



Environment and Spatial Planning
*Ministry of Housing, Spatial Planning and
the Environment*

Criteria for the Sustainable Public Procurement of **Construction Works**

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1 Introduction

The Dutch government wants to take concrete steps towards a sustainable society, and to set a good example. Each year, government organisations spend more than EUR 50 billion on the purchase of Supplies, Services and Public works. By purchasing sustainably, the government can significantly boost the market for Sustainable Public Products. Governmental authorities have set clear objectives to achieve this: the central government is aiming for 100% Sustainable Public Procurement in 2010, while the municipalities aspire towards 75% in 2010 and 100% in 2015. Provincial governments and water boards have set themselves the target of at least 50% in 2010. 100% Sustainable Public Procurement is understood to mean that all purchases meet the minimum requirements that have been set for the relevant product groups at the time of purchase. More information on this topic is available from the website Sustainable Public Procurement (www.agentschapnl.nl/sustainableprocurement).

NL Agency supports government authorities in various ways to help reach these objectives. These include developing criteria for Supplies, Services and Public works procured by these authorities. This document focuses on the criteria for the Construction Works, the elaboration of the criteria in specification texts and a more detailed assessment of the criteria, as well as a number of points for attention in the pre- and post-procurement stages. Additional background information and considerations regarding the content of the criteria can be found in the criteria document on the website Sustainable Procurement www.agentschapnl.nl/duurzaaminkopen/criteria, available in Dutch only.

1.1 Definition of the product group

The product group Construction Works comprises civil engineering works, not consisting of earth, sand or clay, intended to make a vertical or horizontal passage of people or vehicles possible. This includes viaducts, aqueducts, movable bridges and ecoducts. Besides this, weirs and culverts also belong to this product group.

Construction works in the Netherlands are mostly under the management of Directorate-General for Public Works and Water Management, the provinces, water boards, ProRail and a number of large municipalities. The design, building, renovation and demolition of construction works is largely contracted out to engineering bureaus and contractors so that government is probably the only purchaser in this product group. This concerns works, services and supplies.

For the benefit of the contracting authority, a number of CPV codes that might be of relevance to this product group have been included in this document. The selection is by no means exhaustive or complete. The contracting authority will remain responsible for compiling the correct set of CPV codes to match the relevant tender.

The following CPV codes apply to this product group:

Part	CPV codes	Description
Design and consultation on new works and reconstruction	71322000-1	Technical designs for construction of civil engineering works.
	71322300-4	Bridge design services.
Construction of new works and reconstruction	44212100-0	Bridges.
	45221000-2	Building of bridges and tunnels, shafts and underground passages.
Design and consultancy on management and maintenance	-	-

Implementation of management and maintenance	63712300-6	Exploitation of bridges and tunnels.
	71631450-9	Bridge inspection services.
Demolition	45111100-9	Demolition activities.

Criteria for sustainable procurement in the entire lifecycle of construction works

This criteria document indicates the manner in which and with what criteria sustainability may be implemented when calling for tenders for services and works in the entire life cycle of Construction Works. The criteria are applicable to calls for tender for design services, traditional performance contracts and integrated contracts. The criteria do not therefore apply to the steps prior to the call for tender.

The criteria in this document are presently applicable to Construction Works. Integration and harmonisation with other directly associated product groups such as Road Network, Rail and Tram Works, Ground Works, Dams and Waterways is still to be done. For road surfacing on or to the construction work reference is made for example to the product group Roads.

Objects included in the product group Construction Works:

Object	Description
Viaduct	A permanent connection for traffic between two points which are separated by a road, railway line and/or a dip in the terrain.
Aqueduct	Bridge by means of which an open water connection (canal or river) is made over a road, railway line and/or dip in the terrain by means of a trough-shaped construction.
Movable bridge	Movable connection between two points which are separated by water.
Permanent bridge	Permanent connection between two points which are separated by water.
Ecoduct	A permanent connection for wild animals between two nature areas separated by a road, railway line or water.
Tunnel	Connection under the ground or water between two points, intended for traffic.
Weir	Construction to regulate the water level in a waterway. Theoretically, the water manager is responsible for this type of object (water board, municipality, Directorate-General for Public Works and Water Management).
Culvert	Construction intended, like a weir, to regulate the water level in an area. A culvert forms a connection between two waterways. A concomitant effect is an ecological connection between the waterways.

