Environmental criteria for sustainable public procurement of

Civil constructions

Version 7 May 2015

1. Scope/definition

The product group Civil constructions includes civil works and hydraulic engineering constructions.

Civil works are civil engineering works, not consisting of earth, sand or clay, intended to enable vertical or horizontal passage of people or vehicles. This includes viaducts, aqueducts, bridges, ecoducts and tunnels. Weirs and culverts also belong to this product group.

Hydraulic engineering constructions include hydraulic engineering works, or "wet" projects, in the groundwork, road and hydraulic engineering sector and that function at the land/water interface. This includes the construction, improvement and maintenance of dikes and quays, harbours and shipping lanes:

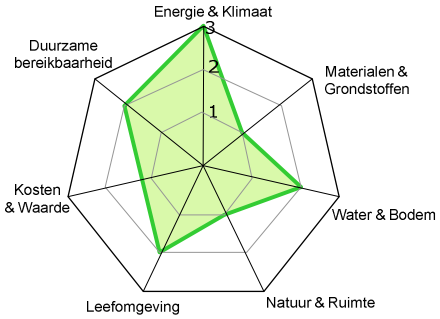
- wet and dry groundworks/dike reinforcement; quay improvement works, riverbed expansions, etc.
- coastal/shore/bank works including placement of retaining wall constructions, stone cladding, poured works, overgrown banks, etc.
- dredging work and underwater soil clean-up operations.
- hydraulic engineering constructions such as lochs, guard walls and jetties, mooring facilities and quay constructions in ports.

The foregoing includes works, services and supplies. The following products (with their corresponding CPV codes) are part of this product group. This list of products is not intended to be exhaustive.

Products	CPV code
Artworks	
Design and consultation on new works and reconstruction	
Technical design for construction of civil engineering works	71322000-1
Bridge design services	
Construction of new works and reconstruction	71322300-4
Bridges	44212100-0
Construction of bridges and tunnels, shafts and underground passages	45221000-2
Design and consultancy on management and maintenance	-
Implementation of management and maintenance	
Operation of bridges and tunnels	63712300-6
Bridge inspection services	71631450-9
Demolition	
Demolition activities	45111100-9
Hydraulic engineering works	
General	45220000-5
Weirs	
Design and consultation on new works and reconstruction (dam design services)	71322400-5
Construction of new works and reconstruction	
Building of bridges and tunnels, shafts and underground passages.	45243000-2
Design and consultancy on management and maintenance (maintenance of flood defences)	45246410-0
Implementation of management and maintenance (dam inspection services)	71631460-2
Demolition (demolition works)	45111100-9
Water systems and shipping lanes	
General (hydraulic engineering activities)	45240000-1
Design and consultation on new works and reconstruction	-
Completion of new works and reconstruction (construction works for shipping lanes)	45247100-1
Design and consultancy on management and maintenance	-
Implementation of management and maintenance (operation of shipping lanes)	63721300-2
Demolition (demolition works)	45111100-9

2. Criteria documents and approach to sustainable groundwork, road and hydraulic engineering

The core of the Sustainable Groundwork, Road and Hydraulic Engineering Approach is to allow sustainability aspects to be a consideration from an early planning stage on, with a focus on the whole life cycle of the infrastructure or object(s) to be built. This is the approach that facilitates the biggest gains in sustainability, and it allows a good and broad-based consideration of People, Planet and Profit to be made in every project.



The AmbitionWeb has a key role in the Sustainable Groundwork, Road and Hydraulic Engineering Approach. It helps clarify ambitions at an early stage of a project, so they can then be maintained throughout the entire project process. For more information about the Sustainable Groundwork, Road and Hydraulic Engineering Approach and AmbitionWeb, see http://duurzaamgww.nl/.

The AmbitionWeb revolves around a number of sustainability themes, each with three ambition levels:

1. insight into the biggest impactors and flows for the theme in question, with the achievement of a minimum level.
2. drafting specific reduction targets and achieving a significant improvement on the theme in question.
3. adding value, instead of just making “less bad”. Not only is the impact on people/planet/profit zero, but a positive contribution is made

Part of level 1 is meeting the suitability requirements, minimum requirements and contract provisions of the Sustainable Procurement criteria documents. The award criteria may be used to make a contribution to level 2.

Below is a list of the requirements and criteria broken down by the individual themes. The criteria documents identify a total of five themes:

- energy and climate
- supplies and raw materials
- water and soil
- living environment
- nature and space

The following table presents the themes on which the buyer can actually have an impact by using the requirements and criteria in this criteria document.

