APPENDIX (iv)

SAP L1A 2010 REGULATIONS COMPLIANCE REPORT (SAP FEE WORKSHEETS)

	3	Jser Details					
Assessor Name: Software Name:	Ondrej Gajdos Stroma FSAP 2009	•	na Num vare Ver		1000	006629 n: 1.4.0.91	
	Pro	perty Addres	s Propos	ed			
Address :	1 Radlett Place, London, NW	3 6BT					
 Overall dwelling dim 	ensions						
a month descrip		Area(m²)	•	Ave Height		Volume(m	_
Basement		831	(1a) x	2.7	(2a) =	2243.7	(3a)
Ground floor		1114	(1b) x	4	(2b) =	4456	(3b)
First floor		657	(1c) x	4	(2c) =	2628	(3c)
Second floor		571	(1d) x	3.6	(2d) =	2055.6	(3d)
Third floor		164	(1e) x	3	(2e) =	492	(3e)
Total floor area TFA = (1	1a)+(1b)+(1c)+(1d)+(1e)+(1n)	3337	(4)				
Dwelling volume			(3a)+(3b))+(3c)+(3d)+(3e)	+(3n) =	11875.3	(5)
2. Ventilation rate:	TO THE RESERVE OF THE PERSON O		-				
	main Secondary heating heating	other		total		m³ per hou	ır
Number of chimneys	0 + 0	* 0	= [0	x 40 =	0	(6a)
Number of open flues	0 + 0	+ 0	⋽ - Ē	0	x 20 =	0	(6b)
Number of intermittent fa	ans	:. *	_ F	4	x 10 =	.40	(7a)
Number of passive vent	s		F	0	x 10 =	0	(7b)
Number of flueless gas	fires		Ē	0	x 40 =	0	(7c)
			10.	-	Air ch	anges per ho	our
Infiltration due to chimne	eys, flues and fans = (6a)+(6b)+(7a)	+(7b)+(7c) =	Г	40	+(5)=	0	(8)
	been carried out or is intended, proceed t		continue fr			1.7	
Number of storeys in	the dwelling (ns)					0	(9)
Additional infiltration					[(9)-1]x0.1 =	0	(10)
	0.25 for steel or timber frame or 0		TOWN THEM IS NOT	ruction		0	(11)
if both types of wall are p deducting areas of open	present, use the value corresponding to ti iinas): if equal user 0.35	ne greater wall ar	ea (after				
	floor, enter 0.2 (unsealed) or 0.1	(sealed), else	e enter 0			0	(12)
If no draught lobby, er	nter 0.05, else enter 0					0	(13)
Percentage of window	vs and doors draught stripped					0	(14)
Window infiltration		0.25 - [0	2 x (14) + 1	00] =		0	(15)
Infiltration rate		(8) + (10	0 + (11) + (1	12) + (13) + (15)	-	0	(16)
Air permeability value	, q50, expressed in cubic metres	per hour per	square m	etre of envelo	ope area	5	(17)
If based on air permeab	ility value, then (18) = [(17) + 20]+(8).	otherwise (18) =	(16)			0.25	(18)
Air permeability value appli	ies if a pressurisation test has been done	or a degree air p	ermeability	is being used			= 193
Number of sides on which	ch sheltered		*****			1	(19)
Shelter factor			-[0.075 x (1	[9]		0.92	(20)
Infiltration rate incorpora	ating shelter factor	(21) = (1	8) x (20) =			0.23	(21)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Monthly	v avera	ne wind	speed fr	1 a c 1 a c 1	le 7									
22)m=	5.4	5.1	5.1	4.5	4.1	3.9	3.7	3.7	4.2	4.5	4.8	5.1		
Mond F	antar 10	20100 -	/22\m	,										
VING F 22a)m=	-	1.27	(22)m +	1.12	1.02	0.98	0.92	0.92	1.05	1.12	1.2	1.27		
20,011	1.00	1,27	1,41	1.12	1.02	0.50	0.02	0.02	1.00	1.12	1.4	1.27		
djuste	ed infiltra	ation rat	e (allowi	ng for si	helter an	d wind s	peed) =	(21a) x	(22a)m					
alcula	0.32	0.3	0.3	0.26	0.24 he applic	0.23	0.22	0.22	0.25	0.26	0.28	0.3		
		l ventila		ato ioi i	ло арри	Jubio du	00					Г	0	(23
If exha	aust air he	eat pump i	using Appe	endix N, (2	23b) = (23a) × Fmv (e	equation (f	N5)), other	wise (23b)	= (23a)		Ť	0	(23
If bala	nced with	heat reco	overy: effici	iency in %	allowing f	or in-use f	actor (fron	n Table 4h	=			Ē	0	(23
a) If I	balance	d mecha	anical ve	ntilation	with hea	at recove	ery (MVI	HR) (24a)m = (22	2b)m + (23b) × [1 - (23c) -	100]	-
24a)m=	0	0	0	0	0.	0	0	0	0	0	0	0		(24
b) If I	balance	d mecha	anical ve	ntilation	without	heat rec	covery (1	VV) (24b)m = (22	2b)m + (2	23b)			
24b)m=	0	0	0	0	0	0	0	0	0	0	0	0		(24
c) If	whole h	ouse ex	tract ven	itilation o	or positiv	re input v	ventilatio	on from o	utside	CONTRACTOR		34		
it	f (22b)n	1 < 0.5 ×	(23b), t	hen (24	c) = (23b); other	vise (24	c) = (22t)) m + 0.	5 × (23b)			
4c)m=	0	0	0	0	0	0	0	0	0	0	0	0		(24
								on from I 0.5 + [(2		0.51				
24d)m=		0.54	0.54	0.53	0.53	0.53	0.52	0.52	0.53	0.53	0.54	0.54		(24
									0.00	0.55	0.04	0.04		
Effec	tive air	change	rate - er	nter (24a) or (24b	o) or (24	Water Date	d) in box	3.9.V-00	0.55	0.54	0.54		
	0.55	change 0.54	rate - er 0.54	nter (24a 0.53	0.53	o) or (24 0.53	Water Date	15 m a 1 % o 10 m a 1	3.9.V-00	0.53	0.54	0.54		(25
25)m=	0.55	0.54	0.54	0.53	0.53		c) or (24	d) in box	(25)					(25
25)m= 3 Hea	0.55 at losse	0.54	0.54 eat loss p	0.53	0.53		or (24 0.52	d) in box	(25) 0.53					(25 A X k
25)m= 3 Hea	0.55 at losse	0.54 s and he	0.54 eat loss p	0.53 Caramet	0.53	0.53	c) or (24 0.52 ea	d) in box 0.52	(25) 0.53	0.53	0.54	0.54		
3 He LEM	0.55 at losse	0.54 S and he	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar	c) or (24 0.52 ea	d) in box 0.52 U-valu	(25) 0.53	0.53 A X U	0.54	0.54 k-value		AXk
3 He BLEW	0.55 at losse IENT	0.54 S and he	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r	0.52 ea n ²	d) in box 0.52 U-valu W/m2	(25) 0.53 ue K	0.53 A X U (W/I	0.54	0.54 k-value		A X k kJ/K
25)m= C 3. He ELEM Doors 7	0.55 IENT Type 1	0.54 S and he	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r	ea n ²	U-valu W/m2	(25) 0.53 De K	0.53 A X U (W/i	0.54	0.54 k-value		A X k kJ/K
S He S LEM Doors Doors Doors Doors Doors Doors	0.55 IENT Type 1 Type 2	0.54 Gros area	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r 3.36	ea 11 ² × ×	U-valu W/m2	(25) 0.53 ue K	0.53 A X U (W/I 5.04 3.15	0.54	0.54 k-value		A X k kJ/K (26
25)m= [3 He 3 He 0 loors 1 0 loors 1 0 loors 1	0.55 IENT Type 1 Type 2 Type 3	0.54 S and he Gros area	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r 3.36 2.1	ea m² x x1 x1	U-valu W/m2 1.5 1.5	0.53 0.53 DE K = [= [0.04] = [0.53 A X U (VV// 5.04 3.15 5.04	0.54	0.54 k-value		A X k kJ/K (26
25)m= [3, Head ELEM Doors 7 Doors 7 Vindov Vindov	0.55 IENT Type 1 Type 2 Type 3 ws Type	0.54 S and he Gros area	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r 3.36 2.1 3.36 49.5	ea m² x x x1 x1	U-valu W/m2 1.5 1.5	(25) 0.53 IVE 	0.53 A X U (W// 5.04 3.15 5.04 70.05	0.54	0.54 k-value		A X k kJ/K (26 (26 (27 (27
S)m= [SLEM Doors 7 Doors 7 Vindov Vindov Vindov	0.55 IENT Type 1 Type 2 Type 3 Type 3 ws Type ws Type	0.54 S and he Gros area	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A , r 3.36 2.1 3.36 49.5	ea x x x1 x1 x1	U-valt W/m2 1.5 1.5 1.5 1.7 (1/(1.5)+	(25) 0.53 ie K = [= 0.04] = [0.04] = [0.53 A X U (W// 5.04 3.15 5.04 70.05	0.54	0.54 k-value		A X k kJ/K (28 (28 (27 (27 (27)
25)m= [3 He 3 He 3 He 3 Oors 1 0 oors 1 0 oors 1 Vindov Vindov Vindov Vindov	0.55 IENT Type 1 Type 2 Type 3 ws Type ws Type ws Type ws Type	0.54 s and he Gros area	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r 3.36 2.1 3.36 49.5 21 4.32	ea m² x x x1 x1 x1 x1	U-valu W/m2 1.5 1.5 1.5 1.5 1.7(1.7.1.5)+	0.04] = [0.04] = [0.04] = [0.04] = [0.53 A X U (W/// 5.04 3.15 5.04 70.05 29.72 6.11	0.54	0.54 k-value		A X k kJ/K (26 (26 (26
25)m= SHEM Doors 1 Doors 1 Doors 1 Vindov Vindov Vindov Vindov Vindov	0.55 IENT Type 1 Type 2 Type 3 Type 3 ws Type ws Type ws Type ws Type	0.54 S and he Gros area	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A , r 3.36 2.1 3.36 49.5 21 4.32 10.8	ea m² x 1 x1 x1 x1 x1	U-valu W/m2 1.5 1.5 1.5 1.5 1.5 1.7 1.15 + 1.7 1.1 1.5 + 1.7 1.5 +	(25) 0.53 IE K = [0.04] = [0.04] = [0.04] = [0.04] = [0.53 A X U (W// 5.04 3.15 5.04 70.05 29.72 6.11 15.28	0.54	0.54 k-value		A X k kJ/K (24 (24 (22 (22 (22 (22 (22 (22 (22 (22
25)m= Coors 1 Coors 1 Coo	0.55 IENT Type 1 Type 2 Type 3 ws Type ws Type ws Type ws Type ws Type ws Type	0.54 S and he Gros area	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r 3.36 2.1 3.36 49.5 21 4.32 10.8 9.52	ea m² x x x1 x1 x1 x1 x1 x1 x1	U-valt W/m2 1.5 1.5 1.5 1.5 1.5 + A1A(1.5)+ A1A(1.5)+ A1A(1.5)+	0.04] = [0.04] = [0.04] = [0.04] = [0.04] = [0.04] = [0.04] = [0.04] = [0.53 A X U (W/// 5.04 3.15 5.04 70.05 29.72 6.11 15.28 13.47	0.54	0.54 k-value		A X k kJ/K (26 (27 (27 (27 (27 (27 (27)
25)m=	0.55 IENT Type 1 Type 2 Type 3 ws Type	0.54 S and he Gros area 2.1 2.2 3.3 4.5 5.6	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A , r 3.36 2.1 3.36 49.5 21 4.32 10.8 9.52 1.87	ea n² x x x1 x1 x1 x1 x1 x1 x1 x1	U-value W/m2 1.5 1.5 1.5 1.5 1.7 1.7 1.7 1.7	(25) 0.53 IP K = [0.04] = [0.04] = [0.04] = [0.04] = [0.04] = [0.04] = [0.53 A X U (W/// 5.04 3.15 5.04 70.05 29.72 6.11 15.28 13.47 2.65 1.78	0.54	0.54 k-value		A X k kJ/K (26 (26 (27 (27 (27 (27 (27 (27 (27 (27 (27 (27
25 m= Care Care Care Care Care Care Care Care	0.55 IENT Type 1 Type 2 Type 3 ws Type	0.54 S and he Gros area 1 1 2 3 3 4 4 5 6 6 7 8 8	0.54 eat loss p	0.53 Caramet	0.53	0.53 Net Ar A ,r 3.36 2.1 3.36 49.5 21 4.32 10.8 9.52 1.87	ea m² x 1 x1 x1 x1 x1 x1 x1 x1 x1	U-valu W/m2 1.5 1.5 1.5 1.5 1.5 \tag{1/(1.5)+} \(\lambda\)(1.5)+ \(\lambda\)(1.5)+ \(\lambda\)(1.5)+ \(\lambda\)(1.5)+	(25) 0.53 IE K = [0.04] = [0.53 A X U (W/// 5.04 3.15 5.04 70.05 29.72 6.11 15.28 13.47 2.65	0.54	0.54 k-value		A X k kJ/K (26 (26 (27 (27 (27 (27 (27 (27 (27 (27 (27 (27

3492.01	241.0.02	041 0.02	3432.00	3400.54	0000.17	5551,55	2001.22	3414.02	2402.00	3130,04	347 0.02		_
39)m= 3492.01	,		3432 08	3408 94	3398.17	3387.95	3387.95	-		3450.84	3470.82		
leat transfer	coefficie	nt. W/K						(39)m	= (37) + (3	38)m			
38)m= 2155.57	_	2134.38	2095.64	2072.5	2061.74	2051.51	2051.51	2078.08	2095.64	2114.41	2134.38		(3
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
entilation he		alculated	i monthi	,						25)m x (5)	L	1336.44	(3
details of therm otal fabric he		are not kn	own (36) :	0.15 x (3	1)			(33) +	(36) =		Г	1222.11	70
Thermal bridg	es : S (L	xY) cal	culated	using Ap	pendix k	K						106.33	(3
or design asses an be used inste				constructi	uri are noi	кломп рг	ecisely ine	maunca inve	values of	iner in 18	IME 11		
Thermal mass For design asses							anioals the		tive Value:		hin 1f	250	(3
leat capacity	(프렛게 그렇							110000		2) + (32a)	(32e) =	118555.56	(3
abric heat lo			U)				(26)(30)					1230.1	(3
* include the are							Same and the same	Z. Garage	2.0.0.1	200 000 000			
for windows and		and the same	ffective w	ndow Ll-va			formula 1	f(1/U-valu	e)+0:041 a	s given in	paragraph :	3.2	10
Total area of e		None of the	0	— J	4773.	=	0.2		- 21				(3
Roof Type5	105	=	3.58	=	503.4	2 ×	0.18	- -	90.62			┤	(3
Roof Type3 Roof Type4	63	=	0	=	63	_ ×	0.18	<u> </u>	11.34	⊣ 片		┥┝═	(3
Roof Type2	155	=	5.76	=	149.2	=	0.18	= =	26.86	⊣ ¦		 	(3
Roof Type1	352	=	24.0	=	327.9	=	0.16	-	52.47	⊣ ¦		-	
Valls Type4	680	=	0	=	680	×	0.19	_ *	129.2	- -		-	4
Valls Type3	31.	=	6.3	=	25.2	=	0.2	_ =	5.04	⊣ ¦		╣	4
Valls Type2	124		272.6	8	971.3		0.21	_] = [203.98	⊣ ¦		┤ ├ ─	
Valls Type1	522	=	0	=	522	_ *	0.11		57.42	닉 뉴			4
loor	-	_		_	1114	=	0.17	_ [189.38	4 ¦		!	_
Rooflights Typ	e 5				1.37	=	(1/(1.5) + 1	_ ;	2.055	╡,			_
Rooflights Typ					0.42		/1/(1.5) +1	Silen	0.63	=			0
Rooflights Typ					5.76	=	(1/(1.5) + 1	11	8.64	╡			C
Rooflights Typ					9,61		(1/(1.5) +		14.415	4			(2
Rooflights Typ					14.44	_	(1/(1.5) +)	Winds of the last	21,66	_			(2
Windows Type					1.87		(1/(1.5)+		2.65	=			(2
Windows Type					4.32		/1/(1.5)+		6.11	4			(2
Windows Type					1.35	=	/(1/(1.5)+		1.91	4			(2
Mindows Type					1.35		(1/(1.5)+	Total Control	1.91	4			(2
Vindows Type					1.87	x1	(1/(1.5)+	0.04] =	2.65				(;
Windows Type	e 17				1.21	x1	/1// 1.5)+	0.04] =	1.71	_			Ç
Windows Type					9.1	x1	/(1/(1.5)+	0.04] =	12.88	_			C
Vindows Type	e 15				12.6	х1	/1/(1.5)+	0.04] =	17.83	_			(2
Vindows Type	e 14				2.2	×1	/1// 1.5)+	0.04] =	3.11				(2
Mindows Type	e 13				1.32	х1	/1/(1.5)+	0.04] =	1.87				C
Vindows Type	e 12				24.5	x1	//1/(1.5)+	0.04] =	34.67				C
	e 11				2.72	200	/(1/(1.5)+		3.85				C

Heat lo	ss para	meter (H	HLP), W	/m²K					(40)m	= (39)m +	(4)			
40)m=	1.05	1.04	1.04	1.03	1.02	1.02	1.02	1.02	1.02	1,03	1.03	1.04		
lumbo	r of day	e le mor	nth (Tab	lo tal	32		803	08 3		Average =	Sum(40)	g/12=	1.03	(4
iumbe			100		May	lun	l tot	Aug	Con	Cost	Nov	Doo		
(1)m=	Jan 31	Feb 28	Mar 31	Apr 30	May 31	Jun 30	Jul 31	Aug 31	Sep 30	Oct 31	Nov 30	Dec 31		(4
,,,,,	31	20		50	31	50	- 51		50	31	30			
4. Wa	ter heat	ling ener	gy requi	rement.								kWh/ye	ar.	
		ipancy, f										.08		(4
	A > 13.9 A £ 13.9		+ 1.76 x	[1 - exp	(-0.0003	349 x (TI	-A -13.9)2)] + 0.0	0013 x (IFA -13.	9)			
nnual	averag	e hot wa						(25 x N)				2.35		(4
			hot water berson per				Contract to the contract of th	to achieve	a water us	se target o		7.7		
1	10000000						1	Aug	Con	Oat	Nov	Dog		
ot wate	Jan v usage ii	Feb n litres per	Mar day for ea	Apr ich month	May Vd,m = fe	Jun clor from	Jul Table 1c x	(43)	Sep	Oct	Nov	Dec		
4)m=	222.59	214,49	206.4	198.3	190.21	182.12	182.12	190.21	198.3	206.4	214.49	222.59		
	SOME STREET	Carrier design		A MARKON VICES OF	200000000000000000000000000000000000000	Secretary in	AN AND AND AND AND AND AND AND AND AND A	V.0-2000		Total = Su	TO THE RESERVE	The second second second	2428.21	(4
nergy c	ontent of	hot water	used - cal	culated m	onthly = 4.	190 x Vd,i	n x nm x L	OTm / 3600	kWh/mor	nth (see Ta	ibles 1b, 1	c, 1d)		- 69
45)m=	330.88	289.39	298.62	260.35	249.81	215.57	199.75	229.22	231.96	270.32	295.08	320.44		_
instant	anenus w	ater heating	na at naint	of use (no	s hot water	storage)	enter 0 in	boxes (46)		Total = Su	m(45) _{1,12} :	- L	3191.38	_(
6)m=	0	0	0	0	0	0	0	0	0	0	0	0		(
100 TO 10	storage			187										
) If ma	anufacti	ırer's de	clared lo	ss facto	r is know	vn (kVVh	/day):					0		(4
empe	rature f	actor fro	m Table	2b								0		(
0.00 PO 200 PO			storage					(47) x (48) =			0		(4
			red cylin								_			1122
) includir no tank in									0		(
								enter '0' in	box (50)					
lot wa	ter stor	age loss	factor fr	om Tab	le 2 (kW	h/litre/da	y)					0]		(!
/olume	e factor	from Ta	ble 2a		- 22						=	0		C
Tempe	rature f	actor fro	m Table	2b							-	0		(
nergy	lost fro	m water	storage	, kWh/ye	ear			((50) x (51) x (52) x	(53) =		0		(
Enter (49) or (54) in (5	5)									0		(
Vater s	storage	loss cal	culated f	or each	month			((56)m = (55) × (41)	m				
56)m=	0	0	0	0	0	0	0	0	0	0	0	0		(
cylinde	r contains	s dedicate	d solar sto	rage, (57)	m = (56)m	x [(50) - (H11)]+(5	0), else (5	7)m = (56)	m where (H11) is fro	m Appendi	Н	
57)m=	0	0	0	0	0	0	0	0	0	0	0	0		(:
riman	v circuit	loss (an	nual) fro	m Table	3		10					0		(
	y circuit	loss cal	culated f	for each	month (85 × (41)		e theorem	-1-1\	- 00		
	different laws	ractor II	om rab	ie no ii t	riere is s		ter neati	ng and a	o	r thermo	stat)	0		
(mod	dified by		0	0	0	- 11								1.5
(mod 59)m=	0	0	0	0	0	0		976	-	- 27				(3
(mod 59)m=	0	0	o for each		0.000	100		976	0	0	0			(8

