organisation with regard to the facilities to be realized with associated agreements and/or forms of cooperation for the use.
L	5.3	Plan map adopted by the municipality or plan map from established area vision (SYN2) to scale with all facilities for sharing mobility.
M	6.1, 6.2	An integrated mobility plan.
N	6.2	Calculations and/or substantiation by traffic expert of the intended reduction of emissions as a result of the facilities to be realised.
Oh	6.3	Proof that the mobility plan fits within the municipal policy WHETHER the municipality in question agrees with the mobility plan and the proposed measures.
P	6.4	A traffic report and intensity calculations drawn up by a recognised traffic engineer that shows the effect of the development (a traffic model can be used for this).
Q	6.4	A written agreement from the municipality and, if applicable, the relevant documents from the land development.

Definitions

Safe walking route

A safe walking route runs via footpaths separated from other traffic, safe crossings or specially intended pedestrian crossings with zebra crossing or canalisation stripes.

Additional information

The transport of goods and people to and from an area costs energy. In order to reduce the negative environmental impact of the various mobilities, it is desirable to:

- Reduce the number of transport movements to and from the area.
- Encourage the use of fossil-free mobilities.
- Ensuring that mobilities (especially those running on fossil fuels) are used efficiently by collaborating and/or sharing them.

By ensuring that the number of traffic movements to and from an area is limited, the environmental impact on mobility will be limited. This is possible, for example, because residents of an area can also work within the area. Or because products that are used within the area are also produced there. Car use can be reduced by, for example, concentrating facilities around public transport hubs. The use of bicycles can be stimulated by preventing detours and by connecting cycling and walking routes to logical places and connecting them well to routes in surrounding areas. In cases where cycling or public transport are not sufficient, it is desirable to use non-fossil fuel mobility. The environmental performance of an area will also improve by using the available means of transport efficiently by working together and/or sharing them. Several studies show that car-sharing affects car use, parking pressure and pollution, see references.

The car mobility that an area has must not unnecessarily burden the surrounding areas, obstructions and congestion cause additional environmental pollution and noise pollution.

A transport plan is a good way to determine the right strategy on how to limit the various flows and how no undesirable traffic bottlenecks will arise for the area and the surrounding areas.

References

- Guidelines for bicycle parking, CROW publication 291 (2010).

Mobility

- Nijland, H., J. van Meerkerk & A. Hoen (2015) Effects of car-sharing on mobility and CO2 emissions. Netherlands Environmental Assessment Agency.
- National Knowledge Platform for Charging Infrastructure, KEY FIGURES. Public Charging Infrastructure for Electric Transport, May 2017.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Well-being & Prosperity



SUMMARY

The Welfare and Prosperity category stimulates an area in which the social and societal values of the users are clearly visible. By means of spatial interventions, visual, physical, aesthetic, connecting and organisational measures are applied that the users of the area can use. In this way, the spatial quality is combined with the amenity value of the area. In this way, the human, physical and economic value of an area come together.

CONTEXT

The liveability of an area determines how an environment is experienced by the users, how an area is experienced and therefore directly determines whether an area is also a successful area. An area with which the users have no connection, do not experience a sense of security, have no value judgment about the layout of the area, and how much they like to use it or not, is not a successful area. Many choices that are included in the design of an area affect how an area can be used. For example, the choice of green spaces combined with sports and play facilities, and the possibility of being able to sit on benches will be experienced in a completely different way than a green space where this is not possible. These design choices affect the amenity value of an area. By understanding the future user well, researching the needs and taking this into account in the design of the design, successfully used areas can be realized.

Value of the issues

WELL 1	Quality of life and perception of safety	4 credits
Value:	- Identifying design measures that affect the quality of life and perception of safety contributes to the functioning of the area.	
WELL 2	Social cohesion	2 credits
Value:	- Actively applying measures that promote the social connection of the users with the area contributes to the functioning of the area.	
WELL 3	Environmental experience	2 credits
Value:	- The environmental experience requires measures that address the feeling in addition to physicality, stimulating a good environmental experience contributes to the functioning of the area.	
WELL 4	Regional vitality	5 credits
Value:	- In order to stimulate prosperity, it is important to improve activity, employment, the level of facilities and infrastructural bottlenecks.	
WELL 5	Corporate Social Responsibility	3 credits
Value:	- Stimulating sustainable behaviour of the users contributes to the functioning of the area.	

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Promoting the quality of life and safety perception to create added value for the users.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 4 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. It must be substantiated that:

#	CRITERIA	CREDITS
1	A good quality of life and perception of safety will be achieved in the area.	2
2	An excellent quality of life and safety perception is achieved in the area.	4

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA
1.1	There is a 'good' quality of life and perception of safety if at least 4 of the 7 themes described under 'Additions to the criteria requirements' have been subject to a concrete plan that goes beyond municipal policy.
1.2	For each theme, it is indicated which specific measures and initiatives have been or will be implemented, in what way and when, and the result that has been or will be achieved.
2.1	There is an 'excellent' quality of life and perception of safety if a concrete plan has been drawn up for at least 6 of the 7 themes described under 'Additions to the criteria requirements' that goes beyond municipal policy, including at least categories 6 and 7.
2.2	For each theme, it is indicated which specific measures and initiatives have been or will be implemented, in what way and when, and the result that has been or will be achieved.

Addition to the criteria requirements

Existing works

No additional requirements.

Themes for quality of life and perception of safety

A concrete plan has been or will be drawn up for the themes below, as part of the area development. This means that measures and initiatives have been or will be included with the aim of optimising the quality of life and perception of safety. As an example, general measures are listed under each theme. These are not exhaustive, other additional measures may also be relevant.

A number of measures are related to residential buildings, this is indicated after the relevant measures. If there are no residential buildings in the area, these aspects do not have to be included.

1. Amenities nearby:
 - a. Good and regular maintenance of the roads, paths and squares;
 - b. Good and regular maintenance of flower beds, public gardens;
 - c. Adequate lighting in the area;

Quality of life and perception of safety

- d. Good and sufficient play areas for children (Home related);
- e. Good and sufficient facilities for the users.
2. Limiting nuisance:
 - a. Counteracting physical deterioration;
 - b. Combating litter on the street;
 - c. Rapid identification and replacement of damaged street furniture;
 - d. Rapid identification and cleaning of defaced walls or buildings;
 - e. Combating nuisance from dog poop.
3. Limiting social nuisance:
 - a. Identifying and combating nuisance by local residents (Housing related);
 - b. Measures so that people are not harassed on the street;
 - c. Combating nuisance from groups of people loitering;
 - d. Combating nuisance from alcohol consumption;
 - e. Combating nuisance from drug use or drug trafficking.
4. Limiting traffic nuisance:
 - a. Combating nuisance caused by speeding;
 - b. Preventing parking problems, for example wrongly parked vehicles or crowds;
 - c. Preventing aggressive behavior in traffic.
5. Improving the safety experience:
 - a. Preventing and reducing unsafe places in the neighborhood;
 - b. Counteracting the feeling of insecurity on the street at night.
6. Proactivity of the municipality:
 - a. Involving the users within the area in the approach to quality of life and safety in the neighborhood;
 - b. Extra attention from the municipality to improving quality of life and safety in the area;
 - c. Informing the users within the area about the approach to quality of life and safety in the area.
7. Police proactivity:
 - a. Contact from the police with the users in the area (community officer);
 - b. The police are responding to the problems in the area.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 to 2.2	Reporting and/or planning with the intended themes.
B	1.1 to 2.2	Relevant measures or initiatives have been incorporated into the design, coordinated with and approved by responsible authorities, laid down in (cooperation) agreements with the municipality or police or part of the management plan of the park management, V.V.E., etc.
C	1.2, 2.2	Description with the expected results, the method of implementation of any measures, planning, plan of action, etc.

Definitions

Safety

Safety concerns both an objective (low crime) and subjective (the perception of safety) phenomenon. Both components are included in this issue.

In terms of experiential value: do people feel safe in the area at different times of the day and in the different seasons?

Quality of life and perception of safety

In terms of crime: how high is the actual crime (offences such as vandalism, theft, burglary and violence) in this area?

