

DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS												SAP 2012 CO ₂ PERFORMANCE										SAP 10.0 CO ₂ PERFORMANCE										DEMAND
Unit Identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m²)	Number of units	Total area represented by model (m²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - TER WORKSHEET							REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)						REGULATED CO ₂ EMISSIONS PER UNIT						Fabric Energy Efficiency (FEE)							
				Calculated TER 2012 (kgCO ₂ / m²)	TER Worksheet TER 2012 (kgCO ₂ / m²)	Space Heating	Fuel type Space Heating	Domestic Hot Water	Fuel type Domestic Hot Water	Lighting	Auxiliary	Cooling	Space Heating	Domestic Hot Water	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating	Domestic Hot Water	Lighting	Auxiliary	Cooling	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)		Calculated TER SAP 10.0 (kgCO ₂ / m²)						
																											TER Worksheet (Row 4)	TER Worksheet (Row 273)	TER Worksheet (Row 211)	TER Worksheet (Row 219)	TER Worksheet (Row 232)	TER Worksheet (Row 231)
Flat 104	82	1	80	36.1	36.1	10295.1119	Natural Gas	2268.678	Natural Gas	439.9934	30		2,224	490	228	16	2,958	2,162	476	103	7		2,748	33.5	n/a							
Flat 105	50	1	47	37.5	37.5	6112.1293	Natural Gas	1805.1097	Natural Gas	289.7619	30		1,320	390	150	16	1,876	1,284	379	68	7		1,737	34.7	n/a							
Flat 106	59	1	65	29.6	29.6	5261.1417	Natural Gas	1956.8508	Natural Gas	335.389	30		1,136	423	174	16	1,749	1,105	411	78	7		1,601	27.1	n/a							
Flat 204	82	1	80	25.1	25.1	6126.1759	Natural Gas	2268.678	Natural Gas	439.9934	30		1,323	490	228	16	2,057	1,286	476	103	7		1,872	22.8	n/a							
Flat 205	50	1	47	22.3	22.3	2590.6516	Natural Gas	1805.1097	Natural Gas	289.916	30		960	390	150	16	1,116	544	379	68	7		998	20.0	n/a							
Flat 206	69	1	65	23.8	23.8	4498.9565	Natural Gas	2111.6243	Natural Gas	384.1408	30		972	456	199	16	1,643	945	443	90	7		1,485	21.5	n/a							
Flat 304	82	1	80	26.0	26.0	6478.7439	Natural Gas	2268.678	Natural Gas	439.9934	30		1,399	490	228	16	2,133	1,361	476	103	7		1,946	23.7	n/a							
Flat 305	50	1	47	22.6	22.6	2650.4931	Natural Gas	1805.1097	Natural Gas	296.1618	30		573	390	154	16	1,132	557	379	69	7		1,012	20.2	n/a							
Flat 306	68	1	65	25.5	25.5	4921.7105	Natural Gas	2097.2085	Natural Gas	384.1559	30		1,063	463	199	16	1,731	1,034	440	90	7		1,570	23.1	n/a							
Sum	592	9	576	27.7	-	47,752	N/A	17,880	N/A	3,210	262	0	10,315	3,862	1,666	136	0	15,979	10,028	3,755	748	61	0	14,592	25.3	0.00						
NON-DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																																
Building Use	Model Area (m²)	Number of units	Total area represented by model (m²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION BY END USE (kWh/m² p.a.) TER - SOURCE: BRUKL OUTPUT							REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m² p.a.) TER - SOURCE: BRUKLINP or *SM.CSV FILE				REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m² p.a.) - TER BRUKL				REGULATED CO ₂ EMISSIONS											
				Calculated TER 2012 (kgCO ₂ / m²)	BRUKL TER 2012 (kgCO ₂ / m²)	Space Heating (kWh/m² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m² p.a.)	Fuel type Domestic Hot Water	Lighting (kWh/m² p.a.)	Auxiliary (kWh/m² p.a.)	Cooling (kWh/m² p.a.)	Natural Gas	Grid Electricity	Equipment	2012 CO ₂ emissions (kgCO ₂ p.a.)	Natural Gas	Grid Electricity	Unregulated Grid Electricity		SAP10.0 CO ₂ emissions (kgCO ₂ p.a.)	BRUKL TER SAP10.0 (kgCO ₂ / m²)										
														0.216 kgCO ₂ /kWh	0.519 kgCO ₂ /kWh	0.519 kgCO ₂ /kWh						0.210 kgCO ₂ /kWh	0.233 kgCO ₂ /kWh	0.233 kgCO ₂ /kWh								
Sum	0	0	0	0.0	-	0	N/A	0	N/A	0	0	0	0	0	0	0	N/A	N/A	0	0	0	0	N/A	N/A	0	0.0						
SITE-WIDE ENERGY CONSUMPTION AND CO ₂ ANALYSIS																																
Use	Total Area (m²)	Calculated TER 2012 (kgCO ₂ / m²)		REGULATED ENERGY CONSUMPTION								REGULATED CO ₂ EMISSIONS				REGULATED CO ₂ EMISSIONS PER UNIT																
				Space Heating (kWh p.a.)	N/A	Domestic Hot Water (kWh p.a.)	N/A	Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)																						
													2012 CO ₂ emissions (kgCO ₂ p.a.)	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated TER SAP 10.0 (kgCO ₂ / m²)																	
Sum	576	27.7	-	47,752		17,880		3,210	262	0		15,979				14,592	25.3															

The applicant should complete all the light blue cells including information on the 'be lean' energy consumption figures, the 'be lean' DER, the DFEE and the regulated energy demand of the 'be lean' scenario.

SAP 2012 CO ₂ PERFORMANCE															SAP 10.0 CO ₂ PERFORMANCE										FEES					
DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																														
Unit Identifier (e.g. plot number, dwelling type etc.)				VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE LEAN' SAP DER WORKSHEET										REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)						REGULATED CO ₂ EMISSIONS PER UNIT								Fabric Energy Efficiency (FEE)
				Calculated DER 2012 (kgCO ₂ / m ²)	DER Worksheet DER 2012 (kgCO ₂ / m ²)	Space Heating	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Secondary Heating system	Fuel type Space Heating	Lighting	Auxiliary	Cooling	Space Heating CO ₂ emissions (kgCO ₂ p.a.)	Domestic Hot Water CO ₂ emissions (kgCO ₂ p.a.)	Lighting CO ₂ emissions (kgCO ₂ p.a.)	Auxiliary CO ₂ emissions (kgCO ₂ p.a.)	Cooling CO ₂ emissions (kgCO ₂ p.a.)	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating CO ₂ emissions (kgCO ₂ p.a.)	Domestic Hot Water CO ₂ emissions (kgCO ₂ p.a.)	Lighting CO ₂ emissions (kgCO ₂ p.a.)	Auxiliary CO ₂ emissions (kgCO ₂ p.a.)	Cooling CO ₂ emissions (kgCO ₂ p.a.)	Unregulated (kgCO ₂ p.a.)	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated DER SAP 10.0 (kgCO ₂ / m ²)	Dwelling Fabric Energy Efficiency (DFEE) (kWh/m ²)	
				DER Sheet (Row 384)	DER Sheet ((Row 307a) + (Row 367a x 0.61))	Select fuel type	DER Sheet (Row 310b + (Row 367b x 0.61))	Select fuel type	DER Sheet (Row 309)	Select fuel type	DER Sheet Row 332	DER Sheet (Row 313 + 331)	DER Sheet Row 315																	
Flat 104	82	1	80	27.5	27.6	7272.1343	Natural Gas	2268.678	Natural Gas		351.9947	30	0		1,571	490	183	16	0	2,259	1,527	476	82	7	0	637	2,093	25.5	n/a	
Flat 105	50	1	47	29.3	29.3	4321.7159	Natural Gas	1805.1097	Natural Gas		231.8095	30	12.0136		933	390	120	16	6	1,466	908	379	54	7	3	429	1,350	27.0	n/a	
Flat 106	59	1	65	24.2	24.3	3946.1424	Natural Gas	1956.8508	Natural Gas		268.3122	30			852	423	139	16		1,430	829	411	63	7		492	1,309	22.2	n/a	
Flat 204	82	1	80	20.5	20.5	4591.6441	Natural Gas	2268.678	Natural Gas		351.9947	30	0		992	490	183	16	0	1,680	964	476	82	7	0	637	1,530	18.7	n/a	
Flat 205	50	1	47	19.6	19.6	2062.1512	Natural Gas	1805.1097	Natural Gas		231.9328	30	18.7899		445	390	120	16	10	991	433	379	54	7	4	429	878	17.6	n/a	
Flat 206	69	1	65	19.6	19.6	3297.0796	Natural Gas	2111.6243	Natural Gas		307.3126	30	22.0912		712	456	159	16	11	1,355	692	443	72	7	5	559	1,220	17.7	n/a	
Flat 304	82	1	80	21.2	21.2	4847.5988	Natural Gas	2268.678	Natural Gas		351.9947	30	0		1,047	490	183	16	0	1,735	1,018	476	82	7	0	637	1,583	19.3	n/a	
Flat 305	50	1	47	20.2	20.2	2191.2448	Natural Gas	1805.1097	Natural Gas		236.9294	30	14.4612		473	390	123	16	8	1,009	460	379	55	7	3	429	905	18.1	n/a	
Flat 306	68	1	65	21.0	21.0	3649.9294	Natural Gas	2097.2085	Natural Gas		307.3248	30	17.1099		788	453	160	16	9	1,425	766	440	72	7	4	553	1,289	19.0	n/a	
Sum	592	9	576	22.6	-	35,307	N/A	17,880	N/A	0	N/A	2,568	262	80	N/A	7,626	3,862	1,333	136	41	12,999	7,414	3,766	598	61	19	4,673	11,847	20.6	0.00
NON-DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																														
Building Use				VALIDATION CHECK		REGULATED ENERGY CONSUMPTION BY END USE (kWh/m ² p.a.) 'BE LEAN' BER - SOURCE: BRUKL OUTPUT							REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m ² p.a.) 'BE LEAN' BER - SOURCE: BRUKLINP or *SIM.CSV FILE					REGULATED CO ₂ EMISSIONS PER UNIT						SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	BRUKL DER SAP 10.0 (kgCO ₂ / m ²)	N/A				
				Calculated BER 2012 (kgCO ₂ / m ²)	BRUKL BER 2012 (kgCO ₂ / m ²)	Space Heating (kWh/m ² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m ² p.a.)	Fuel type Domestic Hot Water		Lighting (kWh/m ² p.a.)	Auxiliary (kWh/m ² p.a.)	Cooling (kWh/m ² p.a.)	Natural Gas	Grid Electricity	Equipment	2012 CO ₂ emissions (kgCO ₂ p.a.)	Natural Gas	Grid Electricity	Equipment										
														0.216 kgCO ₂ /kWh	0.519 kgCO ₂ /kWh	0.519 kgCO ₂ /kWh		0.210 kgCO ₂ /kWh	0.233 kgCO ₂ /kWh	0.233 kgCO ₂ /kWh										
Sum	0	0	0	0.0	-	0	N/A	0	N/A	N/A	N/A	0	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0	0		0	0.0		
SITE-WIDE ENERGY CONSUMPTION AND CO ₂ ANALYSIS																														
Use		Total Area (m ²)	Calculated BER 2012 (kgCO ₂ / m ²) -		REGULATED ENERGY CONSUMPTION							REGULATED CO ₂ EMISSIONS					REGULATED CO ₂ EMISSIONS		N/A											
					Space Heating (kWh p.a.)	N/A	Domestic Hot Water (kWh p.a.)	N/A	Secondary Heating System (kWh p.a.)	N/A	Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)	2012 CO ₂ emissions (kgCO ₂ p.a.)		SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated BER SAP 10.0 (kgCO ₂ / m ²)													
Sum		576	22.6	-	35,307		17,880		0		2,568	262	80		12,999		11,847	20.6												

DOMESTIC ENERGY CONSUMPTION AND CO2 ANALYSIS																												
Unit identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m²)	Number of units	Total area represented by model (m²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE CLEAN' SAP DER WORKSHEET													REGULATED CO2 EMISSIONS PER UNIT (kgCO2 p.a.)									
				Calculated DER 2012 (kgCO2 / m²)	DER Worksheet DER 2012 (kgCO2 / m²)	Space Heating (Heat Source 1)	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Space and Domestic Hot Water from CHP	Fuel type CHP	Total Electricity generated by CHP (t)	Secondary Heating system	Fuel type Secondary Heating	Lighting	Auxiliary	Cooling	2012 CO2 emissions (kgCO2 p.a.)	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Lighting	Auxiliary	Cooling			
				DER Sheet (Row 384)		DER Sheet (Row 307b + (Row 367b x 0.01))	Select fuel type	DER Sheet (Row 310b + (Row 367b x 0.01))	Select fuel type	If applicable DER Sheet [(Row 307a + 310a) + (Row 361 + 362) x 0.01]	If applicable Select fuel type	If applicable DER Sheet [(Row 307a + 310a) + (Row 361 + 362) x 0.01]	DER Sheet (Row 309)	Select fuel type	DER Sheet Row 332	DER Sheet (Row 313 + 331)	DER Sheet Row 315		If applicable		If applicable		If applicable		SAP 10.0 CO2 emissions (kgCO2 p.a.)	Calculated DER SAP 10.0 (kgCO2 / m²)		
Flat 104	82	1	80	27.5	27.6	2772.1343	Natural Gas	2768.678	Natural Gas						351.9947	30	0	2,259	1,527	476				82	7	0	2,093	25.5
Flat 105	50	1	47	29.3	29.3	4321.7159	Natural Gas	1805.1097	Natural Gas						221.8095	30	12.0136	1,466	908	379				54	7	3	1,350	27.0
Flat 106	59	1	65	24.2	24.3	3948.1424	Natural Gas	1956.8508	Natural Gas						268.3112	30		1,430	829	411				63	7		1,309	22.2
Flat 204	82	1	80	28.5	28.5	4591.6441	Natural Gas	2368.678	Natural Gas						351.9947	30	0	1,600	964	476				82	7	0	1,530	18.7
Flat 205	50	1	47	19.6	19.6	2062.1512	Natural Gas	1805.1097	Natural Gas						231.9328	30	18.7899	981	433	379				54	7	4	878	17.6
Flat 206	69	1	65	19.6	19.6	3297.0796	Natural Gas	2111.6243	Natural Gas						307.3226	30	22.0912	1,355	692	443				72	7	5	1,220	17.7
Flat 304	82	1	80	21.2	21.2	4847.3888	Natural Gas	2368.678	Natural Gas						351.9947	30	0	1,735	1,018	476				82	7	0	1,583	19.3
Flat 305	50	1	47	20.2	20.2	2191.2448	Natural Gas	1805.1097	Natural Gas						236.9304	30	14.6612	1,009	460	379				55	7	3	895	18.1
Flat 306	68	1	65	21.0	21.0	3649.9294	Natural Gas	2097.2085	Natural Gas						307.3248	30	17.1099	1,425	766	440				72	7	4	1,289	19.0
Sum	592	9	576	22.6	-	35,307	N/A	17,880	N/A	0	N/A	0	0	N/A	2,568	262	80	12,999	7,414	3,755	0	0	598	61	19	11,847	20.6	
NON-DOMESTIC ENERGY CONSUMPTION AND CO2 ANALYSIS																												
Building Use	Model Area (m²)	Number of units	Total area represented by model (m²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION BY END USE (kWh/m² p.a.) 'BE CLEAN' BER - SOURCE: BRUKL OUTPUT										REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m² p.a.) 'BE CLEAN' BER - SOURCE: BRUKLINP or 'SIM.CSV FILE							REGULATED CO2 EMISSIONS PER UNIT					

The applicant should complete all the light blue cells including information on the 'be green' energy consumption figures and the 'be green' DER.

