

Appendix A – Acquisition Sub-Groups

14/4/2023

- Carbon emissions are reported for Acquisition only if they are significant.

Table A-1: Acquisition Sub-Groups

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2) AC AE		
	Group (Level 3)		
	Sub-Group (Level 4)		
1.	Acquisition Costs (AC) Acquisition Carbon Emissions (AE) (each Sub-Group includes Risk Allowances)		• Same as Project Quantities
1.	Site acquisition		• Same as Project Quantities
01.010	Costs and premium required to procure site		• Same as Project Quantities
01.020	Compensation to existing occupiers		• m2 Gross floor area occupied
01.030	Demolition, removal and modification of existing properties by way of payment to existing owners instead of carrying out physical work		• m2 Site area
01.040	Contributions for the preservation of heritage, culture and environment		• m2 Site area
01.050	Related fees to agents, lawyers, and the like		• Same as Project Quantities
01.060	Related taxes and statutory charges		• Same as Project Quantities
2.	Administrative, finance, legal and marketing expenses		• Same as Project Quantities
02.010	Client's general office overheads		• Same as Project Quantities
02.020	Client's project-specific administrative expenses: - in-house project management and design team - supporting project staff - project office venue, furniture and equipment if not included in Constructor's preliminaries site overheads - stores and workshops - safety and insurances - staff training - accommodation and travelling expenses for in-house team and external parties		• Same as Project Quantities
02.030	Interest and finance costs		• Same as Project Quantities
02.040	Legal expenses		• Same as Project Quantities
02.050	Accounting expenses		• Same as Project Quantities
02.060	Sales, leasing, marketing, advertising and promotional expenses		• Same as Project Quantities
02.070	Taxes and statutory charges related to sales and lease		• Same as Project Quantities
02.080	License and permit charges for operation and use		• Same as Project Quantities

- Carbon emissions are reported at the Sub-Group level by exception.

Table B-1: Construction | Renewal | Maintenance Sub-Groups: Buildings

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)	CC CE	RC RE or MC ME
	Group (Level 3)		
	Sub-Group (Level 4)		
2.	Construction Costs (CC) Construction Carbon Emissions (CE)		• Same as Project Quantities
3.	Renewal Costs (RC) Renewal Carbon Emissions (RE)		• Same as Project Quantities
5.	Maintenance Costs (MC) Maintenance Carbon Emissions (ME)		• Same as Project Quantities
	(CC CE, RC RE, and MC ME share the same Groups below, so far as applicable. Those separated by ' ' in [] are respective alternative terms.)		
1.	Demolition, site preparation and formation		• Same as Project Quantities • m2 Site area
01.010	Site survey and ground investigation		• m2 Site area
01.020	Environmental treatment		• m2 Site area
01.030	Sampling of hazardous or useful materials or conditions		• m2 Site area
01.040	Temporary fencing		• m Site boundary length
01.050	Demolition of existing buildings and support to adjacent structures		• m2 Roof and floor area demolished
01.060	Site surface clearance (clearing, grubbing, topsoil stripping, tree felling, minor earthwork, removal)		• m2 Site area
01.070	Tree transplant		• m2 Site area • No. of trees transplanted
01.080	Site formation and slope treatment		• m2 Site area • m3 Volume of earthwork
01.090	Temporary surface drainage and dewatering		• m2 Site area
01.100	Temporary protection, diversion and relocation of public utilities		• m2 Site area
01.110	Erosion control		• m2 Site area
2.	Substructure		• Same as Project Quantities
02.010	Foundation piling and underpinning: • mobilisation and demobilisation • trial piles and caisson • permanent piles and caisson • pile and caisson testing • underpinning		• Same as Project Quantities
02.020	Foundations up to top of lowest floor slabs: • excavation and disposal • lateral supports • raft footings, pile caps, column bases, wall footings, strap beams, tie beams • substructure walls and columns • lowest floor slabs and beams (excluding and beyond basement bottom slabs) • lift pits • composite or prefabricated work		• Same as Project Quantities • m2 Covered area on plan on ground
02.030	Basement sides and bottom: • excavation and disposal • lateral supports • bottom slabs and blinding • sides • vertical waterproof tanking, drainage blanket, drains and skin wall • horizontal waterproof tanking, drainage blanket, drains and topping slab • insulation • lift pits, sump pits, sleeves • composite or prefabricated work		• m3 Basement excavation volume
3.	Structure		• Same as Project Quantities
03.010	Structural removal and alterations		• m2 Gross area on floor removed or altered

- Carbon emissions are reported at the Sub-Group level by exception.

