## Appendix A - Description of test areas at Andøya

**Et bilde som inneholder kart, tekst, atlas

Automatisk generert beskrivelse**

**RED** = Official test area **1**, **Bleik**

**Green** = Official test area **2**, **Grunnvatn**

**Blue** = Official test area **3**, **Stave**

## Survey points

**Notice:** Geodetic reference frame is EUREF89.

Differences between EUREF89 and WGS84 (from Appendix H):

𝑁 𝑊𝐺𝑆84 𝑒𝑝𝑜𝑐ℎ2024.7 = 𝑁𝐸𝑈𝑅𝐸𝐹89𝑈𝑇𝑀33𝑒𝑝𝑜𝑐ℎ1989.0 + Δ𝑁 where ΔN=0.64m

𝐸 𝑊𝐺𝑆84 𝑒𝑝𝑜𝑐ℎ2024.7 = 𝐸𝐸𝑈𝑅𝐸𝐹89𝑈𝑇𝑀33𝑒𝑝𝑜𝑐ℎ1989.0 + Δ𝐸 where ΔE = 0.46m

𝜑 𝑊𝐺𝑆84 𝑒𝑝𝑜𝑐ℎ2024.7 = 𝜑𝐸𝑈𝑅𝐸𝐹89𝑈𝑇𝑀33𝑒𝑝𝑜𝑐ℎ1989.0 + Δ𝐿𝑎𝑡 where Δ𝐿𝑎𝑡 =0.0000056°

λ 𝑊𝐺𝑆84 𝑒𝑝𝑜𝑐ℎ2024.7 = λ𝐸𝑈𝑅𝐸𝐹89𝑈𝑇𝑀33𝑒𝑝𝑜𝑐ℎ1989.0 + Δ𝐿𝑜𝑛𝑔 where Δ𝐿𝑜𝑛𝑔= 0.0000119

Seven significant decimal digits for latitude and longitude will ensure cm-precision.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Point ID | Latitude | Longitude | Ellipsoidal height | Physical height | Northing  UTM33 | Easting  UTM33 | Mark |
| SAMF | 69.27560042 | 15.96812897 | 42.73 | 6.88 | 7685395.45 | 538232.98 | Foot antenna at roof |
| MECONING | 69.28000843 | 16.00593213 | 370.23 | 334.44 | 7685910.97 | 539717.71 | rig |
| RX\_1 | 69.28031078 | 16.01065010 | 352.50 | 316.72 | 7685947.75 | 539903.42 | Green antenna |
| RX\_2 | 69.27876623 | 16.01691109 | 358.16 | 322.39 | 7685779.63 | 540153.46 | White antenna |
| SENDER | 69.28007238 | 16.00643461 | 381.98 | 346.19 | 7685918.43 | 539737.43 | rig |
| REFANTENNA | 69.27538406 | 15.96826115 | 41.01 | 5.16 | 7685371.41 | 538238.59 | Grey ant. yellow tripod |
| E-BLEIK-RF | 69.27560844 | 15.96881180 | 42.64 | 6.79 | 7685396.77 | 538259.93 | Ericsson Right Front |
| E-BLEIK-LF | 69.27560014 | 15.96882632 | 42.60 | 6.75 | 7685395.85 | 538260.52 | Ericsson Left Front |
| E-BLEIK-LB | 69.27560509 | 15.96884918 | 42.60 | 6.75 | 7685396.42 | 538261.42 | Ericsson Left Back |
| E-BLEIK-RB | 69.27561842 | 15.96885426 | 42.65 | 6.80 | 7685397.91 | 538261.59 | Ericsson Right Back |
| 11 | 69.27548568 | 15.96814545 | 40.85 | 5.00 | 7685382.66 | 538233.84 | Antenna rig |
| 12 | 69.27549051 | 15.96816671 | 40.84 | 4.99 | 7685383.22 | 538234.67 | Antenna rig |
| 13 | 69.27549534 | 15.96818795 | 40.85 | 5.00 | 7685383.77 | 538235.50 | Antenna rig |
| 14 | 69.27550022 | 15.96820929 | 40.86 | 5.01 | 7685384.32 | 538236.33 | Antenna rig |
