

Helping procurers and suppliers understand and accelerate performance improvements

CLOCS mission is to ensure the safest, leanest and greenest construction vehicle journeys. Its ethos continues to be to drive continuous performance improvement by all parties – particularly by leveraging the power of procurement which should always seek to create the right commercial and physical conditions for all parties to perform at the highest levels.

The CLOCS Standard (Version 4, August 2022) requires procurers and suppliers to report and review collisions and emissions data for their construction vehicle journeys. This guide is designed to help all parts of the sector (in particular clients and contractors procuring products or services requiring vehicle movements) to better obtain and understand the fleet operations performance of suppliers they are procuring, and importantly, to work collaboratively with those organisations to improve the performance of all.

Sections in this guide are:

1. Key points to aid understanding and implementation
2. What the national CLOCS Standard requires in terms of collisions and emissions reporting
3. Why collisions and emissions data for construction vehicle journeys is critical
4. How to obtain and report collisions and emissions data
5. How procurers should understand and respond appropriately to suppliers' collisions and emissions data

1. Key points to aid understanding and implementation

- Under the national CLOCS Standard, suppliers must now collect and report to procurers their annual collisions and emissions performance data – expressed in terms of 'per 100,000km travelled' to enable fair comparison between suppliers. Given the significant impact construction logistics has on the community, procurers shall collect and review such collision and emissions data with equal importance to data on incidents within the site hoardings e.g. RIDDOR.
- Annual collisions/emissions data for a fleet operator provides a more useful/rounded performance picture than for specific journeys or projects. It is also far easier for suppliers to provide, as all responsible organisations operating a fleet will already collect collisions data and report it to their management team and insurers; all will also track fuel consumption as it is a significant and rising cost element which is used to calculate emissions; many will now also publish emissions data to meet Environment, Social & Governance (ESG) requirements. i.e. [ESOS Regulations](#).
- To minimise the reporting burden, organisations should report data for the most recent 12-month period (taken from the last 18 months) that has been reviewed/approved by its management team. Fleet operators that are FORS Silver accredited already submit all the required data into the FORS data submission portal which calculates key emissions; there are also many other online fuel-based emissions calculators.
- Organisations must at least provide their fleet's overall performance and importantly a 'fair interpretation statement' that identifies balancing factors (particularly urban vs rural environments, engine types, driver training etc.) to help procurers better understand supplier performance. As fleets with different vehicle mixes and/or operating in different urban/rural environments may well have different overall performances, organisations are encouraged (but not required) to also breakdown their performance data using industry-recognised vehicle categories (see table below).
- Organisations falling in the bottom quartile of a procurer's supply chain are now required (through contracts or procurement documents) to provide their procurer with a suitable and sufficient 'performance improvement plan'. As CLOCS seeks to improve the performance of the whole sector, not just the worst performing organisations, all organisations should by default have performance improvement plans.

2. What the national CLOCS Standard requires in terms of collision and emission reporting

The following extract is from the Client and Principal Contractors sections of the CLOCS Standard (Version 4):

4.4 Clients / Principal Contractors shall obtain from all regular or significant project or supply chain partners their annual collisions and emissions performance information, and where appropriate, obtain a credible improvement plan.

See [this Collisions and Emissions Reporting] guidance on CLOCS website for further information

The CLOCS Standard expands to state more detailed requirements placed on Clients / Principal Contractors:

Performance **shall** be reported, per 100,000km travelled, for the most recently formally reported 12-month period in last 18 month (to minimise reporting burden).

Collisions **shall** be reported under:

- fatal
- serious injury
- minor injury
- near miss (optional)

Emissions **shall** be reported under:

- CO₂
- NO_x (NO + NO₂)
- PM10 (and PM2.5 if available)

Clients / Principal Contractors **shall** determine which contractors/suppliers are 'significant'.

Clients / Principal Contractors **should** obtain from the worst performing quartile of their supply chain (by collision or emission performance), a credible performance improvement plan.

Where specific significant issues are identified, Clients / Principal Contractors **shall** obtain and monitor an urgent action plan to prevent recurrence on any current or future project they can reasonably influence.

Principal contractors **should** proactively report all relevant annual performance data and improvement plans to their client(s).

