

Annexes to the ‘First Stakeholder Questionnaire: Product definition, scope and criteria’ for the Revision of the EU Green Public Procurement (GPP) Criteria for Transport (January 2016)

Annex I. Details of the current GPP criteria by environmental issue

For each environmental issue, the tables below gather the following information:

- Categories in which this issue is included as a criterion, i.e.:
 - Purchase or lease of cars and LCVs (light commercial vehicles);
 - Purchase or lease of buses;
 - Provision of bus services;
 - Purchase or lease of waste collection trucks; or
 - Provision of waste collection services.
- Definition of each criterion related to the environmental issue.
- Whether it is covered at the ‘core’ or ‘comprehensive’ level, or both.
- The way in which the information should be verified.
- Additional information of the environmental issue or the criteria (current state of legislation, potential impacts of the criteria, etc.).

CO₂ EMISSIONS

CO₂ emissions

Categories in which this criteria can be found:

- Only for the purchase and lease of **passenger cars** as core and comprehensive criteria in the technical specifications and as a core and comprehensive award criteria

Criteria formulated with reference to CO₂ emissions of cars and light commercial vehicles as measured under Regulations 443/2009 and 510/2011, respectively. The criteria in the technical specifications are as follows:

Vehicle type ¹	CO ₂ g/km	
	Core criteria	Comprehensive criteria
Mini car	110	90
Small car	120	100
Compact car	130	110
Mid car	150	130
Large car	170	150
High/Exclusive car	270	200
Offroad/Family Wagon car	210	170
Small vans (N1, class I)	150	130
Other vans (N1, class II and class III)	220	180

The respective award criteria are simply:

- Lower CO₂ emissions than those required in the specifications

Verification (for all categories)

The tenderer must provide the technical sheet of the vehicle where the CO₂ emissions are stated

Additional information:

In 2014, the average CO₂ emissions of new cars in the EU was 123g/km, which was a 10% drop since 2011, while the equivalent figure for new light commercial vehicles was 169 g/km. The CO₂ emissions of heavy duty vehicles, such as buses and waste collection trucks, are not yet measured on a comparable basis, nor are they monitored at the EU level.

¹ Examples of types of vehicles can be found at www.cleanvehicle.eu

EXHAUST GAS EMISSIONS

Exhaust gas emissions

Categories in which this criteria can be found:

- All five as a core and comprehensive criterion in the technical specification.
- For the purchase or lease of **buses** and **waste collection trucks**, also as a core award criterion.
- For the provision of **bus services** and **waste collection services**, also as a core and comprehensive award criterion.

Criteria formulated with reference to respective Euro emission standards:

- a. Purchase or lease of **cars and LCVs**: Euro 5 (core criterion in the technical specifications) and Euro 6 (comprehensive criterion in the technical specifications).
- b. Purchase or lease of **buses** and **waste collection trucks**: EEV² (core criterion in the technical specification) and Euro VI (comprehensive criterion in the technical specification and core award criterion).
- c. Provision of **bus services** and **waste collection services**: All vehicles used in carrying out the contract should be all at least Euro IV (core criterion) or Euro V (comprehensive criterion) for the technical specifications; and the proportion of Euro V/EEV/Euro VI (core criterion) and of EEV/Euro VI (comprehensive criterion) as an award criterion.

Verification (for all categories)

When a vehicle(s) is purchased or leased, the tenderer must present the technical sheet of the vehicle(s) where the relevant information is displayed. When services are bought a list of vehicles must be provided along with their respective technical sheets that contain the relevant information. In the latter case, where technical after-treatment has been used to bring a vehicle up to the necessary minimum Euro standard, the relevant information must be included in the tender application and approved by an independent third party.

Additional information:

The criteria for 'exhaust emissions gases', at least for the purchase or lease of vehicles, are no longer relevant as all new vehicles/engines will meet the respective Euro 6/VI standard; for light duty vehicles, real driving emission (RDE) tests are being introduced.

² i.e. 'EEV' means an Enhanced Environmentally friendly Vehicle as defined in Directive 1999/96/EC.

NOISE EMISSION LEVELS

Noise emission levels

Categories in which this criteria can be found:

- All five as a core and comprehensive criterion in the technical specification

Criteria formulated with reference to respective European emission standards:

- Purchase or lease of **cars and LCVs** and of **buses** and the **provision of bus services**: Noise emissions (of the vehicles purchased or used in a service contract) lower than those required by law.
- Purchase or lease of **waste collection trucks** and the provision of **waste collection services**: Noise emissions (of the vehicles purchased or used in a service contract), including any compaction equipment, are below 102 dB (A) measured according to Directive 2000/14/EC.