| 21 | 69.27549321 | 15.96813174 | 40.86 | 5.01 | 7685383.49 | 538233.28 | Antenna rig |
| 22 | 69.27549803 | 15.96815312 | 40.87 | 5.02 | 7685384.05 | 538234.12 | Antenna rig |
| 23 | 69.27550290 | 15.96817433 | 40.88 | 5.03 | 7685384.60 | 538234.95 | Antenna rig |
| 24 | 69.27550779 | 15.96819577 | 40.89 | 5.04 | 7685385.16 | 538235.79 | Antenna rig |
| 31 | 69.27550083 | 15.96811797 | 40.89 | 5.04 | 7685384.34 | 538232.73 | Antenna rig |
| 32 | 69.27550562 | 15.96813928 | 40.89 | 5.04 | 7685384.88 | 538233.56 | Antenna rig |
| 33 | 69.27551050 | 15.96816054 | 40.91 | 5.06 | 7685385.44 | 538234.39 | Antenna rig |
| 34 | 69.27551533 | 15.96818190 | 40.92 | 5.07 | 7685385.99 | 538235.22 | Antenna rig |
| 41 | 69.27550813 | 15.96810477 | 40.92 | 5.07 | 7685385.14 | 538232.19 | Antenna rig |
| 42 | 69.27551297 | 15.96812596 | 40.93 | 5.08 | 7685385.69 | 538233.02 | Antenna rig |
| 43 | 69.27551782 | 15.96814729 | 40.94 | 5.09 | 7685386.25 | 538233.85 | Antenna rig |
| 44 | 69.27552264 | 15.96816853 | 40.96 | 5.11 | 7685386.80 | 538234.68 | Antenna rig |
| 1 | 69.27553403 | 15.96883049 | 39.86 | 4.01 | 7685388.48 | 538260.80 | Asphalt nail |
| 2 | 69.27523091 | 15.96674688 | 40.48 | 4.63 | 7685353.39 | 538179.06 | Asphalt nail |
| LOK2-ORIG | 69.22249871 | 15.93303984 | 66.92 | 31.04 | 7679453.28 | 536937.52 | Tree stick, Height ref: terrain |
| A50 | 69.22293289 | 15.93335322 | 65.69 | 29.80 | 7679501.88 | 536949.19 | Tree stick, Height ref: top |
| A100 | 69.22336709 | 15.93366659 | 65.76 | 29.87 | 7679550.48 | 536960.86 | Tree stick, Height ref: top |
| A150 | 69.22380127 | 15.93398000 | 65.64 | 29.75 | 7679599.08 | 536972.52 | Tree stick, Height ref: top |
| B50 | 69.22218526 | 15.93394222 | 65.80 | 29.91 | 7679418.87 | 536973.77 | Tree stick, Height ref: top |
| B100 | 69.22187181 | 15.93484460 | 66.76 | 30.88 | 7679384.47 | 537010.03 | Tree stick, Height ref: top |
| B150 | 69.22155835 | 15.93574693 | 67.95 | 32.07 | 7679350.07 | 537046.28 | Tree stick, Height ref: top |
| C50 | 69.22237796 | 15.93182408 | 64.44 | 28.55 | 7679439.08 | 536889.60 | Tree stick, Height ref: top |
| C100 | 69.22225721 | 15.93060834 | 63.97 | 28.08 | 7679424.89 | 536841.68 | Tree stick, Height ref: top |
| C150 | 69.22213644 | 15.92939261 | 63.64 | 27.75 | 7679410.69 | 536793.75 | Tree stick, Height ref: top |

