

## COURSE MEASUREMENT SUMMARY SHEET

EVENT **THE FLORA LONDON MARATHON**

LOCATION: **LONDON**

DATE: **18 APRIL 2004**

Promoting Organisation: **LONDON MARATHON LTD.**

Name & Address of  
race director **David Bedford**  
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Distance: **not less than 42,195m** Measured by: **Pete Riegel & Hugh Jones**  
Dates: 1999-04-11 & 2004-04-13 (taping)  
2001-03-11 (Red/Green start additions)  
2002-02-10, 2004-04-11 (amendments)

Measurement method: **Jones counter mounted on bicycle wheel**

Elevation, if not same, of: START 40.5m FINISH 6.8m  
Distance, in a straight line, between start & finish: **10.860m**

### Description of the Course

- i) Terrain: **mainly flat, but 32m drop in fifth km**
- ii) Race surface **tarmac city streets, 400m cobbled section at 36.5-36.9km**
- iii) Course configuration: **point-to-point, incl. complete lap from 20.2-36.5km**

### Measurement Details

- i) Section of road available: **entire width of road or carriageway (see map)**
- ii) Line to be taken at turns: **shortest route (in direction indicated at roundabouts)**

SIGNED: .....

DATE: **2004-04-18**

## FLORA LONDON MARATHON

**BLACKHEATH-WESTMINSTER, UK**

**18 APRIL 2004**

The 1999 base measurement has been amended in several minor ways in this report for the 2004 race. Construction at Canary Wharf and at Westminster tube station has previously altered the route in these two places in the intervening years, and the course has also changed, very recently, at the West Gate of the Tower of London at 23 miles. Changed positions of traffic islands has altered the turn into East Smithfield just before halfway. The basic course-length measurement is supplemented by two sets of amendments to yield a 2004 course length.

Specifically, from 1999 the route has changed to include:

- i) going the long way around Rotherhithe roundabout (clockwise) and changed kerblines – *adds 84.88m*
- ii) changed disposition of traffic islands at end of Tower Bridge Road (*subtracts 12.35m*)
- iii) use of the full width of Prestons Road Roundabout – *subtracts 0.57m*
- vi) a re-aligned roadway between Cartier Circle and Canada Square – *subtracts 48.10m*
- v) changed configuration at west gate of Tower of London – *subtracts 17.14m*
- v) staying on the south carriageway of Embankment until the junction with Bridge St. – *adds 6.72m*

This report also details the measurement of the separate routes from the Red and Green starts to their respective merge points with the main (Blue, elite field) route, done in 2001, and unchanged since.

