

SHOPPING MALL CASES OF STUDY		C1. S.Light	C2. S. E.D.	C3.Aricanduva	C4. ABC. Serr.	C5. L. Vaguda	C6. P.S.	C7. Belmar	C8. M.O.A.
A	A1.- LOW EMISSIVE INSTALLATIONS	A1.1 Givonni ch. adequacy	0 (1) <i>n. adq</i>	0 (1) <i>n. adq</i>	0 (1) <i>n. adq</i>	1 (1) <i>n. adq</i>	1 (1) <i>adequate</i>	1 (1) <i>adequate</i>	1 (1) <i>adequate</i>
		A1.2 CO2 emissions calification (Eur.Union)	3 (4) <i>C</i>	3 (4) <i>C</i>	3 (4) <i>C</i>	3 (4) <i>B</i>	3 (4) <i>B</i>	3 (4) <i>C</i>	3 (4) <i>C</i>
		A1.3 Obsolescence	0 (1) <i>obsolete</i>	0 (1) <i>obsolete</i>	0 (1) <i>obsolete</i>	1 (1) <i>non obs.</i>	1 (1) <i>non obs.</i>	1 (1) <i>non obs.</i>	1 (1) <i>non obs.</i>
		A1.4 En. Consumption calification (Eur.Union)	3 (4) <i>C</i>	3 (4) <i>C</i>	3 (4) <i>C</i>	3 (4) <i>C</i>	3 (4) <i>C</i>	3 (4) <i>C</i>	3 (4) <i>C</i>
		TOTAL SCORE	6 (10)	6 (10)	6 (10)	8 (10)	8 (10)	8 (10)	8 (10)
	A2.- ACTIVE SOLAR SYSTEMS	A2.1 Usage of act. s. syst.	2 (4) <i>adq. build.</i>	2 (4) <i>adq. build.</i>	2 (4) <i>adq. build.</i>	0 (4) <i>none</i>	1 (4) <i>10%</i>	1 (4) <i>10%</i>	0 (4) <i>no</i>
		A2.2 Usage of r. energies (in mall)	3 (4) <i>r. e in city</i>	3 (4) <i>r. e in city</i>	3 (4) <i>r. e in city</i>	0 (4) <i>none</i>	1 (4) <i>4%</i>	1 (4) <i>5,6%</i>	1 (4) <i>100% est.</i>
		A2.3 Givonni ch. adequacy	2 (2) <i>non neces.</i>	2 (2) <i>non neces.</i>	2 (2) <i>non neces.</i>	0 (2) <i>none</i>	1 (2) <i>p. adeq.</i>	1 (2) <i>p.adeq.</i>	0 (2) <i>none</i>
		TOTAL SCORE	7 (10)	7 (10)	7 (10)	0 (10)	3 (10)	3 (10)	5 (10)
	A3.- PASSIVE SOLAR SYSTEMS	A3.1 Bioclimatic adequacy (Olgay)	1 (2) <i>part. Adq</i>	0 (2) <i>non. adq.</i>	0 (2) <i>non. adq.</i>	1 (2) <i>Part. adq</i>	2 (2) <i>adeq.</i>	1 (2) <i>Part. adq</i>	1 (2) <i>Part. adq</i>
		A3.2 Efficiency of coverages	3 (4) <i>efficient</i>	3 (4) <i>efficient</i>	3 (4) <i>efficient</i>	3 (4) <i>efficient</i>	3 (4) <i>efficient</i>	3 (4) <i>efficient</i>	3 (4) <i>efficient</i>
		A3.3 Usage of natural light (% of built up area	1 (2) <i>28%</i>	0 (2) <i>16%</i>	0 (2) <i>1,14%</i>	1 (2) <i>20%</i>	1 (2) <i>23,39%</i>	1 (2) <i>26,13%</i>	2 (2) <i>83,53%</i>
		A3.4 Givonni ch. adequacy	1 (2) <i>part. Adq</i>	0 (2) <i>non adq.</i>	0 (2) <i>non adq.</i>	1 (2) <i>part. Adq</i>	1 (2) <i>part. Adq</i>	1 (2) <i>part. Adq</i>	2 (2) <i>adequate</i>
		TOTAL SCORE	6 (10)	3 (10)	3 (10)	6 (10)	7 (10)	7 (10)	7 (10)
B	B1.- GREEN AREAS RETROFITTING	B1.1 Green areas in urban env. (m2 inhabitant)	0 (2) <i>1,9m2 inh.</i>	0 (2) <i>1,9m2 inh.</i>	1 (2) <i>13,47 m2 i</i>	0 (2) <i>2,3m2 inh.</i>	0 (2) <i>1,16m2 inh</i>	0 (2) <i>5,6m2 inh</i>	2 (2) <i>96m2 inh</i>