Viability

Subjective experience and appreciation of a living environment, the extent to which the physical environment is attuned to human needs, desires and requirements. This issue mainly assesses the influence of the physical environment on the experiential value. Aspects such as the level of care are reflected in other issues, such as WEL 4.

Additional information

Quality of life and safety are important aspects of a sustainable area. When quality of life and safety are perceived as inadequate, an area will not function properly. The Safety Monitor (VM) is a useful instrument for valuing quality of life and perception of safety as objectively as possible. The Safety Monitor is an annual large-scale population survey on safety, quality of life, nuisance, government functioning and victimisation. The VM is carried out on behalf of the Ministry of Security and Justice, municipalities and the police. In the study, at least 65,000 surveys are conducted every other year in odd-numbered years + 70,000 additional surveys commissioned by municipalities.

For this issue, which values the quality of life and perception of safety, a BREEAM-NL selection of seven themes has been made from all indicators of the Safety Monitor.

References

Safety monitor. CBS via, <https://www.cbs.nl/nl-nl/maatschappij/veiligheid-en-recht/veiligheidsmonitor>.

This document is for informational purposes only and cannot be used for certification. The official BREEAM version prevails.

Promoting social cohesion in the area.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 2 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. It must be substantiated that:

#	CRITERIA	CREDITS
1	Measures are applied to achieve a good social cohesion.	1
2	Measures are applied to achieve a very good social cohesion.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An analysis was carried out of the social cohesion in the area before the current situation and the situation after the development.
1.2	The analysis has been drawn up by an independent expert body OR written approval by the municipality.
1.3	At least 4 measures from the List of Measures for Social Cohesion (see 'Additions to the criteria requirements') have been or will be implemented in the area to promote social cohesion.
2.1	Criterion 1 is met.
2.2	At least 8 measures from the Social Cohesion Measures (see 'Additions to the criteria requirements') have been or will be implemented in the area.

Addition to the criteria requirements

Existing works

If measures from the List of Measures for Social Cohesion have already been implemented in the area and the analysis shows that the development of the area does not have a negative impact on this, these measures may be included in the total number of criteria requirements 1.3 and 2.2.

It must be demonstrated that the existing measures are in line with the scale of the area to be assessed.

Analysis

The points from the 'Social Cohesion Measures List' can be used as the basis for the analysis.

List of measures for social cohesion

To promote social cohesion, bottom-up organised measures will have to be encouraged. This process must be facilitated from above. One must choose at least 4 or 8 measures from the list below:

1. Facilitating the creation of an entity in which the users are formally organized.
2. Organizing meetings of all users, e.g. events, promotions, etc.
3. Facilitating/promoting common management and/or ownership (land, energy, water).
4. To make available/enable digital meeting places.
5. Designing physical meeting places in the form of publicly accessible squares, short stays, gardens, parks and car-free streets.

Social cohesion

6. Formalize the involvement of the municipality with the neighborhood.
7. Make the municipality visibly present in the area (counter, police, etc.).
8. Supporting initiatives of users, aimed at improving their own environment.
9. Strengthening self-activity and own initiative by one for the users.
10. Realisation of facilities for the users aimed at sports facilities, neighbourhood horticulture, small-scale business premises.
11. Realization of facilities for the users focused on health.

In the case of measures yet to be introduced, at least the approach is known, the implementation is guaranteed and the budget for this is included. For measures 3, 8 and 9, the approach has been coordinated with the municipality and for measures 6 and 7 there is a letter of intent from the municipality regarding the approach.

Sphere of influence measures

The impact of measures to improve social cohesion must have an effect on the scale of the area to be assessed. It is possible that several small initiatives within one of the measures on the list have a wide reach, and can offer a solution for different groups of users. The effect of the individual measures will have to emerge in the analysis.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 2.1	Analysis of social cohesion issues.
B	1.2	Substantiation of expertise from the authority or approval of the municipality.
C	1.3, 2.2	Inspection report containing the measures taken.
D	1.3, 2.2	In the case of measures still to be implemented: <ul style="list-style-type: none"> - Plan of action and (if relevant) overview of locations; - Organisational plan; - Budgeting (time and money), included in financial plans; - Measures 3, 8 and 9: Documentation coordination with the municipality; - Measures 6 and 7: Signed declaration of intent by the municipality.
E	1.3, 2.2	Measures implemented: proof of implementation based on, for example, documentation, minutes, photographic evidence or inspection report.

Definitions

Social cohesion

The concept of social cohesion (cohesion) refers to the strength of social ties within a society. Social cohesion can exist on both a small and a larger scale. On a small scale, one can think of the family, the relatives and the circle of friends. On a larger scale, social cohesion exists within neighbourhoods, associations, religious denominations, schools and companies.

Additional information

No.

References

No.

Improving the quality of the environmental experience.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 2 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. It must be substantiated that:

#	CRITERIA	CREDITS
1	The environmental experience is analysed and leads to a rating of > 3.	1
2	The environmental experience is analysed and leads to a rating of > 4.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An independent organisation or person has carried out an analysis of environmental perception (see under 'additions to the criteria requirements').
1.2	As a result of the SWOT analysis, the environmental experience of the planned final situation is rated higher on average than neutral (> 3).
2.1	Criterion 1 is met.
2.2	As a result of the SWOT analysis, the environmental experience of the planned final situation is rated higher on average than pleasant (> 4).

Addition to the criteria requirements

Analysis of the environmental experience

The environmental experience analysis is carried out on the basis of a SWOT analysis. In the analysis of the environmental experience, the planned final situation (after development) is considered. The situation prior to the area development is used as a starting point and included in the analysis.

In the SWOT analysis, the environmental experience is valued on the basis of the following four categories: Landscape aspects (A), Character of the plan area (B), Human scale (C) and Accessibility and accessibility (D). When assessing the four categories, the quality of experience of the sub-components (if applicable) from the list at the bottom of this paragraph must be taken into account.

A representative group of stakeholders, who use or will use the area, assess the analysis. These stakeholders then rate the four categories as a result of the SWOT analysis based on a 5-point Likert scale: very unpleasant (1); unpleasant (2); neutral (3); pleasant (4); Very pleasant (5) and are accompanied by a brief motivation of the classification. The end result is the average of these four scores.

- A. Landscape aspects:
- Horizon experience and sightlines;
 - Presence of water, ditches, banks, rivers, streams;

Environmental experience

- Diversity of greenery;
 - Variety within the landscape;
 - Relief in the landscape.
- B. Character of the plan area:
- Identity of the area;
 - General atmosphere in the area (crowds, unrest, stimuli);
 - Presence of stench, noise, wind.
- C. Human scale:
- Scale and layout of the space, the landscape, the street plan;
 - Eyes focused on the public area, front doors on the street, lively plinth;
 - Size and scale of the buildings;
 - Opportunities for recreation and relaxation;
 - Diversity of program and facilities.
- D. Accessibility and accessibility:
- Accessibility for the elderly and disabled;
 - Accessibility and accessibility for children;
 - Presence of specific pedestrian areas.

Independent organisation or person

A person with sufficient knowledge and experience in the field of one of the themes, for example an environmental psychologist or policy officer of the municipality.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 2.1	Analysis of environmental experience with substantiation of knowledge and experience of the drafter.
B	1.2, 2.2	Result of environmental policy.

Definitions

Environmental experience

The users' perceived experience of the environment on a scale from '(very) pleasant' to '(very) unpleasant'. The experience is determined by the environment in which one finds oneself and is influenced by visual aspects of that environment.

Additional information

Users have an opinion about the perception of the quality of their environment. A pleasant environment contributes to the well-being of its users. However, environmental perception is not a hard science. In order to obtain a useful valuation of the (future) environmental experience, the physical properties of the environment are analysed and valued by stakeholders on the basis of a SWOT analysis.

References

- Wikipedia (SWOT); strength-weakness analysis.
- Breeam.nl/hulp.

Environmental experience

- Human dimension, through <https://thecityateyelevel.com>.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Stimulating regional vitality in the area, the municipality and the region.

