

# COURSE MEASUREMENT REPORT

## - REPORT FOR INTERNATIONAL CERTIFIED COURSE -

| INFORMATION ABOUT EVENT AND COURSE   |
|--|
| <b>Event:</b> PB Milå  |
| <b>Technical Organiser:</b> Grødem Runners Friidrettsklubb   |
| <b>City/Place:</b> Randaberg, Rogaland, Norway   |
| <b>Date of Arrangement:</b> 30.September 2023  |
| <b>Date and time for measurement:</b> 28.June 2023 – 17:00   |
| <b>Measured distance(s):</b> 10 km   |
| <b>Length of calibration course:</b> 300,014 m   |
| <b>Terrain:</b> Flat <input type="checkbox"/> Slightly hilly <input type="checkbox"/> Hilly <input checked="" type="checkbox"/> Terrain <input type="checkbox"/><br><b>Type of course route:</b> Closed loop <input checked="" type="checkbox"/> Back and forth <input type="checkbox"/> A to B <input type="checkbox"/> Other <input type="checkbox"/><br><b>Race surface:</b> Asphalt (with a short distance of 540 m firm gravel)<br><b>Elevation Start - Finish:</b> Same<br><b>Description of start:</b> Between light poles 25 m before finish line<br><b>Description of finish:</b> Between light poles at entrance to parking lot<br><b>Distance, in a straight line, between start &amp; finish:</b> 25 m<br><b>Start and Finish marked:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br><b>Km-markings:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br><b>Measurement direction:</b> Running direction <input checked="" type="checkbox"/> Opposite running direction <input type="checkbox"/><br><b>National record can be approved:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |

| CONTACT INFORMATION    |                         |                               |
|------------------------|-------------------------|-------------------------------|
|                        | <b>Measured by:</b>     | <b>Organizer:</b>             |
| <b>Contact person:</b> | Erling Hiorth           | Alexander Middleton           |
| <b>Phone:</b>          | +47 91337338            | +47 48493042                  |
| <b>Email:</b>          | Erling.hiorth@gmail.com | Alexander.middleton@gmail.com |

It is hereby confirmed that the course has been measured by an A- or B certified international certified course measurer from Norwegian Athletics. The course is measured in accordance with AIMS and Norwegian athletics regulations, and the distance(s) has the minimum reported length(s). The survey is valid for 5 years, except if the route is changed.

05 July 2023 *Erling Hiorth*

|      |                              |      |                   |
|------|------------------------------|------|-------------------|
| Date | Signature by Course measurer | Date | Signature by AIMS |
|------|------------------------------|------|-------------------|

# Norwegian Athletic Federation

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Phone: +47 94 83 33 26

## PB Milå

10 km  
Randaberg, Norway  
30.Sept 2023

| CALIBRATION COURSE AND PROCEDURE  |  |
|---|--|
| Length of measuring tape (steel measuring tape only)                                | 50 m                                     |
| Length of calibration course 1st measurement  | 300,000 m                                |
| Length of calibration course 2nd measurement  | 300,003 m                                |
| Possible 3rd measure (max. 1 cm diff per 100m 1 <sup>st</sup> and 2 <sup>nd</sup> ) | No                                       |
| Average of measurements before adjustments  | 300,0015 m                               |
| Temperature (road or measuring tape)  | 15 degree                                |
| Adjustment cf. $D-(D*(1+(temp-20)*0,0000115))$                                      | -0,017 m temp<br>+0,03 m added on ground |
| Measured calibration distance after adjustment                                      | 300,014 m                                |
| Distance from start/finish to calibration distance                                  | 760 m                                    |

| CALIBRATION INFORMATION - (max 8 counts difference of 1000 m between 4 measurements, ie 2 counts of 300m and 3 count of 400m) |                              |       |       |                              |        |       |
|---|------------------------------|-------|-------|------------------------------|--------|-------|
|   | Pre-measurement:             |       |       | Post measurement:            |        |       |
|   | Date and Time: 28.June 17:00 |       |       | Date and Time: 28.June 18:35 |        |       |
|   | Start                        | End   | Diff. | Start                        | End    | Diff. |
| 1st measure   | 44500                        | 47968 | 3468  | 95700                        | 99168  | 3468  |
| 2nd measure   | 47968                        | 51438 | 3470  | 99168                        | 102637 | 3469  |
| 3rd measure   | 51438                        | 54906 | 3468  | 102637                       | 106105 | 3468  |
| 4th measure   | 54906                        | 58376 | 3470  | 106105                       | 109575 | 3470  |

|                                | Pre measurement | Post measurement |   |
|--------------------------------|-----------------|------------------|---|
| Average (1+2+3+4) / 4          | 3469            | 3468,75          | Today's constant. Either highest or average of before and after measurement |
| Constant 1 km                  | 11562,784       | 11561,951        |   |
| Addn. +1‰                      | 11,563          | 11,562           |   |
| Measurement constant (rounded) | 11574           | 11574            | 11574   |