Verification (for all categories)

When a vehicle(s) is purchased or leased, the tenderer must present the technical sheet of the vehicle(s) where the relevant information is displayed or the relevant test results.

Additional information:

The noise emission levels required by law (referred to in Annex I of the GPP criteria document and repeated in Annex II of this document) are those that were set in Directive 2007/34/EC. The limits specified were not to be exceeded. Directive 2007/34 has since been replaced by Regulation (EU) 540/2104, which sets three phases of declining noise limit values for cars, LCVs, buses and other heavy duty vehicles, starting in 2016. Directive 2000/14, which is referred to in the two waste collection categories and sets noise requirements for outdoor machinery, does not set a limit value for noise from waste collection vehicles, only requiring that the vehicles are subject to noise marking.

ECO-DRIVING/TRAINING OF DRIVERS

Eco-driving/Training of drivers

Categories in which these criteria can be found:

- The purchase or lease of **cars and LDVs** has '**eco-driving**' as a core and comprehensive criterion in the technical specifications.
- The provision of **bus services** and of **waste collection services** have the '**training of drivers**' as a core and comprehensive criteria in the contract performance clauses.

Criteria are specified as follows:

- **Cars and LCVs / eco-driving**: Cars/LCVs are provided with information/instructions on eco driving relevant to the vehicle.
- **Bus services and waste collection services / training of drivers**: All drivers involved in carrying out the service for the duration of the contract period must be trained in a recognised institution on environmentally-conscious driving on a regular basis to increase fuel efficiency.

Verification

- **Cars and LCVs / eco-driving**: Tenderer provides documentation containing the required information
- **Bus services and waste collection services / training of drivers**: The contractor will provide a list of the drivers who have carried out the service and their certificates

Additional information:

Driving behaviour can have a significant influence on a vehicle's CO₂ emissions. In this respect, adopting more fuel efficient driving behaviour through 'eco-driving' and by the 'training of drivers' can help to reduce CO₂ emissions by, for example, using appropriate speeds, acceleration, braking and gear changing.

FUEL CONSUMPTION DISPLAY/FUEL CONSUMPTION DATA

Fuel consumption display/Fuel consumption data

Categories in which these criteria can be found:

- The purchase or lease of **cars and LCVs** has '**fuel consumption display**' as a comprehensive criterion in the technical specifications.
- The provision of **bus services** and of **waste collection services** have the '**fuel consumption data**' as a core and comprehensive criteria in the contract performance clauses.

Criteria are specified as follows:

- **Cars and LDVs / fuel consumption display**: The vehicle offered is equipped with a mechanism to display to the driver fuel consumption figures.
- **Bus services and waste collection services / 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

- **Cars and LCVs / fuel consumption display**: The tenderer must present the technical sheet of the vehicle where this information is displayed.
- **Bus services and waste collection services / fuel consumption data**: The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.

Additional information:

The provision of fuel consumption information to drivers enables them to understand better the impact that their driving behaviour has on their fuel consumption and thus encourages them to take action to use fuel more efficiently.

START AND STOP

Start and stop (vehicle fitted with such a system)

Categories in which these criteria can be found:

- The purchase or lease of **cars and LCVs** and of **buses** and the provision of **bus services** have '**start and stop**' as a comprehensive award criterion.

Criteria are specified as follows:

- **Cars and LCVs / buses**: The vehicle is fitted with a start and stop system.
- **Bus services**: Proportion of vehicles fitted with a start and stop system.

Verification

- **Cars and LCVs / buses / bus services**: The tenderer must present the technical sheet of the vehicle where this information is displayed.

Additional information:

The inclusion of 'stop and start' technology is part of the increasing hybridisation of vehicles. Its use on new vehicles has been increasing as it turns a vehicle's engine off when the vehicle is standing still, thus reducing emissions particularly in congested conditions or when vehicles are otherwise stationary, e.g. at bus stops.

LUBRICANT OILS

Lubricant oils

Categories in which this criteria can be found:

- All five as a comprehensive criterion in the technical specification.