Table B-1: Construction | Renewal | Maintenance Sub-Groups: Buildings

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)	CC CE	RC RE or MC ME
	Group (Level 3)		
	Sub-Group (Level 4)		
03.020	Basement suspended floors (up to top of ground floor slabs): - structural walls and columns - beams and slabs - staircases		- m2 Gross external floor area of basement - m2 Gross internal floor area of basement
03.030	Frames and slabs (above top of ground floor slabs): - structural walls and columns - upper floor beams and slabs - roof beams and slabs - staircases - fireproofing to steel structure		- m2 Gross external floor area above top of ground floor slabs - m2 Gross internal floor area above top of ground floor slabs
03.040	Tanks, pools, sundries		- Same as Project Quantities - m3 Volume of tanks, pools, sundries
03.050	Composite or prefabricated work		- m2 Area of tops, sides and bases of rooms so constructed - m2 Area of floors, roofs and walls so constructed - Weighted no. of modules so constructed, with weightings
4.	Architectural works Non-structural works		Same as Project Quantities
04.010	Non-structural removal and alterations		m2 Gross area on floor with non-structural removal or
04.020	External elevations: - non-structural external walls and features - external wall finishes except cladding - facade cladding and curtain walls - external windows - external doors - external shop fronts - roller shutters and fire shutters		m2 Area of external elevations
04.030	Roof finishes, skylights and landscaping (including waterproofing and insulation): - roof finishes - skylights - other roof features - roof landscaping (hard and soft)		m2 Plan area of roof finishes, skylights and landscaping
04.040	Internal divisions: - non-structural internal walls and partitions - shop fronts - toilet cubicles - moveable partitions - cold rooms - internal doors - internal windows - roller shutters and fire shutters - sundry concrete work		- Same as Project Quantities - m2 Area of all these components

- Carbon emissions are reported at the Sub-Group level by exception.

Table B-1: Construction | Renewal | Maintenance Sub-Groups: Buildings

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2) CC CE RC RE or MC ME		
	Group (Level 3)		
	Sub-Group (Level 4)		
04.050	Fittings and sundries: • balustrades, railings and handrails • staircases and catwalk not forming part of the structure, cat ladders • cabinets, cupboards, shelves, counters, benches, notice boards, blackboards • exit signs, directory signs • window and door dressings • decorative features • interior landscaping • access panels, fire service cabinets • sundries		• Same as Project Quantities
04.060	Finishes under cover: • floor finishes (internal and external) • internal wall finishes and cladding • ceiling finishes and false ceilings (internal or external)		• Same as Project Quantities • m2 Total area of all these components
04.070	Builder's work in connection with services: • plinth, bases • fire-proofing enclosure • hoisting beams, lift pit separation screens, lift shaft separator beams • suspended manholes • cable trenches, trench covers • sleeves, openings and the like not allowed for in 'Fittings and sundries'		• Same as Project Quantities • % of costs of services
04.080	Composite or prefabricated work		• m2 Gross area on floor with such non-structural construction
5.	Services and equipment		• Same as Project Quantities
05.010	Heating, ventilating and air-conditioning systems/air conditioners: • seawater system • cooling water system • chilled water system • heating water system • steam and condensate system • fuel oil system • water treatment • air handling and distribution system • condensate drain system • unitary air-conditioning system • mechanical ventilation system • kitchen ventilation system • fume and smoke extraction system • anaesthetic gas-extraction system • window and split-type air conditioners • air-curtains • fans • related electrical and control systems		• Same as Project Quantities • Tonnes of refrigeration capacity • Weighted no. of terminal outlets, with weightings stated

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Table B-1: Construction | Renewal | Maintenance Sub-Groups: Buildings

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)	CC CE	RC RE or MC ME
	Group (Level 3)		
	Sub-Group (Level 4)		
05.020	Electrical services: - high-voltage transformers and switchboards - incoming mains, low-voltage transformers and switchboards - mains and submains - standby system - lighting and power - uninterruptible power supply - electric underfloor heating - local electrical heating units - earthing/lightning protection and bonding - submissions, testing and commissioning		- Same as Project Quantities - kWh of supply capacity - Weighted no. of terminal outlets, with weightings stated
05.030	Fitting out lighting fittings		- Same as Project Quantities - No. of lighting fittings
05.040	Extra low voltage electrical services: - information and communications technology system - staff paging/location - public address system - building automation - security and alarm - close circuit television - communal aerial broadcast distribution and the like - submissions, testing and commissioning		- Same as Project Quantities - Weighted no. of terminal outlets, with weightings stated
05.050	Water supply and drainage above ground or inside basement: - cold water supply - hot water supply - flushing water supply - grey water supply - cleansing water supply - irrigation water supply - rainwater disposal - soil and waste disposal - planter drainage disposal - kitchen drainage disposal - related electrical and control systems - submissions, testing and commissioning		- Same as Project Quantities - No. of kitchens and bathrooms - Weighted no. of terminal outlets like sanitary fittings, and floor and roof outlets, with weightings stated
05.060	Supply of sanitary fittings and fixtures (installation included in 'Water supply and above ground drainage' unless not separable from costs of 'Fittings and sundries')		- Same as Project Quantities - Weighted no. of kitchens, bathrooms, drained rooms and roof outlets, with weightings stated - Weighted no. of terminal outlets, with weightings stated
05.070	Disposal systems: - refuse - laboratory waste - industrial waste - incinerator - submissions, testing and commissioning		Same as Project Quantities

