

## SHADOW - Main Result

Calculation: 5 Old WTG

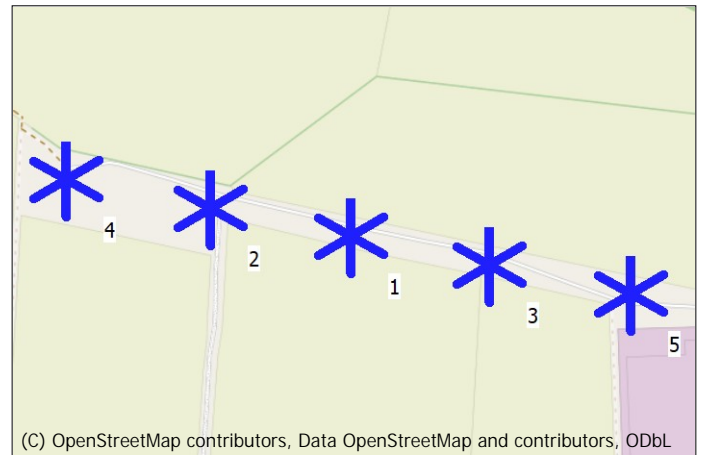
### Assumptions for shadow calculations

Maximum distance for influence  
 Calculate only when more than 20 % of sun is covered by the blade  
 Please look in WTG table

The calculated times are "worst case" given by the following assumptions:  
 The sun is shining all the day, from sunrise to sunset  
 The rotor plane is always perpendicular to the line from the WTG to the sun  
 The WTG is always operating

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:  
 DHM: Elevation Grid Data Object: OS\_Terrain\_50\_2020\_30km\_x\_30km.wpg (1)

All coordinates are in British TM-OSGB36/Airy (GB/IE)

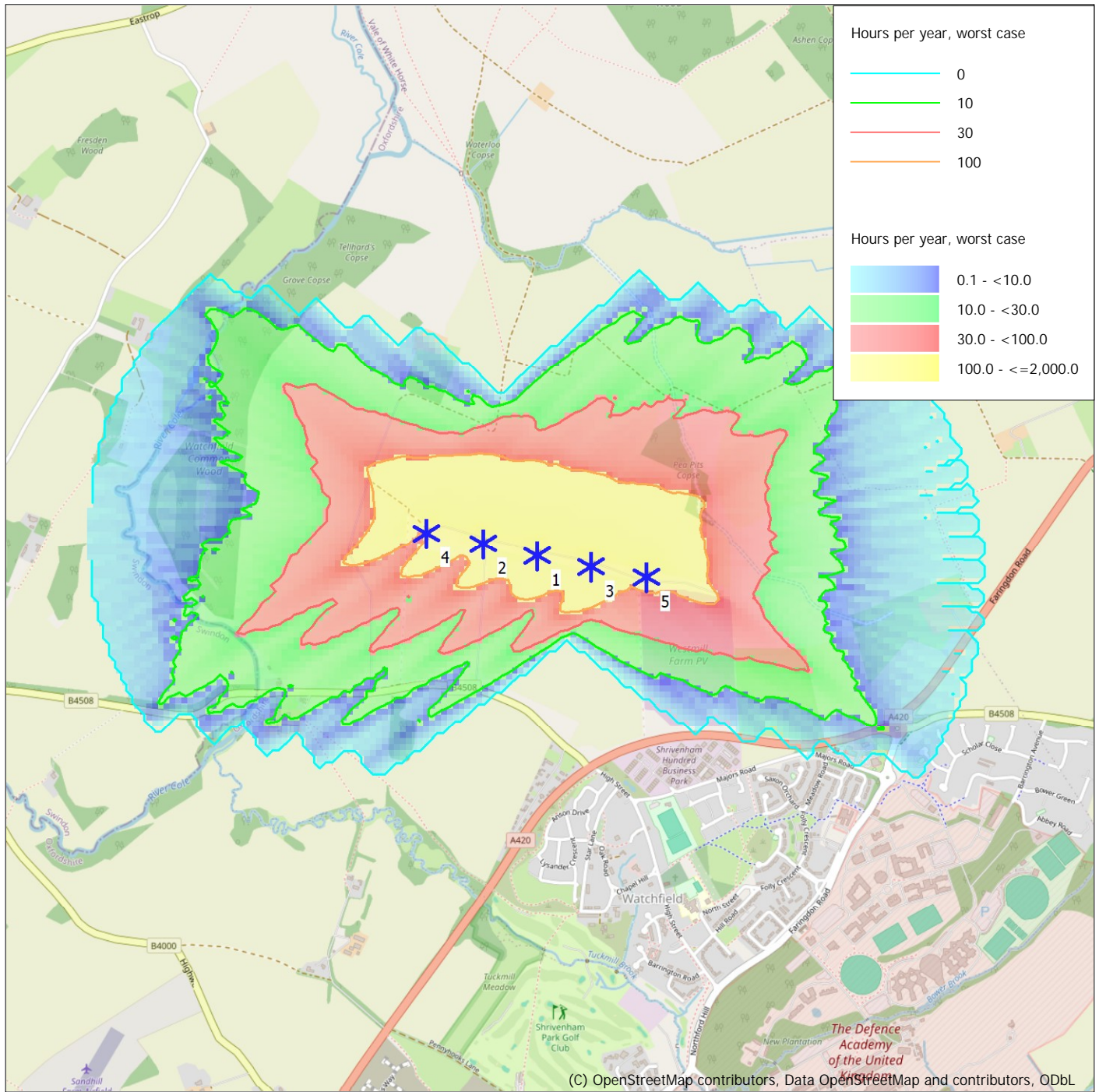


\* Existing WTG

### WTGs

	Easting	Northing	Z	Row data/Description	WTG type			Shadow data				
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Calculation distance [m]	RPM [RPM]
			[m]									
1	424,115	191,390	109.3	BONUS 1.3 MW 1300-250 62.0 !O! hub: 50.0 m (TOT... No	BONUS	1.3 MW-1,300/250	1,300	62.0	50.0	1,144	19.0	
2	423,930	191,427	112.1	BONUS 1.3 MW 1300-250 62.0 !O! hub: 50.0 m (TOT... No	BONUS	1.3 MW-1,300/250	1,300	62.0	50.0	1,144	19.0	
3	424,300	191,353	107.9	BONUS 1.3 MW 1300-250 62.0 !O! hub: 50.0 m (TOT... No	BONUS	1.3 MW-1,300/250	1,300	62.0	50.0	1,144	19.0	
4	423,738	191,463	113.3	BONUS 1.3 MW 1300-250 62.0 !O! hub: 50.0 m (TOT... No	BONUS	1.3 MW-1,300/250	1,300	62.0	50.0	1,144	19.0	
5	424,488	191,315	106.0	BONUS 1.3 MW 1300-250 62.0 !O! hub: 50.0 m (TOT... No	BONUS	1.3 MW-1,300/250	1,300	62.0	50.0	1,144	19.0	

SHADOW - Map  
 Calculation: 5 Old WTG



\* Existing WTG

Map: EMD OpenStreetMap , Print scale 1:20,000, Map center British TM-OSGB36/Airy (GB/IE) East: 424,120 North: 191,380

Flicker map level: Elevation Grid Data Object: OS\_Terrain\_50\_2020\_30km\_x\_30km.wpg (1)  
 Time step: 3 minutes, Day step: 7 days, Map resolution: 20 m, Visibility resolution: 10 m, Eye height: 1.5 m