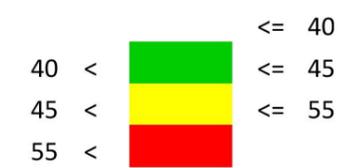
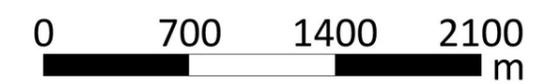


Yearly Average, $L_{den,365}$ days



- NSP - Residential dwelling
- Wind turbine
- NSP dBA L_{den} 4 m above ground in dBA



Wind Farm Harbaksfjellet,
30 Vestas V117 3,6 MW - Curtailment

Noise emission: 102,4-107 dBA
 WT operation: 365 days
 Wind conditions: Downwind 8 m/s at 10 m height
 Calculation height: 4 m

Handläggare: Paul Appelqvist Kvalitetsgranskare: Victor Wetterblad
 Projekt nr.: 10-16162 Ritning: A02
 Datum: 2017-11-03

Beräknad med SoundPLAN 7.4 uppdatering 2017-06-27 www.akustikkonsulten.se



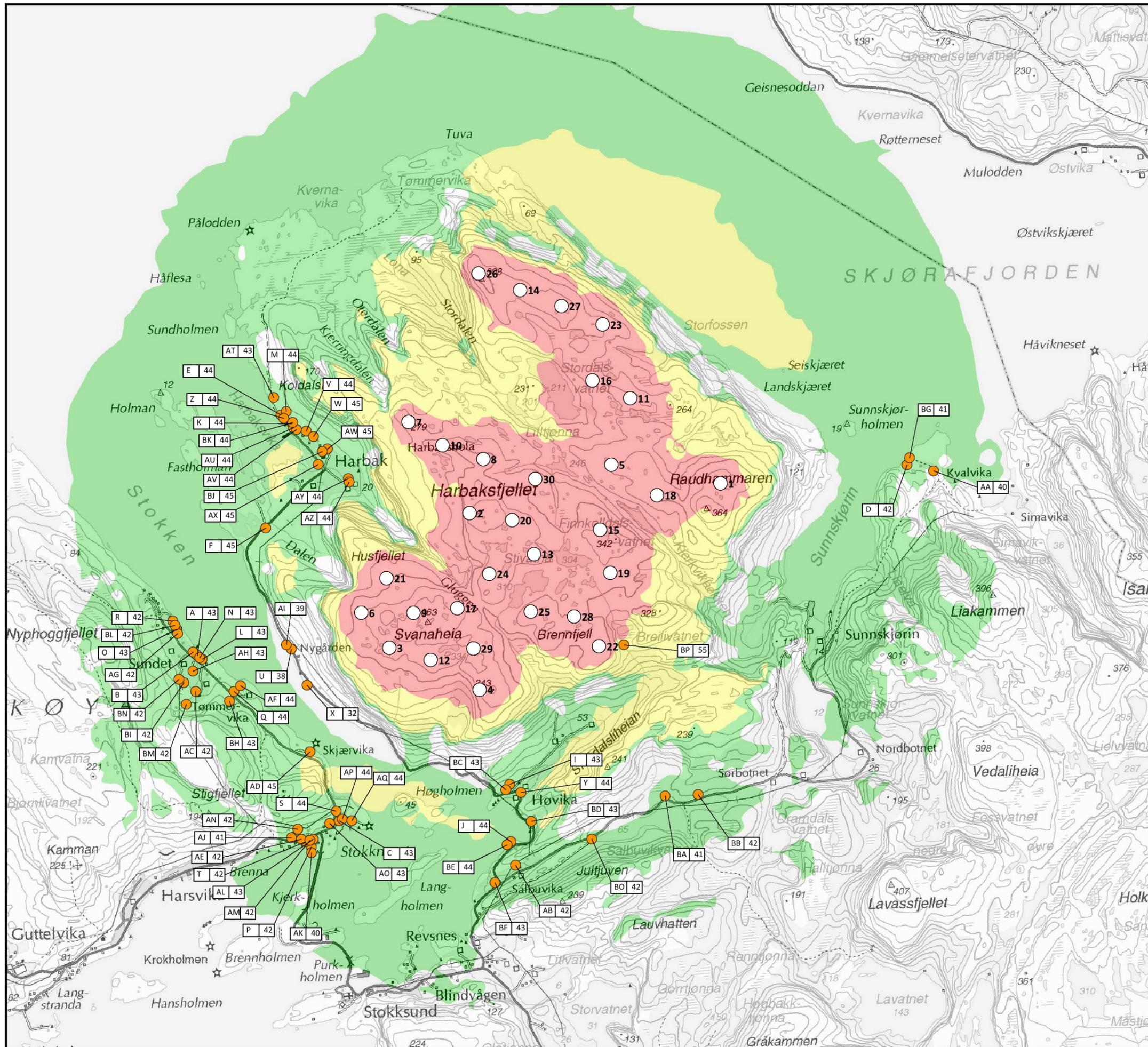
Vedlegg til MTA for Harbaksfjellet – Støyverdier helårsbolig