5 245.98 t calculated	253.83	221.29	212.34	183.23	169.79	194.84	400.40	200 20	250.02	676 67		
t calculated	The William			3-3/17/Year	100.70	194.04	197.16	229.78	250.82	272.37		(62)
	using App	endix G or	Appendix	H (negat	ive quantity	y) (enter	'0' if no sola	r contribut	ion to wate	er heating)		
al lines if	FGHRS	and/or V	WHRS	applies	s, see Ap	pendix	G)					
0	0	0	0	0	0	0	0	0	0	0		(63)
water hea	ter				i.ii		202					
5 245.98	253.83	221.29	212,34	183.23	169.79	194.84	197.16	229.78	250.82	272.37		
						Ot	tput from w	ater heate	r (annual).	ij	2712.67	(64
om water	heating,	kWh/m	onth 0.2	5 ' [0.85	× (45)m	+ (61)	m] + 0.8	k [(46)m	+ (57)m	+ (59)m]		
61,49	63,46	55.32	53.08	45.81	42.45	48.71	49.29	57.44	62.7	68.09		(65
m in calc	culation of	of (65)m	only if c	ylinder	is in the	dwellin	g or hot w	ater is fr	om com	munity he	ating	
osins (sec	Table 5	and 5a										
	-											
1 1 1 1 1 1 1 1 1			Mav	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
354	354	354	354	354	354	354	354	354	354	354		(66
s (calcula	ted in Ar	pendix	equat	ion I 9 c	r (9a) a	Iso see	Table 5		_			
					1		-	181.65	212.01	226.01		(67
-	_				1		1	1	1864 66	2003.06		(68
	CAC STREET,	0.000	100000000000000000000000000000000000000	Characterist	47,755,000	Total Control	C C C C C C C C C C C C C C C C C C C	100 000 00	1004.00	2000.00		1000
_		-			1			_	504	604		(69
		11.55	30.4	30.4	30.4	30.4	30.4	30.4	30.4	30.4		(00
	_			-			1 -			_		
1		10			0	0	0	0	0	0		(70
		_		-								
-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2		(71
g gains (T	able 5)				,							
91.51	85.29	76.84	71.35	63.62	57.05	65.47	68.46	77.21	87.09	91.52		(72
-				(66)m + (67)m	1 + (68)n	n + (69)m +	(70)m + (7	1)m + (72)	m		
3 2533.29	2435.8	2272.11	2089	1928.87	1835,95	1847.2	1 1941.47	2105.46	2292.96	2449.8		(73
ns:							272	95	10 0			
calculated	using sola	flux from	Table 6a	and asso	ciated equa	tions to	convert to th	e applicat	ole orientat	tion.		
	TOTAL STREET	Area m²			200		g_ Table 6b	Т	FF able 6c		Gains (W)	
0.54	×	49.	5	×	11,51	×	0.63	×	0.7	=	122.11	(75
0.77	×	2.7	2	x	11.51	×	0.63	×	0.7	- - [19.14	(75
0.77	x		=	=		x	0.63	7 x	0.7	=	86.18	(75
	×	=	=			×	0.63	T x	0.7	= =	13.93	(75
0.77	×	9.	=		11.51	×	0.63	i x F	0.7	≓ <u>-</u> F	32.01	(75
			=		_	=	0.63	×		- - -	12.77	(75
0.77	X	1:2	1	A.	11.31							
0.77	×	1.2	_	_	11.51	x	0.63	×	0.7	=	13.16	(75
	water head 5 245,98 from water 61,49 from water 61,49 from in calculations (Calculations) (Calcu	water heater 5 245.98 253.83 from water heating, 61.49 63.46 7)m in calculation of the color o	water heater 5 245.98 253.83 221.29 from water heating, kWh/mc 61.49 63.46 55.32 7)m in calculation of (65)m pains (see Table 5 and 5a) pains (Table 5), Watts Feb Mar Apr 354 354 354 as (calculated in Appendix is (calculated in Appe	water heater 5 245.98 253.83 221.29 212.34 from water heating, kWh/month 0.25 61.49 63.46 55.32 53.08 7)m in calculation of (65)m only if contains (See Table 5 and 5a) ins (Table 5), Watts Feb Mar Apr May 354 354 354 354 is (calculated in Appendix L, equat 3 195.31 158.84 120.25 89.89 gains (calculated in Appendix L, equat 58.4 58.4 58.4 58.4 58.4 fans gains (Table 5a) 0 0 0 0 evaporation (negative values) (Table 2 -283.2 -283.2 -283.2 -283.2 ig gains (Table 5) 91.51 85.29 76.84 71.35 al gains = 13 2533.29 2435.8 2272.11 2089 no calculated using solar flux from Table 6a and Calculated using solar flux fl	water heater 5 245.98 253.83 221.29 212.34 183.23 from water heating, kWh/month 0.25 * [0.85] 61.49 63.46 55.32 53.08 45.81 7)m in calculation of (65)m only if cylinder pains (see Table 5 and 5a) iins (Table 5), Watts 7 Feb Mar Apr May Jun 354 354 354 354 354 354 354 354 354 354	water heater 5 245.98 253.83 221.29 212.34 183.23 169.79 from water heating, kVVh/month 0.25 [0.85 × (45)m only if cylinder is in the file of the fil	water heater 5	water heater 5	water heater 5	water heater 5	water heater 5 245.98 253.83 221.29 212.34 183.23 169.79 194.84 197.16 229.78 250.82 272.37 Cutput from water heater (annual):	water heater 245.96

Northeast 0.9x	0.54	×	49.5] x [23.55	×	0.63] × [0.7] = [249.89	(75)
Northeast 0.9x	0.77	x	2.72	x	23.55	x	0.63	×	0.7	- [39.16	(75)
Northeast 0.9x	0.77	×	24.5] × [23.55	×	0.63] × [0.7	Ī = [176.36	(75)
Northeast 0.9x	0.77	x	1.32] x [23.55	x	0.63	×	0.7	Ī - [28.51	(75)
Northeast 0.9x	0.77	x	9.1	x	23.55	x	0.63	×	0.7] = [65.51	(75)
Northeast 0.9x	0.77	x	1.21	x	23.55	x	0.63	x	0.7	=	26.13	(75)
Northeast 0.9x	0.77	×	1.87] x [23.55	×	0.63	×	0.7] = [26.92	(75)
Northeast 0.9x	0.77	x	1.35] x [23.55	x	0.63	×	0.7	=	19.44	(75)
Northeast 0.9x	0.54	x	49.5] × [41,13	x	0.63] x [0.7] = [436.32	(75)
Northeast 0.9x	0.77	×	2.72] × [41.13	×	0.63] × [0.7] = [68.37	(75)
Northeast 0.9x	0.77	x	24.5] x [41.13	×	0.63] x [0.7] = [307.94	(75)
Northeast 0.9x	0.77	_ x [1.32] x [41.13	×	0.63] x [0.7] = [49.77	(75)
Northeast 0.9x	0.77	x	9.1] × [41.13	х	0.63] x [0.7	-	114.38	(75)
Northeast 0.9x	0.77	x	1.21] x [41.13	×	0.63	x	0.7	= [45.62	(75)
Northeast 0.9x	0.77	x	1.87] x [41.13	×	0.63] × [0.7	=	47.01	(75)
Northeast 0.9x	0.77	x	1.35] × [41.13	x	0.63] x [0.7] = [33.94	(75)
Northeast 0.9x	0.54	x	49.5] x	67.8	×	0.63] x [0.7	= [719.28	(75)
Northeast 0.9x	0.77	x	2.72	x	67.8	×	0.63	x	0.7	= [112.72	(75)
Northeast 0.9x	0.77	х	24.5] x [67.8	x	0.63	x	0.7] = [507.64	(75)
Northeast 0.9x	0.77	X	1.32] x [67.8	x	0.63] x	0.7	=	82.05	(75)
Northeast 0.9x	0.77	x	9.1	x	67.8	x	0.63] x	0.7] = [188.55	(75)
Northeast 0.9x	0.77	×	1.21] × [67.8	×	0.63] * [0.7] = [75.21	(75)
Northeast 0.9x	0,77	x	1.87] × [67.8	×	0.63	×	0.7] = [77,49	(75)
Northeast 0.9x	0.77	х	1.35	×	67.8	x	0.63	х	0.7	=	55.94	(75)
Northeast _{0.9x}	0.54	×	49.5	_ × [89.77	×	0.63	×	0.7	=	952.34	(75)
Northeast 0.9x	0.77	×	2.72	x	89.77	x	0.63	×	0.7	=	149.24	(75)
Northeast 0.9x	0.77	х	24.5	х	89.77	х	0.63	х	0.7	=	672.12	(75)
Northeast 0.9x	0.77	х	1.32	x	89,77	х	0.63	х	0.7	=	108.64	(75)
Northeast 0.9x	0.77	x	9.1	×	89,77	×	0.63	×	0.7	=	249.65	(75)
Northeast 0.9x	0.77	х	1.21	×	89.77	X	0.63	х	0.7	=	99.58	(75)
Northeast 0.9x	0.77	×	1.87	×	89.77	×	0.63	×	0.7		102.6	(75)
Northeast 0.9x	0.77	×	1.35	_ × [89,77	х	0.63	х	0.7	<u> </u> =	74,07	(75)
Northeast 0.9x	0.54	х	49.5	×	97.5	×	0.63	×	0.7	_ = _	1034.41	(75)
Northeast 0.9x	0.77	X	2.72	×	97.5	×	0.63	×	0.7	_ = <u> </u> _	162.1	(75)
Northeast 0.9x	0.77	×	24.5	×	97.5	×	0.63	×	0.7	=	730.04	(75)
Northeast 0.9x	0.77	×	1.32	×	97.5	x	0.63] × [0.7	-	118	(75)
Northeast 0.9x	0.77	×	9.1	×	97.5	×	0.63	×	0.7	<u> </u> = [271,16	(75)
Northeast 0.9x	0.77	×	1.21	×	97.5	×	0.63	×	0.7	=	108.17	(75)
Northeast 0.9x	0.77	×	1.87	×	97.5	×	0.63	×	0.7] = [111.44	(75)
Northeast 0.9x	0.77	х	1.35	×	97.5	x	0.63	×	0.7	_ = _	80.45	(75)
Northeast 0.9x	0.54	х	49.5	х	92.98	х	0.63	х	0.7	=	986.43	(75)

Northeast 0.9x	0.77	x	2.72	* [92.98] x [0.63	×	0.7	=	154.58	(75)
Northeast 0.9x	0.77	х	24.5	x	92.98	×	0.63	×	0.7	Ī = [696.18	(75)
Northeast 0.9x	0.77	1 x	1.32	T x	92.98	ī × [0.63	x	0.7	Ī = Ē	112.53	(75)
Northeast 0.9x	0.77	×	9.1	×	92.98] × [0.63] x [0.7	= [258.58	(75)
Northeast 0.9x	0.77	x	1.21	×	92.98] × [0.63	×	0.7] = [103.15	(75)
Northeast 0.9x	0.77	7 x [1.87	×	92.98	7 × [0.63	1 x [0.7	7 = [106.27	(75)
Northeast 0.9x	0.77	×	1.35	×	92.98] × [0.63	×	0.7	= [76.72	(75)
Northeast 0.9x	0.54	×	49.5	×	75.42] × [0.63	×	0.7	=	800.12	(75)
Northeast 0.9x	0.77	x	2.72] × [75.42] × [0.63] × [0.7] = [125.38	(75)
Northeast 0.9x	0.77	x	24.5	×	75.42] × [0.63] x [0.7	= [564.69	(75)
Northeast 0.9x	0.77	_ x [1.32	×	75.42] × [0.63] × [0.7] = [91.27	(75)
Northeast 0.9x	0.77	_ x [9.1	×	75.42] × [0.63] × [0.7] = [209.74	(75)
Northeast 0.9x	0.77	x	1.21	x	75.42] x	0.63	x	0.7	= [83.67	(75)
Northeast 0.9x	0.77	×	1.87	×	75.42] × [0.63	x	0.7	= [86.2	(75)
Northeast 0.9x	0.77	x	1.35	×	75,42] x [0.63	x [0.7] = [62.23	(75)
Northeast 0.9x	0.54	x	49.5	×	51.24] × [0.63	×	0.7] = [543.66	(75)
Northeast 0.9x	0.77	×	2.72	x	51.24] × [0.63	×	0.7	=	85.2	(75)
Northeast 0.9x	0.77	x	24.5	x	51.24] x [0.63	x	0.7	= [383.69	(75)
Northeast 0.9x	0,77	x	1,32	×	51,24] × [0.63] x [0.7	=	62.02	(75)
Northeast 0.9x	0,77	×	9.1	×	51.24] ×	0.63	×	0.7	= [142.52	(75)
Northeast 0.9x	0.77	×	1.21	x	51.24] × [0.63	×	0.7	= [56.85	(75)
Northeast 0.9x	0.77	x	1.87	×	51.24	_ × [0.63	×	0.7	-	58.57	(75)
Northeast 0.9x	0.77	х	1.35	×	51.24	_ × [0.63	x	0.7	=	42.28	(75)
Northeast 0.9x	0.54	x	49.5	х	29.6	_ x	0.63	×	0.7	= [314.02	(75)
Northeast 0.9x	0.77	Х	2.72	х	29.6	_ × [0.63	×	0.7	=	49.21	(75)
Northeast 0.9x	0.77	х	24.5	х	29.6	×	0.63	х	0.7	=	221.62	(75)
Northeast 0.9x	0.77	x	1.32	×	29.6	_ × _	0.63	×	0.7	-	35.82	(75)
Northeast 0.9x	0.77	×	9.1	×	29,6	×	0.63	×	0.7	=	82.32	(75)
Northeast 0.9x	0,77	X	1.21	х	29.6	×	0.63	×	0.7		32.84	(75)
Northeast 0.9x	0.77	x	1.87	×	29.6	_ × _	0.63	×	0.7	=	33.83	(75)
Northeast 0.9x	0.77	_ x _	1.35	х	29.6	_ × [0.63	×	0.7	_ = _	24.42	(75)
Northeast 0.9x	0.54	x	49.5	х	14.52	×	0.63	×	0.7	=	154.1	(75)
Northeast 0.9x	0.77	x	2.72	×	14.52	_ × [0.63	×	0.7	_ = _	24.15	(75)
Northeast 0.9x	0.77	×	24.5	×	14.52	×	0.63	×	0.7	=	108.76	(75)
Northeast 0.9x	0.77	X	1.32	×	14.52	×	0.63	×	0.7		17.58	(75)
Northeast 0.9x	0.77	×	9.1	×	14.52	_	0.63	×	0.7	<u> </u>	40.4	(75)
Northeast 0.9x	0.77	×	1.21	x	14.52	×	0.63	×	0.7	_ = _	16.11	(75)
Northeast 0.9x	0.77	x	1.87	×	14.52	_ *	0.63	×	0.7	= _	16,6	(75)
Northeast 0.9x	0.77	×	1.35	×	14.52	×	0.63	×	0.7	_ = _	11.99	(75)
Northeast 0.9x	0.54	_ ×	49.5	×	9,36	۱ × ۲	0.63	×	0.7	╛┇┝	99,31	(75)
Northeast 0.9x	0.77	×	2.72	×	9.36	_ × _	0.63	_ × _	0.7	=	15.56	(75)

Northeast 0.9x	0.77	x	24.5	x [9.36	×	0.63] * [0.7	=	70.09	(75)
Northeast 0.9x	0.77	x	1.32] x [9.36	×	0.63	x	0.7	=	11.33	(75)
Northeast 0.9x	0.77	x	9.1] × [9.36	×	0.63] x [0.7	Ī = [26.03	(75)
Northeast 0.9x	0.77	х	1.21] x [9.36	×	0.63	×	0,7] = [10.38	(75)
Northeast 0,9x	0.77	×	1.87] x [9.36	x	0.63	x	0.7] = [10.7	(75)
Northeast 0.9x	0.77	x	1.35] x [9.36	×	0.63	×	0.7	Ī = [7.72	(75)
Southeast 0.9x	0.54	x	21] x [37.39	x	0.63] x [0.7	Ī - [168.28	(77
Southeast 0.9x	0.77	x	4.32] × [37.39	x	0.63	×	0.7	=	345.53	(77)
Southeast 0.9x	0.77	x	10.8	×	37.39	x	0.63] x [0.7] = [246.81	(77
Southeast 0.9x	0.77	x	9.52] x [37.39	×	0.63] x [0.7	=	108.78	(77
Southeast 0.9x	0.77	×	1.87	x	37.39	x	0.63] x [0.7	= [235.04	(77
Southeast 0.9x	0.77	×	1.26] x [37.39	×	0.63] × [0.7] - [28.79	(77
Southeast 0.9x	0.54	x	21] x [63.74	x	0.63] x [0.7] = [286.86	(77)
Southeast 0.9x	0.77	x	4.32	x	63.74	x	0.63	x	0.7] = [589.02	(77
Southeast 0.9x	0.77	x	10.8] x [63,74	×	0.63] x [0.7	=	420.73	(77
Southeast 0.9x	0.77	x	9.52	x	63.74	x	0.63] x [0.7] = [185.43	(77
Southeast 0.9x	0.77	x	1.87	×	63.74	×	0.63] × [0.7] = [400.67	(77
Southeast 0.9x	0.77	x	1.26] x [63.74	x	0.63	×	0.7] = [49.09	(77
Southeast 0.9x	0.54	x	21] x [84.22	(X)	0.63] x	0.7] = [379.04	(77
Southeast 0.9x	0.77	x	4.32	_ x [84.22	x	0.63	x	0.7	= [778.3	(77
Southeast 0.9x	0.77	×	10.8] x [84.22	×	0.63] * [0.7] = [555.93	(77
Southeast 0.9x	0.77	×	9.52] x [84.22	×	0.63] * [0.7] = [245.02	(77
Southeast 0.9x	0.77	x	1.87	x	84.22	×	0.63] x [0.7] = [529.42	(77
Southeast 0.9x	0.77	x	1.26] x [84.22	x	0.63	_ x [0.7	= [64.86	(77
Southeast 0.9x	0.54	x	21] x [103.49	x	0.63] x [0.7	= [465.79	(77
Southeast 0.9x	0.77	×	4.32] x [103.49	х	0.63] x [0.7	- [956.42	(77
Southeast 0.9x	0.77	x	10.8] x [103.49	×	0.63	x	0.7] = [683.16	(77
Southeast 0.9x	0.77	x [9.52] x [103,49	×	0.63	x	0.7] = [301.09	(77
Southeast 0.9x	0.77	×	1.87	×	103.49	×	0.63	x	0.7] = [650.58	(77
Southeast 0.9x	0.77	x	1.26] × [103,49	x	0.63	×	0.7] = [79.7	(77
Southeast 0.9x	0.54	x	21	×	113.34	×	0.63	×	0.7	- [510.11	(77
Southeast 0.9x	0.77	x	4.32	x [113.34	х	0.63	×	0.7] • [1047.43	(77)
Southeast 0.9x	0.77	×	10.8] × [113.34	×	0.63	_ x [0.7] = [748.16	(77
Southeast 0.9x	0.77	x	9.52	x	113.34	x	0.63	x	0.7] = [329.75	(77
Southeast 0.9x	0.77	x	1.87] x [113.34	х	0.63	×	0.7] = [712.49	(77
Southeast 0,9x	0.77	×	1.26] × [113.34	×	0.63] × [0.7] = [87.29	(77
Southeast 0.9x	0.54	×	21] × [115.04	×	0.63] * [0.7] = [517.8	(77
Southeast 0.9x	0.77	×	4.32] × [115.04	×	0.63] × [0.7] = [1063.21	(77
Southeast 0.9x	0.77	x	10.8] x [115.04	× [0.63] × [0.7] = [759.43	(77
Southeast 0.9x	0.77	x	9.52	_ x [115.04	×	0.63] × [0.7] = [334.71	(77)
Southeast 0.9x	0.77	x	1.87	×	115.04	x	0.63] x [0.7	7 = [723.22	(77)