3. Why collisions and emissions data for construction vehicle journeys is critical

The following defines what data must be reported. Organisations can choose to also supply additional information.

Annual Collision data must be:

- For the whole organisation being procured unless otherwise defined/agreed with the procurer.
- Reported as a ratio of incidents per 100,000km travelled
- Collated using standard Government definitions as follows:
 - fatal (death within 30 days)
 - Serious injury - requiring hospital treatment within a week of the incident and 7 or more days off work (preventing normal activities) in line with RIDDOR
 - Minor injury - known or likely to prevent normal day-to-day activities by casualty within the week following the incident
 - Near misses - optional data - whilst critical for fleet operators to collect and act on as provides predictable foresight to likely collisions, reporting of near misses data to procurers supply chain remains optional

Annual Emission data must be:

- For the whole organisation being procured unless otherwise defined/agreed with the procurer
- Reported as a ratio of emissions per 100,000km travelled
- Collated to include as a minimum:
 - CO₂ - carbon dioxide - reported in tonnes
 - NO_x - including nitrogen dioxide and nitrogen monoxide - reported in kilograms
 - PM10 (and PM2.5 if available) - Particulate Matter from exhausts, tyres and brakes - reported in kilograms

These key emissions matter because:

- Hydrocarbon fuels release significant amounts of carbon dioxide (CO₂), the primary cause of climate change as it absorbs radiation preventing heat from escaping our atmosphere and stays in it for approx. 1,000 years; as the planet heats up, more water evaporates into the atmosphere which in turn increases temperature.

- Nitrous oxides (NO_x) - covering NO and NO₂ - depletes the ozone layer and contributes to global warming. It has 300 times the warming potential of carbon dioxide and stays in the atmosphere for approx. 116 years. It's the third most important greenhouse gas after CO₂ and methane (CH₄).
- Particulate Matter (PM) is everything in the air that isn't a gas, comprising huge mix of chemical compounds some of which are toxic, and are measured in micrometres/microns [1 micron (1μ) = 1/1000 mm]. Due to their small size, they are easily absorbed into the body's critical organs. The UK is currently focused on PM10 and PM2.5. About half of PM in UK comes from anthropogenic sources, particularly domestic wood burning and importantly tyre and brake wear. UK Air Quality Standards Regulations 2010 require PM concentrations less than:
 - An annual average of 40 μg/m³ for PM10
 - A 24-hour average of 50 μg/m³ more than 35 times in a single year for PM10
 - An annual average of 20 μg/m³ for PM2.5

Different vehicles emit more or less CO₂, NO_x, PM10 and PM2.5 depending on key factors:

- Distance travelled in urban vs rural environments significantly change the level of emissions from the same vehicle.
- Driver behaviour - one of the most significant factors in defining fuel efficiency and wear & tear of brakes/tyres so consequently emissions. Good drivers that accelerate/brake smoothly and minimise engine idling significantly reduce emissions.
- Fuel used - White diesel and HVO (hydrotreated vegetable oil, sometimes known as 'renewable diesel') are currently direct primary replacements for red diesel, banned with effect from April '22.
- Engine efficiency - Euro 6/VI diesel engines were introduced in 2014 to significantly reduce nitrous oxides, carbon dioxide, carbon monoxide, sulphur dioxide and diesel particulate matter. In June '22 Emissions Analytics estimated that for vehicles with Euro 6/VI engines, tyre particulate emissions are 1,850 times greater than their tailpipe emissions as exhaust systems are now so 'clean'.
- Migrating fleets to Electric Vehicles effectively eliminates journey CO₂ and NO_x emissions, but EVs emit similar levels of PM10 and PM2.5 from the brakes, tyres and bodywork, and the environmental impact of EV battery production, recharging & recycling/disposal still remains largely unknown.

4. How to obtain and report collisions and emissions data

The CLOCS Standard requires procurers to determine which contractors/suppliers are 'significant'. CLOCS suggests that means all organisations likely to be involved in at least 2.5% of the generated/required vehicle journeys or construction spend (whichever is easiest to estimate, given journey numbers/distance may be unknown) - intended to be 10-30 organisations at most - plus those likely to present the highest risk to the community (if different).

