



# Government of Gibraltar

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## Green Procurement Policy

March 2012



Document detailing the Government of Gibraltar's environmental procurement policy

# Introduction

Public procurement, which represents a significant proportion of Government spending, has its environmental impact. The negative aspects of this impact, such as those associated with materials and resource use and the resulting waste should be reduced, whilst the positive effects are promoted. This can be achieved via the implementation of a Green Procurement policy.

Green procurement is a win-win tool which enables the public sector to obtain the best value for money and procure low-carbon, environmentally friendly goods and services while presenting a business opportunity to suppliers and helping to expand the market for green products and services.

Green procurement is one of the main pillars of the Government's Environmental Action & Management Plan. As such the Government is adopting this Green Procurement Policy which sets out the position and establishes targets for 10 product and service groups (based on EU guidance).

The policy is designed to help ensure that the procurement process is open, transparent and equitable. It will apply to all Government Departments, Authorities and Agencies and wholly owned Government companies and will also have implications for private contractors working for Government.

Implementation will be overseen by the Chief Secretary and carried out by the Procurement Department, with assistance from the Department of the Environment.

# The Policy

Green procurement is defined as:

“a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.”

Within the wider context of sustainable development, the highest priorities for the Government are:

- To help achieve reductions of carbon emissions, energy and water consumption, waste generation and to increase recycling
- To help protect biodiversity
- To ensure that no unsustainable or illegal timber/timber products are used

# The Action Plan

## Leadership and Accountability

- All above tender threshold expenditure purchasing for all Government Departments, Agencies, Authorities and wholly owned Government companies is to be carried out via the Procurement Department.
- Below threshold expenditure purchasing must be carried out using best purchasing practice to achieve the best environmentally friendly option that provides value for money.
- The Chief Secretary will oversee the delivery of this plan and the results will be reported in the Department of the Environment's Annual Report.
- The Procurement Office is responsible for embedding agreed procurement policies throughout the public service so that they become part of normal procurement practice.
- Heads of Departments are accountable for their department's overall progress in moving towards the overall sustainability objectives.
- Where Departments believe that an upfront cost constraint prevents them from choosing the most environmentally friendly option, they may raise this with the Chief Secretary and the Financial Secretary.

## Raising Standards

- New Government contracts, where relevant, will include appropriate requirements for suppliers and sub-contractors to provide products and services that comply with agreed mandatory standards
- Existing contracts will be updated to also meet these standards as soon as is practically possible

This means, for example, that Government will increasingly only choose: computers, office equipment and white goods that are energy efficient; stationary and tissue paper with recycled content; low volatile organic compound (VOC) wall paints; biodegradable detergents; water saving taps and fittings etc. Further advice on green public procurement criteria is provided in Appendix A.

## Scrutiny and Reporting

- The Department of the Environment will report on public sector progress on green procurement commitments in the annual report, 'The Environment Matters'. All Departments, Agencies, Authorities and wholly owned Government companies will be expected to co-operate by supplying evidence of compliance (including justification for non compliance) with the mandatory procurement policies and standards set out in this plan;
- All actions will be undertaken within the legal and policy framework governing public procurement. This involves securing value for money, and consistency with EU Procurement Directives and Treaty-based principles of non-discrimination, equal treatment, transparency, mutual recognition and proportionality.

# What does this plan mean for the Public Sector?

Achievement of the green procurement objectives will require efforts across all Government departments, agencies and authorities to embed the mandatory product standards into relevant contracts and decisions in key areas including:

- Capital expenditure plans
- Construction projects for new builds and refurbishments
- Facilities management, buildings and grounds maintenance
- IT hardware and services and office solutions
- Travel services
- Hire, lease and pool cars.

In essence the public sector will be required to:

- Design and build low carbon and water efficient new buildings and major refurbishments, consider the use of renewable energy sources that contribute towards carbon neutrality and only use sources of timber that are legal and sustainable;
- Operate buildings with energy efficient equipment such as 'A' rated water heaters, low flush toilets etc;
- Use the most resource efficient product types such as computing equipment that is 'energy star' compliant, the most energy efficient white and brown goods, compact fluorescent and LED lamps etc;
- Only use contractors able to supply equipment and/or services (including design) which comply with this procurement policy.

# What does this plan mean for suppliers to Government?

For Government suppliers, this action plan means that:

- All Government bodies will now be looking for solutions that are in keeping with the Government's sustainability objectives as defined earlier and that comply with an increasing range of product standards;
- Government will be seeking out innovative solutions and approaches to procurement, including the use of outcome-based specifications (non-EU).

## **Appendix A: Green Procurement Standards**

Green Public Procurement Sheet 1: Copying & Graphic Paper

Green Public Procurement Sheet 2: Cleaning Products & Services

Green Public Procurement Sheet 3: Office IT Equipment

Green Public Procurement Sheet 4: Construction

Green Public Procurement Sheet 5: Transport

Green Public Procurement Sheet 6: Furniture

Green Public Procurement Sheet 7: Indoor Lighting

Green Public Procurement Sheet 8: Street Lighting & Traffic Signals

Green Public Procurement Sheet 9: Road Construction & Traffic Signs

Green Public Procurement Sheet 10: Food & Catering Services

# Green Public Procurement Sheet 1: Copying and Graphic Paper

## Key Environmental Impacts

Forest destruction and potential loss of biodiversity

Emissions to air and water during pulp and paper production

Energy and water consumption during production

Chemical consumption during production

Waste generation during production such as rejects and sludge



## GPP Approach

- Procurement of paper based on post-consumer recovered paper fibres (recycled paper) or paper based on legally and/or sustainably harvested virgin fibre
- Procurement of paper produced through process characterised by low energy consumption and emissions
- Avoidance of certain substances in paper production and bleaching

Copying and Graphic Paper for normal office use	Paper for Professional Purposes
<b>Subject Matter</b>	
Purchase of recycled office paper made from 100% recovered paper fibres	Purchase of recycled paper made from 75% recovered paper fibres
<b>Specifications</b>	
<p>1. Paper must be made from 100% recovered paper fibres. This includes both post-consumer recycled fibres and pre-consumer recycled fibres from paper mills, also known as broke. Post consumer recycled fibres may come from consumers, offices, printing houses, bookbinders or similar.</p> <p><b>Verification:</b> All products carrying any type I eco label, such as the EU Ecolabel can serve as means of proof if it is specified that the paper is made from 100% recovered paper fibres. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.</p>	<p>1. Paper must be made from at least 75% recovered paper fibres. This includes both post-consumer recycled fibres and pre-consumer recycled fibres from paper mills, also known as broke. Post consumer recycled fibres may come from consumers, offices, printing houses, bookbinders or similar.</p> <p><b>Verification:</b> All products carrying any type I eco label, such as the EU Ecolabel can serve as means of proof if it is specified that the paper is made from 100% recovered paper fibres. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.</p>
2. The paper must be at least Elementary Chlorine Free (ECF). Totally Chlorine Free (TCF) will also be accepted.	2. The paper must be at least Elementary Chlorine Free (ECF). Totally Chlorine Free (TCF) will also be accepted.

<p><b>Verification:</b> All products carrying the EU Ecolabel will be deemed to comply. Other type I ecolabels fulfilling the above criterion can also be accepted. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.</p>	<p><b>Verification:</b> All products carrying the EU Ecolabel will be deemed to comply. Other type I ecolabels fulfilling the above criterion can also be accepted. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.</p>
<p>3. In order to guarantee the suitability of the paper offered for office machines, a sample of the product must be provided to conduct quality tests.</p>	<p>3. In order to guarantee the suitability of the paper offered for office machines, a sample of the product must be provided to conduct quality tests.</p>



## Green Public Procurement Sheet 2: Cleaning Products and Services

### Key Environmental Impacts

Climate change

Human health

Ecotoxicity

Eutrophication

Water consumption

Waste generation



### GPP Approach

- Use cleaning products that are effective at lower temperatures
- Avoid certain hazardous substances in the product
- Avoid phosphorus and limit biocides in the product
- Limit the overall "critical dilution volume" of the product;
- Provide information on recommended dosages
- Decrease the use of products through reviewing cleaning plans and techniques
- Improve the training of cleaning staff
- Decrease the quantity of packaging used
- Ensure the recyclability of the packaging used and the use of recycled packaging

## Cleaning Products & Services

### Subject Matter

2.1 Purchase of environmentally friendly all purpose cleaning products.

### Specifications

1. No ingredients (substances) shall be listed on the product label, in the safety data sheet (SDS) or in other relevant technical data sheets that have been identified as substances of very high concern and have been included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 (the REACH Regulation). The list of substances referred to (the candidate list) can be found at:

[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

#### **Verification:**

Products carrying a relevant type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list

2. All products must be delivered with clear dosing instructions

**Verification:** Supply of instruction documents to the contracting authority

3. Sprays containing propellants must not be used

**Verification:** Written confirmation declaring that no propellants are used

4. Products packaged as trigger sprays must be sold as part of a refillable system.

**Verification:** Written declaration confirming the trigger sprays are refillable, together with details of how to obtain refills and their prices.

### Cleaning Products & Services

#### Subject Matter

2.2 Purchase of environmentally friendly sanitary cleaning products

#### Specifications

1. No ingredients (substances) shall be listed on the product label, in the safety data sheet (SDS) or in other relevant technical data sheets that have been identified as substances of very high concern and have been included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 (the REACH Regulation). The list of substances referred to (the candidate list) can be found at:

[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

**Verification:**

Products carrying a relevant type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list

2. All products must be delivered with clear dosing instructions

**Verification:** Supply of instruction documents to the contracting authority

3. Sprays containing propellants must not be used

**Verification:** Written confirmation declaring that no propellants are used

4. Products packaged as trigger sprays must be sold as part of a refillable system.

**Verification:** Written declaration confirming the trigger sprays are refillable, together with details of how to obtain refills and their prices.

## Cleaning Products & Services

### Subject Matter

2.3 Purchase of environmentally friendly window cleaning products

### Specifications

1. No ingredients (substances) shall be listed on the product label, in the safety data sheet (SDS) or in other relevant technical data sheets that have been identified as substances of very high concern and have been included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 (the REACH Regulation). The list of substances referred to (the candidate list) can be found at:  
[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

#### Verification:

Products carrying a relevant type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list

2. All products must be delivered with clear dosing instructions

**Verification:** Supply of instruction documents to the contracting authority

3. Sprays containing propellants must not be used

**Verification:** Written confirmation declaring that no propellants are used

## Cleaning Products & Services

### Subject Matter

2.4 Purchase of environmentally friendly hand dishwashing detergent products

### Specifications

1. No ingredients (substances) shall be listed on the product label, in the safety data sheet (SDS) or in other relevant technical data sheets that have been identified as substances of very high concern and have been included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 (the REACH Regulation). The list of substances referred to (the candidate list) can be found at:  
[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

#### Verification:

Products carrying a relevant type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list

2. All products must be delivered with clear dosing instructions

**Verification:** Supply of instruction documents to the contracting authority

## Cleaning Products & Services

### Subject Matter

2.5 Purchase of environmentally friendly laundry detergents and pre-treatment stain removers

### Specifications

1. No ingredients (substances) shall be listed on the product label, in the safety data sheet (SDS) or in other relevant technical data sheets that have been identified as substances of very high concern and have been included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 (the REACH Regulation). The list of substances referred to (the candidate list) can be found at:

[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

**Verification:**

Products carrying a relevant type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list.