Southeast 0.9x	0.77	x	1.26	×	115.04	_ x [0.63	×	0.7	=	88.6	(77
Southeast 0.9x	0.54	x	21	×	112.79	×	0.63	x	0.7		507.65	(77
Southeast 0.9x	0.77	x	4.32	×	112.79	x	0.63	x	0.7] = [1042.38	(77
Southeast 0.9x	0.77	_ x [10.8	×	112.79] × [0.63	_ x [0.7] = [744.56	(77
Southeast 0.9x	0.77	×	9.52	_ x [112.79] × [0.63	×	0.7] = [328.16	(77
Southeast 0.9x	0.77	_ x [1.87	× [112.79] * [0.63	×	0.7] = [709.06	(77
Southeast 0.9x	0.77	×	1.26	×	112.79] × [0.63	×	0.7	= [86.87	(77
Southeast 0.9x	0.54	_ x [21	×	105.34] × [0.63	×	0.7] = [474.12	(77
Southeast 0.9x	0.77	x	4.32	× [105.34] * [0.63	x	0.7] = [973.53	(77
Southeast 0.9x	0.77	x	10.8	×	105.34] * [0.63	×	0.7	=	695.38	(77
Southeast 0.9x	0.77	_ x [9.52	х [105.34] × [0.63	×	0.7] = [306.48	(77
Southeast 0.9x	0.77] * [1.87	x [105.34] * [0.63] × [0.7	= [662.22	(77
Southeast 0.9x	0.77	x	1.26	×	105.34] x [0.63	x	0.7] = [81.13	(77
Southeast 0.9x	0.54	_ x [21	_ x [92.9] × [0.63] x [0.7	= [418.12	(77
Southeast 0.9x	0.77	x	4.32	x	92.9] x [0.63	×	0.7	= [858.53	(77
Southeast 0.9x	0.77	x	10.8	×	92.9] × [0.63	x [0.7] = [613.24	(77
Southeast 0.9x	0.77	_ × [9.52] x [92.9] × [0.63	x	0.7	= [270.28	(77
Southeast 0.9x	0.77	x	1.87	x [92.9] x	0.63	×	0.7	= [583.99	(77
Southeast 0.9x	0.77	x [1.26	_ x [92.9] x [0.63	x	0.7	= [71.54	(77
Southeast 0.9x	0.54	_ x [21	_ x [72.36] × [0.63	x	0.7	= [325.69	(77
Southeast 0.9x	0.77	x	4.32	x	72.36] x [0.63	x	0.7] = [668.76	(77
Southeast 0.9x	0.77	_ x [10.8	×	72.36] × [0.63	×	0.7] = [477.68	(77
Southeast 0.9x	0.77	x	9.52	x [72.36] × [0.63	×	0.7] = [210.53	(77
Southeast 0.9x	0.77	.x:	1.87	х	72.36] x	0.63	×	0.7] = [454.91	(77
Southeast 0.9x	0.77	_ x [1.26	×	72.36] × [0.63	x	0.7] = [55.73	(77
Southeast 0.9x	0.54	×	21	x	44.83] × [0.63	×	0.7	= [201.75	(77
Southeast 0.9x	0.77	_ x [4.32	×	44.83] × [0.63	×	0.7	=	414.26	(77
Southeast 0.9x	0.77	_ x [10.8] x [44.83] × [0.63	×	0.7] = [295.9	(77
Southeast 0.9x	0.77	_ x _	9.52	x	44.83] x [0.63	x	0.7	=	130.42	(77
Southeast 0.9x	0.77	x	1.87	×	44.83] × [0.63	×	0.7] = [281.79	(77
Southeast 0.9x	0.77	_ x [1.26	x	44.83] × [0.63	x	0.7] = [34.52	(77
Southeast 0.9x	0.54	x	21	×	31.95] × [0.63	×	0.7	=	143.8	(77
Southeast 0.9x	0.77] x [4.32	х [31.95] × [0.63] × [0.7] = [295.27	(77
Southeast 0.9x	0.77	x	10.8	x [31.95	×	0.63	x	0.7] = [210.91	(77
Southeast 0.9x	0.77	X.	9.52	х	31.95	×	0.63	×	0.7	= [92.96	(77
Southeast 0.9x	0.77	×	1.87	×	31.95] × [0.63	_ × [0.7] = [200.85	(77
Southeast 0.9x	0.77	_ × [1.26	_ x [31.95] x [0.63] x [0.7	_ = [24.61	(77
Southwesto.9x	0.77	x	2.2	_ x [37.39] [0.63	×	0.7	= [75.41	(79
Southwest _{0.9x}	0.77	_ x [12.6	×	37,39] [0.63	×	0.7] = [143.97	(79
Southwesto.9x	0.77	×	1.35	_ x [37.39] [0.63	×	0.7] = [30.85	(79
Southwesto.9x	0.77	×	4.32	×	37.39	ı Ē	0.63	1 x [0.7	T = [98.72	(79

Southwesto.9x	0.77	x	1.87	×	37.39	0.63	x	0.7	=	42,73	(79)
Southwesto.9x	0.77	x	2.2	×	63.74	0.63	×	0.7	7 = [128.56	(79)
Southwesto.9x	0.77] x [12.6	x [63.74	0.63	×	0.7	= [245.43	(79)
Southwesto 9x	0.77	x	1.35	×	63.74	0.63	×	0.7] = [52.59	(79)
Southwesto.9x	0.77	x	4.32	×	63.74	0.63	x	0.7] = [168.29	(79)
Southwesto,9x	0.77	x	1.87] × [63.74	0.63	×	0.7] = [72.85	(79)
Southwesto.9x	0.77	x	2.2	×	84.22	0.63	×	0.7] = [169.87	(79)
Southwesto 9x	0.77	x	12.6	×	84.22	0.63] x [0.7] = [324.29	(79)
Southwesto 9x	0.77	_ x [1.35] x [84.22	0.63	x	0.7	= [69.49	(79)
Southwesto.9x	0.77	_ x [4.32	_ x [84.22	0.63	×	0.7] = [222.37	(79)
Southwest _{0.9x}	0.77	×	1.87	× [84.22	0.63	×	0.7] = [96.26	(79)
Southwesto_9x	0.77	×	2.2	x	103.49	0.63	x	0.7	=	208.74	(79)
Southwesto.9x	0.77	x	12.6] x [103.49	0.63	×	0.7] = [398.51	(79)
Southwesto.9x	0.77] x [1.35	×	103.49	0.63	x [0.7] = [85.39	(79)
Southwesto.9x	0.77	x	4.32	×	103.49	0.63	x	0.7] = [273.26	(79)
Southwesto.9x	0.77	×	1.87	×	103.49	0.63	×	0.7] • [118.29	(79)
Southwesto.9x	0.77	x	2.2	×	113.34	0.63	×	0.7] = [228.61	(79)
Southwesto.9x	0.77	×	12.6] x [113.34	0.63] x [0.7	=	436.43	(79)
Southwesto.9x	0.77	x	1.35	x	113,34	0.63	x	0.7	= [93.52	(79)
Southwesto 9x	0.77	х	4.32	х [113.34	0.63	×	0.7] = [299.27	(79)
Southwesto_9x	0.77] x [1.87] x [113.34	0.63	x.	0.7] = [129.54	(79)
Southwesto.sx	0.77	×	2.2	_ × [115.04	0.63] × [0.7] - [232.05	(79)
Southwesto.9x	0.77	_ x [12.6	_ x [115.04	0.63	x [0.7] = [443	(79)
Southwesto.9x	0.77	x	1.35	×	115.04	0.63	×	0.7] = [94.93	(79)
Southwest _{0.9x}	0.77	_ x [4.32	x	115.04	0.63	×	0.7	= [303.77	(79)
Southwesto.9x	0.77	_ x [1.87	x	115.04	0.63	x	0.7] = [131.49	(79)
Southwesto.9x	0.77	x	2.2	x	112.79	0.63	x	0.7	=	227.5	(79)
Southwesto.9x	0.77] x [12.6	x	112.79	0.63	_ x [0.7] = [434.33	(79)
Southwesto.sx	0.77	x	1.35	×	112.79	0.63	×	0.7	= [93.07	(79)
Southwesto.9x	0.77	x	4.32	x	112.79	0.63	×	0.7	=	297.82	(79)
Southwesto.9x	0.77	x	1.87	x	112.79	0.63	×	0.7	= [128.92	(79)
Southwesto 9x	0.77	×	2.2	x	105.34	0.63	x	0.7	=	212.48	(79)
Southwesto.9x	0.77	x	12.6	x	105.34	0.63	×	0.7	= [405.64	(79)
Southwest _{0.9x}	0.77	x	1.35	_ x [105.34	0.63	x	0.7	=	86.92	(79)
Southwesto.9x	0.77	x	4.32	x [105.34	0.63	x	0.7] = [278.15	(79)
Southwesto.9x	0.77	_ x [1.87	_ x [105.34	0.63	×	0.7	= [120.4	(79)
Southwesto.9x	0.77	_ x [2.2	х	92.9	0.63	×	0.7	= [187.38	(79)
Southwesto.9x	0.77] x [12.6] × [92.9	0.63] × [0.7] = [357.72	(79)
Southwesto.9x	0.77	_ x [1.35	х [92.9	0.63] x	0.7] = [76.65	(79)
Southwesto.9x	0.77] x [4.32	x	92.9	0.63	x	0.7] = [245.29	(79)
Southwesto.9x	0.77	×	1.87] x [92.9	0.63	×	0.7	-	106.18	(79)

Southwesto 9x	0.77	×	2.2	_ × [72.36] [0.63	x	0.7	=	145.96	(79)
Southwesto.sx	0.77	×	12.6	×	72.36	וֹ וֹ	0.63	x	0.7	-	278.65	(79)
Southwesto.sx	0.77	×	1.35] × [72.36	Ī	0.63	×	0.7	=	59.71	(79)
Southwesto,9x	0.77	_ x [4.32	x	72.36	Ī [0.63	×	0.7] = [191.07	(79)
Southwesto.9x	0.77	×	1.87] × [72.36	Ī [0.63	×	0.7	=	82.71	(79)
Southwesto,9x	0.77	x	2,2] x [44.83	Ī [0.63	x	0.7	= [90.41	(79)
Southwesto.9x	0.77	×	12.6] x [44.83	Ī [0.63	x	0.7	= [172.61	(79)
Southwesto 9x	0.77	x	1.35	х	44.83] [0.63	×	0.7	= [36.99	(79)
Southwesto.9x	0.77	x	4.32] x [44.83] [0.63	x	0.7] = [118.36	(79)
Southwesto.9x	0.77	x	1.87] x [44.83] [0.63	x	0.7] = [51.24	(79)
Southwesto.9x	0.77	_ x [2.2] x [31.95] [0.63	x	0.7] = [64.44	(79)
Southwesto 9x	0.77] × [12.6	_ x [31.95] [0.63	x	0.7] = [123.03	(79)
Southwesto,9x	0.77	x [1.35] x [31.95] [0,63	x	0.7] = [26.36	(79)
Southwesto 9x	0.77	×	4.32	×	31.95] [0.63] x [0.7] = [84.36	(79)
Southwesto.9x	0.77	_ x [1.87] x [31.95] [0.63] x [0.7	= [36.52	(79)
Northwest 0.9x	0.77] x [1.26	_ × [11.51] x [0.63	_ x [0.7] = [13.3	(81)
Northwest 0.9x	0.77	_ x [1.87] x [11.51	_ × [0.63	×	0.7] = [59.2	(81)
Northwest 0.9x	0.77	x	1.21	x	11.51] x [0.63	×	0.7] = [25.54	(81)
Northwest 0.9x	0.77	×	1.26] x [23,55	×	0.63	_ x [0.7] = [27.21	(81)
Northwest 0.9x	0.77	_ x [1.87	×	23.55] x [0.63	x	0.7] = [121.15	(81)
Northwest 0.9x	0.77	×	1.21	x	23,55	x	0.63	×	0.7	= [52.26	(81)
Northwest 0.9x	0.77	_ × [1.26] x [41.13] × [0.63	x	0.7	= [47,51	(81)
Northwest 0.9x	0.77	×	1.87	×	41.13	x	0.63	х	0.7	=	211.53	(81)
Northwest 0.9x	0.77	x	1.21] x [41.13	x	0.63	x	0.7	=	91.25	(81)
Northwest 0.9x	0.77	x	1.26	_ x [67,8	_ × [0.63	x	0.7] = [78.32	(81)
Northwest 0,9x	0.77	x	1.87	х	67.8	×	0.63	×	0.7	=	348.72	(81)
Northwest 0.9x	0.77	x [1.21	_ x [67.8] × [0.63	×	0.7] = [150.43	(81)
Northwest 0.9x	0.77	х	1.26	×	89.77	_ x [0.63	x	0.7	=	103.7	(81)
Northwest 0.9x	0.77	x	1.87	x	89.77	x	0.63	x	0.7	= [461.71	(81)
Northwest 0.9x	0.77	×	1.21	_ × [89,77	_ x [0.63	x	0.7	= [199.17	(81)
Northwest 0.9x	0.77	x [1.26	_ x [97.5	x [0.63	х	0.7	=	112.64	(81)
Northwest 0.9x	0.77	×	1.87	_ ×	97.5	×	0.63	×	0.7	=	501.5	(81)
Northwest 0.9x	0.77	x [1.21	×	97.5	x_[0.63	×	0.7] = [216.33	(81)
Northwest 0.9x	0.77	×	1.26	×	92.98	×	0.63	х	0.7	- [107.41	(81)
Northwest 0.9x	0.77	_ x [1.87] x [92.98	_ x	0.63	x	0.7] = [478.24	(81)
Northwest 0.9x	0.77	×	1.21	×	92.98	×	0.63	×	0.7	=	206.3	(81)
Northwest 0.9x	0.77	×	1.26	_ × [75.42	_ × [0.63	×	0.7	= [87.12	(81)
Northwest 0.9x	0.77	х	1.87] x [75.42	х	0.63] x [0.7] = [387.91	(81)
Northwest 0.9x	0.77	×	1.21	x	75.42	x	0.63	×	0.7	=	167.33	(81)
Northwest 0.9x	0.77	x	1.26	x	51.24	x	0.63	x	0.7] = [59.2	(81)
Northwest 0.9x	0.77	×	1.87	×	51.24	x	0.63	×	0.7	=	263.57	(81)

Northwest 0.9x	0.77	×	1.21	×	51.24] x [0.63	×	0.7	=	113,7	(81)
Northwest 0.9x	0.77] × [1.26	×	29.6	×	0.63	x	0.7	=	34.19	(81)
Northwest 0.9x	0.77] × [1.87	_ x	29.6] × [0.63	x	0.7	Ī = [152.24	(81)
Northwest 0.9x	0.77] x [1.21	x	29.6	×	0.63	×	0.7	=	65.67	(81)
Northwest 0.9x	0.77	x	1.26	×	14.52] x [0.63	×	0.7	=	16.78	(81)
Northwest 0.9x	0.77	x	1.87	×	14.52] x [0.63] x	0.7	=	74.71	(81)
Northwest 0.9x	0.77	x	1.21	x	14.52	_ x	0.63	x	0.7	= [32.23	(81)
Northwest 0.9x	0.77	×	1.26	×	9.36] x [0.63] x [0.7	=	10.81	(81)
Northwest 0.9x	0.77	_ × [1.87] × [9.36] x [0.63] x [0.7] - [48.15	(81)
Northwest 0.9x	0.77	x	1.21	x	9.36] × [0.63	×	0.7	=	20.77	(81)
Rooflights 0.9x	1	×	14.44	х	26] x	0.63	x	8.0	=	170.3	(82)
Rooflights 0.9x	1	x	9.61	x	26] x [0.63	x	0.8	= [113.34	(82)
Rooflights 0.9x	1	x	5.76	×	26	x	0.63	x	0.8	=	67.93	(82)
Rooflights 0.9x	1	_ x [0.42	_ x [26] x [0.63] x [0.8	=	9.91	(82)
Rooflights 0.9x	1	x	1.37	×	26] x [0.63	×	0.8	=	32.31	(82)
Rooflights 0.9x	1	×	14.44	×	54	x	0.63	x	0.8	= [353.7	(82)
Rooflights 0.9x	- 1	x	9.61	×	54	_ × [0.63	_ x [0.8	=	235.39	(82)
Rooflights 0.9x	1	x [5.76	×	54	x	0.63	x	0.8	=	141.09	(82)
Rooflights 0.9x	1	x	0.42	x [54] x [0.63] x [0.8	=	20.58	(82
Rooflights 0.9x	1	x	1.37	х	54] x [0.63	x	0.8	=	67.11	(82
Rooflights 0.9x	1	x	14.44	x [94] x [0.63	×	8.0	= [615.7	(82
Rooflights 0.9x	1	_ x [9.61	×	94	_ x [0.63	x	0.8] - [409.76	(82
Rooflights 0.9x	1	_ x [5.76] x [94] * [0.63] x [0.8	= [245.6	(82)
Rooflights 0.9x	-1	×	0.42	×	94] × [0.63	x	0.8	=	35.82	(82)
Rooflights 0.9x	1	x [1.37	x	94] x [0.63	x [0.8	=	116.83	(82
Rooflights 0.9x	1	×	14.44	×	150] × [0.63	x	0.8	=	982.5	(82
Rooflights 0.9x	1] x [9.61	_ × [150] x [0.63] x [0.8	= [653.86	(82
Rooflights 0.9x	1] * [5.76	_ × [150] × [0.63	_ × [0.8] = [391.91	(82
Rooflights 0.9x	1	_ x [0.42	×	150] x [0.63	×	0.8	= [57.15	(82
Rooflights 0.9x	1	_ x [1.37	×	150] × [0.63] × [0.8] = [186.43	(82
Rooflights 0.9x	1	×	14.44	×	190] × [0.63	_ x [8.0	=	1244.5	(82)
Rooflights 0.9x	1	x	9.61	x	190	×	0.63	x	0.8	=	828.23	(82)
Rooflights 0.9x	1] x [5.76	_ x [190] * [0.63] × [0.8] = [496.42	(82
Rooflights 0.9x	1] × [0.42	×	190] x [0.63	х	0.8	= [72.39	(82
Rooflights 0.9x	1	×	1.37	x	190	×	0.63	×	0.8	=	236.14	(82
Rooflights 0.9x	1	×	14.44	x	201	_ x [0.63	x	0.8	= [1316.55	(82
Rooflights 0.9x	-1	_ x [9.61	×	201] × [0.63	×	0.8	= [876.18	(82
Rooflights 0.9x	1	×	5.76	×	201	×	0.63	×	0.8	= [525.16	(82
Rooflights 0.9x	1	×	0.42	×	201	x	0.63	х.	0.8	=	76.59	(82)
Rooflights 0.9x	1	_ x [1,37	_ x [201] x [0.63] x [0.8	=	249.82	(82)
Rooflights 0.9x	1	x	14.44	x	194	x	0.63	×	0.8] = [1270.7	(82)

Rooflights	0.9x	1	×	9.6	31	×	194	×	0.63] × [0.8		845.66	(82)
Rooflights		1	×	5.7	=	×	194	×	0.63	= × =	0.8	=	506.87	(82)
Rooflights	0.9x	1	×	0.4	12	x	194	×	0.63	i x F	0.8	⊣ = [73.92	(82)
Rooflights	0.9x	1	×	1.3	37	x	194	×	0.63	×	0.8	= [241.12	(82)
Rooflights	0.9x	1	x	14.	44	x	164	×	0.63	×	0.8	= [1074.2	(82)
Rooflights	0.9x	1	×	9.6	51	x	164	×	0.63	7 x	0.8	Ħ₌F	714.89	(82)
Rooflights	0.9x	1	×	5.7	76	x	164	×	0.63	×	0.8	= [428.49	(82)
Rooflights	0.9x	1	x	0.4	12	x	164	×	0.63	×	0.8	= [62.49	(82)
Rooflights	0.9x	1	×	1.3	37	×	164	×	0.63	×	0.8		203.83	(82)
Rooflights	0.9x	1	×	14.	44	x	116	×	0.63	×	0.8	=	759.8	(82
Rooflights	0.9x	1	×	9.6	31	x	116	x	0.63	x	0.8	=	505.66	(82
Rooflights	0.9x	1	×	5,7	76	х	116	×	0.63	×	0.8		303.08	(82
Rooflights	0.9x	1	×	0.4	12	x	116	x	0.63	×	0.8	=	44.2	(82
Rooflights	0.9x	1	x	1.3	37	x	116	x	0.63	×	0.8	_] = [144.17	(82)
Rooflights	0.9x	1	×	14.	44	х	68	×	0.63	x [0.8	=	445.4	(82
Rooflights	0.9x	1	×	9.6	51	x	68	×	0.63	x	8.0	= [296.42	(82)
Rooflights	0.9x	1	×	5.7	76	×	68	×	0.63	x	0.8	_ = [177.67	(82
Rooflights	0.9x	1	×	0.4	12	х	68	x 🗆	0.63	×	0.8	=	25.91	(82)
Rooflights	0.9x	1	x	1.3	37	x	68	x	0.63	×	0.8	_ = [84.51	(82
Rooflights	0.9x	10	- X	14.	44	x	33	×	0.63	х	0.8	=	216.15	(82
Rooflights	0.9x	1	×	9.6	31	×	33	x	0.63	×	0.8	=	143.85	(82
Rooflights	0.9x	1	x	5.7	76	χ	33	x	0.63	x	0.8	=	86.22	(82
Rooflights	0.9x	1	x	0.4	12	X	33	×	0.63	×	0.8	= [12.57	(82
Rooflights		1	x	1.3	37	х	33	x	0.63	x [0.8	=	41.01	(82
Rooflights	0.9x	1	х	14.	44	x	21	×	0.63	x [0.8	= [137.55	(82
Rooflights	0.9x	1	×	9.6	31	х	21	×	0.63	×	0.8	=	91.54	(82
Rooflights	0.9x	1	×	5.7	6	x	21	×	0.63	x	0.8	=	54.87	(82
Rooflights	0.9x	1	×	0.4	12	x	21	×	0.63	× [0.8		8	(82
Rooflights	0.9x	1	×	1.3	37	х	21	×	0,63	x	8.0	= [26.1	(82
Solar gair	ns in w	atts, ca	lculated	for each	h month	i i		(83)m = S	Sum(74)m	(82)m				
83)m= 23	25.51 4	1249.93	6312.19	8889.13	10673.08	11182.74	10824.98	9446.02	7357.1	5027.5	2841.46	1952.03		(83
Total gain	ns – int	ernal a	nd solar	r (84)m =	(73)m	+ (83)m	, watts	30		(
84)m= 48	64.64	3783.23	8748	11161.23	12762.08	13111.61	12660.93	11293.23	9298.57	7132.96	5134.43	4401.82		(84)
7 Mean	intern	al temp	erature	(heating	seasor))								116
Tempera	ature d	uring h	eating p	eriods in	the livi	ng area	from Ta	ble 9, Th	11 (°C)			Г	21	(85)
Utilisatio	n facto	or for ga	ains for	living are	ea, h1,m	(see Ta	able 9a)					8=	7-7-7	(0)
100	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
	1	1	1	1	1	0.98	0.88	0.92	1	1	1	1		(86)
				Same		allow etc	ens 3 to	7 in Tabl	e 9c)	Y		30 A		
86)m=		emper	ature in	living are	ea 1 (fo	DIION SEC								
86)m= Mean int		empera 19.6	ature in 19.84	living are	20.45	20.74	20.92	20.9	20.61	20.2	19.76	19.52		(87)
86)m= Mean int	ternal t	19.6	19.84	20.11	20.45	20.74	20.92	20.9	20.61	20.2	19,76	19.52		(87)