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Table B-1: Construction | Renewal | Maintenance Sub-Groups: Buildings

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)	CC CE	RC RE or MC ME
	Group (Level 3)		
	Sub-Group (Level 4)		
05.080	Fire services: - fire hydrant and hose reel system - wet risers - sprinkler system - deluge system - gaseous extinguishing system - foam extinguishing system - audio/visual advisory system - automatic fire alarm and detection system - portable hand-operated appliances and sundries - related electrical and control systems - submissions, testing and commissioning		- Same as Project Quantities - Weighted no. of terminal outlets, with weightings stated
05.090	Gas services: - coal gas - natural gas - liquid petroleum gas - medical gas/laboratory gas - industrial gas/compressed air/instrument air - vacuum - steam - submissions, testing and commissioning		- Same as Project Quantities - Weighted no. of terminal outlets, with weightings stated
05.100	Movement systems: - lifts elevators - platform lifts - escalators - travellators moving walkways - conveyors - submissions, testing and commissioning		Weighted no. of equipment, with weightings stated
05.110	Gondolas		No. of gondolas
05.120	Turntables		No. of turnables
05.130	Generators		kWh of generators
05.140	Energy-saving features		Lump sum
05.150	Water and wastewater treatment equipment		Plant capacity
05.160	Fountains, pools and filtration plant		Lump sum
05.170	Powered building signage		Lump sum
05.175	Audio/visual entertainment system		Weighted no. of terminal outlets, with weightings stated
05.180	Kitchen equipment		Floor area of kitchens
05.190	Cold room equipment		Floor area of cold rooms
05.200	Laboratory equipment		Floor area of laboratories
05.210	Medical equipment		Same as Project Quantities
05.220	Hotel equipment		Same as Project Quantities
05.230	Car park or entrances access control		No. of carparking spaces
05.240	Domestic appliances		Same as Project Quantities
05.250	Other specialist services		Same as Project Quantities
05.260	Builder's profit and attendance on services		- Same as Project Quantities % of costs of services
6.	Surface and underground drainage		- Same as Project Quantities - Site area
06.010	Surface water drainage		Ditto
06.020	Storm water drainage		Ditto
06.030	Foul and wastewater drainage		Ditto
06.040	Drainage disconnections and connections		Ditto
06.050	CCTV inspection of existing or new drains		Ditto
06.060	Buried Process Pipe		Ditto

- Carbon emissions are reported at the Sub-Group level by exception.

Table B-1: Construction | Renewal | Maintenance Sub-Groups: Buildings

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)	CC CE	RC RE or MC ME
	Group (Level 3)		
	Sub-Group (Level 4)		
7.	External and ancillary works		• Same as Project Quantities • Site area
07.010	Permanent retaining structures		• m Length of retaining
07.020	Site enclosures and divisions		• m Length of enclosures and divisions
07.030	Ancillary structures		• m Gross floor area of ancillary structures
07.040	Roads and paving		• m Site area less building footprint
07.050	Landscaping (hard and soft)		• m Site area less building
07.060	Fittings and equipment		• m Site area
07.070	External services: • water supply • gas supply • power supply • communications supply • external lighting • utility disconnections and connections		• m Site area
8.	Preliminaries Constructors' site overheads general requirements	(j)	• Same as Project Quantities • % of costs above
08.010	Construction management including site management staff and support labour		• Ditto
08.020	Temporary access roads and storage areas, traffic management and diversion (at the Constructors' discretion)		• Ditto
08.030	Temporary site fencing and securities		• Ditto
08.040	Commonly shared construction plant		• Ditto
08.050	Commonly shared scaffolding		• Ditto
08.060	Other temporary facilities and services		• Ditto
08.070	Technology and communications: telephone, broadband, hardware, software		• Ditto
08.080	Constructor's submissions, reports and as-built documentation		• Ditto
08.090	Quality monitoring, recording and inspections		• Ditto
08.100	Safety, health and environmental management		• Ditto
08.110	Insurances, bonds, guarantees and warranties		• Ditto
08.120	Constructor's statutory fees and charges		• Ditto
08.130	Testing and commissioning		• Ditto
08.140	Extras for extreme climatic or working conditions (if priced separately according to local pricing practice)		• Ditto
9.	Risk Allowances	(j), (k)	• Same as Project Quantities • % of costs above
09.010	Design development allowance	(l)	• Ditto
09.020	Construction contingencies	(m)	• Ditto
09.030	Price Level Adjustments: • until tendering • during construction	(n)	• Ditto
09.040	Exchange rate fluctuation adjustments		• Ditto
10.	Taxes and Levies	(j)	• Same as Project Quantities • % of costs above
10.010	Paid by the Constructor		• Ditto
10.020	Paid by the Client in relation to the construction contract payments		• Ditto
11.	Work and utilities off-site (including related risk allowances, taxes and levies)		• Same as Project Quantities • Lump sum

