

# COURSE MEASUREMENT REPORT

## - REPORT FOR NATIONAL CERTIFIED COURSE -

| INFORMATION ABOUT EVENT AND COURSE  |
|---|
| <b>Event:</b> Birkenes IL, 10 km, part of the Norwegian Championships halv marathon   |
| <b>Technical Organiser:</b> Birkenes IL - Friidrett   |
| <b>City/Place:</b> Birkeland, Norway  |
| <b>Date of Arrangement:</b> 25.May 2024   |
| <b>Date and time for measurement:</b> 23.April 2024 – 12:00 – 14:30 pm  |
| <b>Measured distance(s):</b> 10 km + 21 km – <b>This report is for 10 km</b>  |
| <b>Length of calibration course:</b> 350 m  |
| <b>Terrain:</b> Flat <input type="checkbox"/> Slightly hilly <input type="checkbox"/> Hilly <input checked="" type="checkbox"/> Terrain <input type="checkbox"/>                    |
| <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"/> |
| <b>Race surface:</b> Asphalt  |
| <b>Elevation Start - Finish:</b> 0  |
| <b>Description of start:</b> Birkenes IL Stadium – In front of club house   |
| <b>Description of finish:</b> Same as start   |
| <b>Distance, in a straight line, between start &amp; finish:</b> 120 m  |
| <b>Start and Finish marked:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |
| <b>Km-markings:</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>   |
| <b>Measurement direction:</b> Running direction <input checked="" type="checkbox"/> Opposite running direction <input type="checkbox"/>   |
| <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> | Finn Kollstad          | Andreas Emil Hansen          |
| <b>Phone:</b>          | +47 48999300           | +47 45804500                 |
| <b>Email:</b>          | finnkollstad@gmail.com | Birkenes.friidrett@gmail.com |

It is hereby confirmed that the course has been measured by an C-certified national 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.

25.April 2024 *Finn Kollstad*

Date Signature by Course measurer

14.5.2024 *Peer Jensen*

Date Signature by AIMS

# Norwegian Athletic Federation

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Phone: +47 94 83 33 26

## Tveide rundt - Birkeland

10 km  
Birkeland, Norway  
25.May 2024

| CALIBRATION COURSE AND PROCEDURE – 23.Apr.2024 – 11 am                              |                               |
|---|-------------------------------|
| Length of measuring tape (steel measuring tape only)                                | 50 m                          |
| Length of calibration course 1st measurement  | 350,00 m                      |
| Length of calibration course 2nd measurement  | 349,996 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  | 349,998 m                     |
| Temperature (road or measuring tape)  | 10 degrees                    |
| Adjustment cf. $D-(D*(1+(temp-20)*0,0000115))$                                      | - 0,04 m temp.                |
| Measured calibration distance after adjustment                                      | 349,995 m (+3,7 cm on ground) |
| Distance from start/finish to calibration distance                                  | 200 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: 23.Apr – 11 am |        |       | Date and Time: 23.Apr – 2:15 pm |        |       |
|   | Start                         | End    | Diff. | Start                           | End    | Diff. |
| 1st measure   | 538751                        | 542715 | 3964  | 714312                          | 718275 | 3963  |
| 2nd measure   | 542715                        | 546678 | 3963  | 718275                          | 722238 | 3963  |
| 3rd measure   | 546678                        | 550640 | 3962  | 722238                          | 726203 | 3965  |
| 4th measure   | 550640                        | 554604 | 3964  | 726203                          | 730165 | 3962  |

|                                   | Pre measurement | Post measurement |   |
|-----------------------------------|-----------------|------------------|---|
| Average<br>(1+2+3+4) / 4          | 3963,25         | 3963,25          | Today's constant. Either highest or average of before and after measurement |
| Constant 1 km                     | 11323,571       | 11323,571        |   |
| Addn. +1‰                         | 11,324          | 11,324           |   |
| Measurement constant<br>(rounded) | 11334,90        | 11334,90         | 11335   |