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Utilisa	ation fac	ctor for g	ains for	rest of d	welling,	h2,m (se	e Table	9a)						
(89)m=	1	1	1	1	0.99	0.95	0.77	0.83	0.99	1	1	1		(89)
Mean	interna	il temper	ature in	the rest	of dwell	ing T2 (f	ollow ste	eps 3 to 7	in Tabi	le 9c)				
(90)m=	18.63	18.75	18.98	19.26	19.61	19.89	20.04	20.03	19.76	19.35	18.91	18.67		(90)
				(A)	197				1 5	LA = Livin	g area + (4) =	0.05	(91)
Monn	interna	I tompo	mts area /fo	or then sub	olo duo	ttine) - f	A - T1	+ (1 - fL	A) × T2				333,932	
(92)m=	18.67	18.79	19.02	19.3	19.65	19.93	20.08	20.07	19.8	19.39	18.95	18.71		(92)
			200					4e, whe			10.55	10.7.7		-
(93)m=	18.67	18.79	19.02	19.3	19.65	19.93	20.08	20.07	19.8	19.39	18.95	18.71		(93)
AND RESIDENCE OF THE PARTY OF T		ting reg		10.0	10.00	10.00	20.00	20,07	10.0	10.00	10.00	10.71		
-	-	ARREST MANAGE		mperatu	re obtain	ned at st	en 11 of	Table 9t	so tha	t Ti m=/	76)m an	d re-calci	ilate	
		factor fe				aco at ot	ъ	rabic of	, 50 trio		, 0,,,, 0,,	a re caro	andre	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Utilisa	ation fac	ctor for g	ains, hr											
(94)m=	1	1	1	- 1	0.99	0.95	0.77	0.83	0.99	1	1	1		(94)
Usefu	Il gains,	hmGm	. W = (9	4)m x (8	4)m									
(95)m=	4864.62	6783.09	8746.72	11149.6	12656.56	12427.44	9781.19	9325.42	9201.25	7130.77	5134.38	4401.82		(95)
Month	nly aver	age exte	rnal ten	peratur	e from T	able 8								
(96)m=	4.5	5	6.8	8.7	11.7	14.6	16.9	16.9	14.3	10.8	7	4.9		(96)
Heat	loss rati	e for me	an interr	al temp	erature,	Lm.W	=[(39)m	x [(93)m	- (96)m	1				
(97)m=	49478.29	47849.54	42420.56	36378.99	27100.8	18124.63	10789.93	10746.23	18792.31	29486.3	41233.09	47924.66		(97)
Space	e heatin	g requir	ement fo	r each r	nonth, k	Wh/mon	th = 0.02	24 x [(97	m - (95)m] x (4	1)m			
(98)m=	33192.57	27596.65	25053.33	18165.16	10746.51	0	0	0	0	16632.52	25991.08	32380.99		
	-			Lanca Contractor				Tota	per year	(kWh/year) = Sum(9	0) .s. u =	189758.82	(98)
Span	e heatin	ng requir	ement in	W/M/m	2/vear							L	56.87	(99)
100.00	a secondario		*10000000000	SSCAROTOSS	rycui								39.07	1,550
124-104		oling rec		Shirt III										
Calcu		Feb		August. Apr	See Ta	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Lient	Jan loop rat		Mar		-			and exte						
(100)m=		0	o	0	0			21005.29	0	o	0	0		(100
	_	ctor for k				20224.20	21000.20	21005.25						
(101)m=	_	0	0	0	0	0.55	0.71	0.66	0	0	0	0		(101
							0.71	0.00	0	0		-		1.0.
(102)m=	0	hmLm (V	o o	(100)m)	0		+ 4920 02	13772.73	0	0	0	0		(102
2012										0	0	0		(102
525 R. R. C. C.		gains ca	o	o o	o o			e Table		_				(103
(103)m=					_			14372.96	0	0	0	0		(103
		g require zero if i				twelling,	continu	ous (KW	n) = 0.0	24 x [(10	13)m – (102)m]x	(41)m	
mert.	A	a Loro III	V-05-4/1111	0100	7111		201.00			0				
(104)m=	0	0	0	0	0	0	701.58	446.57	0		.0	0 1		
(104)m=	0	0	0	.0	0	0	701.58	446.57	Total		104)	0	1148.15	7004
		-	0	0	0	0	701.58	446.57	Total	= Sum(104)	=	1148.15	(104
Cooled	d fractio	n			0	0	701.58	446.57	Total		104)	=	1148.15 0.99	(104
	d fractio	-			0	0.25	9.25	0.25	Total	= Sum(104)	=		1,177

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APPENDIX (v)

SAP L1A 2010 REGULATIONS COMPLIANCE REPORT (SAP NEW DWELLING DESIGN STAGE WORKSHEETS)

		User Details					
Assessor Name: Software Name:	Ondrej Gajdos Stroma FSAP 2009		na Num are Ver		1200	006629 n: 1.4.0.91	
	Pro	perty Address	s Propos	ed			
Address :	1 Radlett Place, London, NW	8 6BT					
 Overall dwelling dim 	ensions:						
Description		Area(m²)	7	Ave Height	100000	Volume(m ³	_
Basement		831	(1a) x	2.7	(2a) =	2243.7	(3a)
Ground floor		1114	(1b) x	4	(2b) =	4456	(3b)
First floor		657	(1c) x	4	(2c) =	2628	(3c)
Second floor		571	(1d) x	3.6	(2d) =	2055.6	(3d)
Third floor		164	(1e) x	3	(2e) =	492	(3e)
Total floor area TFA = (*	1a)+(1b)+(1c)+(1d)+(1e)+(1n)	3337	(4)			100,001%	
Dwelling volume			(3a)+(3b))+(3c)+(3d)+(3e)	+(3n) =	11875,3	(5)
2 Ventilation rate:	28 2 2	993					
	main Secondary heating heating	other		total		m³ per hou	ır
Number of chimneys	0 + 0	. 0	_ = [0	x 40 =	0	(6a)
Number of open flues	0 + 0	+ 0	∃ = F	0	x 20 =	0	(6b)
Number of intermittent fa	ans		~ F	0	x 10 =	0	(7a)
Number of passive vents	s		F	0	x 10 =	0	(7b)
Number of flueless gas	fires		Ē	0	x 40 =	0	(7c)
			9		Air ch	anges per ho	our
Infiltration due to chimne	eys, flues and fans = (6a)+(6b)+(7a))+(7b)+(7c) =	Г	0	+ (5) =	0	(8)
	been carried out or is intended, proceed		continue fr	171			200
Number of storeys in t	the dwelling (ns)					0	(9)
Additional infiltration					[(9)-1]x0.1 =	0	(10)
	0.25 for steel or timber frame or 0			ruction	[0	(11)
if both types of wall are p deducting areas of open	present, use the value corresponding to ti lings): If equal user 0.35	he greater wall ar	ea (after				
시하시기 기계 회사 사람들은 경기 기계를 하였다.	floor, enter 0.2 (unsealed) or 0.1	(sealed), else	enter 0		1	0	(12)
If no draught lobby, er	nter 0.05, else enter 0				Ì	0	(13)
Percentage of window	s and doors draught stripped				Ì	0	(14)
Window infiltration		0.25 - [0.	2 x (14) + 1	00] =		0	(15)
Infiltration rate		(8) + (10) + (11) + (1	12) + (13) + (15)	=	0	(16)
Air permeability value	, q50, expressed in cubic metres	per hour per :	square m	etre of envelo	ope area	5	(17)
If based on air permeab	ility value, then (18) = [(17) + 20]+(8)	otherwise (18) =	(16)			0.25	(18)
	es if a pressurisation test has been done	or a degree air p	ermeability	is being used			
Number of sides on which	ch sheltered	(80) - 1	10.075 11	1011 -		1	(19)
Shelter factor	200-200-200-200-2		- [0.075 x (1	9)]=	Į	0.92	(20)
Infiltration rate incorpora	ating shelter factor	(21) = (1	8) x (20) =			0.23	(21)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
onthi	y averag	ge wind:	speed fr	om Tabl	e 7									
22)m=	5.4	5.1	5.1	4.5	4.1	3.9	3.7	3.7	4.2	4.5	4.8	5.1		
Vind F	actor (2	2a\m = i	(22)m +	4										
	1.35	1.27	1.27	1,12	1.02	0.98	0,92	0.92	1,05	1.12	1.2	1.27		
diuste	ed infiltra	ation rate	e (allowi	na for st	nelter an	d wind s	peed) =	(21a) x (22a\m					
	0.31	0.29	0.29	0.26	0.24	0.23	0.21	0.21	0.24	0.26	0.28	0.29		
		tive air d	change r	ate for t	ne applic	able ca	se						0.5	(23
				endix N, (2	3b) = (23a) × Fmv (e	quation (N5)), other	wise (23b)	= (23a)		F	0.5	(23
If bala	nced with	heat reco	wery: effici	ency in %	allowing fo	or in-use f	actor (from	n Table 4h)	=			⊢	72.25	(23
a) If	balance	d mecha	anical ve	ntilation	with hea	at recove	ery (MV	HR) (24a)m = (22	2b)m + (2	23b) × [1	- (23c) +		
4a)m=	0.45	0.43	0.43	0.4	0.38	0.36	0.35	0.35	0.38	0.4	0.42	0.43		(24
b) If	balance	d mecha	anical ve	ntilation	without	heat rec	overy (f	MV) (24b)m = (22	b)m + (2	23b)	- 51		
4b)m=	0	0	0	0	0	0	0	0	0	0	0	0		(24
c) If	whole h	ouse ext	ract ven	tilation o	or positiv	e input v	entilatio	on from o	utside		((TA TA		
						-		c) = (22b)		5 × (23b	-			
lc m=		0	0	0	0	0	0	0	0	0	0	0		(2
						Control of the Control of		on from $60.5 + [(2)$		0.51				
4d)m=		0	0	0	0	0	0	0.5+[(2.	0	0	0	0		(24
Effec	ctive air	change	rate - en	ter (24a) or (24b) or (24	c) or (24	ld) in box	(25)					
5)m=	0.45	0.43	0.43	0.4	0.38	0.36	0.35	0.35	0.38	0.4	0.42	0.43		(2
SI VUE	at locate	a most his	of loon a											
	ai lusse:			name areas promotes Pa										
	IENT	Gros	All the second	Openin	and a	Net Ar	ea	U-valu	ie.	AXU		k-value	А	Χk
LEN	IENT	1141000	ss	and the latest state of	gs	Net Ar A ,r	7.27	U-valu W/m2	K .	A X U (W/i	<)	k-value kJ/m²·K		X k I/K
LEN oors	MENT Type 1	Gros	ss	Openin	gs		7.27				<) 	Control of the Contro		I/K
DOTS OORS	Type 1 Type 2	Gros	ss	Openin	gs	А,г	n²	W/m2	K .	(W/I	<) 	Control of the Contro		J/K (2)
LEN oors	MENT Type 1	Gros	ss	Openin	gs	A ,r 3.36	n² x	W/m2 1.5	K □ = [(W// 5.04	() 	Control of the Contro		J/K (2) (2)
LEM pors pors pors	Type 1 Type 2	Gros area	ss	Openin	gs	A ,r 3.36 2.1	m ²	1.5 1.5	K = [= [5.04 3.15	<	Control of the Contro		
Dors oors oors oors ondo	Type 1 Type 2 Type 3	Gros area	ss	Openin	gs	A ,r 3.36 2.1 3.36	m ²	1.5 1.5 1.5	K = [5.04 3.15 5.04	<) 	Control of the Contro		(2) (2) (2)
DOTS DOTS DOTS DOTS DOTS DOTS DOTS DOTS	Type 1 Type 2 Type 3 ws Type	Gros area	ss	Openin	gs	A ,r 3.36 2.1 3.36 49.5	n ²	W/m2 1.5 1.5 1.5 (1.7 (1.5)+	K = [5.04 3.15 5.04 70.05	©	Control of the Contro		(2 (2 (2 (2 (2
Dors ors ors ors ors ors ors ors ors ors	Type 1 Type 2 Type 3 ws Type ws Type	Gros area	ss	Openin	gs	A ,r 3.36 2.1 3.36 49.5	n ²	W/m2 1.5 1.5 1.5 1.5 1/1/(1.5)+	K = [= [0.04] = [0.04] = [0.04] = [5.04 3.15 5.04 70.05 29.72	<>	Control of the Contro		(2) (2) (2) (2)
DOTS DOTS DOTS DOTS DOTS DOTS DOTS DOTS	Type 1 Type 2 Type 3 ws Type ws Type ws Type	Gros area	ss	Openin	gs	A ,r 3.36 2.1 3.36 49.5 21 4.32	n² x x x x x x x x x x x x x x x x x x x	W/m2 1.5 1.5 1.5 (1.7 (1.5)+ (1.7 (1.5)+	K = [(W// 5.04 3.15 5.04 70.05 29.72 6.11	©	Control of the Contro		I/K (2 (2 (2 (2 (2 (2 (2 (2 (2 (2 (2 (2 (2
DOTS DOTS DOTS DOTS DOTS DOTS DOTS DOTS	Type 1 Type 2 Type 3 ws Type ws Type ws Type ws Type	Gros area	ss	Openin	gs	A , r 3.36 2.1 3.36 49.5 21 4.32	n² x x x x x x x x x x x x x x x x x x x	W/m2 1.5 1.5 1.5 1.5 1.7 1.5 1.7 1.5)+ 1.7 1.7 1.5)+ 1.7 1.7 1.5)+	$ \begin{array}{ccc} X & = & \\ $	5.04 3.15 5.04 70.05 29.72 6.11 15.28		Control of the Contro		(2 (2 (2 (2 (2 (2 (2 (2
LEM poors poors indov indov indov indov	Type 1 Type 2 Type 3 ws Type ws Type ws Type ws Type ws Type ws Type	Gros area 1 2 3 4 5 6	ss	Openin	gs	A , r 3.36 2.1 3.36 49.5 21 4.32 10.8 9.52	n² x x x x x x x x x x x x x x x x x x x	W/m2 1.5 1.5 1.5 1.5 1.5 1.6 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	$ \begin{array}{ccc} X & = & \\ $	(VV/IIII) 5.04 3.15 5.04 70.05 29.72 6.11 15.28 13.47		Control of the Contro		(2) (2) (2) (2) (2) (2) (2) (2) (2) (2)
LEN oors oors indo	Type 1 Type 2 Type 3 ws Type	Gros area 1 2 3 4 5 6 7	ss	Openin	gs	A , r 3.36 2.1 3.36 49.5 21 4.32 10.8 9.52	n²	W/m2 1.5 1.5 1.5 1.5 1.5 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	$\begin{bmatrix} X \\ = [\\ = [\\ 0.04] = [$	(VV/IIII) 5.04 3.15 5.04 70.05 29.72 6.11 15.28 13.47 2.65		Control of the Contro		(2) (2) (2) (2) (2) (2)
LEN oors oors oors findout	Type 1 Type 2 Type 3 ws Type	Gros area 1 2 3 4 5 6 7 8	ss	Openin	gs	A , r 3.36 2.1 3.36 49.5 21 4.32 10.8 9.52 1.87	x x x x x x x x x x	W/m2 1.5 1.5 1.5 1.5 1.5 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7	$\begin{bmatrix} X \\ \\ \end{bmatrix} = \begin{bmatrix} \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \end{bmatrix} 0.04 \end{bmatrix} = \begin{bmatrix} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	(VV/IIII) 5.04 3.15 5.04 70.05 29.72 6.11 15.28 13.47 2.65		Control of the Contro		(2 (2 (2 (2 (2 (2 (2 (2 (2 (2 (2 (2 (2 (

Heat transfer of (39)m= 3103,59			2899.69	2809.07	2763.76	2718.44	2718.44	***	mane er	2967.66	MARK 24		
Lines have a select	petticiér	IL, VV/K						(39)m	=(37)+(3	io)m			
1707-16			1003.23	147 2.03	1427.32	1302.01	1002.01	A3000	Time of	Side in	.000,10		100
Jan (38)m= 1767,16	Feb 1699.19	Mar 1699.19	Apr 1563.25	May 1472.63	Jun 1427.32	Jul 1382.01	Aug 1382.01	Sep 1495.29	Oct 1563.25	Nov 1631.22	Dec 1699.19		(3)
Ventilation hea								1	= 0.33 × (2	2.00			
Total fabric hea	at loss				(4)			(33) +		Specificação		1336.44	(3)
Thermal bridge of details of therma											L	106.33	(3
can be used instead				wing A-	nondiv t	,					-		7
For design assess	ments wh	ere the de	tails of the				ecisely the	indicative	values of	TMP in Ta	ible 1f		-
Thermal mass			= Cm -	TFA) ir	ı kJ/m²K				tive Value:			250	(3
Heat capacity			-/						(30) + (32	2) + (32a)	.(32e) = [118555.56	(3
include the area Fabric heat los				is and part	litions		(26)(30)	+ (32) =			_	1230.1	(3
for windows and						lated using	formula 1	¶(1/U-valu	e)+0.04] a	s given in _l	paragraph 3	1.2	
Total area of e	ements	, m²	200	- 725	4773.	5		-8	3			93 #T	(3
Roof Type5	105	5	0		105	×	0.2	= [21				(3
Roof Type4	507		3.58		503.4	2 x	0.18	= [90.62				(3
Roof Type3	63		0		63	x	0.18	= [11.34	ĪĪ			(3
Roof Type2	155	5	5.76		149.2	4 X	0.18] = [26.86	ĪĪ			(3
Roof Type1	352	ı	24.0	5	327.9	5 ×	0.16	= [52.47	īĒ			(3
Walls Type4	680	,	0		680	×	0.19	= [129.2	ΠĒ			(2
Walls Type3	31.5	5	6.3		25.2	x	0.2	=	5.04	īĒ		1 🗀	(2
Walls Type2	124	4	272.6	9	971.3	1 x	0.21	= [203.98	ī ī		ī 💳	(2
Walls Type1	522	2	0		522	×	0.11	= i	57.42	ī ī		1	(2
Floor					1114	×	0.17		189.38	T r		1 \square	(2
Rooflights Typ	e 5				1.37	×1	(1/(1.5) +	0.04] =	2.055	Ħ			(2
Rooflights Typ	e 4				0.42	x1	(1/(1.5) +	0.04] =	0.63	Ħ			(2
Rooflights Typ	e 3				5.76	x1	(1/(1.5)+	0.04] =	8.64	Ħ			(2
Rooflights Typ	e 2				9.61	x1	(1/(1.5) +	0.04] =	14.415	Ħ			(2
Rooflights Typ					14.44	= .	(1/(1.5) +		21.66	Ħ			(2)
Windows Type					1.87		(1/(1.5)+	0.04] =	2.65	ヺ			(2
Windows Type					4.32	= .	(1/(1.5)+	0.04] =	6.11	Ħ			(2
Windows Type					1.35	= .	(1/(1,5)+	0.04] =	1.91	Ħ			(2
Windows Type					1.35	= .	(1/(1.5)+		1.91	i i			(2
Windows Type					1.87	= .	(1/(1.5)+		2.65	╡			(2
Windows Type					1.21		(1/(1.5)+		1.71	╡			(2
Windows Type					9.1	=	(1/(1,5)+		12.88	╡			(2
Windows Type					12.6	=	(1/(1.5)+		17.83	╡			(2
Windows Type					2.2	=	[1/(1.5)+		3.11	╡			(2
Windows Type	in la lami				1.32	=	(1/(1.5)+		1.87	╡			(2
	12				24.5	x1	(1/(1.5)+	0.041 =	34.67	7			(2