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| MEASUREMENT PROCEDURE |         |  |
|-----------------------|---------|--|
| Measurement constant  | 11574   |  |
| Measured Distance     | Counter | Description of place   |
|                       |         |  |
|                       | 70500   | Start city centre, between 2 lightpoles, 25 m before finish line                         |
| 10003,9 m             | 186285  | Finish between 2 lightpoles at entrance to parking lot                                   |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
|                       |         |  |
| 10003,9 m             |         | <b>Total measured without adjustments</b>  |
|                       |         |  |
|                       |         | No adjustments required, light poles to be used as reference points for start and finish |
|                       |         |  |
|                       |         |  |
| 0 m                   |         | <b>Total measured adjustments</b>  |
|                       |         |  |
| 10003,9 m             |         | <b>Total measured course</b>   |

### CONCLUSION OF MEASUREMENT

1. General information about race course and start/finish
  - The course consist of a closed loop of 9978 m + 25m adjusted start
  - Pre measurement including calibration, cycling and post calibration performed 26.May to define lenght of closed loop and calculated distance to start line
  - Final measurement with pre- and post calibration performed 28.June
2. Measurement of calibration course
  - Vistnesveien 51, main road
  - Measured in accordance with procedure, 2 persons
  - Fixed mark at both ends, adjusted for temperature and adjusted +3 cm on ground
3. Calibration of bicycle
  - Calibrated in accordance with procedure, 4 measures, deviation 2 count ok
4. Measurement of the course
  - Started from precalculated start to finish (25 m), and then 1 closed loop
5. Post calibration of bicycle
  - Same procedure, 4 measures, deviation 2 count ok
6. Course adjustments
  - No adjustments required. Race organizer are ok with + 3,9m.
7. Overall length of the course
  - The course is not shorter than 10 km
8. Additional info
  - Right lane to be used first 130m after start, fences to be set up
  - Continue in right lane to roundabout, +630 m, cones to be used
  - Right lane to be used from Bøveien 151 through left turn, 30m distance, guard and cones to be used
  - Right lane to be used from Vistnesveien 181 through left turn, 200m distance, guard and cones to be used
  - Right lane to be used last 500 m, from roundabout to finish line, cones to be used

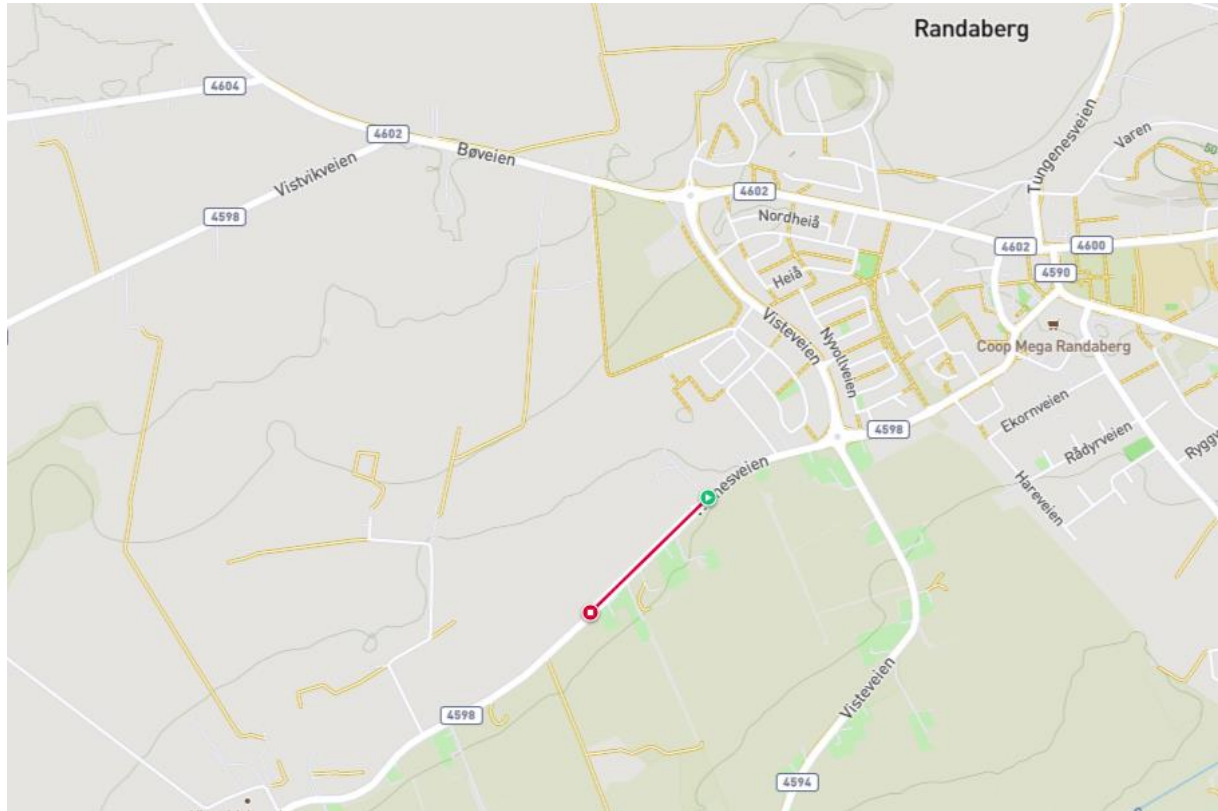
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### CALIBRATION COURSE MAP