Nedenstående tabell viser beregnet årsmiddel Lden støyverdi for alle helårsboliger i områdene rundt Harbaksfjellet vindpark.

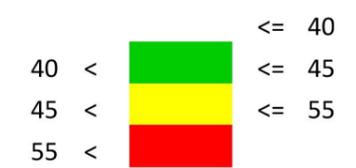
Helårsbolig	
Mottager ID	Lden
A	37,1
AA	41,1
AB	38,8
AC	39,3
AD	41,0
AE	39,8
AF	41,5
AG	35,0
AH	39,4
AI	33,9
AJ	33,9
AK	43,3
AL	43,5
AM	41,7
AN	37,2
AO	44,2
AP	37,8
AQ	40,5
AT	41,8
AU	40,9
AV	42,3
AW	43,8
AX	42,4
AY	40,7
AZ	41,3
B	36,2
BA	41,5
BB	40,1
BC	42,1
BD	42,9
BE	42,6
BF	40,8
BG	43,1
BH	41,3
BI	40,9
BJ	43,1
BK	41,2
BL	41,2
BM	41,2
BN	43,6

Helårsbolig	
Mottager ID	Lden
BO	42,5
BP	43,8
BQ	37,1
BR	42,9
BS	43,9
BT	43,0
BU	40,1
BV	44,2
BW	43,6
BY	43,2
BZ	44,1
C	38,5
CA	43,5
CB	39,1
CC	43,4
CD	43,0
CE	38,7
CF	44,7
CG	44,7
CH	45,1
CI	45,1
CJ	42,6
CK	42,2
CL	44,4
CM	33,1
CN	42,4
CO	43,0
CP	42,6
CQ	42,9
CR	42,7
CS	42,8
CT	35,2
CU	43,2
CV	42,3
CX	43,0
CY	38,6
CZ	42,9
D	40,3
DA	42,2
DB	42,3

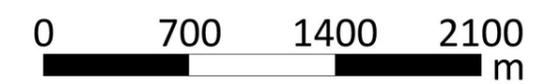
Helårsbolig	
Mottager ID	Lden
DC	42,5
DE	42,1
DF	42,0
DG	41,9
DH	41,9
DI	43,8
DJ	43,7
DK	44,8
DL	45,5
DM	45,4
DN	44,8
DO	45,0
DP	45,0
DQ	45,1
DR	44,7
DS	44,8
DT	44,5
DU	44,3
DV	43,4
DW	44,0
E	40,2
F	40,8
I	39,6
J	40,7
K	40,5
L	38,7
M	40,8
N	40,8
O	40,8
P	38,4
Q	39,7
R	39,1
S	39,4
T	40,6
U	40,9
V	39,6
W	40,0
X	40,7
Y	40,0
Z	40,9



Yearly Average, $L_{den,365}$ days



- NSP - Recreational dwelling
- Wind turbine
- NSP dBA L_{den} 4 m above ground in dBA



Wind Farm Harbaksfjellet, 30 Vestas V117 3,6 MW - Curtailment		 Akustikkonsulten
Noise emission: 102,4-107 dBA WT operation: 365 days Wind conditions: Downwind 8 m/s at 10 m height Calculation height: 4 m		
<small>Beräknad med SoundPLAN 7.4 uppdatering 2017-06-27 www.akustikkonsulten.se</small>		
Handläggare	Paul Appelqvist	Kvalitetsgranskare
Projekt nr.	10-16162	Ritning
Datum	2017-11-03	A02

Vedlegg til MTA for Harbaksfjellet – Støyverdier fritidsbolig

Nedenstående tabell viser beregnet årsmiddel Lden støyverdi for alle fritidsboliger i og rundt Harbaksfjellet vindpark.