Available Credits	: 5
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 5 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The development leads to a net increase in employment in the region.	1
2	Regional companies use each other's products, processes and/or services.	1
3	Infrastructural bottlenecks are being improved.	1
4	An increase or expansion of the level of facilities is realised.	1
5	Users within the area, possibly as a collective, are active in the public/social domain.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An analysis has been carried out by a person or organisation with sufficient knowledge and/or experience, into the needs and opportunities within the area and its immediate surroundings and the way in which the area (re)development can improve regional vitality. It should provide insight into the extent to which the development complements and improves the existing economic activity in the area and the surrounding area. In any case, the analysis includes: <ol style="list-style-type: none"> Employment and unemployment rates; Overview of location and types of companies; Accessibility and significant infrastructural bottlenecks (communication, mobility and energy); Overview of facilities; Expected impact of the area (re)development on the above points; Future trends for the area and the surrounding area.
1.2	The development has a net positive effect on employment in the region, whereby the region is defined as an area with at least 25,000 inhabitants or a radius of 10 km around the plan area.
2.1	The users within the area use products, processes and/or services of regional companies, located within a radius of 10 km from the area. At least 3 concrete connections must be functioning.
3.1	The infrastructural bottlenecks in the plan area that arise from the analysis will be addressed, improving mobility, communication and energy facilities in the area and its immediate surroundings.
4.1	The development of the area will lead to a greater reach and/or an expansion of the level of facilities within the municipality and the immediate vicinity.
5.1	At least 3 activities carried out demonstrate that the users of the area and its immediate surroundings support the public/social domain.

Addition to the criteria requirements

Existing works

No additional requirements. When assessing the impact of the development on employment, the most relevant use and use of the past five years should be taken into account.

Regional vitality

Infrastructural bottlenecks

The bottleneck can be a large or small bottleneck and does not necessarily have to be in the area itself. However, the development of the area will have a positive effect on the bottleneck or solve it. The bottleneck lies within the mobility, communication and/or energy infrastructure.

Public/Social domain

Users, individually or collectively (V.V.E.), within the area boundary stimulate the municipality by offering opportunities to individuals or cultural and social institutions by:

- Providing sponsorship, scholarships and/or subsidies to persons, foundations and/or organisations within the municipality;
- Providing guarantee(s);
- Setting up revolving fund(s);
- Creating apprenticeships: internships, graduation projects, reintegration places;
- The collective sustainable generation of green energy;
- Supporting social objectives and associations within the municipality.

Facilities

Facilities include care facilities, cultural facilities and general facilities. The list below is as an example, but not exhaustive:

- Community buildings/community center/local meeting place;
- Educational facilities and library services;
- Green space*;
- Recreational facilities (free and for a fee) and other sports facilities (e.g. tennis courts, football pitches, swimming pools, etc.);
- Health and social care services such as pharmacy, medical centers, and general practices;
- Shop and/or farmer's market with food and fresh groceries;
- Allotment garden or places where fresh fruit and vegetables are grown;
- Children's playground and facilities (nursery/crèche);
- Communication services such as public internet access, mailbox and postal facilities;
- Bank and/or ATM;
- Places of religious worship (including parish halls), etc.

* Green spaces (public park, village green or similar).

Expert person or organisation

A person or organisation with sufficient knowledge and experience in the field of environmental analyses and at least a completed HBO education.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Reporting of analysis and substantiation of knowledge and experience of the person or organisation that has carried it out.
B	1.2	Calculated effects of employment.
C	2.1	Documentation of three associations that are functioning or will function, including the parties involved and the location in relation to the area.
D	3.1	Documentation of assurance or proof of realisation of tackling infrastructural bottlenecks.
E	4.1	Documentation of assurance or proof of realization regarding the level of facilities.

Regional vitality

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
E	5.1	Documentation of at least 3 examples showing that relevant users support the public/social area.

Definitions

Net positive effect

More employment in the region than before development.

Revolving fund

A fund with an amount of capital committed for a special purpose. A special feature of a revolving fund is that the money lent comes back, so that it becomes available again for new loans.

Additional information

Relevant destination and use

This is being discussed in order to ensure that a fair comparison is made between the pre- and post-development situation in terms of employment. If a large office building has been demolished a year before the moment of certification for the purpose of residential construction, for example, the relevant destination and use of the past five years is still that of the office building and the ready-to-build plot may not be used in the comparison.

When regional employment, regional activity, infrastructural bottlenecks, the level of facilities and the public/social domain are stimulated or resolved, a contribution is made to the well-being and well-being of the users and the environment. In addition, it contributes to the prosperity of the area as well as the immediate surroundings (region) and thus to the future-proofing of the development.

References

No

This document is for informational purposes only and cannot be used for certification. For more information, visit www.dutchgreenbuildingcouncil.nl

Encouraging users to stay in the area in a sustainable and responsible manner.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

For the awarding of credits, only the criterion that applies (most) to the area applies. A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	At least 50% of the companies present in the area actively steer towards corporate social responsibility, and report this back to the area organisation.	1
2	At least 50% of the companies present in the area actively and integrally steer towards corporate social responsibility and residents have united for sustainable activities.	3

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	At least 50% of the companies actively steer towards corporate social responsibility, covering environmental, social and economic aspects in the community, business operations and chain. Coasters can be: <ul style="list-style-type: none"> - CSR performance ladder; - Sustainable Development Goals; - Corporate Sustainable Reporting Directive.
1.2	The companies report annually to the area organisation.
2.1	At least 50% of the companies steer towards corporate social responsibility in addition to being active, by ensuring the following: <ul style="list-style-type: none"> - The companies have provided insight into which environmental, social and economic aspects they have the most impact on; - The companies have formulated objectives that are embedded in the policy; - The companies have established KPIs that can be managed; - The companies have drawn up an evaluation plan, which shows how the extent to which the objectives are being achieved is monitored.
2.2	The companies report annually to the area organisation.
2.3	At least 50% of the residents are united in a collective where they can find each other and with which they organize sustainable activities.

Addition to the criteria requirements

This issue is about the situation after the area development. Companies or residents who are present and comply at that time can be assumed to continue to comply until possible recertification. In addition, the following situations must be dealt with as follows:

- There will be no residential buildings: The resident requirements may be disregarded.

Corporate social responsibility and housing

- Housing will be built as part of the area development: If the residents are not yet known, the credits can be awarded if there is a plan of action established by the area organisation, including budgeting (time and money), to actively help residents unite for sustainable activities.
- There will never be companies: The requirements for companies may be disregarded.
- Companies will be established as part of the area development: If the organisations to be established are not yet known, the credits can be awarded if it is demonstrated that the minimum required percentage will be met. In that case, the area organisation does apply such a location condition for future companies.
- When a company operates internationally, it is demonstrated that the Guiding Principles on Business and Human Rights, OECD Guidelines and the ILO Conventions are safeguarded. The CSR Risk Check can, among other things, provide insight into the risks in the chain, and where the company can influence on a social entrepreneurship level

The percentage may be calculated on the basis of the number of companies or the FTE operating within the area. The choice is free, but must be used consistently in the calculation.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 to 2.2	Policy report in which corporate social responsibility is safeguarded.
B	2.3	Statement from the residents' collective indicating the following: <ul style="list-style-type: none"> - Social and sustainable activities that residents undertake within the area and/or beyond; - Reporting of the (expected) sustainable impact; - Method of communication, such as newsletter, area app, website, etc.

Definitions

Residents' collective

The homeowners and/or tenants who have united in a collective to find each other and set up social and sustainable activities in the area. Examples of such collectives are: residents' circles, neighborhood associations and/or local energy companies. This can be done offline but also online via, for example, an area app in which residents, entrepreneurs and/or social organisations can find each other.

Examples of sustainable activities:

- Thinking about separating and collecting waste;
- Purchasing and realizing solar panels;
- Use shared cars.

Examples of social activities:

- Establishment of resident management for social real estate;
- Organizing excursions, meetings, (professional) networks and programs for the purpose of knowledge exchange, meeting and development;
- Developing or having your own area-specific website/app that serves as a guide, with news, agenda, overview of organisations, examples, etc.