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25.May 2024

| MEASUREMENT PROCEDURE |                 |  |
|-----------------------|-----------------|--|
| Measurement constant  | 11335           |  |
| Measured Distance     | Counter         | Description of place                             |
|                       |                 |  |
|                       | 571460          | Pre-set Start (and Finish) 21.1 km - Stadium     |
| 239,7                 | 574177          | Preliminary Start 10 km - Stadium                |
| 4317,0                | 623110          | Mark 1 – Start main loop – 1 <sup>st</sup> round |
| 875,3                 | 633032          | Mark 3 – Preliminary turning point side loop     |
| 875,6                 | 642957          | Mark 2 – End side loop – Same plot as Mark1      |
| 59017,9               | 709923          | Pre-set Finish (and Start) - Stadium             |
| 12.215,5              |                 | Total measured without adjustments               |
|                       |                 |  |
| - 239,7               | 574177- 571460  | Pre-set start 21.1 km – prelim start 10 km       |
| - 1750,9              | 642957 - 623110 | Mark 2– turing poing – Mark 2                    |
| - 1990,6 m            |                 | Total measured ekstra distances                  |
|                       |                 |  |
| - 224,9 m             | 736050 - 738600 | Total measured adjustments                       |
|                       |                 |  |
| 10 000 m              |                 | Total measured course                            |

### CONCLUSION OF MEASUREMENT

1. General information about race course and start/finish
  - Start / finish line inside the stadium. Adjusted the start by - 224,9 m
  - The course is a closed loop run once.
  - The course was measured by one B-measurer (21 km, other report), one C-measurer (for 10 km race following same route except 1 loop and not mark 2-3) and the race organizer. Results were compared and verified between the two measurements.
2. Measurement of calibration course
  - 200 m from start/finish, straight/flat walking path on asphalt
  - Measured in accordance with procedure, 3 persons
  - Marked at both ends, adjusted for temperature and adjusted +3,7 cm on ground
3. Calibration of bicycle
  - Calibrated in accordance with procedure, 4 measures, deviation 3 counts ok
4. Measurement of the course
  - From pre-set start to finish continuous, closed loop measured once
5. Post calibration of bicycle
  - Same procedure, 4 measures, deviation 3 counts ok
6. Course adjustments
  - Starting point of race adjusted by -224,9 m from the track to near the club house.
7. Overall length of the course
  - The course is not shorter than 10 000 m.
8. Additional info
  - The organizer will set up cones/fences on all course separations and corners as shown on attached pictures
  - The course is measured the shortest way possible, except where crossing the main road where there are marks in the asphalt (see pictures)

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## Tveide rundt - Birkeland

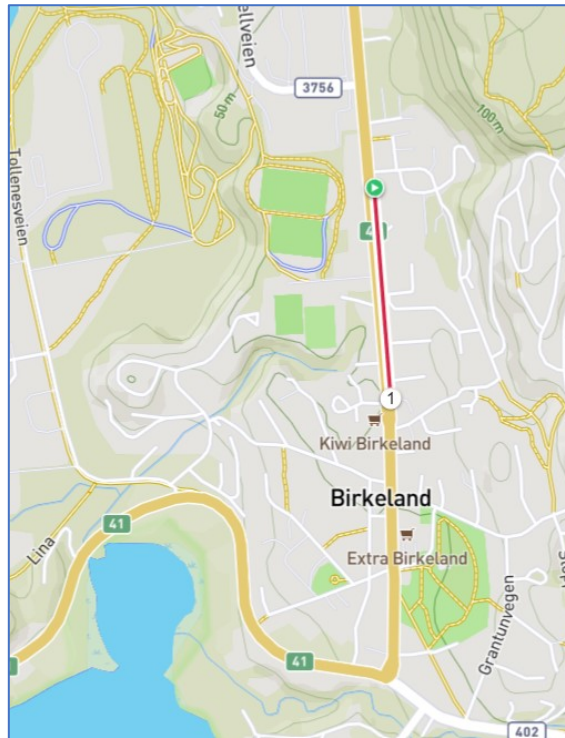
10 km

Birkeland, Norway

25.May 2024

### CALIBRATION COURSE MAP

Straight / flat pavement 200 m from stadium with no road crossings



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10 km  
Birkeland, Norway  
25.May 2024

