COURSE MEASUREMENT SUMMARY SHEET

Cert No

Replaces Cert No:

RACE LICENCE/PERMIT BODY: AREA:

Course Name	North QEOP 2-lap 5k	County	London
Race Name (if diff)	QEOP ELVIS 5k	Race Date	21-Jun-16
Promoting club or organization	East End Road Runners		
Name and address of race organizer/ director	Jamie Zucker, 36 Saddlers House, East Village, London, E20 1AX	Tel (home)	07748534886
		Tel work)	07748534886
		email	jayzee51@hotmail.com
Distance	5 km	Measurer	M Jefford
Grade	Grade 2		
Measurement Method	Calibrated Bicycle / Jones-Oerth Counter	Measurement Date	27-Mar-16
Height (in m above sea level) if not same	Start		Finish
Distance in straight line from Start to Finish	0 m	Approx Start Grid Ref	TQ385845

Brief Description of Coure

Terrain (Flat/Undulating/Severe Hills/etc.)	Virtually flat with small incline down to lower level path and back up again.
Race Surface (city streets/country lanes/paths/etc.; amount off road e.g. on grass). Is it a Multi-terrain course?	Sealed paths within secction of the northern half of the Queen Elizabeth Country Park.
Course Configuration (single lap/multi lap/anti clockwise/ out & back/point to point)	Two laps figure of eight with turnaround point

Measurement Details (additional information may be shown in the report)

The section of the road available to the runners on the day of the race. Are pavements allowed?	Full width of pavements. Sharp left turn at end of incline near the 2k marker should be tapped to prevent shortcut between metal post and wooden fence.
The line to be taken at right hand turns.	Shortest possible route on path.
Dates for race series & Any other information	

I am sending the measurement report : this **summary page**, all **data sheets**, **course map** & **sketches** showing the exact position of the start/finish to the Race Director, who must use this report to lay out the course & carefully keep it for future years. It should be shown to any official requiring details of the measured course. I am also sending a copy to the **Area Course Measurement Secretary**, who will check the report, file it, & issue a certificate of course accuracy.

The Constant for the Day = Either the Working Constant or the Finish Constant, whichever is the larger.

Signed	M Jefford	Date	27-Mar-16
Measurers Address	124 Crouch Hill, London, N8 9DY	Email	mark_jefford@yahoo.co.uk
ACMS Name/Address		Email	

After calibrating in Finsbury Park I cycled to the QEOP to measure the route pre-agreed with Jamie, my contact for the event.

The course is for a 5k race made up of 2 laps. The start is near to the Velodrome, using a green painted marker on the tarmac labelled 0.5km (illustrated on a later page of this document).

I first measured in the direction of the run from the start point to the bollards at the end of London way, round the remainder of the course back to the start/finish point. The first measurement gave me 2533.8m.

I then proceeded to measure a second time in the reverse direction, also making a note of the split locations that could be used for 1k and 2k on the first lap, and 4k on the second lap. This gave me a distance of 2534m. The first ride measurement is shorter and has been used.

I then measured in running direction from the start to locate the 3k split.

Finally, I located a reference point fur the turning point that was approximately 17m from the end of London Way. For this I used a wooden bench mid-way between and opposite lamp posts LS61 and LS62.

The turnaround should be made up of a semi-circle of cones with a 1m radius, with a centreline in on a line that is 0.6m (to the right) of the left hand edge of the bench (if sitting on the bench).