Additional information

An area can be developed sustainably, but this does not mean that the users, i.e. homeowners/tenants or companies, strive for sustainability or corporate social responsibility in their own household and/or business operations. That is why it is important to steer not only on physical interventions in the area, but also on the behavior of the users.

References

- SDG Netherlands, via <https://www.sdg nederland.nl/>.
- Ministry of the Interior and Kingdom Relations / Entrepreneurial Social Initiative Programme (March 2013), 'Residents' Management of Social Real Estate', via <https://bouwstenen.nl>

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Area climate



SUMMARY

This category encourages the reduction of health risks for the users of the area. There can be several factors present in the area that affect the health of residents, employees, and other users in an area. By identifying the risks and taking measures, risks are prevented. This creates good conditions for users, plants and animals present and the amenity value. Various risks can be eliminated through a balanced spatial design. For example, designing with attention to greenery, shade, location and orientation helps to combat heat stress, light pollution, noise pollution and light penetration in buildings. The quality of soil and water surfaces can pose risks to public health in the form of diseases, disrupt the balance of ecosystems and thus damage biodiversity.

CONTEXT

The Area Climate category of BREEAM-NL focuses on essential aspects of climate resilience and environmental health in the built environment. Each of the issues highlights specific themes such as outdoor thermal climate, wind climate, air and water quality, soil quality, noise pollution, light entry, light pollution, and radiation risk. Together, they form a framework for creating living environments that are sustainable and safe for users. Addressing challenges such as heat stress and the Urban Heat Island effect, as well as limiting air pollution and noise pollution, contributes to a higher quality of life and better health for residents and visitors. These topics are essential in the guideline because they directly affect the sustainability and functionality of an area. For example, measures against wind nuisance and optimal light penetration improve the usability and attractiveness of public spaces. In addition, strict soil and water quality standards ensure future-proof areas that contribute to improving biodiversity. Bringing all these aspects together in one guideline emphasizes an integrated approach to area development, in which both environmental and social aspects are included in order to realize sustainable and future-proof locations.

Value of the issues

KLI 1	Thermal outdoor climate	3 credits
Value:	- The application of green, reflective colors and materials, shade and water supplies prevents heat stress	
KLI 2	Wind climate	4 credits
Value:	- A design and built environment without wind nuisance or danger ensures that the outdoor space can be used safely and comfortably as intended.	
KLI 3	Air quality	4 credits
Value:	- By building emission-free, CO ₂ emissions from construction equipment are prevented in the construction phase. - By taking measures on mobility and green areas, local air quality is improved. - Good air quality improves the health of the users in the area.	
KLI 4	Water quality	4 credits
Value:	- By actively managing the quality of the surface water, flora and fauna are improved and water can be used for recreation.	
KLI 5	Soil quality	3 credits
Value:	- Good soil quality improves flora and fauna and public health.	
KLI 6	Noise pollution	4 credits
Value:	- Noise pollution can cause health problems, by combating nuisance the risk to public health is minimized.	
KLI 7	Light entry	4 credits
Value:	- A good location of buildings achieves optimal daylight penetration so that building users can experience the health benefits.	
KLI 8	Light nuisance	2 credits
Value:	- Preventing light pollution from light installations contributes to the quality of life for users, flora and fauna.	
KLI 9	Radiation risk	2 credits
Value:	- Sources of electromagnetic radiation can cause physical complaints, and a good design of the area prevents health effects.	

Thermal climate

Stimulating a good outdoor thermal climate for users and preventing heat stress.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	Warming of the built environment is limited by reducing the amount of heat that is absorbed and retained.	2
2	Warming of the built environment is limited through the presence of green areas and water elements.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	At least 75% of all relevant roof area meets one of the following criteria: <ol style="list-style-type: none"> A green roof with a substrate layer of at least 5 cm or equivalent A minimum SRI value according to Table 14 under 'Additions to the criteria requirements.'
1.2	At least 50% of the pavement (pedestrian areas, streets, roads and parking lots) in the area meet one or more of the following criteria: <ol style="list-style-type: none"> Lie in the shade of trees (the growth of trees already planted in the next 10 years may be taken into account). Lie in the shadow of designed shading systems or structures that meet the minimum SRI value for roofs according to Table 14. A minimum SRI value according to Table 14. Equipped with semi-pavement with or without vegetation and with good water permeability (relevant for parking spaces).
2.1	10% of the open spaces (including playgrounds, sports fields and squares) in the area are covered with horizontal or vertical green areas. The growth of green areas already realized in the next 10 years may be taken into account.
2.2	Within a walking distance of up to 500 meters for all users in the area, a water supply is located for cooling properties: <ol style="list-style-type: none"> Canal, canal, canal, river, lake or sea Pond, fountain or other water work. A swimming pool or other swimming option

Addition to the criteria requirements

SRI Roof area values

Thermal climate

Table 14 Minimum SRI value, by roof type*

	INITIAL SRI VALUE	SRI VALUE IN USE*
Flat or slightly sloping roofs (<30 degrees)	82	64
Sloping roofs (>30 degrees)	39	32
Pavement	33	28

*This is the SRI value of a roof surface that has been in use for three years or more, as described in Reducing urban heat islands: Compendium of strategies

Existing works

Work and/or measures that have already been carried out will be included in the assessment.

Works to be realized

If measures have not yet been implemented, it must be made plausible that they will be implemented, see section 4.2.

Water supply

The water supply has a cooling effect on the environment of a few degrees. The aim is to cool the environment, and therefore not only focus on the use of the facility as bathing water.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Plan drawings for the design and/or photos of the existing part showing the relevant roof area, pedestrian areas, streets and roads, parking spaces and the measures.
B	2.1, 2.2	Plan drawings for the design and/or photos of the existing part showing the relevant roof area, pedestrian areas, streets and roads, parking spaces and the measures.

Definitions

Solar Reflectance Index (SRI)

The SRI value indicates how much the surface and the immediate vicinity of that surface can heat up due to solar radiation. The higher the SRI, the lower the contribution to warming. The SRI value is calculated on the basis of two parts, namely the reflectivity (albedo effect) and the thermal emissivity (thermal radiation) in the infrared range.

Relevant roof area

Roof area is relevant if it is not used as an outdoor space by building users (roof terrace or balcony), for building installations or solar energy systems.

Urban Heat Island effect (UHI)

A good outdoor thermal climate can be stimulated by preventing the formation of the Urban Heat Island effect (UHI). This heat island effect is the phenomenon of the rise in temperature in the urban area compared to the surrounding area. This is caused, among other things, by the large number of paved and dark surfaces that retain heat longer. This warming has a number of consequences:

1. Increase in energy consumption by cooling systems.

Thermal climate

2. Increase in air pollution (increase in smog, CO₂, ozone and nitrogen dioxide).
3. The emergence of (new) disease epidemics and the hay fever season lasts longer.
4. Heat stress; The risk of dying from cardiovascular disease increases.

Knowledge in the field of UHI is increasing rapidly, but the exact impact of measures is not yet known. Therefore, it is appreciated if various measures have been taken to promote a good outdoor thermal climate and prevent the UHI effect

Additional information

No

References

- Working on a heat-resistant city, A guide with solutions to problems with high temperatures in the city – Grontmij/Province of Limburg, Maastricht, 26 September 2011.
- The weather in the city: how design determines the urban climate – Sanda Lenzholzer, 2013.
- U.S. Environmental Protection Agency. 2008. Reducing urban heat islands: Compendium of strategies.
- www.coolroofs.org.
- LEED BDC v4, USGBC.
- Sites v2 Rating System, Sustainable Sites Initiative.
- The WELL Community Standard Pilot, IWBI.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Wind climate

Optimizing the local wind climate.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 4 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. It must be substantiated that:

#	CRITERIA	CREDITS
1	A wind climate will be achieved in the plan area and in the surrounding buildings with at least the classification 'moderate'.	2
2	A wind climate will be achieved in the plan area and in the surrounding buildings with at least the classification 'good'.	4

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The wind climate is moderate when: <ul style="list-style-type: none"> a. Buildings in the area are higher than 15 metres AND b. A wind nuisance study carried out by a wind nuisance expert showing at least the classification 'moderate' in accordance with NEN8100. In any case, activities I and II, Walking through and Strolling (from NEN 8100) have been included in this study.
1.2	It has been demonstrated that any negative effects of the wind climate due to the development on the immediately adjacent environment (see system boundary) do not lead to a classification of one step lower than the classification applicable there before the area development.
2.1	The wind climate is good when: <ul style="list-style-type: none"> a. Buildings in the area are higher than 15 metres, AND b. A wind nuisance study carried out by a wind nuisance expert showing at least the classification 'good' in accordance with NEN8100. In any case, activities I and II, Walking through and Strolling (from NEN 8100) have been included in this study.
2.2	It has been demonstrated that any negative effects of the wind climate due to the development on the immediately adjacent environment (see system boundary) do not lead to a classification of one step lower than the classification applicable there before the area development.

