



Environmental & Sustainability Data Collation Report 2023 (Incorporating GHG Reporting to ISO 14064-1)

Ready-Mixed Concrete Report - Acton & Southall



Introduction

Quattro (UK) Limited is committed to producing ready-mixed concrete by using the most sustainable constituent products available whilst also operating to BS EN ISO 9001, BS EN ISO 14001, BS ISO 45001 and BRE BES 6001 standards covering quality, environmental, health & safety and sustainability respectively.

This report also includes the mandatory reporting requirements stipulated by ISO 14064-1 “Specification with guidance at the organisation level for the quantification and reporting of greenhouse gas emissions and removals”. In this respect, the management and employees of Quattro (UK) recognise the obligation to protect the environment (at all levels e.g. local, national and global) in which it operates. This obligation is reflected in the following key commitments:

- To continue implementing existing emission reduction measures
- To continually improve our energy efficiency and reduce our environmental impacts
- To use cost-effective and environmentally friendly energy sources, where available
- The procurement of reliable, cost effective and environmentally sustainable supplies where possible
- The promotion of an energy conservation culture within the company through staff education and involvement
- To evaluate greenhouse gas emissions from ready-mixed concrete production and to continually strive for new methods to reduce them

We work closely with our supply chain partners to actively develop and introduce suitable management systems, certified standards, and directives to enhance the built environment. We are committed to continually improving our effectiveness in these areas and will continue to liaise with stakeholders and set itself meaningful and measurable objectives and targets to achieve this in line with BRE BES 6001.

The following data has been collated against the Sustainable Construction Forum (SCF) Key Performance Indicators (KPI's) and targets, and is compliant with the requirements of the Building Research Establishment (BRE) Environmental and Sustainability Standard BES 6001 '*Framework Standard for the Responsible Sourcing of Construction Products*'.

Eamon O'Loughlin

Managing Director*
Quattro (UK) Limited

*And 'Responsible Person' as identified under GHG standard ISO 14064-1

Sustainability Principles	Concrete Industry Performance Indicators & Quattro (UK) Specific KPI's	Unit of expression	Link to BES 6001	Wider Industry & UK Gov't Targets	Quattro (UK) Limited Actual Data 2020 Baseline	Quattro (UK) Limited Actual Data 2023	Target Set	Quantitative	Qualitative	Quattro (UK) Limited Targets to 2025
Environmental Management Systems	1.1 % of production sites covered by a 'UKAS' certified EMS (such as ISO14001, EMAS and for SMEs, BS8555)	% of production sites (and absolute number compared to total)	Management systems (sections 4.2.3 of BES 6001)	Increasing the m ³ , as well as production sites, covered by an EMS (e.g. ISO 14001) to 95%	100 %	100 %	Y	Y	N/A	Maintain % of production sites covered by a UKAS certified EMS at 100%
Waste minimisation	1.2a kg of waste to landfill as a proportion of production output (supplemented by 3.1b & c)	kg per m ³	Waste Management (section 4.4.4 of BES 6001)	Reducing overall factory waste by 10%	0.10 kg/m ³	0.001 kg/m ³	Y	Y	N/A	Maintain kg/m ³ of waste at 0.10 kg per m ³ or less
Waste minimisation	1.2b Net waste ratio. Ratio of 'total waste product usage' to 'waste to landfill'	Ratio	Waste Management (section 4.4.4 of BES 6001)	-	1099.06 : 1	18950.06 : 1	Y	Y	N/A	-
Emissions (excluding CO ₂ e)	1.3 Number of convictions for air and water emissions per annum	Number per annum	Local communities (section 4.4.13 of BES 6001)	Reducing the convictions for air and water emissions to zero	0	0	Y	Y	N/A	Maintain zero convictions for air and water emissions
Stakeholder Engagement	1.4 Stakeholder engagement. <i>No Indicator – performance to be covered qualitatively</i>	n/a	Social Requirements (section 4.4 of BES 6001)	-	-	-	N/A	N/A	N/A	No Target
Quality & Performance	1.5 % of production sites covered by a 'UKAS' certified 9001 quality management system	% of production sites (and absolute number compared to total)	Management systems (section 4.2.3 of BES 6001)	Increasing the m ³ , as well as production sites, covered by a quality system (e.g. ISO 9001) to 95%.	100 %	100 %	Y	Y	N/A	Maintain % of production sites certified to BS EN ISO 9001 at 100%
Responsible Sourcing	1.6 % of reported production certified to BES 6001	% of reported production m ³ Certified to BES 6001	Management systems (section 4.2.3 of BES 6001)	Increasing the m ³ , as well as production sites, covered by a Responsible Sourcing standard (e.g. BES 6001) to 95%	100 % (Good)	100 % (Excellent)	Y	Y	N/A	Increase % of production m ³ certified to BES 6001 at 'Excellent' to 100%