2. The following ingredients must not be included in the ingredients listed on the product label, in the safety data sheet or in other relevant technical data sheets:

- Phosphates

Verification: Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted, such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and any other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list.

3. The recommended dosage for a water hardness of 2.5 mmol CaCO<sub>3</sub>/l ("medium water hardness") shall not exceed the following amounts for normally soiled textiles (heavy duty detergents, colour-safe detergents) and lightly soiled textiles (low-duty detergents) respectively.

- Heavy duty laundry detergent: 17.0g/kg wash (powders/tablets) or 17.0 ml/kg wash (liquids)
- Colour-safe detergent: 17.0 g/kg wash (powders/tablets) or 17.0 ml/kg wash (liquids)
- Low duty laundry detergent: 17.0g/kg wash (powders/tablets) or 17.0 ml/kg wash (liquids)

If recommendations for both prewash and subsequent wash apply, the total recommended dosage (prewash and subsequent wash) shall comply with the maximum dosage.

**Verification:** The recommended dosage for medium water hardness must be provided for normally soiled textiles and lightly soiled textiles. Where the

recommended dosage is per load, this should relate to a 4.5 kg (dry textile) load for heavy duty detergents and colour safe detergents and a 2.5 kg (dry textile) load for low duty detergents.

4. All products must be delivered with clear dosing instructions

**Verification:** Supply of instruction documents to the contracting authority

#### Contract Performance Clauses

1. Information on the recommended wash temperatures should be provided for laundry detergents.

### Cleaning Products & Services

#### Subject Matter

2.6 Purchase of environmentally friendly dishwasher detergents and rinse aids

#### Specifications

1. No ingredients (substances) shall be listed on the product label, in the safety data sheet (SDS) or in other relevant technical data sheets that have been identified as substances of very high concern and have been included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 (the REACH Regulation). The list of substances referred to (the candidate list) can be found at:  
[http://echa.europa.eu/chem\\_data/authorisation\\_process/candidate\\_list\\_table\\_en.asp](http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp)

**Verification:**

Products carrying a relevant type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list.

2. The following ingredients must not be included in the ingredients listed on the product label, in the safety data sheet or in other relevant technical data sheets:
  - Phosphates

Verification: Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted, such as the provision of the ingredients listed on the product label, the safety data sheet, the manufacturer's website and any other relevant technical data sheets along with their CAS-number (where available) and a declaration that none of the listed ingredients are on the candidate list.

3. All products must be delivered with clear dosing instructions

**Verification:** Supply of instruction documents to the contracting authority

4. The cardboard packaging shall consist of  $\geq 80\%$  recycled material.

**Verification:** Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted, such as a technical dossier of the manufacturer or a test report from a recognised body.

## Cleaning Products & Services

### Subject Matter

2.7 Environmentally friendly cleaning services

### Specifications

1. Products used by the cleaning company must meet the criteria set out in sections 2.1 to 2.6 above.

**Verification:** The tenderer must supply a list of the products that will be used, together with proof of compliance with the specifications set out in sections 2.1 to 2.6.

### Contract Performance Clauses

1. After the first six months of the contract, and thereafter at the end of every year of the contract, a balance must be submitted by the contractor indicating the name and quantity of the cleaning products used. For any products not mentioned in the initial bid, the contractor shall provide the required proof of compliance with the technical specifications.

**Verification:** Reports listing the products used. The contractor should also be able to justify the cleaning frequency and range of products used.

2. All cleaning staff employed in carrying out the service must be regularly trained for their various tasks. This training should cover cleaning agents, methods, equipment and machines used; waste management and aspects of health, safety and the environment.

**Verification:** A record of these training measures (introductory/vocational training) should be kept at the disposal of the contracting authority.

3. In agreement with the contracting authority, precise work instructions on environmental protection and on health and safety standards in carrying out the service shall be produced and displayed in the buildings in a way that they can be consulted by cleaning staff at any time.

**Verification:** Displayed instructions shall be made available for inspection by the contracting authority.

# Green Public Procurement Sheet 3: IT Office Equipment

## Key Environmental Impacts

Energy consumption and CO<sub>2</sub> emissions

Air, soil and water pollution, ozone formation (smog), bioaccumulation or food chain exposure and effects on aquatic organisms due to hazardous constituents e.g. mercury content of LCD displays and flame retardants.

Negative impact on the health of employees due to noise, causing stress for those sensitive to such sounds.

Use of energy, finite resources and harmful emissions related to the production of IT products (raw material acquiring, manufacture of components)

Generation of waste material including packaging & final disposal



## GPP Approach

- Purchase energy efficient models
- Purchase products with a restricted amount of hazardous constituents and promote take back options
- Purchase products with a restricted noise level
- Design for recycling, longer life and promote take back options
- Ensure the recyclability of the packaging used
- Increase the use of recycled packaging
- Safe disposal (recycling, re-using) of final products

## Office IT Equipment

### Subject Matter

3.1 Purchase of PCs, notebooks and monitors with low environmental impacts throughout the lifecycle

### Specifications

1. All products shall meet the latest ENERGY STAR standards for energy performance, available at [www.eu-energystar.org](http://www.eu-energystar.org)

Verification: Products holding a relevant Type I ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted such as a technical dossier of the manufacturer or a test report from a recognised body (e.g a body accredited to issue test reports according to standard ISO 17025) demonstrating that the criteria are met.

2. PCs shall be designed so that:
  - The memory is readily accessible and can be changed or upgraded.

- The hard disk (or parts that perform functions of hard disk), and if available, the CD drive and/or DVD drive can be changed.

**Verification:** Products holding a relevant Type I ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.

3. Notebooks shall be designed so that the memory is easily accessible and can be changed or upgraded.

**Verification:** Products holding a relevant Type I ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.

4. The background lighting of LCD monitors shall not contain more than 3.5 mg mercury on average per lamp.

**Verification:** All products carrying the EU ecolabel will be deemed to comply. Other Type I ecolabels fulfilling the above criteria can also be accepted. Other appropriate means of proof will also be accepted. Note that after 31<sup>st</sup> December 2011 this issue will be regulated through Regulation 2011/65/EU (3.a).

5. The 'Declared A-weighted Sound Power Level' (re 1 pW) of PCs or notebooks, according to paragraph 3.2.5 of ISO 9296, measured in accordance with ISO 7779 (or equivalent standards), shall not exceed:

**For PCs:**

- 4.0 B (A) in the idle operating mode (equivalent to 40 dB (A)).
- 4.5 B (A) when accessing a hard-disk drive (equivalent to 45 dB (A)).

**Verification:** All products carrying the EU Ecolabel will be deemed to comply. Other type I Ecolabels fulfilling the above criteria can also be accepted. Other appropriate means of proof will also be accepted.

**For notebooks:**

- 3.5 B(A) in the idle operating mode (equivalent to 35 dB(A)).
- 4.0 B(A) when accessing a hard-disk drive (equivalent to 40 dB(A)).

**Verification:** Products holding a relevant Type 1 ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.

This could be a report, certifying that the levels of noise emissions have been measured in accordance with ISO 7779 and declared in accordance with ISO 9296 or equivalent standards. The report shall state the measured levels of noise emissions in both the idle operating mode and when accessing a disk drive, which shall be declared in accordance with paragraph 3.2.5 of ISO 9296 or equivalent standard.

6. User instructions and/or training courses for IT support on green management of IT products shall be supplied.

**Verification:** A copy of the instruction manual shall be supplied to the authority. These User Instructions shall then be pre-loaded onto the computer (or in the case of a monitor, supplied with the driver software) for the user to read; plus this manual shall be available for access on the manufacturer's website. Issues covered could include, for example, use of the energy-saving functions. Alternatively, a simple training course (interactive, in line with the nature of equipment), information



toolbox shall be provided.

7. Packaging

Where cardboard boxes are used, they shall be made of at least 50% recycled material. Where plastic bags or sheets are used for the final packaging, they shall be made of at least 50% recycled material or they shall be biodegradable or compostable, in agreement with the definitions provided by the EN 13432.

**Assessment and verification:** Products holding a relevant type I ecolabel fulfilling the listed criteria will be deemed to comply. Alternatively, a declaration of compliance with this criterion for the product packaging should be supplied. Only primary packaging, as defined in Directive 94/62/EC, is subject to the criterion.

8. Energy management functions shall be present on the hardware itself (for all products)

**Verification:** Products shall be accompanied by a clear description of the existence, placement and operation requirements of energy management function on hardware.

9. The tenderer shall guarantee the availability of spare parts for at least 3 years from the time that production ceases.

**Verification:** Products holding a relevant Type 1 ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof will also be accepted.

#### Award Criteria

1. Additional points will be awarded for ease of disassembly and ease of recycling plastic parts:

- Connections shall be easy to find, accessible with commonly available tools, and as standardised as possible.
- Plastic parts heavier than 25g shall have a permanent marking identifying the material, in conformity with ISO 11469: 2000 or equivalent standard.

Excluded from this criterion are extruded plastic materials and the light-guide of flat panel displays. Plastic parts shall be of one polymer or compatible polymers, except for the cover, which shall consist of no more than two types of polymer, which are separable.

**Verification:** A test report shall be submitted with the application detailing the dismantling of the personal computer. It shall include an exploded diagram of the personal computer labelling the main components as well as identifying any hazardous substances in components. It can be in written or audiovisual format. Information regarding hazardous substances shall be provided to the authority in the form of a list of materials identifying material type, quantity used and location.

## Green Public Procurement Sheet 4: Construction

### Key Environmental Impacts

The consumption of energy for heating, cooling, ventilation, hot water, and electricity, and resulting CO<sub>2</sub> emissions

The consumption of natural resources

The consumption of fresh water resources both during construction and during the use phase

Emission of substances harmful to human health and the environment during the production or disposal of building materials leading to air and water pollution

Negative health impacts on building users due to building materials containing dangerous substances

CO<sub>2</sub> emissions resulting from the transportation of construction materials and products

Waste production



### GPP Approach

- Maximise the energy performance of buildings
- Ensure high energy efficiency standards for heating, cooling, ventilation and hot water systems, and electronic devices
- Encourage the use of localised renewable energy and high efficiency cogeneration
- Include a systematic Life Cycle Approach (LCA) for building materials
- Encourage the use of sustainably harvested and produced resources and construction/insulation materials
- Encourage the installation of high-end water saving technologies and reduce the use of freshwater during the construction process.
- Encourage the use of non-toxic building materials by also building upon the availability of renewable raw materials based construction materials
- Use energy efficient vehicles for transportation and on the building site
- Apply effective supply chain management systems
- Minimise waste production and ensure proper waste management of demolition and construction waste

## Construction

### Subject Matter

Construction of new energy efficient housing or office stock, using environmentally friendly construction materials and products; or  
Renovation of housing or office building stock to high energy efficiency standards using environmentally friendly materials and products.

