

Supplementary materials

Part 1. Calculation sheet

In the Table S1: CEC=Carbon emission coefficient (kgCO₂-eq/unit), All carbon emissions are measured in kgCO₂-eq

Table 1. Quantity calculation sheet and their carbon emissions in construction stage.

Item number: 010101001001					Item unit: m ²				
Item name: Flat ground					Item amount: 1563.4				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A1-188	Bulldozer 75kW with the thickness of 30cm	1000m ²	1.91	1.26		369.61	370.873	710.07
Comprehensive CEC								0.454	710.07
Item number: 010101003001					Item unit: m ³				
Item name: Digging foundation earthwork					Item amount: 1143.88				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A1-143	Loading of hydraulic excavator within 2m depth;	1000m ³	0.46	7.56		1859.54	1867.104	853.03
2	A1-144	No loading of hydraulic excavator digging depth less than 2m;	1000m ³	0.84	7.56		1456.75	1464.309	1233.78
3	A1-181	Dump truck earth load 8t distance (within 5km)	1000m ³	0.46	7.56		14578.36	14585.919	6663.88
Comprehensive CEC								7.650	8750.69
Item number: 010103001001					Item unit: m ³				
Item name: Backfill of foundation earthwork					Item amount: 706.36				
		Item content	Unit	Amount			Total CEC		
							Total carbon emissions		

Sequence number	Quota number				Manual CEC	Material CEC	Machinery CEC		
1	A1-29	Backfill and tamp on site	m ³	785.78	0.10		2.03	2.126	1670.58
Comprehensive CEC								2.365	1670.58
Item number: 010103001002							Item unit: m ³		
Item name: Indoor earthwork backfill							Item amount: 107.23		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A1-29	Backfill and tamp on site	m ³	107.22	0.10		2.03	2.126	227.92
Comprehensive CEC								2.126	227.92
Item number: 010301001001							Item unit: m ³		
Item name: Brick foundation							Item amount: 4.5		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A3-1	M5 brick foundation; straight shape	m ³	4.50	1.41	317.78	0.70	319.887	1439.49
Comprehensive CEC								319.887	1439.49
Item number: 010302004001							Item unit: m ³		
Item name: Infilled wall							Item amount: 15.97		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A3-9	M5 mix water brick wall; 1 brick	m ³	15.97	1.91	336.39	0.68	338.983	5413.56
Comprehensive CEC								338.983	5413.56
Item number: 010302004002							Item unit: m ³		
Item name: Infilled wall							Item amount: 972.46		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	A3-17	M5 porous brick wall; wall thickness 180 240×180×115	m ³	972.46	1.41	186.16	0.38	187.955	182778.78
Comprehensive CEC								187.955	182778.78
Item number: 010302004003				Item unit: m ³					
Item name: Infilled wall				Item amount: 203.32					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A3-15	M5 porous brick wall; wall thickness 115 240×115×90	m ³	203.32	1.70	186.31	0.45	188.456	38316.78
Comprehensive CEC								188.456	38316.78
Item number: 010302004004				Item unit: m ³					
Item name: Infilled wall				Item amount: 154.6					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A3-15	M5 porous brick wall; wall thickness 100 240×115×90	m ³	154.60	1.70	186.31	0.45	188.456	29135.23
Comprehensive CEC								188.456	29135.23
Item number: 010302004005				Item unit: m ³					
Item name: Infilled wall				Item amount: 205.15					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A3-17	M5 porous brick wall; wall thickness 180 240×180×115	m ³	205.15	1.41	186.16	0.38	187.955	38558.98
Comprehensive CEC								187.955	38558.98
Item number: 010302004006				Item unit: m ³					
Item name: Infilled wall				Item amount: 124.9					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	A3-15	M5 porous brick wall; wall thickness 115 240×115×90	m ³	124.90	1.70	186.31	0.45	188.456	23538.10
Comprehensive CEC								188.456	23538.10
Item number: 010302004007				Item unit: m ³					
Item name: Infilled wall				Item amount: 8.33					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A3-15	M5 porous brick wall; wall thickness 100 240×115×90	m ³	8.33	1.70	186.31	0.45	188.456	1569.83
Comprehensive CEC								188.456	1569.83
Item number: 010302006001				Item unit: m ³					
Item name: Sporadic bricklaying				Item amount: 10.21					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A3-37	M5 sporadic masonry	m ³	10.21	2.68	407.43	0.93	411.043	4196.75
Comprehensive CEC								411.043	4196.75
Item number: 010401002001				Item unit: m ³					
Item name: Independent foundation				Item amount: 281.07					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A2-274	Commercial concrete; unreinforced; pumping	m ³	61.27	0.47	242.78	1.26	244.509	14981.07
2	A4-143	C30 isolated foundation; concrete	m ³	281.07	0.45	244.14	1.29	245.876	69108.41
Comprehensive CEC								299.176	84089.48
Item number: 010403001001				Item unit: m ³					
Item name: Foundation beam				Item amount: 143.23					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	A4-153	C30 foundation beam	m ³	143.23	0.47	354.14	2.18	356.794	51103.60
Comprehensive CEC								356.794	51103.60
Item number: 010401003001				Item unit: m ³					
Item name: Manitem foundation (elevator pit floor)				Item amount: 9.32					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A2-260	Sand	m ³	12.45	1.21	11.00	0.62	12.834	159.85
2	A4-144	C30 raft foundation; no beam	m ³	9.32	0.38	244.20	1.34	245.924	2292.02
3	A2-274	Commercial concrete; unreinforced; pumping	m ³	4.15	0.47	242.78	1.26	244.509	1015.11
Comprehensive CEC								371.993	3466.98
Item number: 010402001001				Item unit: m ³					
Item name: Constructional column				Item amount: 184.11					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-15	C20 circle、polygon、structural concrete column、specially shaped column	m ³	184.11	3.08	252.91	6.68	262.667	48359.54
Comprehensive CEC								262.667	48359.54
Item number: 010402001002				Item unit: m ³					
Item name: Door stamping				Item amount: 44.06					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-152	C20 structural concrete column	m ³	44.06	1.21	253.60	6.73	261.552	11525.05
Comprehensive CEC								261.552	11525.05
Item number: 010402001003				Item unit: m ³					
Item name: Recitemular column				Item amount: 6.72					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	A4-150	C40 recitemular column	m ³	6.72	1.02	445.66	6.73	453.414	3046.94
Comprehensive CEC								453.414	3046.94
Item number: 010402001004							Item unit: m ³		
Item name: Recitemular column							Item amount: 56.92		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-150	C40 recitemular column	m ³	56.92	1.02	445.66	6.73	453.414	25808.34
Comprehensive CEC								453.414	25808.34
Item number: 010402001005							Item unit: m ³		
Item name: Recitemular column							Item amount: 38.8		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-150	C35 recitemular column	m ³	38.80	1.02	395.24	6.73	402.992	15636.09
Comprehensive CEC								402.992	15636.09
Item number: 010402001006							Item unit: m ³		
Item name: Recitemular column							Item amount: 105.66		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-150	C30 recitemular column	m ³	105.66	1.21	360.38	6.73	368.332	38918.01
Comprehensive CEC								368.332	38918.01
Item number: 010402001007							Item unit: m ³		
Item name: Recitemular column (stair column)							Item amount: 5.99		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-150	C30 recitemular column	m ³	5.99	1.21	360.38	6.73	368.332	2206.31
Comprehensive CEC								368.332	2206.31
Item number: 010403004001							Item unit: m ³		
Item name: Waterproof beam							Item amount: 18.32		
Item content			Unit	Amount				Total CEC	Total carbon emissions