Fritidsbolig	
Mottager ID	Lden
A	43,0
AA	40,0
AB	41,8
AC	42,5
AD	45,1
AE	41,8
AF	44,3
AG	42,4
AH	42,7
AI	38,7
AJ	41,5
AK	40,5
AL	42,5
AM	42,3
AN	41,5
AO	43,4
AP	44,0
AQ	44,0
AT	42,8
AU	44,2
AV	44,3
AW	44,9
AX	44,5
AY	43,7
AZ	43,9
B	42,9
BA	41,1
BB	41,9
BC	43,2
BD	43,3
BE	44,2
BF	43,3
BG	41,3
BH	43,5
BI	42,2
BJ	45,3
BK	44,0
BL	42,4
BM	42,0
BN	42,1
BO	42,1
BP	55,2

Fritidsbolig	
Mottager ID	Lden
C	43,2
D	42,2
E	43,8
F	44,6
I	43,1
J	44,3
K	44,1
L	43,2
M	43,6
N	43,1
O	42,5
P	42,2
Q	44,0
R	42,3
S	44,0
T	42,1
U	38,4
V	44,4
W	44,6
X	31,6
Y	43,6
Z	44,0

Harbaksfjellet

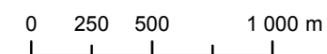
Skyggekast

Tegnforklaring

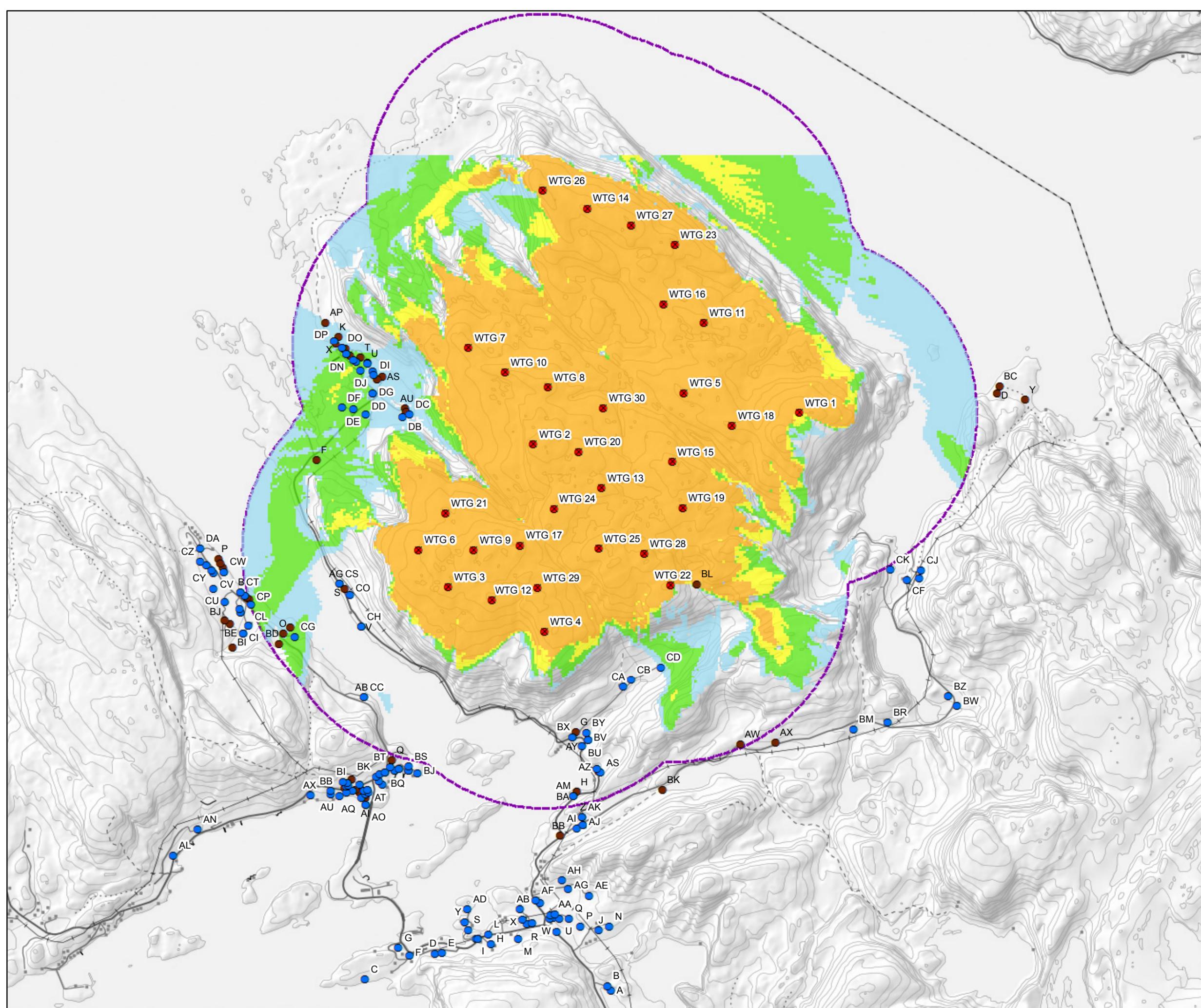
- Skyggemottaker - Bolig
- Mottaker - Fritidsbolig
- ✖ Vindturbin
- ▭ Vindturbin - 1500 m buffer