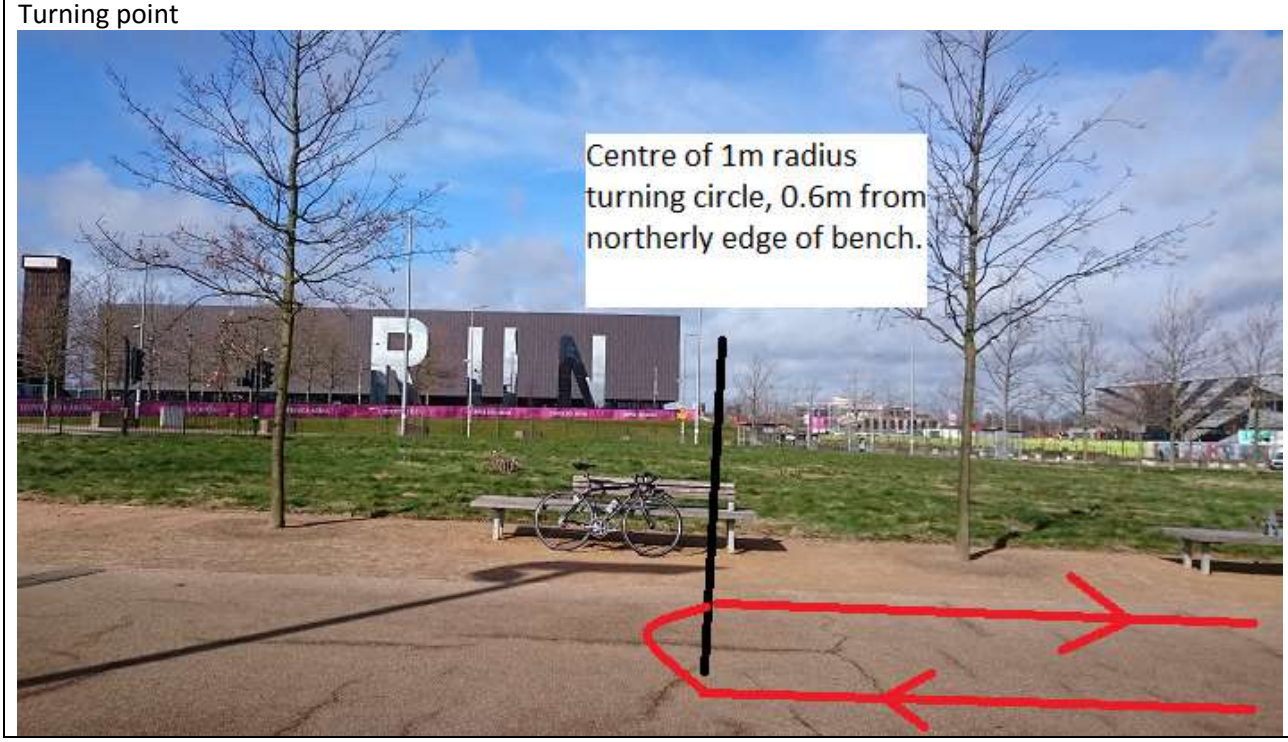
The kilometre split location are as follows:

START = The point of green triangle on tarmac labelled 0.5km
1k = 1.4m BEFORE the centre of the picnic bench on L just after the route leaves London Way
2k = 2.2m AFTER the start of the metal railings on the bridge (W edge of bridge just after sharp R turn).
3k = 3.5m BEFORE the Southern edge of the tarmac crossroads heading S on London way
4k = 3.7m AFTER the centre of the bench on L on lower path by river, just after the second of the two velo bridges overhead.
FINISH = The point of green triangle on tarmac labelled 0.5km


START/FINISH
4K
START/
FINISH
1K
2K
3K
N
TQ 375 848
EERR ELVIS 5K
Queen Elizabeth Country Park
Stratford, London
23-Jun-2016
LS61
LS62
Bench
Cones
@ 1m radius
Bollards

START/FINISH Line.