Heat Id	oss para	meter (H	HLP), W	m²K					(40)m	= (39)m +	(4)			
40)m=	0.93	0.91	0.91	0.87	0.84	0.83	0,81	0.81	0.85	0.87	0.89	0.91		
										Average =	Sum(40)	u/12≃	0.87	(4
lumbe			nth (Tab		1444	- Long	1.1		0	0.1	News	I		
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		(4
41)m=	31	28	31	30	31	30	31	31	30	31	30	31		14
d the	Dar boom	Contract of the Contract of th		(comment								kWhye		
4 VVS	ner nea	ing ene	gy requi	rement.								KVVIIIye	31	
Ssum	ed occu	pancy, I	N + 1 76 v	[4 ovn	/ 0.0003	040 v /Tt	TA 420)2)]+0.0	0012 v /	TEA 42	7.	08		(4
	A £ 13.9		T 1.70 A	[1 - exh	1-0.000	745 X (11	M-10.0	12/1+0.0) X 61 00	IFA-19.	٥)			
								(25 x N)				2.35		(4
			not water person per				10 10 Co. Co. Co.	to achieve	a water us	e target o		323		
	Jan	Feb	Mar	Apr	Mav	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
fot wate	_		day for ea						ССР	Out	1101	Deo		
\$4)m=	222.59	214.49	206.4	198.3	190.21	182.12	182.12	190.21	198.3	206.4	214.49	222.59		
		diamento di in	STORY AND SONS		Chara the cas		on a management			Total = Sur	A COLUMN TO SERVICE STATE OF THE PERSON AND ADDRESS OF THE PERSON AND	Granden III	2428.21	(4
nergy o	content of	1022 1020	used - cak		onthly = 4.			7m/3600				c, 1d)		
45)m=	330.88	289.39	298.62	260.35	249.81	215.57	199.75	229.22	231.96	270.32	295.08	320.44		_
instant	taneous w	ater heatii	na at point	of use (no	hot water	storage)	enter 0 in	boxes (46,		Total = Sur	m(45). 13 =		3191.38	(4
										40.55	44.30	49.07		(4
(6)m= Vater	storage	43.41 loss:	44.79	39.05	37.47	32.33	29.96	34.38	34.79	40.55	44.26	48.07		1.5
			clared lo	ss facto	r is know	vn (kWh	/day):					10		(4
empe	erature f	actor fro	m Table	2b							0	.6		(4
nergy	lost fro	m water	storage	, kWh/y	ear			(47) x (48)	=			6		(4
			red cylir								=	=		
) includir					9			_	0		(5
	1000		no tank in t water (thi					enter '0' in	box (50)					
			factor fr				0000		5107			0		(5
		from Ta			50000 6 000 0		**				=	0		(5
			m Table	2b							-	0		(5
Energy	lost fro	m water	storage	, kWh/y	ear			((50) x (51) x (52) x	(53) =	\equiv	0		(5
Inter ((49) or (54) in (5	5)								- 1	6		(5
Vater	storage	loss cal	culated f	or each	month			((56)m = (55) × (41)	m	T.	163		
56)m=	186	168	186	180	186	180	186	186	180	186	180	186		(5
cylinde	er contains	s dedicate	d solar sto	rage, (57)	m = (56)m	x [(50) - (H11)]+(5	0), else (5	7)m = (56)	m where (H11) is fro	m Appendix	н	
57)m=	186	168	186	180	186	180	186	186	180	186	180	186		(5
Primar	v circuit	loss (ar	nual) fro	m Table	3	-					3	60		(5
						59)m =	(58) + 36	65 × (41)	m					
	Transcription.				Carrow Albert			ng and a		r thermo	stat)			
59)m=	30.58	27.62	30.58	29.59	30.58	29.59	30.58	30.58	29.59	30.58	29.59	30.58		(5
	loss ca	culated	for each	month	(61)m=	(60) + 30	65 × (41)m						
Combi														
Combi 61)m=	0	0	0	0	0	0	0	0	0	0	0	0		(6

			469.94			440.00	445.5					(59)m + (61)m	
62)m= 547.45		515.2		466.38	425.15	416.33	445.8	441.55	486.9	504.67	537.01		(6
iolar DHW inpu add addition									r contribut	on to wate	r heating)		
63)m= 0	0	0	0	0	o 0	o o	0	T o	0	0	0		(6
	- Marcon stante		0			0		L					10
Output from 547.4	_	515.2	469.94	466.38	125.15	416.33	AAEO	144.55	400.0	E04.07	E27.04		
64)m= 547.45	400	313,2	409.94	400,30	425.15	410.33	445.8	441.55	486.9	504.67	537.01	5744.20	(6
lant anima fo		bestes	LAA fin fan		E ' 10 0E	- / AE\-		tput from w		- MILLION BO		5741.38	10
leat gains fr						_	249.48	_				1	(6
65)m= 283.20	20 E 10 E	272.55	254.24	256.32	239.35	239,68	2000000	E25651	263.14	265.79	279.81	104	10
include (57)m in cal	sulation o	of (65)m	only if o	ylinder i	s in the o	dwelling	or hot w	ater is fr	om com	munity h	eating	
5 Internal	jains (sei	: Table 5	and 5a	60									
Metabolic ga	ins (Table	5), Wat	ts										
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
66)m= 424.8	424.8	424.8	424.8	424.8	424.8	424.8	424.8	424.8	424.8	424.8	424.8		(6
ighting gain	s (calcula	ted in Ap	pendix	L, equat	ion L9 o	r L9a), a	lso see	Table 5					
67)m= 549.75	488.29	397.1	300.63	224.73	189.72	205	266.47	357.65	454.12	530.03	565.03		(6
Appliances g	ains (calc	ulated in	Append	dix L, eq	uation L	13 or L1	3a), als	o see Ta	ble 5				
38)m= 3127.6	4 3160.1	3078.31	2904.2	2684.41	2477.85	2339.85	2307.39	2389.18	2563.29	2783.08	2989.64		(6
cooking gair	is (calcula	ated in Ar	ppendix	L. equat	ion L15	or L15a	, also s	ee Table	5				
69)m= 84.56	1	84.56	84.56	84.56	84.56	84.56	84.56	84.56	84.56	84.56	84.56		(6
Pumps and f	ans nains	(Table 5	ial	00000	1,540,935-7		-57:20:00						
70)m= 0	0	0	0	0	0	0	0	0	0	0	0		0
osses e.g. e			1200000			1000	- 1						9
71)m= -283.2	_	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2	-283.2		(7
			200.2	200.2	200.2	200.2	200.2	200,2	200,2	-200.2	200.2		4.
Vater heatin	1	_	252.44	244.62	222.42	222.45	226.22	240	252.00	200.46	270.00		17
72)m= 380.75		366.33	353,11	344.52	332.43	322.15	335.32	C.1964 -1	353.69	369.15	376.08		.(7
otal interna		_	-	THE COURSE NAME.	-			+ (69)m + (- 00
73)m= 4284.3	_	4067.91	3784.1	3479.82	3226.16	3093.16	3135,34	3312.99	3597.26	3908.41	4156.92		(7
	15												
	Carlotte Laborat	continue a side of		W-14- W-							200		
Solar gains are				Table 6a			tions to o	onvert to th	e applicat		ion.	Callan	
Solar gains are		actor	r flux from Area m²	Table 6a	Flu			onvert to th g_ Table 6b	523	FF able 6c	ion.	Gains (W)	
Solar gains are Orientation:	Access F Table 6d	actor	Area		Flu Ta	IX.		9_	523	FF	ion, =]0
Solar gains are Drientation: Northeast 0.9x	Access F Table 6d	actor	Area m²	5	Flu Tal	x ble 6a		g_ Table 6b	T	FF able 6c		(VV)	=
Solar gains are Drientation: Northeast 0.9x	Access F Table 6d 0.54	actor x	Area m²	5 2	Flu Tal	x ble 6a 1.51	х	g_ Table 6b 0.63	T x	FF able 6c 0.7	=	(W) 122.11](7
Solar gains are Drientation: Fortheast 0.9x Fortheast 0.9x Fortheast 0.9x	Access F Table 6d 0.54 0.77 0.77	Factor x	Area m² 49 2.1	5 2 5	Flu Ta	1.51 1.51	x x	g_ Table 6b 0.63 0.63	x x	FF able 6c 0.7 0.7	=	(VV) 122.11 19.14 86.18	
Solar gains are Drientation: Northeast 0.9x Northeast 0.9x Northeast 0.9x	Access F Table 6d 0.54 0.77 0.77	x x x	Area m² 49 2.1 24	5 5 5 5 5 5 6 7 2	Flu Tal	1.51 1.51 1.51	x x	g_ Table 6b 0.63 0.63 0.63	X X X	FF able 6c 0.7 0.7 0.7	= = =	(W) 122.11 19.14 86.18 13.93	
Solar gains are Drientation: Northeast 0.9x Northeast 0.9x Northeast 0.9x Northeast 0.9x	Access F Table 6d 0.54 0.77 0.77 0.77	x x x x x	Area m² 49 2.1 24 1.3 9.	5 5 5 5 12 1	Flu Tal	1.51 1.51 1.51 1.51	x	9_ Table 6b 0.63 0.63 0.63 0.63	x	FF able 6c 0.7 0.7 0.7 0.7	= = = = = = = = = = = = = = = = = = = =	(W) 122.11 19.14 86.18 13.93 32.01	
Solar gains are Orientation: Northeast 0.9x Northeast 0.9x Northeast 0.9x Northeast 0.9x Northeast 0.9x Northeast 0.9x	Access F Table 6d 0.54 0.77 0.77 0.77 0.77	x x x	Area m² 49 2.1 24	5 5 5 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Flu Tal x 1 1 x 1 x 1 1 x 1 x 1 1 x	1.51 1.51 1.51	x x	g_ Table 6b 0.63 0.63 0.63	X X X	FF able 6c 0.7 0.7 0.7	= = = = = = = = = = = = = = = = = = = =	(W) 122.11 19.14 86.18 13.93	

Northeast 0.9x	0.54	×	49.5	×	23.55	×	0.63	x	0.7	= [249.89	(75)
Northeast 0.9x	0.77	x	2.72	×	23.55	×	0.63	х	0.7	=	39.16	(75)
Northeast 0.9x	0.77	×	24.5	_ x [23.55	×	0.63	x	0.7	= [176.36	(75)
Northeast 0.9x	0.77	x	1.32] x [23.55	x	0.63	×	0.7] = [28.51	(75)
Northeast 0.9x	0.77	х	9.1	×	23.55	x	0.63	х	0.7	= [65.51	(75)
Northeast 0.9x	0.77	×	1.21] x [23.55	_ x [0.63	x	0.7	= [26.13	(75)
Northeast 0.9x	0.77	x	1.87	×	23.55	×	0.63	x	0.7	=	26.92	(75)
Northeast 0.9x	0.77	x	1.35	×	23.55	x	0.63	x	0.7] = [19.44	(75)
Northeast 0.9x	0.54	х	49.5] x [41.13	x	0.63	x	0.7] = [436.32	(75)
Northeast 0.9x	0.77	x	2.72] x [41.13] x [0.63	×	0.7] = [68.37	(75)
Northeast 0.9x	0.77	x [24.5] x [41.13] x [0.63	×	0.7] = [307.94	(75)
Northeast 0.9x	0.77	x	1.32	×	41.13	x	0.63	х	0.7	=	49.77	(75)
Northeast 0.9x	0.77	x	9.1	x	41.13	x	0,63	×	0.7] = [114.38	(75)
Northeast 0.9x	0.77	x	1.21] x [41.13] x [0.63	x	0.7] = [45.62	(75)
Northeast _{0.9x}	0.77	x	1.87] x [41.13] x [0.63	х	0.7] = [47.01	(75)
Northeast 0.9x	0.77	×	1.35	×	41.13	×	0.63	x	0.7	=	33.94	(75)
Northeast 0.9x	0.54	х	49.5	x	67.8	_ x	0.63	x	0.7] = [719.28	(75)
Northeast 0.9x	0.77	×	2.72	_ x [67.8	_ x [0.63	×	0.7] = [112.72	(75)
Northeast 0.9x	0.77	×	24.5	_ x [67.8	x	0.63	×	0.7] = [507.64	(75)
Northeast 0.9x	0.77	х	1.32	_ x [67.8	_ x [0.63	×	0.7] = [82.05	(75)
Northeast 0.9x	0.77	x	9.1] x [67,8] x [0.63	х.	0.7] = [188.55	(75)
Northeast 0.9x	0.77	×	1.21] x [67.8] x [0.63	_ x _	0.7] - [75.21	(75)
Northeast 0.9x	0.77	x	1.87] × [67.8	×	0.63	x	0.7] = [77.49	(75)
Northeast 0.9x	0.77	×	1.35] x [67.8] x [0.63	x	0.7	= [55,94	(75)
Northeast 0.9x	0.54	х	49.5	×	89.77	×	0.63	x	0.7] = [952.34	(75)
Northeast 0,9x	0.77] x [2.72] × [89.77	x	0.63	_ x	0.7] = [149.24	(75)
Northeast 0.9x	0.77	×	24.5	_ x [89.77	_ x [0.63	×	0.7] = [672.12	(75)
Northeast 0.9x	0.77	x	1.32] x [89.77] x [0.63	x	0.7] = [108.64	(75)
Northeast 0.9x	0.77	x	9.1	_ x [89.77	x	0.63	x	0.7] = [249.65	(75)
Northeast 0.9x	0.77	x	1.21	_ x [89,77	_ x	0.63	x	0.7] = [99.58	(75)
Northeast 0.9x	0.77	x	1.87	_ x [89.77	X.	0.63	x	0.7] = [102.6	(75)
Northeast 0.9x	0.77	×	1.35	_ × [89.77	_ × [0.63	×	0.7	=	74.07	(75)
Northeast 0.9x	0.54	×	49.5	×	97.5	_ x [0.63	×	0.7] = [1034.41	(75)
Northeast 0.9x	0.77	х	2.72] x [97.5	x	0.63	х	0.7	= [162.1	(75)
Northeast 0.9x	0.77	_ x [24.5	_ x [97.5	×	0.63	x	0.7] = [730.04	(75)
Northeast 0.9x	0.77	×	1.32] * [97.5] x [0.63] x [0.7] = [118	(75)
Northeast 0.9x	0.77	×	9.1] x [97.5] x [0.63	x	0.7] = [271.16	(75)
Northeast 0.9x	0.77	x	1.21] x [97.5	_ x [0.63	x	0.7] = [108.17	(75)
Northeast 0.9x	0.77	×	1.87] x [97.5	x	0.63	x	0.7] = [111.44	(75)
Northeast 0.9x	0.77	х	1.35	_ x [97.5	x	0.63	x	0.7] = [80.45	(75)
Northeast 0.9x	0.54	×	49.5	T x	92.98	7 x [0.63	×	0.7	7 = [986.43	(75)

Northeast 0.9x	0.77	×	2.72] * [92.98	×	0.63	x	0.7] = [154.58	(75)
Northeast 0.9x	0.77	×	24.5	x [92.98	x	0.63	x	0.7] = [696.18	(75)
Northeast 0.9x	0.77] × [1.32] x [92.98] × [0.63	x [0.7	= [112.53	(75)
Northeast 0.9x	0.77	_ x [9.1	×	92.98	×	0.63	x	0.7] - [258.58	(75)
Northeast 0.9x	0.77	x	1.21	×	92.98	×	0.63	x	0.7] = [103.15	(75)
Northeast 0.9x	0.77	x	1.87	_ x [92.98	x	0.63	x	0.7] = [106.27	(75)
Northeast 0.9x	0.77	_ x [1.35	×	92.98	×	0.63	×	0.7] = [76.72	(75)
Northeast 0.9x	0.54	×	49.5] x [75.42	x	0.63	x	0.7	= [800.12	(75)
Northeast 0.9x	0.77	_ x [2.72] × [75.42	×	0.63	x	0.7] = [125.38	(75)
Northeast 0.9x	0.77	_ x [24.5] x [75.42] x [0.63	×	0.7] = [564.69	(75)
Northeast 0.9x	0.77	x	1.32	×	75.42	×	0.63	x -	0.7] = [91.27	(75)
Northeast 0.9x	0.77	x	9.1] × [75.42	×	0.63	x	0.7] = [209.74	(75)
Northeast 0.9x	0.77	x	1.21	_ x [75.42	x	0.63	x	0.7] = [83.67	(75)
Northeast 0.9x	0.77	_ x [1.87	x	75.42] x [0.63	x	0.7] = [86.2	(75)
Northeast 0.9x	0.77] x [1.35] * [75.42	×	0.63	x [0.7] = [62.23	(75)
Northeast 0.9x	0.54	×	49.5	×	51.24] × [0.63	x	0.7] = [543.66	(75)
Northeast 0.9x	0.77	x	2.72] × [51.24] x [0.63	x	0.7] = [85.2	(75)
Northeast 0.9x	0.77	_ x [24.5	×	51.24	x	0.63	x	0.7] = [383.69	(75)
Northeast 0.9x	0.77	×	1.32] x [51.24	x [0.63	x	0.7] - [62.02	(75)
Northeast 0.9x	0.77	×	9.1] x [51.24] × [0.63	×	0.7] = [142.52	(75)
Northeast 0.9x	0.77	×	1.21] x [51.24	x	0.63	х	0.7] = [56.85	(75)
Northeast 0.9x	0.77	×	1.87] x [51.24] x	0.63	x	0.7] = [58.57	(75)
Northeast 0.9x	0.77	×	1.35	_ x [51.24] × [0.63	x	0.7] = [42.28	(75)
Northeast 0.9x	0.54	_ x [49.5] x [29.6] x [0.63	x	0.7] = [314.02	(75)
Northeast _{0.9x}	0.77] x [2.72	×	29.6	_ x [0.63	x	0.7] = [49.21	(75)
Northeast 0.9x	0.77] x [24.5] x [29.6	x	0.63	x	0.7] = [221.62	(75)
Northeast 0.9x	0.77	_ x [1.32] x [29.6	* [0.63	x	0.7] = [35.82	(75)
Northeast 0.9x	0.77	x	9.1	×	29.6	x	0.63	x	0.7	= [82.32	(75)
Northeast 0.9x	0.77] x [1.21	×	29.6] × [0.63	x	0.7] = [32.84	(75)
Northeast 0.9x	0.77	x	1.87] * [29.6	_ x [0.63	×	0.7] = [33.83	(75)
Northeast 0.9x	0.77	_ x [1.35	×	29.6	×	0.63	x	0.7] = [24.42	(75)
Northeast 0.9x	0.54	х	49.5] x [14.52	_ x [0.63	x	0.7] = [154.1	(75)
Northeast 0.9x	0.77	×	2.72] × [14.52] × [0.63	x	0.7] = [24.15	(75)
Northeast 0.9x	0.77	x	24.5] × [14.52	_ x [0.63	х	0.7] = [108.76	(75)
Northeast 0.9x	0.77	×	1.32	x [14.52] x [0.63	x	0.7] = [17.58	(75)
Northeast 0.9x	0.77	x	9.1	×	14.52] x [0.63	x	0.7] = [40.4	(75)
Northeast 0.9x	0.77	x	1.21] x [14.52] x	0.63	x	0.7] = [16.11	(75)
Northeast 0.9x	0.77	x	1,87	×	14.52] x [0.63	×	0.7] = [16,6	(75)
Northeast 0.9x	0.77	x	1.35] × [14.52	x	0.63	x	0.7] = [11.99	(75)
Northeast 0.9x	0.54	×	49.5	× [9.36	×	0.63	×	0.7] = [99.31	(75)
Northeast 0.9x	0.77	х	2.72	×	9.36	×	0.63	x	0.7	=	15.56	(75)