Themes	**Level 1 AmbitionWeb** Selection criteria (SC) Technical specifications (ME) Contract provisions (CB)	**Level 2 AmbitionWeb** Award criteria (AC)
Energy and climate	CB1. Management and maintenance plan	GC2. Soil balance
Supplies and raw materials	ME1. Sustainable design, wooden construction ME2. Sustainable design, steel construction ME3. Sustainable timber ME4. Processing/removal of substances released	GC1. Environmental performance of groundwork, road and hydraulic engineering works GC2. Soil balance

	CB1. Management and maintenance plan	

3. Assignment of criteria to project phases

The criteria in this document pertain to both the design and completion of new construction and reconstruction of works, and the management, maintenance and demolition of existing works. In the following table, the criteria are assigned to the individual phases to which they apply.

Area of application Criterion	Design	Completion	Management and Maintenance	Demolition
Technical specifications				
1. Sustainable design, wooden construction	x	-	-	-
2. Sustainable design, steel construction	x	-	-	-
3. Sustainable timber	x	x	x	-
4.Processing/removal of substances released	-	x	x	x
Award criteria				
1. Environmental performance of groundwork, road and hydraulic engineering works	o	o	o	o
2. Closed soil balance	o	o	o	o
Contract provisions				
1. Management and maintenance plan	-	x	x	-

x = include in this phase
- = do not include in this phase
o = optional

4. Selection criteria

Not defined for this product group.

5. Technical specifications

No.	Technical specifications (ME)
ME1	*(For design of constructions with wood which are exposed to weather and wind)* **Sustainable design, wooden construction** The construction must be designed so that no water or rainwater can lie and/or no capillary moisture can be absorbed. *Explanation* This minimum requirement is only to be used for simple design tasks. If the task concerns more complex construction works, an award criterion will offer a solution. For example, the number of points where water or rainwater can lie may be considered. The principle described above forms part of the CUR report 213 "Sustainable detailing of wood in the civil engineering sector" (*Hout in de GWW-sector duurzaam detailleren*). This report may be ordered via the website: http://www.sbrcurnet.nl/producten/kennisarchief/hout-in-de-gww-sector By detailing properly and with suitable wood types, constructions with a long lifespan may be built.

	General rules for proper detailing are given in the report. A further definition of the principle may refer to: • End grain surfaces of wood protected from moisture. • In using a wooden surface against another surface a distance of at least 8 mm maintained between these surfaces (with the exception of finger-jointed wood) For more information on wood to be used and detailing of wooden constructions, see also http://www.houtdatabase.nl/ *Verification* The tenderer may be asked to submit documentation demonstrating compliance with the requirements above.
ME2	*(For the design and detailed design of the steel construction)* **Sustainable design of steel construction** The design and design detailing must comply with the following sustainability principles: • The steel construction must be designed so that no water or rainwater can lie or dirt can build up. • All sharp edges in the steel construction must be rounded off. *Explanation* This minimum requirement is only to be used for simple design tasks. If the task concerns more complex construction works, an award criterion will offer a solution. For example, the number of points where water or rainwater and dirt can lie may be considered. The principles listed in this criterion are described in NEN-EN-ISO 12944-3 (1998) Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 3: Design considerations (NEN, 1998). *Verification* The tenderer may be asked to submit documentation demonstrating compliance with the requirements above.
ME3	**Sustainable timber** Raw wood to be supplied, or wood incorporated into wood products or other products to be supplied, must meet the Dutch Procurement Criteria for Timber set out in the TPAS (Timber Procurement Assessment System). The wood must be in compliance with at least 7 of the 9 principles for sustainable forest management. *Explanation* More information on the procurement of sustainably produced wood can be found on: www.inkoopduurzaamhout.nl. An example of specifications defined for sustainably produced wood can be found on: http://www.inkoopduurzaamhout.nl/public/pdf/2014nieuwe-standaard-bestektekst-duurzaam-hout.pdf . General information on the prescription and verification of sustainably produced wood can be found on: www.houtdatabase.nl. The complete TPAS criteria can be found on the website: http://www.tpac.smk.nl/Public/TPAC%20documents/DutchProcurementCriteriaMAR2014.pdf *Verification* Wood will be assumed to meet the criteria if it is certified in accordance with a system approved by the TPAC (Timber Procurement Assessment Committee). The tenderer may also furnish other evidence, accompanied by extensive, documented and verifiable data and information demonstrating that the set minimum requirement is met. A list of approved certification systems can be found on the website: http://www.tpac.smk.nl/170/about/judgements.html
ME4	**Processing/removal of released substances** 1. If stony waste is broken up, the breaking must take place according to BRL 2506. 2. Tar-containing asphalt (granulate) must be transported away to a processing and treatment