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Energy & CO ₂ e emissions (Production)	2.1 Energy used in production as a proportion of production output	kWh per m ³	Energy & Greenhouse gas Emissions (sections 3.4.1 & 4.4.2 of BES 6001)	Reducing overall kWh/tonne of energy used in production by 10% & Reducing CO ₂ emissions for production by 20% Note: Wider UK Government target was set in April 2021 of a 78% reduction by 2035 based on 1990 levels	8.43 kWh/m ³	5.92 kWh/m ³	Y	Y	N/A	Reduce kWh/m ³ emissions from production by 5% from 2020
	2.1a Energy intensity of production output	m ³ : kWh ratio	Energy & Greenhouse gas Emissions (sections 4.4.1 & 4.4.2 of BES 6001)		1 : 8.43	1 : 5.92	Y	Y	N/A	Reduce energy intensity ratio from production by 5% from 2020
	2.1b Energy intensity of production output	£turnover : kWh ratio	Energy & Greenhouse gas Emissions (sections 4.4.1 & 4.4.2 of BES 6001)		1 : 0.09	1 : 0.07	Y	Y	N/A	Reduce energy intensity ratio from production by 5% from 2020
	2.2 CO ₂ e emissions as a proportion of production output	kgCO ₂ e per m ³	Energy & Greenhouse gas Emissions (sections 4.4.1 & 4.4.2 of BES 6001)		2.06 kgCO ₂ e/m ³	1.26 kgCO ₂ e/m ³	Y	Y	N/A	Reduce kgCO ₂ e/m ³ emissions from production by 5% from 2020
	2.2a GHG intensity of production output	m ³ : kgCO ₂ e Ratio	Energy & Greenhouse gas Emissions (sections 4.4.1 & 4.4.2 of BES 6001)		1 : 2.06	1 : 1.26	Y	Y	N/A	Reduce GHG intensity ratio from production by 5% from 2020
	2.2b GHG intensity of production output	£turnover : kgCO ₂ e Ratio	Energy & Greenhouse gas Emissions (sections 4.4.1 & 4.4.2 of BES 6001)		1 : 0.02	1 : 0.02	Y	Y	N/A	Reduce GHG intensity ratio from production by 5% from 2020