DOMESTIC ENERGY CONSUMPTION AND CO₂ ANALYSIS

Unit identifier (e.g. plot number, dwelling type, etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE GREEN' SAP DER WORKSHEET															REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)							REGULATED CO ₂ EMISSIONS PER UNIT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
				Validation Check		Space Heating (Heat Source 1)	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Space Heating (Heat source 2)	Fuel type Space Heating	Domestic Hot Water (Heat source 2)	Fuel type Domestic Hot Water	Space and Domestic Hot Water from CHP	Fuel type CHP	Total Electricity generated by CHP (t)	Secondary Heating system	Fuel type Secondary Heating	Electricity generated by renewable (t)	Lighting	Auxiliary	Cooling	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Electricity generated by renewable	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Electricity generated by renewable	Lighting	Auxiliary	Cooling	SAP 10.6 CO ₂ emissions (kgCO ₂ p.a.)	Calculated DER SAP 10.6 (kgCO ₂ /m ²)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
				Calculated DER 2012 (kgCO ₂ /m ²)	DER Worksheet DER 2012 (kgCO ₂ /m ²)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
				DER Sheet (Row 304)	DER Sheet (Row 307) + (Row 307b x 0.01)	Select fuel type	DER Sheet (Row 310) + (Row 310c x 0.01)	Select fuel type	DER Sheet (Row 312) + (Row 312c x 0.01)	Select fuel type	DER Sheet (Row 315) + (Row 315c x 0.01)	Select fuel type	DER Sheet (Row 318) + (Row 318c x 0.01)	Select fuel type	DER Sheet (Row 321) + (Row 321c x 0.01)	DER Sheet Row 323	DER Sheet (Row 325) + (Row 325c x 0.01)	DER Sheet Row 327	DER Sheet (Row 329) + (Row 329c x 0.01)	DER Sheet Row 331	DER Sheet (Row 335) + (Row 335c x 0.01)	DER Sheet Row 337	DER Sheet (Row 341) + (Row 341c x 0.01)	DER Sheet Row 343	DER Sheet (Row 345) + (Row 345c x 0.01)	DER Sheet Row 347	DER Sheet (Row 351) + (Row 351c x 0.01)	DER Sheet Row 353	DER Sheet (Row 355) + (Row 355c x 0.01)	DER Sheet Row 357	DER Sheet (Row 361) + (Row 361c x 0.01)	DER Sheet Row 363	DER Sheet (Row 365) + (Row 365c x 0.01)	DER Sheet Row 367	DER Sheet (Row 371) + (Row 371c x 0.01)	DER Sheet Row 373	DER Sheet (Row 375) + (Row 375c x 0.01)	DER Sheet Row 377	DER Sheet (Row 381) + (Row 381c x 0.01)	DER Sheet Row 383	DER Sheet (Row 385) + (Row 385c x 0.01)	DER Sheet Row 387	DER Sheet (Row 391) + (Row 391c x 0.01)	DER Sheet Row 393	DER Sheet (Row 395) + (Row 395c x 0.01)	DER Sheet Row 397	DER Sheet (Row 401) + (Row 401c x 0.01)	DER Sheet Row 403	DER Sheet (Row 405) + (Row 405c x 0.01)	DER Sheet Row 407	DER Sheet (Row 411) + (Row 411c x 0.01)	DER Sheet Row 413	DER Sheet (Row 415) + (Row 415c x 0.01)	DER Sheet Row 417	DER Sheet (Row 421) + (Row 421c x 0.01)	DER Sheet Row 423	DER Sheet (Row 425) + (Row 425c x 0.01)	DER Sheet Row 427	DER Sheet (Row 431) + (Row 431c x 0.01)	DER Sheet Row 433	DER Sheet (Row 435) + (Row 435c x 0.01)	DER Sheet Row 437	DER Sheet (Row 441) + (Row 441c x 0.01)	DER Sheet Row 443	DER Sheet (Row 445) + (Row 445c x 0.01)	DER Sheet Row 447	DER Sheet (Row 451) + (Row 451c x 0.01)	DER Sheet Row 453	DER Sheet (Row 455) + (Row 455c x 0.01)	DER Sheet Row 457	DER Sheet (Row 461) + (Row 461c x 0.01)	DER Sheet Row 463	DER Sheet (Row 465) + (Row 465c x 0.01)	DER Sheet Row 467	DER Sheet (Row 471) + (Row 471c x 0.01)	DER Sheet Row 473	DER Sheet (Row 475) + (Row 475c x 0.01)	DER Sheet Row 477	DER Sheet (Row 481) + (Row 481c x 0.01)	DER Sheet Row 483	DER Sheet (Row 485) + (Row 485c x 0.01)	DER Sheet Row 487	DER Sheet (Row 491) + (Row 491c x 0.01)	DER Sheet Row 493	DER Sheet (Row 495) + (Row 495c x 0.01)	DER Sheet Row 497	DER Sheet (Row 501) + (Row 501c x 0.01)	DER Sheet Row 503	DER Sheet (Row 505) + (Row 505c x 0.01)	DER Sheet Row 507	DER Sheet (Row 511) + (Row 511c x 0.01)	DER Sheet Row 513	DER Sheet (Row 515) + (Row 515c x 0.01)	DER Sheet Row 517	DER Sheet (Row 521) + (Row 521c x 0.01)	DER Sheet Row 523	DER Sheet (Row 525) + (Row 525c x 0.01)	DER Sheet Row 527	DER Sheet (Row 531) + (Row 531c x 0.01)	DER Sheet Row 533	DER Sheet (Row 535) + (Row 535c x 0.01)	DER Sheet Row 537	DER Sheet (Row 541) + (Row 541c x 0.01)	DER Sheet Row 543	DER Sheet (Row 545) + (Row 545c x 0.01)	DER Sheet Row 547	DER Sheet (Row 551) + (Row 551c x 0.01)	DER Sheet Row 553	DER Sheet (Row 555) + (Row 555c x 0.01)	DER Sheet Row 557	DER Sheet (Row 561) + (Row 561c x 0.01)	DER Sheet Row 563	DER Sheet (Row 565) + (Row 565c x 0.01)	DER Sheet Row 567	DER Sheet (Row 571) + (Row 571c x 0.01)	DER Sheet Row 573	DER Sheet (Row 575) + (Row 575c x 0.01)	DER Sheet Row 577	DER Sheet (Row 581) + (Row 581c x 0.01)	DER Sheet Row 583	DER Sheet (Row 585) + (Row 585c x 0.01)	DER Sheet Row 587	DER Sheet (Row 591) + (Row 591c x 0.01)	DER Sheet Row 593	DER Sheet (Row 595) + (Row 595c x 0.01)	DER Sheet Row 597	DER Sheet (Row 601) + (Row 601c x 0.01)	DER Sheet Row 603	DER Sheet (Row 605) + (Row 605c x 0.01)	DER Sheet Row 607	DER Sheet (Row 611) + (Row 611c x 0.01)	DER Sheet Row 613	DER Sheet (Row 615) + (Row 615c x 0.01)	DER Sheet Row 617	DER Sheet (Row 621) + (Row 621c x 0.01)	DER Sheet Row 623	DER Sheet (Row 625) + (Row 625c x 0.01)	DER Sheet Row 627	DER Sheet (Row 631) + (Row 631c x 0.01)	DER Sheet Row 633	DER Sheet (Row 635) + (Row 635c x 0.01)	DER Sheet Row 637	DER Sheet (Row 641) + (Row 641c x 0.01)	DER Sheet Row 643	DER Sheet (Row 645) + (Row 645c x 0.01)	DER Sheet Row 647	DER Sheet (Row 651) + (Row 651c x 0.01)	DER Sheet Row 653	DER Sheet (Row 655) + (Row 655c x 0.01)	DER Sheet Row 657	DER Sheet (Row 661) + (Row 661c x 0.01)	DER Sheet Row 663	DER Sheet (Row 665) + (Row 665c x 0.01)	DER Sheet Row 667	DER Sheet (Row 671) + (Row 671c x 0.01)	DER Sheet Row 673	DER Sheet (Row 675) + (Row 675c x 0.01)	DER Sheet Row 677	DER Sheet (Row 681) + (Row 681c x 0.01)	DER Sheet Row 683	DER Sheet (Row 685) + (Row 685c x 0.01)	DER Sheet Row 687	DER Sheet (Row 691) + (Row 691c x 0.01)	DER Sheet Row 693	DER Sheet (Row 695) + (Row 695c x 0.01)	DER Sheet Row 697	DER Sheet (Row 701) + (Row 701c x 0.01)	DER Sheet Row 703	DER Sheet (Row 705) + (Row 705c x 0.01)	DER Sheet Row 707	DER Sheet (Row 711) + (Row 711c x 0.01)	DER Sheet Row 713	DER Sheet (Row 715) + (Row 715c x 0.01)	DER Sheet Row 717	DER Sheet (Row 721) + (Row 721c x 0.01)	DER Sheet Row 723	DER Sheet (Row 725) + (Row 725c x 0.01)	DER Sheet Row 727	DER Sheet (Row 731) + (Row 731c x 0.01)	DER Sheet Row 733	DER Sheet (Row 735) + (Row 735c x 0.01)	DER Sheet Row 737	DER Sheet (Row 741) + (Row 741c x 0.01)	DER Sheet Row 743	DER Sheet (Row 745) + (Row 745c x 0.01)	DER Sheet Row 747	DER Sheet (Row 751) + (Row 751c x 0.01)	DER Sheet Row 753	DER Sheet (Row 755) + (Row 755c x 0.01)	DER Sheet Row 757	DER Sheet (Row 761) + (Row 761c x 0.01)	DER Sheet Row 763	DER Sheet (Row 765) + (Row 765c x 0.01)	DER Sheet Row 767	DER Sheet (Row 771) + (Row 771c x 0.01)	DER Sheet Row 773	DER Sheet (Row 775) + (Row 775c x 0.01)	DER Sheet Row 777	DER Sheet (Row 781) + (Row 781c x 0.01)	DER Sheet Row 783	DER Sheet (Row 785) + (Row 785c x 0.01)	DER Sheet Row 787	DER Sheet (Row 791) + (Row 791c x 0.01)	DER Sheet Row 793	DER Sheet (Row 795) + (Row 795c x 0.01)	DER Sheet Row 797	DER Sheet (Row 801) + (Row 801c x 0.01)	DER Sheet Row 803	DER Sheet (Row 805) + (Row 805c x 0.01)	DER Sheet Row 807	DER Sheet (Row 811) + (Row 811c x 0.01)	DER Sheet Row 813	DER Sheet (Row 815) + (Row 815c x 0.01)	DER Sheet Row 817	DER Sheet (Row 821) + (Row 821c x 0.01)	DER Sheet Row 823	DER Sheet (Row 825) + (Row 825c x 0.01)	DER Sheet Row 827	DER Sheet (Row 831) + (Row 831c x 0.01)	DER Sheet Row 833	DER Sheet (Row 835) + (Row 835c x 0.01)	DER Sheet Row 837	DER Sheet (Row 841) + (Row 841c x 0.01)	DER Sheet Row 843	DER Sheet (Row 845) + (Row 845c x 0.01)	DER Sheet Row 847	DER Sheet (Row 851) + (Row 851c x 0.01)	DER Sheet Row 853	DER Sheet (Row 855) + (Row 855c x 0.01)	DER Sheet Row 857	DER Sheet (Row 861) + (Row 861c x 0.01)	DER Sheet Row 863	DER Sheet (Row 865) + (Row 865c x 0.01)	DER Sheet Row 867	DER Sheet (Row 871) + (Row 871c x 0.01)	DER Sheet Row 873	DER Sheet (Row 875) + (Row 875c x 0.01)	DER Sheet Row 877	DER Sheet (Row 881) + (Row 881c x 0.01)	DER Sheet Row 883	DER Sheet (Row 885) + (Row 885c x 0.01)	DER Sheet Row 887	DER Sheet (Row 891) + (Row 891c x 0.01)	DER Sheet Row 893	DER Sheet (Row 895) + (Row 895c x 0.01)	DER Sheet Row 897	DER Sheet (Row 901) + (Row 901c x 0.01)	DER Sheet Row 903	DER Sheet (Row 905) + (Row 905c x 0.01)	DER Sheet Row 907	DER Sheet (Row 911) + (Row 911c x 0.01)	DER Sheet Row 913	DER Sheet (Row 915) + (Row 915c x 0.01)	DER Sheet Row 917	DER Sheet (Row 921) + (Row 921c x 0.01)	DER Sheet Row 923	DER Sheet (Row 925) + (Row 925c x 0.01)	DER Sheet Row 927	DER Sheet (Row 931) + (Row 931c x 0.01)	DER Sheet Row 933	DER Sheet (Row 935) + (Row 935c x 0.01)	DER Sheet Row 937	DER Sheet (Row 941) + (Row 941c x 0.01)	DER Sheet Row 943	DER Sheet (Row 945) + (Row 945c x 0.01)	DER Sheet Row 947	DER Sheet (Row 951) + (Row 951c x 0.01)	DER Sheet Row 953	DER Sheet (Row 955) + (Row 955c x 0.01)	DER Sheet Row 957	DER Sheet (Row 961) + (Row 961c x 0.01)	DER Sheet Row 963	DER Sheet (Row 965) + (Row 965c x 0.01)	DER Sheet Row 967	DER Sheet (Row 971) + (Row 971c x 0.01)	DER Sheet Row 973	DER Sheet (Row 975) + (Row 975c x 0.01)	DER Sheet Row 977	DER Sheet (Row 981) + (Row 981c x 0.01)	DER Sheet Row 983	DER Sheet (Row 985) + (Row 985c x 0.01)	DER Sheet Row 987	DER Sheet (Row 991) + (Row 991c x 0.01)	DER Sheet Row 993	DER Sheet (Row 995) + (Row 995c x 0.01)	DER Sheet Row 997	DER Sheet (Row 1001) + (Row 1001c x 0.01)	DER Sheet Row 1003	DER Sheet (Row 1005) + (Row 1005c x 0.01)	DER Sheet Row 1007	DER Sheet (Row 1011) + (Row 1011c x 0.01)	DER Sheet Row 1013	DER Sheet (Row 1015) + (Row 1015c x 0.01)	DER Sheet Row 1017	DER Sheet (Row 1021) + (Row 1021c x 0.01)	DER Sheet Row 1023	DER Sheet (Row 1025) + (Row 1025c x 0.01)	DER Sheet Row 1027	DER Sheet (Row 1031) + (Row 1031c x 0.01)	DER Sheet Row 1033	DER Sheet (Row 1035) + (Row 1035c x 0.01)	DER Sheet Row 1037	DER Sheet (Row 1041) + (Row 1041c x 0.01)	DER Sheet Row 1043	DER Sheet (Row 1045) + (Row 1045c x 0.01)	DER Sheet Row 1047	DER Sheet (Row 1051) + (Row 1051c x 0.01)	DER Sheet Row 1053	DER Sheet (Row 1055) + (Row 1055c x 0.01)	DER Sheet Row 1057	DER Sheet (Row 1061) + (Row 1061c x 0.01)	DER Sheet Row 1063	DER Sheet (Row 1065) + (Row 1065c x 0.01)	DER Sheet Row 1067	DER Sheet (Row 1071) + (Row 1071c x 0.01)	DER Sheet Row 1073	DER Sheet (Row 1075) + (Row 1075c x 0.01)	DER Sheet Row 1077	DER Sheet (Row 1081) + (Row 1081c x 0.01)	DER Sheet Row 1083	DER Sheet (Row 1085) + (Row 1085c x 0.01)	DER Sheet Row 1087	DER Sheet (Row 1091) + (Row 1091c x 0.01)	DER Sheet Row 1093	DER Sheet (Row 1095) + (Row 1095c x 0.01)	DER Sheet Row 1097	DER Sheet (Row 1101) + (Row 1101c x 0.01)	DER Sheet Row 1103	DER Sheet (Row 1105) + (Row 1105c x 0.01)	DER Sheet Row 1107	DER Sheet (Row 1111) + (Row 1111c x 0.01)	DER Sheet Row 1113	DER Sheet (Row 1115) + (Row 1115c x 0.01)	DER Sheet Row 1117	DER Sheet (Row 1121) + (Row 1121c x 0.01)	DER Sheet Row 1123	DER Sheet (Row 1125) + (Row 1125c x 0.01)	DER Sheet Row 1127	DER Sheet (Row 1131) + (Row 1131c x 0.01)	DER Sheet Row 1133	DER Sheet (Row 1135) + (Row 1135c x 0.01)	DER Sheet Row 1137	DER Sheet (Row 1141) + (Row 1141c x 0.01)	DER Sheet Row 1143	DER Sheet (Row 1145) + (Row 1145c x 0.01)	DER Sheet Row 1147	DER Sheet (Row 1151) + (Row 1151c x 0.01)	DER Sheet Row 1153	DER Sheet (Row 1155) + (Row 1155c x 0.01)	DER Sheet Row 1157	DER Sheet (Row 1161) + (Row 1161c x 0.01)	DER Sheet Row 1163	DER Sheet (Row 1165) + (Row 1165c x 0.01)	DER Sheet Row 1167	DER Sheet (Row 1171) + (Row 1171c x 0.01)	DER Sheet Row 1173	DER Sheet (Row 1175) + (Row 1175c x 0.01)	DER Sheet Row 1177	DER Sheet (Row 1181) + (Row 1181c x 0.01)	DER Sheet Row 1183	DER Sheet (Row 1185) + (Row 1185c x 0.01)	DER Sheet Row 1187	DER Sheet (Row 1191) + (Row 1191c x 0.01)	DER Sheet Row 1193	DER Sheet (Row 1195) + (Row 1195c x 0.01)	DER Sheet Row 1197	DER Sheet (Row 1201) + (Row 1201c x 0.01)	DER Sheet Row 1203	DER Sheet (Row 1205) + (Row 1205c x 0.01)	DER Sheet Row 1207	DER Sheet (Row 1211) + (Row 1211c x 0.01)	DER Sheet Row 1213	DER Sheet (Row 1215) + (Row 1215c x 0.01)	DER Sheet Row 1217	DER Sheet (Row 1221) + (Row 1221c x 0.01)	DER Sheet Row 1223	DER Sheet (Row 1225) + (Row 1225c x 0.01)	DER Sheet Row 1227	DER Sheet (Row 1231) + (Row 1231c x 0.01)	DER Sheet Row 1233	DER Sheet (Row 1235) + (Row 1235c x 0.01)	DER Sheet Row 1237	DER Sheet (Row 1241) + (Row 1241c x 0.01)	DER Sheet Row 1243	DER Sheet (Row 1245) + (Row 1245c x 0.01)	DER Sheet Row 1247	DER Sheet (Row 1251) + (Row 1251c x 0.01)	DER Sheet Row 1253	DER Sheet (Row 1255) + (Row 1255c x 0.01)	DER Sheet Row 1257	DER Sheet (Row 1261) + (Row 1261c x 0.01)	DER Sheet Row 1263	DER Sheet (Row 1265) + (Row 1265c x 0.01)	DER Sheet Row 1267	DER Sheet (Row 1271) + (Row 1271c x 0.01)	DER Sheet Row 1273	DER Sheet (Row 1275) + (Row 1275c x 0.01)	DER Sheet Row 1277	DER Sheet (Row 1281) + (Row 1281c x 0.01)	DER Sheet Row 1283	DER Sheet (Row 1285) + (Row 1285c x 0.01)	DER Sheet Row 1287	DER Sheet (Row 1291) + (Row 1291c x 0.01)	DER Sheet Row 1293	DER Sheet (Row 1295) + (Row 1295c x 0.01)	DER Sheet Row 1297	DER Sheet (Row 1301) + (Row 1301c x 0.01)	DER Sheet Row 1303	DER Sheet (Row 1305) + (Row 1305c x 0.01)	DER Sheet Row 1307	DER Sheet (Row 1311) + (Row 1311c x 0.01)	DER Sheet Row 1313	DER Sheet (Row 1315) + (Row 1315c x 0.01)	DER Sheet Row 1317	DER Sheet (Row 1321) + (Row 1321c x 0.01)	DER Sheet Row 1323	DER Sheet (Row 1325) + (Row 1325c x 0.01)	DER Sheet Row 1327	DER Sheet (Row 1331) + (Row 1331c x 0.01)	DER Sheet Row 1333	DER Sheet (Row 1335) + (Row 1335c x 0.01)	DER Sheet Row 1337	DER Sheet (Row 1341) + (Row 1341c x 0.01)	DER Sheet Row 1343	DER Sheet (Row 1345) + (Row 1345c x 0.01)	DER Sheet Row 1347	DER Sheet (Row 1351) + (Row 1351c x 0.01)	DER Sheet Row 1353	DER Sheet (Row 1355) + (Row 1355c x 0.01)	DER Sheet Row 1357	DER Sheet (Row 1361) + (Row 1361c x 0.01)	DER Sheet Row 1363	DER Sheet (Row 1365) + (Row 1365c x 0.01)	DER Sheet Row 1367	DER Sheet (Row 1371) + (Row 1371c x 0.01)	DER Sheet Row 1373	DER Sheet (Row 1375) + (Row 1375c x 0.01)	DER Sheet Row 1377	DER Sheet (Row 1381) + (Row 1381c x 0.01)	DER Sheet Row 1383	DER Sheet (Row 1385) + (Row 1385c x 0.01)	DER Sheet Row 1387	DER Sheet (Row 1391) + (Row 1391c x 0.01)	DER Sheet Row 1393	DER Sheet (Row 1395) + (Row 1395c x 0.01)	DER Sheet Row 1397	DER Sheet (Row 1401) + (Row 1401c x 0.01)	DER Sheet Row 1403	DER Sheet (Row 1405) + (Row 1405c x 0.01)	DER Sheet Row 1407	DER Sheet (Row 1411) + (Row 1411c x 0.01)	DER Sheet Row 1413	DER Sheet (Row 1415) + (Row 1415c x 0.01)	DER Sheet Row 1417	DER Sheet (Row 1421) + (Row 1421c x 0.01)	DER Sheet Row 1423	DER Sheet (Row 1425) + (Row 1425c x 0.01)	DER Sheet Row 1427	DER Sheet (Row 1431) + (Row 1431c x 0.01)	DER Sheet Row 1433	DER Sheet (Row 1435) + (Row 1435c x 0.01)	DER Sheet Row 1437	DER Sheet (Row 1441) + (Row 1441c x 0.01)	DER Sheet Row 1443	DER Sheet (Row 1445) + (Row 1445c x 0.01)	DER Sheet Row 1447	DER Sheet (Row 1451) + (Row 1451c x 0.01)	DER Sheet Row 1453	DER Sheet (Row 1455) + (Row 1455c x 0.01)	DER Sheet Row 1457	DER Sheet (Row 1461) + (Row 1461c x 0.01)	DER Sheet Row 1463	DER Sheet (Row 1465) + (Row 1465c x 0.01)	DER Sheet Row 1467	DER Sheet (Row 1471) + (Row 1471c x 0.01)	DER Sheet Row 1473	DER Sheet (Row 1475) + (Row 1475c x 0.01)	DER Sheet Row 1477	DER Sheet (Row 1481) + (Row 1481c x 0.01)	DER Sheet Row 1483	DER Sheet (Row 1485) + (Row 1485c x 0.01)	DER Sheet Row 1487	DER Sheet (Row 1491) + (Row 1491c x 0.01)	DER Sheet Row 1493	DER Sheet (Row 1495) + (Row 1495c x 0.01)	DER Sheet Row 1497	DER Sheet (Row 1501) + (Row 1501c x 0.01)	DER Sheet Row 1503	DER Sheet (Row 1505) + (Row 1505c x 0.01)	DER Sheet Row 1507	DER Sheet (Row 1511) + (Row 1511c x 0.01)	DER Sheet Row 1513	DER Sheet (Row 1515) + (Row 1515c x 0.01)	DER Sheet Row 1517	DER Sheet (Row 1521) + (Row 1521c x 0.01)	DER Sheet Row 1523	DER Sheet (Row 1525) + (Row 1525c x 0.01)	DER Sheet Row 1527	DER Sheet (Row 1531) + (Row 1531c x 0.01)	DER Sheet Row 1533	DER Sheet (Row 1535) + (Row 1535c x 0.01)	DER Sheet Row 1537	DER Sheet (Row 1541) + (Row 1541c x 0.01)	DER Sheet Row 1543	DER Sheet (Row 1545) + (Row 1545c x 0.01)	DER Sheet Row 1547	DER Sheet (Row 1551) + (Row 1551c x 0.01)	DER Sheet Row 1553	DER Sheet (Row 1555) + (Row 1555c x 0.01)	DER Sheet Row 1557	DER Sheet (Row 1561) + (Row 1561c x 0.01)	DER Sheet Row 1563	DER Sheet (Row 1565) + (Row 1565c x 0.01)	DER Sheet Row 1567	DER Sheet (Row 1571) + (Row 1571c x 0.01)	DER Sheet Row 1573	DER Sheet (Row 1575) + (Row 1575c x 0.01)	DER Sheet Row 1577	DER Sheet (Row 1581) + (Row 1581c x 0.01)	DER Sheet Row 1583	DER Sheet (Row 1585) + (Row 1585c x 0.01)	DER Sheet Row 1587	DER Sheet (Row 1591) + (Row 1591c x 0.01)	DER Sheet Row 1593	DER Sheet (Row 1595) + (Row 1595c x 0.01)	DER Sheet Row 1597	DER Sheet (Row 1601) + (Row 1601c x 0.01)	DER Sheet Row 1603	DER Sheet (Row 1605) + (Row 1605c x 0.01)	DER Sheet Row 1607	DER Sheet (Row 1611) + (Row 1611c x 0.01)	DER Sheet Row 1613	DER Sheet (Row 1615) + (Row 1615c x 0.01)	DER Sheet Row 1617	DER Sheet (Row 1621) + (Row 1621c x 0.01)	DER Sheet Row 1623	DER Sheet (Row 1625) + (Row 1625c x 0.01)	DER Sheet Row 1627	DER Sheet (Row 1631) + (Row 1631c x 0.01)	DER Sheet Row 1633	DER Sheet (Row 1635) + (Row 1635c x 0.01)	DER Sheet Row 1637	DER Sheet (Row 1641) + (Row 1641c x 0.01)	DER Sheet Row 1643	DER Sheet (Row 1645) + (Row 1645c x 0.01)	DER Sheet Row 1647	DER Sheet (Row 1651) + (Row 1651c x 0.01)	DER Sheet Row 1653	DER Sheet (Row 1655) + (Row 1655c x 0.01)	DER Sheet Row 1657	DER Sheet (Row 1661) + (Row 1661c x 0.01)	DER Sheet Row 1663	DER Sheet (Row 1665) + (Row 1665c x 0.01)	DER Sheet Row 1667	DER Sheet (Row 1671) + (Row 1671c x 0.01)	DER Sheet Row 1673	DER Sheet (Row 1675) + (Row 1675c x 0.01)	DER Sheet Row 1677	DER Sheet (Row 1681) + (Row 1681c x 0.01)

