



Utvärdering Branta Backen, Botkyrka (near Stockholm)

**Energy savings due to ThermoShield Extérieur only facade coating
Comparison of calculated prediction (2009) and measured values (2011)**

Resultat

Branta Backen 17-29

Graddagsskorrigerad värme (VV exkluderad)

Mätperiod			Jämförelseperiod		
2013	2012	2011	2008	2007	2006
MWh	MWh	MWh	MWh	MWh	MWh
		113,6	145,5	132,0	131,6
		96,4	113,2	130,5	118,2
		89,1	107,3	116,0	105,8
		77,3	84,8	85,8	87,9
		48,7	39,2	48,7	32,5
		6,5	11,6	15,4	9,3
		1,3	9,4	3,4	0,6
		4,3	7,5	4,7	0,0
			34,5	25,0	7,3
			71,6	68,9	61,9
			100,3	84,3	104,4
			138,7	120,7	121,1
Summa tom aug		437,2	518,6	536,4	485,8
Besparing 14,9%			Snitt tom aug.		513,6



Energibesparing 15 %

Enligt resultat från rapport ÅF sept. 2011

Resultat

Branta Backen 7-15

Graddagsskorrigerad värme (VV exkluderad)

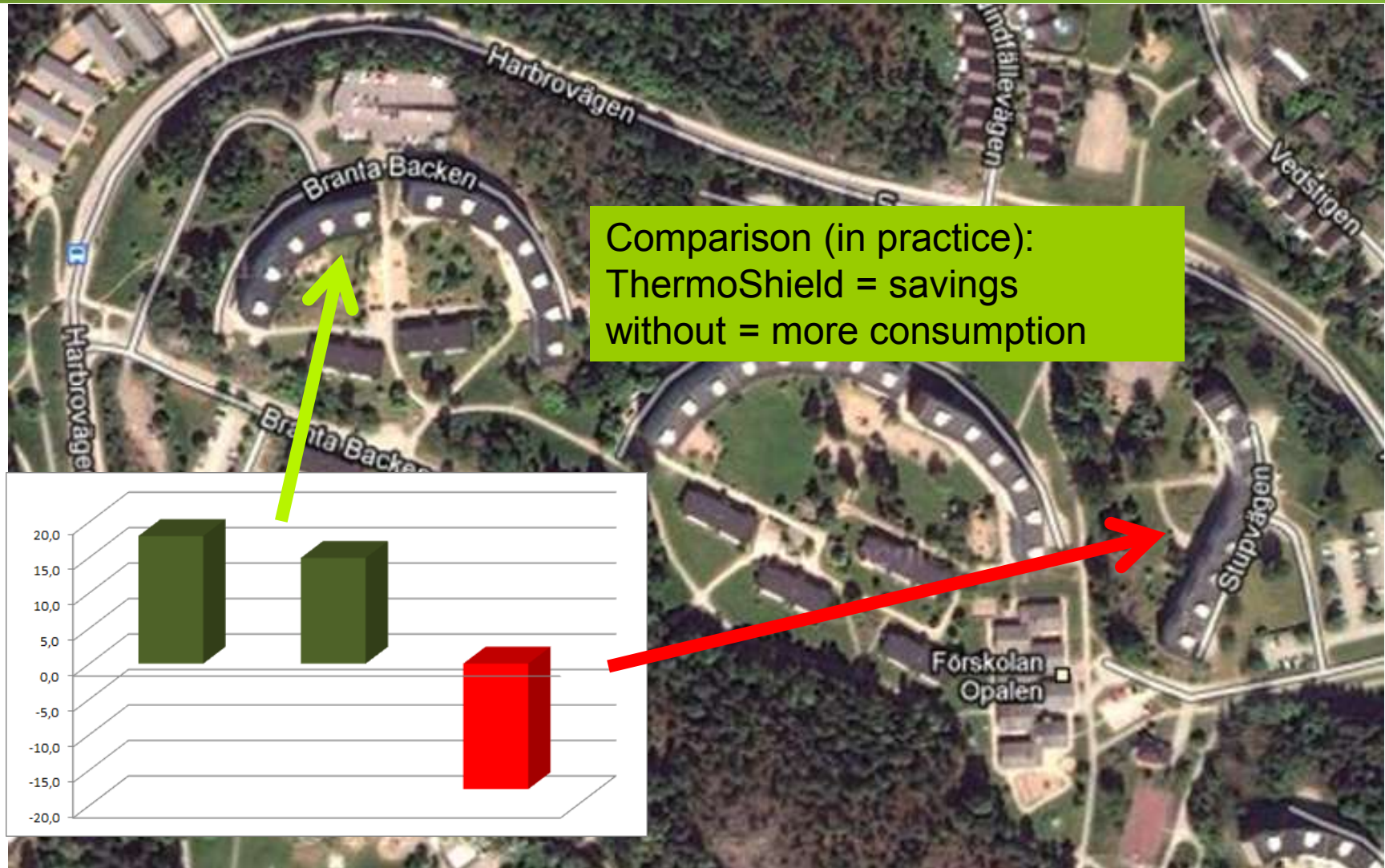
Mätperiod			Jämförelseperiod		
2013	2012	2011	2008	2007	2006
MWh	MWh	MWh	MWh	MWh	MWh
		77,6	92,4	81,5	103,5
		67,2	77,0	80,3	90,7
		60,2	70,5	74,5	80,3
		65,8	55,1	56,9	72,1
		24,0	31,9	36,1	38,0
		4,1	9,7	7,0	13,5
		0,0	5,2	0,6	1,6
		0,0	1,1	14,6	0,0
			22,2	23,9	8,9
			39,3	51,3	40,0
			53,7	53,0	63,5
			76,6	76,4	76,6
Summa tom aug		299,2	342,9	351,7	399,7
Besparing 17,99%			Snitt tom juni.		364,8