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CO ₂ e emissions (Transport)	2.3a Average delivery distance travelled per m ³ (from factory gate to customer)	km per m ³	Transport Impacts (section 4.4.8 of BES 6001)	Note: Note: Wider UK Government target was set in April 2021 of a 78% reduction by 2035 based on 1990 levels	7.71 km/m ³	3.85 km/m ³	Linked to 2.3d	N/A	N/A	Linked to 2.3d
	2.3b m ³ moved split by three modes: road, rail, inland barge	m ³ moved by each mode	Transport Impacts (section 4.4.8 of BES 6001)		93876.00m ³ (100% Road)	105425.00m ³ (100% Road)	Linked to 2.3d	N/A	N/A	Linked to 2.3d
	2.3c Average load for each mode	m ³ per load	Transport Impacts (section 4.4.8 of BES 6001)		6.0m ³	6.67m ³	Linked to 2.3d	N/A	N/A	Linked to 2.3d
	2.3d CO ₂ e emissions as a proportion of production output	kgCO ₂ e per m ³	Transport Impacts (section 4.4.8 of BES 6001)		8.04 kgCO ₂ e/m ³ (1.34 kgCO ₂ e/m ³ as part of a 6.0 m ³ load)	5.88 kgCO ₂ e/m ³ (0.84 kgCO ₂ e/m ³ as part of a 6.67 m ³ load)	Y	Y	N/A	Reduce kgCO ₂ e/m ³ emissions by 5% from 2020
	2.3e % road transport certified to FORS gold	%	Transport Impacts (section 4.4.8 of BES 6001)		100%	100%	Y	Y	N/A	Maintain at 100% level
Materials Efficiency	3.1b % of additional cementitious materials (GGBS, fly ash etc.) as a proportion of total cementitious materials used	%	Resource Use & Waste Management (sections 4.4.3 & 4.4.4 of BES 6001)	Increasing the proportion of alternative cement additions (as a % of total cement) to 25% & Increasing the proportion of recycled/ secondary aggregates (as a % of total aggregates) to 25%	33.47%	36.41%	Y	Y	N/A	Maintain proportion of cement replacement at or above 25%
	3.1c Recycled/secondary aggregates as a proportion of total aggregates used	%	Resource Use & Waste Management (sections 4.4.3 & 4.4.4 of BES 6001)		0.06%	0.00%	Y	N/A	Y	Examine/assess the optimum recycled/secondary aggregate use as a proportion of total aggregate use based upon independent LCA reports

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Water	3.2a Mains water use as a proportion of production output	Litres per m ³	Water Extraction (section 4.4.5 of BES 6001)	Reduce mains water consumption by 20%	12.80 Litres/m³	24.41 Litres/m³	Y	Y	N/A	Maintain optimum level of overall water usage whilst maintaining Mains water usage at or below 15 litres /m ³ and optimising use of recycled / recovered water subject to product technical specifications
	3.2b Controlled groundwater use as a proportion of production output	Litres per m ³	Water Extraction (section 4.4.5 of BES 6001)		90.85 Litres/m³	116.78 Litres/m³	Y	Y	N/A	Maintain optimum level of overall water usage whilst maintaining Mains water usage at or below 15 litres /m ³ and optimising use of recycled / recovered water subject to product technical specifications
	3.2c Mains water intensity of production output	Production m ³ : Litres ratio	Water Extraction (section 4.4.5 of BES 6001)		1 : 12.80	1 : 24.41	Y	Y	N/A	Maintain 2020 ratio in-line with KPI 3.2a
	3.2d Controlled groundwater Intensity of production output	Production m ³ : Litres ratio	Water Extraction (section 4.4.5 of BES 6001)		1 : 90.85	1 : 116.78	Y	Y	N/A	Maintain 2020 ratio in-line with KPI 3.2a
Site Stewardship	3.3 % of relevant production sites that have site specific action plans	% of relevant production sites (and absolute number compared to total)	Resource Use (Section 4.4.3 of BES 6001)	-	100%	100%	N	N/A	N/A	Maintain at 100%

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Health & Safety	4.1a Reportable Injuries per 100,000 direct employees	Number of reportable injuries per 100,000 direct employees And absolute number per annum	Management systems (section 4.2.3 of BES 6001)	Reduction in accident frequency of 65% between 2014 and 2018	0 per 100,000 employees	0 per 100,000 employees	Y	Y	N/A	Overarching Zero harm expectation, and maintain LTIFR 'direct employees' figures at no more than 2 LTI per annum
	4.1b Lost time injuries for 'direct employees' per 1 million hours worked	Number of LTI's per 1 million hours worked for direct employees and absolute number per annum		MPA target = 50% reduction in LTIFR between 2020 and 2025 to 1.5	0 per 1 million hours	0 per 1 million hours				
Employment & Skills	4.2b % of employees covered by environmental and H&S management systems following the principles of BS EN 14001 or BS ISO 45001	% of employees covered by BS EN ISO 14001 or BS ISO 45001 systems	Employment & Skills (section 4.4.12 of BES 6001)	Increasing the % of employees covered by MPA Safer by competence training and qualifications to 100%	100%	100%	Y	Y	N/A	Maintain % of Relevant employees covered by BS EN ISO 14001 & BS ISO 45001 management systems at 100%
	4.2c Safety, health, Environmental and Responsible Sourcing related training undertaken by Quattro (UK) Limited Employees	Hours of training attended	Employment & Skills (section 4.4.12 of BES 6001)	No target set at Baseline – measure introduced in 2017	64 hours (H&S & BES 6001)	389 hours (H&S & BES 6001)	-	-	-	-