SAP 2012 Performance

SAP 10.0 Performance

Domestic

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	16.0	
After energy demand reduction (be lean)	13.0	
After heat network connection (be clean)	13.0	
After renewable energy (be green)	16.9	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	3.0	19%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	-3.9	-24%
Cumulative on site savings	-0.9	-6%
Annual savings from off-set payment	16.9	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	596	-
Cash in-lev contribution (£)	48,891	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Non-domestic

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	0.0	
After energy demand reduction (be lean)	0.0	
After heat network connection (be clean)	0.0	
After renewable energy (be green)	0.0	

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	0.0	0%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	0.0	0%
Total Cumulative Savings	0.0	0%
Annual savings from off-set payment	0.0	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	0	-
Cash in-lev contribution (£)	0	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

SITEWIDE

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2013 baseline	16.0		
Be lean	13.0	3.0	19%
Be clean	13.0	0.0	0%
Be green	16.9	-3.9	-24%
Total Savings	-	-0.9	-6%
	-	CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	596.2	-

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	14.6	
After energy demand reduction (be lean)	11.8	
After heat network connection (be clean)	11.8	
After renewable energy (be green)	7.6	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: Savings from energy demand reduction	2.7	19%
Be clean: Savings from heat network	0.0	0%
Be green: Savings from renewable energy	4.3	29%
Cumulative on site savings	7.6	48%
Annual savings from off-set payment	7.6	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	227	-
Cash in-lev contribution (£)	21,590	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	0.0	
After energy demand reduction (be lean)	0.0	
After heat network connection (be clean)	0.0	
After renewable energy (be green)	0.0	

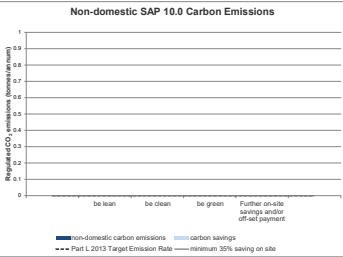
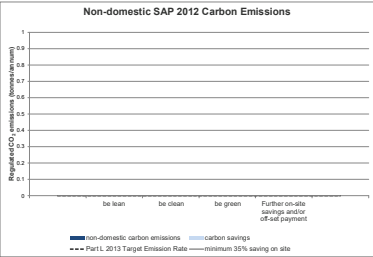
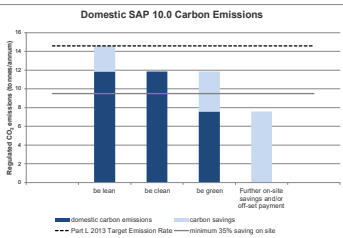
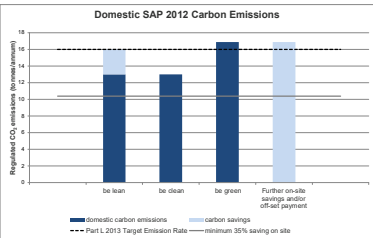
Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	0.0	0%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	0.0	0%
Total Cumulative Savings	0.0	0%
Annual savings from off-set payment	0.0	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	0	-
Cash in-lev contribution (£)	0	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

	Target Fabric Energy Efficiency (kWh/m ²)	Dwelling Fabric Energy Efficiency (kWh/m ²)	Improvement (%)
Development total	0.00	0.00	

	Area weighted non-domestic cooling demand (MJ/m ²)	Total area weighted non-domestic cooling demand (MJ/year)
Actual		
National		



The applicant should complete all the light blue cells including information on the modelled units, the area per unit, the number of units, the baseline energy consumption figures, the TER and the TFEF.

DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																			DEMAND							
Unit Identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - TER WORKSHEET							REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)					REGULATED CO ₂ EMISSIONS PER UNIT						Fabric Energy Efficiency (FEE)		
				Calculated TER 2012 (kgCO ₂ / m ²)	TER Worksheet TER 2012 (kgCO ₂ / m ²)	Space Heating	Fuel type Space Heating	Domestic Hot Water	Fuel type Domestic Hot Water	Lighting	Auxiliary	Cooling	Space Heating	Domestic Hot Water	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating	Domestic Hot Water	Lighting	Auxiliary	Cooling	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated TER SAP 10.0 (kgCO ₂ / m ²)	Target Fabric Energy Efficiency (TFEE) (kWh/m ²)
				TER Worksheet (Row 4)	TER Worksheet (Row 273)	TER Worksheet (Row 211)	TER Worksheet (Row 219)	TER Worksheet (Row 232)	TER Worksheet (Row 231)	N / A																
HH Flat 01	50	1	78	26.3	26.3	3460.0317	Natural Gas	1897.0415	Natural Gas	231.8095	75	747	410	120	39	1,316	727	398	54	17	1,196	23.9	75.34			
HH Flat 02	60	1	85	22.3	22.3	3251.3011	Natural Gas	2082.9682	Natural Gas	272.2928	84	702	450	141	44	1,337	683	437	63	20	1,203	20.1	55.89			
HH Flat 03	60	1	85	22.3	22.3	3251.3011	Natural Gas	2082.9682	Natural Gas	272.2928	84	702	450	141	44	1,337	683	437	63	20	1,203	20.1	55.89			
HH Flat 04	126.4	1	148	18.6	18.6	7038.3754	Natural Gas	2576.4644	Natural Gas	461.823	75	1,520	557	240	39	2,355	1,478	541	108	17	2,144	17.0	66.53			
VLB Apt 1	89.4	1	89.4	17.8	17.8	3808.82	Natural Gas	2481.53	Natural Gas	374.63	75	823	536	194	39	1,592	800	521	87	17	1,426	15.9	54.1			
VLB Apt 2F	51.8	1	51.8	20.0	20.0	1913.37	Natural Gas	2116.33	Natural Gas	240.22	75	413	457	125	39	1,034	402	444	56	17	920	17.8	50.2			
VLB Apt 3F	52.4	1	52.4	19.4	19.4	1815.15	Natural Gas	2127.25	Natural Gas	242.63	75	392	459	126	39	1,016	381	447	57	17	902	17.2	47.6			
VLB Apt 4F	52.9	1	52.9	19.7	19.7	1919.78	Natural Gas	2132.35	Natural Gas	243.66	75	415	461	126	39	1,041	403	448	57	17	925	17.5	50			
VLB Apt 5	51.3	1	51.3	21.4	21.4	2238.62	Natural Gas	2102.03	Natural Gas	237.12	75	484	454	123	39	1,100	470	441	55	17	984	19.2	57.6			
VLB Apt 6	89.4	1	89.4	18.0	18.0	3871.9	Natural Gas	2480.61	Natural Gas	374.63	75	836	536	194	39	1,606	813	521	87	17	1,439	16.1	54.9			
VLB Apt 7	89.4	1	89.4	15.6	15.6	2878.09	Natural Gas	2496.67	Natural Gas	379.29	75	622	539	197	39	1,397	604	524	88	17	1,235	13.8	42.5			
VLB Apt 8	52.4	1	52.4	19.1	19.1	1744.28	Natural Gas	2129.29	Natural Gas	242.63	75	377	460	126	39	1,002	366	447	57	17	887	16.9	46.2			
VLB Apt 9	52.9	1	52.9	19.3	19.3	1820.29	Natural Gas	2135.05	Natural Gas	243.66	75	393	461	126	39	1,020	382	448	57	17	905	17.1	47.9			
VLB Apt 10	51.3	1	51.3	20.8	20.8	2076.45	Natural Gas	2105.78	Natural Gas	237.12	75	449	455	123	39	1,065	436	442	55	17	951	18.5	54.2			
VLB Apt 11	66.93	1	66.93	21.2	21.2	3381.88	Natural Gas	2282.08	Natural Gas	299.54	75	730	493	155	39	1,418	710	479	70	17	1,277	19.1	63.7			
VLB Apt 2R	89.4	1	89.4	17.0	17.0	3444.33	Natural Gas	2485.25	Natural Gas	384.64	75	744	537	200	39	1,519	723	522	90	17	1,352	15.1	49			
VLB Apt 3	52.4	1	52.4	19.2	19.2	1766.82	Natural Gas	2128.62	Natural Gas	242.63	75	382	460	126	39	1,006	371	447	57	17	892	17.0	46.7			
VLB Apt 4	52.9	1	52.9	19.5	19.5	1881.06	Natural Gas	2132.32	Natural Gas	244.65	75	406	461	127	39	1,033	395	448	57	17	917	17.3	48.6			
VLB Apt15	51.3	1	51.3	20.8	20.8	2076.42	Natural Gas	2105.74	Natural Gas	237.12	75	449	455	123	39	1,065	436	442	55	17	951	18.5	54.2			
VLB Apt 16	51	1	51	18.7	18.7	1555.63	Natural Gas	2115.16	Natural Gas	236.99	75	336	457	123	39	955	327	444	55	17	844	16.5	43.1			
VLB Apt 48	52.9	1	52.9	20.5	20.5	2136.38	Natural Gas	2126.91	Natural Gas	243.66	75	461	459	126	39	1,086	449	447	57	17	970	18.3	54.4			
VLB Apt 15	51.3	1	51.3	21.7	21.7	2292.13	Natural Gas	2100.82	Natural Gas	237.12	75	495	454	123	39	1,111	481	441	55	17	995	19.4	58.7			
VLB Apt 19	51	1	51	23.8	23.8	2775.61	Natural Gas	2086.6	Natural Gas	237.01	75	600	451	123	39	1,212	583	438	55	17	1,094	21.4	69			
WCS Flat 101	62	1	62	19.5	19.5	2651.6542	Natural Gas	2124.7089	Natural Gas	280.6811	75	568	459	146	39	1,212	553	446	65	17	1,082	17.4	61.1			
WCS Flat 102	56	1	51	20.2	20.2	2413.0985	Natural Gas	2021.3458	Natural Gas	257.0175	75	521	437	133	39	1,130	507	424	60	17	1,009	18.0	51.1			
WCS Flat 103	78	1	75	19.1	19.1	3549.351	Natural Gas	2350.9601	Natural Gas	338.9136	75	767	508	176	39	1,489	745	494	79	17	1,336	17.1	48.81			
WCS Flat 201	62	1	62	17.2	17.2	1928.7804	Natural Gas	2139.7999	Natural Gas	280.6811	75	417	462	146	39	1,063	405	449	65	17	937	15.1	39.66			
WCS Flat 202	56	1	51	17.5	17.5	1690.7393	Natural Gas	2037.7614	Natural Gas	257.0017	75	365	440	133	39	978	355	428	60	17	860	15.4	48.81			
WCS Flat 203	78	1	75	17.1	17.1	2824.9498	Natural Gas	2362.9973	Natural Gas	338.9136	75	810	510	176	39	1,335	593	496	79	17	1,186	15.2	41.63			
WCS Flat 301	62	1	62	17.2	17.2	1928.7804	Natural Gas	2139.7999	Natural Gas	280.6811	75	417	462	146	39	1,063	405	449	65	17	937	15.1	51.97			
WCS Flat 302	56	1	51	17.8	17.8	1780.8693	Natural Gas	2035.3473	Natural Gas	257.0017	75	385	440	133	39	997	374	427	60	17	879	15.7	41.63			
WCS Flat 303	78	1	75	17.1	17.1	2824.9498	Natural Gas	2362.9973	Natural Gas	338.9136	75	810	510	176	39	1,335	593	496	79	17	1,186	15.2	40.8			
WCS Flat 401	140	1	62	17.4	17.4	7315.7675	Natural Gas	2591.2185	Natural Gas	487.1475	75	1,580	560	253	39	2,432	1,536	544	114	17	2,211	15.8	49.73			
WCS Flat 402	50	1	52	23.4	23.4	2772.2917	Natural Gas	1904.9935	Natural Gas	232.9087	75	599	411	121	39	1,170	582	400	54	17	1,054	21.1	66.55			
WCS Flat 403	78	1	75	17.1	17.1	2824.9498	Natural Gas	2362.9973	Natural Gas	338.9136	75	810	510	176	39	1,335	593	496	79	17	1,186	15.2	45.49			
WCS Flat 404	82	1	77	19.0	19.1	3813.3436	Natural Gas	2392.3113	Natural Gas	352.0117	75	824	517	183	39	1,562	801	502	82	17	1,403	17.1	56.78			
WCS Flat 405	40	1	40	22.2	22.2	1730.5951	Natural Gas	1745.5725	Natural Gas	191.3458	75	374	377	99	39	889	363	367	45	17	792	18.8	53.7			
WCS Flat 406	52	1	50	20.3	20.3	2176.3783	Natural Gas	1952.0127	Natural Gas	239.9839	75	470	422	125	39	1,055	457	410	56	17	940	18.1	52.19			
WCS Flat 501	73	1	68	22.0	22.0	4201.3979	Natural Gas	2277.2497	Natural Gas	321.6637	75	908	492	167	39	1,605	882	478	75	17	1,453	19.9	68.5			
Sum	2,552	39	2,536	19.5	-	109,099	N/A	85,899	N/A	11,211	2,985	0	23,565	18,554	5,818	1,549	0	49,487	22,911	18,039	2,612	695	0	44,257	17.4	52.86
NON-DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																				Fabric Energy Efficiency (FEE)						
Building Use	Model Area (m ²)	Number of units	Total area represented by model (m ²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION BY END USE (kWh/m ² p.a.) TER - SOURCE: BRUKLINP OUTPUT						REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m ² p.a.) TER - SOURCE: BRUKLINP or *SIM.CSV FILE				REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m ² p.a.) - TER BRUKL			REGULATED CO ₂ EMISSIONS							
				Calculated TER 2012 (kgCO ₂ / m ²)	BRUKL TER 2012 (kgCO ₂ / m ²)	Space Heating (kWh/m ² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m ² p.a.)	Fuel type Domestic Hot Water	Lighting (kWh/m ² p.a.)	Auxiliary (kWh/m ² p.a.)	Cooling (kWh/m ² p.a.)	Natural Gas	Grid Electricity	Equipment	2012 CO ₂ emissions (kgCO ₂ p.a.)	Natural Gas	Grid Electricity	Unregulated Grid Electricity	2012 CO ₂ emissions (kgCO ₂ p.a.)	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	BRUKL TER SAP 10.0 (kgCO ₂ / m ²)				
				0.0	-	0	N/A	0	N/A	0	0	0	0	0	N/A	N/A	0	0	0	0	N/A	N/A	0	0.0		
Sum	0	0	0	0.0	-	0	N/A	0	N/A	0	0	0	0	0	N/A	N/A	0	0	0	0	N/A	N/A	0	0.0		
SITE-WIDE ENERGY CONSUMPTION AND CO ₂ ANALYSIS																				Fabric Energy Efficiency (FEE)						
Use	Total Area (m ²)	Calculated TER 2012 (kgCO ₂ / m ²)		REGULATED ENERGY CONSUMPTION						REGULATED CO ₂ EMISSIONS						REGULATED CO ₂ EMISSIONS PER UNIT										
				Space Heating (kWh p.a.)	N/A	Domestic Hot Water (kWh p.a.)	N/A	Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)	2012 CO ₂ emissions (kgCO ₂ p.a.)						SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated TER SAP 10.0 (kgCO ₂ / m ²)								
Sum	2,536	19.5		109,099	N/A	85,899	N/A	11,211	2,985	0	49,487						44,257	17.4								

The applicant should complete all the light blue cells including information on the 'be lean' energy consumption figures, the 'be lean' DER, the DFEE and the regulated energy demand of the 'be lean' scenario.