2 Sustainability in the procurement process

The criteria in this document have been classified in the various steps of the public procurement process. More information about these steps and how to combine them with sustainability can be found in the Sustainable Public Procurement Manual. This manual can be downloaded from the website Sustainable Procurement www.agentschapnl.nl/sustainableprocurement.

2.1 Preparatory stage (points for consideration)

In the preparation of a call for tender, many choices are made which have a great impact on sustainability. The inclusion of sustainability in the preparation of projects is not current practice and demands additional policy from the government bodies concerned. By involving sustainability in an explicit way at all stages, sustainable calls for tender gain more content and a sustainable realisation at a higher level becomes possible.

Every purchase or call for tender starts with drawing up the inventory of the needs of the internal or external customer. Sustainability can be incorporated into this stage by considering whether the purchase is truly necessary and whether a more sustainable alternative might be available. Specific points for consideration regarding procurement for the Construction Works product group are:

Ensuring sustainability in the project

Ensuring sustainability demands that at an early stage, even before the formal start of the procurement phase, the sustainability aspects of the project are considered within the procuring organisation. In practice this will mean a collaboration among the project leader (advocate of technology and project result), the purchaser (financial advocate) and for example the environmental coordinator (sustainability advocate).

In the sustainable design of construction works, certain conditions are of importance to a proper organisation and the incorporation of sustainability into the process. Below are listed some general attention points for the process, as these are also to be found in the National Civil Engineering Sustainable Building Package (NP GWW = Civil Engineering <http://www.crow.nl/zoek?q=nationaal+pakket&c=okt&c=pub&c=cur&c=con&c=faq>):

- Organise sustainable building in the project (NP GWW 100);
- Take account of sustainable building in the project plan (NP GWW 101);
- Take account of sustainable building in the composition of the project team (NP GWW 103);
- Take account of sustainable building in communication (NP GWW 102);
- Take account of sustainable building in the financing of the project (NP GWW 104);
- Draw attention to risks in civil engineering projects, particularly with regard to the environmental effects to be realised (NP GWW 105);
- Take account during the design of future management and maintenance (NP GWW 106);
- In comparing cost aspects, employ the Total Costs of Ownership approach, by which means the sustainability aspect will obtain (more) weight.

Besides ensuring sustainability in the process, there are opportunities to safeguard sustainability in the design, in the execution of works, in the usage phase or at the end of the lifetime. Below are several attention points as listed in the National Civil Engineering

Sustainable Building Package. The attention points are not always specific to construction works, but there are reference points for the product group Construction Works included in the measures concerned:

- Attune the construction work to its future use (NP GWW 800);
- Harmonise the material choice and design with the envisaged lifetime (NP GWW 805);
- Restrict unnecessary use of materials (NP GWW 807);
- Use secondary materials or materials which can be re-used later (NP GWW 808);
- Limit the production of waste in construction, use and management (NP GWW 513);
- Impose the principle of multiple space usage (NP GWW 802);
- Aim for energy saving in civil engineering works (NP GWW 503);
- Employ alternative energy sources (NP GWW 504);
- Attune the construction work with (environmental) values and spatial plans in the surroundings (NP 801);
- Restrict damage to landscape, natural and historico-cultural values (NP GWW 803);
- Compare different building methods (NP GWW 806);
- Prevent nuisance from vibration and noise (NP GWW 809 and 810);
- Limit damage to construction works (NP GWW 811);
- Restrict disruption of the surface and ground water system and the natural level and course of groundwater during the construction and use of works, and the natural quality of the groundwater in the construction and use of works; avoid contamination of the water system (NP GWW 201, 202, 203, 204 and 205);
- Prevent barrier effects for fauna when constructing civil works (NP GWW 205);
- Compare different building methods (NP GWW 806).

2.2 Specification stage (criteria)

During the specification stage, the needs of the internal or external customer are translated into a tender document. This stage entails the formulation of:

- Criteria for supplier qualification. These could include grounds for exclusion, suitability requirements, i.e. requirements with regard to suppliers, and, in the case of restricted procedures, any selection criteria, i.e. wishes with regard to suppliers.
- A description of the minimum requirements pertaining to supply, service or task (the Schedule of Requirements).
- Award criteria, i.e. wishes regarding Supplies, Services and Public works. These are only applicable when the tendering process is based on the principle of the Most Economically Advantageous Offer ('Economisch Meest Voordelige Inschrijving' or EMVI).
- The contract stipulating the contract provisions.

