Project:
Nyvallsåsen

EI19276PO
Ramström Vind AB

Description:
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04941/927-0
Christian Meckenhäuser / Wind Farm Engineering
Calculated:
2019-09-06 14:53/3.3.261

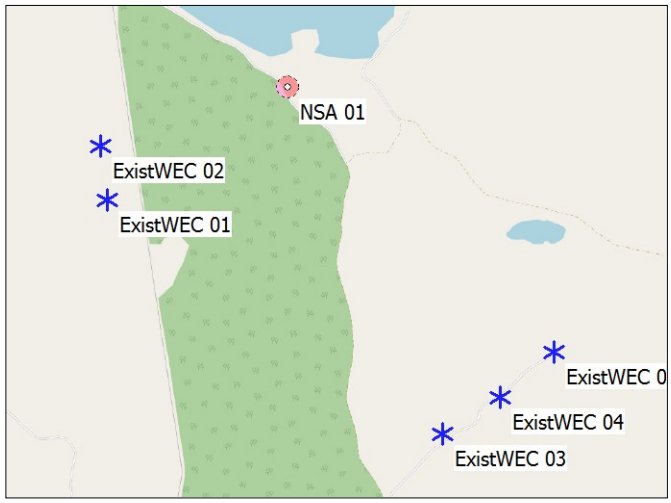
# DECIBEL - Main Result

## Calculation: Initial Noise Impact - A01b

SVENSKA BESTÄMMELSER FÖR EXTERNT BULLER FRÅN LANDBASERADE VINDKRAFTVERK

Beräkningen är baserad på den av Statens Naturvårdsverk rekommenderad metod "Ljud frånvindkraftverk", 2010 (NV dnr 382-6897-07 Rv)

All coordinates are in
Geo [deg]-WGS84




Scale 1:50 000
Existing WTG  Noise sensitive area

## WTGs

| | Longitude | Latitude | Z [m] | Row data/Description | WTG type Valid | Manufact. | Type-generator | Power, rated [kW] | Rotor diameter [m] | Hub height [m] | Noise data Creator | Name | Wind speed [m/s] | LwA,ref [dB(A)] | Pure tones | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ExistWEC 01 | 16.992799° Ost | 62.097178° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: ... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No | h |
| ExistWEC 02 | 16.991884° Ost | 62.100468° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: ... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No | h |
| ExistWEC 03 | 17.035269° Ost | 62.083350° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: ... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No | h |
| ExistWEC 04 | 17.042727° Ost | 62.085458° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: ... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No | h |
| ExistWEC 05 | 17.049656° Ost | 62.088238° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: ... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No | h |

h) Generic octave distribution used

# Calculation Results

## Sound level

| Noise sensitive area No. | Name | Longitude | Latitude | Z [m] | Imission height [m] | Demands Noise [dB(A)] | Sound level From WTGs [dB(A)] | Distance to noise demand [m] | Demands fulfilled ? Noise |
|---|---|---|---|---|---|---|---|---|---|
| NSA 01 | Nordanstig Bergsjö Prastgård 1:10 | 17.015736° Ost | 62.103867° Nord | 0.0 | 1.5 | 40.0 | 32.6 | 738 | Yes |

## Distances (m)

| WTG | NSA 01 |
|---|---|
| ExistWEC 01 | 1411 |
| ExistWEC 02 | 1302 |
| ExistWEC 03 | 2503 |
| ExistWEC 04 | 2489 |
| ExistWEC 05 | 2484 |

Project:
Nyvallsåsen

EI19276PO
Ramström Vind AB

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Christian Meckenhäuser / Wind Farm Engineering
Calculated:
2019-09-06 14:53/3.3.261

# DECIBEL - Main Result

## Calculation: Additional Noise Impact - A01b

SVENSKA BESTÄMMELSER FÖR EXTERNT BULLER FRÅN LANDBASERADE VINDKRAFTVERK

Beräkningen är baserad på den av Statens Naturvårdsverk rekommenderad metod "Ljud frånvindkraftverk", 2010 (NV dnr 382-6897-07 Rv)