SAP 2012 CO₂ PERFORMANCE

SAP 10.0 CO₂ PERFORMANCE

FEEES

DOMESTIC ENERGY CONSUMPTION AND CO₂ ANALYSIS

Unit Identifier (e.g. plot number, dwelling type etc.)				REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE LEAN' SAP DER WORKSHEET												REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)										REGULATED CO ₂ EMISSIONS PER UNIT										Fabric Energy Efficiency (FEE)	
				Calculated DER 2012 (kgCO ₂ / m ²)	DER Worksheet DER 2012 (kgCO ₂ / m ²)	Space Heating	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Secondary Heating system	Fuel type Space Heating	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating CO ₂ emissions (kgCO ₂ p.a.)	Domestic Hot Water CO ₂ emissions (kgCO ₂ p.a.)	Lighting CO ₂ emissions (kgCO ₂ p.a.)	Auxiliary CO ₂ emissions (kgCO ₂ p.a.)	Cooling CO ₂ emissions (kgCO ₂ p.a.)	Unregulated (kgCO ₂ p.a.)	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated DER SAP 10.0 (kgCO ₂ / m ²)	Dwelling Fabric Energy Efficiency (DFEE) (kWh/m ²)													
				DER Sheet (Row 384)	DER Sheet ((Row 307a) + (Row 367b x 0.01))	Select fuel type	DER Sheet (Row 310b + (Row 367b x 0.01))	Select fuel type	DER Sheet (Row 309)	Select fuel type	DER Sheet Row 332	DER Sheet (Row 313 + 331)	DER Sheet Row 315																								
HH Flat 01	50	1	78	26.4	26.4	3527.468	Natural Gas	1349.5589	Natural Gas		231.8095	210.2065	72.4732	762	292	120	109	38	1,320	741	283	54	49	17	429	1,144	22.9	77.18									
HH Flat 02	60	1	85	20.1	20.1	2706.7254	Natural Gas	1474.6916	Natural Gas		217.2928	217.2478	76.4738	585	319	141	123	40	1,208	589	310	63	55	18	499	1,015	16.9	59.72									
HH Flat 03	60	1	85	20.0	20.0	2706.7254	Natural Gas	1474.6916	Natural Gas		217.2928	217.2478	60.7236	585	319	141	123	32	1,200	589	310	63	55	14	499	1,012	16.9	59.72									
HH Flat 04	126.4	1	148	17.0	17.0	5484.0694	Natural Gas	1850.8988	Natural Gas		461.823	433.8899	180.5639	1,185	400	240	225	94	2,143	1,152	389	108	101	42	825	1,791	14.2	59.88									
VLB Apt 1	89.4	1	89.4	15.8	15.8	2288.94	Natural Gas	2628.96	Natural Gas		374.67	292.24		494	568	194	152		1,408	481	552	87	68		676	1,188	13.3	46.2									
VLB Apt 2F	51.8	1	51.8	18.6	18.6	2225.46	Natural Gas	2232.78	Natural Gas		239.17	181.95		285	482	124	94		966	257	265	56	42		442	824	15.9	46.6									
VLB Apt 3F	52.4	1	52.4	18.5	18.5	1234.53	Natural Gas	2240.5	Natural Gas		243.62	183.71		287	484	125	95		971	259	271	56	43		446	829	15.8	46									
VLB Apt 4F	52.9	1	52.9	17.9	17.9	1100.78	Natural Gas	2254.77	Natural Gas		243.66	185.17		238	487	126	96		947	231	474	57	43		450	805	15.2	44.4									
VLB Apt 5	51.3	1	51.3	18.3	18.3	1105.3	Natural Gas	2229.82	Natural Gas		237.12	180.48		239	482	123	94		937	232	468	55	42		438	798	15.5	44.3									
VLB Apt 6	89.4	1	89.4	16.7	16.7	2621.28	Natural Gas	2621.69	Natural Gas		374.67	328.21		566	566	194	170		1,497	550	551	87	76		676	1,265	14.1	51.4									
VLB Apt 7	89.4	1	89.4	13.9	13.9	1422.74	Natural Gas	2650.36	Natural Gas		374.67	328.21		307	572	194	170		1,245	299	557	87	76		676	1,019	11.4	38									
VLB Apt 8	52.4	1	52.4	18.9	18.9	1280.99	Natural Gas	2239.53	Natural Gas		243.62	204.79		277	484	125	106		992	269	470	56	48		446	843	16.1	48.8									
VLB Apt 9	52.9	1	52.9	19.0	19.0	2335.16	Natural Gas	2246.05	Natural Gas		243.66	206.46		288	485	126	107		1,007	280	472	57	48		450	857	16.2	50									
VLB Apt 10	51.3	1	51.3	18.7	18.7	1157.01	Natural Gas	2228.7	Natural Gas		237.12	201.12		250	481	123	104		959	243	468	55	47		438	813	15.9	47									
VLB Apt 11	66.93	1	66.93	21.2	21.3	2858.42	Natural Gas	2298.37	Natural Gas		299.19	253.26		617	518	155	131		1,422	600	504	70	59		546	1,233	18.4	64.6									
VLB Apt 2R	89.4	1	89.4	15.6	15.6	2129.05	Natural Gas	2627.36	Natural Gas		374.67	328.21		480	568	194	170		1,392	447	480	57	76		676	1,163	13.0	45.5									
VLB Apt 3	52.4	1	52.4	19.2	19.3	1360.38	Natural Gas	2236.09	Natural Gas		243.62	204.79		294	483	125	106		1,009	246	470	56	48		446	859	16.4	50									
VLB Apt 4	52.9	1	52.9	19.6	19.6	1485.49	Natural Gas	2240.72	Natural Gas		243.66	206.46		321	484	126	107		1,038	312	471	57	48		450	887	16.8	52.5									
VLB Apt15	51.3	1	51.3	18.8	18.8	1182.24	Natural Gas	2227.56	Natural Gas		237.12	201.12		255	481	123	104		964	248	468	55	47		438	818	15.9	47.3									
VLB Apt 16	51	1	51	19.6	19.6	1416.9	Natural Gas	2226.08	Natural Gas		235.9	179.6		306	479	122	93		1,000	298	465	55	42		436	860	16.9	51.3									
VLB Apt 4R	52.9	1	52.9	19.3	19.3	1447.68	Natural Gas	2242.62	Natural Gas		243.66	185.17		313	484	126	96		1,020	304	471	57	43		450	875	16.5	50.7									
VLB Apt 15	51.3	1	51.3	20.5	20.5	1653.08	Natural Gas	2212.04	Natural Gas		237.12	180.48		357	478	123	94		1,052	347	465	55	42		438	909	17.7	54.5									
VLB Apt 19	51	1	51	26.1	26.1	2201.65	Natural Gas	2176.74	Natural Gas		235.9	214.7		627	471	122	111		1,331	609	458	55	50		436	1,172	23.0	78.2									
WCS Flat 101	62	1	62	17.3	17.3	2226.2704	Natural Gas	1459.1	Natural Gas		280.1876	238.5226	0	481	324	145	124	0	1,074	448	315	65	56	0	513	903	14.6	49.58									
WCS Flat 102	56	1	51	17.2	17.2	1883.8731	Natural Gas	1429.0092	Natural Gas		256.2521	222.7249	0	407	309	133	116	0	964	396	300	60	52	0	472	807	14.4	47.32									
WCS Flat 103	78	1	75	17.3	17.3	2380.4607	Natural Gas	1387.2338	Natural Gas		338.8327	280.7597	0	514	511	176	146	0	1,347	500	497	79	65	0	614	1,141	14.6	46.48									
WCS Flat 201	62	1	62	16.2	16.2	1927.3295	Natural Gas	1501.3299	Natural Gas		280.1876	223.3111	0	416	324	145	116	0	1,002	405	315	65	52	0	513	837	13.5	43.99									
WCS Flat 202	56	1	51	15.9	15.9	1563.5237	Natural Gas	1430.7355	Natural Gas		256.2521	208.9584	0	338	309	133	108	0	888	328	300	60	49	0	472	737	13.2	41.58									
WCS Flat 203	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas		338.8327	280.7597	0	475	359	176	146	0	1,156	462	349	79	65	0	614	956	12.3	42.97									
WCS Flat 301	62	1	62	16.2	16.2	1935.8212	Natural Gas	1501.3855	Natural Gas		280.1876	223.3111	0	418	324	145	116	0	1,004	407	315	65	52	0	513	839	13.5	44.02									
WCS Flat 302	56	1	51	16.1	16.1	1637.3838	Natural Gas	1430.2836	Natural Gas		256.2521	208.9584	0	344	309	133	108	0	904	344	300	60	49	0	472	753	13.4	42.18									
WCS Flat 303	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas		338.8327	280.7597	0	475	359	176	146	0	1,156	462	349	79	65	0	614	956	12.3	42.97									
WCS Flat 401	140	1	62	15.2	15.2	5797.3092	Natural Gas	1863.2422	Natural Gas		487.1475	456.358	0	1,239	402	253	237	0	2,131	1,205	391	114	106	0	868	1,816	13.0	55.76									
WCS Flat 402	50	1	52	21.3	21.3	2546.67	Natural Gas	1351.5077	Natural Gas		231.8095	194.6058	0	550	292	120	101	0	1,063	535	284	54	45	0	429	916	18.4	60.48									
WCS Flat 403	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas		338.8327	280.7597	0	475	359	176	146	0	1,156	462	349	79	65	0	614	956	12.3	42.97									
WCS Flat 404	82	1	77	17.6	17.6	3487.489	Natural Gas	1691.5474	Natural Gas		351.9947	271.1534	0	753	365	183	141	0	1,442	732	355	82	63	0	637	1,233	15.0	58.85									
WCS Flat 405	40	1	40	18.9	18.9	1333.4306	Natural Gas	1236.3589	Natural Gas		191.3458	169.55	26.7788	288	267	99	88	14	756	280	260	45	40	6	359	630	15.7	48.91									
WCS Flat 406	52	1	50	18.0	18.0	1814.3208	Natural Gas	1379.3986	Natural Gas		197.915	157.915	35.7864	292	298	125	103	19	936	381	290	56	46	8	443	781	15.0	50.38									
WCS Flat 501	73	1	68	18.8	18.8	3367.5692	Natural Gas	1614.0642	Natural Gas		321.491	249.6244	0	727	349	167	130	0	1,372	707	339	75	58	0	584	1,179	16.2	57.53									
Sum	2,552	39	2,536	18.0	-	84,840	N/A	75,974	N/A	0	N/A	11,183	9,354	580	N/A	18,325	16,410	5,804	4,855	301	45,696	17,816	15,955	2,806	2,180	135	20,455	36,691	15.3	51.00							

NON-DOMESTIC ENERGY CONSUMPTION AND CO₂ ANALYSIS

				Validation Check		Regulated Energy Consumption by End Use (kWh/m² p.a.) 'BE LEAN' BER - Source: BRUKL Output								Regulated Energy Consumption by Fuel Type (kWh/m² p.a.) 'BE LEAN' BER - Source: BRUKL.INP or 'SIM.CSV File								Regulated CO₂ Emissions per Unit							
Building Use	Model Area (m²)	Number of units	Total area represented by model (m²)	Calculated BER 2012 (kgCO₂ / m²)	BRUKL BER 2012 (kgCO₂ / m²)	Space Heating (kWh/m² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m² p.a.)	Fuel type Domestic Hot Water		Lighting (kWh/m² p.a.)	Auxiliary (kWh/m² p.a.)	Cooling (kWh/m² p.a.)	Natural Gas		Grid Electricity	Equipment		2012 CO₂ emissions (kgCO₂ p.a.)	Natural Gas		Grid Electricity	Equipment		SAP 10.0 CO₂ emissions (kgCO₂ p.a.)	BRUKL BER SAP 10.0 (kgCO₂ / m²)			
														0.216 kgCO₂/kWh	0.519 kgCO₂/kWh	0.519 kgCO₂/kWh	0.210 kgCO₂/kWh			0.233 kgCO₂/kWh	0.233 kgCO₂/kWh								
Sum	0	0	0	0.0	-	0	N/A	0	N/A	N/A	N/A	0	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0		0	0.0	N/A	

The applicant should complete all the light blue cells including information on the 'be clean' energy consumption figures and the 'be clean' DER.

DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS															SAP 2012 CO ₂ PERFORMANCE							SAP 10.0 CO ₂ PERFORMANCE													
VALIDATION CHECK				REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE CLEAN' SAP DER WORKSHEET													REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)							REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)											
Unit identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	Calculated DER 2012 (kgCO ₂ / m ²)	DER Worksheet DER 2012 (kgCO ₂ / m ²)	Space Heating (Heat Source 1)	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Space and Domestic Hot Water from CHP	Fuel type CHP	Total Electricity generated by CHP (-)	Secondary Heating system	Fuel type Secondary Heating	Lighting	Auxiliary	Cooling	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Lighting	Auxiliary	Cooling	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated DER SAP 10.0 (kgCO ₂ / m ²)	
					DER Sheet (Row 384)	DER Sheet (Row 307b + (Row 367b x 0.01))	Select fuel type	DER Sheet (Row 310b + (Row 367b x 0.01))	Select fuel type	If applicable (Row 307a + 310a) + (Row 362 x 0.01)	If applicable Select fuel type	If applicable (Row 307a + 310a) + (Row 361 + 362)	DER Sheet (Row 309)	Select fuel type	DER Sheet Row 332	DER Sheet (Row 313 + 331)	DER Sheet Row 315				If applicable	If applicable													
HH Flat 01	50	1	78	26.4	26.4	3527.468	Natural Gas	1349.5589	Natural Gas						231.8095	210.2065	72.4732	762	292						1,320	741	283				54	49	17	1,144	22.9
HH Flat 02	60	1	85	20.1	20.1	2709.7254	Natural Gas	1474.6916	Natural Gas						272.2928	237.2478	76.4738	585	319	123	40				1,208	569	310				55	18		1,015	16.9
HH Flat 03	60	1	85	20.0	20.0	2709.7254	Natural Gas	1474.6916	Natural Gas						272.2928	237.2478	60.7336	585	319	123	32				1,200	569	310				55	14		1,012	16.9
HH Flat 04	126.4	1	148	17.0	17.0	5484.0694	Natural Gas	1850.8988	Natural Gas						461.823	433.8899	180.5639	1,185	400	240	225				2,143	1,152	389				108	101	42	1,791	14.2
VLB Apt 1	89.4	1	89.4	15.8	15.8	2288.94	Natural Gas	2628.96	Natural Gas						374.67	292.24		1,408	568	194	152				1,408	491	552				87	68		1,188	13.3
VLB Apt 2F	51.8	1	51.8	18.6	18.6	1225.46	Natural Gas	2232.78	Natural Gas						239.17	181.95		265	482	257					966	482	257				56	42		824	15.9
VLB Apt 3F	52.4	1	52.4	18.5	18.5	1234.53	Natural Gas	2362.1	Natural Gas						241.62	181.71		267	484	125					971	259	471				56	43		829	15.8
VLB Apt 4F	52.9	1	52.9	17.9	17.9	1100.78	Natural Gas	2254.77	Natural Gas						243.66	185.17		238	487	96					947	231	474				57	43		805	15.2
VLB Apt 5	51.3	1	51.3	18.3	18.3	1105.3	Natural Gas	2229.82	Natural Gas						237.12	180.48		239	482	123					937	232	468				55	42		798	15.5
VLB Apt 6	89.4	1	89.4	16.7	16.8	2621.28	Natural Gas	2621.69	Natural Gas						374.67	328.21		566	566	194	170				1,497	550	551				87	76		1,265	14.1
VLB Apt 7	89.4	1	89.4	13.9	13.9	1422.74	Natural Gas	2650.36	Natural Gas						374.67	328.21		307	572	194	170				1,245	299	557				87	78		1,019	11.4
VLB Apt 8	52.4	1	52.4	18.9	18.9	1280.99	Natural Gas	2239.53	Natural Gas						241.62	204.79		277	484	106					992	269	56				48	41		843	16.1
VLB Apt 9	52.9	1	52.9	19.0	19.0	1335.16	Natural Gas	2246.05	Natural Gas						243.66	206.46		288	485	107					1,007	280	472				57	48		857	16.2
VLB Apt 10	51.3	1	51.3	18.7	18.7	1157.01	Natural Gas	2228.7	Natural Gas						237.12	201.12		250	481	123					969	243	468				55	47		813	15.9
VLB Apt 11	66.93	1	66.93	21.2	21.3	2858.42	Natural Gas	2398.37	Natural Gas						299.19	253.26		617	518	155	131				1,422	600	504				70	59		1,233	18.4
VLB Apt 2R	89.4	1	89.4	15.6	15.6	2129.05	Natural Gas	2627.36	Natural Gas						374.67	328.21		460	568	194	170				1,392	447	552				87	76		1,163	13.0
VLB Apt 3	52.4	1	52.4	19.2	19.3	1360.38	Natural Gas	2236.09	Natural Gas						241.62	204.79		294	483	125					1,009	286	470				56	48		859	16.4
VLB Apt 4	52.9	1	52.9	19.6	19.6	1485.49	Natural Gas	2240.72	Natural Gas						243.66	206.46		321	484	126					1,038	312	471				57	48		887	16.8
VLB Apt15	51.3	1	51.3	18.8	18.8	1182.24	Natural Gas	2227.56	Natural Gas						237.12	201.12		255	481	123					964	248	468				55	47		816	15.9
VLB Apt 16	51	1	51	19.6	19.6	1416.9	Natural Gas	2216.08	Natural Gas						235.9	179.6		306	479	122					1,000	298	465				55	42		860	16.9
VLB Apt 4R	52.9	1	52.9	19.3	19.3	1447.68	Natural Gas	2242.62	Natural Gas						243.66	185.17		313	484	126					1,020	304	471				57	43		875	16.5
VLB Apt 15	51.3	1	51.3	20.5	20.5	1653.08	Natural Gas	2212.04	Natural Gas						237.12	180.48		357	478	123					1,052	347	465				55	42		909	17.7
VLB Apt 19	51	1	51	26.1	26.1	2961.65	Natural Gas	2178.74	Natural Gas						235.9	214.7		627	471	122					1,331	609	458				55	50		1,172	22.0
WCS Flat 101	62	1	62	17.3	17.3	2226.2704	Natural Gas	1499.9	Natural Gas						280.1876	238.5526	0	481	324	145					1,074	468	315				65	56	0	903	14.8
WCS Flat 102	56	1	51	17.2	17.2	1883.6731	Natural Gas	1429.0092	Natural Gas						256.2521	222.7249	0	407	309	133					964	396	300				60	52	0	807	14.4
WCS Flat 103	78	1	75	17.3	17.3	2380.4607	Natural Gas	2387.2338	Natural Gas						338.8327	280.7597	0	514	511	176					1,347	500	497				79	65	0	1,141	14.6
WCS Flat 201	62	1	62	16.2	16.2	1927.3295	Natural Gas	1501.3299	Natural Gas						280.1876	223.3111	0	416	324	145					1,002	405	315				65	52	0	837	13.5
WCS Flat 202	56	1	51	15.9	15.9	1563.5237	Natural Gas	1430.7355	Natural Gas						256.2521	208.9584	0	338	309	133					888	328	300				60	49	0	737	13.2
WCS Flat 301	62	1	62	16.2	16.2	1927.3295	Natural Gas	1501.3299	Natural Gas						280.1876	223.3111	0	416	324	145					1,004	407	315				65	52	0	839	13.5
WCS Flat 302	56	1	51	16.1	16.1	1637.3828	Natural Gas	1430.2836	Natural Gas						256.2521	208.9584	0	354	309	133					904	344	300				60	49	0	753	13.4
WCS Flat 303	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas						338.8327	280.7597	0	475	359	145					1,156	462	349				79	65	0	986	12.3
WCS Flat 401	140	1	62	15.2	15.2	1771.3092	Natural Gas	1863.2422	Natural Gas						487.1475	456.358	0	1,239	402	237					1,231	391	110				114	106	0	1,816	13.0
WCS Flat 402	50	1	52	21.3	21.3	2546.67	Natural Gas	1351.5677	Natural Gas						231.8095	194.6058	0	550	292	120					1,063	535	284				64	45	0	918	18.4
WCS Flat 403	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas						338.8327	280.7597	0	475	359	145					1,156	462	349				79	65	0	986	12.3
WCS Flat 404	82	1	77	17.6	17.6	3487.493	Natural Gas	1651.5474	Natural Gas						351.5947	271.1534	0	753	365	141					1,442	732	355				82	63	0	1,233	15.