- Carbon emissions are reported at the Sub-Group level by exception.

Table B-1: Construction | Renewal | Maintenance Sub-Groups: Buildings

Code	Description	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)	CC CE	RC RE or MC ME
	Group (Level 3)		
	Sub-Group (Level 4)		
11.010	Connections to, diversion of and capacity enhancement of public utility mains or sources off-site up to mains connections on-site: • electricity • transformers • water • sewer • gas • telecommunications		• Ditto
11.020	Public access roads and footpaths		• Ditto
12.	Production and loose furniture, fittings and equipment (including related risk allowances, taxes and levies)		• Same as Project Quantities • Lump sum
12.010	Loose production, process and operating furniture, fittings and equipment not normally provided before completion of construction		• Ditto
12.020	Fixed production, process and operating furniture, fittings and equipment installed before completion of construction • production (including process and operating) equipment (including furniture and fittings) • related instrument and control systems • related safety and environmental control systems • related storage and transfer systems • services and equipment as described in Group 05 but dedicated to serve production equipment • surface and underground drainage as described in Group 06 but dedicated to serve production equipment • testing and commissioning • licences and certifications to start production • risks allowances		• Ditto
13.	Construction-related consultants and supervision (including related risk allowances, taxes and levies)		• Same as Project Quantities • % of costs above • Lump sum
13.010	Consultants' fees and reimbursable: • architects (architectural, landscape, interior design, technical, etc.) • engineers (geotechnical, civil, structural, mechanical, electrical and plumbing, technical, etc.) • project managers • surveyors (quantity surveying, land surveying, building surveying, cost engineering, etc.) • specialist consultants (environmental, traffic, acoustic, facade, BIM, etc.)		• Ditto
13.020	Charges and levies payable to statutory bodies or their appointed agencies (in connection with planning, design, tender and contract approvals, supervision and acceptance		• Ditto
13.030	Site supervision charges (including their accommodation and travels)		• Ditto
13.040	Payments to testing authorities or laboratories		• Ditto

Appendix C – Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

14/4/2023

- Carbon emissions are reported by exception at the Sub-Group level.
- A bullet indicates that the Sub-Group is likely to apply. Sub-Groups without a bullet can also be included if applicable.