Skyggekast: timer/år (verste fall)

- 1-10
- 10-30
- 30-50
- >50



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Document updated:
Map generated: 15.12.2017
Creator: AAM



Harbaksfjellet

Skyggekast

Tegnforklaring

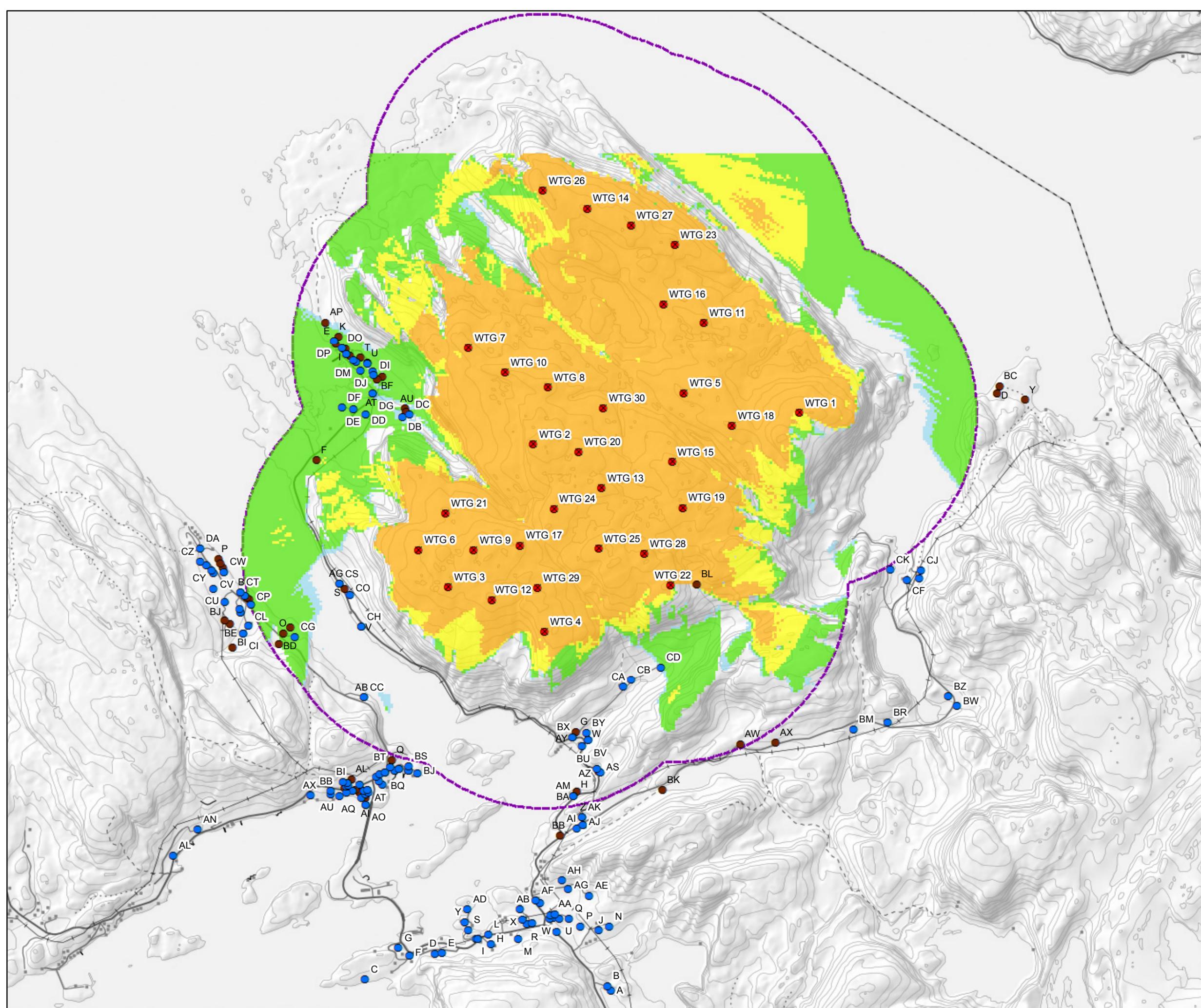
- Skyggemottaker - Bolig
- Mottaker - Fritidsbolig
- ✖ Vindturbin
- ▭ Vindturbin - 1500 m buffer