Turning point



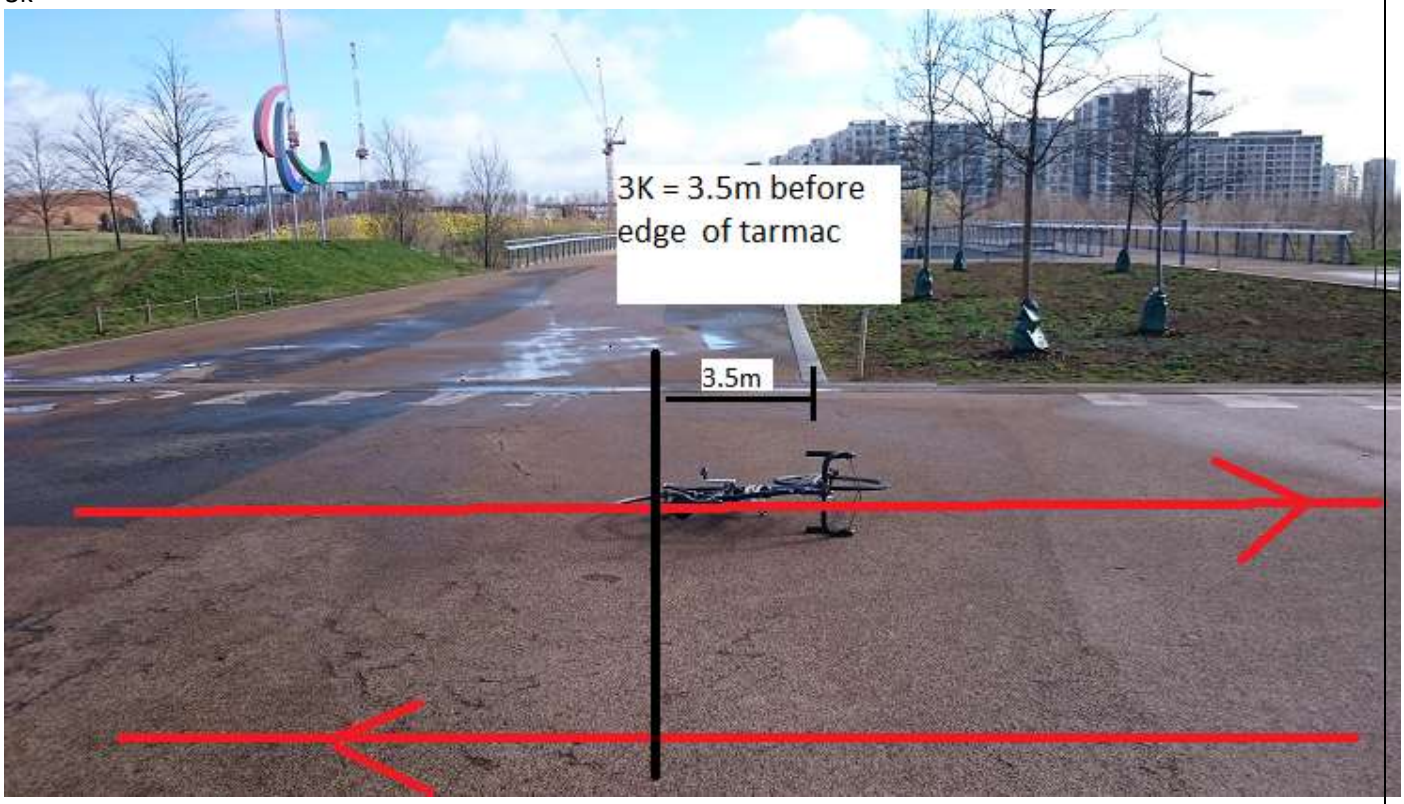
1K


1k = 1.4m before centre of picnic bench

2K


2K = 2.2m after edge of metal railing in direction of run

3k



4k

Bicycle Calibration Data Sheet

Name of Measurer	Mark Jefford	Date of Calibration	27-Mar-16
Calibration Course Location	Finsbury Park	Length	500m
Measurement method used to determine calibration course length:			Steel Tape
Bicycle Tyre type (e.g. pneumatic or solid,			Pneumatic
and racing, touring or mountain).			Racing

1. Ride the calibration course 4 times, recording data as follows

	Start Count	Finish Count	Difference
Ride 1	76169	81763	5594
Ride 2	81763	87360	5597
Ride 3	87360	92954	5594
Ride 4	92954	98552	5598

Pre-measurement

Distance(km)	0.500
Average Count	5595.75
Time of day	08:26
Temperature	2 C

Working Constant = Number of counts in 1 km or 1 mile, calculated from the pre-measurement average count, divided by the calibration course length, and multiplied by the short course prevention factor of 1.001.