The criteria in this document have been formulated to support the purchaser in the sustainable procurement of Construction Works. The criteria have been subjected to legal review. However, every procurement and tender process is unique. For that reason, the drafting of a tender document remains the responsibility of the purchaser.

More information on the various types of criteria and the various tender options can be found in the Sustainable Public Procurement Manual.

The criteria apply to new construction, reconstruction and also to the management and maintenance of existing construction works. Distinction is made in the table among the different forms of contract, such as design-only, design and construct, and construct-only.

Table 3.1 Overview of criteria for construction works

Area of application	Design	Construct	Design & construct	Manage & maintain	Demolition/Removal
Criterion					
Minimum requirements for Construction Works					
Sustainable design, wooden construction	X	-	X	-	-
Sustainable design, steel construction	X	-	X	-	-
Sustainable timber	X	X	X	X	-
Processing/removal of substances released	-	X	X	X	X
Award criteria					
Sustainable material usage	O	O	O	O	O
Closed soil balance	O	O	O	O	O
Contract provisions					
Management and maintenance plan	-	X	X	X	-
Other product groups					
Preservation works	O	O	O	O	-

X = include in this phase

- = do not include in this phase

O= optional

In the 'procurement' of construction works, it is not generally sufficient to merely include the criteria for Construction Works. In general, the simultaneous carrying out of ground works, the use of heavy vehicles or mobile machinery, the installation of cables and pipelines and the purchase of electricity will also need to be considered. The criteria for these product groups may be found on the website: www.agentschapnl.nl/duurzaaminkopen/criteria.

2.2.1 Supplier qualifications

No criteria have been formulated for this specific product group with regard to supplier qualification. More information on the possibilities of incorporating sustainability at this stage of the process can be found in the Sustainable Public Procurement Manual.

2.2.2 Schedule of requirements

The use of the criteria below does not exclude the use of any material whatsoever. If however the materials wood and/or metal are employed, technical minimum requirements 1 and/or 2 are applicable.

Minimum requirements

<p>Minimum requirement No. 1</p>	<p><i>(For the design and detailed design of constructions with wood which are exposed to weather and wind)</i></p> <p>Sustainable design, wooden construction</p> <p>The design and design detailing must comply with the sustainability principles below.</p> <p>For constructions which are exposed to weather and wind:</p> <ul style="list-style-type: none"> • No use must be made of film-forming paint systems on wooden surfaces. • End grain of wood must be protected from moisture. • The construction must be designed so that no water or rainwater can lie. • In using a wooden surface against another surface a distance of at least 8 mm must be maintained between these surfaces. <p>For constructions which are exposed to soil and/or water:</p> <ul style="list-style-type: none"> • No wood in contact with the ground must be used in the construction. • Wood to XX cm above the water level must not be closed in. <p><u>Means of proof:</u></p> <ol style="list-style-type: none"> 1. Statement to be included in this tender by the tenderer to confirm compliance with this minimum requirement. 2. A description of the way in which the design principles are complied with.
<p>Notes for purchaser</p>	<p>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.</p> <p>The principles described above form part of the CUR report 213 'Sustainable detailing of wood in the civil engineering sector' (<i>Hout in de GWW-sector duurzaam detailleren</i>). This report may be ordered</p>

	<p>via the website: www.cur.nl. By detailing properly and with suitable wood types, constructions with a long lifetime may be made. General rules for proper detailing are given in the report.</p> <p><u>Verification of means of proof:</u></p> <ol style="list-style-type: none"> 1. The description of the way in which the design principles are complied with. 2. No further verification.
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<p>Minimum requirement No. 2</p>	<p><i>(For the design and detailed design of the steel construction)</i></p> <p>Sustainable design of steel construction</p> <p>The design and design detailing must comply with the following sustainability principles:</p> <ul style="list-style-type: none"> • 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. <p><u>Means of proof:</u></p> <ol style="list-style-type: none"> 1. Statement to be included in this tender by the tenderer to confirm compliance with this minimum requirement.
<p>Notes for purchaser</p>	<p>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.</p> <p>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).</p> <p><u>Verification of means of proof:</u></p> <ol style="list-style-type: none"> 1. No further verification during tendering.