Addition to the criteria requirements

Existing works

No additional requirements. Existing works that are preserved must be included in the assessment.

Height of buildings

If the buildings in the area are lower than or equal to 15 meters, the maximum number of credits can be awarded. For buildings with a height of between 15 and 30 metres, an estimate by a wind nuisance expert can be considered equivalent to a wind nuisance survey.

Wind climate

Wind nuisance study

If no wind investigation is necessary according to the NEN 8100 Decision Model, the maximum number of credits can be awarded.

Wind nuisance expert

A person who, in terms of training and experience, has sufficient insight into the relationship between the wind climate and the built environment and is able to apply the Dutch standard NEN 8100:2006 'Wind nuisance and wind danger in the built environment' and to carry out quantitative wind simulations.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 - 2.2	Urban plan with drawings showing all building heights (also of existing buildings and structures)
B	1.1 - 2.2	A wind nuisance study of the plan area and adjacent surroundings.

Definitions

NEN 8100 Decision Model (source: Handbook Building Physics)

The assessment of the wind climate is carried out on the basis of NEN 8100 - Wind nuisance and wind hazard in the built environment. This standard indicates, among other things, in which situations wind research is considered necessary and provides criteria (guidelines) for the assessment of the wind climate. The decision model says that no wind survey is required for buildings up to 15 metres. The requirements for wind nuisance and wind danger serve to achieve a responsible wind climate in the built environment.

Activities

NEN 8100 provides a further definition of quality classes and activities. The emphasis in this issue is on the activities Walking through and Strolling. These activities will have to be assessed generally within the area. The activity Prolonged sitting has not been taken into account, because this activity can often improve the local wind climate in a fairly simple way.

System boundary

This issue has a systemic limit. This is located 100m outside the area boundary. This concerns the possible effects of wind nuisance from outside on the area and vice versa.

Additional information

Wind nuisance occurs around tall buildings. This involves increased wind speeds, which can make staying in the immediate vicinity of these buildings unpleasant or even dangerous. The degree of wind partly determines whether there is wind nuisance or not. Wind nuisance is more than a "headwind" for cyclists or pedestrians. Social and economic effects of wind nuisance are especially important for activity areas such as terraces and walking routes. Depending on the temperature, the clothing worn by people and their activities, there is a relationship with the different wind speeds which expresses the comfort. Recreational places are avoided if the average wind climate leaves much to be desired. This means that the attractiveness of areas partly depends on the average wind climate.

To date, there is no legislation in the Netherlands to prevent wind nuisance or wind danger.

References

- NEN8100:2006 - Wind nuisance and wind hazard in the built environment

Air Quality

Optimizing local air quality.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 4 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	For all work in the development phase, emission-free construction is the standard for mobile equipment and construction transport.	2
2	Measures have been taken at the scale level of the area to improve the local air quality in the area during the use phase.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	The client of the area development has committed itself to the basic level for mobile equipment and construction transport of the Clean and Emission-Free Construction (SEB) covenant
1.2	The mobile equipment and construction transport used for the area development meets the emission requirements basic level of the Residential and Non-Residential Construction Transition Path of the SEB covenant.
2.1	Measures are applied to improve air quality, the measures affect the reduction of NO2, PM10 and/or PM2.5 emissions in the use phase of the area.
2.2	There are two mobility measures and one landscaping measure has been applied.
2.3	The measures applied are relevant to the destination and context of the area.

Addition to the criteria requirements

Improve air quality measures in the use phase

Local air quality is the air quality within the boundaries of the area to be certified. This is determined by the large-scale background concentrations and local sources, such as the traffic contribution.

The background concentrations are not always within the sphere of influence of the area development. Local sources can be adapted or avoided.

Mobility

- Car-free or car-free zones: At least 50% of the public space in the area is car-free or car-free.
- Cycling and walking infrastructure: At least 70% of the main roads in the area have well-designed and safe cycle paths and pedestrian routes.
- Electric vehicles and charging infrastructure: At least 10% of the parking spaces in the area are equipped with charging points for electric cars, freight traffic and/or delivery vans, with the capacity to easily expand this number.
- Public transport connections: The area has, or is within a radius of 500 meters from, at least one public transport stop (bus, tram, train) that offers a high frequency of services.

Air quality

- Zero emission zone: At least 50% of the area is a zero-emission zone. In the zero-emission zone, motorised traffic is limited to zero-emission vehicles, such as electric or hydrogen vehicles. Distribution hubs, last-mile delivery, etc. can be taken into account.
- Organisational: Owners, tenants or users in the area will be required to use zero-emission logistics/transport or develop a sustainability plan to minimize emissions. Monitoring and reporting to the project organisation takes place.

Green spaces and biodiversity

- Trees and green areas: At least 20% of the total area of the area is covered by trees or green areas that help reduce air pollution (such as absorbing particulate matter and nitrogen dioxide). Priority is given to trees with a high absorption capacity of air pollutants such as particulate matter (e.g. plane tree, linden, ash).
- Green roofs and facades: At least 30% of the roofs of the new construction or redevelopment are covered with vegetation (green roofs) that contribute to air purification and the reduction of heat stress.
- Biodiversity plan: The area has a biodiversity plan that includes specific measures to demonstrably reduce air pollution.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Proof of signature of the SEB covenant at basic level. Proof of used mobile equipment and construction transport that correspond to the emission values in the transition path.
B	2.1 to 2.3	Project plans, PVE, Inspection report with realized measures or established documentation, contract documents in which realization measures are guaranteed, etc.

Definitions

No.

Additional information

The air quality in an area affects the perception of the outdoor space and the health of the users of the area. The concentration of pollutants in the air is determined by emission sources outside the area and sources in the area. Although several substances determine the air quality, the air quality of the area is assessed on the basis of the concentration of particulate matter in the air and the concentration of nitrogen oxide.

References

- Air Covenant Clean and Emission-Free Construction, via <https://www.opwegnaarseb.nl/over-seb>
- Central instrument for monitoring air quality, via <https://www.cimlk.nl/kaart>

Water quality

Improving the quality of the surface water in the area.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 4 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	A water test has established that there is no negative impact on the water quality of the surface water in any way as a result of the project.	1
2	The opportunities for improvement have been mapped out and sufficient measures are being implemented to actually make use of this potential (partially or fully).	2
3	Management measures have been adopted to ensure the improvement of the water quality of the surface water in the long term.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	A water test has been carried out.
1.2	Objectives are being drawn up (in consultation with the water board), aimed at the absence of negative effects. This has been demonstrated in one of the following ways: <ul style="list-style-type: none"> a. No water flows from the paved surface that can end up directly or indirectly (e.g. through infiltration) in the surface water. b. The water that enters the surface water directly or indirectly from the paved surface has an equal or better quality than the receiving surface water: <ul style="list-style-type: none"> - The current quality of the surface water is known - The route and quality of precipitation and any other water from the paved surface to the surface water is described. - It has been substantiated why the water quality is adequate. c. By means of a baseline measurement and monitoring of the quality of the receiving surface.
2.1	Criterion 1 is met.
2.2	In consultation with the water board, an inventory is being drawn up of the possibilities for improving the water quality in the zone of influence of the project area.
2.3	Sufficient measures must be or be taken to actually improve water quality.
2.4	The water quality specialist determines whether sufficient measures have been taken or will be taken.
3.1	Criteria 1 and 2 are met
3.2	Management measures have been laid down in consultation with the water quality specialist with the management organisation to ensure that they are actually implemented and thus guarantee the quality gains achieved in the long term.