All coordinates are in
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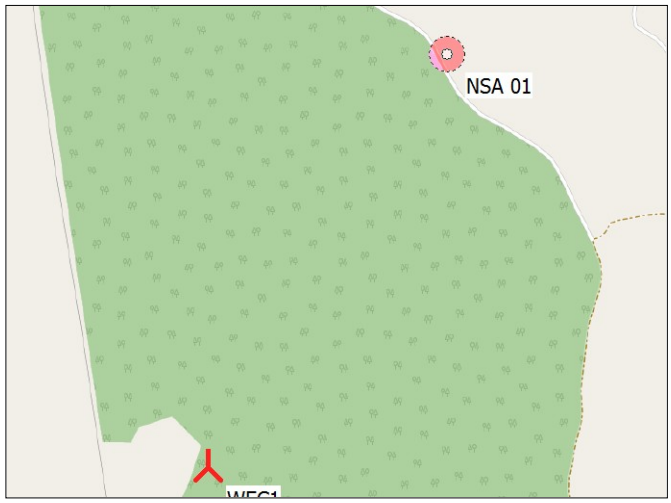


Scale 1:20 000

New WTG  Noise sensitive area

## WTGs

| | Longitude | Latitude | Z | Row data/Description | WTG type Valid | Manufact. | Type-generator | Power, rated | Rotor diameter | Hub height | Noise data Creator | Name | Wind speed | LwA,ref | Pure tones |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | [m] | | | | | [kW] | [m] | [m] | | | [m/s] | [dB(A)] | |
| WEC1 | 17.003514° Ost | 62.094060° Nord | 0.0 | ENERCON GmbH E-160 EP5 460... | Yes | ENERCON GmbH | E-160 EP5-4 600 | 4 600 | 160.0 | 166.6 | USER | E-160 EP5 - OM 0s - 4600 kW + 1.7 dB | 8.0 | 107.9 | No |

# Calculation Results

## Sound level

| Noise sensitive area No. | Name | Longitude | Latitude | Z | Imission height | Demands Noise | Sound level From WTGs | Distance to noise demand | Demands fulfilled ? Noise |
|---|---|---|---|---|---|---|---|---|---|
| | | | | [m] | [m] | [dB(A)] | [dB(A)] | [m] | |
| NSA 01 | Nordanstig Bergsjö Prastgård 1:10 | 17.015736° Ost | 62.103867° Nord | 0.0 | 1.5 | 40.0 | 33.4 | 612 | Yes |

## Distances (m)

| | WTG |
|---|---|
| NSA | WEC1 |
| NSA 01 | 1265 |

Project:
Nyvallsåsen

EI19276PO
Ramström Vind AB

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Calculated:
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# DECIBEL - Main Result

## Calculation: Total Noise Impact - A01b

SVENSKA BESTÄMMELSER FÖR EXTERNT BULLER FRÅN LANDBASERADE VINDKRAFTVERK

Beräkningen är baserad på den av Statens Naturvårdsverk rekommenderad metod "Ljud frånvindkraftverk", 2010 (NV dnr 382-6897-07 Rv)

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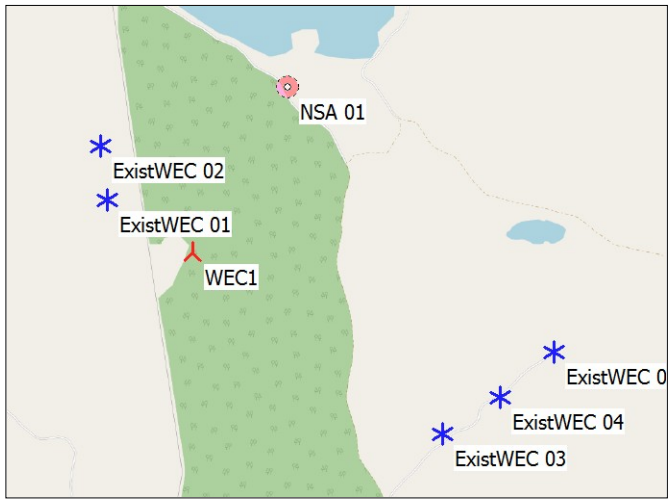