	establishment in the Netherlands, licensed on the grounds of the Environmental Management Act, for the thermal cleaning of the tar-containing material. 3. *(In the case of a temporary establishment, which does not come within the Environmental Management Act and the Activities Decree)* Provisions must be made on the implementation site to store separately or otherwise transport away separately the different types of waste arising from the activities. Provisions must also be made on the implementation site for the separate storage of released secondary raw materials. *Explanation of point 2 of this criterion* The purchaser is advised to employ CROW publication 210 *Richtlijn omgaan met vrijkomend asfalt – Aandacht voor de teerproblematiek* (Guideline for dealing with released asphalt – Attention to the tar problem). *Explanation of point 3 of this criterion* The part of the requirement concerning the separation of waste substances is indeed already a legal requirement for most establishments, arising from the Environmental Management Act, but because temporary establishments do not fall under this, said requirement is therefore stipulated here explicitly. *Verification* Verification with regard to point 1: The tenderer may be asked to submit a KOMO product certificate "BRL 2506 Recycling granulates for use in Groundwork, Road and Hydraulic Engineering works and concrete" in the name of the tenderer or subcontractor. Certificates can be verified on www.bouwkwaliteit.nl.

6. Award criteria

No.	Award criteria (AC)
GC1	**Environmental performance of groundwork, road and hydraulic engineering works** The lower the environmental impact, calculated using an environmental life cycle analysis and expressed in MKI value, is than [XX], the higher the tender will be rated. The LCA must be conducted in accordance with the Environmental Performance of Buildings and Groundwork, Road and Hydraulic Engineering Works Calculation Method (based, in part, on EN 15804; for the current version, see www.milieudatabase.nl *Explanation* The LCA tool within the Sustainable Groundwork, Road and Hydraulic Engineering Approach is DuboCalc. DuboCalc is an LCA tool compatible with the calculation method referred to above. When using the LCA method, the contracting authority must supply a reference, and a clear definition must also be given (i.e., a selection of certain project components (groundwork, paving construction, conduction, etc.). *Verification* The tenderer may be asked to substantiate the environmental performance as bid. DuboCalc offers the option to supply reporting that provides this substantiation.
GC2	**Soil balance** The less soil needed for the project and usable as a secondary construction material that must be delivered to or removed from the site, the higher the tender will be rated. This criterion will be evaluated as follows: The larger the proportion of soil released from the work (possibly in exchange with neighbouring works) which is used within the work (in volume percentage/m^3 or mass percentage/tonne), the higher the tender will be rated. *Explanation* In the award, a tender with a completely closed soil balance (released soil which is suitable as secondary building material is completely re-used) may for example be evaluated higher than a tender which does not have a completely closed soil balance. The purchaser will determine the unit to be used (m^3 or tonnes) depending on the nature of the work. The purchaser must determine in advance whether exchange with neighbouring works will be allowed, and if so, which. To optimise the soil balance, this can also be included in the definition of GC1 Environmental Performance of Groundwork, Road and Hydraulic Engineering Works.

	Verification The tenderer may be asked to provide a description of the soil stream plan.

7. Contract provisions

No.	Contract provisions (CB)
CB1	**Management and maintenance plan** At the handover of the civil construction work, a management and maintenance plan must be supplied, in which the maintenance measures required to keep the construction work in good order must be described. The plan should also describe the means of management and maintenance necessary to maintain the sustainable aspects of the civil construction work. The plan should consist in any case of the following sections: • Description of the management measures to be taken into account with inspection intervals for a period of XX years, with associated instructions (at least describing inspection points, methods, estimated number of person-hours). • Description of the maintenance intervals to be taken into account for a period of XX years, with associated instructions (at least describing maintenance activities and necessary materials and energy, and an estimate of the number of person-hours and any relationship with other activities for which for example excavation is necessary). *Explanation* The sustainable aspects of the construction may be relevant for example to the maintenance and management of certain materials and installations. A certain low-maintenance material may require a modified maintenance regime. If a change takes place such that a new maintenance and management plan is necessary, separate agreements must be made with the tenderer for this. Provisions for this may also be laid down in the contract.