The applicant should complete all the light blue cells including information on the 'be green' energy consumption figures and the 'be green' DER.

[illegible]

SAP 2012 Performance

SAP 10.0 Performance

Domestic

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	49.5	
After energy demand reduction (be lean)	45.7	
After heat network connection (be clean)	45.7	
After renewable energy (be green)	51.3	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	3.8	8%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	-5.6	-11%
Cumulative on site savings	-1.9	-4%
Annual savings from off-set payment	51.3	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	1,540	-
Cash in-flow contribution (£)	146,319	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Non-domestic

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	0.0	
After energy demand reduction (be lean)	0.0	
After heat network connection (be clean)	0.0	
After renewable energy (be green)	0.0	

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	0.0	0%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	0.0	0%
Total Cumulative Savings	0.0	0%
Annual savings from off-set payment	0.0	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	0	-
Cash in-flow contribution (£)	0	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

SITEWIDE

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2013 baseline	49.5		
Be lean	45.7	3.8	8%
Be clean	45.7	0.0	0%
Be green	51.3	-5.6	-11%
Total Savings	-	-1.9	-4%
		CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	1,540.2	-

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	44.3	
After energy demand reduction (be lean)	38.7	
After heat network connection (be clean)	38.7	
After renewable energy (be green)	23.0	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: Savings from energy demand reduction	5.6	13%
Be clean: Savings from heat network	0.0	0%
Be green: Savings from renewable energy	15.6	35%
Cumulative on site savings	21.2	48%
Annual savings from off-set payment	23.0	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	691	-
Cash in-flow contribution (£)	65,688	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	0.0	
After energy demand reduction (be lean)	0.0	
After heat network connection (be clean)	0.0	
After renewable energy (be green)	0.0	

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

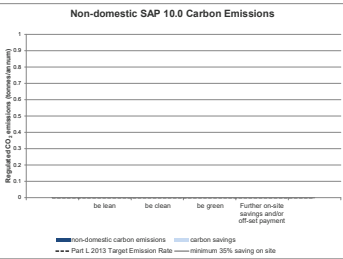
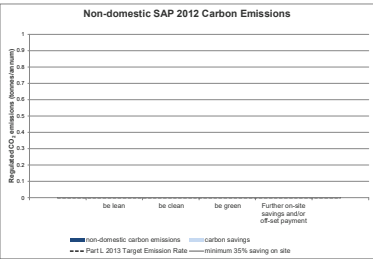
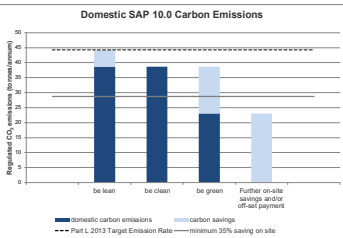
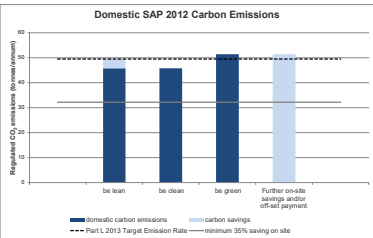
	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	0.0	0%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	0.0	0%
Total Cumulative Savings	0.0	0%
Annual savings from off-set payment	0.0	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	0	-
Cash in-flow contribution (£)	0	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2013 baseline	44.3		
Be lean	38.7	5.6	13%
Be clean	38.7	0.0	0%
Be green	23.0	15.6	35%
Total Savings	-	21.2	48%
		CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	691.5	-

	Target Fabric Energy Efficiency (kWh/m ²)	Dwelling Fabric Energy Efficiency (kWh/m ²)	Improvement (%)
Development total	52.86	51.00	4%

	Area weighted non-domestic cooling demand (MJ/m ²)	Total area weighted non-domestic cooling demand (MJ/year)
Actual		
National		



The applicant should complete all the light blue cells including information on the modelled units, the area per unit, the number of units, the baseline energy consumption figures, the TER and the TFEE.

SAP 2012 CO ₂ PERFORMANCE										SAP 10.0 CO ₂ PERFORMANCE										DEMAND					
DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																									
Unit Identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - TER WORKSHEET							REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)						REGULATED CO ₂ EMISSIONS PER UNIT					Fabric Energy Efficiency (FEE)	
				Calculated TER 2012 (kgCO ₂ / m ²)	TER 2012 (kgCO ₂ / m ²)	Space Heating	Fuel type Space Heating	Domestic Hot Water	Fuel type Domestic Hot Water	Lighting	Auxiliary	Cooling	Space Heating	Domestic Hot Water	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating	Domestic Hot Water	Lighting	Auxiliary	Cooling		SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)
TER Worksheet (Row 4)				TER Worksheet (Row 273)		TER Worksheet (Row 211)		TER Worksheet (Row 219)		TER Worksheet (Row 232)	TER Worksheet (Row 231)	N / A													
Sum	0	0	0	0.0	-	0	N/A	0	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.00
NON-DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																									
Building Use	Model Area (m ²)	Number of units	Total area represented by model (m ²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION BY END USE (kWh/m ² p.a.) TER - SOURCE: BRUKL OUTPUT							REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m ² p.a.) TER - SOURCE: BRUKLINP or *SIM.CSV FILE				REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m ² p.a.) - TER BRUKL				REGULATED CO ₂ EMISSIONS				
				Calculated TER 2012 (kgCO ₂ / m ²)	BRUKL TER 2012 (kgCO ₂ / m ²)	Space Heating (kWh/m ² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m ² p.a.)	Fuel type Domestic Hot Water	Lighting (kWh/m ² p.a.)	Auxiliary (kWh/m ² p.a.)	Cooling (kWh/m ² p.a.)	Natural Gas	Grid Electricity	Equipment	2012 CO ₂ emissions (kgCO ₂ p.a.)	Natural Gas	Grid Electricity	Unregulated Grid Electricity			SAP10.0 CO ₂ emissions (kgCO ₂ p.a.)	BRUKL TER SAP10.0 (kgCO ₂ / m ²)		
1MS office	20693	1	22650	13.1	13.1	5.46	Natural Gas	7.99	Natural Gas	13.67	1.89	4.62	13.4488	19.67589	40	271,424	13	20	40			153,309	7.4		
1MS Retail	648.7	1	633	36.9	36.9	6.88	Natural Gas	1.79	Natural Gas	60.35	3.01	5.82	8.67138	67.4470875	20	23,923	9	67	20			11,376	17.5		
HH Retail	137.5	1	137.5	17.2	17.2	32.25	Natural Gas	0.36	Natural Gas	18.98	0.81	0.36	33	20	14	2,371	33	20	14			1,571	11.4		
VIS Retail	764.8	1	764.8	23.6	23.6	6.34	Natural Gas	0.91	Natural Gas	33.17	1.76	8.6	7	42	16	18,044	7	42	16			8,727	11.4		
WCS Retail	1733	1	1733	20.0	20.0	4.45	Natural Gas	0.7	Natural Gas	27.61	1.5	8.28	5	36	69	34,715	5	36	69			16,594	9.6		
Sum	23,977	5	25,918	15.7	-	145,019	N/A	184,065	N/A	423,653	48,771	129,303	329,052	586,690	1,045,446	375,967	329,052	586,690	1,045,446	N/A	N/A	205,800	7.9		
SITE-WIDE ENERGY CONSUMPTION AND CO ₂ ANALYSIS																									
Use	Total Area (m ²)	Calculated TER 2012 (kgCO ₂ / m ²)	-	REGULATED ENERGY CONSUMPTION							REGULATED CO ₂ EMISSIONS		REGULATED CO ₂ EMISSIONS PER UNIT												
				Space Heating (kWh p.a.)	N/A	Domestic Hot Water (kWh p.a.)	N/A	Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)	2012 CO ₂ emissions (kgCO ₂ p.a.)		SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated TER SAP 10.0 (kgCO ₂ / m ²)											
Sum	25,918	14.5	-	145,019		184,065		423,653	48,771	129,303		375,967			205,800	7.9									

The applicant should complete all the light blue cells including information on the 'be lean' energy consumption figures, the 'be lean' DER, the DFEE and the regulated energy demand of the 'be lean' scenario.

DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS												SAP 2012 CO ₂ PERFORMANCE						SAP 10.0 CO ₂ PERFORMANCE						FEEs					
Unit Identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE LEAN' SAP DER WORKSHEET										REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)						REGULATED CO ₂ EMISSIONS PER UNIT						Fabric Energy Efficiency (FEE)	
				Calculated DER 2012 (kgCO ₂ / m ²)	DER Worksheet DER 2012 (kgCO ₂ / m ²)	Space Heating	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Secondary Heating system	Fuel type Space Heating	Lighting	Auxiliary	Cooling	Space Heating CO ₂ emissions (kgCO ₂ p.a.)	Domestic Hot Water CO ₂ emissions (kgCO ₂ p.a.)	Lighting CO ₂ emissions (kgCO ₂ p.a.)	Auxiliary CO ₂ emissions (kgCO ₂ p.a.)	Cooling CO ₂ emissions (kgCO ₂ p.a.)	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating CO ₂ emissions (kgCO ₂ p.a.)	Domestic Hot Water CO ₂ emissions (kgCO ₂ p.a.)	Lighting CO ₂ emissions (kgCO ₂ p.a.)	Auxiliary CO ₂ emissions (kgCO ₂ p.a.)	Cooling CO ₂ emissions (kgCO ₂ p.a.)	Unregulated (kgCO ₂ p.a.)	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated DER SAP 10.0 (kgCO ₂ / m ²)	Dwelling Fabric Energy Efficiency (DFEE) (kWh/m ²)
				DER Sheet (Row 384)	DER Sheet [(Row 307a) + (Row 367a x 0.61)]	Select fuel type	DER Sheet (Row 310b + (Row 367b x 0.61))	Select fuel type	DER Sheet (Row 309)	Select fuel type	DER Sheet (Row 332)	DER Sheet (Row 313 + 331)	DER Sheet (Row 315)																
Sum	0	0	0	0.0	-	0	N/A	0	N/A	0	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	

NON-DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS												REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m ² p.a.) 'BE LEAN' BER - SOURCE: BRUKLINP or *SIM.CSV FILE						REGULATED CO ₂ EMISSIONS PER UNIT						N/A		
Building Use	Model Area (m ²)	Number of units	Total area represented by model (m ²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION BY END USE (kWh/m ² p.a.) 'BE LEAN' BER - SOURCE: BRUKL OUTPUT						REGULATED ENERGY CONSUMPTION BY FUEL TYPE (kWh/m ² p.a.) 'BE LEAN' BER - SOURCE: BRUKLINP or *SIM.CSV FILE				REGULATED CO ₂ EMISSIONS PER UNIT										
				Calculated BER 2012 (kgCO ₂ / m ²)	BRUKL BER 2012 (kgCO ₂ / m ²)	Space Heating (kWh/m ² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m ² p.a.)	Fuel type Domestic Hot Water	Lighting (kWh/m ² p.a.)	Auxiliary (kWh/m ² p.a.)	Cooling (kWh/m ² p.a.)	Natural Gas	Grid Electricity	Equipment	2012 CO ₂ emissions (kgCO ₂ p.a.)	Natural Gas	Grid Electricity	Equipment	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	BRUKL BER SAP 10.0 (kgCO ₂ / m ²)					
1MS office	20693	1	22650	10.1	10.1	9.25	Natural Gas	8.3	Natural Gas	4.88	4.06	3.48	0.216 kgCO ₂ /kWh	0.519 kgCO ₂ /kWh	0.519 kgCO ₂ /kWh	208,547	0.210 kgCO ₂ /kWh	0.233 kgCO ₂ /kWh	0.233 kgCO ₂ /kWh	134,682	6.5					
1MS Retail	646.7	1	633	20.5	20.5	11.7	Natural Gas	1.9	Natural Gas	26.07	5.02	3.69	14	34	20	13,324	14	34	20	6,979	10.8					
HH Retail	137.5	1	137.5	14.2	14.2	24.35	Natural Gas	0.37	Natural Gas	13.76	1.56	1.69	25	17	14	1,947	25	17	14	1,258	9.2					
VLB Retail	764.8	1	764.8	14.6	14.6	8.08	Natural Gas	0.87	Natural Gas	13.78	3.49	7.83	9	24	16	11,192	9	24	16	5,798	7.6					
WCS Retail	1733	1	1733	15.0	15.0	1.93	Natural Gas	0.75	Natural Gas	17.91	2.4	7.41	3	28	69	25,940	3	28	69	12,169	7.0					
Sum	23,977	5	25,918	10.8	-	229,791	N/A	191,214	N/A	N/A	N/A	170,503	102,180	100,220	421,076	364,929	1,048,602	N/A	N/A	N/A	280,351	421,076	364,929	1,048,602	173,454	6.7

SITE-WIDE ENERGY CONSUMPTION AND CO ₂ ANALYSIS												REGULATED ENERGY CONSUMPTION				REGULATED CO ₂ EMISSIONS		REGULATED CO ₂ EMISSIONS				N/A
Use	Total Area (m ²)	Calculated BER 2012 (kgCO ₂ / m ²)	-	Space Heating (kWh p.a.)	N/A	Domestic Hot Water (kWh p.a.)	N/A	Secondary Heating System (kWh p.a.)	N/A	Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)	REGULATED CO ₂ EMISSIONS		REGULATED CO ₂ EMISSIONS		REGULATED CO ₂ EMISSIONS					
													2012 CO ₂ emissions (kgCO ₂ p.a.)		SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated BER SAP 10.0 (kgCO ₂ / m ²)						
Sum	25,918	10.8	-	229,791	N/A	191,214	N/A	0	N/A	170,503	102,180	100,220		280,351			173,454	6.7				

The applicant should complete all the light blue cells including information on the 'be clean' energy consumption figures and the 'be clean' DER.

