

Project:
Walcourt/Thuin

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SGS Environmental Services NV
Polderdijkweg 16 Haven 407
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Calculated:
10/05/2010 14:21/2.3.0.125

SHADOW - Main Result

Calculation: Ombre météo

Assumptions for shadow calculations

Maximum distance for influence 2.000 m
Minimum sun height over horizon for influence 3 °
Day step for calculation 1 days
Time step for calculation 2 minutes

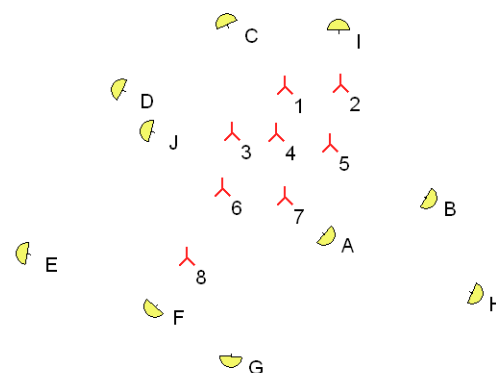
Sun shine probabilities (part of time from sun rise to sun set with sun shine)

jan fév mar avr mai jui jui aoû sep oct nov déc
0,17 0,26 0,34 0,38 0,42 0,40 0,41 0,38 0,40 0,35 0,22 0,15

Operational time

N NNE NE ENE E ESE
263 508 614 473 167 202

SE SSE S SSW SW WSW W WNW NW NNW Sum
210 543 675 1.341 1.043 1.148 386 377 237 333 8.521



Scale 1:75.000
New WTG Shadow Receptor

WTGs

LUREF	North			Row data/Description	WTG type							
	East	North	Z [m]		Valid	Manufact.	Type	Power [kW]	Diam. [m]	Height [m]	RPM [RPM]	
1	-728.930	-2.280.192	0	Eolienne 1	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	
2	-728.369	-2.280.210	0	Eolienne 2	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	
3	-729.486	-2.280.616	0	Eolienne 3	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	
4	-729.050	-2.280.655	0	Eolienne 4	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	
5	-728.513	-2.280.796	0	Eolienne 5	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	
6	-729.621	-2.281.163	0	Eolienne 6	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	
7	-729.001	-2.281.285	0	Eolienne 7	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	
8	-730.026	-2.281.826	0	Eolienne 8	Yes	NORDEX	N90	2.300	90,0	100,0	16,9	

Shadow Receptor-Input

No	Name	LUREF			Width [m]	Height [m]	Height a.g.l. [m]	Degrees from south cw [°]	Slope of window [°]
		East	North	Z [m]					
A	P1	-728.637	-2.281.690	0	1,0	1,0	1,0	-231,3	90,0
B	P2	-727.596	-2.281.394	0	1,0	1,0	1,0	-239,4	90,0
C	P3	-729.463	-2.279.538	0	1,0	1,0	1,0	-26,2	90,0
D	P4	-730.555	-2.280.116	0	1,0	1,0	1,0	-62,7	90,0
E	P5	-731.613	-2.281.678	0	1,0	1,0	1,0	-81,4	90,0
F	P6	-730.371	-2.282.285	0	1,0	1,0	1,0	-136,2	90,0
G	P7	-729.647	-2.282.842	0	1,0	1,0	1,0	-174,1	90,0
H	P8	-727.202	-2.282.367	0	1,0	1,0	1,0	-244,1	90,0
I	P9	-728.354	-2.279.670	0	1,0	1,0	1,0	0,0	90,0
J	P10	-730.298	-2.280.550	0	1,0	1,0	1,0	-73,5	90,0

Calculation Results

No	Name	Shadow, worst case			Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]	Shadow hours per year [h/year]
A	P1	15:56	68	0:20	3:10	
B	P2	10:20	80	0:12	2:04	
C	P3	12:38	62	0:18	1:03	
D	P4	11:20	64	0:18	1:32	
E	P5	2:06	16	0:10	0:24	
F	P6	0:00	0	0:00	0:00	

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SHADOW - Main Result**Calculation:** Ombre météo

No	Name	Shadow, worst case			Shadow, expected values	
		Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]	Shadow hours per year [h/year]	
G	P7	0:00	0	0:00	0:00	
H	P8	0:00	0	0:00	0:00	
I	P9	0:00	0	0:00	0:00	
J	P10	25:20	128	0:28	4:46	