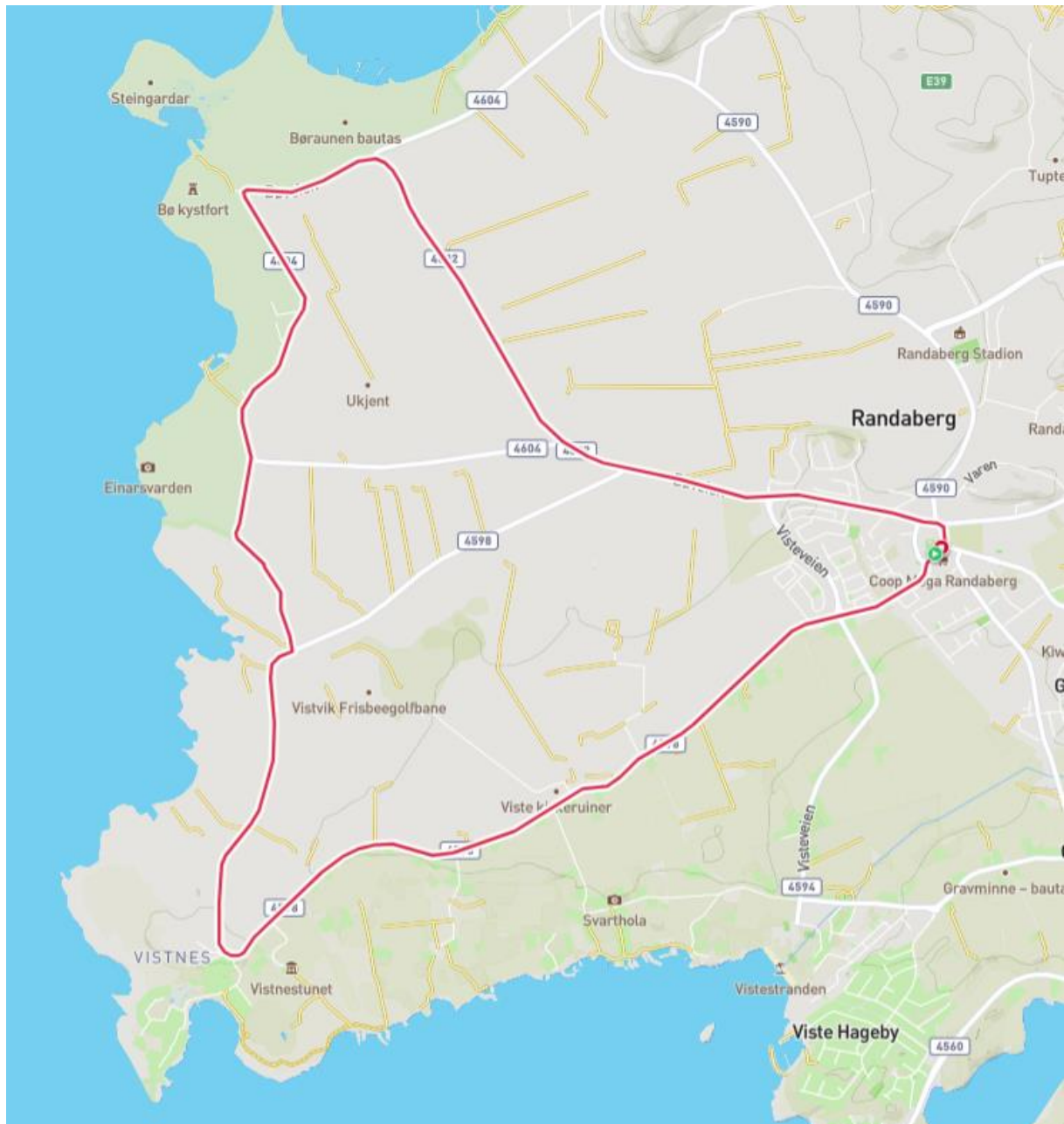
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### COURSE MAP & DESCRIPTION



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### PICTURES

Start line



Finish line



Right lane first 130 m – from picture A ...



... to picture B



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Right lane from Bøveien 151, 3,30m from inner white line (left turn)



Right lane from Vistnesveien 181, 1,15m from outer white line (left turn)