Skyggekast: min/dag (verste fall)

- 1 - 10
- 10 - 30
- 30 - 50
- >50



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Map generated: 14.12.2017
Creator: AAM



Harbaksfjellet

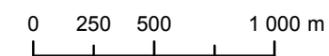
Skyggekast

Tegnforklaring

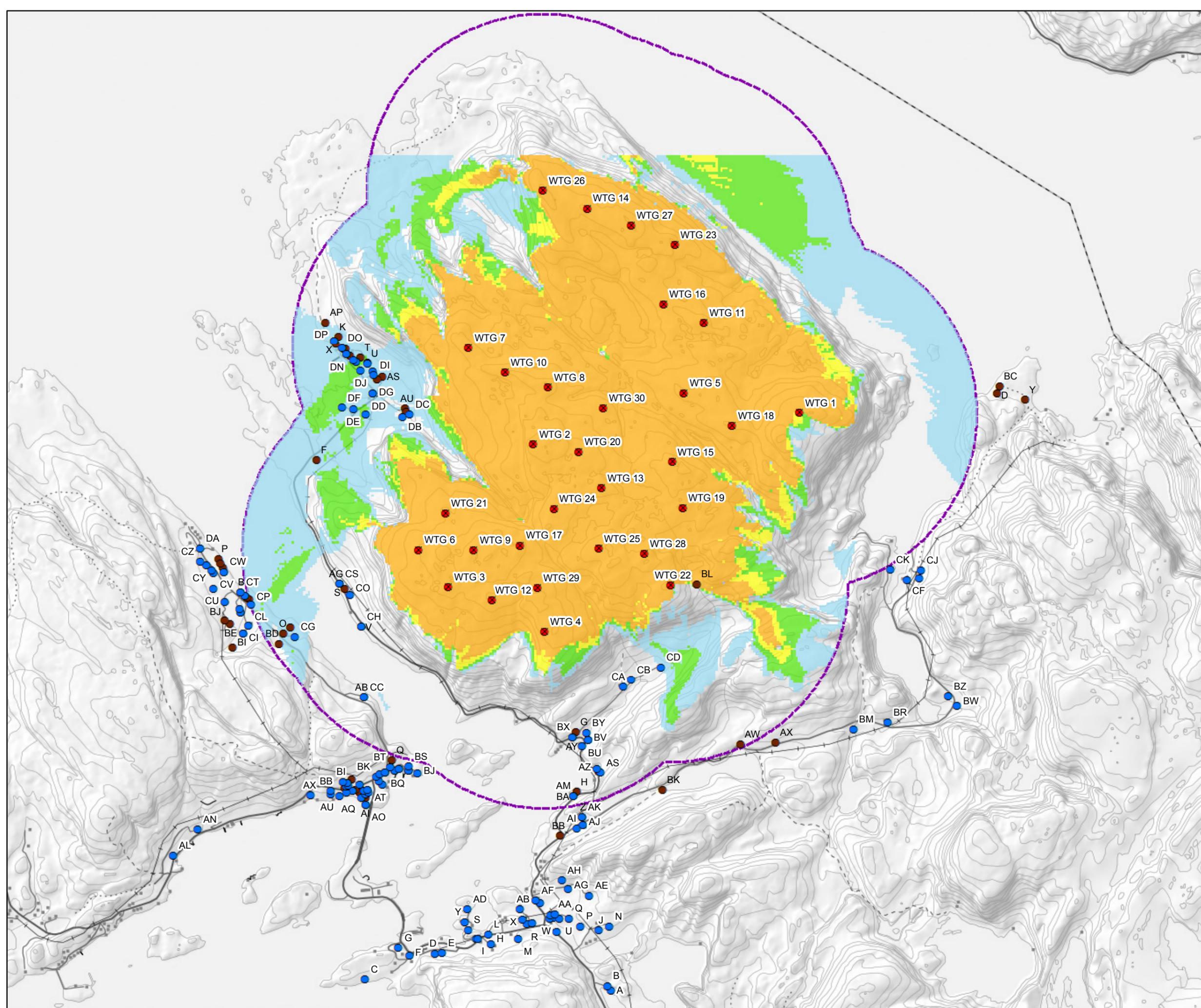
- Skyggemottaker - Bolig
- Mottaker - Fritidsbolig
- ✖ Vindturbin
- ▭ Vindturbin - 1500 m buffer