Sequence number	Quota number				Manual CEC	Material CEC	Machinery CEC		
1	A4-156	C20 girth	m³	18.33	1.13	244.27	6.73	252.124	4621.06
Comprehensive CEC								252.124	4621.06
Item number: 010403004002							Item unit: m³		
Item name: Ring beam							Item amount: 2.4		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-156	C20 girth	m³	2.40	1.13	244.27	6.73	252.124	605.10
Comprehensive CEC								252.124	605.10
Item number: 010403005001							Item unit: m³		
Item name: Lintel							Item amount: 8.8		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-157	C20 lintel	m³	8.80	1.24	244.35	6.73	252.309	2220.32
Comprehensive CEC								252.309	2220.32
Item number: 010404001001							Item unit: m³		
Item name: Straight wall							Item amount: 6.13		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-160	C30 wall; concrete	m³	6.13	0.82	359.06	6.73	366.610	2246.29
Comprehensive CEC								366.610	2246.29
Item number: 010404001002							Item unit: m³		
Item name: Straight wall							Item amount: 11.15		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-161	C30 elevator shaft; straight wall	m³	11.15	1.13	359.71	6.73	367.576	4099.21
Comprehensive CEC								367.576	4099.21

Item number: 010405001001					Item unit: m ³				
Item name: Beam slab					Item amount: 361				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-165	C30 beam slab	m ³	361.00	0.58	354.36	6.86	361.801	130610.20
Comprehensive CEC								361.801	130610.20
Item number: 010405001002					Item unit: m ³				
Item name: Beam slab					Item amount: 187.42				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-165	C30 beam slab	m ³	187.42	0.58	354.36	6.86	361.801	67808.76
Comprehensive CEC								361.801	67808.76
Item number: 010405001003					Item unit: m ³				
Item name: Beam slab					Item amount: 12.98				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-165	C30 beam slab	m ³	12.98	0.58	354.36	6.86	361.801	4696.18
Comprehensive CEC								361.801	4696.18
Item number: 010405001004					Item unit: m ³				
Item name: Beam slab (under rib beam)					Item amount: 598.08				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-165	C30 beam plate	m ³	598.08	0.58	354.36	6.86	361.801	216386.01
Comprehensive CEC								361.801	216386.01
Item number: 010405003001					Item unit: m ³				
Item name: Tablet slab					Item amount: 6.09				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	A4-167	C30 flat-plate	m ³	6.09	0.60	354.55	6.86	362.009	2204.64
Comprehensive CEC								362.009	2204.64
Item number: 010403002001				Item unit: m ³					
Item name: Recitemular beam				Item amount: 81.66					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-154	C30 monospar、continuous beam、Frame beams	m ³	81.66	0.70	354.14	6.73	361.565	29525.41
Comprehensive CEC								361.565	29525.41
Item number: 010405006001				Item unit: m ³					
Item name: Breast board				Item amount: 14.32					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-169	C30 breast board	m ³	14.31	1.31	354.88	5.37	361.558	5175.46
Comprehensive CEC								361.558	5175.46
Item number: 010405008001				Item unit: m ³					
Item name: Awning board				Item amount: 0.71					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-171	C30 rain awning	m ²	5.55	0.12	37.23	0.97	38.319	212.82
Comprehensive CEC								299.740	212.82
Item number: 010405007001				Item unit: m ³					
Item name: Eaves soffit				Item amount: 46.15					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-170	C30 gutter、eaves board	m ³	46.15	1.18	354.94	10.80	366.913	16933.04
Comprehensive CEC								366.913	16933.04
Item number: 010406001001				Item unit: m ²					
Item name: Stairway				Item amount: 150.27					

Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-173	C30 stair; straight shape	每 m² 投影面积	150.27	0.20	75.06	1.94	77.205	11601.75
Comprehensive CEC								77.205	11601.75
Item number: 010407001001						Item unit: m³			
Item name: Other element						Item amount: 20.02			
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-182	C20 top-beam	m³	20.02	1.24	245.72		246.967	4944.33
Comprehensive CEC								246.967	4944.33
Item number: 010407001002						Item unit: m³			
Item name: Other element						Item amount: 14.72			
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-180	C20 small components	m³	14.72	1.18	246.65	5.37	253.196	3727.04
Comprehensive CEC								253.196	3727.04
Item number: 010408001001						Item unit: m³			
Item name: Back strip						Item amount: 5.11			
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-186	C35 post-cast bean strip	m³	5.11	0.84	361.31	8.92	371.077	1896.21
Comprehensive CEC								371.077	1896.21
Item number: 010408001002						Item unit: m³			
Item name: Back strip						Item amount: 8.49			
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-185	C35 post-cast plate strip	m³	8.49	0.70	361.31	8.92	370.935	3149.24
Comprehensive CEC								370.935	3149.24

Item number: 010416001001					Item unit: t				
Item name: Reinforcing bar in cast-in-place concrete					Item amount: 18.755				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-257	Circular steel bar φ 10 or less	t	18.76	23.76	2167.22	43.33	2234.310	41904.49
Comprehensive CEC								2234.310	41904.49
Item number: 010416001002					Item unit: t				
Item name: Reinforcing bar in cast-in-place concrete					Item amount: 87.153				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-259	Steel bar less than φ 10; level 3 steel φ 25 or less	t	87.15	8.19	2187.06	28.00	2223.244	193762.39
Comprehensive CEC								2223.244	193762.39
Item number: 010416001003					Item unit: t				
Item name: Reinforcing bar in cast-in-place concrete					Item amount: 225.843				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-259	Steel bar more than φ 10; level 3 steel φ 25 or less	t	225.84	8.19	2187.06	28.00	2223.244	502104.11
Comprehensive CEC								2223.244	502104.11
Item number: 010416001004					Item unit: t				
Item name: Reinforcing bar in cast-in-place concrete					Item amount: 6.867				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-284	Masonry; steel reinforcement in plate joints; no bingding	t	6.87	26.69	2150.49	23.77	2200.953	15113.94
Comprehensive CEC								2200.953	15113.94
Item number: 010416001005					Item unit: 1				
Item name: Reinforcing bar in cast-in-place concrete					Item amount: 3188				

Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-286	Electro-slag welding(ESW)	10	318.80	0.50	4.21	6.16	10.868	3464.66
Comprehensive CEC								1.087	3464.66
Item number: 002000200001 (supplement)							Item unit: 1		
Item name: Upsetting straight thread joint							Item amount: 413		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-288	Long and straight thread joint Φ 25 or more	10	41.30	1.17	21.46	7.50	30.129	1244.34
Comprehensive CEC								3.013	1244.34
Item number: 010417002001							Item unit: t		
Item name: Embedded iron							Item amount: 0.366		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-291	Embedded iron parts; making	t	0.37	33.33	2263.76	683.90	2980.992	1091.04
Comprehensive CEC								2980.992	1091.04
Item number: 010407001003							Item unit: item		
Item name: Elevator hole							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D0005	Elevator opening and calling hole	1	22.00		36.33		36.330	799.26
Comprehensive CEC								799.260	799.26
Item number: 010416001006							Item unit: 1		
Item name: Elevator hook							Item amount: 3		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-291	Embedded iron parts; making	t	0.02	33.33	2263.76	683.90	2980.992	53.66

Comprehensive CEC								17.884	53.66
Item number: 010607001001								Item unit: m ²	
Item name: Metal mesh								Item amount: 3861.56	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-285	Wall peg wire mesh	10m ²	386.16	0.69	62.89		63.585	24553.89
Comprehensive CEC								6.359	24553.89
Item number: 010606008001								Item unit: t	
Item name: Steel ladder								Item amount: 0.272	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A6-30	Steel ladder; paddle	t	0.27	32.60	3787.03	291.58	4111.203	1117.84
2	A9-110	Step type escalator	t	0.27	22.10	17.01	18.73	57.842	15.73
3	B5-254	Alkyd enamel; twice	t	0.27	2.89	87.80		90.684	24.66
Comprehensive CEC								4259.729	1158.22
Item number: 010603001001								Item unit: t	
Item name: Steel frame								Item amount: 2.434	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B5-252	Ready mixed paint; twice	t	2.43	2.22	71.78		73.995	180.10
2	B5-263	Aluminum paint; twice	t	2.43	2.73	86.51		89.241	217.21
3	A6-9	The steel column of the real abdomen (each mass is within) 5t	t	2.43	15.35	3876.57	381.95	4273.864	10402.58
4	A9-25	Transportation distance of a class of metal components (within 1 km)	10t	0.24	33.36	67.88	210.22	311.460	75.81
5	A9-77	Steel column; installation quality (within 4 t).	t	8.24	202.83	134.96	47.37	385.164	3175.36
Comprehensive CEC								5772.830	14051.07