Northeast 0.9x	0.77	×	24.5	x [9,36	×	0.63	x	0.7	= [70.09	(75)
Northeast 0.9x	0.77	×	1.32	x	9.36	x	0.63	х	0.7	7 - [11.33	(75)
Northeast 0.9x	0.77	ī x Ē	9,1	×	9.36	×	0.63	ī x [0.7	T = [26.03	(75)
Northeast 0.9x	0.77	x	1.21	×	9.36	х	0.63	×	0.7	=	10.38	(75)
Northeast 0.9x	0.77] x [1.87	×	9.36] × [0.63	×	0.7	Ī = [10.7	(75)
Northeast 0.9x	0.77	T x	1.35] x [9.36	×	0.63	×	0.7	7 = [7.72	(75)
Southeast 0.9x	0.54	×	21	×	37.39] × [0.63	T x	0.7	Ī = [168.28	(77)
Southeast 0.9x	0.77	×	4.32	×	37.39	×	0.63	×	0.7] = [345.53	(77)
Southeast 0.9x	0.77] x [10.8	x	37.39	x	0.63	x	0.7] = [246.81	(77)
Southeast 0.9x	0.77	x	9.52	×	37.39] x [0.63	x	0.7] = [108.78	(77)
Southeast 0.9x	0.77	x	1.87] × [37.39	x	0.63	x	0.7	= [235.04	(77)
Southeast 0.9x	0.77	×	1.26	×	37.39	x	0.63	x	0.7] = [28.79	(77)
Southeast 0.9x	0.54	×	21	×	63.74	x	0.63	х	0.7	= [286.86	(77)
Southeast 0.9x	0.77	_ x _	4.32	×	63.74	×	0.63	x	0.7] = [589.02	(77)
Southeast 0.9x	0.77	×	10.8] x [63.74] x [0.63	x	0.7] = [420.73	(77)
Southeast 0.9x	0.77] × [9.52	x [63.74] * [0.63] x [0.7] = [185.43	(77)
Southeast 0.9x	0.77	x	1.87] × [63.74	×	0.63	x	0.7] = [400.67	(77)
Southeast 0.9x	0.77] x [1.26] x [63.74	_ x [0.63	x	0.7] = [49.09	(77)
Southeast 0.9x	0.54	x	21	×	84.22] x [0.63	x	0.7] = [379.04	(77)
Southeast 0.9x	0.77	х [4.32] * [84.22	x	0.63	x	0.7] = [778.3	(77)
Southeast 0.9x	0.77	x	10.8	×	84.22	x	0.63	x	0.7] = [555.93	(77)
Southeast 0.9x	0.77	x	9.52	x	84.22	x	0.63	x	0.7] = [245.02	(77)
Southeast 0,9x	0.77] x [1.87	×	84.22	_ × [0.63	×	0.7] = [529.42	(77)
Southeast 0.9x	0.77	х	1.26	_ x [84.22	×	0.63	x	0.7] - [64.86	(77)
Southeast 0.9x	0.54	_ x _	21	_ × [103,49	×	0.63	x	0.7] = [465.79	(77)
Southeast 0.9x	0.77	X	4.32	×	103.49	x	0.63	х	0.7] = [956.42	(77)
Southeast 0.9x	0.77	×	10.8	×	103.49	×	0.63	x	0.7	-	683.16	(77)
Southeast 0.9x	0.77	×	9.52	×	103.49	х	0.63	х	0.7	=	301.09	(77)
Southeast 0.9x	0.77	х	1.87	×	103,49	х	0.63	х	0.7] - [650,58	(7.7)
Southeast 0.9x	0.77	x	1.26	х	103.49	x	0.63	х	0.7	= [79.7	(77)
Southeast 0.9x	0.54	х	21	×	113.34	х	0.63	х	0.7	=	510.11	(77)
Southeast 0.9x	0.77	x	4.32	х	113.34	х	0.63	х	0.7	=	1047.43	(77)
Southeast 0.9x	0.77	х	10.8	×	113.34	Х	0.63	×	0.7	=	748.16	(77)
Southeast 0.9x	0.77	×	9.52	×	113.34	х	0.63	х	0.7	=	329.75	(77)
Southeast 0.9x	0.77	×	1.87	×	113.34	х	0.63	×	0.7	= _	712.49	(77)
Southeast 0.9x	0.77	×	1.26	x	113.34	×	0.63	х	0.7	= _	87.29	(77)
Southeast 0.9x	0.54	×	21	х	115.04	х	0.63	×	0.7	=	517.8	(77)
Southeast 0.9x	0.77	x	4.32	x	115.04	х	0.63	x	0.7	=	1063.21	(77)
Southeast 0.9x	0.77	×	10.8	x	115.04	×	0.63	х	0.7	=	759.43	(77)
Southeast 0.9x	0.77	×	9.52	×	115.04	×	0.63	×	0.7	_ -	334.71	(77)
Southeast 0.9x	0.77	×	1.87	×	115.04	×	0.63	×	0.7	= _	723,22	(77)

Southeast 0.9x	0.77	×	1.26	×	115.04] * [0.63	×	0.7] = [88.6	(77
Southeast 0.9x	0.54	×	21	×	112.79	×	0.63	x	0.7] = [507.65	(77
Southeast 0.9x	0.77	×	4.32	×	112.79] × [0.63] x [0.7	=	1042.38	(77
Southeast 0.9x	0.77	x	10.8	x [112.79] x	0.63] x	0.7	=	744.56	(77
Southeast 0.9x	0.77	×	9.52	x	112.79	×	0.63	×	0.7	=	328.16	(77
Southeast 0.9x	0.77	x	1.87	×	112.79] x [0.63] x [0.7	= [709.06	(77
Southeast 0.9x	0.77	x	1.26	×	112.79] x [0.63] x [0.7	=	86.87	(77
Southeast 0.9x	0.54	×	21	×	105,34] x [0.63] x [0.7] = [474.12	(77
Southeast 0.9x	0.77	×	4.32	×	105.34] x [0.63] × [0.7] = [973.53	(77
Southeast 0.9x	0.77	×	10.8	×	105.34] x [0.63] x [0.7	= [695.38	(77
Southeast 0.9x	0.77	_ x [9.52	×	105.34] x [0.63	x	0.7	=	306.48	(77
Southeast 0.9x	0.77	×	1.87	×	105.34] x [0.63	x	0.7	=	662.22	(77
Southeast 0.9x	0.77	×	1.26	×	105.34	_ x [0.63	x	0.7] = [81.13	(77
Southeast 0.9x	0.54	x	21	x	92.9] × [0.63	×	0.7	= [418.12	(77
Southeast 0.9x	0.77	x	4.32	x	92.9] x [0.63	x	0.7	= [858.53	(77
Southeast 0.9x	0.77	×	10.8	_ × [92.9] × [0.63	x	0.7] = [613.24	(77
Southeast 0.9x	0.77	×	9.52	×	92.9	_ x [0.63	x	0.7	= [270.28	(77
Southeast 0.9x	0.77	x	1.87	х	92.9] x [0.63] x [0.7] = [583.99	(77
Southeast 0.9x	0.77	×	1.26	×	92.9] x [0.63	x	0.7] = [71.54	(77
Southeast 0.9x	0.54	×	21	×	72.36	x	0.63	x	0.7	= [325.69	(77
Southeast 0.9x	0.77	×	4.32	_ x [72.36] × [0.63] x [0.7	= [668.76	(77
Southeast 0.9x	0.77	×	10.8	x	72.36] x [0.63	×	0.7	=	477.68	(77
Southeast 0.9x	0.77	x	9.52	x [72.36	_ × [0.63] x [0.7] = [210.53	(77
Southeast 0.9x	0.77	×	1.87	×	72.36] × [0.63] x [0.7	=	454.91	(77
Southeast 0.9x	0.77	×	1.26	×	72.36] x [0.63] × [0.7	=	55.73	(77
Southeast 0.9x	0.54	x [21	×	44.83] x [0.63	×	0.7] = [201.75	(77
Southeast 0.9x	0.77	×	4.32	× [44.83] x [0.63	×	0.7] = [414.26	(77
Southeast 0.9x	0.77	x	10.8	×	44.83] x [0.63] x [0.7] = [295.9	(77
Southeast 0.9x	0,77	x	9.52	x	44.83] x [0.63] x [0.7	= [130.42	(77
Southeast 0.9x	0.77	×	1.87	×	44.83] x [0.63	x	0.7	= [281.79	(77
Southeast 0.9x	0.77	x	1.26	x	44.83	_ x	0.63] x	0.7	=	34.52	(77
Southeast 0.9x	0.54	x	21	×	31.95	_ x [0.63	x	0.7	=	143.8	(77
Southeast 0.9x	0.77	x	4.32	×	31.95] x [0.63	x	0.7	= [295.27	(77
Southeast 0.9x	0.77	×	10.8	×	31.95] x [0.63	x	0.7	= [210.91	(77
Southeast 0.9x	0.77	×	9.52	x	31.95	_ x [0.63	×	0.7	= [92.96	(77
Southeast 0,9x	0.77	x	1.87	_ x [31.95] * [0.63] x [0.7] = [200.85	(77
Southeast 0.9x	0.77	_ x [1.26	×	31.95] * [0.63	×	0.7	= [24,61	(77
Southwesto.9x	0.77	×	2.2	×.	37.39] [0.63	×	0.7	= [75.41	(79
Southwesto.9x	0.77	×	12.6	_ x [37.39		0.63] × [0.7] = [143.97	(79
Southwesto,9x	0.77	x:	1.35	x	37.39		0.63	x	0.7] = [30.85	(79
Southwesto.9x	0.77	×	4.32	×	37.39	7 [0.63	x	0.7] = [98.72	(79

Southwesto.9x	0.77	×	1.87	×	37.39	0.63	×	0.7] = [42.73	(79)
Southwesto.9x	0.77	×	2.2	x	63.74	0.63	×	0.7	=	128.56	(79)
Southwesto 9x	0.77	x	12.6] x [63.74	0.63	x	0.7	= [245.43	(79)
Southwesto.9x	0.77	×	1.35	×	63.74	0.63	x	0.7	=	52.59	(79)
Southwesto 9x	0.77	×	4.32] × [63.74	0.63	×	0.7] = [168.29	(79)
Southwesto.9x	0.77] x [1.87	x	63.74	0.63	x	0.7] = [72.85	(79)
Southwesto.sx	0.77	х	2.2	х	84.22	0.63	х	0.7	=	169.87	(79)
Southwesto.sx	0.77	×	12.6	x	84.22	0.63	×	0.7	=	324.29	(79)
Southwesto.9x	0.77	x	1.35	x	84.22	0.63	x	0.7] = [69.49	(79)
Southwesto 9x	0.77	×	4.32] x [84.22	0.63	x	0.7] = [222.37	(79)
Southwesto.9x	0.77	x	1.87	×	84.22	0.63	x	0.7	=	96.26	(79)
Southwesto.9x	0.77	×	2.2] x [103.49	0.63	x	0.7] = [208.74	(79)
Southwesto 9x	0.77	×	12.6	x	103.49	0.63	×	0.7	=	398.51	(79)
Southwesto,9x	0.77	x	1.35	x	103.49	0.63	x	0.7] = [85.39	(79)
Southwesto.9x	0.77	x	4.32	×	103.49	0.63	x	0.7	=	273.26	(79)
Southwesto.9x	0.77	х	1.87	×	103.49	0.63	х	0.7] = [118,29	(79)
Southwesto,9x	0.77	×	2.2] × [113.34	0.63	×	0.7] = [228.61	(79)
Southwesto,9x	0.77	×	12.6	_ x [113.34	0.63	x	0.7] = [436.43	(79)
Southwesto.9x	0.77	x	1.35] x [113.34	0.63	x	0.7] = [93.52	(79)
Southwesto.9x	0.77	x	4.32] x [113.34	0.63	x	0.7] = [299.27	(79)
Southwesto,9x	0.77] x [1.87] x [113.34	0.63	x [0.7] = [129.54	(79)
Southwesto.sx	0.77] × [2.2] × [115.04	0.63	× [0,7] - [232.05	(79)
Southwesto sx	0.77	x	12.6] x [115.04	0.63	x	0.7] = [443	(79)
Southwesto.9x	0.77	x	1.35] x [115.04	0.63	×	0.7] = [94.93	(79)
Southwesto 9x	0.77	x	4.32	x	115.04	0.63	x	0.7] = [303.77	(79)
Southwesto sx	0.77	×	1.87] x [115.04	0.63	x	0.7] = [131.49	(79)
Southwesto 9x	0.77] x	2.2	×	112.79	0.63	x	0.7] = [227.5	(79)
Southwesto.9x	0.77	×	12.6	_ x [112.79	0.63	×	0.7] # [434.33	(79)
Southwesto 9x	0.77	×	1.35	х	112.79	0.63	х	0.7	=	93.07	(79)
Southwesto,9x	0.77	×	4.32] × [112.79	0.63	×	0.7	= [297.82	(79)
Southwesto 9x	0.77	×	1.87] x [112.79	0.63	x	0.7	=	128.92	(79)
Southwesto.sx	0.77	x	2.2	x	105.34	0.63	x.	0.7] = [212,48	(79)
Southwesto.9x	0.77	×	12.6] × [105.34	0.63	×	0.7] = [405.64	(79)
Southwesto.9x	0.77	x	1.35] x [105.34	0.63	×	0.7] = [86.92	(79)
Southwesto.9x	0.77	×	4.32] x [105.34	0.63] x [0.7] = [278.15	(79)
Southwesto.9x	0.77	×	1.87	x	105.34	0.63	х	0.7] = [120.4	(79)
Southwesto,9x	0.77	×	2.2] × [92.9	0.63	x	0.7] = [187.38	(79)
Southwesto 9x	0.77	×	12.6	_ x [92,9	0.63	×	0.7] = [357.72	(79)
Southwesto 9x	0.77] × [1.35] x [92.9	0.63	×	0.7] = [76.65	(79)
Southwesto.9x	0.77	x	4.32] x [92.9	0.63	x	0.7] = [245.29	(79)
Southwesto.9x	0.77	x	1.87	ī x Ī	92.9	0.63	×	0.7	ī = [106.18	(79)

Southwesto.9x	0.77	_ x [2.2	×	72.36		0.63	_ x	0.7] = [145.96	(79)
Southwesto,9x	0.77	×	12.6	х	72.36	ĪĒ	0.63	x	0.7	=	278.65	(79)
Southwesto.9x	0.77	×	1.35] × [72.36	ĪŌ	0.63] x [0.7] = [59.71	(79)
Southwesto.9x	0.77	×	4.32	×	72.36	בֿ בֿ	0.63] x [0.7	= [191.07	(79)
Southwesto,9x	0.77	×	1.87	x	72.36	ĪĪ	0.63	×	0.7	= [82.71	(79)
Southwesto 9x	0.77	x	2.2	_ x [44.83	Ī [0.63	x	0.7] = [90.41	(79)
Southwesto.9x	0.77	x	12.6	×	44,83		0.63	×	0.7	= [172.61	(79)
Southwesto.9x	0.77	×	1.35	×	44.83	J [0.63	x	0.7] = [36.99	(79)
Southwesto.9x	0.77	×	4.32	_ x [44.83		0.63] × [0.7] = [118.36	(79)
Southwesto.9x	0.77	x	1.87	x	44.83] [0.63	x	0.7] = [51.24	(79)
Southwesto.9x	0.77	x	2.2	x	31,95] [0.63	x	0.7] = [64.44	(79)
Southwesto,9x	0.77	x	12.6	×	31.95	J [0.63	x	0.7	= [123.03	(79)
Southwesto.9x	0.77	x	1.35	x	31.95] [0.63	x	0.7] = [26.36	(79)
Southwesto.9x	0.77	х	4.32	x	31,95] [0.63] x	0.7] = [84.36	(79)
Southwesto.9x	0.77	x	1.87	x	31.95		0.63	x	0.7] = [36.52	(79)
Northwest 0.9x	0.77	x	1.26	×	11.51] × [0.63] x [0.7] = [13.3	(81)
Northwest 0.9x	0.77	×	1.87	(x)	11.51	×	0.63	x	0.7	= [59.2	(81)
Northwest 0.9x	0.77	х	1.21	x	11.51	x	0.63	x	0.7] = [25.54	(81)
Northwest 0.9x	0.77	_ x [1.26	×	23,55	_ x [0.63] x [0.7] = [27.21	(81)
Northwest o.9x	0.77	x	1.87	x	23.55	_ x [0.63] x [0.7] = [121.15	(81)
Northwest 0.9x	0.77	_ x [1.21	x [23.55	× [0.63	x	0.7] = [52.26	(81)
Northwest 0.9x	0.77	×	1.26	x	41,13	_ x [0.63] x [0,7] = [47.51	(81)
Northwest 0.9x	0.77	×	1.87	x [41.13	_ x [0.63	x	0.7] = [211.53	(81)
Northwest 0.9x	0.77	x	1.21	x	41.13	×	0.63	_ x [0.7	=	91.25	(81)
Northwest 0.9x	0.77	x	1.26	×	67.8] x [0.63	_ x [0.7] = [78,32	(81)
Northwest 0.9x	0.77	x	1.87	_ x [67.8] × [0.63	x	0.7] = [348.72	(81)
Northwest 0.9x	0.77	х	1.21	×	67.8	×	0.63	×	0.7	=	150.43	(81)
Northwest 0.9x	0.77	x	1.26	x	89.77	_ × [0.63	x	0.7	= [103.7	(81)
Northwest 0.9x	0.77	x	1.87	x	89.77	x	0.63	х	0.7	=	461.71	(81)
Northwest 0.9x	0.77	x	1.21	×	89.77	×	0.63	x	0.7	=	199.17	(81)
Northwest 0.9x	0.77	x	1.26	x	97.5	×	0.63	х	0.7	=	112.64	(81)
Northwest g.9x	0.77	x	1.87	×	97.5	x	0.63	х	0.7	=	501.5	(81)
Northwest 0.9x	0.77	×	1.21	x	97.5	×	0.63	х	0.7	=	216.33	(81)
Northwest 0.9x	0.77	×	1.26	×	92.98	×	0.63] × [0.7] - [107.41	(81)
Northwest 0.9x	0.77	x	1.87	x	92.98	×	0.63	x	0.7] = [478.24	(81)
Northwest 0.9x	0.77	x	1.21	×	92.98	×	0.63	×	0.7	=	206.3	(81)
Northwest 0.9x	0.77	×	1.26	х	75.42	_ x [0.63	x	0.7	= [87.12	(81)
Northwest o.sx	0.77	x	1.87	x	75.42	×	0.63	_ x [0.7	= [387.91	(81)
Northwest 0.9x	0.77	×	1.21	×	75.42] × [0.63] × [0.7] = [167.33	(81)
Northwest 0.9x	0.77	x	1.26	×	51.24	_ x [0.63] x [0.7] = [59.2	(81)
Northwest 0.9x	0,77	x	1.87	×	51.24	×	0.63	×	0.7	=	263.57	(61)

Northwest o.sx	0.77	x	1.21	×	51.24	×	0.63	x	0.7	=	113.7	(81)
Northwest 0.9x	0.77	×	1.26	×	29.6	×	0.63	7 × [0.7	ī - Ē	34.19	(81)
Northwest 0.9x	0.77	×	1.87	×	29.6	1 ×	0.63	ī × [0.7] = [152.24	(81)
Northwest 0.9x	0.77	×	1.21	×	29.6] × [0.63] x [0.7] = [85.67	(81)
Northwest 0.9x	0.77	×	1.26	×	14.52] × [0.63] × [0.7] = [16.78	(81)
Northwest 0.9x	0.77	×	1.87] × [14.52	×	0.63] x [0.7] = [74.71	(81)
Northwest 0.9x	0.77	x	1.21	x	14.52	x	0.63] × [0.7	= [32.23	(81)
Northwest 0.9x	0.77	×	1.26	×	9.36	×	0.63] × [0.7] = [10.81	(81)
Northwest o.sx	0.77	×	1.87	_ x [9.36	_ × [0.63] x [0.7] = [48.15	(81)
Northwest 0.9x	0.77	x	1.21	×	9.36] × [0.63] x [0.7] = [20.77	(81)
Rooflights 0.9x	1	x	14.44] x [26] × [0.63] x [0.8] = [170.3	(82)
Rooflights 0.9x	-1	×	9.61	x [26] × [0.63] x [0.8] = [113.34	(82)
Rooflights 0.9x	- 1	x	5.76	x	26] x [0.63] x [0.8] = [67.93	(82)
Rooflights 0.9x	1	x	0.42	×	26	×	0.63] × [0.8	=	9.91	(82)
Rooflights 0.9x	1	x	1.37	x	26	_ x [0.63	_ x [0.8] = [32.31	(82)
Rooflights 0.9x	1	x	14.44	×	54	_ x [0.63	_ x [0.8	=	353.7	(82)
Rooflights 0.9x	1	×	9.61	×	54	_ x	0.63] x [0.8] = [235,39	(82)
Rooflights 0.9x	1	x	5.76	x	54	×	0.63] x [0.8] = [141.09	(82)
Rooflights 0.9x	1	x	0.42	x	54	×	0.63] x [0.8	=	20.58	(82)
Rooflights 0.9x	1	x	1.37] x	54] × [0.63	_ x [8.0	= [67.11	(82)
Rooflights 0.9x	1	x	14.44	x	94	_ x [0.63	×	0.8] = [615.7	(82)
Rooflights 0.9x	-1	x	9.61	x	94	×	0.63	x	0.8	=	409.76	(82)
Rooflights 0.9x	1	x	5,76	x	94	×	0.63] x [0.8] = [245.6	(82)
Rooflights 0.9x	1	×	0.42	_ x [94	×	0.63] x [0.8	= [35.82	(82)
Rooflights 0.9x	1	x	1.37	x	94	×	0.63	_ x _	0.8] = [116.83	(82)
Rooflights 0.9x	1	x	14.44	×	150	×	0.63	x	0.8	= [982.5	(82)
Rooflights 0.9x	1	×	9.61	×	150	×	0.63] × [0.8	=	653.86	(82)
Rooflights 0.9x	1	x	5.76	×	150	_ × [0.63	_ × [0.8] = [391.91	(82)
Rooflights 0.9x	1	×	0.42	х	150	×	0,63	×	0.8	=	57.15	(82)
Rooflights 0.9x	1	×	1.37	×	150	×	0.63	×	0.8] = [186.43	(82)
Rooflights 0.9x	1	x	14.44	x	190	×	0.63	_ x _	0.8	=	1244.5	(82)
Rooflights g.9x	1	×	9.61	×	190	×	0.63	_ x _	0.8	=	828.23	(82)
Rooflights 0.9x	1	×	5.76	×	190	_ × [0.63] x [0.8] = [496.42	(82)
Rooflights o.9x	1	×	0.42	×	190	×	0.63	_ ×	0.8	=	72.39	(82)
Rooflights 0.9x	1	х	1,37	х	190	×	0.63	×	0.8	=	236.14	(82)
Rooflights 0.9x	1	х	14.44	×	201	×	0.63	×	0.8	=	1316.55	(82)
Rooflights 0.9x	1	×	9.61	_ x [201	_ × [0.63] × [0.8	= [876.18	(82)
Rooflights 0.9x	1	×	5.76	x	201	_ × [0.63] × [0.8] = [525.16	(82)
Rooflights 0.9x	1	×	0.42	x [201	_ × [0.63	_ x _	0.8] = [76.59	(82)
Rooflights 0.9x	1	x	1.37	x [201	×	0.63	_ x _	0.8] = [249.82	(82)
Rooflights 0.9x	1	×	14.44	×	194	×	0.63	×	0.8	=	1270.7	(82)

