

UK Advance Market Commitment for Low Carbon Concrete

TPP requirements: TPP 1, TPP 2 and TPP 3

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Department for Energy Security & Net Zero

UKRI Innovate UK

Carbon Limiting Technologies

About this document

This document sets out the requirements for the three TPPs under the UK Advance Market Commitment for Low Carbon Concrete. Each TPP is presented in tabular form. TPP 3 is followed by Annex I, which lists minimum CO_2 removal percentages for TPP3r example technologies.

Versions: TPP 1 and TPP 2, April 2026. TPP 3, published on the AMC portal 12/08/2026.

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TPP 1: Alternative code-compliant supplementary cementitious materials (SCMs)

Basic product specification	Concrete must conform with BS EN 206 and BS 8500 and incorporate binder that conforms with all relevant standards, including EN 197 (Parts 1 and 5 and 6) and BS 8615. The binder must contain greater volumes of alternative low carbon supplementary cementitious materials (SCM) than it does ground granulated blast-furnace slag (GGBS) and / or virgin fly ash. An alternative low carbon SCM is any SCM other than GGBS and virgin fly ash.
Applications	The concrete should be available on market standard terms (except in relation to price, see below) for use in the following applications: I. Ready mix concrete II. Pre-cast concrete (for example, structural and non-structural products including concrete masonry elements, concrete tiles, concrete cladding panels) AMC signatories making conditional demand commitments (CDCs) in relation to this TPP are encouraged to disaggregate their CDCs by application where feasible.
Strength classes	The concrete must be available on market standard terms (except in relation to price, see below) in 28-day compressive strength classes up to and including C32/40, but 56-day strength conformity may be specified if this allows a reduced total binder content for specific applications.
Carbon intensity	The **A1-A3 greenhouse gas emissions intensity** of the concrete, when calculated on a gross basis i.e. including emissions arising from burning fossil waste-derived fuels, shall be consistent with that required to be graded as at least **'C'**, under the **Universal Classification**[1], as maybe updated from time to time. If classified as **'C'**, the manufacturer must provide a documented plan to achieve at least a **'B' classification by 2030**. The measurement of the carbon intensity of the concrete shall follow the rules and protocols established by the AMC Working Group on Carbon Intensity Measurement. The carbon intensity should be measured in relation to the concrete being used by the purchaser, not using a 'book and claim' system.

Price	The price of concrete procured under this TPP shall be determined through normal market competition. AMC signatories are only expected to support and/or approve the use of concrete under this TPP if it is available at a delivered price (i.e. ready for use) not exceeding 10% above the benchmark concrete price and otherwise on market standard terms. The benchmark concrete price refers to the delivered price at which CEMI concrete could have been procured for the specific asset where the TPP-aligned concrete will be used, during the three-month period preceding purchase. The maximum price uplift will be adjusted downwards if policy developments, such as the introduction of the UK Carbon Border Adjustment Mechanism, or other external changes, result in an appreciable increase in the benchmark concrete price. This price uplift is intended to be sufficient to cover any costs that the supplier of the product may incur in testing or trialling the product prior to its delivery.
UK benefits	The manufacture and supply of the concrete must bring demonstrable economic benefit to the UK, such as supporting employment and/or investment in the UK.
Legal requirements	All concrete and its constituents must comply with all applicable UK laws related to health, safety, and environmental protection including, but not limited to, the Construction (Design and Management) Regulations (2015). For the avoidance of doubt, this includes, for example, laws concerning the provision of a safe working environment for all employees in relation to the handling, manufacture and/or fabrication of an asset which uses the concrete, as well as the safety and welfare of subsequent users of the asset.
Environmental sustainability	All manufacturers in the supply chain must minimize water and waste use to the minimum that the manufacturing process allows, avoided any negative biodiversity impacts, and be able to demonstrate that the SCM and concrete have as great a potential for recyclability as is economically feasible. The concrete manufacturer shall provide a declaration statement demonstrating how these requirements have been achieved.

[1] The carbon intensity thresholds and classification system may be revised in the future to account for the requirement to classify concrete by GWP reduction in the revision to EN 206, currently being considered by TC104/SC1/WG20.