Item number: 010407001004					Item unit: m ³				
Item name: Other element					Item amount: 1.81				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A4-177	C20 steps	m ³	1.81	0.68	244.59	10.80	256.068	463.48
Comprehensive CEC								256.068	463.48
Item number: 010407002001					Item unit: m ²				
Item name: Planting aprot					Item amount: 185.69				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A2-267	Crushed stone; dry shop	m ³	18.57	1.06	10.39	0.67	12.128	225.20
2	A1-30	Soil backfill; Earthwork	m ³	55.71	0.13		1.58	1.712	95.34
3	A1-27	Original soil ramming; twice	m ²	185.69	0.16		0.14	0.303	56.26
4	A4-181	C20 concrete apron dispersal and grouting a polishing	10m ²	18.57	0.99	209.40	0.16	210.554	3909.77
Comprehensive CEC								23.085	4286.57
Item number: 010407002002					Item unit: m ²				
Item name: Outdoor step					Item amount: 44.22				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A2-258	Soil-lime	m ³	13.27	1.23	45.91	1.13	48.269	640.34
2	A4-177	C20 steps	m ³	2.65	0.68	244.59	10.80	256.068	679.40
3	B1-283	Granite; cement mortar	100m ²	0.44	63.18	2137.95	158.76	2359.885	1043.54
Comprehensive CEC								53.444	2363.28
Item number: 010407002003					Item unit: m ²				
Item name: Outdoor platform					Item amount: 138.63				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A2-258	Soil-lime	m ³	41.59	1.23	45.91	1.13	48.269	2007.47

2	A2-274	Commercial concrete; unreinforced; pumping	m ³	8.31	0.47	242.78	1.26	244.509	2032.38
3	B1-29	Granite; floor; cement mortar	100m ²	1.39	30.45	1855.54	158.76	2044.758	2834.65
Comprehensive CEC								49.589	6874.50
Item number: 010407002004							Item unit: m ²		
Item name: Accessible ramp							Item amount: 5.18		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-18+[B1-20]	Cement mortar; 25mm thickness on concrete or hard base	100m ²	0.05	11.60	594.41	7.73	613.744	31.79
2	A2-258	Soil-lime	m ³	0.78	1.23	45.91	1.13	48.269	37.51
3	B1-29	Granite; floor; cement mortar	100m ²	0.05	30.45	1855.54	158.76	2044.758	105.92
Comprehensive CEC								33.825	175.22
Item number: 010407002005							Item unit: m ²		
Item name: Ramp							Item amount: 6.72		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A2-267	Crushed stone; dry shop	m ³	0.67	1.06	10.39	0.67	12.128	8.15
2	A2-275	Commercial concrete; unreinforced; no pumping	m ³	0.67	0.71	212.33	1.52	214.555	144.18
3	B1-29	Granite; floor; cement mortar	100m ²	0.07	30.45	1855.54	158.76	2044.758	137.41
Comprehensive CEC								43.116	289.74
Item number: 010702001001							Item unit: m ²		
Item name: Roofing coil waterproof and heat preservation roofing (no people)							Item amount: 356.74		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A8-206	Roof insulation; 100 thickness cast-in-place ceramsite concrete	m ²	356.74	0.12	7.94		8.058	2874.53

2	A8-218	Roof extrusion insulation board	m ²	356.74	0.08	17.41		17.487	6238.19
3	B1-19	Cement mortar; 20mm thickness on filling material	100m ²	3.57	10.08	996.31	7.55	1013.942	3617.14
4	A7-27	SBS-modified asphalt waterproofing	m ²	356.74	0.09	3.21		3.301	1177.57
5	A7-44	The roof is covered with polyurethane paint	m ²	356.74	0.07	43.83		43.900	15661.04
6	D00096	Light color coating protective layer	m ²	356.74		14.00		14.000	4994.36
Comprehensive CEC								134.622	34562.83
Item number: 010702001002				Item unit: m ²					
Item name: Roofing coil waterproof and heat preservation roofing (people)				Item amount: 1266.8					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-13	Fine aggregate concrete ground 40mm thick	100m ²	12.67	13.73	1158.80	24.22	1196.747	15160.38
2	D00097	Steel mesh	m ²	1266.80		4.39		4.387	5557.11
3	B1-1+[B1-2]*-2	Cement mortar; floor is 10mm thick	100m ²	12.67	9.39	584.67	2.88	596.935	7561.97
4	A7-27	SBS-modified asphalt waterproofing	m ²	1266.80	0.09	3.21		3.301	4181.62
5	A7-44	The roof is covered with polyurethane paint	m ²	1266.80	0.07	43.83		43.900	55613.08
6	B1-19	Cement mortar; 20mm thickness on filling material	100m ²	12.67	10.08	996.31	7.55	1013.942	12844.62
7	A8-206	Roof insulation; 100 thickness cast-in-place ceramsite concrete	m ²	1266.80	0.12	7.94		8.058	10207.58
8	A8-218	Roof extrusion insulation board 40	m ²	1266.80	0.08	17.41		17.487	22152.09

Comprehensive CEC							105.209	133278.44	
Item number: 010703003001							Item unit: m²		
Item name: Waterproof mortar							Item amount: 57.08		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A7-99	Waterproof mortar; plane	m²	57.08	0.11	10.76	0.06	10.928	623.75
Comprehensive CEC								10.928	623.75
Item number: 010803003001							Item unit: m²		
Item name: Thermal insulation external wall							Item amount: 3459.83		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00098	Insulation	m²	3459.83		25.55		25.545	88381.36
Comprehensive CEC								25.545	88381.36
Item number: 010407002006							Item unit: 1		
Item name: air conditioning mouth							Item amount: 126		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00093	Embedded PVC casing in air conditioning hole	1	126.00		10.38		10.376	1307.38
Comprehensive CEC								10.376	1307.38
Item number: 020101001001							Item unit: m²		
Item name: Cement mortar floor							Item amount: 12.4		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A2-267	Crushed stone; dry shop	m³	1.24	1.06	10.39	0.67	12.128	15.04
2	A2-273	Concrete; unreinforced; cast	m³	0.99	1.72	211.28	4.05	217.054	215.32
3	B1-1	Cement mortar; floor is 20mm thick	100m²	0.12	12.94	1129.23	6.11	1148.276	142.39
Comprehensive CEC								30.060	372.74

Item number: 020102002001 Item name: Ceramic tile floor					Item unit: m ² Item amount: 918.04				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-18+[B1-20]*-1	Cement mortar; 15mm thickness on concrete or hard base	100m ²	9.18	11.60	1074.66	7.73	1093.997	10043.33
2	B1-46	Floor tile floor below 300 x 300; cement mortar	100m ²	9.18	38.35	1746.72	76.63	1861.704	17091.19
3	A2-273	Concrete; unreinforced; cast	m ³	73.44	1.72	211.28	4.05	217.054	15941.12
4	D00099	Cement based waterproof	m ²	2028.08		4.31		4.314	8749.14
5	A2-267	Crushed stone; dry shop	m ³	91.80	1.06	10.39	0.67	12.128	1113.37
6	A2-273	Concrete; unreinforced; cast	m ³	36.72	1.72	211.28	4.05	217.054	7970.56
Comprehensive CEC								66.346	60908.71
Item number: 020102001001 Item name: Stone floor					Item unit: m ² Item amount: 413.22				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-31	Granite; floor; dry cement mortar	100m ²	4.13	53.17	954.94	160.02	1168.135	4826.97
2	A2-267	Crushed stone; dry shop	m ³	41.32	1.06	10.39	0.67	12.128	501.14
3	A2-273	Concrete; unreinforced; cast	m ³	41.32	1.72	211.28	4.05	217.054	8969.10
Comprehensive CEC								34.599	14297.20
Item number: 020101001002 Item name: Cement mortar floor					Item unit: m ² Item amount: 41.96				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-14+[B1-15]*-2	No sand surface layer; 20mm thickness	100m ²	0.42	9.20	1194.57	17.97	1221.739	512.64