Table C-1: Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

Code	Description	Roads and runways	Railways	Bridges	Tunnels	Wastewater treatment works	Water treatment works	Pipelines	Wells and boreholes	Power generating plants	Chemical plants	Refineries	Dams and reservoirs	Mines and quarries	Offshore structures	Near Shore Works	Ports	Waterway Works	Land formation and reclamation	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)																				
	Group (Level 3)																				
	Sub-Group (Level 4)																				
2.	Construction (CC CE)																				• Same as Project Quantities
3.	Renewal (RC RE)																				• Same as Project Quantities
5.	Maintenance (MC ME)																				• Same as Project Quantities
	(CC CE, RC RE, and MC ME share the same Groups below, so far as applicable. Those separated by 'I' in [] are alternative terms for respective																				
1.	Demolition, site preparation and formation																				• Same as Project Quantities • m2 Site area
01.010	Site survey and ground investigation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area
01.020	Environmental treatment	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area
01.030	Sampling of hazardous or useful materials or conditions	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area
01.040	Temporary fencing	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m Site boundary length
01.050	Demolition of existing structures and support to adjacent structures	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Roof and floor area demolished
01.060	Site surface clearance (clearing, grubbing, topsoil stripping, tree felling, minor earthwork, removal)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area
01.070	Tree transplant	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area • No. of trees transplanted
01.080	General site formation and slope treatment (including embankments / cuttings required by more than one Sub-Project)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area • m3 Volume of earthwork
01.090	Temporary surface drainage and dewatering	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area
01.100	Temporary access roads and storage areas (provided under an advance contract)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Site area
01.110	Temporary protection, diversion and relocation of public utilities	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Area protected
01.120	Erosion control	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	• m2 Area controlled
01.600	Water surface development (including common facilities and services, and dredge spoil recovery area)													•	•	•	•	•	•		• m2 Area developed
01.610	Dredge spoil recovery area													•	•	•	•	•	•		• m2 Recovery area
01.620	Hydrographic / bathymetry surveys													•	•	•	•	•	•		• m2 Area surveyed
01.630	Water quality monitoring													•	•	•	•	•	•		• m2 Area monitored
01.640	Excavation (of soft silt, peat, sands, gravels, clay, rock, etc., including mobilisation and demobilisation of excavators, blasting, transportation, disposal, reclamation, compaction and monitoring)													•	•	•	•	•	•		• m2 Site area • m2 Area excavated • m3 Volume of earthwork
01.650	Dredging (of soft silt, peat, sands, gravels, clay, rock, etc., including mobilisation and demobilisation of dredgers and barges, blasting, transportation, disposal, reclamation,													•	•	•	•	•	•		• m2 Site area • m2 Area dredged • m3 Volume of earthwork
01.660	Special disposal and treatment of contaminated sediment													•	•	•	•	•	•		• m2 Site area • m3 Volume of contaminated sediment
01.670	Reclamation or filling (with imported rock, concrete, or other hard materials)													•	•	•	•	•	•		• m2 Area reclaimed / filled • m3 Volume of earthwork
01.680	Reclamation or filling (with dredged materials)													•	•	•	•	•	•		• m2 Area reclaimed / filled • m3 Volume of earthwork
01.690	Surcharging or consolidation of lands and monitoring of settlement													•	•	•	•	•	•		• m2 Area surcharged / consolidated
01.700	Habitat protection systems													•	•	•	•	•	•		• Lump sum
2.	Substructure																				• Same as Project Quantities
02.010	Embankments / cuttings (specifically required for the Project or Sub-Project)	•	•	•	•								•	•			•	•	•	•	• m3 Volume cut / filled
02.020	Excavation, disposal and lateral supports (specifically to receive any substructure construction but excluding general site formation and slope treatment)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m3 Volume excavated / filled
02.025	Geotextile or other geomembranes													•	•	•	•	•	•		• m3 Area covered
02.030	Trenching / common trenches	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m Trench lengths

Appendix C – Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

14/4/2023

- Carbon emissions are reported by exception at the Sub-Group level.
- A bullet indicates that the Sub-Group is likely to apply. Sub-Groups without a bullet can also be included if applicable.