### Selection Criteria

#### Exclusion of certain contractors

1. Construction companies which have repeatedly acted against environmental legislation or regulations or have been found guilty of grave professional misconduct as outlined in Articles 53 and 54 of Directive 2004/17/EC and Article 45 of Directive 2004/18/EC will be excluded from the tendering procedure.

#### Experience of the architect in environmental construction

2. The architect must demonstrate sufficient experience with environmental building design. This may include reference to associated specialists e.g. engineering consultants for heating/cooling systems. Each applicant is required to submit a 2-page document outlining (past and on-going) experience in the following areas (indicative list):
  - Energy efficient and RES friendly construction design, including, if available, specific energy demand per m<sup>2</sup> including heating, cooling, lighting and ventilation for a previous construction.
  - The use of high-efficiency cogeneration
  - The use of renewable energy sources
  - The use of guaranteed performance contracts with Energy Service Companies
  - Design of air-tight and air exchange systems with heat recovery
  - Bioclimatic architecture, to achieve energy efficiency, thermal and optical comfort and good indoor air quality standards, avoiding mechanical systems e.g. light supply with daylight systems
  - Use of construction products and materials complying with environmental criteria
  - Water efficiency
  - Waste reduction

#### Technical capacity to take the necessary environmental management measures in order to ensure that the construction works are executed in an environmentally friendly way.

3. Bidders must demonstrate their technical capacity (either by having the expertise within the company or by co-operation with experts) to put in place certain environmental management measures that meet the following requirements:
  - Ensuring effective protection of fauna and flora in the building area and its surroundings (where construction takes place in an environmentally sensitive area).
  - Measures to prevent any harmful waste and hazardous substance flows that may adversely impact the area.
  - Environmental management measures aimed at minimising waste production on the site, respecting noise regulations and avoiding traffic congestion.
  - Measures to ensure energy and water efficiency

**Verification:** Possible means of proof include EMAS and ISO 14001 certificates or equivalent certificates issued by bodies conforming to Community law or the relevant European or international standards concerning certification based on environmental management standards. Other means of evidence provided by the company that can prove the required technical capacity will also be accepted.

## Energy Performance

### Specifications

1. Energy consumption standards: The overall primary energy efficiency of the building (including heating, cooling, hot water, lighting and ventilation), and therefore its associated carbon dioxide emission rates, shall be 20% lower than the maximum defined in the Building Rules i.e. shall obtain an SBEM rating of 40 or less.
2. Energy efficiency training: A training session must be given to the building manager on the energy efficient use of the building following the completion of construction/renovation works. The tenderer must outline the content of the training.

### Award criteria

1. Additional points will be awarded for: Lowest energy consumption and use of localised RES sources and/or high efficiency cogeneration. Points will be awarded on the basis of a sliding scale between the best and worst bids.

## Building Materials/Construction Products

### Specifications

#### Exclusion of certain materials

1. Tenderers must declare that the following materials/substances will not be used in the building:
  - Products which contain sulphurhexafluoride (SF<sub>6</sub>)
  - Indoor paints and varnishes with a content of solvents (volatile organic compounds (VOCs) with a boiling point of 250C maximum) higher than:
    - For wall paints: 30g/l (minus water)
    - For other paints with a spreading rate of at least 15m<sup>2</sup>/l at a hiding power of 98% opacity: 250g/l (minus water)
    - For all other products (including paints that are not wall paints and that have a spreading rate of less than 15m<sup>2</sup>/l, varnishes, wood stains, floor coatings and floor paints, and related products): 180g/l (minus water)

**Verification:** Tenderers must declare that these products/substances will not be used in the building

## Timber

2. Timber used in the building shall come from legal sources.

**Verification:** Certificates of chain of custody for the wood fibres certified as FSC, PEFC or any other equivalent means of proof, will be accepted as proof of compliance. The legal origin of the wood can also be demonstrated with a tracing system being in place. These voluntary systems may be 3rd party certified, often as part of ISO 9000 and/or ISO 14000 or EMAS management systems. If wood stems from a country that has signed a Voluntary Partnership Agreement (VPA) with the EU, the FLEGT license will serve as proof of legality. For the non-certified wood bidders shall indicate the types (species), quantities and origins, together with a declaration of legality. As such the wood shall be able to be traced throughout the whole production chain from the forest to the product. In specific cases, where the evidence provided is not considered sufficient to prove compliance with the requested technical specifications, contracting authorities may ask suppliers for further clarifications of proof.

### **Volatile Organic Compounds (VOC)**

3. The VOC emissions from the building products used must not exceed the respective values outlined in the European standard for the determination of emissions from building products EN ISO 16000-9 to -11 (see: [www.iso.org](http://www.iso.org)), or equivalent (for instance the building products must adhere to the test values set in the German AgBB scheme in order to meet the minimum requirements of the building codes for health protection with regard to VOC emissions).

**Verification:** Test report based on the outlined method in EN ISO 16000-9 to -11 or equivalent (see for instance for the German AgBB scheme (<http://www.umweltbundesamt.de/building-products/archive/AgBB-Evaluation-Scheme2008.pdf>)).

### **Award Criteria**

Additional points will be awarded for:

#### **Use of construction materials and products complying with certain environmental criteria.**

1. Tenderers must indicate the percentage of [insert relevant product types, e.g. windows, paints, insulation materials] to be used in construction (by value) that are produced in compliance with the standards underlying a Type I ecolabel according to ISO standard 14024 or provide clear and transparent information on the product performance based on type III product declarations. Additional points will be awarded in proportion to the percentages proposed.

**Verification:** Products carrying a Type I ecolabel will be deemed in compliance with these criteria. Alternatively credible documentation that the standards of a given Type I ecolabel are met, will also be accepted.

#### **Use of construction materials based on renewable raw materials**

2. Tenderers must indicate the percentage of [insert relevant product types e.g. windows, paints, insulation materials] to be used in construction (by value) that are based on renewable raw materials.

#### **Sustainable forestry sources**

3. Wood products coming from forests that are verified as being managed so as to implement the principles and measures aimed at ensuring sustainable forest management, on condition that these criteria characterize and are relevant for the product. In Europe, these principles and measures shall at least correspond to those of the Pan-European Operational Level Guidelines for Sustainable Forest Management, as endorsed by the Lisbon Ministerial Conference on the Protection of Forests in Europe (2 – 4 June 1998). Outside Europe they shall at least correspond to the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where applicable, to the criteria or guidelines for sustainable forest management as adopted under the respective international and regional initiatives (ITTO, Montreal Process, Tarapoto Process, UNEP/FAO Dry-Zone Africa Initiative).

**Verification:** Certificates of chain of custody for the wood fibres certified as FSC, PEFC or any other equivalent means of proof, will be accepted as proof of compliance. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from a recognised body will also be accepted.

### **Water saving installations**

#### **Specifications**

1. All sanitary and kitchen water facilities must be equipped with the latest water-saving technologies available on the market
  - Dual flush WCs should use a maximum of 6 litres for full flush and 3 litres for urine flush
  - Waterless urinals have to either use a biodegradable fluid or operate completely without fluid
  - Water saving devices fitted into cisterns must demonstrate a water saving of at least 30% for toilet flushing
  - Tap inserts should save at least 50% of water compared to normal tap use.

**Verification:** Tenderers must provide technical data sheets for the products to be installed that verify compliance with the specifications.

### Award criteria

Additional points will be awarded for:

1. Rainwater and grey water use: Bidders must provide a proposal on how to maximise the use of rainwater and grey-water in the water supply and return system of the building. Additional points will be awarded based on the proposals submitted. The proposals will be rated according to the following criteria:
  - Design and quality of the technology including adaptability to the building design.
  - Estimated percentage of overall water supply from rainwater and grey-water sources.
  - Maintenance costs and durability of the product (installation and maintenance costs).

### Contract Performance Clauses

1. Compulsory blower door test: Where mechanical ventilation is included in the building, the contractor must ensure that a 'Blower Door Test' is carried out. This must be repeated until the appropriate standard is achieved.
2. Book-keeping: The contractor must provide a regular book-keeping service for the first 3 years that will provide the building manager with monthly figures on energy usage for heating, cooling, hot water, lighting and ventilation
3. Transport and recycling of building materials: The contractor should set a minimum and a target level for the use of reusable containers to transport the necessary building materials to, on and from the construction site. Suppliers of building materials must set a minimum and target level for packaging waste (to be achieved for instance through a system of take back, recycle and reuse of packaging that comes with the building materials).
4. Waste management: The contractor must put appropriate measures in place to reduce and recover (reuse or recycle) waste that is produced during the demolition and construction process. It is required to have a recovery rate of at least 60% related to weight percentage segregations.

**Verification:** Proof of compliance can be provided by an Environmental Management System (EMS) such as EMAS or other evidence of equivalent environmental management measures.

# Green Public Procurement Sheet 5: Transport

## Key Environmental Impacts

Contribution to climate change via emissions of greenhouse gases

Depletion of resources (especially non-renewable fuels)

Air pollution through the emission of other exhaust gases that can cause:

- Local health (especially respiratory) and regional problems
- Damage to the environment, buildings and monuments

Noise pollution

Generation of waste lubricant, oils and tyres

Generation of waste parts and materials at end of life



## GPP Approach

- Procurement of low emission vehicles (GHG, other exhaust gases and noise)
- Reduce fuel consumption through eco-driving, tyre pressure monitoring systems and gear shift indicators
- Reduce fuel consumption by using low viscosity lubricants and low rolling resistance tyres
- Procurement of vehicles with air-conditioning systems with low GWP (Global Warming Potential) coolers
- Procurement of environmentally friendly tyres and regenerated lubricant oils
- Ensure the correct collection and management of used lubricant oils and tyres
- Encourage vehicles made with recycled/bio-materials

## Transport: Criteria for Passenger Cars and Light Duty Vehicles

### Subject Matter

5.1 Purchase or lease of low emission vehicles

### Specifications

1. **CO<sub>2</sub> emissions:** According to the vehicle technical sheet, CO<sub>2</sub> emissions for vehicles shall not exceed the following values:

Vehicle Type*	CO <sub>2</sub> g/km
Mini	110
Small	120
Compact	130

Mid	150
Large	170
High/Exclusive	270
Offroad/Family wagon	210
Small vans (N1, class I)	220
Other vans (N1, class II and class III)	220

\* See [www.cleanvehicle.eu](http://www.cleanvehicle.eu) for vehicle type examples

**Verification:** The tenderer must provide the technical sheet of the vehicle where the CO<sub>2</sub> emissions are stated.

2. **Exhaust gas emissions:** Vehicles must comply with the EURO 5 standard.

**Verification:** The tenderer must present the technical sheet of the vehicle where this information is displayed.

3. **Eco driving:** Cars/vans must be provided with information/instructions on eco driving relevant to the vehicle.

**Verification:** Tenderer must provide documentation containing the required information.

#### Award criteria

Additional points will be awarded for:

1. **Use of alternative fuels:** Vehicle is designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems)

**Verification:** The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.

2. **Noise emission levels:** Noise emissions must be lower than those established by law.

**Verification:** The tenderer must provide the technical sheet of the vehicle where this information is displayed, or the test results.

3. **Lower CO<sub>2</sub> emissions:** Lower CO<sub>2</sub> emissions than those required in the specifications.