2	B1-18+[B1-20]*-2	Cement mortar; 10mm thickness on concrete or hard base	100m ²	0.42	6.27	200.76	2.88	209.912	88.08
Comprehensive CEC								14.317	600.72
Item number: 020102002002				Item unit: m ²					
Item name: Ceramic tile floor				Item amount: 3275.77					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-18+[B1-20]*-1	Cement mortar; 15mm thickness on concrete or hard base	100m ²	32.76	11.60	594.41	7.73	613.744	20104.84
2	B1-49	Floor tile floor below 600×600; cement mortar	100m ²	32.76	34.26	1451.64	118.27	1604.165	52548.76
Comprehensive CEC								22.179	72653.60
Item number: 020102002003				Item unit: m ²					
Item name: Ceramic tile floor				Item amount: 287.82					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00095	Cement based waterproof coating	m ²	868.20		10.93		10.928	9487.41
2	B1-18+[B1-20]*-1	Cement mortar; 15mm thickness on concrete or hard base	100m ²	2.88	11.60	594.41	7.73	613.744	1766.48
3	B1-46	Floor tile floor below 300 x 300; cement mortar	100m ²	2.88	38.35	1451.64	118.27	1608.260	4628.89
Comprehensive CEC								55.183	15882.78
Item number: 020102002004				Item unit: m ²					
Item name: Sunken floor				Item amount: 187.17					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	B1-18	Cement mortar; 20mm thickness on concrete or hard base	100m ²	3.74	9.83	834.54	6.11	850.476	3183.67
2	B1-46	Floor tile floor below 300 x 300; cement mortar	100m ²	1.87	38.35	1451.64	118.27	1608.260	3010.18
3	A7-27	SBS-modified asphalt waterproofing roll; heat fusion method (full lay) layer	m ²	187.17	0.09	3.21		3.301	617.84
4	A7-27	SBS-modified asphalt waterproofing roll; heat fusion method (full lay) layer	m ²	187.17	0.09	3.21		3.301	617.84
5	A8-212	Cement and lime; slag	m ²	187.17	0.10	9.16		9.251	1731.52
Comprehensive CEC								48.945	9161.04
Item number: 020102001002							Item unit: m ²		
Item name: Stone floor							Item amount: 93.63		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-18	Cement mortar; 20mm thickness on concrete or hard base	100m ²	0.94	9.83	834.54	6.11	850.476	796.30
2	B1-31	Granite; floor; dry cement mortar	100m ²	0.94	53.17	954.94	160.02	1168.135	1093.73
Comprehensive CEC								20.186	1890.03
Item number: 020106002001							Item unit: m ²		
Item name: Ceramic tile floor							Item amount: 150.27		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-186	Stairs; cement mortar; 20mm thickness	100m ²	1.50	54.23	1445.73	8.09	1508.052	2266.15
2	B1-183	Block staircase; Cement mortar; floor tile	100m ²	1.50	74.97	2145.90	134.69	2355.567	3539.71

Comprehensive CEC								38.636	5805.86
Item number: 020105001001				Item unit: m ²					
Item name: Cement mortar kick thread				Item amount: 5.73					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-141	Cement mortar baseboard	100m ²	0.06	42.01	897.60	5.93	945.535	54.18
Comprehensive CEC								9.455	54.18
Item number: 020105003001				Item unit: m ²					
Item name: Block material toe line				Item amount: 391.46					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-156	Floor tile baseboard; cement mortar	100m ²	3.91	80.48	1330.93	3.59	1415.002	5539.19
Comprehensive CEC								14.150	5539.19
Item number: 020107001001				Item unit: m					
Item name: Stair rail				Item amount: 66.36					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-213	Stainless steel railing; straight line type; vertical strip	10m	6.64	6.14	487.52	67.84	561.497	3726.16
Comprehensive CEC								56.150	3726.16
Item number: 020107005001				Item unit: m					
Item name: Hardwood handrail				Item amount: 62.08					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-244	Hardwood railing against the wall; structural steel corbel	10m	6.21	5.42	189.06		194.473	1207.31
Comprehensive CEC								19.447	1207.31
Item number: 020107007001				Item unit: m					

Item name: Plastic handrail					Item amount: 633.6				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-261	Plastic armrest	10m	63.36	1.13	15.68		16.815	1065.42
Comprehensive CEC								1.682	1065.42
Item number: 020107008001					Item unit: m				
Item name: Window handrail					Item amount: 70				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-213	Stainless steel railing; straight line type; vertical strip	10m	7.00	6.14	487.52	67.84	561.497	3930.48
Comprehensive CEC								56.150	3930.48
Item number: 020107001002					Item unit: m				
Item name: Metal handrail					Item amount: 8.4				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B1-213	Stainless steel railing; straight line type; vertical strip	10m	0.84	6.14	487.52	67.84	561.497	471.66
Comprehensive CEC								56.150	471.66
Item number: 020204003001					Item unit: m ²				
Item name: Tile wall					Item amount: 2651.23				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B2-160	Lining brick (cement mortar paste) circumference is within 1600mm	100m ²	26.51	45.36	1579.36	117.89	1742.609	46200.57
Comprehensive CEC								17.426	46200.57
Item number: 020204003002					Item unit: m ²				
Item name: Tile wall					Item amount: 2051.15				

Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B2-162	Lining brick (cement mortar paste) circumference is within 2400mm	100m ²	20.51	40.82	1579.36	117.89	1738.073	35650.48
Comprehensive CEC								17.381	35650.48
Item number: 020201001001 Item name: Wall plaster skin coat							Item unit: m ² Item amount: 4343.59		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B2-13	Metope、dado、 cement mortar、 brick wall 20mm thickness	100m ²	43.44	19.34	1227.81	7.01	1254.161	54475.62
Comprehensive CEC								12.542	54475.62
Item number: 020201001002 Item name: Wall plaster skin coat							Item unit: m ² Item amount: 19835.42		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B2-12	Metope、dado、 cement mortar、 brick wall 20mm thickness	100m ²	198.35	22.55	769.44	4.49	796.491	157987.37
Comprehensive CEC								7.965	157987.37
Item number: 020507001001 Item name: Spray paint (interior wall paint)							Item unit: m ² Item amount: 14855.7		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B5-324	107 glue white cement full batch putty; twice	100m ²	148.56	7.09	114.68		121.772	18090.09
2	B5-275	Latex paint; twice	100m ²	148.56	4.79	396.06		400.847	59548.67

Comprehensive CEC								5.226	77638.76
Item number: 020507001002								Item unit: m ²	
Item name: Spray paint								Item amount: 4343.59	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B5-328	Outer wall lacquer	100m ²	43.44	10.21	2455.98		2466.187	107121.05
Comprehensive CEC								24.662	107121.05
Item number: 020209001001								Item unit: m ²	
Item name: Plastic barrier								Item amount: 148.24	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B2-370	Movable plastic; partition	100m ²	1.48	45.54	1065.72	7.65	1118.906	1658.67
Comprehensive CEC								11.189	1658.67
Item number: 020301001001								Item unit: m ²	
Item name: Ceiling plaster								Item amount: 2452.9	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B3-5	Concrete canopy cement mortar; cast	100m ²	24.53	18.64	550.61	5.75	575.000	14104.18
Comprehensive CEC								5.750	14104.18
Item number: 020507001003								Item unit: m ²	
Item name: Spray paint (ceiling)								Item amount: 2452.9	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B5-275	Latex paint; twice	100m ²	24.53	4.79	396.06		400.847	9832.39
2	B5-324	107 glue white cement full batch putty; twice	100m ²	24.53	7.09	114.68		121.772	2986.95
Comprehensive CEC								5.226	12819.34
Item number: 020302001001								Item unit: m ²	