## Description of site 1

Overview of survey points



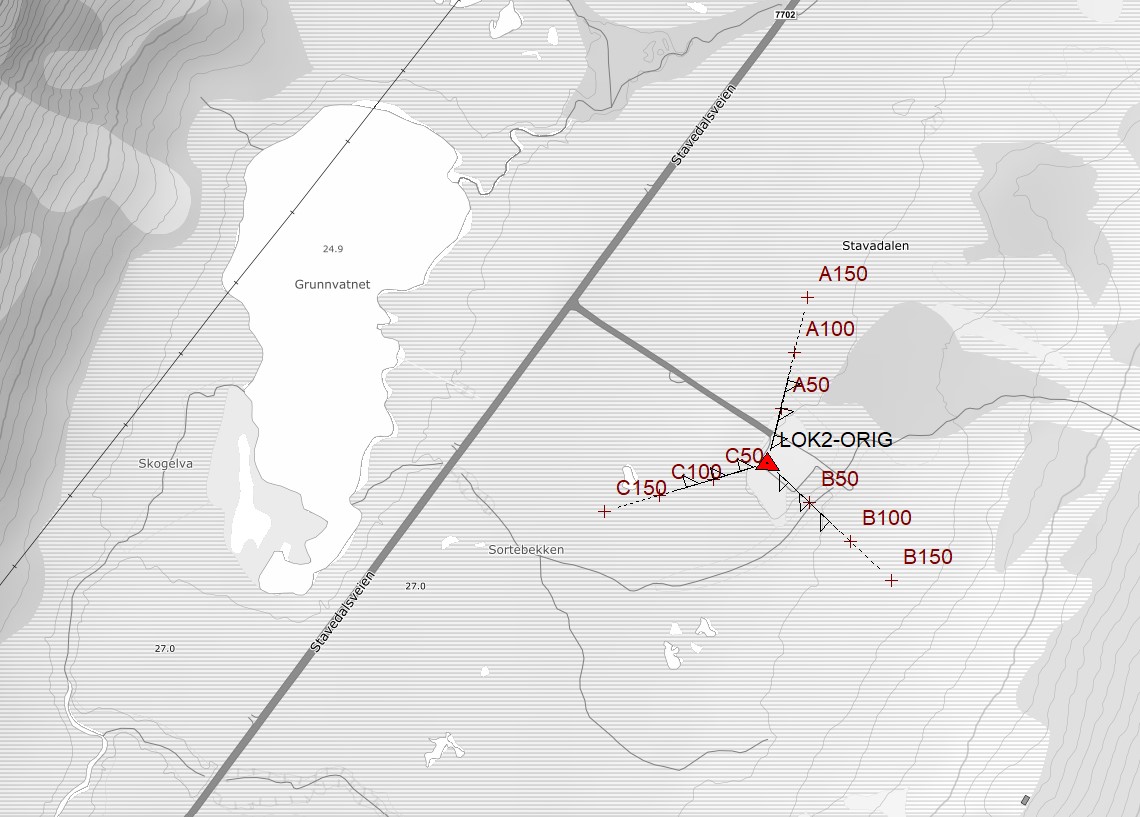


More detailed view of surveyed points.

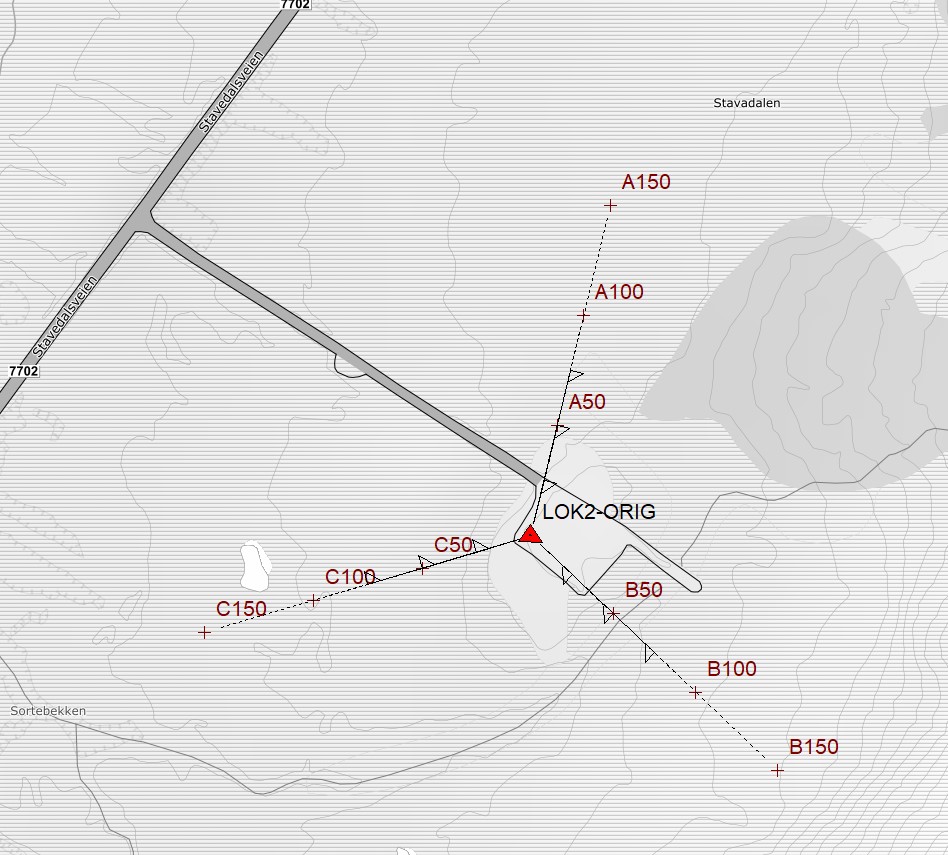
## Description of site 2

Location 2 is the parking lot at the end of a dirt road. Position N 69.2225°, Ø 15.9335°

Most of the testing will be conducted at the parking lot, or the surrounding area.