Table C-1: Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

Code	Description	Roads and runways	Railways	Bridges	Tunnels	Wastewater treatment works	Water treatment works	Pipelines	Wells and boreholes	Power generating plants	Chemical plants	Refineries	Dams and reservoirs	Mines and quarries	Offshore Structures	Near Shore Works	Ports	Waterway Works	Land formation and reclamation	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)																				
	Group (Level 3)																				
	Sub-Group (Level 4)																				
02.040	Drilling / boring				•			•	•				•	•	•	•	•	•	•		• m Depth drilled / bored
02.050	Piling / anchoring	•	•	•		•	•			•	•	•	•	•	•	•	•	•	•		• m Depth piled / anchored
02.060	Structural backfill / ground remediation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m3 Volume backfilled
02.070	Earth-retaining structures	•	•	•	•								•	•	•	•	•	•	•		• m3 Volume of such structures
02.080	Abutments / wing walls	•	•	•									•	•	•	•	•	•	•		• m3 Volume of such structures
02.090	Pile caps / footings / bases (nearest to the ground level or water level if constructed in water)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m3 Volume of such structures
02.100	Sub-base to pavements and rail track	•	•											•	•	•	•	•	•		• m2 Area of sub-bases
02.110	Bases to supports for tanks, pipes, well heads and the like					•	•	•	•	•	•	•		•	•	•	•	•	•		• m3 Volume of bases • m2 Area of bases
02.120	Beds and surrounds to underground pipes					•	•	•	•	•	•	•		•	•	•	•	•	•		• m Pipe lengths
02.600	Pile retaining walls (combi walls / H-pile walls / secant piled walls • sheet piled walls • gravity quay walls • relieving platforms • pile supported structures • special types																•	•			• m2 Elevation area retained and anchored
02.610	Diaphragm walls																•	•			• m2 Area of diaphragm walls
02.620	Quays / docks / wharfs / moorings / piers / dry dock structure foundations																•	•			• m2 Gross floor area of such structures supported
02.630	Marine anchor systems														•	•	•	•			• No. of anchors
02.640	Mooring dolphins															•	•	•			• No. of dolphins
02.650	Breakwaters • cores • primary armour (interlocking units) • secondary armour															•	•	•	•		• m Length of breakwaters • m2 Surface area of breakwaters
02.660	Rock revetments / gabions															•	•	•			• m2 Surface area of rock revetments / gabions
02.670	Cofferdams															•	•	•			• m2 Elevation area retained and anchored
02.680	Bank protection																	•	•		• m2 Surface area of bank protection
3.	Structure																				• Same as Project Quantities
03.010	Piers and towers			•										•							• No. of piers and towers
03.020	Suspension system			•										•							• m Length of structures
03.030	Decks			•																	• m2 Area of deck
03.040	Bearings			•																	• m Length of structures supported
03.050	Tunnel lining				•									•			•	•			• m Length of lining
03.060	Roads / track bases	•	•	•	•									•			•	•			• m2 Area of roads / track bases
03.070	Pavements	•	•	•	•												•	•			• m2 Area of pavements
03.080	Service roads and approaches	•	•	•	•										•	•	•	•			• m2 Area of service roads and approaches
03.090	Parapets / edge treatment	•	•	•	•																• m Length of parapets / edge treatment
03.100	Main structures (in case of land formation and reclamation, referring to those of project types not separately reported as Sub-					•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m3 External volume of main structures
03.105	Service stations and houses for district utility services																•	•			• No. of surface stations and houses
03.110	Tanks, rigs, storage containers and the like					•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m3 External volume of such containers
03.120	Supports for tanks, pipes and the like					•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m3 External volume of such containers
03.130	Civil pipework					•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m Length of pipes
03.140	Valves and fittings					•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m Length of pipes
03.600	Seawalls															•	•		•		• m Length of seawalls • m2 Surface area of seawalls
03.610	Lake and river lining																•	•			• m2 Area lined
03.620	Prefabricated marine structures – off-site fabrication														•	•	•				• m3 Gross volume of such structures
03.630	Prefabricated marine structures – transport to site location														•	•	•				• m3 Gross volume of such structures

- Carbon emissions are reported by exception at the Sub-Group level.
- A bullet indicates that the Sub-Group is likely to apply. Sub-Groups without a bullet can also be included if applicable.