Scale 1:50 000

New WTG  Existing WTG  Noise sensitive area

## WTGs

| | Longitude | Latitude | Z [m] | Row data/Description | WTG type Valid | Manufact. | Type-generator | Power, rated [kW] | Rotor diameter [m] | Hub height [m] | Noise data Creator | Name | Wind speed [m/s] | LwA,ref [dB(A)] | Pure tones |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ExistWEC 01 | 16.992799° Ost | 62.097178° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: 1... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No h |
| ExistWEC 02 | 16.991884° Ost | 62.100468° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: 1... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No h |
| ExistWEC 03 | 17.035269° Ost | 62.083350° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: 1... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No h |
| ExistWEC 04 | 17.042727° Ost | 62.085458° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: 1... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No h |
| ExistWEC 05 | 17.049656° Ost | 62.088238° Nord | 0.0 | VESTAS V90 2000 90.0 !O! NH: 1... | Yes | VESTAS | V90-2 000 | 2 000 | 90.0 | 105.0 | EMD | Level 0 - calculated - Mode 0 - 07-2009 | 8.0 | 104.0 | No h |
| WEC1 | 17.003514° Ost | 62.094060° Nord | 0.0 | ENERCON GmbH E-160 EP5 4600 ... | Yes | ENERCON GmbH | E-160 EP5-4 600 | 4 600 | 160.0 | 166.6 | USER | E-160 EP5 - OM 0s - 4600 kW + 1.7 dB | 8.0 | 107.9 | No |