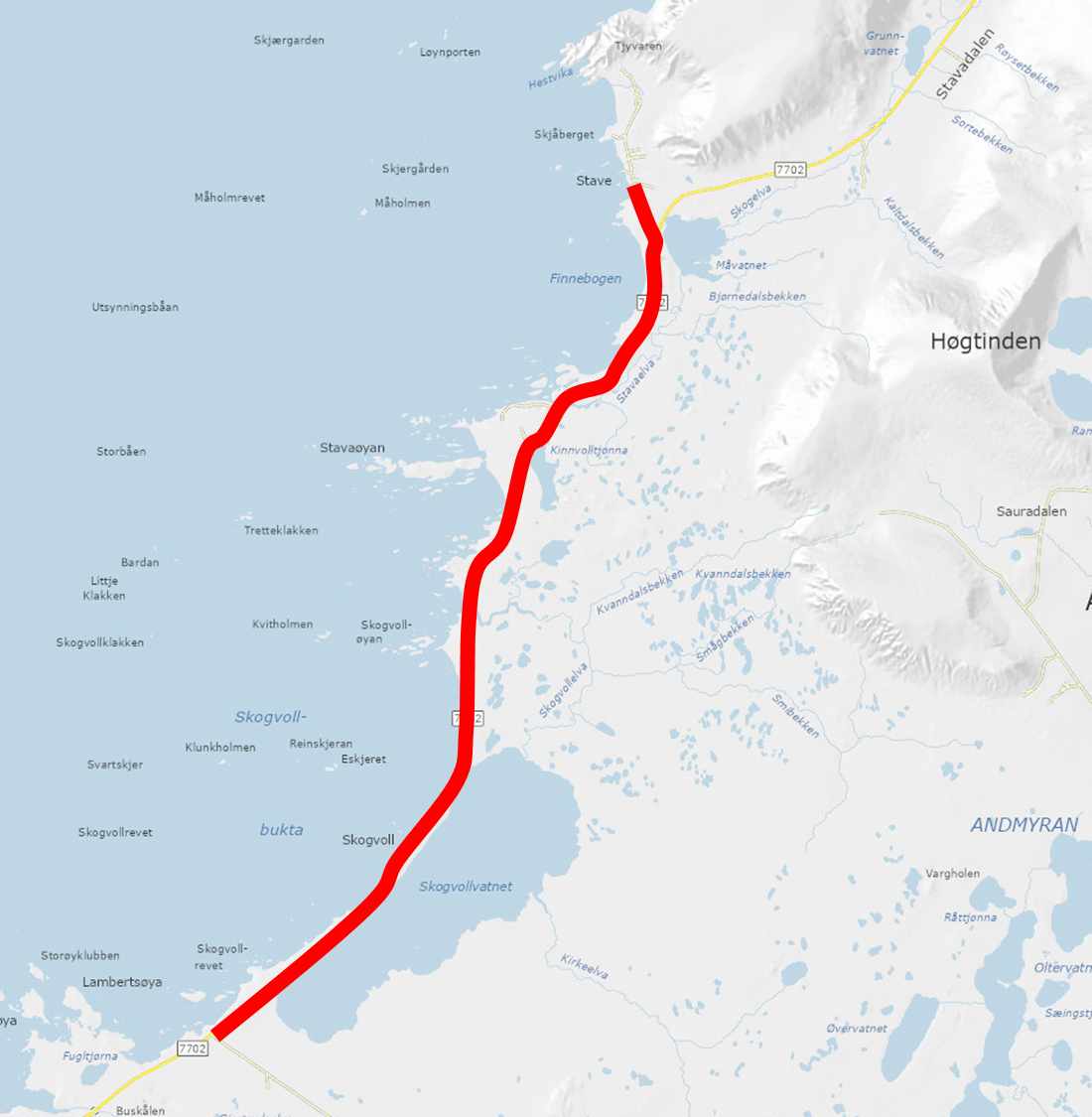


There will be certain marked position surrounding the area. 120 degrees apart, at 50, 100 and 150 meter in distance. Those positions can be found on the picture below:



## Description of motorcade route(s) on Andøya, site 3

The start is as Stave commynity house (69.212187 North ,15.858559 East), the small jammers can be used the intersection between county road 7702 and communal road “Oklveien” (69.14409 North, 15.75847 East). The picture below shows the stretch of road that can be used for the motorcade (Red line).



The road is quite narrow 5.1 meters with a speed limit of 80 km/h. The traffic volume is low with about 1000 vehicles per day. For some tests where reduced speed is need there will be a NPRA vehicle in front and at the back of motorcade. Communication to the vehicles will be via FM radio.