Water quality

Addition to the criteria requirements

Existing works

Criteria apply to existing buildings and the new development.

No surface water

If there is no or almost no surface water present or is realized within the area, no credits can be awarded.

Inventory of water quality improvement measures

This is highly location-dependent and must be coordinated with the water board/water board of the area in question. Potential can be determined in part by functions (industry, agriculture), soil quality, flow and degree of urbanisation in the surrounding area. Even if no water from the paved surface ends up in the surface water, measures may still be possible to improve the quality of the surface water, for example by redesigning the riparian zone.

Water quality monitoring

A baseline measurement is carried out on the receiving water, after which the monitoring can be carried out on the basis of the 'Regulation on monitoring the Water Framework Directive'.

Water quality specialist

A water quality specialist is a person who:

- Has received an education at college or university level with a focus on (Dutch) aquatic ecology or water quality AND/OR
- As a water quality specialist, you work for a consultancy firm, water board or other organisation that is substantively involved in water quality in the Netherlands AND
- Have at least 5 years of relevant work experience in aquatic ecology or water quality projects.

Water test

Of the aspects that may affect water quality, at least the following aspects should be studied:

- Sewer overflow;
- Water buffer (first drain the dirty water, then buffer);
- Road storage and purification systems (examples are helophyte filters, environmentally friendly banks, dephosphating, Aquaflow, Wassende Weg and the harvesting of aquatic plants for use as biomass);
- Do not allow leachable materials (e.g. copper, zinc, PAHs).

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	Water test
B	1.1, 1.2	The ambitions set, agreements in consultation with the water board.
C	2.2	A document in which the potential regarding water quality is recorded, a list of promising measures and a document/design in which it is recorded which measures will be taken.
D	2.3	Proof of assurance, carrying out measures or proof of measures already being taken.
E	2.4	Substantiation of knowledge and experience of water quality specialist.
F	2.4	Statement by water quality specialist on measures taken
G	3.2	Management plan and assurance of execution.

Water quality

Definitions

Water test

The water assessment is an instrument that allows water management interests to be taken into account explicitly and in a balanced manner when drawing up spatial plans and decisions. It is not so much a factual test, but the entire process of early involvement and coordination that brings the initiator of a spatial development and the water manager into dialogue with each other.

Additional information

The possibilities for improving the quality of surface water vary greatly from area to area. Laws and regulations differ per area (depending on the function of the area), different complexity and differences in water quality that are started. The criteria therefore focus on the extent to which the area uses its potential for improvement.

The purpose of the issue is to improve water quality. When the water quality is good, flora and fauna in the area are given every opportunity to develop optimally. Residents and users can enjoy clean water and use it for recreational purposes. This increases the amenity value of the area.

Water quality targets have been defined for all surface waters in the Netherlands. The challenge is to achieve a higher quality than legally determined by implementing measures in the area. In order to achieve the highest possible quality of surface water, the involvement of and consultation with the water quality manager (or a recognised expert) is important. Examples of measures are:

- Prevent rainwater that falls on leachable materials (e.g. copper and zinc) from ending up in the surface water.
- By means of oil separators, pollutants such as petrol, oil or other chemical agents are prevented from entering the surface water.
- Prevent manure/(domestic) wastewater/contaminated water/pesticides from ending up in the surface water.
- The more natural design of the water.
- Extra purification of surface water (e.g. with reed beds).

In consultation with the water quality manager, the possibility and desirability of implementing such measures can be discussed.

References

- <https://iplo.nl/thema/water/>.
- <http://www.unievanwaterschappen.nl>.

Soil quality

Stimulating the highest possible soil quality.

Available Credits	: 3
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 3 credits can be awarded. It must be substantiated that:

#	CRITERIA	CREDITS
1	The soil quality is in accordance with the use that takes place on it.	2
2	Healthy soil is the starting point for all planning, implementation and management phases of developments in the area.	1

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	A preliminary soil survey of the site is carried out for the area by a recognised expert to determine the quality of the soil.
1.2	The soil function classes of development locations correspond to the lower limit of quality classes in accordance with Article 25d of the Soil Quality Decree. See additions to the criteria requirements.
2.1	All developments in the area have taken healthy soil as a starting point from the planning to implementation and management phases and are acting accordingly.
2.2	In order to take healthy soil as a starting point, the seven principles included in the additions to the criteria requirements are taken into account

Addition to the criteria requirements

Soil quality class

In the case of the environmentally harmful activity of digging, when building houses, laying cables, sewerage and designing public space or landscape, rules apply to the quality of the soil. In accordance with Chapter 3 of the Ball, the rules are designated. The Soil Quality Regulation 2022 and Article 25d of the Soil Quality Decree show the different soil quality classes and soil function classes. For each job, the lower limit is shown as the required quality in Table 15. The quality requirement for Housing therefore has at least the quality class for Living. For more information, see www.iplo.nl

Table 15 Soil quality classes per soil function class

QUALITY REQUIREMENT	LOWER LIMIT OF QUALITY CLASS	UPPER LIMIT OF QUALITY CLASS	FORMER NAME (FOR ENVIRONMENT AND PLANNING ACT)
Agriculture/nature	-	Agriculture/nature	Background value
Live	Agriculture/nature	Live	Class living
Industry	Live	Industry	Class industry

Existing works

Soil quality

Existing works within the area development are part of the area and must meet the soil quality class specified in the issue criteria.

Principles of healthy soil.

In order to achieve healthy soil in the area, various principles are used that contribute to healthy soil. The principles are the result of research and practical experience by Developer Heijmans and Wageningen University & Research and aim to minimise the impact of earthworks. The principles have been included to create awareness of the importance of healthy soil. The seven principles are:

- Soil investigation. Knowledge of the properties of the soil, groundwater, etc.
- Limit disruptions. Minimize excavation work.
- Limit soil load. Use machine movements and use efficiently.
- Healthy soil structure. Sufficient nutrients.
- External threats. Minimize the effect of water, drought, pesticides, etc.
- Biodiversity and soil ecosystems. Align ecology with soil and environment.
- Organisation and expertise. Involve soil with developers, residents, contractors, users.

For more information, visit the help page of richtlijn.breeam.nl.

Expert

A soil expert, with an education in Soil or Subsurface at at least HBO or WO level, and has at least 2 years of work experience in conducting soil investigations.

Works to be realized

If (part of) the area development has not yet been realised, it must be made plausible that the relevant soil quality class will be achieved upon realisation and that the set criteria will be met.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 1.2	A soil quality map or soil investigation
B	1.1	Substantiation of the expertise of the person who determined the soil quality class
C	2.1, 1.2	Contracts, agreements and/or legal frameworks that show what the requirements are for quality
D	2.1, 2.2	Program of requirements, design plans, work instructions, research results, etc. showing how healthy soil is stimulated

Definitions

Bottom

The solid part of the earth with the liquid and gaseous components and organisms contained in it. This means, for example, that the groundwater belongs to the soil, as well as 'the subsoil'.

Soil quality class

Soil quality concerns the combination of ecological diversity and chemical soil composition, i.e. the diversity of soil organisms, the presence/absence of nutrients and the presence/absence of contaminants.

Additional information

The quality of the soil determines how an area can be used and when public health is compromised. Not all different activities require the same high soil quality, a higher quality offers the most flexibility in use. By striving for the highest possible quality, the quality of use for both the users and the flora and fauna present is increased.

Soil quality

The quality of soil improves by requiring that newly added soil is of a better quality than the soil already present in the area.

References

- Seven principles of healthy soil. WUR, via <https://www.wur.nl/nl/project/werken-aan-een-gezonde-bodem-in-stedelijke-ontwikkeling-zeven-principes-en-praktische-maatregelen.htm>
- PLO. Soil quality classes, via <https://iplo.nl/thema/bodem/regelgeving/hergebruik-bouwstoffen-grond-baggerspecie/kwaliteitseisen-toepassen-grond-baggerspecie/kwaliteits-bodemfunctieklassen-activiteiten-bodem/>.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

Noise pollution

Minimizing noise pollution.