Item name: Light steel keel silicon calcium plate ceiling					Item amount: 2619.38				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B3-111	Calcium silicon plate canopy surface course; put it on the U-shaped light steel keel	100m ²	26.19	17.64	900.89		918.525	24059.66
2	B3-41	Assembled U-shaped light steel ceiling keel (not human type); surface layer specification (600×600mm) plane	100m ²	26.19	23.94	1897.47	9.91	1931.320	50588.62
Comprehensive CEC								28.498	74648.28
Item number: 020302001002					Item unit: m ²				
Item name: Light steel keel silicon calcium plate ceiling					Item amount: 647.93				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B3-43	Assembled U-shaped light steel ceiling keel (not human type); surface layer specification	100m ²	6.48	22.68	1978.32	9.91	2010.914	13029.31
2	B3-142	Square aluminum button plate 300mm×300mm	100m ²	6.48	18.90	2190.48		2209.380	14315.24
Comprehensive CEC								42.203	27344.55
Item number: 020406007001					Item unit: item				
Item name: PVC-steel window (C0923)					Item amount: 1				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	2.07		23.00		23.000	47.61
Comprehensive CEC								47.610	47.61
Item number: 020406007002					Item unit: item				

Item name: PVC-steel window (C1223)					Item amount: 3				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	8.28		23.00		23.000	190.44
		Comprehensive CEC						63.480	190.44
Item number: 020406007003					Item unit: item				
Item name: PVC-steel window (C1623)					Item amount: 19				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	69.92		23.00		23.000	1608.16
		Comprehensive CEC						84.640	1608.16
Item number: 020406007004					Item unit: item				
Item name: PVC-steel window (C2123)					Item amount: 8				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	38.64		23.00		23.000	888.72
		Comprehensive CEC						111.090	888.72
Item number: 020406007005					Item unit: item				
Item name: PVC-steel window (C2323)					Item amount: 8				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	43.24		23.00		23.000	994.52
		Comprehensive CEC						124.315	994.52
Item number: 020406007006					Item unit: item				
Item name: PVC-steel window (C2423)					Item amount: 2				
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	11.04		23.00		23.000	253.92

Comprehensive CEC								126.960	253.92
Item number: 020406007007								Item unit: item	
Item name: PVC-steel window (C2623)								Item amount: 83	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	505.89		23.00		23.000	11635.36
Comprehensive CEC								140.185	11635.36
Item number: 020406007008								Item unit: item	
Item name: PVC-steel window (C1423)								Item amount: 3	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	9.66		23.00		23.000	222.18
Comprehensive CEC								74.060	222.18
Item number: 020406007009								Item unit: item	
Item name: PVC-steel window (C5523)								Item amount: 6	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	75.90		23.00		23.000	1745.70
Comprehensive CEC								290.950	1745.70
Item number: 020406007010								Item unit: item	
Item name: PVC-steel window (C1517)								Item amount: 4	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	10.20		23.00		23.000	234.60
Comprehensive CEC								58.650	234.60
Item number: 020406007011								Item unit: item	
Item name: PVC-steel window (NC1823)								Item amount: 1	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	D00005	PVC-steel window	m ²	4.14		23.00		23.000	95.22
Comprehensive CEC								95.220	95.22
Item number: 020406007012							Item unit: item		
Item name: PVC-steel window (NC2623)							Item amount: 5		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	29.90		23.00		23.000	687.70
Comprehensive CEC								137.540	687.70
Item number: 020406007013							Item unit: item		
Item name: PVC-steel window (NC2832)							Item amount: 51		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	463.49		23.00		23.000	10660.22
Comprehensive CEC								209.024	10660.22
Item number: 020402001001							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	8.96		23.00		23.000	206.08
Comprehensive CEC								206.080	206.08
Item number: 020402001002							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 3		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	9.60		23.00		23.000	220.80
Comprehensive CEC								73.600	220.80
Item number: 020402001003							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
		Item content	Unit	Amount				Total CEC	Total carbon emissions

Sequence number	Quota number				Manual CEC	Material CEC	Machinery CEC		
1	D00005	PVC-steel window	m ²	4.80		23.00		23.000	110.40
Comprehensive CEC								110.400	110.40
Item number: 020402001004							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	5.12		23.00		23.000	117.76
Comprehensive CEC								117.760	117.76
Item number: 020402001005							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	8.48		23.00		23.000	195.04
Comprehensive CEC								195.040	195.04
Item number: 020402001006							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	13.12		23.00		23.000	301.76
Comprehensive CEC								301.760	301.76
Item number: 020402001007							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	16.32		23.00		23.000	375.36
Comprehensive CEC								375.360	375.36
Item number: 020402001008							Item unit: item		

Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	17.60		23.00		23.000	404.80
Comprehensive CEC								404.800	404.80
Item number: 020402001009							Item unit: item		
Item name: PVC-steel ordinary hollow glass door connecting window							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00005	PVC-steel window	m ²	17.60		23.00		23.000	404.80
Comprehensive CEC								404.800	404.80
Item number: 020401006001							Item unit: item		
Item name: Fire-proof wooden door							Item amount: 3		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00036	Class-A fire-proof door	m ²	7.56		89.05		89.053	673.24
Comprehensive CEC								673.238	673.24
Item number: 020401006002							Item unit: item		
Item name: Fire-proof wooden door							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00036	Class-A fire-proof door	m ²	2.10		89.05		89.053	187.01
Comprehensive CEC								187.011	187.01
Item number: 020401006003							Item unit: item		
Item name: Fire-proof wooden door							Item amount: 3		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00037	Class-B fire-proof door	m ²	7.56		89.05		89.053	673.24

Comprehensive CEC								224.413	673.24
Item number: 020401006004								Item unit: item	
Item name: Fire-proof wooden door								Item amount: 5	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00037	Class-C fire-proof door	m ²	15.75		89.05		89.053	1402.58
Comprehensive CEC								280.516	1402.58
Item number: 020401006005								Item unit: item	
Item name: Fire-proof wooden door								Item amount: 6	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00037	Class-B fire-proof door	m ²	22.68		89.05		89.053	2019.72
Comprehensive CEC								336.619	2019.72
Item number: 020401006006								Item unit: item	
Item name: Fire-proof wooden door								Item amount: 33	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00039	Class-D fire-proof door	m ²	37.62		89.05		89.053	3350.16
Comprehensive CEC								3350.163	3350.16
Item number: 020401006007								Item unit: item	
Item name: Fire-proof wooden door								Item amount: 5	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	D00039	Class-C fire-proof door	m ²	11.70		89.05		89.053	1041.92
Comprehensive CEC								1035.848	1041.92
Item number: 020406004001								Item unit: m ²	
Item name:防雨百叶窗								Item amount: 386.59	
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	D00031	Rain-proof shutter	m ²	386.59		127.20		127.196	49172.61
Comprehensive CEC								127.196	49172.61
Item number: 020508002001				Item unit: m					
Item name: Drip line				Item amount: 338.3					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	B6-99	Other materials, decorative lines, soft plastic lines	100m	3.38	1.35	249.08		250.425	847.19
Comprehensive CEC								2.504	847.19
Item number: 060108000001				Item unit: item					
Item name: Concrete, reinforced concrete formwork and support				Item amount: 1					
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A10-1	Concrete pad; combined steel molding plate	10m ²	8.46	5.00	20.12	5.23	30.35	256.65
2	A10-7	Isolated foundation、 Isolated pile cap compound wood template	10m ²	59.31	3.34	15.33	5.39	24.06	1427.11
3	A10-29	Foundation beam; compound wood template	10m ²	113.15	3.29	13.14	7.23	23.66	2677.61
4	A10-11	No beam reinforced concrete foundation; compound wood template	10m ²	0.43	2.95	14.31	3.94	21.21	9.09
5	A10-1	Concrete pad; combined steel molding plate	10m ²	0.57	5.00	20.12	5.23	30.35	17.39
6	A10-26	Structural concrete column; compound template	10m ²	174.90	5.54	12.54	4.69	22.76	3981.66
7	A10-26	Structural concrete column; compound template	10m ²	41.86	5.54	12.54	4.69	22.76	952.95
8	A10-21	Recitemular column; compound wood template	10m ²	6.72	4.13	20.19	5.28	29.60	198.91