Rooflights 0 av	(88)m= 20.14	_	20.16	20.2	20.22	20.23	20.24	20.24	20.21	20.2	20.18	20.16		(88
Reoflights 0 9x	The second second	A NAME OF THE								13334				
Redfights 0.9x		_			_			_	_	20.38	19.97	19.74		(87
Coolights 0.9X					V PANA		3327/653			1.		,		100
Coolights 0 9x		_	_	_	_	_	_			_				(8)
collights 0.9x		_				1		1.		I 6.				
ocilights 0.9x								ble 9, Tr	11 (°C)			L	21	(8:
ooflights 0.9x				and the latest desired to										_,
collights 0.9x		-		_		_	13918.14	12581.36	10670.09	8624.76	6749.88	6108.95		(8)
Coolights 0.9x		_		_		-		Lance	Lacra	Langua				16
codlights 0.9x 1								9446.02	7357.1	5027.5	2841.46	1952.03		(8)
Social contigits 0.9x	olar gains ir	watts, c	alculated	d for eac	h month			(83)m = 5	Sum(74)m	(82)m		2 2		
Social contigits 0.9x	20 70 47 27			-			###.		: market				, 20 00	
Rooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.6 = 506.87 (8) Rooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (6) Rooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (6) Rooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1714.89 (6) (6) (6) (6) (7) (8) (7) (8) (7) (8) (7) (8)		=	=		=	=		=		≓ F		=		
Reoflights 0.9x		=	=		=			; ⊨	- Name of the last	- 1		=		
Scorlights 0.9x			=		=			;	107.55.65	×	5.710	=		
ooflights 0.9x		_	=				-	≓		=		=		
codlights 0.9x 1 x 5.76 x 194 x 0.63 x 0.6 = 506.87 (8) codlights 0.9x 1 x 0.42 x 194 x 0.63 x 0.6 = 73.92 (8) coolights 0.9x 1 x 1.4.44 x 164 x 0.63 x 0.8 = 241.12 (8) coolights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8) coolights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8) coolights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 714.89 (8) coolights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49		=			=			+ =	_	≓ F		=		=
coolights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8) coolights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8) coolights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8) coolights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8) coolights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8) coolights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49 (8) coolights 0.9x 1 x 1.44 x 1.64 x 0.63 x 0.8 = 759.8			=		=	=		;		×		= :		=
1			=		=	_		-	5.5753333	x		=		=
coolights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8) coolights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8) coolights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 241.12 (8) coolights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8) coolights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8) coolights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49 (8) coolights 0.9x 1 x 1.37 x 164 x 0.63 x 0.8 = 759.8		_	=	=	_	X		;	1000000	x		=	195,000,00	
coolights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8) coolights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8) coolights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8) coolights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8) coolights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8) coolights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 62.49 (8) coolights 0.9x 1 x 1.37 x 164 x 0.63 x 0.8 = 759.8			×			×		; ⊨		×		=		=
200 200		=			_			= =		≓ ⊨	7,770	=		=
200 poor 1			×	0.4	12	x	68	x	0.63	×	0.8		25.91	=
200 200		1	×	5.7	76	x	68	x	0.63	×	0.8	=	177.67	(8
ooflights 0.9x		1	×	9.6	51	×	68	x	0.63	×	0.8	=	296.42	(8
ooflights 0.9x		1	×	14.	44	х	68	×	0.63	x	0.8	=	445.4	(8
cooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 cooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8 cooflights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8 cooflights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 428.49 (8 cooflights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49		1	x	1.3	37	x	116	x	0.63	×	0.8	=	144.17	(8)
cooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 cooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8 cooflights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 714.89 (8 cooflights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 428.49 (8 cooflights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49			х	0.4	12	х	116	x	0.63	x	0.8	=	44.2	(8
cooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 cooflights 0.9x 1 x 164 x 0.63 x 0.8 = 1074.2 (8 cooflights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8 cooflights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 428.49 (8 cooflights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49 (8	ooflights 0.9x	1	X	5.7	76	х	116	×	0.63	х	0.8	=	303.08	(8
ooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 ooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 ooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 ooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8 ooflights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8 ooflights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 428.49 (8 ooflights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49 <t< td=""><td>ooflights 0.9x</td><td>1</td><td>×</td><td>9.6</td><td>31</td><td>x</td><td>116</td><td>×</td><td>0.63</td><td>x</td><td>0.8</td><td>=</td><td>505.66</td><td>(8</td></t<>	ooflights 0.9x	1	×	9.6	31	x	116	×	0.63	x	0.8	=	505.66	(8
cooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 cooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8 cooflights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8 cooflights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 428.49 (8 cooflights 0.9x 1 x 0.42 x 164 x 0.63 x 0.8 = 62.49	ooflights 0.9x	1	×	14.	44	×	116	×	0.63	×	0.8	=	759.8	(8
cooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 cooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8 cooflights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8 cooflights 0.9x 1 x 5.76 x 164 x 0.63 x 0.8 = 428.49 (8	ooflights 0.9x	1	×	1.3	37	x	164	x	0.63	×	0.8		203,83	(8
cooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 cooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8 cooflights 0.9x 1 x 9.61 x 164 x 0.63 x 0.8 = 714.89 (8	ooflights 0.9x	1	×	0.4	12	x	164	x	0.63	x	0.8	=	62.49	(8
coflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8 cooflights 0.9x 1 x 14.44 x 164 x 0.63 x 0.8 = 1074.2 (8	ooflights 0.9x	1	×	5.7	76	×	164	x	0.63	×	0.8	=	428.49	(8
coflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 cooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8 cooflights 0.9x 1 x 1.37 x 194 x 0.63 x 0.8 = 241.12 (8	ooflights 0.9x	1	×	9.6	31	x	164	×	0.63	x	0.8	=	714.89	(8
ooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8 ooflights 0.9x 1 x 0.42 x 194 x 0.63 x 0.8 = 73.92 (8	ooflights 0.9x	1	×	14.	44	x	164	x	0.63	x	0.8	=	1074.2	(8
ooflights 0.9x 1 x 5.76 x 194 x 0.63 x 0.8 = 506.87 (8	ooflights 0.9x	1	×	1.3	37	x	194	×	0.63	×	0.8	-	241.12	(8
	ooflights 0.9x	1	×	0.4	12	×	194	×	0.63	×	0.8	= i	73.92	(8
ooflights 0.9x 1 x 9.61 x 194 x 0.63 x 0.8 = 845.66 (8	ooflights 0.9x	1	×	5.7	76	x	194	×	0.63	x	0.8	= [506.87	(8
7.0.9.419.90.15.15.15.15.15.15.15.15.15.15.15.15.15.	ooflights 0.9x	1	x	9.6	31	x	194	x	0.63	x	0.8	=	845.66	(8

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220		ctor for g												
89)m=	1	1	1	1	0.99	0.9	0.64	0.7	0.98	1	1	1		(89)
Mear	interna	I temper	ature in	the rest	of dwell	ing T2 (f	ollow ste	eps 3 to 7	7 in Tabl	e 9c)	300			
90)m=	18.34	18.54	18.86	19.3	19.78	20.12	20.23	20.23	19.94	19.39	18.78	18.43		(90)
		•							- 1	LA = Livir	ig area + (4) =	0.05	(91)
Mear	interna	l temner	ature (fo	or the wh	nole dwe	ellina) = f	1 Δ × T1	+ (1 – fL	Δ) × T2				-	_
92)m=		18.6	18.91	19.34	19.82	20.15	20.27	20.26	19.98	19.43	18.83	18.49		(92)
90.000	14.700.000	ment to t	he mear	1000000	10000000	1885777	2.898630	e 4e, whe	2000000	[1250Aby2670]	1359751	0.5000		
93)m=		18.6	18.91	19.34	19.82	20.15	20.27	20.26	19.98	19.43	18.83	18.49		(93)
8 Sr	ace hea	ating rea	uiremen		-	_		_			-			
	Table of the second		di and distribution		re obtair	ned at st	ep 11 of	Table 9t	so tha	t Ti m=(76)m an	d re-calc	ulate	
		factor fe					ср 11 с.	10010 01	,		, 0,,,, 0,,	0.10.00.10	andre.	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Utilis	ation fac	ctor for g	ains, hn	n:					200					
94)m=	1	1	1	1	0.98	0.89	0.64	0.7	0.97	1	1	1		(94)
Usefi	l gains,	hmGm	W = (9	4)m x (8	4)m	•								
95)m=	6609.74	8500.1	10376.74	12646.46	13904.98	12879.7	8958,07	8818.19	10402.8	8618.09	6749.68	6108.9		(95)
Mont	hly aver	age exte	mal ten	perature	e from T	able 8	11.6				d v			
96)m=	4.5	5	6.8	8.7	11.7	14.6	16.9	16.9	14.3	10.8	7	4.9		(96)
Heat	loss rat	e for me	an interr	nal temp	erature,	Lm, W	=[(39)m	x [(93)m	- (96)m	1				
	925 Star 127	44000 04	36775.7	30866.2	22818.2	15242 14	9156 89	9141 77	16073.24	25031.76	35117.59	41249.44		(97)
97)m=	43157.26	41293.31	201101	20000.2	22010.2	10040.14	0100.00	214175						
		_			_	_		24 x [(97)				11210111		
Spac	e heatir	_	ement fo	r each r	nonth, k	Wh/mon)m] x (4				
Spac	e heatir	ng require	ement fo	r each r	nonth, k	Wh/mon	th = 0.02	24 x [(97))m – (95 o)m] x (4 12211.77	1)m	26144.56	147400.1	(98)
Spac (98)m=	e heatir 27191.35	ng require \$22037.04	ement fo 19640.83	or each r 13118.21	nonth, k 6631.44	Wh/mon	th = 0.02	24 x [(97))m – (95 o)m] x (4 12211.77	1)m 20424.9	26144.56	I KONOCONUA.	=
Spac 98)m= Spac	e heatir 27191.35 e heatir	ng require 22037.04 ng require	ement fo 19640.83 ement in	13118.21 n kWh/m	nonth, k 6631.44	Wh/mon	th = 0.02	24 x [(97))m – (95 o)m] x (4 12211.77	1)m 20424.9	26144.56	147400.1 44.17	=
Spac 98)m= Spac 86. S	e heatir 27191 33 e heatir	ng require 22037.04 ng require	ement fo 19640.83 ement in	13118.21 n kWh/m	6631.44 6631.44 ² /year	Wh/mon	th = 0.02	24 x [(97))m – (95 o)m] x (4 12211.77	1)m 20424.9	26144.56	I KONOCONUA.	=
Spac 98)m= Spac 85. S	e heatir 27191 35 e heatir 13169 00 ulated fo	ng require 22037.04 ng require of June,	ement for 19640.83 ement in July and	13118.21 1KWh/mi	nonth, k 6631.44 ² /year See Ta	Wh/mon	th = 0.00	24 x [(97) 0 Tota)m – (95 0 I per year)m] x (4 12211:77 (kWh/yea	1)m 20424.9 r) = Sum(9	26144.56 8) =	I KONOCONUA.	=
Spac 98)m= Spac 80. S Calcu	e heatir 27191.35 e heatir pale oculated for Jan	ng require 22037.04 ng require solling record or June, s	ement for 19640.83 ement in Ulterned July and Mar	n kWh/mi August Apr	nonth, k 6631.44 ² /year See Ta May	Wh/mon	th = 0.00	24 x [(97) 0 Tota)m – (95 0 I per year Sep)m] x (4 12211.77 (kWh/yea	1)m 20424.9 r) = Sum(9	26144.56 8) =	I KONOCONUA.	=
Space Space Space Calcu	e heatir 27191.35 e heatir page co ulated fo Jan loss rat	ng require s22037.04 ng require solling record or June, Feb e Lm (ca	ement for 19640.83 ement in July and Mar Ilculated	KWh/mill August using 2	see Ta May 5°C inte	Wh/mon	o Jul	24 x [(97) 0 Tota Aug)m – (95 0 I per year Sep ernal ten)m] x (4 12211.77 (kWh/yea Oct	1)m 20424.9 r) = Sum(9 Nov	26144.56 8) = Dec able 10)	I RESOURCE IN THE RESERVE OF THE RES	(99)
Space 98)m= Space 8c. S Calcut Heat 100)m=	e heatir 27191 33 e heatir culated for Jan loss rat	ng require 22037.04 ng require colling record Feb Em (ca	ement for 19640.83 ement in Ulicand July and Mar Ilculated	n kWh/mi August Apr	nonth, k 6631.44 ² /year See Ta May	Wh/mon	o Jul	24 x [(97) 0 Tota)m – (95 0 I per year Sep)m] x (4 12211.77 (kWh/yea	1)m 20424.9 r) = Sum(9	26144.56 8) =	I RESOURCE IN THE RESERVE OF THE RES	(99)
Space 98)m= Space 80. S Calculation Heat 100)m= Utilis	e heatir 27191.33 e heatir page co ulated for Jan loss rat 0 ation fac	ng require 22037.04 ng require of June, Feb e Lm (ca	ement for 19640.83 ement in control of the control	13118.21 1 KWh/mint August Apr using 2	See Ta May 5°C inte	Wh/mon 0 ble 10b Jun rnal tem 23768.3	th = 0.02 0 Jul perature	24 x [(97] 0 Tota Aug and exte)m – (95 0 I per year Sep ernal ten)m] x (4 12211:77 (kWh/yea Oct nperatur	1)m 20424.9 r) = Sum(9 Nov e from T	26144.56 8)	I RESOURCE IN THE RESERVE OF THE RES	(100
Space 98)m= Space 86. S Calculation Heat 100)m= Utilis 101)m=	e heatir 27191.33 e heatir 18366 Go Jan Joss rat 0 ation fac	ng require 22037.04 ng require of June, Feb e Lm (cas 0 cotor for lo	ement for 19640.83 ement in Ulicana July and Mar Ilculated 0 poss hm 0	n kWh/mint August Apr using 2:	See Ta May 5°C inte	Wh/mon 0 ble 10b Jun rnal tem 23768.3	o Jul	24 x [(97) 0 Tota Aug)m – (95 0 I per year Sep ernal ten)m] x (4 12211.77 (kWh/yea Oct	1)m 20424.9 r) = Sum(9 Nov	26144.56 8) = Dec able 10)	I RESOURCE IN THE RESERVE OF THE RES	(100
Space	e heatin 27191.35 e heatin 18368.05 ulated for Jan loss rat 0 ul loss, l	ng require 22037.04 ng require colling recorr June, Feb e Lm (ca 0 ctor for lo	ement for 19640.83 ement in Ulicana July and Mar Ilculated 0 pss hm 0 Vatts) =	n kWh/milland August Apr using 2:	See Ta May 5°C inte 0 (101)m	Wh/mon 0 ble 10b Jun rnal tem 23768.3	th = 0.02 0 Jul perature 16854.38	24 x [(97] 0 Tota Aug and exter 16854.35)m – (95 0 I per year Sep ernal ten 0)m] x (4 12211.77 (kWh/yea Oct nperatur 0	1)m 20424.9 r) = Sum(9 Nov re from T 0	26144.56 8). _{10.11} = Dec able 10)	I RESOURCE IN THE RESERVE OF THE RES	(100
Space	e heatin 27191.33 e heatin page oculated for Jan loss rat 0 ation fac	ng require 22037.04 ng require colling recorr June, Feb e Lm (ca 0 ctor for lo	ement for 19640.83 ement in Ulicana July and Mar Ilculated 0 pss hm 0 Vatts) = 0	13118.21 1 KWh/mi 1 August Apr 1 using 2: 0 (100)m x	No. No.	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68	th = 0.02 0 Jul perature 16854.35 0.85	24 x [(97] 0 Tota Aug and exter 16854.35)m – (95 0 I per year Sep ernal ten 0)m] x (4 12211:77 (kWh/yea Oct nperatur	1)m 20424.9 r) = Sum(9 Nov e from T	26144.56 8)	I RESOURCE IN THE RESERVE OF THE RES	(100
Space 98)m= Space 8c S Calcut Heat 100)m= Utilis 101)m= Useful 102)m= Gains	e heatir 27191.33 e heatir 27191.33 e heatir 27191.33 e heatir Jan loss rat 0 ation fac	ng require 22037.04 ag require or June, Feb e Lm (ca 0 ctor for lo 0 mmLm (V 0 gains ca	ement for 19640.83 ement in 19	August Apr using 2 0 (100)m x 0 for appli	See Ta May 5°C inte 0 (101)m 0 icable w	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 1 16257 eather re	th = 0.02 0 Jul perature 16854.35 0.85	24 x [(97] 0 Tota Aug and exter 16854.35 0.8)m – (95 0 l per year Sep ernal ten 0)m] x (4 12211:77 (kWh/yea Oct nperatur 0	1)m 20424.9 r) = Sum(9 Nov e from T 0 0	26144.56 8)	I RESOURCE IN THE RESERVE OF THE RES	(100 (101 (102
Space Space Space Space Space Space Calculation Heat 100)m Utilis 101)m Usefit 102)m Gaint 103)m	e heatir 27191.33 e heatir 1000 Culated for Jan 100ss rat 100 ation fact 100 s (solar 0)	ng require 22037.04 ag require or June, Feb e Lm (ca 0 ctor for lo 0 nmLm (V 0 gains ca 0	ement for 19640.83 ement ir suitement July and Mar suitement 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	n kWh/mint August Apr using 2:	See Ta May 5°C inte 0 0 (101)m 0 icable w	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 1 16257 eather rr 16795.4	Jul perature 16854.35 0.85	24 x [(97] 0 Tota Aug and exte 16854.35 0.8	Sep	Oct nperature 0	1)m 20424.9 r) = Sum(9 Nov e from T 0 0 0 0	26144.56 8)	44.17	(100 (101 (102
Space	e heatir 27191.33 e heatir e heatir loss rat 0 ation fac ut loss, i 0 s (solar 0 e coolin	ng require 22037.04 ag require or June, Feb e Lm (ca 0 ctor for lo 0 nmLm (V gains ca 0 grequire	ement for 19640.83 ement in 19	a kWh/mint August Apr Using 2:	See Ta See Ta May 5°C inte 0 (101)m 0 cable w	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 1 16257 eather rr 16795.4	Jul perature 16854.35 0.85	24 x [(97] 0 Tota Aug and exter 16854.35 0.8	Sep	Oct nperature 0	1)m 20424.9 r) = Sum(9 Nov e from T 0 0 0 0	26144.56 8)	44.17	(100 (101 (102
Space	e heatir 27191.33 e heatir 1010 Jan 100s rat 100 Jan 100s, 100 100 Jan	ng require 22037.04 ng require or June, Feb e Lm (ca 0 ctor for lc 0 nmLm (V 0 gains ca 0 g require o zero if	ement for 19640.83 ement in 19640.83 ement for 19640.83	a kWh/mint August Apr Using 20 0 (100)m o for appli 0 or month, < 3 × (98	See Ta May 5°C inte 0 (101)m 0 whole o	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 16257 eather re 16795.4 dwelling,	Jul perature 16854.35 0.85 14280.22 egion, se 16038.14 continu	24 x [(97] 0 Tota Aug e and exte 16854.35 0.8 13506.78 ee Table 14642.81	Sep O O O O O O O O O	Oct nperature 0 0 0 24 x [(10	1)m 20424.9 (20424.9	26144.56 8) 25.12 = Dec [able 10) 0 0 0 0	44.17	(100 (101 (102
Space	e heatir 27191.33 e heatir 1010 Jan 100s rat 100 Jan 100s, 100 100 Jan	ng require 22037.04 ag require or June, Feb e Lm (ca 0 ctor for lo 0 nmLm (V gains ca 0 grequire	ement for 19640.83 ement in 19	a kWh/mint August Apr Using 2:	See Ta See Ta May 5°C inte 0 (101)m 0 cable w	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 1 16257 eather rr 16795.4	Jul perature 16854.35 0.85	24 x [(97] 0 Tota Aug e and exte 16854.35 0.8 13506.78 ee Table 14642.81 ous (kW	Sep O O O O O O O O O	Oct 0 0 0 0 24 x [(10	1)m 20424.9 (9) = Sum(9) Nov re from T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	26144.56 8) 25.12 = Dec Cable 10) 0 0 0 102)m] >	44.17	(100 (100 (100 (100
Space	e heatir 27191.36 e heatir 27191.36 e heatir 100 Jan loss rat 100 ation fac 100 s (solar 100 e coolin 1004)m to	ng require 22037.04 ng require 2017.04 ng require 0 June, v Feb e Lm (ca 0 ctor for le 0 nmLm (V 0 gains ca 0 require 0 zero if	ement for 19640.83 ement in 19640.83 ement for 19640.83	a kWh/mint August Apr Using 20 0 (100)m o for appli 0 or month, < 3 × (98	See Ta May 5°C inte 0 (101)m 0 whole o	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 16257 eather re 16795.4 dwelling,	Jul perature 16854.35 0.85 14280.22 egion, se 16038.14 continu	24 x [(97] 0 Tota Aug e and exte 16854.35 0.8 13506.78 ee Table 14642.81	Sep Sep O O O O O O Total	Oct nperature 0 0 0 0 24 x [(10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1)m 20424.9 (20424.9	26144.56 8) 25.12 = Dec (able 10) 0 0 0 102)m] >	44.17 (41)m 2153.1	(100 (101 (102 (103
Space	e heatir 27191.36 e heatir 27191.36 e heatir 27191.36 lated fc Jan loss rat 0 ation fac 0 ul loss, l 0 s (solar 0 e coolin 04)m to 0	ng require 22037.04 ng require Tolling record June, so Etcor for lo 0 cotor for lo 0 gains ca 0 grequire 0 zero if 0	ement for 19640.83 ement in 19640.83 ement in 19640.83 ement in 19640.83 ement in 19640.83 ement for 19640.8	r each r 13118.21 kWh/mi kWh/mi l August Apr using 2: 0 (100)m x 0 for appli 0 or month, 3 × (98	See Ta May 5°C inte 0 (101)m 0 whole o	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 16257 eather re 16795.4 dwelling,	Jul perature 16854.35 0.85 14280.22 egion, se 16038.14 continu	24 x [(97] 0 Tota Aug e and exte 16854.35 0.8 13506.78 ee Table 14642.81	Sep Sep O O O O O O Total	Oct nperature 0 0 0 0 24 x [(10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1)m 20424.9 (9) = Sum(9) Nov re from T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	26144.56 8) 25.12 = Dec (able 10) 0 0 0 102)m] >	44.17	(100 (100 (100 (100 (100 (100
Space	e heatir 27191.36 e heatir 27191.36 e heatir 27191.36 lated fc Jan loss rat 0 ation fact 0 ul loss, i 0 s (solar 0 d fractio dtractio ittency i	ng require 22037.04 ng require 2017.04 ng require 0 June, 0 ctor for lo 0 nmLm (V 0 gains ca 0 ng require 0 zero if 0	ement for 19640.83 ement in 19640.83 ement in 19640.83 ement in 19640.83 ement in 19640.83 ement for 19640.8	r each r 13118.21 kWh/mi kWh/mi l August Apr using 2: 0 (100)m x 0 for appli 0 or month, 3 × (98	See Ta May 5°C inte 0 (101)m 0 whole o	Wh/mon 0 ble 10b Jun rnal tem 23768.3 0.68 16257 eather re 16795.4 dwelling,	Jul perature 16854.35 0.85 14280.22 egion, se 16038.14 continu	24 x [(97] 0 Tota Aug e and exte 16854.35 0.8 13506.78 ee Table 14642.81	Sep Sep O O O O O O Total	Oct nperature 0 0 0 0 24 x [(10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1)m 20424.9 (20424.9	26144.56 8) 25.12 = Dec (able 10) 0 0 0 102)m] >	44.17 (41)m 2153.1	(100 (101 (102 (103