Skyggekast: timer/år (realistisk)

- 1-4
- 4-8
- 8-12
- >12



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Creator: AAM



Harbaksfjellet

Skyggekast

Tegnforklaring

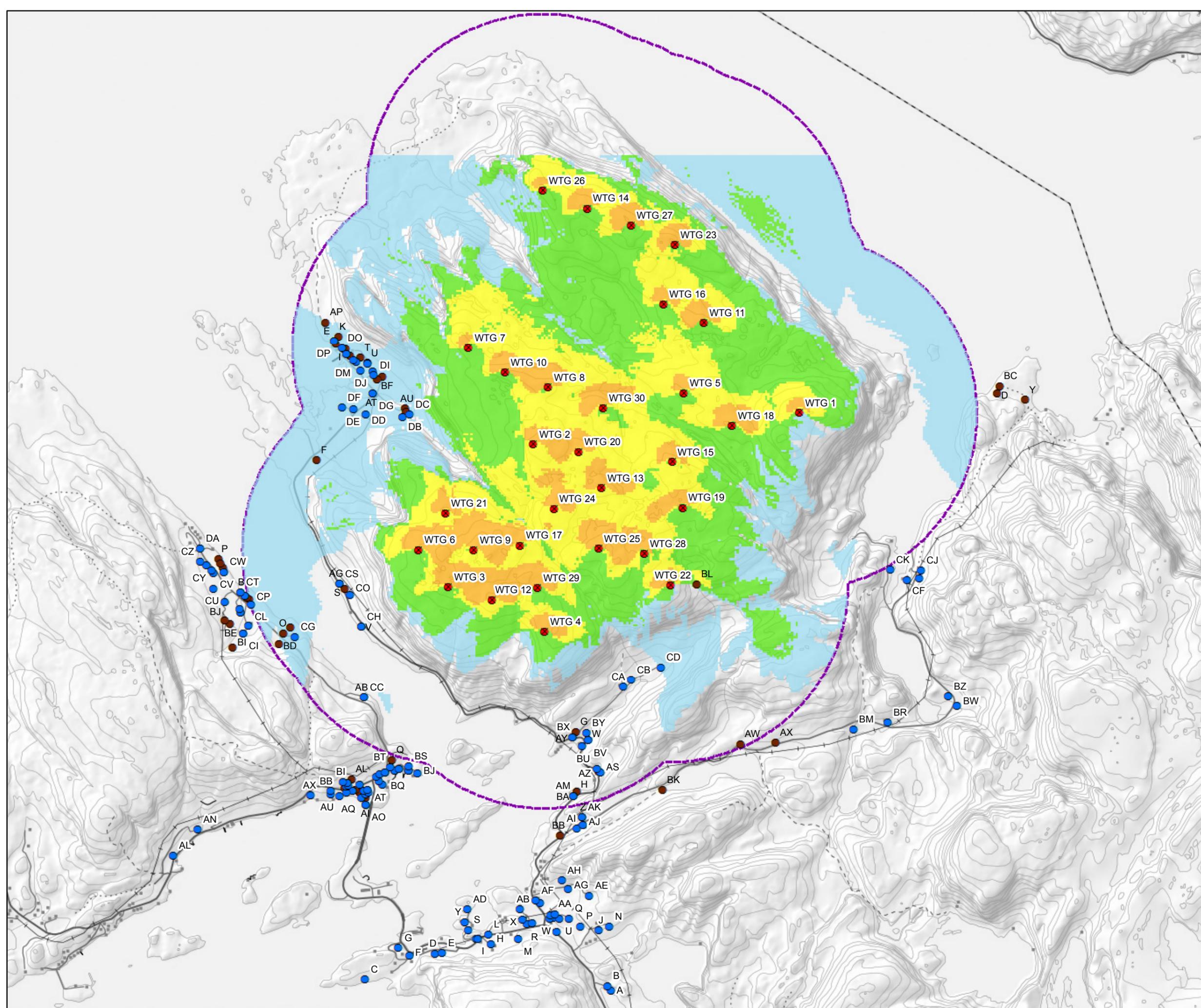
- Skyggemottaker - Bolig
- Mottaker - Fritidsbolig
- ✖ Vindturbin
- ▭ Vindturbin - 1500 m buffer