Criteria for all categories:

- a. Vehicles must use low viscosity engine lubricant oils (LVL) or regenerated lubricant oils, with a minimum of 25% regenerated base oils, in vehicle maintenance. LVL are those corresponding to SAE grade number 0W30 or 5W30 or equivalent 3.
- b. Hydraulic fluids and greases should have no Health or Environmental Hazard statement or R-phrase at the time of application (Lowest classification limit in Regulation (EC) No. 1272/2008 or Council Directive 99/45/EC).
- c. No derogation from the exclusion in Article 6(6) of Regulation (EC) No. 66/2010 may be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No. 1907/2006, when present in mixtures, in concentrations higher than 0.010% (w/w).
- d. Carbon content should be $\geq 45\%$ derived from renewable raw materials.
- e. The cumulative mass percentage of substances present that are both non-biodegradable and bioaccumulative shall not be more than 0.1% (w/w).

Verification (for all categories)

The tenderer must provide the technical sheet of the proposed lubricants. Products carrying a relevant Type I Ecolabel fulfilling the listed criteria will be deemed to comply. Other appropriate means of proof such as a technical dossier or a test report from an independent body will also be accepted.

Additional information:

Lubricants are potentially damaging to the environment, if they leak during normal use or repair and when they are disposed of at the end of a vehicle's lifetime. Some lubricants are potentially more damaging than others, so requirements can be set in this respect. Additionally, the use of low viscosity engine lubricants has the potential to improve the efficiency of engines and thus contribute to reducing CO₂ emissions.

TYRES – NOISE AND ROLLING RESISTANCE

Tyres – noise and rolling resistance

Categories in which this criteria can be found:

- All five as a comprehensive criterion in the technical specification

Criteria for the purchase or lease of **cars and LCVs**:

- For noise: The vehicles must be equipped with tyres with noise emission levels below the maximum established in Regulation 661/2009 Annex II Part C (See Annex II of the GPP criteria document, repeated in Annex III of this document). This is equivalent to the top two categories (of the three available) of the EU tyre label external rolling noise class.
- For rolling resistance: The rolling resistance (for both new and retreaded tyres), expressed in kg/tonne must not exceed the following limit values measured according to ISO 28580 or equivalent:

Tyre class	Max rolling resistance value (kg/tonne)	Tyre label fuel efficiency class
C1	10.5	E
C2	9.2	E
C3	7	D

Criteria for the purchase or lease of **buses and waste collection trucks** and for the provision of **bus services and waste collection services**:

The vehicles must be fitted with / tenderer must use tyres with rolling noise values less than the limit values in Regulation 661/2009 Annex II Part C (see Annex III of this document). This is equivalent to the top two categories (of the three available) of the EU tyre label external rolling noise class.

The tenderer must have a commitment to using low rolling resistance tyres. The rolling resistance (for both new and retreaded tyres), expressed as kg/tonne must not exceed the following limit values, according to ISO 28580 or equivalent:

Tyre class	Max rolling resistance value (kg/tonne)	Tyre label fuel efficiency class
C2	9.2	E
C3	7	D

These are the figures for driven wheels and wheels with other special functions. Free rolling tyres used should have a lower rolling resistance than those used for drive or special functions

Verification

- For the purchase or lease of **cars and LCVs**:
 - For noise: The tenderer must provide a list of the tyres that will be used in maintenance tasks, the technical sheet or test results of the tyres where the noise emissions are displayed, and a signed declaration of commitment for the duration of the contract to use these products.
 - For rolling resistance: The tenderer must provide a list of the tyres that will be used, the test results according to ISO 28580 or equivalent of the tyres to check compliance, and a signed declaration of commitment for the duration of the contract to use these products. 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.
- For the purchase or lease of **buses and waste collection trucks**: Tenderer must present a list of the tyres that will be used in maintenance tasks together with the relevant test results (according to ISO 28580 or equivalent). 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.
- For the provision of **bus services**: Tenderer must present a list of the tyres that will be used in maintenance tasks together with the relevant test results (according to ISO 28580 or equivalent). 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.
- For the provision of **waste collection services**: Tenderer must present a list of the tyres that will be used in maintenance tasks together with the relevant test results (according to ISO 28580 or equivalent).

Additional information:

Regulation 661/2009 requires that all tyres, including those provided with new vehicles, must meet specified rolling resistance and rolling noise requirements. New types of tyre have had to meet the noise limits specified in Annex II of the GPP criteria (and in Annex III of this document) since 2012. From November 2016 new types of tyre have to comply with the following limit values for rolling resistance: 10.5 kg/tonne for C1 class tyres, 9 kg/tonne for C2 tyres and 6.5 kg/tonne for class C3. These are the same, or less than, the current GPP criteria (see above). All measured in accordance with ISO 28580.