**Verification:** The tenderer must present the technical sheet of the vehicle where the CO<sub>2</sub> emissions are stated.

#### Contract Performance Clauses (for lease contracts only)

1. **Disposal of lubricant oils and tyres:** The contractor must have provisions in place to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.

**Verification:** Contractor has contract with one or several authorised waste managers, or can provide proof of provisions in place for collection and disposal of used lubricants, oils and tyres.



## Transport: Criteria for Public Transport Vehicles (Bus Procurement)

### Subject Matter

5.2 Purchase or lease of low emission buses

### Specifications

- 1. Exhaust gas emissions:** Vehicle engines must meet the EEV (enhanced environmentally friendly vehicle) standard for emissions levels.

**Verification:** The tenderer must provide the technical documents of the vehicle where it is stated that the standard is met.

### Award Criteria

Additional points will be awarded for:

- 1. Use of alternative fuels:** Vehicle is designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems)

**Verification:** The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.

- 2. Noise emission levels:** Noise emissions must be lower than those established by law.

**Verification:** The tenderer must provide the technical sheet of the vehicle where this information is displayed, or the test results.

- 3. Lower CO<sub>2</sub> emissions:** Lower CO<sub>2</sub> emissions than those required in the specifications.

**Verification:** The tenderer must present the technical sheet of the vehicle where the CO<sub>2</sub> emissions are stated.

## Transport: Criteria for Public Transport Services

### Subject Matter

Contract for the provision of an environmentally friendly bus service

### Specifications

- 1. Exhaust gas emissions:** All vehicles used in carrying out the service must have engines meeting EURO 5 standards. Where vehicles are not certified as EURO 5 but technical after-treatment has achieved the same standard, this should be documented in the tender application.

**Verification:** The tenderer must provide the technical sheets of the vehicles where emission standards are defined. For those vehicles where a technical upgrade has achieved the EURO IV standard, the measures must be documented and included in the tender application and this must be approved by an independent third party.

- 2. Noise emissions:** Noise level of the vehicles to be used in carrying out the service must be lower than the noise levels established by law.

**Verification:** The tenderer must provide a list of all the vehicles that will be used to carry out the service with the noise levels for each one and the average noise emissions.

### Award Criteria

Additional points will be awarded for:

- 1. Exhaust gas emissions:** Proportion of vehicles to be used in carrying out the service complying with stricter EURO standards (EUROV, EEV, and EURO VI where applicable)

**Verification:** The tenderer must provide a list of all the vehicles to be used in the service with their standard and their respective technical sheets where emission standards are defined.

- 2. Use of alternative fuels:** Vehicle is designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems)

**Verification:** The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.

**Contract Performance Clauses**

- 1. New vehicles:** All vehicles purchased new after the award of the contract and used in carrying out the service during the contract period must comply with the EEV standard (where applicable) and be fitted with TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the passenger door.

**Verification:** The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.

- 2. Fuel consumption data:** The contractor must provide data to the authority stating the amount of fuel consumed over a set period in carrying out the service (petrol, diesel, biofuels, CNG, electricity...). Contractors must also implement and report on measures that will improve this fuel consumption over time.

**Verification:** The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.

- 3. Training of drivers:** All drivers involved in carrying out the service for the duration of the contract period must be trained by a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.

**Verification:** The contractor will provide a list of the drivers who have carried out the service and their certificates of eco-driving training.

- 4. Disposal of lubricant oils and tyres:** The contractor has provisions in place for the duration of the contract period to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.

**Verification:** Contractor has contract with one or several authorised waste managers for the contract period, or can provide proof of provisions used for collection and disposal of used lubricant oils and tyres.

**Transport: Criteria for Waste Collection Trucks**

**Subject Matter**

5.3 Purchase or lease of low emission waste collection trucks

**Specifications**

- 1. Exhaust gas emissions:** Vehicle engines must be certified as meeting the EEV standard for emissions.

**Verification:** The tenderer must provide the technical sheets of the vehicles where emission standards are defined.

- 2. Noise emissions:** Noise emissions for the vehicle including any compaction equipment are below 102 dB (A) measured according to Directive 2000/14/EC.

**Verification:** The tenderer must present the technical sheet of the vehicle where this information is displayed or the test results.

#### Award Criteria

Additional points will be awarded for:

1. **Exhaust gas emissions:** The vehicle is certified as meeting EURO 5 standard for emissions (where applicable)

**Verification:** The tenderer must provide the technical sheet of the vehicle where emission standards are defined.

2. **Use of alternative fuels:** Vehicle is designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems)

**Verification:** The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.

#### Transport: Criteria for Waste Collection Services

#### Subject Matter

5.4 Contract for the provision waste collection services in an environmentally friendly manner

#### Specifications

1. **Exhaust gas emissions:** All vehicles used in carrying out the service must have engines meeting EURO 5 standards. Where vehicles are not certified as EURO IV but technical after-treatment has achieved the same standard, this should be documented in the tender application.

**Verification:** The tenderer must provide the technical sheets of the vehicles where emission standards are defined. For those vehicles where a technical upgrade has achieved the EURO IV standard, the measures must be documented and included in the tender application and this must be approved by an independent third party.

2. **Noise emissions:** Noise emissions for the vehicle including any compaction equipment are below 102 dB (A) measured according to Directive 2000/14/EC.

**Verification:** The tenderer must provide a list of all the vehicles that will be used to carry out the service with the noise levels for each one and the average noise emissions. After awarding the contract the contracting authority reserves the right to ask for the appropriate documents to check the information.

#### Award Criteria

Additional points will be awarded for:

1. **Exhaust gas emissions:** Proportion of vehicles to be used in carrying out the service complying with stricter EURO standards (EURO V, EEV, and EURO VI where applicable)

**Verification:** The tenderer must provide a list of all the vehicles to be used in the service with their standard and their respective technical sheets where emission standards are defined.

2. **Use of alternative fuels:** Vehicle is designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems)

**Verification:** The tenderer must provide the technical sheet of the vehicle where these technical or fuel technology specifications are displayed.

#### Contract Performance Clauses

1. **New vehicles:** All vehicles purchased new after the award of the contract and used in carrying out the service during the contract period must comply with the EEV standard (where applicable) and be fitted with TPMS (Tyre pressure monitoring system). The vehicle's exhaust pipe must not be located on the same side as the

passenger door.
<b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.
<b>2. Fuel consumption data:</b> The contractor must provide data to the authority stating the amount of fuel consumed over a set period in carrying out the service (petrol, diesel, biofuels, CNG, electricity...). Contractors must also implement and report on measures that will improve this fuel consumption over time.
<b>Verification:</b> The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.
<b>3. Training of drivers:</b> All drivers involved in carrying out the service for the duration of the contract period must be trained by a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.
<b>Verification:</b> The contractor will provide a list of the drivers who have carried out the service and their certificates of eco-driving training.
<b>4. Disposal of lubricant oils and tyres:</b> The contractor has provisions in place for the duration of the contract period to collect and dispose of used lubricant oils and tyres, minimising the environmental impact and ensuring proper treatment of these waste fractions.
<b>Verification:</b> Contractor has contract with one or several authorised waste managers for the contract period, or can provide proof of provisions used for collection and disposal of used lubricant oils and tyres.

## Noise level limits for vehicles

The noise level measured according to Directive 2007/34/EC shall not exceed the following limits:

Vehicle categories	Engine power	dB (A)
<b>Vehicles intended for the carriage of passengers, and comprising not more than nine seats including the driver's seat (M1)</b>		74 (1)(3)
<b>Vehicles intended for the carriage of passengers and equipped with more than nine seats, including the driver's seat and having a maximum permissible mass &gt; 3,5 t and (M2 and M3)</b>	< 150kW	78
	150 kW	80 (2)
<b>Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat (M2) and vehicles intended for the carriage of goods (N1) with a maximum permissible mass &lt; 2 t:</b>		76 (1)
<b>Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat (M2) and vehicles intended for the carriage of goods (N1) with a maximum permissible mass <math>2 \geq t &lt; 3,5</math>:</b>	< 75 kW	77 (2)
	75 $\geq$ kW < 150	78 (2)
	$\geq 150$	80 (2)
<b>Vehicles intended for the carriage of goods and having a maximum permissible mass &gt; 3,5 t (N2 and N3)</b>		

However:

(1) The limit values are increased by 1 dB (A) if they are equipped with a direct injection diesel engine.

(2) For vehicles with a maximum permissible mass of over two tonnes designed for off-road use, the limit values are increased by 1 dB (A) if their engine power is less than 150 kW and 2 dB (A) if their engine power is 150 kW or more.

(3) Vehicles equipped with a manually operated gear box having more than four forward gears and with an engine developing a maximum power exceeding 140 kW/t and whose permissible maximum power/maximum mass ratio exceeds 75 kW/t, the limit values are increased by 1 dB (A) if the speed at which the rear of the vehicle passes the line BB& prime in third gear is greater than 61 km/h.

## Green Public Procurement Sheet 6: Furniture

### Key Environmental Impacts

Loss of biodiversity, soil erosion and degradation as a result of unsustainable forest management and illegal logging

Landscape impact from mining activities

Depletion of resources due to the use of non-renewable resources such as metals and oil/natural gas for plastics

CO<sub>2</sub> and other emissions as a result of energy consumption in the production of several materials.

Eutrophication of surface and ground waters as a result of the use of hazardous substances that can be released during production, use or disposal

VOC emissions as a result of the use of organic solvents

Waste and packaging waste due to packaging and early replacement of furniture due to a lack of reparability options, low durability, ergonomics or furniture not fit for purpose.



### GPP Approach

- Procure timber from legal and sustainably managed forests
- Use materials made partly or totally from recycled materials and/or renewable materials (such as wood)
- Limit the organic solvent content and VOC emissions in products, adhesives and surface treatment substances
- Avoid certain hazardous substances in materials production and surface treatment
- Ensure recyclability and separability of packaging materials and furniture parts and the use of packaging materials based on renewable raw materials
- Procure durable, fit for use, ergonomic, easy to disassemble, repairable and recyclable furniture

## Furniture

### Subject Matter

6.1 Purchase of furniture produced using environmentally friendly materials and processes.

### Specifications

#### Wood and wood based materials

1. All wood and wood-based materials shall come from legally sourced timber.

**Verification:** Certificates of chain of custody for the wood certified as FSC1, PEFC2 or any other equivalent will be means of proof. The legal origin of wood can also be demonstrated with the use of a tracing system. These voluntary systems may be 3<sup>rd</sup> party certified, often as part of ISO 9000 and/or ISO 14000 or EMAS management systems. If wood stems from a country that has signed a Voluntary Partnership Agreement (VPA) with the EU, the FLEGT licence may serve as proof of legality. For the non-certified wood bidders shall indicate the types (species), quantities and origins of the wood used in production, together with a declaration of their legality. As such the wood shall be able to be traced throughout the whole production chain from the forest to the product. In specific cases, where the evidence provided is not considered sufficient to prove compliance with the requested technical specifications, contracting authorities may ask suppliers for further clarifications of proof.

#### Plastic parts

2. All plastic parts  $\geq$  50g shall be marked for recycling according to ISO 11469 or equivalent and must not contain additions of other materials that may hinder their recycling.