Skyggekast: min/dag (realistisk)

- 1 - 10
- 10 - 30
- 30 - 50
- >50



Document created:
Document updated:
Map generated: 14.12.2017
Creator: AAM



Vedlegg til MTA for Harbaksfjellet vindpark – Skyggekast helårsbolig

Mottager	Worst case			Real case	Mottager	Easting	Worst case		Real case
	Helårs-bolig	Maks timer/år	Dager med skyggekast /år	Maks timer/dag			Timer/år	Helårs-bolig	Dager med skyggekast /år
A	0:00	0	00:00	00:00	BM	555 001	0	00:00	00:00
AA	0:00	0	00:00	00:00	BN	551 111	0	00:00	00:00
AB	0:00	0	00:00	00:00	BO	550 983	0	00:00	00:00
AC	0:00	0	00:00	00:00	BP	551 142	0	00:00	00:00
AD	0:00	0	00:00	00:00	BQ	551 025	0	00:00	00:00
AE	0:00	0	00:00	00:00	BR	555 295	0	00:00	00:00
AF	0:00	0	00:00	00:00	BS	551 226	0	00:00	00:00
AG	0:00	0	00:00	00:00	BT	551 068	0	00:00	00:00
AH	0:00	0	00:00	00:00	BU	552 699	0	00:00	00:00
AI	0:00	0	00:00	00:00	BV	552 749	0	00:00	00:00
AJ	0:00	0	00:00	00:00	BW	555 884	0	00:00	00:00
AK	0:00	0	00:00	00:00	BX	552 614	0	00:00	00:00
AL	0:00	0	00:00	00:00	BY	552 736	0	00:00	00:00
AM	0:00	0	00:00	00:00	BZ	555 806	0	00:00	00:00
AN	0:00	0	00:00	00:00	C	550 855	0	00:00	00:00
AO	0:00	0	00:00	00:00	CA	553 048	0	00:00	00:00
AP	0:00	0	00:00	00:00	CB	553 115	0	00:00	00:00
AQ	0:00	0	00:00	00:00	CC	550 848	0	00:00	00:00
AR	0:00	0	00:00	00:00	CD	553 366	30	00:09	00:45
AS	0:00	0	00:00	00:00	CE	555 560	0	00:00	00:00
AT	0:00	0	00:00	00:00	CF	555 453	0	00:00	00:00
AU	0:00	0	00:00	00:00	CG	550 262	68	00:21	04:07
AV	0:00	0	00:00	00:00	CH	550 823	0	00:00	00:00
AW	0:00	0	00:00	00:00	CI	549 821	0	00:00	00:00
AX	0:00	0	00:00	00:00	CJ	555 573	0	00:00	00:00
AY	0:00	0	00:00	00:00	CK	555 316	0	00:00	00:00
AZ	0:00	0	00:00	00:00	CL	549 869	0	00:00	00:00
B	0:00	0	00:00	00:00	CM	549 797	0	00:00	00:00
BA	0:00	0	00:00	00:00	CN	549 794	0	00:00	00:00
BB	0:00	0	00:00	00:00	CO	550 726	0	00:00	00:00
BC	0:00	0	00:00	00:00	CP	549 887	49	00:19	02:44
BD	0:00	0	00:00	00:00	CQ	549 668	0	00:00	00:00
BE	0:00	0	00:00	00:00	CR	549 835	0	00:00	00:00
BF	0:00	0	00:00	00:00	CS	550 637	0	00:00	00:00
BG	0:00	0	00:00	00:00	CT	549 798	0	00:00	00:00
BH	0:00	0	00:00	00:00	CU	549 569	0	00:00	00:00
BI	0:00	0	00:00	00:00	CV	549 573	0	00:00	00:00
BJ	0:00	0	00:00	00:00	CW	549 658	0	00:00	00:00
BK	0:00	0	00:00	00:00	CX	549 557	0	00:00	00:00
BL	0:00	0	00:00	00:00	CY	549 509	0	00:00	00:00