9	A10-21	Recitemular column; compound wood template	10m ²	33.18	4.13	20.19	5.28	29.60	982.26
10	A10-21	Recitemular column; compound wood template	10m ²	22.62	4.13	20.19	5.28	29.60	669.56
11	A10-21	Recitemular column; compound wood template	10m ²	61.60	4.13	20.19	5.28	29.60	1823.35
12	A10-21	Recitemular column; compound wood template	10m ²	5.99	4.13	20.19	5.28	29.60	177.30
13	A10-37	Girth; compound wood template	10m ²	12.06	3.64	8.30	4.27	16.21	195.48
14	A10-37	Girth; compound wood template	10m ²	1.58	3.64	8.30	4.27	16.21	25.60
15	A10-39	Beam; compound wood template	10m ²	8.52	5.13	9.67	6.29	21.09	179.69
16	A10-42	Straight wall; compound wood template	10m ²	6.13	2.81	21.69	4.57	29.07	178.11
17	A10-44	Elevator shaft wall; compound wood template	10m ²	10.59	3.04	20.02	7.66	30.72	325.44
18	A10-50	Beam plate; compound wood template	10m ²	469.30	2.79	12.31	7.20	22.30	10464.05
19	A10-50	Beam plate; compound wood template	10m ²	170.55	2.79	12.31	7.20	22.30	3802.83
20	A10-50	Beam plate; compound wood template	10m ²	11.81	2.79	12.31	7.20	22.30	263.37
21	A10-50	Beam plate; compound wood template	10m ²	544.25	2.79	12.31	7.20	22.30	12135.28
22	A10-31	Recitemular beam; compound wood template	10m ²	78.48	7.71	15.52	2.52	25.75	2020.74
23	A10-65	Breast board; compound wood template	10m ²	14.30	5.19	17.05	8.72	30.96	442.74

24	A10-60	Suspension board (rain awning、horizontal cornice);straight; compound wood template	10m ² (horizontal projected area)	0.56	6.80	23.37	15.93	46.10	25.60
25	A10-67	Eaves gutter; wood template	10m ²	38.30	6.75	9.51	8.72	24.98	956.73
26	A10-58	Stairs; compound wood template	(horizontal projected area)	31.80	6.80	22.95	12.18	41.93	1333.44
27	A10-71	Coping; compound wood template	10m ²	22.22	3.06	15.97	7.15	26.18	581.71
28	A10-66	Small components; wood template	10m ²	26.50	5.74	9.12	9.64	24.50	649.09
29	A10-74	Steps; wood template	10m ² (horizontal projected area)	1.81	2.82	3.22	2.08	8.12	14.70
30	A10-74	Steps; wood template	10m ² (horizontal projected area)	2.65	2.82	3.22	2.08	8.12	21.55
31	A10-1	Concrete pad; combined steel molding plate	10m ²	1.15	5.00	20.12	5.23	30.35	34.82
Comprehensive CEC								46824.83	46824.83
Item number: 060109000001							Item unit: item		
Item name: Scaffold							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions
1	A11-9	Steel pipe frame within 30m	100m ²	34.07	2.67	166.53	26.87	196.08	6679.59
2	A11-39	Inside scaffold	100m ²	81.73	4.18	8.13	3.07	15.38	1256.79
In total								7936.39	7936.39
Item number: 060201000001							Item unit: item		
Item name: Vertical transportation and super high efficiency reduction							Item amount: 1		
Sequence number	Quota number	Item content	Unit	Amount	Manual CEC	Material CEC	Machinery CEC	Total CEC	Total carbon emissions

1	A12-10	Cast-in-place frame; eaves (storeys) within 20m	100m ²	63.67	139.67	139.67	8892.63
In total						8892.63	8892.63

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8 Part 2. Energy consumption

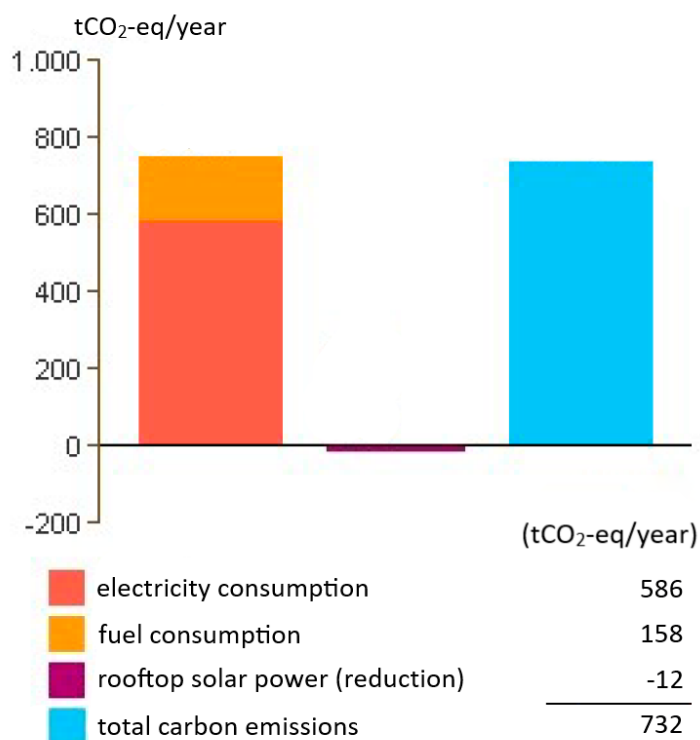


Figure 1. Carbon emissions in the operational stage.

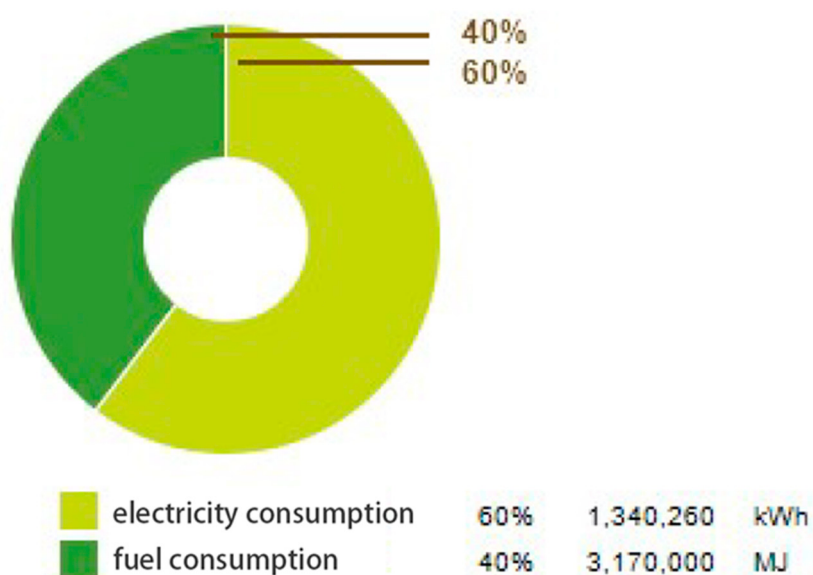


Figure 2. Composition of energy consumption.

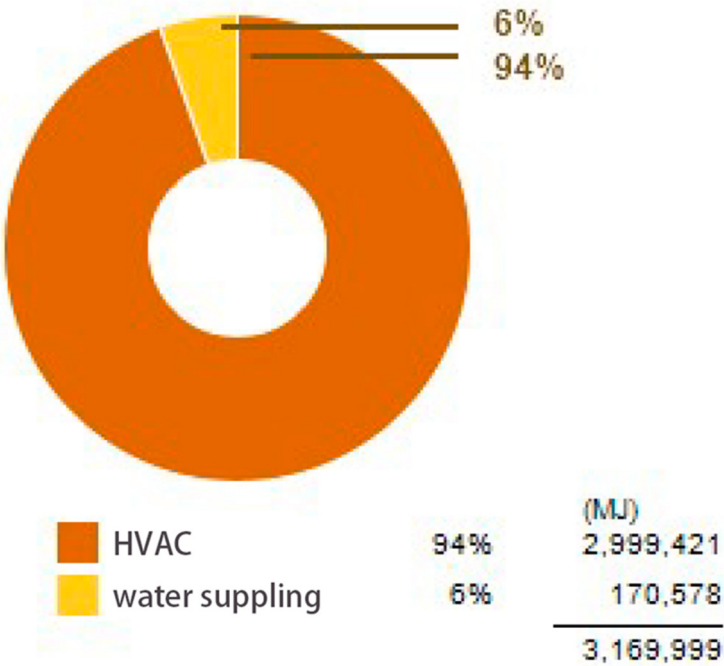


Figure 3. Composition of fuel consumption.