h) Generic octave distribution used

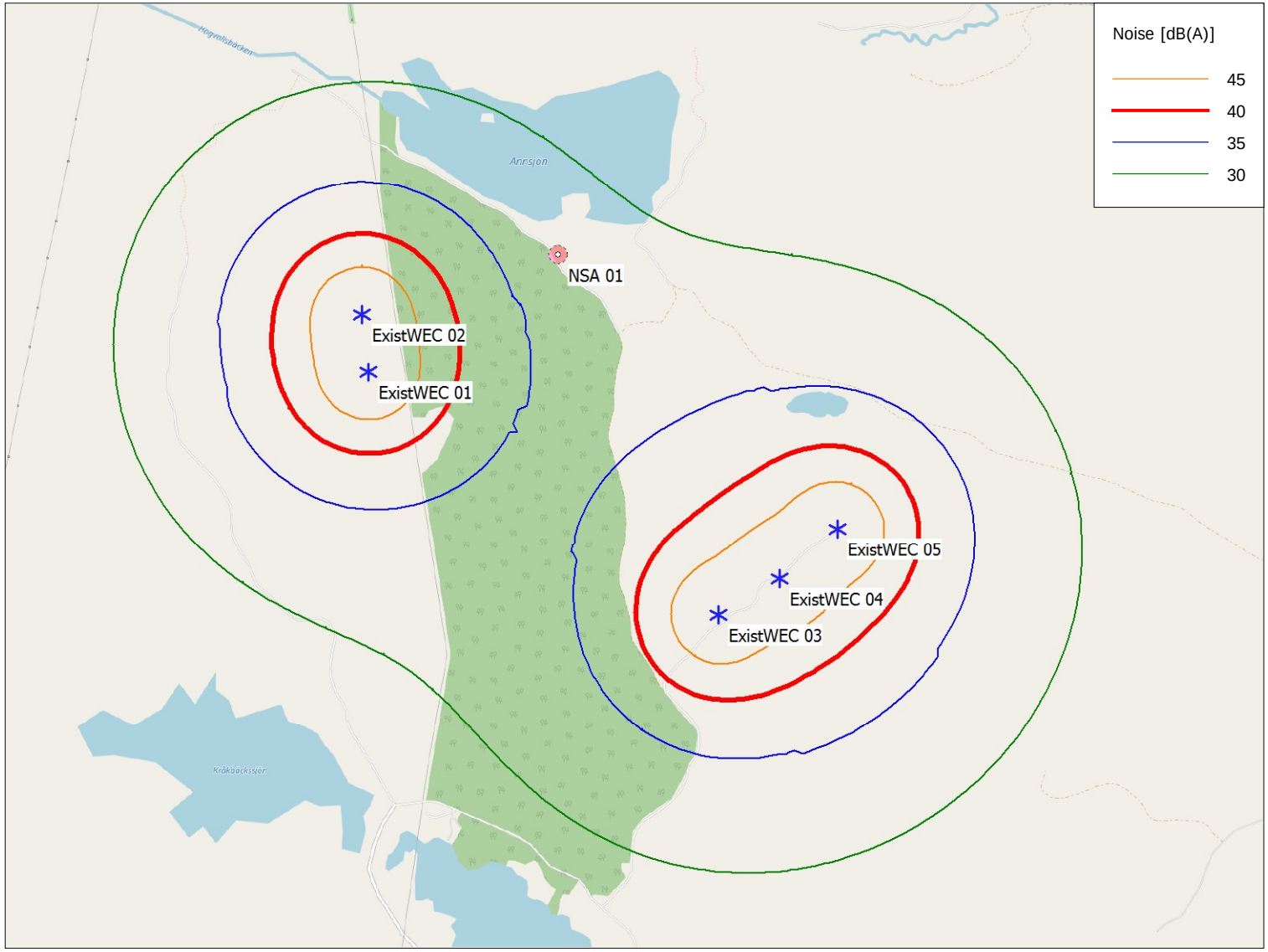
# Calculation Results

## Sound level

| Noise sensitive area No. | Name | Longitude | Latitude | Z [m] | Imission height [m] | Demands Noise [dB(A)] | Sound level From WTGs [dB(A)] | Demands fulfilled ? Noise |
|---|---|---|---|---|---|---|---|---|
| NSA 01 | Nordanstig Bergsjö Prastgård 1:10 | 17.015736° Ost | 62.103867° Nord | 0.0 | 1.5 | 40.0 | 36.1 | Yes |

## Distances (m)

| WTG | NSA 01 |
|---|---|
| ExistWEC 01 | 1411 |
| ExistWEC 02 | 1302 |
| ExistWEC 03 | 2503 |
| ExistWEC 04 | 2489 |
| ExistWEC 05 | 2484 |
| WEC1 | 1265 |




Map: EMD OpenStreetMap , Print scale 1:40 000, Map center Geo WGS84 East: 17.022967° Ost North: 62.090309° Nord

Existing WTG

Noise sensitive area

Noise calculation model: Swedish 2009. Wind speed: 8.0 m/s
Height above sea level: 0.0 m