**Verification:** Tenderers must provide a description of the plastic materials that are present and the quantities used, the way in which they are labelled and how they are attached to one another or to other materials. Products carrying a Type I ecolabel fulfilling the selected criteria will be deemed to comply.

#### Surface coating of wood, plastic and/or metal parts

3. The products used for surface coating shall:
  - Not contain hazardous substances that are classified according to Directive 1999/45/EC as carcinogenic (R40, R45, R49), harmful to the reproductive system (R60, R61, R62, R63) mutagenic (R46, R68), toxic (R23, R24, R25, R26, R27, R28, R51), allergic when inhaled (R42), harmful to the environment (R50, R50/53, R52, R52/53, R53), or cause heritable genetic damage (R46), danger of serious damage to health by prolonged exposure (R48) or possible risks of irreversible effects (R68).
  - Not contain more than 5% by weight of volatile organic compounds (VOCs).
  - For phthalates: no use is allowed of phthalates that at the time of application fulfil the classification criteria of any of the following risk phases or combinations thereof: R60, R61, R62, in accordance with Directive 67/548/EEC and its amendments.
  - Not contain azidine
  - Not contain Chromium (VI) compounds.

**Verification:** Tenderers must present a list with all surface treatment substances used for each material present in the furniture and their security data sheet or equivalent documentation demonstrating compliance with the above criteria. Furniture carrying a Type I ecolabel will be deemed to comply.

**Adhesives and glues**

4. The VOC content of adhesives used in the assembly of furniture shall not exceed 10% by weight.

**Verification:** Tenderers must present a list with all adhesives used in the assembly of furniture and their security data sheet or equivalent documentation where the amount of VOCs is displayed demonstrating compliance with the above criteria. Furniture carrying a Type I ecolabel will be deemed to comply.

**Packaging materials**

5. Packaging must consist of readily recycled material, and/or materials taken from renewable resources or be a multi-use system.
6. All packaging materials shall be easily separable by hand into recyclable parts consisting of one material (e.g. cardboard, paper, plastic, textile).

**Verification:** A description of the product packaging shall be provided together with a corresponding declaration of compliance with these criteria.

**Durability, reparability, fitness for use and ergonomics**

7. Furniture must meet [insert relevant national/international quality standards] or equivalent regarding serviceability (e.g. safety, abrasion resistance, tensile strength, light fastness, rub fastness, deformation by compression, ergonomics).

**Verification:** Tenderers must provide appropriate documentation to demonstrate compliance with these standards.

**Award criteria**

Additional points will be awarded for:

**Raw material/Sustainable forest management**

1. The percentage of the final product made of wood, wood fibres or wood particles stemming from forests that are verified as being sustainably managed. In Europe, these principles and measures shall at least correspond to those of the Pan-European Operational Level Guidelines for Sustainable Forest Management, as endorsed by the Lisbon Ministerial Conference on the Protection of Forests in Europe (2 to 4 June 1998). Outside Europe they shall at least correspond to the UNCED Forest Principles (Rio de Janeiro, June 1992) and, where applicable, to the criteria or guidelines for sustainable forest management as adopted under the respective international and regional initiatives (ITTO, Montreal Process, Tarapoto Process, UNEP/FAO Dry-Zone Africa Initiative).

**Verification:** Certificates of chain of custody for the wood certified as FSC, PEFC or any other sustainable forest management standard will be accepted as proof of compliance. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from an independent body will also be accepted.

**Recycled materials content**

2. Percentage by weight of recycled content of wood-based materials, plastic and/or metals in the final piece of furniture.

**Verification:** Tenderers must provide appropriate documentation where the recycled content percentage by weight is stated.

**Textiles**

3. The products shall comply with (core criteria for textiles)

**Verification:** All products carrying the EU ecolabel for textiles or a national or private label fulfilling the listed criteria will be deemed to comply. Any other appropriate means of proof, such as a technical dossier of the manufacturer or a test report from an independent body will also be accepted.



## Green Public Procurement Sheet 7: Indoor lighting

### Key Environmental Impacts

Energy consumption, in all phases, but especially the use phase of indoor lighting

Potential pollution of air, land and water during the production phase

Use of resources and hazardous materials

Generation of waste (hazardous and non-hazardous)



### GPP Approach

- At design stage, ensure new lighting installations have low power density meeting visual task requirements
- Purchase replacement lamps with high lamp efficacy
- Use lighting controls to further reduce energy consumption
- Encourage the use of dimmable ballasts where circumstances allow
- At installation stage, ensure system works as intended, in an energy efficient way
- Promote lamps with a lower mercury content
- Reuse or recover installation waste

This sheet covers procurement actions for indoor lighting. For the purposes of these criteria, indoor lighting is defined as covering lamps, luminaires (light fittings) and lighting controls installed inside buildings. The criteria do not cover the following specialist types of lighting:

- Coloured lighting
- Display lighting for museums and art galleries
- Emergency escape lighting
- External lighting of any type
- Illuminated signs
- Lighting fixed to machinery or equipment
- Lighting for plant growth
- Lighting for televised sport
- Lighting for visually impaired persons with special lighting needs
- Lighting of monuments or historic buildings that have not been converted for commercial use
- Specialist medical lighting to carry out examination or surgery, for example in hospitals, medical centres, or doctors' and dentists' surgeries
- Stage lighting in theatres and TV studios

Replacement lamps form the majority of regular procurement, and criteria have been proposed for energy efficiency, lamp lifetime, mercury content of fluorescent lamps, hazardous chemical content, and packaging. Different criteria are given for replacement lamps and lamps in new installations, in order to minimise the need to replace fittings. However in some exceptional circumstances, changes in light fitting may be required when replacement lamps are not available for the existing fittings. This is typically the case of incandescent fittings where compact fluorescent lamps with integrated control gear might be longer than the incandescent lamps which they are meant to replace and not fit in the existing luminaire.

Three sets of EU GPP criteria are proposed:

- a) for purchasing of resource and energy efficient lamps
- b) design of a new lighting system or renovation of the existing lighting system
- c) installation work

Lamps	
Subject Matter	
7.1 Purchase of resource and energy efficient lamps	
Specifications	
1. Replacement lamps for existing luminaires shall have a lamp luminous efficacy equal to or greater than the minimum efficacy of the relevant energy class given in the table below:	
Type of lamp	Relevant energy class
Tungsten halogen lamps	C
Compact fluorescent lamps without integral ballast	B
Globe shaped, pear shaped, reflector type or chandelier type compact fluorescent lamps with integral ballast	B
All lamps other than halogen lamps with colour rendering index $R_a \geq 90$	B
All other compact fluorescent lamps with integral ballast	A
15W T8 tubular fluorescent lamps and miniature tubular fluorescent lamps	B
Circular lamps	B
Other tubular fluorescent lamps	A
All other lamps including LEDs and discharge lamps	A
<p>Note: The latest definition of energy efficiency class should be used. Energy efficiency is currently defined in Annex IV to Commission Directive 98/11/EC.</p> <p><b>Verification:</b> Lamp label of the specified energy class or better. Products holding a Type I ecolabel will be deemed to comply, provided that this ecolabel fulfils the requirements listed above. Other appropriate means of proof will be accepted such as manufacturer's lamp efficacy statement (lumens per Watt) and a calculation showing that it equals or exceeds the minimum value for the stated energy class.</p>	

2. Lamps for new and renovated installations shall have a lamp luminous efficacy equal to or greater than the minimum efficacy of the relevant energy class given in the table below:

Type of lamp	Relevant energy class
All lamps with colour rendering index $Ra \geq 90$ (where this is required for the activities being carried out in the building)	B
All other lamps	A

Note: The latest definition of energy efficiency class should be used. Energy efficiency is currently defined in Annex IV to Commission Directive 98/11/EC.

**Verification:** Lamp label of the specified energy class or better. Products holding a Type I ecolabel will be deemed to comply, provided that this ecolabel fulfils the requirements listed above. Other appropriate means of proof will be accepted such as manufacturer's lamp efficacy statement (lumens per Watt) and a calculation showing that it equals or exceeds the minimum value for the stated energy class.

3. Lamps for new and renovated installations, and replacement lamps in existing installations, shall have a lifetime not less than that given in the table below:

Type of lamp	Lamp life (hours)
Tungsten halogen lamps	2000
Globe shaped, pear shaped, reflector type of chandelier type compact fluorescent lamps	6000
All other compact fluorescent lamps	10000
Circular lamps	7500
T8 tubular fluorescent lamps with electromagnetic ballasts (existing installations only)	15000
Other tubular fluorescent lamps	20000
HID non-directional lamps (primary burning position)	12000
HID directional lamps (primary burning position)	9000
Retrofit LEDs with integrated control gear	15000
Other LEDs	20000

**Verification:** Products holding a Type I ecolabel shall be deemed to comply, provided that this ecolabel fulfils the requirements listed above. Other appropriate means of proof will be accepted such as the result of lamp life testing according to the test procedure in EN 50285 (except for HID lamps and LEDs or equivalent)

4. Fluorescent lamps for new and renovated installations, and replacement lamps in existing installations shall have a mercury content not greater than that given in the table below:

Type of lamp	Mercury content (mg/lamp)
Compact fluorescent lamps, wattage less than 30W	2.5
Compact fluorescent lamps, wattage 30W or over	3
T5 tubular fluorescent lamps, lifetime less than 25000 hours	2.5
T5 lamps, lifetime 25000 hours or more	4
T8 tubular fluorescent lamps, wattages less than 70W, lifetime less than 25000 hours	3.5
T8 tubular fluorescent lamps, wattage 70W or over	5
T8 lamps, lifetime 25000 hours or more	5

Note: Circular lamps are not covered by this criterion

**Verification:** According to the Ecodesign Directive (2009/125/EC) and Commission Regulation EC 245/2009, Annex III, mercury content is to be specified in product information on freely accessible websites and in other forms that are deemed appropriate. A copy of the layout of the packaging and a link to the manufacturer's website where the mercury content is specified can be requested as verification.

5. Requirement concerning lamps for new and renovated installations, and replacement lamps in existing installations: packaging. Laminates and composite plastics shall not be used. Where cardboard and corrugated paper boxes are used, they shall be made of at least 50% post-consumer recycled material. Where plastic materials are used, they shall be made of at least 50% post-consumer recycled material.

**Verification:** Products holding a Type I ecolabel which fulfils the above requirements will be deemed to comply. Other appropriate means of proof will be also be accepted, such as written evidence from the tenderer that the above clause is met.

#### Award criteria

1. Credit will be awarded if lamp luminous efficacies are at least 110% of the minima given in the relevant table for criterion 1 above.

**Verification:** Manufacturer's lamp efficacy statement (lumens per Watt) and a calculation showing that it is at least 110% of the minimum value for the stated energy class.

2. Credit will be awarded if lamp lifetime is at least 120% of the minimum given in the table for criterion 2 above.

**Verification:** Result of lamp life testing according to the procedure in EN 50285 or equivalent, together with a calculation showing that the lamp life is at least 120% of the specified minimum value for that lamp type.

3. Credit will be awarded if lamp mercury content is at most 80% of the maximum given in the table for criterion 3 above.