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Local Community	4.3 % of relevant production sites with community liaison activities (supplemented by 1.3 & 3.3)	% of relevant production sites (and absolute number compared to total)	Local Communities (section 4.4.13 of BES 6001)	Maintaining the % of relevant production sites that have community liaison activities at 100%	100% (2)	100% (2)	Y	Y	N/A	Maintain % of relevant production sites that have community liaison activities at 100%
	4.3a Number of community complaints (supplemented by 1.3)	Complaints per production m ³	Local Communities (section 4.4.13 of BES 6001)		0/m³	0/m³	Y	Y	N/A	Overarching zero expectation with year on year reduction of 5% from 2020
	4.3b Number of community events held, attended or sponsored	Number of events per year	Local Communities (section 4.4.13 of BES 6001)		4 (Quarterly community meetings)	4 (free road sweeper & sponsorship of local football team)	Y	Y	N/A	Minimum 4 events attended per year
	4.3c % use of constituent materials sources within 50km of production facilities (i.e. support for local business)	%	Local Communities (section 4.4.13 of BES 6001)		51.89%	0.00%	Y	Y	N/A	Utilise resources with 50km of production facilities subject to product technical specifications and supply availability

Notes:

It should also be noted that community liaison activities are relevant and appropriate to our immediate neighbours and the areas in which we operate.

4.3c data represents the % usage of any given source within the final product. This is to ensure that the % shown is representative of £turnover & tonnage used rather than just geographic position. i.e. A single very local constituent with a low value, purchased once per year should not adversely affect (falsely improve) the published figures, as in reality such a purchase could represent 0.001% of the constituents purchased, with large value/volume items being purchased from further afield.

Constituent material transport:

Sustainability Principles	Constituent material transportation analysis	Unit of expression	Required link to Responsible Sourcing BES 6001	Related Gov't Targets (No BPCF Targets)	Quattro (UK) Limited Base-Line Data 2023	Quattro (UK) Limited Targets to 2025
CO₂ Emissions (Transport)	Delivery distance travelled per tonne of traceable constituent material relative to proportionate usage (from source to production facility)	km travelled per constituent tonne supplied	Transport Impacts (section 44.8 of BES6001)	April 2021 UK Government target is 78% reduction by 2035 based on 1990 levels.	5.42 km per constituent tonne (single journey)	Maintain at or below 6.00 km / per constituent tonne performance or less (where possible)
	Method of transportation split by modes	% moved by each mode	Transport Impacts (section 44.8 of BES6001)		0.00 % (Conveyor) 84.92 % (Road) 5.49 % (Sea) 9.59 % (Rail)	Maintain 2023 performance or enhance (where possible)
	Average load for each mode	Tonnes per load by mode	Transport Impacts (section 44.8 of BES6001)		N/A (Conveyor) 30 tonnes (Road) 1000 tonnes (Sea) 1040 Tonnes (Rail)	Maintain 2023 performance or enhance (where possible)

Transport related aspects and impacts of our business and terminology used:

As part of our policy to reduce our environment aspects and impacts associated with transport, these have been assessed via the organisations UKAS accredited BS EN ISO 14001 certified management system, examining and detailing issues pertaining to our impacts upon air, water, land, natural resources, flora, fauna and human interaction in terms of past, present and planned events under our direct control, those influenced by supplier and those influenced by customer demand.