TPP 2: Code-compliant concrete made with low-carbon Portland clinker binder

Basic product specification	Concrete conforming with BS EN 206 and BS 8500, and using binder conforming with all relevant codes e.g. EN 197 parts 1 and 5 and 6, where the greenhouse gas emissions intensity of the Portland clinker binder used in the concrete is equal to or lower than 500kgCO_2e/tonne (A1-A3 basis)[2].
Disaggregation	The concrete should be available on market standard terms (except in relation to price, see below) for use in the following applications: I. Ready mix concrete II. Pre-cast concrete (for example, structural and non-structural products including concrete masonry elements, concrete tiles, concrete cladding panels) Organisations making conditional demand commitments (CDCs) in relation to this TPP are encouraged to disaggregate their CDCs between these different applications where possible.
Strength classes	The concrete should be available on market standard terms (except in relation to price, see below) at a 28-day compressive strength of up to and including C32/40 but 56-day strength conformity may be specified if this allows a reduced total binder content for specific applications.
Carbon intensity	On A1-A3 basis, the gross carbon intensity i.e. including GHG emissions arising from burning fossil waste-derived fuels of the Portland clinker binder used within the concrete must be equal to or lower than 500kgCO_2e/tonne. Further, AMC signatories making conditional demand commitments referring to this TPP may choose to identify different quantities of concrete according to the following emissions intensities for the clinker: (i) <50kgCO_2e/tonne of Portland clinker binder (ii) 50-200kgCO_2e/tonne of Portland clinker binder (iii) <500kgCO_2e/tonne of Portland clinker binder If AMC signatories adopt this flexible quantity approach within their CDC, the quantity associated with category (1) must be greater than or equal to that of category (2), which must be greater than or equal to that of category (3). The measurement of the carbon intensity of the Portland clinker binder shall follow the rules and protocols established by the AMC Working Group on Carbon Intensity Measurement. The carbon intensity should be measured in relation to the concrete being used by the purchaser, not using a ‘book and claim’ system.

Price	The price of the concrete procured under this TPP should be determined by the normal competitive interaction of buyers and sellers. AMC signatories are only expected to support and/or approve the use of concrete consistent with this TPP when the product is available for delivery (i.e. ready to use) at the following prices: a. <50kgCO_2e/tonne of Portland clinker binder: no more than 20% above the benchmark concrete price (and otherwise on market standard terms) b. 50-200kgCO_2e/tonne of Portland clinker binder: no more than 15% above the benchmark concrete price (and otherwise on market standard terms) c. <500kgCO_2e/tonne of Portland clinker binder: no more than 10% above the benchmark concrete price (and otherwise on market standard terms) The benchmark concrete price refers to the delivered price at which CEMI concrete could have been procured for the specific asset where the TPP-aligned concrete will be used, during the three-month period preceding purchase. These maximum price uplifts will be adjusted downwards if policy developments, such as the introduction of the UK Carbon Border Adjustment Mechanism, or other external changes, result in an appreciable increase in the benchmark concrete price. These price uplifts are intended to be sufficient to cover any costs that the supplier of the product may incur in testing or trialling the product prior to its delivery.
UK benefits	The manufacture and supply of the concrete must bring demonstrable benefit to the UK economy, for example, support employment and/or investment in the UK.
Legal requirements	Concrete and all its constituents shall meet all applicable laws related to Health and Safety and the Environment in the UK, including, but not limited to, the Construction (Design and Management) Regulations (2015). For the avoidance of doubt, this includes, for example, laws concerning the provision of a safe working environment for all employees in relation to the handling, manufacture and/or fabrication of an asset which uses the concrete, as well as the safety and welfare of subsequent users of the asset.
Environmental sustainability	All manufacturers in the supply chain must minimize water and waste use to the minimum that the manufacturing process allows, avoided any negative biodiversity impacts, and be able to demonstrate that the binders and concrete have as great a potential for recyclability as is economically feasible. The concrete manufacturer shall provide a declaration statement demonstrating how these requirements have been achieved.

[2] Where the concrete consists of more than one source of Portland clinker binder, with differing emissions intensities, this threshold applies to their weighted average.