<p>Minimum requirement No. 3</p>	<p><i>(For design, construct, design & construct)</i></p> <p>Sustainable timber</p> <p>Timber to be supplied or timber processed into (wooden) products to be supplied, <i>insofar as these serve for the purposes of the realisation of the works and these will remain behind in the works</i>, must be demonstrably sustainably produced.</p>
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	<p>By demonstrably sustainably produced timber should be understood: timber that complies with the Dutch Procurement Criteria for Timber with regard to sustainable forestry management and the supply chain, according to the applicable assessment method, as laid down on 24 July 2008 by the Minister for Housing, Spatial Planning and the Environment. These criteria can be found on the English language site www.tpac.smk.nl, under "Documents".</p> <p><u>Means of proof:</u></p> <p>1. Statement to be included in this tender by the tenderer to confirm compliance with this minimum requirement, enclosing:</p> <ul style="list-style-type: none"> • a declaration in which it is indicated under what certification system the timber is supplied and which demonstrates that this minimum requirement is complied with. If the timber is supplied under a certification system which is approved by TPAC, this minimum requirement is complied with in any event. You will find an overview of the approved systems on www.tpac.smk.nl or • www.inkoopduurzaamhout.nl. As an aid to supplying evidence for certification systems which are not yet assessed by TPAC, the tenderer may make use of the following mutually related documents: <ul style="list-style-type: none"> -Dutch Framework for Evaluating Evidence of Compliance; -Annex 1: Category A Evidence; -Application form for system managers; -Assessment matrix for system managers. <p>These documents can be found on www.inkoopduurzaamhout.nl and on www.tpac.smk.nl</p> <p>or</p> <ul style="list-style-type: none"> • other evidence, provided with comprehensively documented information which may be verified for authenticity, and which demonstrates that the timber to be used is sustainably produced in the sense intended here. As an aid to supplying the evidence, the tenderer may make use of the following mutually related documents: <ul style="list-style-type: none"> -Dutch Framework for Evaluating Evidence of Compliance; -Annex 2: Category B Evidence; -Appendix 1: Checklist Supply Chain; -Appendix 2: Checklist Legality; -Appendix 3: Checklist SFM with Guidance; -Guidance appendix 1: Checklist Supply Chain; -Guidance appendix 2: Checklist Legality. <p>These documents can be found on www.inkoopduurzaamhout.nl and www.tpac.smk.nl</p>
Notes for purchaser	There are legal considerations in the application of this requirement. You will find more information in Chapter 2 of the Dutch language document.

	<p>To support government purchasers and suppliers, the Timber Procurement Assessment Committee (TPAC), an independent committee of experts, has stipulated which certification systems comply with TPAS in any event. The growing list of approved certification systems can be found on www.tpac.smk.nl.</p> <p>Other "equivalent" forms of evidence proffered by the tenderer must also be taken into consideration. The purchaser may present this other evidence to the TPAC if desired.</p> <p><u>Verification of means of proof:</u></p> <ol style="list-style-type: none"> -In the case of a certificate: collection of further information from the certifying establishment which issued the document. -All other evidence may be presented to the TPAC.
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<p>Minimum requirement No. 4</p>	<p><i>(For construct, design & construct, management & maintenance and removal)</i></p> <p>Processing/removal of released substances</p> <ol style="list-style-type: none"> If stony waste is broken up, the breaking must take place according to BRL 2506. 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. <i>(In the case of a temporary establishment, which does not come within the Environmental Management Act and the Activities Decree)</i> <p>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.</p> <p><u>Means of proof:</u></p> <ol style="list-style-type: none"> Declaration from the tenderer that he complies with this minimum requirement. <p><u>Further supporting document with regard to an aspect mentioned under point 1.</u></p> <ol style="list-style-type: none"> A description of the means by which the tenderer complies with this requirement. If the tenderer or subcontractor possesses a KOMO product certificate 'BRL 2506 <i>beton en/of menggranulaat</i>' (concrete and/or mixed granulate) in the name of the tenderer or subcontractor, this requirement is fulfilled
<p>Notes for purchaser</p>	<p><i>Explanation of point 2 of this criterion</i></p> <p>The purchaser is advised to employ CROW publication 210 '<i>Richtlijn omgaan met vrijkomend asfalt – Aandacht voor de teerproblematiek</i>'</p>