**Verification:** Manufacturer's statement of lamp mercury content and a calculation showing that it is at most 80% of the specified maximum value for that lamp type.

## Design for Indoor Lighting

### Subject Matter

7.2 Resource and energy efficient design of new lighting systems or renovation of the existing lighting system

### Selection Criteria

1. Where a new lighting system is being designed, the tenderer shall demonstrate that the design will be undertaken by personnel with at least three years experience in lighting design and/or having a suitable professional qualification in lighting engineering or membership of a professional body in the field of lighting design.

**Verification:** The tenderer shall supply a list of the persons responsible for the project, including managerial staff, indicating educational and professional qualifications and relevant experience. This should include persons employed by subcontractors where the work is to be sub-contracted. The contractor shall also supply a list of lighting schemes the tenderer has designed over the last three years

### Specifications

1. Where lighting is to be installed throughout a building, the maximum lighting power consumed in the whole building, divided by its total floor area, must not exceed the following values:

Type of building	Lighting power density W/m <sup>2</sup>
Car park	2.5
Court	14
Exhibition space, museum	9
Fire station	12
Further education	13
Hospital	12
Library	12
Office (mainly cellular)	13
Office (mainly open plan)	11
Police station	14
Post office	14
Prison	9
Public hall	9
Residential	11
Residential (communal spaces only)	6
School	8
Sports centre	9
Town hall	13

**Verification:** A calculation provided by the lighting designer showing the total power consumed by the lighting, including lamps, ballasts, sensors and controls, divided by the total floor area of all the indoor spaces in the building. The lighting designer should also show that the lighting meets the relevant performance standards in EN 12464-1, equivalent national standards or best practice guides, or those set by the public authority. Depending on the type of space and its requirements, these may include illuminance, uniformity, control of glare, colour rendering and colour appearance.

2. Where lighting is to be installed in an individual space or part of the building, the maximum lighting power consumed in the space, divided by its total floor area and by its illuminance in units of 100 lux, must not exceed the following values:

Type of Space	Normalised lighting power density (W/m <sup>2</sup> /100 lux)
Bedrooms	7.5
Canteens	3.5
Car parks	2.2
Circulation inc. lifts, stairs	3.2
Conference rooms	2.8
Gyms	2.8
Halls	2.8
Hospital wards and examination rooms	4
Kitchens (domestic)	5
Kitchens (restaurants)	2.8
Laboratories	2.8
Libraries	3.2
Lounges – large area	6
Lounges – small area	7.5
Offices (open plan)	2.3
Offices (cellular)	3
Plant rooms	3.2
Post rooms/switchboards	3.2
Prison cells	4
Reception	4
Rest rooms, toilets, bathrooms	5
Retail	3.5
School classrooms	2.3
Store rooms	3.2
Waiting rooms	3.2

**Verification:** The lighting designer shall provide a calculation showing the total power consumed by the lighting, including lamps, ballasts, sensors and controls, divided by the total floor area of the space, and by one hundredth of the illuminance in the space. Thus if the illuminance were 500 lux, the lighting power would be

divided by the floor area and by 5.

The illuminance used in the calculation shall be the recommended illuminance in EN 12464-1 or equivalent national standard, or the installed maintained illuminance if it is lower. If EN 12464-1, or the equivalent national standard, does not give a recommendation for the type of space, the installed maintained illuminance shall be used.

For stairwells, the total floor area may include the area of the risers on the stairs as well as horizontal surfaces.

For unusually small spaces, the contracting authority may increase the target power densities, or compliance with the criterion need not be enforced.

3. Design and installation of lighting controls.

- Lighting in infrequently occupied spaces to be controlled by occupancy sensors which turn off the lighting after the space becomes unoccupied, unless this would endanger safety or security.
- Lighting in spaces which are unoccupied at night or at weekends, and where the lighting could be left on by mistake, to be fitted with either time switches or occupancy sensors to switch off the lighting after the space becomes unoccupied at night or at weekends.
- Lighting in spaces with side windows to be controlled in rows parallel to the windows, so that rows nearer to the windows can be switched off separately.
- Lighting in offices, conference rooms, school classrooms and laboratories to be controllable by the occupants using accessible switches in convenient locations.
- Lighting in daylight circulation areas and reception areas to be controlled by automatic daylight linked control (either switching or dimming).

**Verification:** The lighting designer shall provide a schedule showing the lighting controls to be installed in each space, with product descriptions or manufacturers' datasheets showing their operation.

**Award criteria**

1. In spaces where dimming would be beneficial, additional credits will be awarded in proportional to the overall proportion of lighting power in such spaces that is dimmable. To count as dimmable, lighting has to be controllable automatically so that early in the life of the installation, when lamps and luminaires are clean and bright, the lighting can be dimmed to provide the required maintained illuminance; and if the space is daylight, automatic daylight linked dimming is to be provided.

**Verification:** The lighting designer shall provide a calculation showing the installed lighting power of the entire installation (including that consumed by lamps, ballasts, sensors and controls) when those parts of the lighting that can be dimmed are fully dimmed, divided by the installed lighting power when all lamps are at full light output.

2. Credit will be awarded if power densities are less than 90% of those given in the table for criterion 2 above, or alternatively if normalised power densities are less than 90% of those given in the table for criterion 3 above.

**Verification:** Calculation as specified in the relevant criterion above.

## Installation of Indoor Lighting

### Subject matter

7.3 Resource and energy efficient installation of new lighting systems or renovation of the existing lighting system

### Selection Criteria

1. Where a new or renovated lighting system is being installed, the tenderer shall demonstrate that the installation will be undertaken by personnel with at least three years experience in installation of lighting systems and/or having a suitable professional qualification in electrical or building services engineering, or membership of a professional body in the field of lighting.

**Verification:** The tenderer shall supply a list of the persons responsible for the project, including managerial staff, indicating educational and professional qualifications and relevant experience. This should include persons employed by subcontractors where the work is to be sub-contracted. The tenderer shall also supply a list of lighting schemes the contractor has installed over the last three years.

### Specifications

1. The tenderer shall provide the following for new or renovated lighting installations:
  - Disassembly instructions for luminaires
  - Instructions on how to replace lamps, and which lamps can be used in the luminaires without increasing the stated power densities
  - Instructions on how to operate and maintain lighting controls
  - For occupancy sensors, instructions on how to adjust their sensitivity and time delay, and advice on how best to do this to meet occupant needs without excessive increase in energy consumption
  - For daylight linked controls, instructions on how to recalibrate and adjust them, for example to take into account changes to room layout.
  - For time switches, instructions on how to adjust the switch off times, and advice on how best to do this to meet occupant needs without excessive increase in energy consumption

**Verification:** The tenderer is to provide written instructions to the contracting authority

2. The tenderer shall implement appropriate environmental measures to reduce and recover the waste that is produced during the installation of a new or renovated lighting system. All waste lamps and luminaires and lighting controls shall be separated and sent for recovery in accordance with the WEEE directive.

**Verification:** The tenderer shall provide a description setting out how the waste is to be separated, recovered or recycled.

### Contract Performance Clauses

1. The contractor shall ensure that new or renovated lighting installations and controls are working properly and using no more energy than is required.
  - For occupancy sensors, sensitivity and time delay shall be set to appropriate levels to meet occupant needs without excessive energy consumption
  - Occupancy sensors shall be checked to ensure that they are working properly and are sensitive enough to detect typical occupant movements
  - Daylight linked controls shall be calibrated to ensure that they switch off the lighting when daylight is adequate
  - Dimming controls shall be calibrated to ensure that they maintain the combined level of daylight and electric light to that required in the space



- Time switches shall be set to appropriate switch off times to meet occupant needs without excessive increase in energy consumption
- The wiring of occupant control switches and dimmers shall be checked to ensure that they control appropriate areas within the room

If following occupation of the space, the lighting controls do not appear to meet all the above requirements, the contractor shall adjust and/or recalibrate the controls so that they do.

**Verification:** Statement by the contractor that the relevant adjustments and calibrations have been carried out.

2. The contractor shall ensure that the lighting equipment (including lamps and luminaires and lighting controls) is installed exactly as specified in the original design.

**Verification:** Schedule of installed lighting equipment with appended manufacturers' invoices or delivery notes, and confirmation that the equipment is as originally specified.

**Note:** This contract performance clause is intended to eliminate the substitution of inferior lighting products at the installation stage. Where substitution is inevitable because the originally specified products are unavailable, the contractor shall provide a replacement schedule and calculation showing that the installation with the substituted products still complies with the relevant lighting design criteria above.

## Green Public Procurement Sheet 8: Street Lighting & Traffic Signals

### Key Environmental Impacts

Energy consumption, in all phases, but especially the use phase of street lighting and traffic signals

High energy consumption from the use of incandescent bulbs in traffic signals

Use of natural resources and materials and generation of waste (hazardous and non-hazardous)

Potential pollution of air, land and water due to the use of hazardous materials e.g. mercury

Light pollution from street lighting



### GPP Approach

- Purchase lamps with high lamp efficacy
- Purchase efficient ballasts
- Promote the purchase of lighting systems with a low energy consumption for the light provided
- Promote the use of LEDs in traffic signals
- Encourage the use of dimmable ballasts where circumstances allow
- Promote lamps with a lower mercury content
- Promote the use of luminaires that limit light emitted above the horizon

These EU GPP criteria cover the units used for street lighting and traffic signalling. Poles, building mounts, or any other type of support and the required fixing mounts are not covered here (see Construction GPP).

### **Street Lighting**

For the purpose of these EU GPP criteria a public street light will be defined as a:

“Fixed lighting installation intended to provide good visibility to users of outdoor public traffic areas during the hours of darkness to support traffic safety, traffic flow and public security”

This is derived from EN 13201 and does not include tunnel lighting, private car park lighting, commercial or industrial outdoor lighting, sports fields or installations for flood lighting (for example monument, building or tree lighting). It does include functional lighting of pedestrian and cycle paths as well as roadway lighting.

Replacement lamps form the majority of regular procurement, and in the replacement lamps criteria of this GPP specification, only high intensity discharge lamps for street lighting are considered. In particular high pressure sodium and metal halide lamps are the focus of the lamp efficacy criteria. These are both used in street lighting, but for different kinds of applications, each with its own advantages. For example, metal halides are best suited for clear white illumination, for example in city centre streets, where the light gives the true colours of objects around it, whereas high pressure sodium lamps are well suited to general street lighting, with their yellow colour which has the advantage of attracting fewer insects and thereby requiring less maintenance and cleaning. They also have long operational times, from three to six years.

## Street Lighting Equipment

### Subject Matter

8.1 Purchase of high efficiency lighting equipment (lamps, ballasts, luminaires)

### Specifications

1. High Pressure Sodium lamps with a colour rendering index  $R_a < 60$  shall have at least the following luminous efficacy:

Nominal Lamp Wattage (W)	Rated Lamp Efficacy (lm/W) - clear	Rated Lamp Efficacy (lm/W) - coated
$W \leq 45$	$\geq 62$	$\geq 60$
$45 < W \leq 55$	$\geq 80$	$\geq 70$
$55 < W \leq 75$	$\geq 91$	$\geq 82$
$75 < W \leq 105$	$\geq 105$	$\geq 95$
$105 < W \leq 155$	$\geq 114$	$\geq 107$
$155 < W \leq 255$	$\geq 125$	$\geq 120$
$255 < W$	$\geq 138$	$\geq 133$

Lamps that meet the above specification shall be purchased for existing street lighting systems where the existing system permits the use of lamps that meet these standards. All new systems shall include fittings for lamps that meet the above specification. High pressure sodium lamps designed to operate on high pressure mercury ballasts are exempted.