		B1.2 Green areas in mall	0 (1) <i>no areas</i>	1 (1) <i>no open area</i>	1 (1) <i>30800m2</i>	0 (1) <i>no areas</i>	1 (1) <i>7276m2</i>	1 (1) <i>12000m2</i>	1 (1) <i>20000m2</i>
		B1.3 CO2 Assimilation rate (urban env.)	1 (3) <i>10%</i>	2 (3) <i>52%</i>	3 (3) <i>73%</i>	0 (3) <i>4,4%</i>	0 (3) <i>6%</i>	3 (3) <i>22 %</i>	3 (3) <i>400%</i>
		B1.4 CO2 Assimilation rate (mall)	0 (3) <i>0,5%</i>	1 (3) <i>21%</i>	1 (3) <i>21%</i>	0 (3) <i>0,5%</i>	2 (3) <i>36%</i>	1 (3) <i>28 %</i>	1 (3) <i>18%</i>
		B1.5 Distance between green areas	1 (1) <i>300m</i>	0 (1) <i>500m</i>	0 (1) <i>400m</i>	1 (1) <i>380m</i>	1 (1) <i>200m</i>	1 (1) <i>380m2</i>	1 (1) <i>200m</i>
		TOTAL SCORE	2 (10)	3 (10)	6 (10) E-> 4(10)	1 (10)	4 (10)	4 (10)	8(10)E-> 7(10)
	B2.- WATER ABSORBING SURFACE	B2.1 Aridity of climate	1 (1) <i>non arid</i>	1 (1) <i>non arid</i>	1 (1) <i>non arid</i>	0 (1) <i>semi arid</i>	0 (1) <i>semi arid</i>	0 (1) <i>semi arid</i>	1 (1) <i>humid</i>
		B2.2 Rate of absorbent pavement % (ur. Env)	0 (4) <i>2,6%</i>	0 (4) <i>3%</i>	1 (4) <i>12%</i>	0 (4) <i>9%</i>	0 (4) <i>4%</i>	2 (4) <i>33%</i>	3 (4) <i>45%</i>
		B2.3 Water saving installations	0 (3) <i>none</i>	0 (3) <i>none</i>	0 (3) <i>none</i>	0 (3) <i>none</i>	2 (3) <i>has some</i>	1 (3) <i>has some</i>	2 (3) <i>has some</i>
		B2.4 Water consumption per visit	1 (2) <i>30l visit</i>	1 (2) <i>30l visit</i>	1 (2) <i>30l visit</i>	1 (2) <i>30l visit</i>	2 (2) <i>20l visit</i>	2 (2) <i>20l visit</i>	1 (2) <i>30l visit</i>
		TOTAL SCORE	2 (10)	2 (10)	3 (10)	1 (10)	4 (10)	4 (10)	5 (10)
	B3.- HEAT ISLAND TREATMENT	B3.1 Climate heat	0 (2) <i>hot cl.</i>	0 (2) <i>hot cl.</i>	0 (2) <i>hot cl.</i>	0 (2) <i>hot cl.</i>	0 (2) <i>hot cl.</i>	1 (2) <i>avg. Clim.</i>	2 (2) <i>cool cl.</i>
		B3.2 Frequency of extreme heat conditions	1 (1) <i>no heat</i>	1 (1) <i>no heat</i>	1 (1) <i>no heat</i>	0 (1) <i>heat cond.</i>	0 (1) <i>heat cond.</i>	0 (1) <i>heat cond.</i>	0 (1) <i>no heat</i>
		B3.3 Heat island effect in the mall urb. area	0 (3) <i>+4º h.i.</i>	0 (3) <i>+4º h.i.</i>	0 (3) <i>+4º h.i.</i>	0 (3) <i>+8º h.i.</i>	0 (3) <i>+5º h.i.</i>	2 (3) <i>+2º</i>	1 (3) <i>+4º</i>
		B3.4 Rate of heat expelling built surface	0 (4) <i>8%</i>	0 (4) <i>17%</i>	0 (4) <i>16 %</i>	2 (4) <i>45,96%</i>	4 (4) <i>91,28%</i>	0 (4) <i>3%</i>	1 (4) <i>23%</i>
		TOTAL SCORE	1 (10)	1 (10)	1 (10)	2 (10)	4 (10)	1 (10)	4 (10)