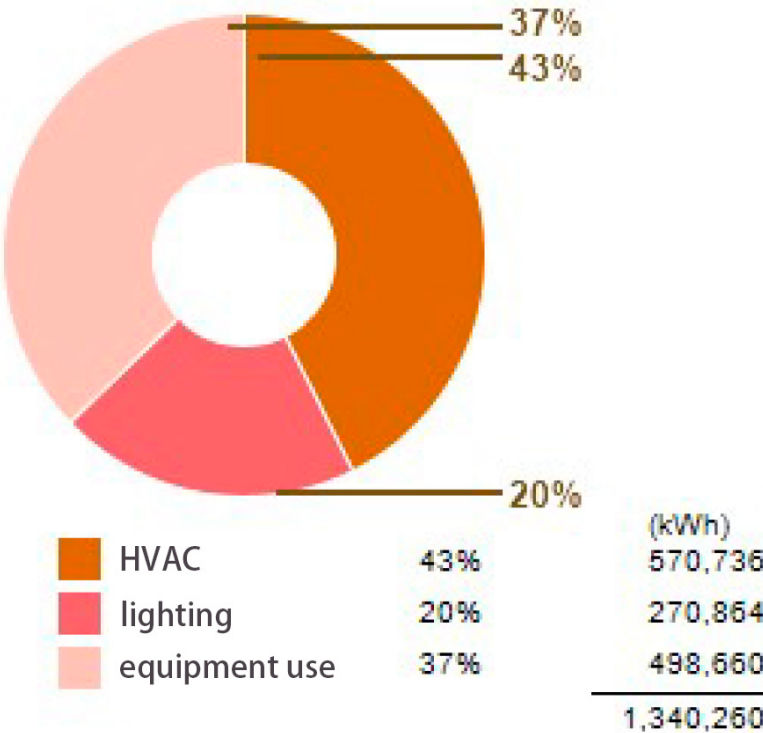


Figure 4. Composition of electricity consumption.

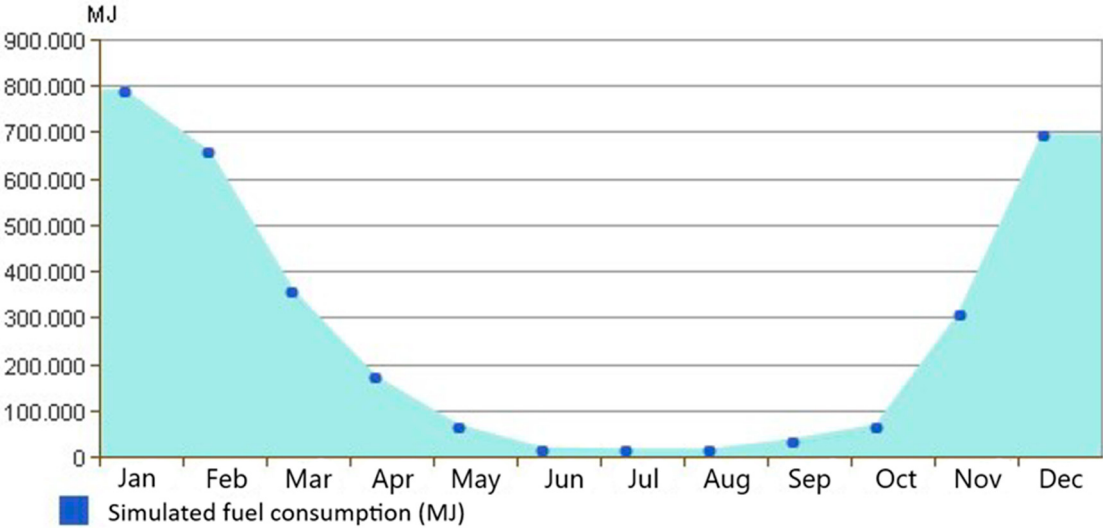


Figure 5. Monthly energy consumption.

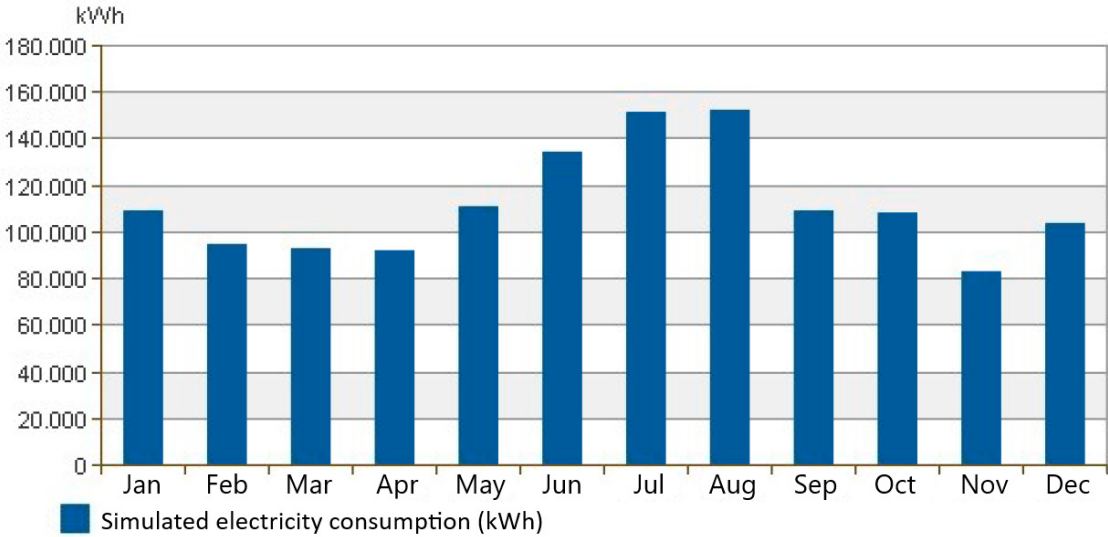


Figure 6. Monthly electricity consumption.

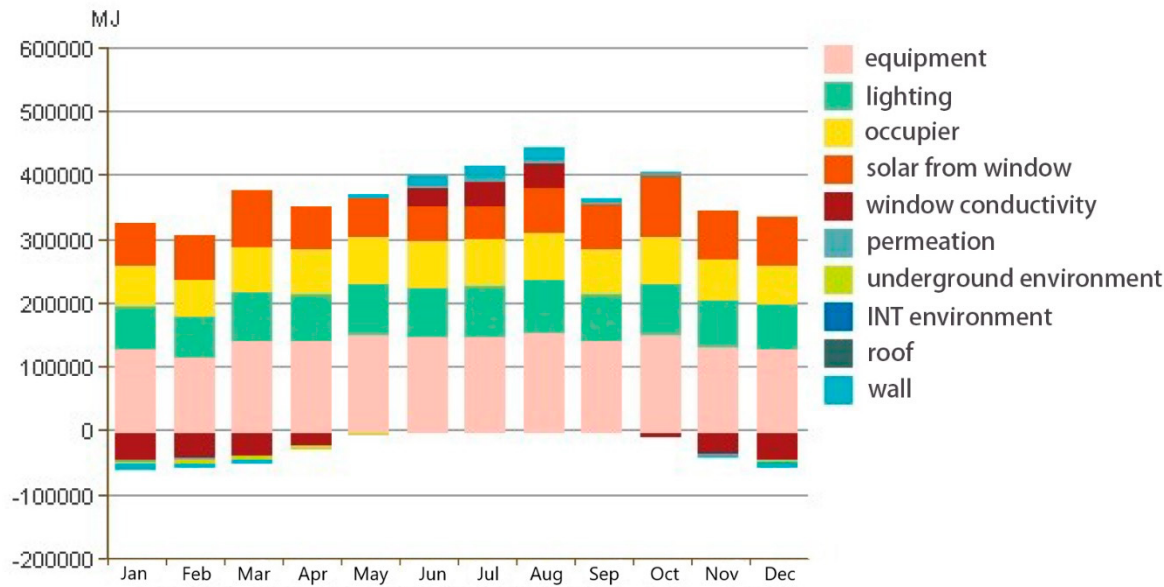


Figure 7. Monthly cooling load.