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 4 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. It must be substantiated that:

#	CRITERIA	CREDITS
1	There is limited noise nuisance.	2
2	There is little or no noise nuisance.	4

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An acoustic study with a calculation of the noise nuisance score has been carried out by an expert consultant, for the situation after the development.
1.2	The acoustic study will provide the necessary measures to achieve a noise nuisance score of less than 3.0%.
1.3	The measures to be implemented from the acoustic research have already been implemented or are demonstrably part of the development.
2.1	Criterion 1 is met
2.2	The acoustic study will provide the necessary measures to achieve a noise nuisance score of less than 2.0%.

Addition to the criteria requirements

Existing works

Existing works must be included in the research and assessed in the situation after development. In order to comply, the existing works will also have to be provided with measures where necessary.

Acoustic research with calculation of noise nuisance score

The acoustic study must include all relevant noise sources in and around the area, insofar as it concerns industrial noise, road traffic noise, rail traffic noise and aviation noise (note: catering noise and schoolyards and the like fall under industrial noise). Construction noise (noise nuisance during construction) and neighbour noise are not covered by this issue.

The noise nuisance score is calculated as follows:

- Calculation of the cumulative noise exposure (due to all relevant noise sources in and around the area) in the outdoor area of the entire area.
- Determination of the number of people at certain locations or in certain buildings within an area with an equal nuisance factor. Assumptions may be made for the number of people to be expected in the area. The number of people per use function is divided by a factor (see Table 16) to determine the number of housing equivalents.

Noise pollution

Table 16 Subfactor for determining housing equivalents (taken from the GGD Health Effect Screening Manual)

TYPE OF BUILDING	SUB-FACTOR
Dwelling	1
Education	8
Care	3
Sport, recreation, nature	16
Office, work location	6
Shopping centre	24

- The number of housing equivalents is multiplied by the nuisance factor for the location in question (see Table 17). This gives the weighted nuisance factor.

Table 17 Nuisance factor as a function of the cumulative noise exposure Lcum in DB

LCUM	< 43 dB	43-48 dB	48-53 dB	53-58 dB	58-63 dB	63-68 dB	> 68 dB
Nuisance factor	0 %	1 %	4 %	7 %	12 %	18 %	25 %

- Add up all weighted nuisance factors and divide by the total number of housing equivalents. This gives a numerical value: the noise nuisance score (in percentages).

The acoustic study indicates which measures are recommended to limit noise nuisance in and around the area. Attention should be paid (at least) to the following topics:

- o Separation of noise sources and noise-sensitive functions in an area.
- o Applying measures to the noise source, such as:
 - Placement of silencers on the main sources
 - Running roads with quiet asphalt
- o Applying measures in the transmission of the sound source to the receiver, such as:
 - Installing noise barriers
 - Shielding first-line buildings
- o Applying measures at the recipient's location, such as:
 - Facilities on the facades of noise-sensitive buildings
 - Residential buildings with at least one low-noise façade and/or low-noise outdoor space

Calculation and measurement of noise exposure

Calculations and measurements must be carried out in accordance with the requirements of the Noise Abatement Calculation and Measurement Regulations 2012 (for road and rail traffic noise) and the Industrial Noise Measurement and Calculation Manual (for industrial noise). The accumulation of different noise sources takes place in accordance with Appendix 1 of the Noise Abatement Calculation and Measurement Regulations 2006.

Expert

An acoustic expert, with a relevant completed education at least HBO level in acoustics or sound technology or other person who has been demonstrably trained in conducting acoustic research. And has at least 2 years of experience in carrying out noise measurements in outdoor areas.

Noise exposure per location

The nuisance factor per location is determined on the basis of the highest calculated noise exposure at the location of the relevant residential location, i.e. for example the most noise-polluted façade of a house. For larger (indivisible) residential locations, such as a hospital, the number of people can also be determined per sector of, for example, 500m², whereby the highest calculated noise exposure per sector can then be used to determine the nuisance score.

Noise pollution

Noise nuisance from the area to the surrounding area

If there is an area in which noise-sensitive functions are adjacent to the area, measures must be included in the acoustic study to limit noise nuisance from the area to the surrounding noise-sensitive functions.

No sub-factor for residence location

If a residential location cannot be classified in accordance with the categories in table 16, a separate sub-factor can be determined. To this end, the following formula is applied: Division factor = 2 x (24 hours / length of stay).

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Acoustic research report with substantiation.
B	1.1	Qualifications of expertise of the consultant.
C	1.2, 2.2	Urban development plan with substantiation of measures.
D	1.3	Documentation showing assurance of acoustic measures to be applied.

Definitions

Lcum

The cumulative noise exposure in dB, determined in accordance with Appendix I of the Noise Abatement Calculation and Measurement Regulations 2006.

Low-noise façade / outdoor space

A façade or outdoor space with a noise exposure that is at least 10 dB lower than the highest loaded façade of the building.

Additional information

Noise pollution can not only be a nuisance, it can also cause health problems such as high blood pressure and insomnia. The central government therefore sets noise standards for road traffic, rail traffic, air traffic and activity. New noise-reducing measures such as quiet asphalt and rail dampers reduce this nuisance. Preventing noise pollution will increase the quality of stay in an area and improve the welfare of the people and animals present.

References

No

Accession of daylight

Stimulating optimal light entry into buildings for the benefit of building users

Available Credits	: 4
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 4 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. It must be substantiated that:

#	CRITERIA	CREDITS
1	For at least 90% of the facades (S, E, W) at least two hours of sunlight per day is possible.	1
2	For 100% of the facades (S, E, W) at least two hours of sunlight per day is possible.	2
3	For at least 90% of the facades (S, E, W) at least four hours of sunlight per day is possible.	3
4	For 100% of the facades (S, E, W) at least four hours of sunlight per day is possible.	4

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	An insolation study has been carried out which shows that at least two hours of sunlight per day is possible on at least 90% of the south, west and east facades within the system boundary.
2.1	An insolation study has been carried out which shows that at least two hours of sunlight per day is possible on 100% of the south, west and east facades within the system boundary.
3.1	An insolation study has been carried out which shows that at least four hours of sunlight per day is possible on at least 90% of the south, west and east facades and at least 2 hours on 100% of the facades within the system boundary.
4.1	An insolation study has been carried out which shows that at least four hours of sunlight per day is possible on 100% of the south, west and east facades within the system boundary.

Addition to the criteria requirements

Existing works

If existing works are part of the area development, they must be assessed against the above requirements. In the case of new developments (buildings, vegetation, etc.), the influence of this on existing works must also be taken into account. The situation after the area development must meet the criteria requirements.

Works to be realized

If (part of) the area development has not yet been realised, it must be made plausible that the requirements will be met during realisation.

No high buildings

Accession of daylight

If there are no buildings higher than 25 metres in the area or if there are no buildings that are/will be built more than 1.5 times the height of the buildings immediately surrounding that building, the maximum number of 4 credits can be awarded. If there is, the insolation study must be carried out for the criteria.

Insolation research

An insolation study must demonstrate that in the period from 19 February to 21 October, assuming a solar height of more than 10 degrees, the minimum number of hours of sunlight per day is possible. The north facades and blind facades (without windows) may be disregarded.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1 to 4.1	Urban plan including drawings and height measurements.
B	1.1 to 4.1	Report and drawings of the insolation study containing the minimum number of hours that sunlight is possible.

Definitions

System boundary

This issue has a systemic limit. This is located 100m outside the area boundary. This concerns the possible effects of insolation from outside on the area and vice versa.

Additional information

The quality of experience for users of an area is largely determined by the degree of daylight. In this issue, the quality of a workplace or living space of residential and utility buildings is tested against the possible duration of sunlight. The placement of the buildings and the duration of sunlight also determine the quality.

The realization of new buildings can reduce the number of hours of sunlight for existing buildings, for example because an existing building is in the shadow of a new building. Therefore, in the case of existing buildings, the situation after the area development must be used to determine the number of sunlight hours.