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Nyvallsåsen

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## DECIBEL - Map 8.0 m/s

Calculation:
Initial Noise Impact - A01b

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Calculated:
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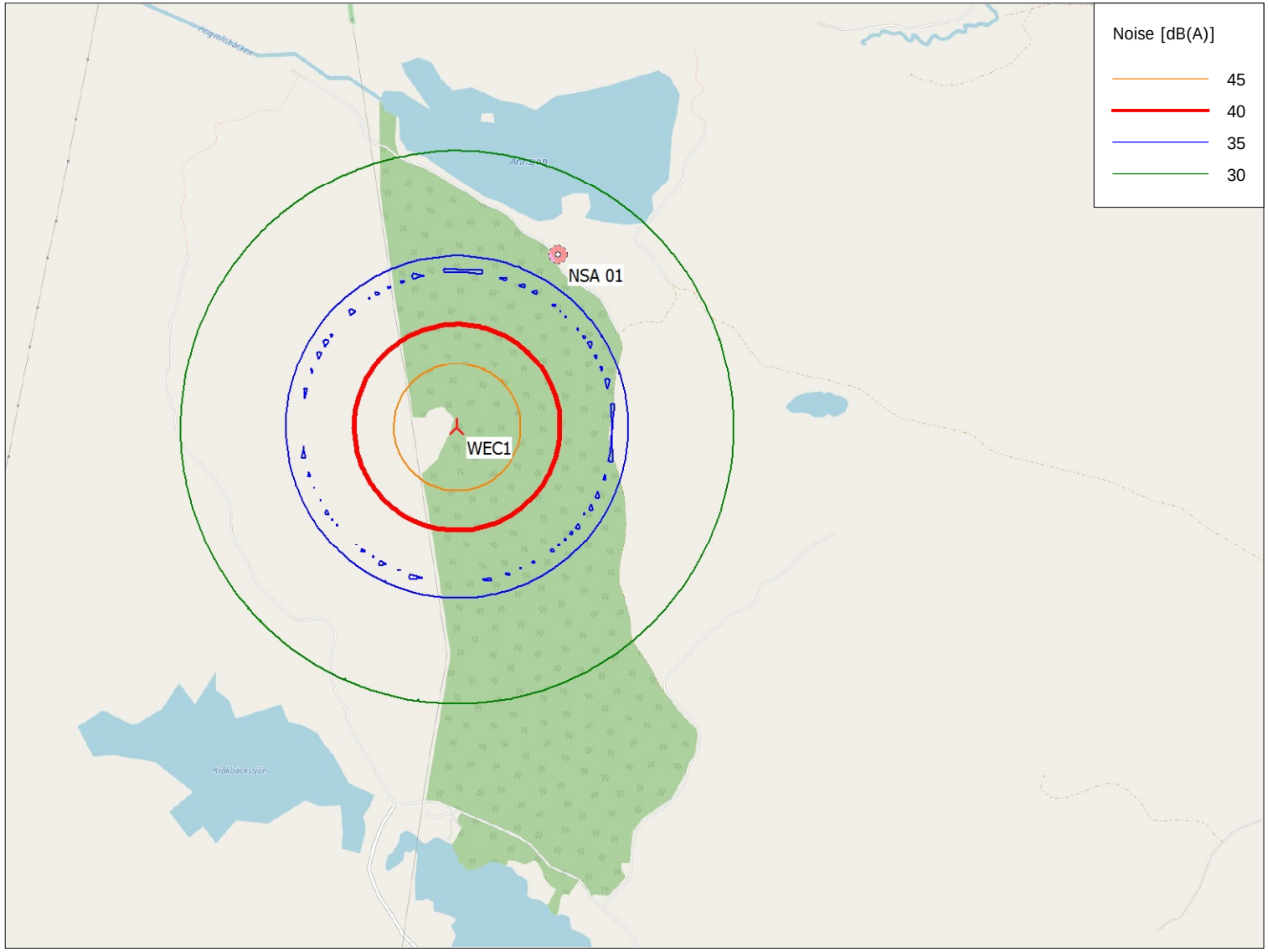


0 500 1000 1500 2000 m

Map: EMD OpenStreetMap , Print scale 1:40 000, Map center Geo WGS84 East: 17.022967° Ost North: 62.090309° Nord

New WTG

Noise sensitive area

Noise calculation model: Swedish 2009. Wind speed: 8.0 m/s
Height above sea level: 0.0 m

Project:
Nyvallsåsen

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DECIBEL -
Map 8.0 m/s
Calculation:
Additional Noise Impact - A01b