SAP 2012 CO₂ PERFORMANCE

SAP 10.0 CO₂ PERFORMANCE

[illegible]

NON-DOMESTIC ENERGY CONSUMPTION AND CO₂ ANALYSIS

Validation Check				Regulated Energy Consumption by End Use (kWh/m² p.a.) 'BE Clean' BER - Source: BRUKL Output										Regulated Energy Consumption by Fuel Type (kWh/m² p.a.) 'BE Clean' BER - Source: BRUKL INP or 'SIM' CSV File										Regulated CO₂ Emissions per Unit									
Building Use	Model Area (m²)	Number of units	Total area represented by model (m²)	Calculated BER 2012 (kgCO₂ / m²)	BRUKL BER 2012 (kgCO₂ / m²)	Space Heating (kWh/m² p.a.)	Fuel type Space Heating	Domestic Hot Water (kWh/m² p.a.)	Fuel type Domestic Hot Water	Electricity generated by CHP (-) If applicable	Lighting (kWh/m² p.a.)	Auxiliary (kWh/m² p.a.)	Cooling (kWh/m² p.a.)	Natural Gas	Grid Electricity	Bespoke DH Factor	Electricity generated by CHP (-) If applicable	Equipment	2012 CO₂ emissions (kgCO₂ p.a.)	Natural Gas	Grid Electricity	Bespoke DH Factor	Electricity generated by CHP (-) If applicable	Equipment	SAP 10.0 CO₂ emissions (kgCO₂ p.a.)	BRUKL BER SAP10.0 (kgCO₂ / m²)							
1MS office	20693	1	22650	10.1	10.1	9.3	Natural Gas	8.3	Natural Gas	N/A	N/A	N/A	N/A	4.88	4.06	3.48	17.5539	12.117175	20	208,547	18	12			40	134,682	6.6						
1MS Retail	645.7	1	653	20.5	20.5	11.7	Natural Gas	1.9	Natural Gas					26.07	5.02	2.69	13.6019	33.91362	14	1,947	25	17	20	13,324	14			34		20	6,979	10.8	
HH Retail	137.5	1	137.5	14.2	14.2	8.4	Natural Gas	0.4	Natural Gas					13.76	1.56	1.69	24.72	17					14	1,947	25			17		14	1,258	9.2	
VLB Retail	764.8	1	764.8	14.6	14.6	8.1	Natural Gas	0.9	Natural Gas					13.78	3.49	7.83	8.94506	24.4725					16	11,192	9			24		16	5,798	7.6	
WCS Retail	1733	1	1733	15.0	15.0	1.9	Natural Gas	0.8	Natural Gas					17.91	2.4	7.41	2.67181	27.7291					69	25,940	3			28		69	12,169	7.0	
Sum	23,977	5	25,918	10.8	-	229,791	N/A	191,214	N/A	0	170,503	102,180	100,220	421,076	364,929	0	0	1,048,602	280,251	421,076	364,929	0	0	1,048,602	173,454	6.7							

SITE-WIDE ENERGY CONSUMPTION AND CO₂ ANALYSIS

Use	Total Area (m²)	Calculated BER 2012 (kgCO ₂ / m²)	REGULATED ENERGY CONSUMPTION										REGULATED CO ₂ EMISSIONS PER UNIT				
			Space Heating (kWh p.a.)	N/A	Domestic Hot Water (kWh p.a.)	N/A	Space and Domestic Hot Water from CHP (kWh p.a.)	N/A	Electricity generated by CHP (kWh p.a.) <i>If applicable</i>	Secondary Heating System (kWh p.a.)	N/A	Lighting (kWh p.a.)	Auxiliary (kWh p.a.)	Cooling (kWh p.a.)	2012 CO ₂ emissions (kgCO ₂ p.a.)	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated BER SAP 10.0 (kgCO ₂ / m²)
Sum	25,918	10.8	229,791		191,214		0		0	0		170,503	102,180	100,220	280,351	173,454	6.7

SAP 2012 Performance

SAP 10.0 Performance

Domestic

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	0.0	
After energy demand reduction (be lean)	0.0	
After heat network connection (be clean)	0.0	
After renewable energy (be green)	0.0	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)		(%)
Be lean: savings from energy demand reduction	0.0		0%
Be clean: savings from heat network	0.0		0%
Be green: savings from renewable energy	0.0		0%
Cumulative on site savings	0.0		0%
Annual savings from off-set payment	0.0		-
(Tonnes CO ₂)			
Cumulative savings for off-set payment	0		-
Cash in-lev contribution (£)	0		

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the "Development Information" tab

Non-domestic

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	375.6	
After energy demand reduction (be lean)	280.4	
After heat network connection (be clean)	280.4	
After renewable energy (be green)	264.1	

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)		(%)
Be lean: savings from energy demand reduction	95.2		25%
Be clean: savings from heat network	0.0		0%
Be green: savings from renewable energy	16.2		4%
Total Cumulative Savings	111.4		30%
Annual savings from off-set payment	264.1		-
(Tonnes CO ₂)			
Cumulative savings for off-set payment	7,824		-
Cash in-lev contribution (£)	782,821		

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the "Development Information" tab

SITEWIDE

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2013 baseline	375.6		
Be lean	280.4	95.2	25%
Be clean	280.4	0.0	0%
Be green	264.1	16.2	4%
Total Savings	-	111.4	30%
	-	CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	7,824.4	-

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	0.0	
After energy demand reduction (be lean)	0.0	
After heat network connection (be clean)	0.0	
After renewable energy (be green)	0.0	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)		(%)
Be lean: Savings from energy demand reduction	0.0		0%
Be clean: Savings from heat network	0.0		0%
Be green: Savings from renewable energy	0.0		0%
Cumulative on site savings	0.0		0%
Annual savings from off-set payment	0.0		-
(Tonnes CO ₂)			
Cumulative savings for off-set payment	0		-
Cash in-lev contribution (£)	0		

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the "Development Information" tab

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	205.8	
After energy demand reduction (be lean)	173.5	
After heat network connection (be clean)	173.5	
After renewable energy (be green)	119.2	

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

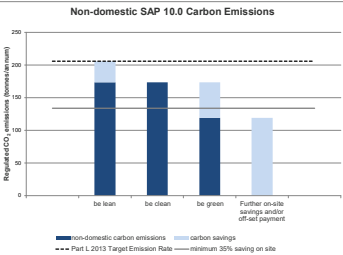
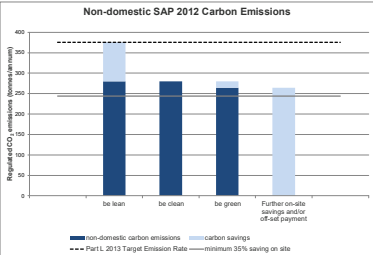
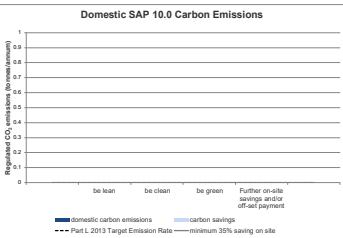
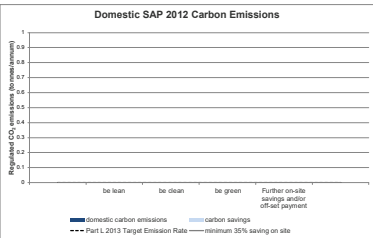
	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)		(%)
Be lean: savings from energy demand reduction	32.3		16%
Be clean: savings from heat network	0.0		0%
Be green: savings from renewable energy	54.3		26%
Total Cumulative Savings	86.6		42%
Annual savings from off-set payment	119.2		-
(Tonnes CO ₂)			
Cumulative savings for off-set payment	3,676		-
Cash in-lev contribution (£)	339,672		

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the "Development Information" tab

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2013 baseline	205.8		
Be lean	173.5	32.3	16%
Be clean	173.5	0.0	0%
Be green	119.2	54.3	26%
Total Savings	-	86.6	42%
	-	CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	3,676.6	-

	Target Fabric Energy Efficiency (kWh/m ²)	Dwelling Fabric Energy Efficiency (kWh/m ²)	Improvement (%)
Development total	0.00	0.00	

	Area weighted non-domestic cooling demand (MJ/m ²)	Total area weighted non-domestic cooling demand (MJ/year)
Actual		
National		



The applicant should complete all the light blue cells including information on the modelled units, the area per unit, the number of units, the baseline energy consumption figures, the TER and the TFEF.

SAP 2012 CO ₂ PERFORMANCE														SAP 10.0 CO ₂ PERFORMANCE										DEMAND																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Unit identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - TER WORKSHEET						REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)						REGULATED CO ₂ EMISSIONS PER UNIT					Fabric Energy Efficiency (FEE) Target Fabric Energy Efficiency (TFEE) (kWh/m ²)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
				Calculated TER 2012 (kgCO ₂ / m ²)	TER Worksheet TER 2012 (kgCO ₂ / m ²)	Space Heating	Fuel type Space Heating	Domestic Hot Water	Fuel type Domestic Hot Water	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating	Domestic Hot Water	Lighting	Auxiliary	Cooling	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated TER SAP 10.0 (kgCO ₂ / m ²)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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The applicant should complete all the light blue cells including information on the 'be lean' energy consumption figures, the 'be lean' DER, the DFEE and the regulated energy demand of the 'be lean' scenario.

SAP 2012 CO₂ PERFORMANCE

SAP 10.0 CO₂ PERFORMANCE

FEEES

DOMESTIC ENERGY CONSUMPTION AND CO₂ ANALYSIS

VALIDATION CHECK				REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE LEAN' SAP DER WORKSHEET										REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)										REGULATED CO ₂ EMISSIONS PER UNIT										Fabric Energy Efficiency (FEE)	
Unit Identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	Calculated DER 2012 (kgCO ₂ / m ²)	DER Worksheet DER 2012 (kgCO ₂ / m ²)	Space Heating	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Secondary Heating system	Fuel type Space Heating	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating CO ₂ emissions (kgCO ₂ p.a.)	Domestic Hot Water CO ₂ emissions (kgCO ₂ p.a.)	Lighting CO ₂ emissions (kgCO ₂ p.a.)	Auxiliary CO ₂ emissions (kgCO ₂ p.a.)	Cooling CO ₂ emissions (kgCO ₂ p.a.)	Unregulated (kgCO ₂ p.a.)	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated DER SAP 10.0 (kgCO ₂ / m ²)	Dwelling Fabric Energy Efficiency (DFEE) (kWh/m ²)											
DER Sheet (Row 384)				DER Sheet (Row 307a) + (Row 367a x 0.01)		Select fuel type	DER Sheet (Row 310b + (Row 367b x 0.01))	Select fuel type	DER Sheet (Row 309)	Select fuel type	DER Sheet Row 332	DER Sheet (Row 313 + 331)	DER Sheet Row 315																						
HH Flat 01	50	1	78	26.4	26.4	3527.468	Natural Gas	1349.5589	Natural Gas			231.8095	210.2065	72.4732		762	292	120	109	38	1,320	741	283	54	49	17	429	1,144	22.9						
HH Flat 02	60	1	85	20.1	20.1	2709.7254	Natural Gas	1474.6916	Natural Gas			272.2628	217.2478	76.4738		585	319	141	123	40	1,208	589	310	63	55	18	499	1,015	16.9						
HH Flat 03	60	1	85	20.0	20.0	2709.7254	Natural Gas	1474.6916	Natural Gas			272.2628	217.2478	76.4738		585	319	141	123	32	1,200	589	310	63	55	14	499	1,012	16.9						
HH Flat 04	126.4	1	148	17.0	17.0	5484.0694	Natural Gas	1850.8988	Natural Gas			461.823	433.8899	180.5639		1,185	400	240	225	94	2,143	1,152	389	108	101	42	825	1,791	14.2						
VLB Apt 1	89.4	1	89.4	15.8	15.8	2288.94	Natural Gas	2628.96	Natural Gas			374.67	292.24			494	568	194	152		1,408	481	552	87	68		676	1,188	13.3						
VLB Apt 2F	51.8	1	51.8	18.6	18.6	2225.46	Natural Gas	2232.78	Natural Gas			230.17	181.95			285	482	124	94		966	257	469	56	42		442	824	15.9						
VLB Apt 3F	52.4	1	52.4	18.5	18.5	2234.53	Natural Gas	2240.5	Natural Gas			241.62	183.71			287	484	126	95		971	259	471	56	43		446	829	15.8						
VLB Apt 4F	52.9	1	52.9	17.9	17.9	2100.78	Natural Gas	2254.77	Natural Gas			243.66	185.17			238	487	126	96		947	231	474	57	43		450	805	15.2						
VLB Apt 5	51.3	1	51.3	18.3	18.3	2105.3	Natural Gas	2229.82	Natural Gas			237.12	180.48			239	482	123	94		937	232	468	55	42		438	798	15.5						
VLB Apt 6	89.4	1	89.4	16.7	16.8	2621.69	Natural Gas	374.67	Natural Gas			328.21	206.46			566	566	194	170		1,497	550	551	87	76		676	1,265	14.1						
VLB Apt 7	89.4	1	89.4	13.9	13.9	1422.74	Natural Gas	2650.36	Natural Gas			374.67	328.21			307	572	194	170		1,245	299	557	87	76		676	1,019	11.4						
VLB Apt 8	52.4	1	52.4	18.9	18.9	2280.99	Natural Gas	2239.51	Natural Gas			241.62	204.79			277	484	126	106		992	269	470	56	48		446	843	16.1						
VLB Apt 9	52.9	1	52.9	19.0	19.0	2235.16	Natural Gas	2246.05	Natural Gas			241.66	206.46			288	485	126	107		1,007	260	472	57	48		450	857	16.2						
VLB Apt 10	51.3	1	51.3	18.7	18.7	2157.01	Natural Gas	2228.7	Natural Gas			237.12	201.12			250	481	123	104		959	243	468	55	47		438	813	15.9						
VLB Apt 11	66.93	1	66.93	21.2	21.3	2858.42	Natural Gas	2398.37	Natural Gas			299.19	253.26			617	518	155	131		1,422	600	504	70	59		546	1,233	18.4						
VLB Apt 2R	89.4	1	89.4	15.6	15.6	2129.05	Natural Gas	2627.36	Natural Gas			374.67	328.21			480	568	194	170		1,392	447	552	87	76		676	1,163	13.0						
VLB Apt 3	52.4	1	52.4	19.2	19.3	2360.38	Natural Gas	2236.09	Natural Gas			241.62	204.79			484	483	125	106		1,009	246	470	56	48		446	859	16.4						
VLB Apt 4	52.9	1	52.9	19.6	19.6	2485.49	Natural Gas	2240.72	Natural Gas			321	286			321	484	126	107		1,038	312	471	57	48		450	887	16.8						
VLB Apt15	51.3	1	51.3	18.8	18.8	2182.24	Natural Gas	2227.56	Natural Gas			237.12	201.12			255	481	123	104		964	248	468	55	47		438	818	15.9						
VLB Apt 16	51	1	51	19.6	19.6	2416.9	Natural Gas	2226.08	Natural Gas			238	206			480	479	122	93		1,000	298	465	55	42		436	860	16.9						
VLB Apt 4R	82.9	1	82.9	19.3	19.3	2447.68	Natural Gas	2242.62	Natural Gas			313	286			313	484	126	98		1,024	304	471	57	43		450	875	17.7						
VLB Apt 15	51.3	1	51.3	20.5	20.5	1653.08	Natural Gas	2212.04	Natural Gas			237.12	180.48			357	478	123	94		1,052	347	465	55	42		438	909	17.7						
VLB Apt 19	51	1	51	26.1	26.1	2901.65	Natural Gas	2178.74	Natural Gas			235.9	214.7			627	471	122	111		1,331	609	458	55	50		436	1,172	23.0						
WCS Flat 101	62	1	62	17.3	17.3	2226.7204	Natural Gas	1459.1	Natural Gas			283.1876	238.5226	0		481	324	145	124	0	1,074	448	315	56	0		513	903	14.6						
WCS Flat 102	56	1	51	17.2	17.2	1883.6731	Natural Gas	1429.0092	Natural Gas			256.2521	222.7249	0		407	309	133	116	0	964	396	300	60	52	0	472	807	14.4						
WCS Flat 103	78	1	75	17.3	17.3	2380.4607	Natural Gas	2367.2338	Natural Gas			338.8327	280.7597	0		514	511	176	146	0	1,347	500	497	79	65	0	614	1,141	14.6						
WCS Flat 201	62	1	62	16.2	16.2	1927.3299	Natural Gas	1501.3299	Natural Gas			280.1876	223.3111	0		416	324	145	116	0	1,002	405	316	65	52	0	513	837	13.5						
WCS Flat 202	56	1	51	15.9	15.9	1563.5237	Natural Gas	1430.7355	Natural Gas			256.2521	208.9584	0		338	309	133	108	0	888	328	300	60	49	0	472	737	13.2						
WCS Flat 203	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas			338.8327	280.7597	0		475	359	176	146	0	1,156	462	349	79	65	0	614	956	12.3						
WCS Flat 301	62	1	62	16.2	16.2	1935.8221	Natural Gas	1501.3855	Natural Gas			280.1876	223.3111	0		418	324	145	116	0	1,004	407	316	65	52	0	513	839	13.5						
WCS Flat 302	56	1	51	16.1	16.1	1637.3838	Natural Gas	1430.3836	Natural Gas			256.2521	208.9584	0		354	309	133	108	0	904	344	300	60	49	0	472	753	13.4						
WCS Flat 303	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas			338.8327	280.7597	0		475	359	176	146	0	1,156	462	349	79	65	0	614	956	12.3						
WCS Flat 401	140	1	62	15.2	15.2	5737.3092	Natural Gas	1863.2422	Natural Gas			487.1475	456.358	0		1,239	402	253	237	0	2,131	1,205	391	114	106	0	868	1,816	13.0						
WCS Flat 402	50	1	52	21.3	21.3	2546.67	Natural Gas	2351.5077	Natural Gas			331.8095	194.8058	0		550	292	120	101	0	1,063	535	284	54	45	0	429	916	18.4						
WCS Flat 403	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas			338.8327	280.7597	0		475	359	176	146	0	1,156	462	349	79	65	0	614	956	12.3						
WCS Flat 404	82	1	77	17.6	17.6	3487.493	Natural Gas	1691.5474	Natural Gas			351.9947	271.1534	0		753	585	183	141	0	1,442	732	355	82	63	0	637	1,233	15.0						
WCS Flat 405	40	1	40	18.9	18.9	1333.4306	Natural Gas	1236.3589	Natural Gas			191.3458	169.55	26.7788		280	288	267	99	88	14	756	280	280	45	40	6	359	630	15.7					
WCS Flat 406	52	1	50	18.0	18.0	1814.3208	Natural Gas	1379.3986	Natural Gas			197.915	35.7864			292	298	125	103	19	936	381	290	56	46	8	443	781	15.0						
WCS Flat 501	73	1	68	18.8	18.8	3367.5692	Natural Gas	1614.0642	Natural Gas			321.491	249.6244	0		727	339	167	130	0	1,372	707	339	75	58	0	584	1,179	16.2						
WCS Flat 104	82	1	80	27.5	27.6	7272.1343	Natural Gas	2268.678	Natural Gas			351.9947	30	0		1,571	490	183	16	0	2,259	1,527	476	82	7	0	637	2,093	25.5						
WCS Flat 105	50	1	47	29.3	29.3																														