TPP 3: Non-code conforming low-carbon concretes

Basic product specification	Concrete does not conform with BS EN 206 and BS 8500 and/or it incorporates binders that do not conforms with all relevant standards, including EN 197 (Parts 1 and 5 and 6) and BS 8615. Ground granulated blast furnace slag and virgin fly ash should not exceed, respectively, 50% and 25%, respectively, of the total binder content of the concrete and, if they are combined, the sum shall not exceed 50%.
Applications	The concrete should be available on market standard terms (except in relation to price, see below) for use in the following applications: I. Ready mix concrete II. Pre-cast concrete (for example, structural and non-structural products including concrete masonry elements, concrete tiles, concrete cladding panels) AMC signatories making conditional demand commitments (CDCs) in relation to this TPP are encouraged to disaggregate their CDCs by application where feasible.
Strength classes	The concrete must be available on market standard terms (except in relation to price, see below) in 28-day compressive strength classes up to and including C32/40, but 56-day strength conformity may be specified if this allows a reduced total binder content for specific applications.
Carbon intensity	The applicable requirements vary depending on the technologies through which the concrete delivers emission reductions. Concrete that relies solely on low-carbon materials and processes is referred to as **TPP3p** concrete, while concrete that achieves the relevant emissions-intensity threshold, at least in part, through carbon dioxide removal is referred to as **TPP3r** concrete. In both cases, the A1-A3 greenhouse gas emissions intensity of the concrete measured in $kgCO_2e/m^3$, when calculated on a gross basis i.e. including emissions arising from burning fossil waste-derived fuels, shall not exceed the value given by the formula: **$0.5 \times (5X + 200)$** Where X is the concrete cube strength for any eligible strength class. In 2030, this threshold will fall to 'C' under the Universal Classification in 2030, and to 'B' by 2035. For TPP3r concrete, each carbon dioxide removal technology contributing to achievement of the emissions-intensity threshold must reduce the A1–A3 gross carbon intensity of the binders, or combination of binders, used in the concrete by the applicable percentage specified in Annex I. It must also be demonstrated that the removed carbon dioxide can reasonably be expected to remain stored for at least 100 years from the date on which the concrete is poured. Any calculation of carbon dioxide removed during the A1–A3 stages shall exclude carbon dioxide that would, in the absence of the technology, have been removed during the use stage (B1–B7). For both TPP3p and TPP3r: • The measurement of the carbon intensity of the concrete shall follow the rules and protocols established by the AMC Working Group on Carbon Intensity Measurement and supplementary guidance issued by the Independent Expert Group relevant to TPP3. • The carbon intensity should be measured in relation to the concrete being used by the purchaser, not using a 'book and claim' system. • The Independent Expert Group must be satisfied that, over approximately the 15-year period following its assessment, concretes incorporating the technology can reasonably be expected to form part of the portfolio of technologies enabling projected emissions from concrete production to contribute to the country where the production takes place achieving net zero emissions by 2050.

Price	The price of concrete procured under this TPP shall be determined through normal market competition. AMC signatories are only expected to support and/or approve the use of concrete under this TPP if it should be available at a delivered price (i.e. ready for use) not exceeding 15% above the benchmark concrete price and otherwise on market standard terms. The benchmark concrete price refers to the delivered price at which CEMI concrete could have been procured for the specific asset where the TPP-aligned concrete will be used, during the three-month period preceding purchase. The maximum price uplift will be adjusted downwards if policy developments, such as the introduction of the UK Carbon Border Adjustment Mechanism, or other external changes, result in an appreciable increase in the benchmark concrete price. This price uplift is intended to be sufficient to cover any costs that the supplier of the product may incur in testing or trialling the product prior to its delivery.
UK benefits	The manufacture and supply of the concrete must bring demonstrable economic benefit to the UK, such as supporting employment and/or investment in the UK.
Legal requirements	All concrete and its constituents must comply with all applicable UK laws related to health, safety, and environmental protection including, but not limited to, the Construction (Design and Management) Regulations (2015). For the avoidance of doubt, this includes, for example, laws concerning the provision of a safe working environment for all employees in relation to the handling, manufacture and/or fabrication of an asset which uses the concrete, as well as the safety and welfare of subsequent users of the asset.
Environmental sustainability	All manufacturers in the supply chain must minimize water and waste use to the minimum that the manufacturing process allows, avoided any negative biodiversity impacts, and be able to demonstrate that the SCM and concrete have as great a potential for recyclability as is economically feasible. The concrete manufacturer shall provide a declaration statement demonstrating how these requirements have or will be(en) achieved.

Annex I: Minimum percentage reductions in A1-A3 carbon intensity reductions for TPP3r example technologies

Technology	Minimum % of CO_2 removal for concrete by mass of binder per m^3
Direct injection of CO_2 (gas or liquid)	0.5%
Accelerated carbonation curing - precast	10%
Calcium silicate cement	15%
Slag carbonation	5%
Carbonated aggregates	5%
Reactive MgO cements	5%
Biochar addition	3%
CO_2 carrier admixtures	1%

See IEG document 'TPP3 Annex 1 – Minimum percentage reductions in A1-A3 carbon intensity reductions for TPP3s' for more details on the assumptions and methodologies to be used when calculating whether a concrete meets these thresholds.