C	C1.- RESIDENTIAL USE	C1.1 Residential use in mall	0 (2) <i>none</i>	0 (2) <i>none</i>	0 (2) <i>none</i>	0 (2) <i>none</i>	0 (2) <i>none</i>	1 (2) <i>15 % visit.</i>	2 (2) <i>36% visit.</i>
		C1.2 Residential use in nearby plots	2 (3) <i>30%</i>	1 (3) <i>15%</i>	3 (3) <i>85%</i>	2 (3) <i>50%</i>	2 (3) <i>50%</i>	3 (3) <i>94%</i>	3 (3) <i>7,96%</i>
		C1.3 Residential use in urban area	3 (5) <i>40%</i>	4 (5) <i>51%</i>	5 (5) <i>81%</i>	3 (5) <i>50%</i>	5 (5) <i>80%</i>	4 (5) <i>68%</i>	2 (5) <i>62%</i>
		TOTAL SCORE	5 (10)	5 (10)	8 (10)	5 (10)	7 (10)	8 (10)	4 (10)
	C2.- PRODUCTIVE USE	C2.1 Productive use in mall	1 (1) <i>R.F. office</i>	1 (1) <i>Police box</i>	1 (1) <i>Police box</i>	0 (1) <i>no uses</i>	1 (1) <i>yes</i>	1 (1) <i>yes</i>	0 (1) <i>no uses</i>
		C2.2 Productive use in nearby plots	3 (3) <i>60%</i>	3 (3) <i>60%</i>	2 (3) <i>10%</i>	3 (3) <i>30%</i>	3 (3) <i>30%</i>	0 (3) <i>1%</i>	3 (3) <i>20%</i>
		C2.3 Productive Use in urban area	5 (6) <i>30%</i>	5 (6) <i>29,86%</i>	1 (6) <i>7,77%</i>	5 (6) <i>30%</i>	2 (6) <i>10,82%</i>	1 (6) <i>16,72%</i>	3 (6) <i>14%</i>
		TOTAL SCORE	9 (10)	9 (10)	4 (10)	8 (10)	6 (10)	2 (10)	7 (10)
	C3.- AMENITIES OR PUBLIC USES	C3.1 Presence of amenities in mall	1 (1) <i>R.F. office</i>	0 (1) <i>non visit.</i>	0 (1) <i>non visit.</i>	0 (1) <i>none</i>	1 (1) <i>post office</i>	0 (1) <i>none</i>	1 (1) <i>some fac.</i>
		C3.1 Amenities in nearby plots	4 (4) <i>1st rank.</i>	0 (4) <i>none</i>	1 (4) <i>3rd rank</i>	2 (4) <i>2nd rank</i>	3 (4) <i>1st rank</i>	0 (4) <i>none</i>	4 (4) <i>most visit.</i>
		C3.3 Amenities in 1 km. from mall	5 (5) <i>1st rank</i>	5 (5) <i>1st rank</i>	5 (5) <i>1st rank</i>	5 (5) <i>1st rank</i>	4 (5) <i>local rank</i>	2 (5) <i>local rank</i>	1 (5) <i>one only</i>
		TOTAL SCORE	10 (10)	5 (10)	6 (10)	7 (10)	9 (10)	4 (10)	7 (10)
D	D1.- EFFICIENT TRANSPORTATION	D1.1 Mass transit facility nearby mall	1 (1) <i>yes</i>	1 (1) <i>yes</i>	1 (1) <i>yes</i>	1 (1) <i>yes</i>	1 (1) <i>yes</i>	1 (1) <i>yes</i>	1 (1) <i>yes</i>
		D1.2 Efficacy of mass transit/private veh.	3 (2) <i>high eff.</i>	2 (3) <i>efficient</i>	0 (3) <i>poorly eff.</i>	0 (3) <i>non eff.</i>	1 (3) <i>poorly eff.</i>	0 (3) <i>no eff.</i>	0 (3) <i>no eff.</i>
		D1.3 Mass transit coverage in urban area	2 (2) <i>96%</i>	1 (2) <i>52%</i>	1 (2) <i>50%</i>	2 (2) <i>72%</i>	2 (2) <i>86%</i>	0 (2) <i>less 50%</i>	0 (2) <i>less 50%</i>
		D1.4 Zonning rate	2 (2) <i>no zonn.</i>	1 (2) <i>Avg. zonn.</i>	0 (2) <i>zonified</i>	2 (2) <i>no zonn.</i>	2 (2) <i>no zonn.</i>	2 (2) <i>no zonn.</i>	0 (2) <i>zonified</i>