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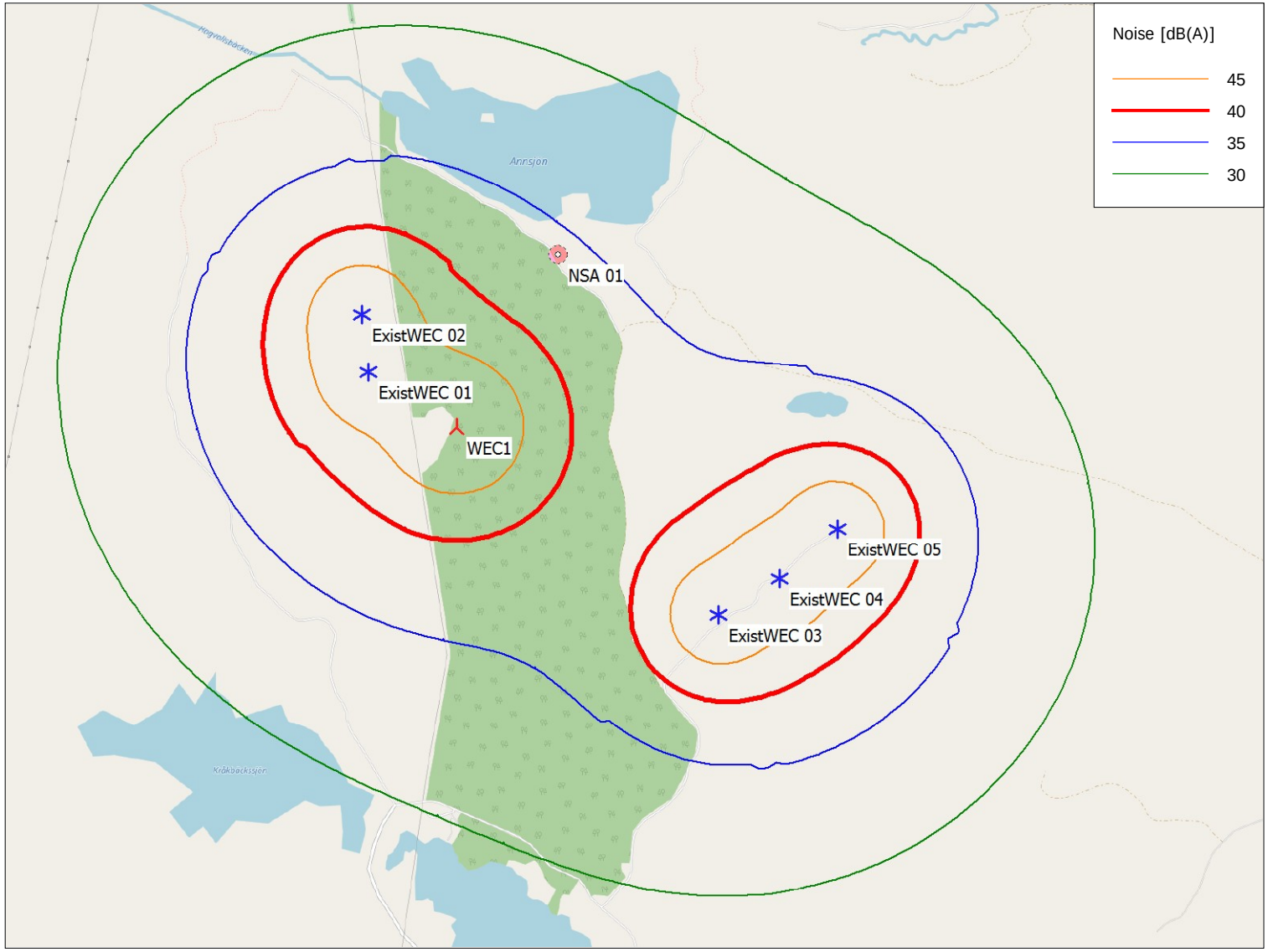


Map: EMD OpenStreetMap , Print scale 1:40 000, Map center Geo WGS84 East: 17.022967° Ost North: 62.090309° Nord

New WTG | Existing WTG | Noise sensitive area

Noise calculation model: Swedish 2009. Wind speed: 8.0 m/s

Height above sea level: 0.0 m

Project:

Nyvallsåsen

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## DECIBEL - Map 8.0 m/s

Calculation:

Total Noise Impact - A01b

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04941/927-0

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Calculated:

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