The applicant should complete all the light blue cells including information on the 'be clean' energy consumption figures and the 'be clean' DER.

SAP 2012 CO ₂ PERFORMANCE														SAP 10.0 CO ₂ PERFORMANCE																							
DOMESTIC ENERGY CONSUMPTION AND CO ₂ ANALYSIS																																					
				VALIDATION CHECK		REGULATED ENERGY CONSUMPTION PER UNIT (kWh p.a.) - 'BE CLEAN' SAP DER WORKSHEET													REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)							REGULATED CO ₂ EMISSIONS PER UNIT (kgCO ₂ p.a.)											
Unit Identifier (e.g. plot number, dwelling type etc.)	Model total floor area (m ²)	Number of units	Total area represented by model (m ²)	Calculated DER 2012 (kgCO ₂ / m ²)	DER Worksheet DER 2012 (kgCO ₂ / m ²)	Space Heating (Heat Source 1)	Fuel type Space Heating	Domestic Hot Water (Heat Source 1)	Fuel type Domestic Hot Water	Space and Domestic Hot Water from CHP	Fuel type CHP	Total Electricity generated by CHP (-)	Secondary Heating system	Fuel type Secondary Heating	Lighting	Auxiliary	Cooling	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Lighting	Auxiliary	Cooling	2012 CO ₂ emissions (kgCO ₂ p.a.)	Space Heating	Domestic Hot Water	Space Heating and DHW from CHP	Electricity generated by CHP	Lighting	Auxiliary	Cooling	SAP 10.0 CO ₂ emissions (kgCO ₂ p.a.)	Calculated DER SAP 10.0 (kgCO ₂ / m ²)			
					DER Sheet (Row 304)	DER Sheet (Row 307b + (Row 307b x 0.01))	Select fuel type	DER Sheet (Row 310b + (Row 310b x 0.01))	Select fuel type	If applicable DER Sheet (Row 307a + 310a) + (Row 361 + 362))	If applicable Select fuel type	If applicable DER Sheet (Row 307a + 310a) + (Row 361 + 362))	DER Sheet (Row 309)	Select fuel type	DER Sheet Row 332	DER Sheet (Row 313 + 331)	DER Sheet Row 315				If applicable	If applicable								If applicable	If applicable						
HH Flat 01	50	1	78	26.4	26.4	3527.468	Natural Gas	1349.5589	Natural Gas			231.8095	210.2065		72.4732			762	292			120	109	38	1,320	741	283			54	49	17	1,144	22.9			
HH Flat 02	60	1	85	20.1	20.1	2709.7254	Natural Gas	1474.6916	Natural Gas			272.2928	237.2478		76.4738			885	319			141	123	40	1,208	569	310			63	55	18	1,015	16.9			
HH Flat 03	60	1	85	20.0	20.0	2709.7254	Natural Gas	1474.6916	Natural Gas			272.2928	237.2478		60.7236			885	319			141	123	32	1,200	569	310			63	55	14	1,012	16.9			
HH Flat 04	126.4	1	148	17.0	17.0	5484.0694	Natural Gas	1850.8988	Natural Gas			461.823	433.8999		180.5639			1,185	400			240	225	94	2,143	1,152	389			108	101	42	1,791	14.2			
VLB Apt 1	89.4	1	89.4	15.8	15.8	2288.94	Natural Gas	2628.96	Natural Gas			374.67	292.24					494	568			194	152		1,408	481	552			87	68		1,188	13.3			
VLB Apt 2F	51.8	1	51.8	18.6	18.6	1225.46	Natural Gas	2232.78	Natural Gas			239.17	181.95					265	482			124	94		966	257	469			56	42		824	15.9			
VLB Apt 3F	52.4	1	52.4	18.5	18.5	1234.53	Natural Gas	2243.61	Natural Gas			241.62	183.71					267	484			125	95		971	268	471			56	43		829	15.8			
VLB Apt 4F	52.9	1	52.9	17.9	17.9	1100.78	Natural Gas	2254.77	Natural Gas			243.66	185.17					238	487			96	96		947	231	474			57	43		806	15.2			
VLB Apt 5	51.3	1	51.3	18.3	18.3	1105.3	Natural Gas	2229.82	Natural Gas			237.12	180.48					239	482			123	94		937	232	468			55	42		798	15.5			
VLB Apt 6	89.4	1	89.4	16.7	16.8	2621.28	Natural Gas	2621.69	Natural Gas			374.67	328.21					566	584			170	170		1,497	550	551			87	76		1,265	14.1			
VLB Apt 7	89.4	1	89.4	13.9	13.9	1422.74	Natural Gas	2650.36	Natural Gas			374.67	328.21					307	572			123	94		937	232	468			55	42		798	15.5			
VLB Apt 8	52.4	1	52.4	18.9	18.9	1280.99	Natural Gas	2239.53	Natural Gas			241.62	204.79					277	484			125	106		992	269	470			56	48		843	16.1			
VLB Apt 9	52.9	1	52.9	19.0	19.0	1135.16	Natural Gas	2246.55	Natural Gas			243.66	206.46					280	455			107	96		1,007	289	472			57	49		857	16.2			
VLB Apt 10	51.3	1	51.3	18.7	18.7	1157.01	Natural Gas	2228.7	Natural Gas			237.12	201.12					250	481			104	94		959	243	468			55	47		813	15.9			
VLB Apt 11	66.93	1	66.93	21.2	21.3	2858.42	Natural Gas	2398.37	Natural Gas			299.19	253.26					617	585			135	131		1,422	600	504			70	59		1,233	18.4			
VLB Apt 2R	89.4	1	89.4	15.6	15.6	2129.05	Natural Gas	2627.36	Natural Gas			374.67	328.21					460	588			164	170		1,292	447	552			87	76		1,163	13.0			
VLB Apt 3	52.4	1	52.4	19.2	19.3	1360.38	Natural Gas	2236.09	Natural Gas			241.62	204.79					483	583			125	108		1,009	286	470			56	48		859	16.4			
VLB Apt 4	52.9	1	52.9	19.6	19.6	1485.49	Natural Gas	2240.72	Natural Gas			243.66	206.46					321	484			102	107		1,038	312	471			57	48		887	16.8			
VLB Apt15	51.3	1	51.3	18.8	18.8	1142.24	Natural Gas	2227.56	Natural Gas			237.12	201.12					255	481			123	104		964	248	468			55	47		816	15.9			
VLB Apt 16	51	1	51	19.8	19.6	1416.9	Natural Gas	2216.08	Natural Gas			235.9	179.16					306	479			93	93		1,000	289	465			55	42		860	16.9			
VLB Apt 4R	52.9	1	52.9	19.3	19.3	1447.68	Natural Gas	2242.62	Natural Gas			243.66	185.17					313	484			123	96		1,020	304	471			57	43		875	16.5			
VLB Apt 15	51.3	1	51.3	20.5	20.5	1653.08	Natural Gas	2212.04	Natural Gas			237.12	180.48					357	478			126	94		1,052	347	465			55	42		909	17.7			
VLB Apt 19	51	1	51	26.1	26.1	2961.65	Natural Gas	2178.74	Natural Gas			295.9	214.7					627	471			122	111		1,331	609	458			55	50		1,172	22.0			
WCS Flat 101	62	1	62	17.3	17.3	2226.2704	Natural Gas	1499.9	Natural Gas			280.1876	238.5526	0				481	324			145	124	0	1,074	468	315			65	56	0	903	14.6			
WCS Flat 102	56	1	51	17.2	17.2	1881.6731	Natural Gas	1429.0092	Natural Gas			256.2521	222.7249	0				407	309			133	116	0	964	396	300			60	52	0	807	14.4			
WCS Flat 103	78	1	75	17.3	17.3	2380.4607	Natural Gas	2387.2338	Natural Gas			338.8327	280.7597	0				514	511			176	146	0	1,247	500	497			79	65	0	1,141	14.6			
WCS Flat 201	62	1	62	16.2	16.2	1927.3295	Natural Gas	1501.3299	Natural Gas			280.1876	223.3111	0				416	324			145	116	0	1,002	405	315			65	52	0	837	13.5			
WCS Flat 202	56	1	51	15.9	15.9	1563.5237	Natural Gas	1430.7355	Natural Gas			256.2521	208.9584	0				338	309			133	108	0	888	328	300			60	49	0	737	13.2			
WCS Flat 203	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas			338.8327	280.7597	0				475	399			176	146	0	1,158	462	349			79	65	0	986	12.3			
WCS Flat 301	62	1	62	16.2	16.2	1851.8221	Natural Gas	1502.2855	Natural Gas			280.1876	223.3111	0				418	324			145	116	0	1,004	407	315			65	52	0	839	13.5			
WCS Flat 302	56	1	51	16.1	16.1	1637.3828	Natural Gas	1430.2836	Natural Gas			256.2521	208.9584	0				354	309			133	108	0	904	344	300			60	49	0	753	13.4			
WCS Flat 303	78	1	75	14.8	14.8	2199.0409	Natural Gas	1663.7847	Natural Gas			338.8327	280.7597	0				475	399			176	146	0	1,158	462	349			79	65	0	986	12.3			
WCS Flat 401	140	1	62	15.2	15.2	5712.3092	Natural Gas	1862.1422	Natural Gas			487.1475	456.358	0																							

The applicant should complete all the light blue cells including information on the 'be green' energy consumption figures and the 'be green' DEF

[illegible]

SAP 2012 Performance

SAP 10.0 Performance

Domestic

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	65.5	
After energy demand reduction (be lean)	58.7	
After heat network connection (be clean)	58.7	
After renewable energy (be green)	69.2	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	6.8	10%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	-9.5	-15%
Cumulative on site savings	-2.7	-4%
Annual savings from off-set payment	69.2	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	2,946	-
Cash in-flow contribution (£)	194,410	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Non-domestic

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	375.6	
After energy demand reduction (be lean)	280.4	
After heat network connection (be clean)	280.4	
After renewable energy (be green)	264.1	

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	95.2	25%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	16.2	4%
Total Cumulative Savings	111.4	30%
Annual savings from off-set payment	264.1	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	7,324	-
Cash in-flow contribution (£)	702,821	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

SITEWIDE

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2013 baseline	441.0		
Be lean	339.0	102.0	23%
Be clean	339.0	0.0	0%
Be green	332.4	6.7	2%
Total Savings	-	108.7	25%
	-	CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	9,979.9	-

Table 1: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for domestic buildings

	Carbon Dioxide Emissions for domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	58.8	
After energy demand reduction (be lean)	50.5	
After heat network connection (be clean)	50.5	
After renewable energy (be green)	30.6	

Table 2: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for domestic buildings

	Regulated domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: Savings from energy demand reduction	8.3	14%
Be clean: Savings from heat network	0.0	0%
Be green: Savings from renewable energy	19.9	34%
Cumulative on site savings	28.2	48%
Annual savings from off-set payment	30.6	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	919	-
Cash in-flow contribution (£)	87,278	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

Table 3: Carbon Dioxide Emissions after each stage of the Energy Hierarchy for non-domestic buildings

	Carbon Dioxide Emissions for non-domestic buildings (Tonnes CO ₂ per annum)	
	Regulated	Unregulated
Baseline: Part L 2013 of the Building Regulations Compliant Development	205.8	
After energy demand reduction (be lean)	173.5	
After heat network connection (be clean)	173.5	
After renewable energy (be green)	119.2	

Table 4: Regulated Carbon Dioxide savings from each stage of the Energy Hierarchy for non-domestic buildings

	Regulated non-domestic carbon dioxide savings (Tonnes CO ₂ per annum)	
	(Tonnes CO ₂ per annum)	(%)
Be lean: savings from energy demand reduction	32.3	16%
Be clean: savings from heat network	0.0	0%
Be green: savings from renewable energy	54.3	26%
Total Cumulative Savings	86.6	42%
Annual savings from off-set payment	119.2	-
(Tonnes CO ₂)		
Cumulative savings for off-set payment	3,676	-
Cash in-flow contribution (£)	339,672	

*Carbon price is based on GLA recommended price of £95 per tonne of carbon dioxide unless Local Planning Authority price is inputted in the 'Development Information' tab

	Total regulated emissions (Tonnes CO ₂ / year)	CO ₂ savings (Tonnes CO ₂ / year)	Percentage savings (%)
Part L 2013 baseline	264.6		
Be lean	224.0	40.7	15%
Be clean	224.0	0.0	0%
Be green	149.8	74.2	28%
Total Savings	-	114.8	43%
	-	CO ₂ savings off-set (Tonnes CO ₂)	-
Off-set	-	4,494.2	-

	Target Fabric Energy Efficiency (kWh/m ²)	Dwelling Fabric Energy Efficiency (kWh/m ²)	Improvement (%)
Development total	42.91	41.39	4%

	Area weighted non-domestic cooling demand (MJ/m ²)	Total area weighted non-domestic cooling demand (MJ/year)
Actual		
National		