Table C-1: Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

Code	Description	Roads and runways	Railways	Bridges	Tunnels	Wastewater treatment works	Water treatment works	Pipelines	Wells and boreholes	Power generating plants	Chemical plants	Refineries	Dams and reservoirs	Mines and quarries	Offshore Structures	Near Shore Works	Ports	Waterway Works	Land formation and reclamation	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)																				
	Group (Level 3)																				
	Sub-Group (Level 4)																				
03.640	Prefabricated marine structures – installation on site location														•		•	•			• m3 Gross volume of such structures
03.650	Slipways / gangways / linkways																•	•	•		• m2 Area of such structures
03.660	Dock and lock gates																	•	•		• m Length of gates
03.670	Pontoons																•	•	•		• m2 Area of pontoons
03.680	Coastal protection systems																•	•			• m Length of coastline • m2 Area protected
03.690	Deck / surface structures (ground bearing or suspended concrete slabs)																•	•	•		• m2 Area of such structures
03.700	Locks and guidance structures																	•	•		• m2 Area of pontoons
03.710	Revetments																•				• m2 Surface area of such structures
03.720	Flood defences																•	•	•		• m Length of barriers
03.730	Navigational aids																•	•	•		• Lump sum
03.740	Dry docks structures																	•	•		• m2 Area of pontoons
03.750	Weirs																	•			• m Length of weirs
03.760	Aqueducts																	•			• m Length of aqueducts
4.	Non-structural works																				• Same as Project Quantities
04.010	Non-structural removal and alterations	•	•	•	•	•	•	•	•	•	•	•	•	•							• m2 Gross plan area with non-structural removal or alterations
04.020	Non-structural construction					•	•	•	•	•	•	•	•	•							• Same as Project Quantities
04.030	Running surface	•	•	•	•									•							• Area of running surface
04.040	Signage, markings and the like	•	•	•	•									•	•						• Same as Project Quantities
04.050	Gantries and the like	•	•	•	•									•							• No. of gantries and the like
04.060	Safety facilities	•	•	•	•	•	•	•	•	•	•	•	•	•	•						• Same as Project Quantities
04.070	Barriers / rails and means of access	•	•	•	•	•	•	•	•	•	•	•	•	•	•						• m Length of barriers / rails
04.080	Special equipment and fittings	•	•	•	•	•	•	•	•	•	•	•	•	•	•						• Lump sum
04.090	Interior landscaping	•	•	•	•	•	•	•	•	•	•	•	•	•	•						• m2 Area landscaped
04.100	Builders' work in connection with services	•	•	•	•	•	•	•	•	•	•	•	•	•	•						• Same as Project Quantities • % of costs of services
5.	Services and equipment																				• Same as Project Quantities • Site area
05.005	District heating, ventilating and cooling																	•			• m2 Area formed / reclaimed
05.010	Mechanical systems	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities
05.020	Lighting systems	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities
05.030	Illuminations	•	•	•	•									•	•	•	•	•			• Same as Project Quantities
05.040	Low-voltage power supply	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•			• Same as Project Quantities
05.050	Cables/cable trays	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities
05.060	Other electrical services	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities
05.070	Control systems and instrumentation • signalling systems • telecommunications systems	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities
05.080	Pipe racks / supports (localised)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities
05.090	Water supply and drainage above ground or inside underground construction (localised)	•	•	•	•	•				•	•	•	•	•	•		•	•	•		• Same as Project Quantities
05.100	Refuse and waste disposal systems														•	•	•	•			• Same as Project Quantities
05.110	Fire services	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities
05.115	Gas services														•	•	•	•			• Same as Project Quantities
05.120	Movement systems: lifts / elevators / conveyors	•	•	•	•	•	•			•	•	•	•	•	•	•	•	•			• Weighted no. of equipment, with weightings stated
05.600	Boat lifts																	•	•		• No. of boat lifts
05.610	Cranes / rigs/ rails																•	•	•		• Same as Project Quantities
05.620	Under water / sea service pipe installation														•	•	•	•			• Same as Project Quantities
05.630	Under water / sea electrical / data cabling														•	•	•	•			• Same as Project Quantities
06.010	Surface water drainage	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	• m2 Site area
06.020	Storm water drainage	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	• m2 Site area
06.030	Foul and waste water drainage	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	• m2 Site area
06.040	Pumping systems	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m2 Site area
06.050	Drainage connections	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•	• m2 Site area
7.	External and ancillary works																				• Same as Project Quantities • Site area
07.010	Site enclosures and divisions	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•		• m Length of enclosures and divisions
07.020	Ancillary structures	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•		• m Gross floor area of ancillary structures

Appendix C – Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

14/4/2023

- Carbon emissions are reported by exception at the Sub-Group level.
- A bullet indicates that the Sub-Group is likely to apply. Sub-Groups without a bullet can also be included if applicable.

Table C-1: Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

Code	Description	Roads and runways	Railways	Bridges	Tunnels	Wastewater treatment works	Water treatment works	Pipelines	Wells and boreholes	Power generating plants	Chemical plants	Refineries	Dams and reservoirs	Mines and quarries	Offshore Structures	Near Shore Works	Ports	Waterway Works	Land formation and reclamation	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)																				
	Group (Level 3)																				
	Sub-Group (Level 4)																				
07.030	Roads and paving (not amounting to a Sub-Project)	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•			• m2 Area paved
07.040	Landscaping (hard and soft)	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•		• m2 Area landscaped
07.050	Fittings and equipment	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•		• Lump sum
8.	Preliminaries Constructors' site overheads general requirements																			(j)	• Same as Project Quantities • % of costs above
08.010	Construction management including site management staff and support labour	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities • % of costs of codes 1 to 7
08.020	Temporary access roads and storage areas, traffic management and diversion (at the Constructors' discretion)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• m2 Area of temporary access roads and storage
08.025	Temporary concrete batching yard, precast concrete casting yard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Lump sum
08.030	Temporary site fencing and securities	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• km Length of fencing
08.040	Commonly shared construction plant	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities • % of costs above
08.045	Marine plant and equipment (e.g. ships / barges / vessels, floating cranes, dredgers, floating drill rigs, cofferdams, caissons, etc.)													•	•	•	•				• Same as Project Quantities • % of costs of codes 1 to 7 • Lump sum
08.050	Commonly shared scaffolding	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities • % of costs of codes 1 to 7 • Lump sum
08.055	Workpeople living accommodation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities • % of costs of codes 1 to 7 • Lump sum
08.060	Other temporary facilities and services	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities • % of costs of codes 1 to 7 • Lump sum
08.065	Mobilisation and demobilisation where significant and not elsewhere reported														•	•	•	•	•		• Lump sum
08.070	Technology and communications: telephone, broadband, hardware, software	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Same as Project Quantities • % of costs of codes 1 to 7 • Lump sum
08.080	Constructor's submissions, reports and as-built documentation	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
08.090	Quality monitoring, recording and	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
08.100	Safety, health and environmental	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
08.110	Insurances, bonds, guarantees and	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
08.120	Constructor's statutory fees and charges	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
08.130	Testing and commissioning	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
08.140	Extras for extreme climatic or working conditions (if priced separately according to local pricing practice)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
9.	Risk Allowances																			(j), (k)	• Same as Project Quantities • % of costs above
09.010	Design development allowance	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	(l)	• Ditto
09.020	Construction contingencies	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	(m)	• Ditto
09.030	Price level adjustments • until tendering • during construction	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	(n)	• Ditto
09.040	Exchange rate fluctuation adjustments	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
10.	Taxes and Levies																			(j)	• Same as Project Quantities • % of costs above
10.010	Paid by the Constructors	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
10.020	Paid by the Client in relation to the construction contract payments	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
11.	Work and utilities off-site (including related risk allowances, taxes and levies)																				• Same as Project Quantities • Lump sum