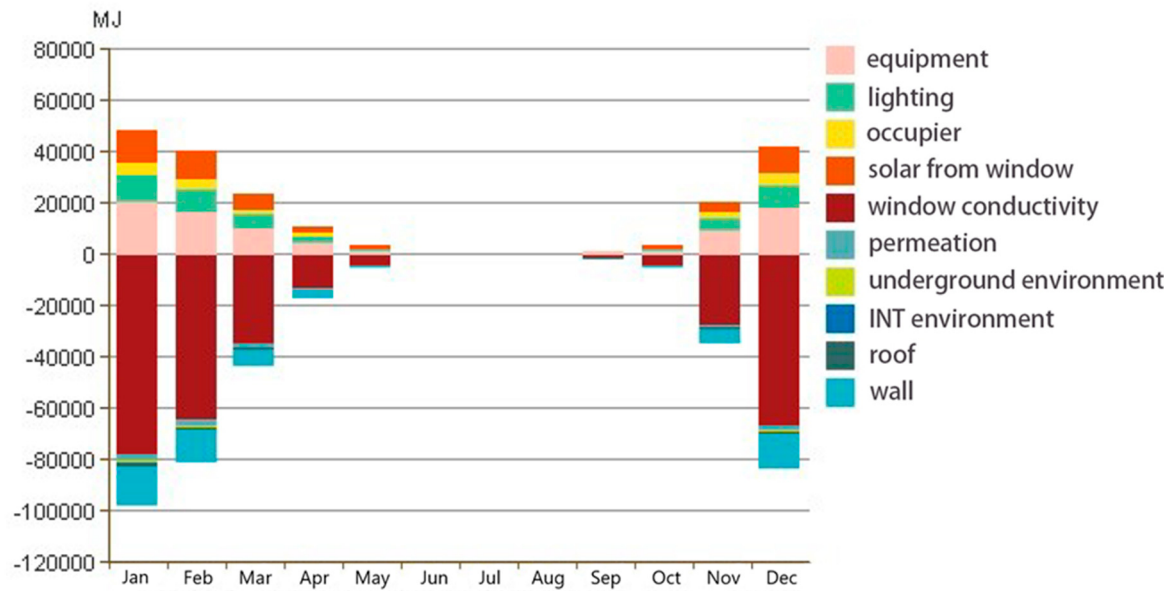


Figure 8. Monthly heat load.

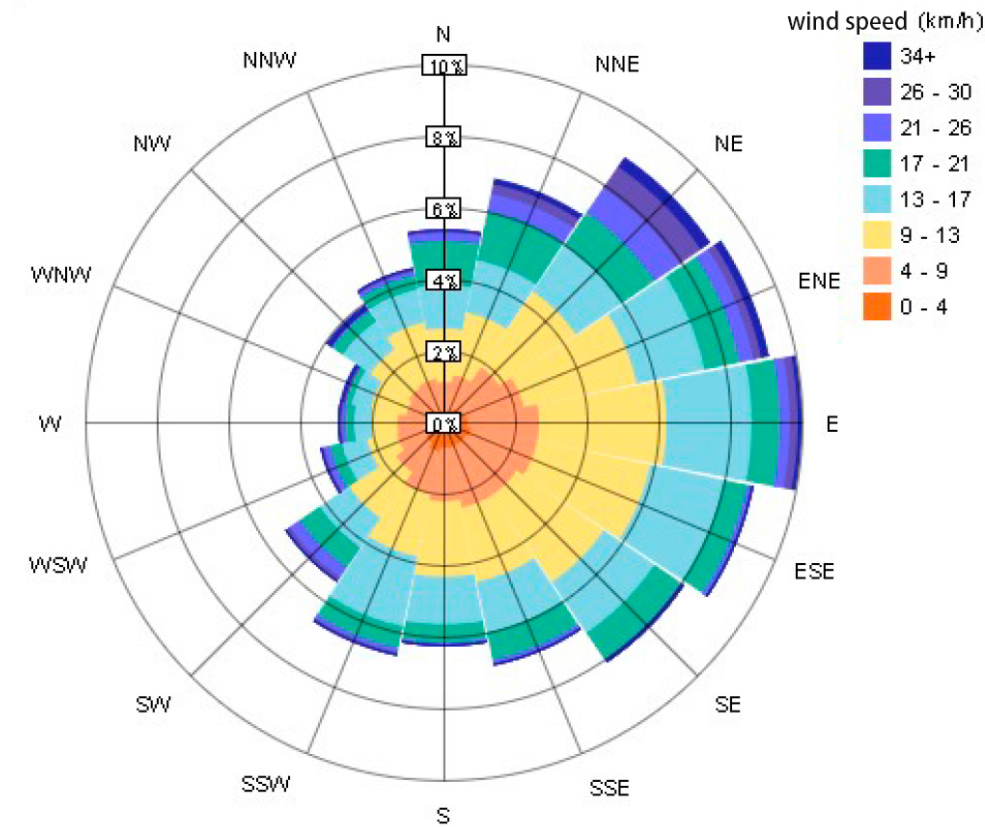


Figure 9. Annual wind direction (wind speed distribution).

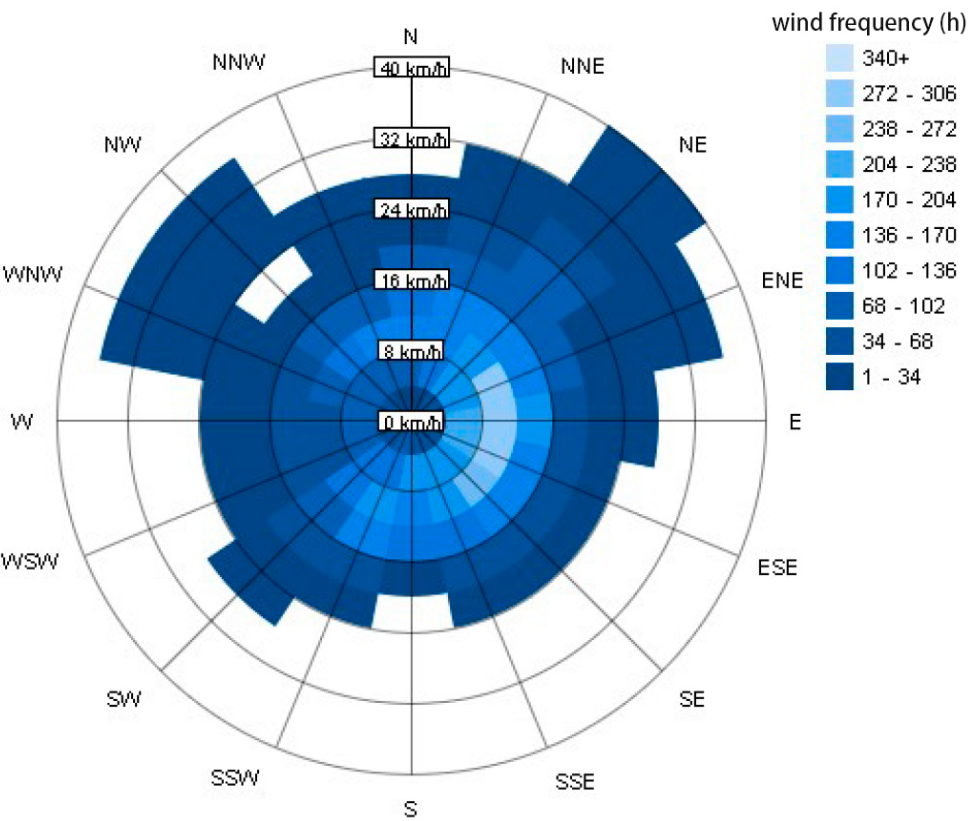


Figure 10. Annual wind direction (wind frequency distribution).