reading	counts	distance	adjusted dist. (m)	location
69000	00000	0	<b>- 12. 63m</b>	Shooters Hill Road, lp31H1285
84312	15312	1630.34	<b>1618.30m</b>	Shooters Hill Road lp113D1285, after Marlboro' La
99316	30316	3227.89	<b>3215.26m</b>	HaHa Road, lp after Repository Road (LHS)
16009	47009	5005.28	<b>4992.65 m</b>	John Wilson Street, lp9 (RHS, after St Mary's St.)
		5006.38	<b>4993.75m</b>	<b>(This reference now lp9AA0781, +1.1m further TF)</b>
29485	60485	6440.13	<b>6427.50m</b>	Woolwich Road, sign M23/M24 on central divider
44824	75824	8073.35	<b>8060.72m</b>	Woolwich Rd, lp4B o/s E Greenwich Fire Station
63181	94181	10027.91	<b>10015.28m</b>	Romney Road, lp10, after Park Street
74968	105968	11282.93	<b>11270.30m</b>	Creek Road, between Tel kiosks – <i>now removed</i>
		11284.48	<b>11271.85m</b>	<b>(new ref: TF of drain, +1.55m further TF)</b>
90143	121143	12898.69	<b>12886.06m</b>	Evelyn Street, lp18, after Grinstead Street
04925	135925	14472.60	<b>14459.97m</b>	Surrey Quays Road, lp0468/36, RHS before Canada Street
30379	<b>161379</b>	17182.82	<b>17170.19m</b>	Salter Road, pillar box LHS, after bridge over dock
RE-MEASURED SECTION [calibration constant = 11.228717/m.]				
87000	00000	17182.82	<b>17170.19m</b>	Salter Road, pillar box LHS, after bridge over dock
93049	6049	17721.52	<b>17708.89m</b>	Brunel Road, lp252/11 (RHS, before Rupack St)
96288	<b>9288</b>	18009.98	<b>17997.35m</b>	apex of divider at end of Jamaica Rd } <i>reverse in mea-</i>
78640	00000	18009.98	<b>17997.35m</b>	apex of divider at end of Jamaica Road } <i>suring direction</i>
63000	<b>15640</b>	19402.84	<b>19390.21m</b>	Tooley Street, lp171 (RHS) after zebra
50432	00000	19402.84	<b>19390.21m</b>	Tooley Street, lp171 (RHS) after zebra
59910	9478	20412.01	<b>20399.38m</b>	end of Tower Bridge east parapet
RE-MEASURED SECTION [calibration constant = 11.193682/m.]				
24000	00000	20412.01	<b>20399.38m</b>	end of Tower Bridge east parapet
31299	07299	21064.07	<b>21051.44m</b>	the Highway, lpH16 (LHS, past Virginia St)
48496	24496	22600.38	<b>22587.75m</b>	The Highway, TF wall of Ratcliffe Orchard footpath
80579	30147	22600.38	<b>22587.75m</b>	The Highway, TF wall of Ratcliffe Orchard footpath
93963	43531	24025.45	<b>24012.82m</b>	Centre of elec.box o/s Limehouse Police Station
03427	<b>52995</b>	25033.13	<b>25020.50m</b>	Poplar High Street, lp53/22 RHS before Harrow Lane
RE-MEASURED SECTION [calibration constant = 11.198061/m.]				
77850	00000	25033.13	<b>25020.50m</b>	Poplar High Street, lp53/22 RHS before Harrow Lane
68000	9850	25912.74	<b>25900.11m</b>	Trafalgar Way, steel groove at start of Bridge
91580	00000	25912.74	<b>25900.11m</b>	Trafalgar Way, steel groove at start of bridge
90000	<b>1580</b>	26053.84	<b>26041.21m</b>	divider at end of Churchill Place N – before obstruction
+ 8.8m taped ( <i>between paint marks either side of temporary obstruction</i> )				
94000	00000	26062.64	<b>26050.01m</b>	divider at west end of Churchill Place
08965	<b>14965</b>	27399.03	<b>27386.40m</b>	Marsh Wall, lpMI0142 o/s Britannia Hotel
26195	00000	27399.03	<b>27386.40m</b>	Marsh Wall, lpMI0142 o/s Britannia Hotel
46941	20746	29607.95	<b>29595.32m</b>	W Ferry Road, between tel.kiosks o/s fire station

71469	45274	32219.57	<b>32206.94m</b>	TS of drain at exit from W Ferry Circus
80474	54279	33178.38	<b>33135.96m</b>	Narrow Street, centre of doors to Papermill Wharf
02818	76623	35557.45	<b>35544.82m</b>	The Highway, lpE1805 before Thomas More St
11819	<b>85624</b>	36515.83	<b>36503.20m</b>	End inset brick double yellow line, at gate under Tower Br

Taped distance from wooden threshold under Tower Bridge (end inset brick double yellow line) to west gate of Tower

OUT (HJ, with 0.3m offset)  $49.9\text{m} \times 6 + 24.19\text{m} + 32.86\text{m} = 356.45\text{m}$

BACK (PR, with 0.3m offset) = 356.67m    **- agreed taped length = 356.5m**

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RE-MEASURED SECTION [calibration constant = 11.198061/m.]

72000	00000	36872.33	<b>36859.70m</b>	west gate of Tower
83997	11997	37943.67	<b>37931.04m</b>	TF stoplight, after Southwark Bridge
28974	00000	37943.67	<b>37931.04m</b>	TF Stoplight, after Southwark Bridge
35327	6353	38620.01	<b>38607.38m</b>	end divider, under Blackfriars railway bridge
54520	<b>25546</b>	40663.67	<b>40651.04m</b>	Embankment, start of last gap in divider

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RE-MEASURED SECTION [calibration constant = 11.228717/m.]

15348	00000	40663.67	<b>40651.04m</b>	Embankment, start of last gap in divider
06974	8374	41409.43	<b>41396.80m</b>	Birdcage Walk, lp62E (RHS, before crossing)
02466	12882	41810.90	<b>41798.27m</b>	Birdcage Walk, lpG91 (RHS, before Spur Rd)
		42207.63	<b>42195.00m</b>	FIXED FINISH LINE POSITION
98000	17348	42208.63	<b>42196.00m</b>	The Mall lp25E, LHS after Marlborough Road

Distance elapsed at finish line from start reference lp31H1285 = 42207.63m;  
therefore start line is located 12.63m east of this lamp-post.