USE OF ALTERNATIVE FUELS

Use of alternative fuels

Categories in which this criteria can be found:

- All five as a core and a comprehensive criterion in the award criteria.

Criteria for the purchase or lease of **cars and LCVs, buses and waste collection trucks**:

- Vehicle is designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems).

Criteria for the provision of **bus services and waste collection services**:

- Proportion of vehicles designed to be powered by alternative fuel types or systems (e.g. biofuels, electric, hydrogen or hybrid systems).

Verification (for all categories)

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

Additional information:

The use of alternative fuels has the potential to reduce both the in-use and lifetime emissions associated with vehicles. For many types of vehicles, there has been an increase in the use of alternative fuels and energy sources, although the proportion of new vehicles using these alternative technologies is still relatively small.

TYRE PRESSURE MONITORING SYSTEMS

Tyre pressure monitoring systems (TPMS)

Categories in which this criteria can be found:

- As a comprehensive criterion in the technical specifications for purchase or lease of **cars and LCVs**
- As a comprehensive criterion in the award criteria for the other four categories

Criteria for the purchase or lease of **cars and LCVs, buses and waste collection trucks**:

- a. The vehicle(s) offered is (are) equipped with TPMS.

Criteria for the provision of **bus services and waste collection services**:

- b. Proportion of vehicles (carrying out the service) fitted with TPMS.

Verification (for all categories)

The tenderer must present the technical sheet of the vehicle(s) where this information is displayed.

Additional information:

Regulation 661/2009 requires that all new cars should be fitted with a TPMS.

VEHICLE MATERIALS

Vehicle materials
Categories in which this criteria can be found: <ul style="list-style-type: none">• All five as a comprehensive criterion in the award criteria.
Criterion for all categories: <ol style="list-style-type: none">Extra points are awarded based on the percentage by weight of vehicle that is from recycled or renewable materials. Renewable materials include, for example, bioplastics derived from such sources as vegetable oil or corn starch.
Verification (for all categories) <p>The tenderer must present the technical sheet of the vehicle where this information is displayed.</p>
Additional information: <p>Increasing the use of recycled and renewable material in vehicle manufacture contributes to reducing the environmental impact associated with vehicle manufacture and disposal. Directive 2000/53/EC sets minimum requirements for the 'reuse and recovery' and for the 'reuse and recycling' of end of life cars and LCVs of 95% and 85%, respectively, by average weight from 2015.</p>

AIR CONDITIONING GASES

Air conditioning gases

Categories in which these criteria can be found:

- The purchase or lease of **cars and LCVs** has '**air conditioning gases**' as a comprehensive criterion under technical specification.
- The purchase or lease of **buses** and the provision of **bus services** have '**air conditioning gases**' as a comprehensive award criterion.

Criteria are specified as follows:

- **Cars and LCVs:** The vehicle offered meets the following requirement: If the vehicle is fitted with an air-conditioning system designed to contain fluorinated greenhouse gases, the specific gas must have a global warming potential (GWP) ≤ 150 (related to CO₂ and a time horizon of 100 years). If the GWP is higher, the leakage rate from the system must not exceed 40g of fluorinated greenhouse gases per year for a single evaporator system, or 60g of fluorinated greenhouse gases per year for a dual evaporator system.
- **Buses:** The refrigerants used must have a GWP, related to CO₂ and a time horizon of 100 years, of < 2500.
- **Bus services:** Proportion of vehicles to be used in carrying out the service whose air conditioning refrigerant have a low GWP. This condition shall be considered fulfilled if the GWP, related to CO₂ and a time horizon of 100 years, is < 2500.

Verification

- **Cars and LCVs / buses / bus services:**

The tenderer must provide the name, formula and GWP of the refrigerating gas used in the air conditioning system. If a mixture of gases is used (n number of gases), the GWP will be calculated as follows:

$$\text{GWP} = \sum (\text{Substance X1 \%} \times \text{GWP(X1)}) + (\text{Substance X2 \%} \times \text{GWP(X2)}) + \dots (\text{Substance Xn \%} \times \text{GWP(Xn)})$$

where % is the contribution by weight with a weight tolerance of +/- 1 %.

Information on GWP of gases can be found at:

www.grida.no/publications/other/ipcc_tar/?src=/climate/ipcc_tar/wg1/248.htm

Additionally, for:

- **Cars and LCVs:** If GWP is > 150, leakage tests results shall be provided.
- **Buses / bus services:** 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.