Procurers should always briefly explain to suppliers how the data will be used (e.g. supplier selection or ongoing supplier performance management) and provide reassurance that all data will remain confidential between the two parties unless otherwise agreed.

Clients should instruct contractors/suppliers to provide data for only their own direct construction logistics activity and separately for all sub-contracted activity if felt significant e.g. because of the supplier's business model of outsourcing delivery/logistics.

Construction clients or contractors are recommended to use their standard procurement processes to request, obtain and review the collisions and emissions performance data, just as they do for other key factors like cost, quality, safety, etc. For a specific project or contract, Standard Selection Questionnaires (SSQs) are recommended. For a more stable supply chain, in which a range of organisations are prequalified and managed over a longer period of time, other documents/processes can also be used.

Crucially, all organisations being procured (and that operate a fleet of vehicles to deliver the services or products being procured) must provide:

- Clear, complete and honest data that best summarises the most recent **annual collisions and emissions performance data totals for the whole fleet** - particularly as likely to be simpler for most fleet operators.

- Organisations may propose/accept a clearly labelled data sub-set that better reflects the services being procured, particularly where data for the wider fleet will unduly distort more relevant data.
 - As well as providing the annual collisions and emissions performance for the 'whole fleet', organisations are encouraged to provide a more detailed breakdown of the fleet – see table below.
- A **'fair interpretation statement'** to ensure procurers can reasonably understand and compare suppliers' annual performance data, including the primary factors influencing that performance, particularly including:
 - method of calculation e.g. simply using total annual fuel consumption and distance travelled to calculate using FORS or other online calculators or using sophisticated vehicle-by-vehicle telematics.
 - ratio between urban and rural distances travelled (using Gov't definition of conurbations with populations <10,000 people) – as urban journeys typically result in significantly more emissions and collisions per 100,000km.
 - fleet size and/or vehicle mix, and details of any use that may impact the emissions e.g. vehicle fitted with Power Take Off (PTO) driven equipment such as HIABS or mixers that are used when the vehicle is stationary.
 - management actions to minimise collisions and emissions – for the period reported.
 - any expected changes to their performance data for the period during which procured services will be delivered e.g. changes in fleet vehicles, driver training, etc.

Organisations are encouraged to provide a breakdown of their fleet's overall annual collision and emission data to help procurers better understand their performance. The following table provides a standard industry framework.

Emissions per 100,000km travelled in last 12 months reported	Heavy (over 3.5T GVW)	Light (up to 3.5T GVW)	Alternative fuelled vehicles (less than 75g CO ₂ / km)	Hybrid vehicle (two/more distinct power sources)	Whole Fleet totals
CO ₂ - tonnes					
NO _x - kilograms					
PM10/PM2.5 - kilograms					
Collisions per 100,000km travelled in last 12 months reported	Heavy (over 3.5T GVW)	Light (up to 3.5T GVW)	Alternative fuelled vehicles (less than 75g CO ₂ / km)	Hybrid vehicle (two/more distinct power sources)	Whole Fleet totals
Fatal (death within 30 days)					
Serious injury - requiring hospital treatment					
Minor injury - affecting normal day-to-day activities					
Near misses (optional)					

5. How procurers should understand and respond appropriately to suppliers' collisions and emissions data

Once data has been received from suppliers, performance should be compared both against each other and ideally against national benchmark data. CLOCS is compiling such benchmark data and will publish on its website to aid comparison. Where specific significant issues are identified, procurers must obtain (from the relevant supplier) and importantly monitor an urgent action to prevent recurrence on any current or future project they can reasonably influence.

Procurers should notify all suppliers whose performance falls in either the bottom quartile of their significant supply chain partners or the bottom quartile of the national benchmark data (see www.clocs.org.uk), requesting an urgent 'performance improvement plan'. That plan must:

- Demonstrate how performance will be sufficiently improved within a reasonable timeframe - by default that means to well above the bottom quartile (ideally in top 50% of suppliers) **and** achieved within 24 months of being procured.
- Have been reviewed and approved by the supplier's management team

CLOCS welcomes feedback on this guide to help improve it and future guides - send comments to support@clocs.org.uk