1.001 * 5595.75 / 0.5	Working Constant	11202.69	counts per	km

2. Measure the course, including all intermediate distances, using the Working Constant.
Record all data on the Course Measurement Data Sheet.

3. Re calibrate the cycle by riding the calibration course 4 times, recording data as follows:

Date (if different)

	Start Count	Finish Count	Difference
Ride 1	42680	48270	5590
Ride 2	48270	53864	5594
Ride 3	53864	59456	5592
Ride 4	59456	65048	5592

Post-measurement

Distance(km)	0.500
Average Count	5592
Time of day	13:52
Temperature	-1 C

Finish Constant = Number of counts in 1 km or 1 mile, calculated from the post-measurement average count, divided by the calibration course length, and multiplied by the short course prevention factor of 1.001.

1.001 * 5592 / 0.5	Working Constant	11195.18	counts per	km

The Constant for the Day = Either the Working Constant or the Finish Constant, whichever is the larger.

Constant for the day	11202.69	counts per	km	Variance btw calibs	0.067%

Other than the larger constant may be used if justified. In some circum¬stances the average is more appropriate. Give detailed reasons if this is applicable.	Windy day, 1st/3rd ride into the wind for pre- and post.

Remember, each day's measurement must be preceded and followed by a calibration run. You may measure as much as you want in a day provided that calibration precedes it and follows it within the same 24 hour period. This is done to minimise error due to changes in tyre pressure from thermal expansion and slow leakage. Frequent re-calibration 'protects' the previous measurement. 1 mile = 1.609344 km

Signed	M Jefford	Date	27-Mar-16

COURSE MEASUREMENT DATA SHEET

Event/Venue	QEOP Elvis 5k				
Measurer	Mark Jefford			Measurement Date	27-Mar-16
Start Time	09:10	Temperature	3 C	Working Constant	11202.69
Finish Time	10:10	Temperature	5 C		

Calibration Constant *11202.69*

Start Reading	Counts	Distance	Adjusted Distance (m)	
Measure lap from start to end of bollards on London Way (by copper box) back to start (in running direction).				
90848				Start/Finish line - at point of green triangle on tarmac labelled 0.5km
98172	7324	653.8	653.8	Bollards at end of London Way by Waterden Road
19233	21061	1880.0	2533.8	Start/Finish line - at point of green triangle on tarmac labelled 0.5km
*Measure lap from start to end of bollards on London Way (by copper box) back to start (in **REVERSE** running direction) along with km split locations.*				
19233	0	0.0		Start/Finish line - at point of green triangle on tarmac labelled 0.5km
24859	5626	502.2	502.2	W edge of the metal bridge after sharp R turn heading towards Timber Lodge
30477	5618	501.5	1003.7	Centre of the bench on path by river, just S of the two bridges of the Velo track overhead
36021	5544	494.9	1498.6	Centre of the picnic bench on L just after the route leaves London way
40301	4280	382.1	1880.6	Bollards at end of London Way by Waterden Road
47621	7320	653.4	2534.0	Start/Finish line - at point of green triangle on tarmac labelled 0.5km
Measurement of 3km splits in forward from the start/finish line				
47621				Start/Finish line - at point of green triangle on tarmac labelled 0.5km
53262	5641	503.5	503.5	S edge of tarmac crossroads
Measure turning point reference from the bollards at end of London Way.				
55066				Bollards at end of London Way by Waterden Road
55285	219	19.5	19.5	N edge of wooden bench
55285	0	0.0		N edge of wooden bench
55502	217	19.4	19.4	Bollards at end of London Way by Waterden Road
Assemble route with 1m radius turning circle at offset from the bollards using the edge of bench as reference point.				
		2533.8	2533.8	Lap to bollards
		4.1	2537.9	Turn (1+0.3) * pi
		0.6	2500.0	Turning point is at 0.6m before the L hand edge of the wooden bench situated between LP LS61 and LS62
		39.1	2498.8	Subtract distance to N edge of bench * 2