In accordance with our transport policy, and in addition to customer transport, we also monitor the transport distances associated with constituent materials. This is performed on an annual basis. We actively seek to source constituents from local suppliers to reduce the environmental impact of our operations. However, as we do not directly control the operations of our suppliers, we are unable to monitor their direct CO₂e emissions, but can monitor our own impact on this in terms of transport distances and by efficient ordering of products in 'full loads' wherever possible.

The Methodology for calculation of all transport related KPI's is taken directly from ISO 14064-1, with supporting information from the Concrete Industry SCF guidance documents in combination with UK Government conversion factors.

Page 8

GHG ISO 14064-1 mandatory reporting requirements:

Detail of 'Boundaries'

Production of 'Ready-Mixed Concrete'.

Direct and indirect emissions by GHG source

	2023
Electricity (Excluding Solar)	0.988 kgCO ₂ e/m ³
Solar Electricity	0.000 kgCO ₂ e/m ³
Gas oil – e.g. for heating (i.e. known as Red Diesel or Gas Oil)	0.000 kgCO ₂ e/m ³
Recovered fuel oil/other heating oil (specify)	0.000 kgCO ₂ e/m ³
Diesel for mobile plant	0.273 kgCO ₂ e/m ³
Mains natural gas	0.000 kgCO ₂ e/m ³
Bottled gas	0.000 kgCO ₂ e/m ³
Coal	0.000 kgCO ₂ e/m ³
Biofuel	0.000 kgCO ₂ e/m ³
Other renewable energy source	0.000 kgCO ₂ e/m ³
Other site energy source (Bulk Gas)	0.000 kgCO ₂ e/m ³

A description of how the CO₂e from biomass fuel is treated

Not Applicable.

A description of how the CO₂e relating to Solar Generated Electricity is treated

Not applicable.

GHG removals

Not applicable.

Exclusion of GHG sources and justification statement

No exclusions made within the boundaries established.

Historical base year data

The base line year is given as 2020 unless otherwise stated.

Explanation of changes from the base year, or recalculation of data

We are ahead of expectation in terms of improvement.

Reference to quantification methodology and factors and any changes made (this statement includes the methodology for production, client transport and constituent transport)

Methodology taken directly from ISO 14064-1, with supporting information from the Concrete Industry SCF guidance documents in combination with Defra conversion factors. Please also see overall summary notes (below).

Uncertainty statement

The organisation has undertaken an uncertainty exercise in accordance with EPA regulations. However, the data collation is verified before use, and the factors used to determine GHG are supplied by Defra, with the uncertainty values being extremely low. The level of uncertainty of the resulting estimates depends significantly on the source category and the pollutant. However, as our sources of CO₂e emissions arise from the combustion of fuel, this uncertainty is vastly reduced, as emissions can be estimated with a high degree of certainty regardless of how the fuel is used as these emissions depend almost exclusively on the carbon content of the fuel, which is generally known with a high degree of precision. The fuel used in our case is almost exclusively gas/electric, with other fuel sources as defined within the relevant SCF PI Guidance Document appendices. Hence, no organisation has determined that no further safety/variance values or factors are required in terms of onward reporting.

Verification statement, and type of verification and level of assurance achieved

AA1000 moderate level of assurance. This level of assurance is equivalent of a limited assurance under ISO 14064-3.

Overall summary notes:

Quattro (UK) Limited has adopted the objectives and targets detailed above. Where organisation data indicates that the industry (trade association) target has been met, whilst it is desirable to surpass the aforementioned target, the requirements in terms of BES 6001 have been achieved. Revised 'organisational' targets will be discussed within the management review meetings to determine the scope for further improvement. KPI 2.3d relates to the transportation of the product 'Ready-Mixed Concrete' from the production facility to site, and the associated return journey, linked to KPI's 2.3a-c. Transport related environmental aspects and impacts have been assessed via the organisations UKAS accredited BS EN ISO 14001 certified management system, with the main contributory factors being CO₂e emissions and transport distances.

The term 'UKAS' refers to a certificate issued by a UKAS accredited certification body.