**Verification:** The tenderer shall provide the technical specification of the lamp or a written declaration to demonstrate this criterion is met.

2. Metal Halide lamps with a colour rendering index  $R_a < 80$  shall have at least the following luminous efficacy:

Nominal Lamp Wattage (W)	Rated Lamp Efficacy (lm/W) - clear	Rated Lamp Efficacy (lm/W) - coated
$W \leq 55$	$\geq 85$	$\geq 80$
$55 < W \leq 75$	$\geq 100$	$\geq 85$
$75 < W \leq 105$	$\geq 105$	$\geq 90$
$105 < W \leq 155$	$\geq 110$	$\geq 95$
$155 < W \leq 255$	$\geq 100$	$\geq 92$
$255 < W$	$\geq 92$	$\geq 100$

Lamps that meet the above specification shall be purchased for existing street lighting systems where the existing system permits the use of lamps that meet these standards. All new systems shall include fittings for lamps that meet the above specification.

**Verification:** The tenderer shall provide the technical specification of the lamp or a written declaration to demonstrate this criterion is met.

3. Metal Halide lamps with a colour rendering index  $Ra \geq 80$  shall have at least the following luminous efficacy:

Nominal Lamp Wattage (W)	Rated Lamp Efficacy (lm/W) - clear	Rated Lamp Efficacy (lm/W) - coated
$W \leq 55$	$\geq 85$	$\geq 65$
$55 < W \leq 75$	$\geq 94$	$\geq 70$
$75 < W \leq 105$	$\geq 95$	$\geq 75$
$105 < W \leq 155$	$\geq 96$	$\geq 75$
$155 < W \leq 255$	$\geq 97$	$\geq 80$
$255 < W$	$\geq 98$	$\geq 80$

Lamps that meet the above specification shall be purchased for existing street lighting systems where the existing system permits the use of lamps that meet these standards. All new systems shall include fittings for lamps that meet the above specification.

**Verification:** The tenderer shall provide the technical specification of the lamp or a written declaration to demonstrate this criterion is met.

4. Ballasts for high intensity discharge lamps shall have the following minimum efficiency:

Nominal Lamp Wattage (W)	Minimum ballast efficiency ( $\eta_{\text{ballast}}$ ) %
$W < 30$	70
$30 < W \leq 75$	80
$75 < W \leq 105$	82
$105 < W \leq 405$	86
$W > 405$	91

Where:

- Ballast efficiency ( $\eta_{\text{ballast}}$ ) means the ratio between the lamp power (ballast output) and the input power of the lamp-ballast circuit with possible sensors, network connections and other auxiliary loads disconnected.

Multiwattage ballasts must comply with the requirements for each wattage at which they operate.

**Verification:** The tenderer shall provide the technical specification of the ballast or a written declaration to demonstrate this criterion is met. The measurement method is given by IEC/EN 62442-2 (currently under preparation).

5. Requirements concerning packaging for lighting equipment

Where cardboard boxes are used, they shall be made of at least 80% postconsumer recycled material.

**Verification:** Products holding a Type I ecolabel shall be deemed to comply, provided that this ecolabel fulfils the requirements listed above. Other appropriate means of proof will be also accepted such as written evidence from the manufacturer that the above clause is met.

**Award criteria**

1. Additional points shall be awarded for lamps that meet the following lamp lumen maintenance factors (LLMF) and lamp survival factors (LSF):

Burning Hours	2000	4000	8000	16000
LLMF	0.98	0.97	0.95	0.92
LSF	0.99	0.98	0.95	0.92

**Verification:** The tenderer shall provide the technical specification of the lamp or a written declaration to demonstrate this criterion is met.

2. Additional points shall be awarded for HID lamps that have a mercury content not greater than that given in the table below, where W is the lamp power in Watts:

Lamp type	Mercury content (mg/lamp)
HPS lamps ( $W \leq 155$ )	25
HPS lamps ( $155 < W \leq 405$ )	30
HPS lamps ( $W > 405$ )	40
MH lamps ( $W \leq 95$ )	5
MH lamps ( $95 < W \leq 245$ )	15
MH lamps ( $W > 245$ )	30

**Verification:** According to the Ecodesign Directive (2009/125/EC) and Commission Regulation (EC) 245/2009, Annex III, mercury content is to be specified in product information on freely accessible websites and in other forms that are deemed appropriate. A copy of the layout of the packaging and a link to the tenderer's website where the mercury content is specified can be requested as verification.

3. Additional points shall be awarded for ballasts for high intensity discharge lamps that have the following minimum efficiency:

Nominal Lamp Wattage (W)	Minimum ballast efficiency ( $\eta_{\text{ballast}}$ ) %
$W \leq 100$	85
$W > 100$	92

Where:

- Ballast efficiency ( $\eta_{\text{ballast}}$ ) means the ratio between the lamp power (ballast output) and the input power of the lamp-ballast circuit with possible sensors, network connections and other auxiliary loads disconnected.

Multiwattage ballasts must comply with the requirements for each wattage at which they operate.

**Verification:** The tenderer shall provide the technical specification of the ballast or a written declaration to demonstrate this criterion is met. The measurement method is given by IEC/EN 62442-2 (currently under preparation). Equivalent measurement methods can be also accepted.

4. Where metal halide lamps are identified as the most suitable lamp type, additional points shall be awarded for those lamps that meet the relevant comprehensive criterion for luminous efficacy. **Verification:** The tenderer shall provide the technical specification of the lamp or a written declaration to demonstrate that this criterion is met.

## Design of Street Lighting

### Subject Matter

8.2 Resource and energy efficient design of new lighting systems or renovation of the existing lighting system

### Selection criteria

Where a new lighting system is being designed, the tenderer shall demonstrate that the design will be undertaken by personnel with at least three years experience in lighting design and/or having a suitable professional qualification in lighting engineering or membership of a professional body in the field of lighting design.

**Verification:** The tenderer shall supply a list of the persons responsible for the project, including managerial staff, indicating educational and professional qualifications and relevant experience. This should include persons employed by subcontractors where the work is to be sub-contracted. The tenderer shall also supply a list of lighting schemes the tenderer has designed over the last three years.

### Specifications

1. Where a new lighting system is being provided for a traffic route (classes ME or MEW in EN 13201-1), the maximum energy efficiency indicator, given by the average system power divided by the required road surface luminance and the area to be lit, must not exceed the following values:

Lamp Wattage (W)	Maximum energy efficiency indicator ( $\text{W}/\text{cd}/\text{m}^2 \cdot \text{m}^2$ )
$W \leq 55$	0.974
$55 < W \leq 155$	0.824
$155 < W$	0.674

**Verification:** A calculation provided by the lighting designer showing the total and the average power consumed by the lighting system, including lamps, ballasts, sensors and controls, divided by the required road surface luminance and the total area to be lit (including the roadway and, where relevant, footway). Where lighting can be dimmed, the average system power is the mean power consumed by the system averaged for periods with different consumptions. The lighting designer should also show that the lighting meets the relevant performance standards in EN 13201, equivalent national standards or best practice guides, or those set by the public authority. Depending on the type of road and its requirements, these may include luminance, uniformity, control of glare and lighting of surroundings.

The public authority may accept higher values of SLEEC where there are particular constraints, for example unusual mounting heights or locations for columns, or where the street lighting is intended to be ornamental or decorative, or where there are unusually strict limits on spill light or demanding colour rendering requirements. In some cases up to double the guideline SLEEC could be acceptable.

- Where a new lighting system is being provided for a conflict area such as a road intersection or shopping street, or a residential road, pathway or cycle track (classes CE or S in EN 13201-1), the maximum energy efficiency indicator, given by the average system power divided by the required horizontal illuminance and the area to be lit, must not exceed the following values:

Required illuminance (lux)	Maximum energy efficiency indicator (W/lux.m <sup>2</sup> )
$E \leq 15$	0.054
$15 < E$	0.044

**Verification:** A calculation provided by the lighting designer showing the total power consumed by the lighting system, including lamps, ballasts, sensors and controls, divided by the required horizontal illuminance and the total area to be lit. Where lighting can be dimmed, the average system power is the mean power consumed by the system averaged for periods with different consumptions. The lighting designer should also show that the lighting meets the relevant performance standards in EN 13201, equivalent national standards or best practice guides, or those set by the public authority. Depending on the type of road and its requirements, these may include illuminance and uniformity. The public authority may accept higher values of SLEEC where there are particular constraints, for example unusual mounting heights or locations for columns, or where the street lighting is intended to be ornamental or decorative, or where there are unusually strict limits on spill light or demanding colour rendering requirements. In some cases up to double the guideline SLEEC could be acceptable.

#### Award criteria

- Where a new lighting system is being provided, credit will be awarded if energy efficiency indicators are less than 90% of those given in the relevant table for core criteria 1 and 2 above.

**Verification:** Calculation as specified in the relevant criterion above.

2. Where dimming is required and/or beneficial, additional points will be given in proportion to the percentage of dimming in relation to the lamp power.

Note: The use of dimming ballasts will depend on location and other aspects, for example ambient light levels.

**Verification:** The tenderer shall provide the technical specification of the ballast or a written declaration to demonstrate this criterion is met.

## Installation of Street Lighting

### Subject Matter

8.3 Resource and energy efficient installation of new lighting systems or renovation of the existing lighting system

### Selection criteria

Where a new lighting system is being designed, the tenderer shall demonstrate that the design will be undertaken by personnel with at least three years experience in lighting design and/or having a suitable professional qualification in lighting engineering or membership of a professional body in the field of lighting design.

**Verification:** The tenderer shall supply a list of the persons responsible for the project, including managerial staff, indicating educational and professional qualifications and relevant experience. This should include persons employed by subcontractors where the work is to be sub-contracted. The tenderer shall also supply a list of lighting schemes the tenderer has designed over the last three years.

### Specifications

1. The tenderer shall provide the following for installation of new or renovated lighting systems:
  - Disassembly instructions for luminaires
  - Instructions on how to replace lamps, and which lamps can be used in the luminaires without decreasing the stated energy efficiency
  - Instructions on how to operate and maintain lighting controls
  - For daylight linked controls, instructions on how to recalibrate and adjust them.
  - For time switches, instructions on how to adjust the switch off times, and advice on how best to do this to meet visual needs without excessive increase in energy consumption

**Verification:** Confirmation that written instructions will be provided to the contracting authority.

### Contract performance clauses

1. The tenderer shall ensure that new or renovated lighting systems and controls are working properly and using no more energy than is required.
  - Daylight linked controls shall be calibrated to ensure that they switch off the lighting when daylight is adequate
  - Time switches shall be set to appropriate switch off times to meet visual needs without excessive increase in energy consumption

If following commissioning of the system, the lighting controls do not appear to meet all the above requirements, the tenderer shall adjust and/or recalibrate the controls so that they do.