Additional information:

Since 2011, Directive 2006/40/EC has required that the gases used in air conditioning systems (that are designed to contain fluorinated greenhouse gases) that are fitted to new cars and to new class I LCVs have a GWP of 150 or less (related to CO₂ and with a time horizon of 100 years).

NEW VEHICLES (i.e. requirements for any vehicles purchased after the award of the contract for use in performing the contract)

New vehicles (i.e. requirements for any vehicles purchased after the award of the contract for use in performing the contract)

Categories in which these criteria can be found:

- The provision of **bus services** and of **waste collection services** have '**new vehicles**' as a core and comprehensive criteria in the contract performance clauses.

Criteria are specified as follows:

- **Bus services** and **waste collection services**: All vehicles purchased from 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

- **Bus services** and **waste collection services**: The contractor will present the authority with the relevant information to demonstrate that the clause is fulfilled.

Additional information:

As service contracts can last for a number of years, it is likely that operators will purchase additional vehicles during the contract for use in delivering the contract. Relevant GPP criteria can be applied to ensure that the environmental performance of contractors' fleets continues to improve. As noted above, all new vehicles/engines will now meet Euro VI standards.

POLLUTANT EMISSIONS (i.e. emissions from separate engines for auxiliary units)

Pollutant emissions (i.e. emissions from separate engines for auxiliary units)

Categories in which these criteria can be found:

- The purchase or lease of **waste collection trucks** and the provision of **waste collection services** have '**pollutant emissions**' as a comprehensive criterion in the technical specifications.

Criteria are specified as follows:

- **Waste collection trucks:** The vehicle's emissions from the separate engines for auxiliary units meet the exhaust emission limits below according to Directive 97/68/EEC, level IIIa (constant rpm):
- **Waste collection services:** Percentage of vehicles to be used in carrying out the service that meet the pollutant emissions of the separate engines according to Directive 97/68/EEC, level IIIa (constant rpm):

Engine power P (kW)	CO (g/kWh)	HC + NO _x (g/kWh)	PM (g/kWh)
H: 130kW ≤ P ≤ 560kW	3.5	4	0.2
I: 75kW ≤ P < 130kW	5	4	0.3
J: 37kW ≤ P < 75kW	5	4.7	0.4
K: 19kW ≤ P < 37kW	5.5	7.5	0.6

Verification

- **Waste collection trucks:** The tenderer must provide either a type approval certificate, a certificate of the manufacturer, or a test certificate of another testing institute. 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.
- **Waste collection services:** The tenderer must provide a list of all the vehicles to be used in carrying out the service identifying those that comply with the criteria, attaching also either a type approval certificate, a certificate of the manufacturer, or a test certificate of another testing institute. 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.

Additional information:

Since at least 2006, Directive 97/68/EEC has required that new engines (if they do not have a constant speed) meet the emission limit values specified above. Further emissions stages (IIIB and IV) have applied to new engines in all but the lowest power categories since at least 2013.

DISPOSAL OF LUBRICANT OILS AND TYRES

Disposal of lubricant oils and tyres

Categories in which these criteria can be found:

- The lease of **cars and LCVs** (this criterion is not relevant for the purchase of cars and LCVs), and the provision of **bus services** and of **waste collection services** have '**disposal of lubricant oils and tyres**' as a core and comprehensive criteria in the contract performance clauses.

Criteria are specified as follows:

- **Cars and LCVs**: For lease contracts, the contractor has 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.
- **Bus services** and **waste collection services**: 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

- **Cars and LCVs** (lease contracts): Contractor has contract with one or several authorised waste managers, or can provide proof of provisions in place of collection and disposal of used lubricants oils and tyres.
- **Bus services** and **waste collection services**: 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 lubricants oils and tyres.

Additional information:

Waste oils (including lubricating oils) and tyres are included on the EU waste list set out in Commission Decision 2000/32/EC. Directive 2008/98/EC sets out the principles for waste management in the EU, including that disposal should occur only when re-use, recycling and recovery are not possible and that when disposal does take place, it should not endanger human health or harm the environment.

WASH BAYS

Wash bays

Categories in which these criteria can be found:

- The provision of **bus services** and of **waste collection services** have '**wash bays**' as a comprehensive criteria in the contract performance clauses

Criteria are specified as follows:

- **Bus services** and **waste collection services**: Where vehicles are washed during the contract period, they shall be in a wash bay that has at least a sludge and oil separator.