		D1.5 Sustainable movility facilities in mall	0 (2) <i>none</i>	0 (2) <i>none</i>	0 (2) <i>none</i>	1 (2) <i>some</i>	2 (2) <i>yes</i>	2 (2) <i>yes</i>	0 (2) <i>none</i>
		TOTAL SCORE	8 (10)	5 (10)	3 (10) E-> 2 (10)	6(10)	8 (10)	7 (10)	2(10)E-> 1(10)
	D2.- DENSITY	D2.1 Optimal rate of population density	3 (4) <i>str. dens.</i>	2 (4) <i>sl. dense</i>	2 (4) <i>sl. dense</i>	3 (4) <i>str. dens.</i>	3 (4) <i>str. dens.</i>	3 (4) <i>str. dens.</i>	0 (4) <i>low dens.</i>
		D2.2 Density of built up area	2 (3) <i>str. dens.</i>	2 (3) <i>avg dens.</i>	2 (3) <i>avg dens.</i>	2 (3) <i>str. dens.</i>	3 (3) <i>optimal d.</i>	3 (3) <i>optimal d.</i>	0 (3) <i>low dens.</i>
		D2.3 Rate of building coverage (%)	3 (3) <i>67%</i>	3 (3) <i>51%</i>	3 (3) <i>69%</i>	3 (3) <i>67%</i>	1 (3) <i>22%</i>	1 (3) <i>21%</i>	1 (3) <i>21%</i>
		TOTAL SCORE	8 (10)	7 (10)	7 (10)	8 (10)	7 (10)	1 (10)	1 (10)
	D3.- WALKABILITY AND SECURITY	D3.1 Negative elements in area	0 (1) <i>yes</i>	0 (1) <i>yes</i>	0 (1) <i>yes</i>	1 (1) <i>none</i>	1 (1) <i>none</i>	0 (1) <i>yes</i>	1 (1) <i>none</i>
		D3.2 Cold activity areas in daytime	1 (1) <i>act. area</i>	1 (1) <i>act. area</i>	0 (1) <i>non act.</i>	1 (1) <i>act. area</i>	1 (1) <i>act. area</i>	1 (1) <i>act. area</i>	0 (1) <i>non act.</i>
		D3.3 Cold activity areas at night	0 (1) <i>non act.</i>	0 (1) <i>non act.</i>	0 (1) <i>non act.</i>	1 (1) <i>act. area</i>	0 (1) <i>non act.</i>	0 (1) <i>non act.</i>	0 (1) <i>non act.</i>
		D3.4 Areas with complicated visual control	0 (1) <i>yes</i>	1 (1) <i>no</i>	0 (1) <i>yes</i>	1 (1) <i>no</i>	1 (1) <i>no</i>	1 (1) <i>no</i>	0 (1) <i>yes</i>
		D3.5 Security feeling in people	0 (1) <i>non secure</i>	0 (1) <i>non secure</i>	0 (1) <i>non secure</i>	1 (1) <i>secure</i>	1 (1) <i>secure</i>	1 (1) <i>secure</i>	1 (1) <i>secure</i>
		D3.6 Active facades in nearby plots (% facade lenght)	1 (2) <i>49% f.lgt</i>	1 (2) <i>31% f.lgt</i>	0 (2) <i>16%</i>	2 (2) <i>58%</i>	1 (2) <i>32%</i>	0 (2) <i>3,73%</i>	0 (2) <i>23,59%</i>
		D3.7 Distance to nearest residential building	1 (1) <i>80m</i>	1 (1) <i>20m</i>	0 (1) <i>500m</i>	1 (1) <i>100m</i>	1 (1) <i>90m</i>	1 (1) <i>R. in mall</i>	1 (1) <i>150m</i>
		TOTAL SCORE	5 (10) E-> 6(10)	5 (10)	1 (10)	10(10)E-> 11(10)	7(10)E-> 9(10)	4(10)E-> 5(10)	4 (10)
E	SCORING RELATED TO ACTIVITY	E1 Attraction index of the mall	3 (5)	3 (5)	5 (5)	3 (5)	4 (5)	3 (5)	5 (5)
		E2 Score in Efficient transportation	8 (10)	5 (10)	3 (10)	7 (10)	8 (10)	2 (10)	1 (10)
		FINAL SCORE	+1 to D3	No Score	-1 > D1; -2 > B1	+1 to D3	+2 to D3	+1 to D3	-1 > D1; -1 > B1