**Verification:** Statement by the tenderer that the relevant adjustments and calibrations have been carried out.



2. The tenderer shall ensure that the lighting equipment (including lamps and luminaires and lighting controls) is installed exactly as specified in the original design.

**Verification:** Schedule of installed lighting equipment with appended manufacturers' invoices or delivery notes, and confirmation that the equipment is as originally specified.

**Note:** This contract performance clause is intended to eliminate the substitution of inferior lighting products at the installation stage. Where substitution is inevitable because the originally specified products are unavailable, the tenderer shall provide a replacement schedule and calculation showing that the installation with the substituted products still complies with the relevant lighting design criteria above.

3. The tenderer shall implement appropriate environmental measures to reduce and recover the waste that is produced during the installation of a new or renovated lighting system. All waste lamps and luminaires and lighting controls shall be separated and sent for recovery in accordance with the WEEE directive.

**Verification:** The tenderer shall provide written confirmation setting out how the waste has been separated, recovered or recycled.

## Green Public Procurement Sheet 9: Road Construction & Traffic Signs

### Key Environmental Impacts

Extraction and use of raw materials

Energy required to produce raw materials and subsequent products

Energy consumption during the construction of the road

Pollution of air, land and water due to the use of fossil fuels to power machinery

Generation of waste material, including hazardous wastes

Noise and visual impacts



### GPP Approach

- Reuse of road building material where possible.
- Use secondary aggregate where possible.
- Reduce energy use during production.
- Reduce energy intensity of construction through the purchase of energy efficient machinery.
- Use road surfacing materials that do not contain, or have low concentrations of, hazardous materials such as heavy metals.
- Waste reduction through using recycled materials, recycling wastes where possible and extending product lifetimes.
- Promoting materials and construction approaches that reduce noise and visual impacts.

For the purpose of defining these green public procurement criteria (guidelines), this product group is split into two categories:

- Road construction.
- Traffic signs.

Road construction is defined as the preparation and building of a road using materials, including aggregate, bituminous binders and additives that are used for the sub-base, road-base and surfacing layers of the road.

Traffic signs have three elements: sign facings (containing the sign's message), substrates (the backing material onto which the facing is attached) and the fixing (the posts or frame onto which the sign is mounted).

The scope of this product group does not cover road marking materials, such as paints, other items of road furniture, such as pedestrian walkways, bollards, overhead gantries and central reservations or public street lighting or traffic signals. For information on the latter, please refer to the separate Sheet for Street Lighting and Traffic Signals. Similarly, the guidance within this document does not extend to cover the foundations or lighting of traffic signs.

## Road Construction

### Subject Matter

9.1 Construction of new roads, or renovation of existing roads, using environmentally sound construction methods and materials.

### Selection criteria

1. The bidder must demonstrate a technical capacity to take the necessary environmental management measures in order to ensure that the construction works are executed in an environmental sound way.

The bidder must demonstrate its technical capacity to put into place certain environmental management measures that meet the following requirements:

- Ensuring effective protection of fauna and flora in the building area and its surroundings (where construction takes place in an environmentally sensitive area).
- Measures to prevent any harmful waste and hazardous substances flows that may adversely impact on the area.
- Environmental management measures aimed at minimising waste production on the site, respecting noise regulations, avoiding traffic congestion.

**Verification:** Possible means of proof include EMAS and ISO 14001 certificates or equivalent certificates issued by bodies conforming to Community law or the relevant European or international standards concerning certification based on environmental management standards. Other means of evidence provided by the bidder that can prove the required technical capacity will also be accepted.

### Award criteria

1. Secondary aggregate and recycled materials should be used when laying or re-laying road surfaces, provided it complies with the relevant national standards for road quality and durability and where the environmentally preferable solution does not negatively impact on the safety of the road. The contractor shall provide data on the content of the materials it is proposing to use.

**Verification:** The bidder must provide information and data as necessary on the type and amount of secondary and recycled material it is proposing to use.

2. The durability and performance characteristics (such as resistance to fragmentation, freezing and thawing) and resistance to chemical degradation (such as sulphate-induced heave) should be considered when selecting materials.

**Verification:** The bidder must provide appropriate proof that this criterion is met.

3. Energy consumption throughout the lifecycle (from raw material production to paving) should be evaluated and reduced.

**Verification:** The bidder must provide appropriate proof that this criterion is met. The contracting authority should state in the tender document what format the information should be presented in.

### Contract performance clauses

1. During both construction and maintenance phases, materials and design of roads and surrounding infrastructure should adhere to the principles of Sustainable Urban Drainage Systems (SUDS) to reduce the impact of rainwater run-off on surrounding surface and ground waters.

**Verification:** Bidders must provide a signed declaration indicating that their product satisfies this criterion.

1. Award Criteria: Contracting authorities will have to indicate in the contract notice and tender documents how many additional points will be awarded for each award criterion. Environmental award criteria should, altogether, account for at least 10 to 15 % of the total points.

2. Contracting authorities should conduct an environmental impact assessment of the proposed construction during the planning phase of the road. This should consider the geography (e.g. flora and fauna, proximity to houses – impact of noise, light and emissions), climate and drainage requirements of the proposed site so that the correct materials and machinery are used. The environmental impacts of the proposed project should be prioritised and be used to prioritise the weighting given to the criteria used in the tender contract.

3. Early inclusion of sustainable urban drainage systems (SUDS) in construction plans can protect and enhance water quality and protect biodiversity in the area around the road. There are many SUDS designs, each with benefits for different sites, e.g. source control techniques to reduce the quantity of runoff from the site, permeable conveyance systems to slow the velocity of runoff to allow settlement filtering and infiltration, and end of pipe systems to provide passive treatment of collected surface water before discharge into groundwater or to a watercourse.

4. Additional points can be awarded to any bidder who provides a solution with higher specifications than those laid down as basic requirements by the contracting authority.

### Traffic Signs

#### Subject Matter

9.2 Purchase of environmentally sound traffic signs

#### Selection criteria

1. Recycled materials should be used when manufacturing the traffic sign, provided they comply with the relevant national standards for traffic signs. The bidder shall provide data on the content of the materials used.

**Verification:** The bidder must provide information and data as necessary on the type and amount of recycled material used.

## Award criteria

2. The traffic sign product shall be durable and recyclable at the end of its useful life.

**Verification:** The bidder must provide information and data as necessary on the predicted lifetime of the traffic sign as well as information on how it can be recycled at the its end of life.

## Green Public Procurement Sheet 10: Food & Catering Services

### Key Environmental Impacts

Eutrophication, acidification and toxic impacts on human health and the environment (plants and animals) due to pesticides and fertilisers residues present in water, air, soil and food.

Negative impact on the occupational health of farmers due to the mishandling and misuse of certain pesticides and fertilisers

Soil erosion, forest destruction and loss of biodiversity caused by inappropriate agricultural practices, over-intensive animal production and intense fishing and aquaculture practices

Animal cruelty due to a lack of respect for animal welfare

High energy and water consumption in food production and processing

Packaging waste

High consumption of cleaning agents and other chemicals which might have a negative impact on the occupational health of kitchen personnel and on the environment through waste water

High water and energy consumption of kitchen appliances

CO<sub>2</sub> and other pollutant emissions as a result of modes of transport used to carry out the catering services



### GPP Approach

- Procurement of organic food
- Procurement of food produced under “integrated production systems”
- Procurement of sustainably-produced or caught aquaculture and marine products
- Promoting design and materials facilitating the end-of-life recycling processes.
- Procurement of livestock products with high welfare standards
- Procurement of seasonal products
- Procurement in bulk or in packaging that has a high recycled content
- Use of reusable cutlery, crockery, glassware and tablecloths
- Use of environmentally friendly paper products
- Selective waste collection and staff training
- Minimisation of the use of hazardous chemicals and the use of environmentally friendly cleaning and dishwashing products
- Procurement of water and energy efficient kitchen appliances
- Improvement of transport routes and energy efficiency and reduction of emissions by vehicles used to carry out the catering services

## Food

### Subject Matter

10.1 Purchase of food (or a certain food product group) with a percentage of products originating from organic and integrated production and with packaging reduced to a minimum.

### Specifications

1. **30%** of [either a defined product group such as dairy, meat vegetables, or a list of specific products e.g. potatoes, tomatoes, beef, eggs] must be organically produced according to Regulation EC 834/2007.

**Verification:** Products carrying a Community organic label will be deemed to comply.

### Award criteria

Additional points will be awarded for:

1. Organic food: Additional share of products coming from organic sources above the minimum requirement in the specification.

**Verification:** Products carrying a Community organic label will be deemed to comply.

2. Packaging: Percentage of products that:
  - Are supplied in secondary and/or transport packaging with more than 45% recycled content.
  - Are supplied in packaging materials based on renewable raw materials.
  - Are not supplied in individual portions (single unit packages)

**Verification:** Suppliers must provide a signed declaration indicating which of these criteria their products are able to meet. The contracting authority will verify compliance during the contract period, and appropriate penalties will be applied for non-compliance.

## Catering Services

### Subject Matter

10.2 Contract for catering services with the provision of food with a percentage of products originating from organic sources and carried out in an environmentally friendly way.

### Specifications

1. Food: 30% of [either a defined product group or a list of specific products] to be used in carrying out the service must be organically produced according to Regulation EC 834/2007.

**Verification:** Suppliers presenting a Type I ecolabel certificate for restaurants will be deemed to comply with the criteria if they specify the percentage of organic food that will be used in the relevant contract. Alternatively suppliers must indicate how they intend to meet the obligation within the proposed offer. Products carrying a Community organic label will be deemed to comply.

2. [In cases where the contracted company defines the menus] the main fruit, vegetables and marine products to be used in carrying out the service shall, whenever possible, be selected according to the season.

## Award criteria

### Additional points will be awarded for:

1. Organic food: Additional share of products coming from organic sources above the minimum requirement in the specification.

**Verification:** Suppliers presenting a Type I ecolabel certificate for restaurants will be deemed to comply with the criteria if they specify the percentage of organic food that will be used in the relevant contract. Alternatively suppliers must indicate how they intend to meet the obligation within the proposed offer. Products carrying a Community organic label will be deemed to comply.

2. Packaging: Percentage of products that:

- Are supplied in secondary and/or transport packaging with more than 45% recycled content.
- Are supplied in packaging materials based on renewable raw materials.
- Are not supplied in individual portions (single unit packages)

**Verification:** Suppliers must provide a signed declaration indicating which of these criteria their products are able to meet. The contracting authority will verify compliance during the contract period, and appropriate penalties will be applied for non-compliance.

### Contract performance clauses

1. Waste generation: In order to reduce waste generation, food and beverages must be served using cutlery, glassware, crockery and tablecloths which are reusable, renewable or based on renewable raw materials.

Waste produced in carrying out the service must be collected separately and recyclable materials (glass and cans) taken to the appropriate recycling points.

2. Transport: The vehicles to be used in carrying out the service shall at least fulfil the exhaust emission requirements of EURO 4 or IV.

Suppliers must provide a list of the vehicles to be used in carrying out the service and the respective technical sheets of these vehicles which state the relevant emission levels.