Verification

- **Bus services** and **waste collection services**: Certificate that the wash bay used has sludge and oil separator before outlet to general sewage/purification plant or excerpt from self-monitoring program.

Additional information:

As noted above, waste oils are included on the EU waste list set out in Commission Decision 2000/32/EC, which includes sludge from oil/water separators. Directive 2008/98/EC explicitly notes that waste oils should be collected separately (where technically feasible) and that their disposal should occur only when re-use, recycling and recovery are not possible and that their disposal should not endanger human health or harm the environment.

GEAR SHIFT INDICATORS

Gear shift indicators (GSI)

Categories in which these criteria can be found:

- The purchase or lease of **cars and LCVs** has '**Gear shift indicators**' as a comprehensive criterion under technical specification.

Criteria are specified as follows:

- **Cars and LCVs:** The vehicle offered is equipped with a GSI.

Verification

- **Cars and LCVs:** The tenderer must present the technical sheet of the vehicle where this information is displayed.

Additional information:

Regulation 661/2009 requires that all new cars should be fitted with a GSI.

EXHAUST PIPES (i.e. location of exhaust pipe on the bus)

Exhaust pipes (i.e. location of exhaust pipe on the bus)

Categories in which these criteria can be found:

- The purchase or lease of **buses** has '**Exhaust pipes**' as a comprehensive criterion under technical specification.

Criteria are specified as follows:

- **Buses:** Vehicles' exhaust pipes must not be located on the same side as the passenger door.

Verification

- **Buses:** The tenderer must provide the technical sheet of the vehicle.

Additional information:

In order to protect human health, passengers should be exposed to as little pollution as possible. Hence, it makes sense to have the exhaust pipe of a bus on the opposite side of the vehicle from the passenger door.

Annex II: 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)
Vehicles intended for the carriage of passengers, and comprising not more than nine seats including the driver's seat (M ₁)		74 (1)(2)
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 > 3.5 t and (M ₂ and M ₃)	< 150kW	78 (3)
	>= 150kW	80 (3)
Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat (M ₂) and vehicles intended for the carriage of goods (N1) with a maximum permissible mass <= 2 t :		76 (1)
Vehicles intended for the carriage of passengers and equipped with more than nine seats including the driver's seat (M ₂) and vehicles intended for the carriage of goods (N1) with a maximum permissible mass > 2 t, but <3.5 t		77 (3)
Vehicles intended for the carriage of goods and having a maximum permissible mass > 3,5 t (N ₂ and N ₃)	< 75kW	77 (3)
	>= 75, < 150kW	78 (3)
	>= 150kW	80 (3)

Notes:

(1): the limit values are increased by 1 dB(A) for these vehicles if they have a direct injection diesel engine.

(2) the limit values are increased by 1 dB(A) for these vehicles if they have a manual gear box with more than four gears, an engine developing a maximum power exceeding 140 kW/t, maximum power/maximum mass ration exceeding 75 kW/t and a speed greater than 61 km/h when the rear of the vehicle passes the line BB' in third gear

(3): the limit values for off road vehicles over two tonnes are increased by 1 dB(A) if their engine power is less than 150 kW and by 2 dB(A) if their engine power is 150 kW or more.

Annex III: Noise level limits for tyres

According to Regulation 661/2009 Annex II Part C rolling noise levels shall not exceed the following limits (to be phased in from 1st November 2012):

Class C1 tyres (primarily designed for cars, LCVs and their trailers) with nominal section width of the tyre that has been tested

Tyre class	Nominal section width (mm)	Limit values in dB(A)
C1A	mm \leq 185	70
C1B	185 < mm \leq 215	71
C1C	215 < mm \leq 245	71
C1D	245 < mm \leq 275	72
C1E	> 275	74

These limits are increased by 1 dB(A) for snow tyres, extra load tyres or reinforced tyres, or any combination of these classifications.

Class C2 and C3 tyres (primarily designed for buses, commercial vehicles and their trailers) with references to the category of use of the range of tyres

Tyre class	Category of use	Limit values in dB(A)
C2	Normal tyres	72
	Traction tyres	73
C3	Normal tyres	73
	Traction tyres	75

These limits are increased by 2 dB(A) for special use tyres. For snow tyres, an additional 1 dB(A) shall be allowed for all categories other than for the C2 traction category for which an additional 2 dB(A) shall be allowed.