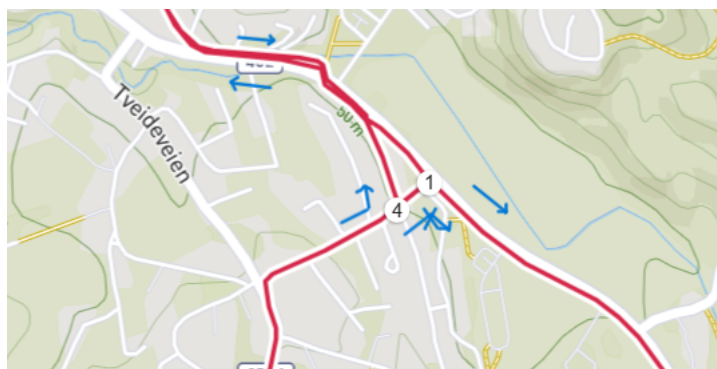
### COURSE MAP & DESCRIPTION

Start / finish at Mark 5

Course direction: Mark 5 – 1 – 2 – 4 – 5 (half marathon is going to mark 3)



Mark 4 – directly to mark 5 (finish)



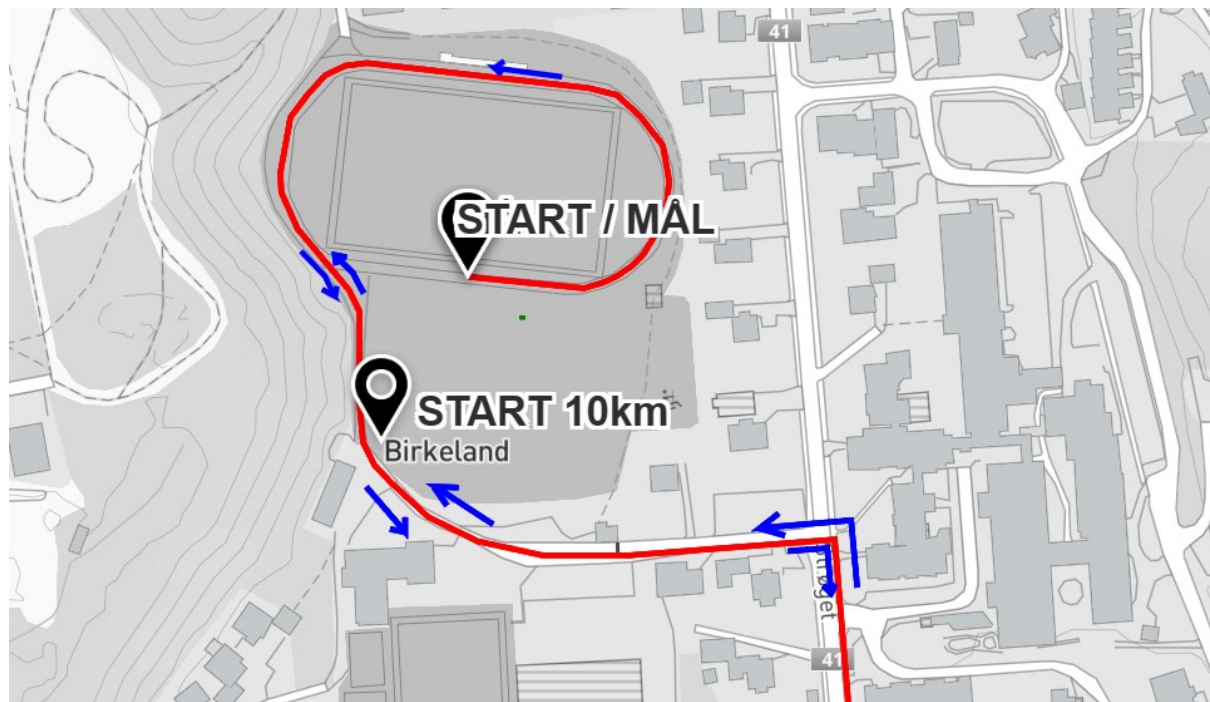


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Start 10 km – In front of club-house. Finish 10 km at light pole on the stadium.





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### DOCUMENTATION / PICTURES – Separation / turning points

Right turn 200 m after start into main road      Keep right side of mark before crossing of road



On pavement upon return to main road

Right side of mark before crossing of road





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10 km

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**Mark 2** - Left picture – South/east – turn right (21.1 will go strait forward)



## Road between mark 4 and 1

Mark 4 – turn left - (mark 1 is down in the end of picture)