Energibesparing 18 %

Enligt resultat från rapport ÅF sept. 2011

Jämförelsehus - Stupvägen





2009



$$U = \frac{1}{R_{si} + \sum \left(\frac{d}{\lambda_R (1 - f_{TS})} \right) + R_{se}}$$

	Ri	f _{TS}	f*	λ _{eff}	Reff
	0,130 m²K/W				0,130 m²K/W
	0,000 m²K/W		0,00	0,000	0,000 m²K/W
Layer 2 Plaster	R2 = 0,021 m²K/W	0,60	0,40	0,280	0,054 m²K/W
Layer 3 Brick 1.600	R3 = 0,559 m²K/W	0,35	0,65	0,442	0,860 m²K/W
Layer 4 Plaster	R4 = 0,180 m²K/W	0,60	0,40	0,400	0,063 m²K/W
	R5 = 0,000 m²K/W		0,00	0,000	0,000 m²K/W
	R6 = 0,000 m²K/W		0,00	0,000	0,000 m²K/W
	R6 = 0,000 m²K/W		0,00	0,000	0,000 m²K/W
	Rse = 0,040 m²K/W				0,040 m²K/W
	Σ Ri = 0,930 m²K/W				1,146 m²K/W
	U = 1,075 W/m²K				0,873 W/m²K
					Δ = 19%

Better than calculated.

2011: Δ Q_{pract} = 15/18%



2009: Δ Q_{calc} ≈ 12%



2009: Δ U_{calc} = 19%



f* = f_{TS}



“... I hope you remember this project.

This is the result from the evaluation made one of Swedens largest consultancy companies. The results from the last 12 months was 13,2 % energy saving.

Note that the energy saving is actually more than 13,2 % because some small houses which was not painted is included in the results from Branta Backen 7-15, this is estimated to give 2 to 3% higher results and the savings from the last 3 months is much higher than the period before. I strongly believe that we are very **close to 16 % ...**”

E-Mail: 10.03.2014

Olle Löfdahl, THERMOGAIA