(107)m= 0 0 0 0 0 146.98 94.90	8 0 0 0 0		
	Total = Sum(107) =	241.96	(107)
Space cooling requirement in kWh/m²/year	(107) + (4) =	0.07	(108)
9b. Energy requirements - Community heating scheme			-
This part is used for space heating, space cooling or water heating pr Fraction of space heat from secondary/supplementary heating (Table		0	(301)
Fraction of space heat from community system 1 – (301) =		1	(302)
The community scheme may obtain heat from several sources. The procedure allows	기가 가는 1 (1) 1 (1) 전 하는 다음이 되는 것이 하는 것이 없는 것이 없는 것이 없는 것이 없다.	e latter	
includes boilers, heat pumps, geothermal and waste heat from power stations. See Ap Fraction of heat from Community CHP	penaix C.	0.66	(3036
Fraction of community heat from heat source 2	Ī	0.34	(303)
Fraction of total space heat from Community CHP	(302) x (303a) =	0.66	(304a
Fraction of total space heat from community heat source 2	(302) x (303b) =	0.34	(304b
Factor for control and charging method (Table 4c(3)) for community h	eating system	1	(305)
Distribution loss factor (Table 12c) for community heating system]	1.05	(306)
Space heating		kWh/year	r
Annual space heating requirement		147400.1	
Space heat from Community CHP	(98) x (304a) x (305) x (306) =	102148.28	(3074
Space heat from heat source 2	(98) x (304b) x (305) x (306) =	52621,84	(307)
Efficiency of secondary/supplementary heating system in % (from Tal	ble 4a or Appendix E)	0	(308
Space heating requirement from secondary/supplementary system	(98) x (301) x 100 + (308) =	0	(309)
Water heating Annual water heating requirement	1	5741.38	7
If DHW from community scheme: Water heat from Community CHP	(64) x (303a) x (305) x (306) =	3978.78	(310a
Nater heat from heat source 2	(64) x (303b) x (305) x (306) =	2049.67	(310b
Electricity used for heat distribution	01 × [(307a)(307e) + (310a)(310e)] =	1607.99	(313)
Cooling System Energy Efficiency Ratio		7.29	(314)
Space cooling (if there is a fixed cooling system, if not enter 0)	= (107) + (314) =	33.19	(315)
Electricity for pumps and fans within dwelling (Table 4f): mechanical ventilation - balanced, extract or positive input from outside	te [30424.52	(330a
warm air heating system fans	Ī	0	(330t
pump for solar water heating	Ī	0	(330g
Total electricity for the above, KWh/year	=(330a) + (330b) + (330g) =	30424.52	(331)
Energy for lighting (calculated in Appendix L)	Ī	3883.53	(332)
Electricity generated by PVs (Appendix M) (negative quantity)	Ī	-5751.2	(333)
Electricity generated by wind turbine (Appendix M) (negative quantity) ř	0	(334)

	Fuel kWh/ye	ear	Fuel Price (Table 12)		Fuel Cost £/year	
Space heating from CHP	(307a) x	ĸ	2.65	x 0,01 =	2706.93	(340a)
Space heating from heat source 2	(307b) x	K	3.78	x 0.01 =	1989.11	(340b)
Water heating from CHP	(310a) x	K	2.65	x 0.01 =	105.44	(3428
Water heating from heat source 2	(310b) x	ĸ	3.78	x 0.01 =	77.48	(342b
Space cooling (community cooling	system) (315)		Fuel Price 11.46	x 0.01 =	0.84	(348)
Pumps and fans	(331)		11.46	x 0.01 =	3486.65	(349)
Energy for lighting	(332)		11.46	x 0.01 =	445.05	(350)
Additional standing charges (Table	12)			į	106	(351)
Energy saving/generation technologitem 1	gies		11.46	x 0.01 = [-659.09	(352)
	= (340a)(342e) + (345	5) (354) =	11.40	Г		(355)
Total energy cost	The Control of the Co				8258.4	1(000)
11b SAP rating - Community hea	ung scheme				2	224
Energy cost deflator (Table 12)				[0.47	(356)
Energy cost factor (ECF)	[(355) x (356)] + [(4) + 4	15.0] =		[1.15	(357)
SAP rating (section12)				[83.99	(358)
12b CO2 Emissions - Community	heating scheme					
Electrical efficiency of CHP unit				-		_
Electrical enforcing of order will				[31.67	(361)
]	31.67 63.33	(361)
		Energy kWh/ye				=
Heat efficiency of CHP unit	(307a) × 100 + (362) =		ar kg CO2/		63.33 Emissions	=
Heat efficiency of CHP unit Space heating from CHP)	(307a) × 100 + (362) = -(307a) × (361) + (362) =	kWh/ye	ar kg CO2/		63.33 Emissions kg CO2/year	(362)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity	Avoid the Common of the Common	kWh/ye	ar kg CO2/ 75 × 0.2 4 × 0.53		63.33 Emissions kg CO2/year	(362)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP	-(307a) × (361) + (362) =	kWh/ye 161286 51074.1	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2		63.33 Emissions kg CO2/year 31934.78 -27018.22	(362) (363) (364)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP less credit emissions for electricity	-(307a) × (361) + (362) = (310a) × 100 + (362) = -(310a) × (361) + (362) =	kWh/ye 161286 51074.1 6282.2 1989.3	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2	kWh I	63.33 Emissions kg CO2/year 31934.78 -27018.22 1243.89	(362) (363) (364) (365) (366)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP less credit emissions for electricity Efficiency of heat source 2 (%)	-(307a) × (361) + (362) = (310a) × 100 + (362) = -(310a) × (361) + (362) = If there is CHP	kWh/ye 161286 51074.1 6282.2 1989.3	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2 9 × 0.53 at (363) to (366) for the	kWh I	63.33 Emissions kg CO2/year 31934.78 -27018.22 1243.89 -1052.39	(362) (363) (364) (365) (366)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP less credit emissions for electricity Efficiency of heat source 2 (%) CO2 associated with heat source 2	-(307a) × (361) + (362) = (310a) × 100 + (362) = -(310a) × (361) + (362) = If there is CHP	kWh/ye 161286 51074.1 6282.2 1989.3 using two fuels repe	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2 9 × 0.53 at (363) to (366) for the	kWh	63.33 Emissions kg CO2/year 31934.78 -27018.22 1243.89 -1052.39	(362) (363) (364) (365) (366) (367b
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP less credit emissions for electricity Efficiency of heat source 2 (%) CO2 associated with heat source 2 Electrical energy for heat distribution	-(307a) × (361) + (362) = (310a) × 100 + (362) = -(310a) × (361) + (362) = If there is CHP	kWh/ye 161286 51074.1 6282.2 1989.3 using two fuels repe 7b)+(310b)] x 100 +	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2 9 × 0.53 at (363) to (366) for the (367b) x 0.2	kWh I	63.33 Emissions kg CO2/year 31934.78 -27018.22 1243.89 -1052.39 95	(362) (363) (364) (365) (366) (367b) (368)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP less credit emissions for electricity Efficiency of heat source 2 (%) CO2 associated with heat source 2 Electrical energy for heat distribution Total CO2 associated with communications	-(307a) × (361) + (362) = (310a) × 100 + (362) = -(310a) × (361) + (362) = If there is CHP (300) (300)	kWh/ye 161286 51074.1 6282.2 1989.3 using two fuels repe (7b)+(310b)[x 100 + [(313) x	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2 9 × 0.53 at (363) to (366) for the (367b) x 0.2	kWh	63.33 Emissions kg CO2/year 31934.78 -27018.22 1243.89 -1052.39 95 11394.69 831.33	(362) (363) (364) (365) (366) (367b (368) (372)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP less credit emissions for electricity Efficiency of heat source 2 (%) CO2 associated with heat source 2 Electrical energy for heat distribution Total CO2 associated with space heating	-(307a) × (361) + (362) = (310a) × 100 + (362) = -(310a) × (361) + (362) = If there is CHP 2	kWh/ye 161286 51074.1 6282.2 1989.3 using two fuels repe (7b)+(310b)] x 100 + [(313) x (363)(366) + (309) x	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2 9 × 0.53 at (363) to (366) for the (367b) x 0.2 0.52 (368)(372)	kWh I	63.33 Emissions kg CO2/year 31934.78 -27018.22 1243.89 -1052.39 95 11394.69 831.33 17334.08	(362) (363) (364) (365) (366) (367b) (368) (372)
Heat efficiency of CHP unit Space heating from CHP) less credit emissions for electricity Water heated by CHP less credit emissions for electricity Efficiency of heat source 2 (%) CO2 associated with heat source 2 Electrical energy for heat distribution Total CO2 associated with space heating CO2 associated with space heating CO2 associated with water from im Total CO2 associated with space a	-(307a) × (361) + (362) = (310a) × 100 + (362) = -(310a) × (361) + (362) = If there is CHP 2	kWh/ye 161286 51074.1 6282.2 1989.3 using two fuels repe (7b)+(310b)] x 100 + [(313) x (363)(366) + (309) x	ar kg CO2/ 75 × 0.2 4 × 0.53 8 × 0.2 9 × 0.53 at (363) to (366) for the (367b) x 0.2 0.52 (368)(372)	kWh I	63.33 Emissions kg CO2/year 31934.78 -27018.22 1243.89 -1052.39 95 11394.69 831.33 17334.08	(362) (363) (364) (365) (366) (367b) (368) (372) (373) (374)

CO2 associated with electricity for	pumps and fans within dv	velling (331)) x		0.52	=	15729.48	(378)
CO2 associated with electricity for	rlighting	(332))) x		0.52	=	2007.79	(379)
Energy saving/generation technol Item 1	ogies (333) to (334) as ap	plicable		0.53 × 0	.01 =	-3042.38	(380)
Total CO2, kg/year	sum of (376)(382) =		30.80		Е	32046.12	(383)
Dwelling CO2 Emission Ra	ate (383) + (4) =				Ē	9.6	(384)
El rating (section 14)						87.3	(385)
13b. Primary Energy - Communit	y heating scheme						
Electrical efficiency of CHP unit	t				L	31.67	(361)
Heat efficiency of CHP unit						63.33	(362)
		Energy kWh/yea	r	Primary factor		.Energy Wh/year	
Space heating from CHP)	(307a) × 100 + (362) =	161286.75	5 ×	1.02		164512.48	(363)
less credit emissions for electricity	-(307a) × (361) ÷ (362) =	51074.14	×	2.92		-149136.48	(364)
Water heated by CHP	(310a) × 100 + (362) =	6282.28	×	1.02		6407.93	(365)
less credit emissions for electricity	/ -(310a) × (361) + (362) =	1989.39	×	2.92]	-5809.02	(366)
Efficiency of heat source 2 (%)	If there is CHP	using two fuels repeat	t (363) to	(366) for the seco	nd fuel	95	(367b
Energy associated with heat sour	ce 2 ((30	7b)+(310b)] x 100 + (3	367b) x	1.02	=	58699.94	(368)
Electrical energy for heat distribut	ion	[(313) x			=	4695.32	(372)
Total Energy associated with com	munity systems	(363)(366) + (3	68)(37	2)	=	79370.17	(373)
if it is negative set (373) to zero	(unless specified otherwis	se, see C7 in App	endix C	()		79370.17	(373)
Energy associated with space hea	ating (secondary)	(309) x		0		0	(374)
Energy associated with water from	n immersion heater or inst	antaneous heaten	(312) x	1.02	=	0	(375)
Total Energy associated with spa	ce and water heating	(373) + (374) + (3	375) =			79370.17	(376)
Energy associated with space coo	oling	(315) x		2.92	-	96.92	(377)
Energy associated with electricity	for pumps and fans within	dwelling	(331)) x	2.92	=	88839.59	(378)
Energy associated with electricity	for lighting	(332))) x		2.92	=	11339.91	(379)
Energy saving/generation technol Item 1	ogies			2.92 x 0	.01 =	-16793.5	(380)
Total Primary Energy, kWI	n/year sum of (3	76)(382) =			Ē	162853.08	(383)

APPENDIX (vi)

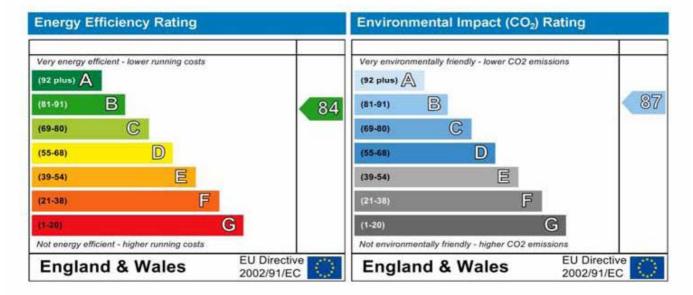
PEA - PREDICTED ENERGY ASSESSMENT (PRE-EPC)

Predicted Energy Assessment

1 Radlett Place London NW8 6BT Dwelling type: Date of assessment: Produced by: Total floor area: Detached House 07 August 2012 Ondrej Gajdos 3337 m²

This is a Predicted Energy Assessment for a property which is not yet complete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, an Energy Performance Certificate is required providing information about the energy performance of the completed property.

Energy performance has been assessed using the SAP 2009 methodology and is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO2) emissions.

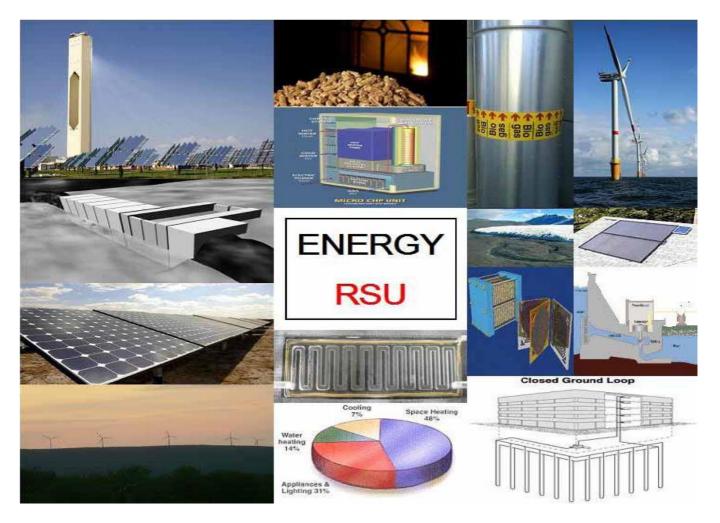


The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

The environmental impact rating is a measure of a home's impact on the environment in terms of carbonn dioxide (CO2) emissions. The higher the rating the less impact it has on the environment.

APPENDIX (iv)

ENERGY RSU – RENEWABLES & SUSTAINABILITY UNIT



ENERGY RSU is an integrated energy sustainability unit able to provide the following:

- SAP Calculations & Certificates L1A&B New/Existing Buildings (NHER certified)
- SBEM Calculations & Certificates L2A&B New/Existing Buildings (BRE certified)
- EPC & DEC Certificates New Build (CIBSE certified)
- Rd SAP Survey EPC Certificates Existing Buildings (NHER certified)
- Commercial EPC Survey certificates Existing Buildings (BRE certified) Level 3, 4 & 5
- Energy Statements & Renewable Reports for Planning
- LEED/BREEAM assessments (USGBC/BRE certified)
- Low/Zero Carbon (LZC) and Sustainability Appraisals/designs (CIBSE Low Carbon Consultant)
- Renewable Energy Appraisals and Designs
- Carbon Rating assessments
- 2D/3D CFD and Dynamic Thermal Simulations
- EPBD Air Conditioning Inspections (Article 20) and EPBD Asset Ratings & Certificates
- Energy Usage (Running Costs)
- Utility/Bill Analysis and Recommendations
- Advice on Green and Environmental Issues Relating to M&E Building Services
- Code for Sustainable Homes (BRE certified)
- Solar Shading/Sun Studies











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M&E Consultants

Energy Consultants



Section 6.0

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