References

No.

Light nuisance

Preventing light nuisance from all lighting installations in the area.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 2 credits can be awarded. It must be substantiated that:

#	CRITERION	CREDITS
1	Light nuisance in the area and the immediate vicinity (system boundary) as a result of all external electrical lighting installations present is prevented.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	Inventory of existing external lighting installations in the current situation and after development.
1.2	Analysis by an expert with relevant knowledge and experience showing that all (electric) lighting installations in the area and its immediate surroundings comply with the limit values in the NSVV Light Nuisance Directive 2020 or which measures must be taken.
1.3	Consultation will have to be held with the municipality concerned so that all (electric) lighting installations in the area and the immediate vicinity (system boundary) are sufficient.

Addition to the criteria requirements

Existing works

If existing works are present, they must be assessed against the above requirements. Measures may have to be taken against light pollution in order to meet the requirements.

Light nuisance

Existing artificial lighting installations can cause various forms of nuisance. An analysis of the installations in the area and the way in which they are set up and adjusted can minimise this nuisance. The analysis requires minimal attention to:

- Nuisance for humans;
- Nuisance for road users along roads;
- Disturbance of nature (decrease in biodiversity);
- Horizon pollution, disturbance of dark landscape and reduced visibility of stars.
- Which limit values are accepted for each situation;
- Measures to prevent light pollution;
- Monitoring, evaluation and enforcement of light nuisance measures.

Light nuisance

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1	Stock staking
B	1.2	Reporting of analysis with regard to light nuisance and measures to be taken with substantiation of knowledge and experience of the drafter.
C	1.2	Declaration or specifications of the suppliers of the lighting installations.

Definitions

NSVV

Dutch Foundation for Lighting.

System boundary

For light nuisance, the system boundary of the area is defined as the area that is 500 metres outside the area boundary.

Additional information

(Electric) lighting installations can cause nuisance. In most cases, this is the case if unshielded luminaires are used or if luminaires are used inefficiently. Nuisance is mainly caused by luminaires for sports fields that are not placed efficiently and luminaires for advertising lighting.

References

- NSVV guideline for light nuisance. Guideline Light Nuisance 2020. Ede.

This document is for informational purposes only and cannot be used for certification. The digital Dutch version prevails.

Radiation risk

Minimizing health risks from electromagnetic radiation sources.

Available Credits	: 2
Exemplary performance	: X
Includes minimum requirement	: X
Mandatory from	: X

Criteria

A maximum of 2 credits can be awarded. For the awarding of credits, only the criterion that applies (most) to the area applies. It must be substantiated that:

#	CRITERIA	CREDITS
1	By means of source research and initiatives, the electromagnetic radiation in residential areas is weakly noticeable.	1
2	The electromagnetic radiation measured in residential areas is weakly noticeable.	2

Criteria requirements

The following demonstrates that the criteria are met:

#	CRITERIA-REQUIREMENTS
1.1	By means of a source investigation and application of source initiatives, it must be demonstrated that the values for two of the three radiation types from Table 18 are sufficient in residential areas (in accordance with 'slight to strong anomaly' according to SBM 2015).
1.2	A source survey shows where the relative distance between residential areas and radiation sources is located and where sufficient distance is observed, taking into account source initiatives.
2.1	By means of a field measurement, it must be demonstrated that the measured values for two of the three radiation types from Table 18 are satisfactory in residential areas (in accordance with 'slight to strong anomaly' according to SBM 2015).
2.2	The measurements are carried out by an expert measurement specialist.
2.3	The measurement of alternating magnetic fields should be measured over at least three days in order to be able to assess fluctuations in the magnetic field.

Addition to the criteria requirements

Table 18 Limit values by type of radiation

RADIATION TYPES	APPLICATION	LIMIT VALUE FOR FAINTLY CONSPICUOUS ¹
Low-frequency magnetic fields	Above-ground and underground high-voltage routes	<100nTesla
Static magnetic fields	Overhead lines of trains, trolleys and trams, and overhead lines	< 2 μTesla
High-frequency electromagnetic radiation	High-frequency transmitters with transmission power >10dBW	<50 μW/m ² (137mV/m)

1) Based on SBM 2015

Existing works

Existing works must meet the set requirements. If existing works do not comply, removal and/or protective measures must be taken. Measures must be demonstrated in draft plans

Expert

A measurement specialist, or otherwise a person who has demonstrably trained in, or has experience with, conducting research with SBM 2015 and/or into electromagnetic radiation in relation to health.

Works to be realized

If residential areas are still being realised in the context of the area development, credits can only be awarded if the expert measurement specialist indicates that the measurements carried out are representative of the new residential areas.

High-rise

In the case of existing high-rise buildings, the measurements must take this into account by measuring in height.

Residential area

Residential areas are areas with functions. It is the final situation that is assessed, future residential areas must meet the criteria.

Evidence

#	CRITERIA	REQUIREMENTS FOR EVIDENCE
A	1.1, 2.1	Source investigation and source initiatives
B	2.1 to 2.3	Research report with measurements.
C	2.2	Qualifications of expertise of the consultant.
D	1.1 to 2.3	Draft plans with initiatives.

Definitions

Occupied area

Part of a utility with at least one occupied space, consisting of adjacent rooms on one or more the same building layer other than a toilet room, a bath room, a technical space or a traffic area.

Tesla (T)

Tesla is the unit of electromagnetic flux density.

Electromagnetism

Electromagnetic fields are waves, measured in Hertz (Hz). The higher the frequency, the shorter the wavelength and the more energy-rich the fields. At frequencies from 0 to 300 Hz, we speak of extremely low-frequency electric and magnetic fields (ELF EM fields). The electric field is expressed in volts per meter [V/m]. The magnetic field depends on the current through the wire and is expressed in tesla (T) or microtesla: (μT) or in amperes per meter (A/m). The units are easy to convert: $1 \text{ A/m} = 1.26 \mu\text{T}$. Both the electric field and the magnetic field rapidly decrease in strength as the distance to the source increases. [Source: www.milieucentraal.nl]

High-frequency electromagnetic radiation

Examples of radiation sources are transmission masts, UMTS masts, radar, C2000, etc.

Low-frequency magnetic field

Examples of radiation sources are underground cabling, transformers, high-voltage lines, etc.

Static magnetic fields

Examples of radiation sources are magnetic fields as a result of direct current such as trams, trains, windmills, etc.

SBM 2015

The SBM-2015 stands for Standard der Baubiologische Messtechnik version 2015. Since 1992, this standard has been drawn up by German experts in the field of building biology, who focus on healthy building and living. The classifications weakly conspicuous and inconspicuous are based on the classifications from the SBM, respectively slight and no anomaly. No anomaly provides the highest degree of radiation risk precautions. Mild anomaly provides precautions aimed at sensitive and sick individuals.

Additional information

Research shows that electromagnetic radiation can cause physical complaints. Specifically, places where people spend long periods of time are risky when they are loaded with electromagnetic fields. Children are particularly vulnerable. Limiting electromagnetic radiation sources within an area ensures that possible effects on the health of people and animals are limited and increases the quality of life in an area.

The issue is based on the limit values from the Standard der Baubiologische Messtechnik. The SBM2015 is based on international research, more than 20 years of practical experience, experiences of (naturopathic) doctors and patients.

References

- NEN-EN 50110-1:1998 EN "Operation of electrical installations - General provisions".
- Haas E.M.; Electrostress and health; Jan van Arkel, 2005.
- SBM 2015.
- www.milieucentraal.nl.
- www.rivm.nl.
- www.cirkel.umtsmasten.nl.
- Association of Electromagnetic Radiation Measurement Specialists www.vemes.nl.

This document is for informational purposes only and cannot be used for certification. The official Dutch version prevails.

We guarantee a
Better tomorrow

BREEAM® | NL

www.dgbc.nl cannot be used for certification. The official Dutch version prevails.



Dutch
Green Building
Council

Benoordenhoutseweg 46
2596 BC The Hague

T +31 (0)88 55 80 100
E helpdesk@dgbc.nl

www.dgbc.nl
www.breem.nl