Mottager	Helårs-bolig	Worst case		Real case
		Easting	Dager med skyggekast /år	Maks timer/dag
CZ	549 456	0	00:00	00:00
D	551 453	0	00:00	00:00
DA	549 456	0	00:00	00:00
DB	551 173	19	00:06	00:18
DC	551 235	13	00:21	00:43
DD	550 863	94	00:19	05:44
DE	550 762	67	00:20	03:56
DF	550 660	90	00:20	05:06
DG	550 925	57	00:18	02:27
DH	550 919	40	00:20	01:42
DI	550 933	41	00:20	01:47
DJ	550 820	94	00:19	04:46
DK	550 878	89	00:19	03:30
DL	550 782	116	00:25	07:11
DM	550 757	86	00:24	04:45
DN	550 700	66	00:22	03:24
DO	550 659	59	00:21	02:40
DP	550 593	54	00:22	02:22
E	551 513	0	00:00	00:00
F	551 233	0	00:00	00:00
G	551 140	0	00:00	00:00
H	551 925	0	00:00	00:00
I	551 796	0	00:00	00:00
J	552 840	0	00:00	00:00
K	551 815	0	00:00	00:00
L	551 901	0	00:00	00:00
M	552 154	0	00:00	00:00
N	552 930	0	00:00	00:00
O	552 484	0	00:00	00:00
P	552 685	0	00:00	00:00
Q	552 589	0	00:00	00:00
R	552 230	0	00:00	00:00
S	551 731	0	00:00	00:00
T	552 457	0	00:00	00:00
U	552 507	0	00:00	00:00
V	552 277	0	00:00	00:00
W	552 422	0	00:00	00:00
X	552 192	0	00:00	00:00
Y	551 701	0	00:00	00:00
Z	552 429	0	00:00	00:00

Vedlegg til MTA for Harbaksfjellet vindpark – Skyggekast fritidsbolig

Mottager	Worst case			Real case	Mottager	Worst case			Real case
Fritidsbolig	Maks timer/år	Dager med skyggekast /år	Maks timer/dag	Timer/år	Fritidsbolig	Easting	Dager med skyggekast /år	Maks timer/dag	Timer/år
BL	133:02	90	02:05	31:43	AO	551 228	0	00:00	00:00
T	19:54	101	00:20	04:42	AW	554 046	0	00:00	00:00
AR	15:24	70	00:22	03:38	AX	554 344	0	00:00	00:00
F	14:56	55	00:22	03:46	AY	552 614	0	00:00	00:00
AQ	14:22	66	00:22	03:24	AZ	552 841	0	00:00	00:00
U	14:06	90	00:19	03:30	BA	552 627	0	00:00	00:00
I	11:41	60	00:21	02:46	BB	552 516	0	00:00	00:00
BG	11:27	61	00:21	02:42	BC	556 247	0	00:00	00:00
AD	10:50	48	00:20	02:29	BD	550 127	0	00:00	00:00
X	10:37	55	00:22	02:30	BE	549 713	0	00:00	00:00
J	10:28	43	00:19	02:25	BH	549 631	0	00:00	00:00
O	10:19	45	00:20	02:22	BI	549 736	0	00:00	00:00
AT	10:07	57	00:18	02:27	BJ	549 669	0	00:00	00:00
E	10:02	54	00:22	02:22	BK	553 386	0	00:00	00:00
K	8:17	49	00:17	01:57					
BF	6:33	39	00:21	01:43					
AS	4:44	18	00:21	01:19					
AU	2:44	11	00:21	00:46					
AV	2:44	14	00:19	00:45					
AP	2:19	24	00:09	00:32					
A	0:00	0	00:00	00:00					
B	0:00	0	00:00	00:00					
C	0:00	0	00:00	00:00					
D	0:00	0	00:00	00:00					
G	0:00	0	00:00	00:00					
H	0:00	0	00:00	00:00					
L	0:00	0	00:00	00:00					
M	0:00	0	00:00	00:00					
N	0:00	0	00:00	00:00					
P	0:00	0	00:00	00:00					
Q	0:00	0	00:00	00:00					
R	0:00	0	00:00	00:00					
S	0:00	0	00:00	00:00					
V	0:00	0	00:00	00:00					
W	0:00	0	00:00	00:00					
Y	0:00	0	00:00	00:00					
Z	0:00	0	00:00	00:00					
AA	0:00	0	00:00	00:00					
AB	0:00	0	00:00	00:00					
AC	0:00	0	00:00	00:00					
AE	0:00	0	00:00	00:00					
AF	0:00	0	00:00	00:00					
AG	0:00	0	00:00	00:00					
AH	0:00	0	00:00	00:00					
AI	0:00	0	00:00	00:00					
AJ	0:00	0	00:00	00:00					
AK	0:00	0	00:00	00:00					
AL	0:00	0	00:00	00:00					
AM	0:00	0	00:00	00:00					
AN	0:00	0	00:00	00:00					