Appendix C – Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

14/4/2023

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Table C-1: Construction | Renewal | Maintenance Sub-Groups: Civil Engineering Works

Code	Description	Roads and runways	Railways	Bridges	Tunnels	Wastewater treatment works	Water treatment works	Pipelines	Wells and boreholes	Power generating plants	Chemical plants	Refineries	Dams and reservoirs	Mines and quarries	Offshore Structures	Near Shore Works	Ports	Waterway Works	Land formation and reclamation	Note	Key Unit and Description ("•" means choices, "/" means either or both)
	Category (Level 2)																				
	Group (Level 3)																				
	Sub-Group (Level 4)																				
11.010	Connections to, diversion of and capacity enhancement of public utility mains or sources off-site up to mains connections on-site: • electricity • transformers • water • sewer • gas	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
11.020	Public access roads and footpaths	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
12.010	Loose production, process and operating furniture, fittings and equipment not normally provided before completion of	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
12.020	Fixed production, process and operating furniture, fittings and equipment installed before completion of construction	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
13.	Construction-related consultants and supervision (including related risk allowances, taxes and levies)																				• Same as Project Quantities • % of costs above • Lump sum
13.010	Consultants' fees and reimbursable: • architects (architectural, landscape, interior design, technical, etc.) • engineers (geotechnical, civil, structural, mechanical, electrical and plumbing, technical, etc.) • project managers • surveyors (quantity surveying, land surveying, building surveying, cost engineering, etc.) • specialist consultants (environmental, traffic, acoustic, facade, BIM, etc.)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
13.020	Charges and levies payable to statutory bodies or their appointed agencies (in connection with planning, design, tender and contract approvals, supervision and	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
13.030	Site supervision charges (including their accommodation and travels)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto
13.040	Payments to testing authorities or	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		• Ditto

Appendix D – Operation Sub-Groups

14/4/2023

- Carbon emissions are reported at the Sub-Group level by exception.

Table D-1: Operation Sub-Groups

	Code	Description	Key Unit and Description ("•" means choices, "/" means either or both)
		Category (Level 2)	OC OE
		Group (Level 3)	
		Sub-Group (Level 4)	
4.		Operation Costs (OC) Operation Carbon Emissions (OE)	• Same as Project Quantities
	1.	Cleaning	
	01.010	External cleaning (routine and periodic)	
	01.020	Internal cleaning (routine and periodic)	
	01.030	Specialist cleaning (define type)	
	2.	Utilities	
	02.010	Fuel (state type: gas / electricity / oil and other fuel sources)	
	02.020	Water, drainage and sewerage	
	3.	Waste management	
	03.010	Waste collection and disposal	
	03.020	Recycling and savage	
	4.	Security	
	04.010	Physical security	
	04.020	Remote monitoring	
	5.	Information and communications technology	
	05.010	Communication systems	
	05.020	Specialist technology / sensors	
	6.	Operators' site overheads general requirements	
	06.010	Administration	
	06.020	Property insurance	
	7.	Risk Allowances	
	07.010	Operation related (user definable)	
	07.020	Contractual obligations	
	8.	Taxes and Levies	
	08.010	Taxes	
	08.020	Levies	