	<p>(Guideline for dealing with released asphalt – Attention to the tar problem).</p> <p><i>Explanation of point 3 of this criterion</i></p> <p>The part of the requirement concerning the separation of waste substances is 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.</p> <p><u>Verification of means of proof:</u></p> <ol style="list-style-type: none"> 1. No further verification. <p><u>Further supporting documents with regard to an aspect mentioned under point 1.</u></p> <ol style="list-style-type: none"> 2. A description of the way in which the granulate is processed, from which it can be deduced whether this conforms to BRL 2506 concrete and/or mixed granulate. 3. A statement from the entity processing the granulate. 4. Check of the certificate on www.bouwkwaliteit.nl.
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2.2.3 Award criteria

Award criteria

Award criterion No.1	<p><i>(For design, construct, design & construct, management & maintenance and removal)</i></p> <p>Sustainable material usage</p> <p>The lower the environmental impact – calculated using an environmental life cycle analysis – is than [XX], the higher the tender will be evaluated. The LCA analysis must be conducted according to NEN 8006 and the harmonised method for the determination of environmental impact.</p> <p><u>Means of proof:</u></p> <ol style="list-style-type: none"> 1. An LCA according to NEN 8006.
Notes for purchaser	<p>The LCA instrument for civil engineering, DuboCalc, is expected to become available during the course of 2009.</p> <p>In applying the LCA method, it is necessary that the contracting authority supplies a reference.</p> <p><u>Verification of means of proof:</u></p> <ol style="list-style-type: none"> 1. No further verification.

<p>Award criterion No.2</p>	<p><i>For design, construct, design & construct, management & maintenance and removal)</i></p> <p>Soil balance</p> <p>The less the transport of soil, which is suitable as a secondary building material, occurs over the boundaries of a work, the higher the tender will be evaluated.</p> <p>This criterion will be evaluated as follows:</p> <p>The larger the proportion of soil released from the work (possibly in combination with neighbouring works) which is used within the work (in volume percentage/m³ or mass percentage/ton) the higher the tender will be evaluated.</p> <p><u>Means of proof:</u></p> <ol style="list-style-type: none"> 1. A description of the tenderer's soil stream plan.
<p>Notes for purchaser</p>	<p>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.</p> <p>The purchaser will determine the unit to be used (m³ or tons) depending on the nature of the work.</p> <p>The purchaser must determine in advance with which neighbouring works exchange can take place.</p> <p><u>Verification of means of proof:</u></p> <ol style="list-style-type: none"> 1. No further verification.

2.2.4 Contract

<p>Contract provision No. 1</p>	<p><i>(For construct, design & construct, management & maintenance)</i></p> <p>Management and maintenance plan</p> <p>At the handover of the construction work, a management and maintenance plan must be supplied, in which are described the maintenance measures required to keep the construction work in good order. The plan should describe the means of management and maintenance, necessary to maintain the sustainable aspects of the construction work.</p> <p>The plan should consist in any case of the following sections:</p> <ul style="list-style-type: none"> • Description of the management measures to be taken into account with inspection intervals for a period of XX years,
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	<p>with associated instructions (at least describing inspection points, methods, estimated number of person-hours);</p> <ul style="list-style-type: none"> • 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 an estimate of number of person-hours and any relationship with other activities for which for example excavation is necessary).
Notes for purchaser	<p>The sustainable aspects of the construction work may be relevant for example to the maintenance and management of certain materials and installations. Thus, a construction work made of a certain low-maintenance material may require a modified maintenance regime.</p> <p>If a change takes place such that a new management and maintenance plan is necessary, separate agreements must be made with the tenderer for this. Provisions for this may also be laid down in the contract.</p>

2.3 Utilisation stage (points for consideration)

Once the procurement stage has been concluded and a product or service has been purchased, there are opportunities for using the product in a sustainable manner.

No specific points for consideration have been formulated for this product group.