### List of split mile positions

START (0.0m)	Shooters Hill Road, 12.63m west of lp31H1285 (LHS)
1 mile (1609.34m)	Shooters Hill Road, 8.96m before lp113D1285, after Marlboro' La (LHS)
2 miles (3218.69m)	HaHa Road, 3.43m after lp after Repository Road (LHS)
3 miles (4828.03m)	John Wilson St, 6.80m past lp19AA0781 ( <b>14.5m before new u/n lp</b> )
5km (5000m)	John Wilson Street, 6.25m past lp9AA0781 (RHS, <b>5.2m before new lp</b> ).
4 miles (6437.38m)	Woolwich Rd (LHS), 9.88m past sign M23/M24 on central divider
5 miles (8046.72m)	Woolwich Rd (RHS), 14m before lp4B o/s E Greenwich Fire Station
6 miles (9656.06m)	Trafalgar Rd (RHS) 12.1m past lp10L1416, o/s 'The Arches' pool
10km (10000m)	Romney Road (LHS), 15.28m before lp10, TF Park Row
7 miles (11265.41m)	Creek Road, 6.44m before TF side of drain before Copperas St
8miles (12874.76m)	Evelyn Street (LHS), 11.30m before lp18, TF Grinstead Street
9 miles (14484.10m)	Surrey Quays Rd (RHS), 24.13m after lp0468/36, RHS TS Canada Street
15km (15000m)	Quebec Way, 5.08m before lp403/06 (LHS)
10 miles (16093.44m)	Salter Road (LHS), 20.12m before TS kerb of Russia Dock Road
11 miles (17702.78m)	Brunel Road (RHS), 6.11m before lp252/11, just before Rupack St
12 miles (19312.13m)	Tooley St, 78.08m before lp171 (RHS, after zebra) or 16.74m past l308/04
20km (20000m)	388.96m before end Tower Bridge E parapet (29m before centre of Bridge)
13 miles (20921.48m)	The Highway (N carr.), 129.96m before lpH16 (LHS), 7.2m past lpH10
halfway (21097.50m)	The Highway (N carr.), 46.06m past lpH16 (LHS)
14 miles (22530.82m)	The Highway 56.93m before TF wall, Ratcliffe Orchard (11.7m past lpH62)
15 miles (24140.16m)	W.India Dock Rd (N carr.), 24.86m after lpW50/23 (RHS, on median)
25km (25000m)	Poplar High Street, 20.50m before lp53/22 (RHS) TS Harrow Lane
16 miles (25749.51m)	Trafalgar Way, 85.53m before anemometer on pole (RHS)
17 miles (27358.85m)	Marsh Wall (RHS), 27.55m before lpMI0142 o/s Britannia Hotel
18 miles (28968.20m)	E Ferry Rd (LHS), 16.60m past lpE04/23, or 3m before end of wall (RHS)
30km (30000m)	W Ferry Rd, 15.15m before lpW45/53, RHS, o/s 'Pizza & Kebab' takeaway
19 miles (30577.54m)	W Ferry Rd, 16.26m before TS kerb Crews St (LHS), 10m before lpW45/36
20 miles (32186.88m)	20.06m before TS of drain at exit from W Ferry Circus
21 miles (33796.23m)	The Highway (S carr.) 9.97m before lpH62 (RHS)
35km (35000m)	The Highway (S carr.) 17.56m before lpH45 (94m past Chigwell Hill)
22 miles (35405.57m)	The Highway (LHS), 13.03m before lpH55 TS Vaughan Way
23 miles (37014.92m)	Lower Thames St (LHS), 18.71m before TS kerb of Water Lane
24 miles (38624.26m)	16.80m after end divider, under Blackfriars railway bridge

40km (40000m)	Victoria Embkt, 122m past Cleopatra's Needle, at new lp before toilets
25 miles (40233.60m)	Victoria Embankment (LHS), 22.44m after lp28 (past Nth'land Ave, RHS) [and 10.56m before new lp opposite entrance to Embankment Gds South]
800m to go (41395m)	Birdcage Walk (RHS), 1.79m before lp62E (RHS, before crossing)
400m to go (41795m)	<i>Not marked, but 3.27m before lpG91 on Birdcage Walk, before Spur Road</i>
26 miles (41842.94m)	Spur Road, 44.67m past lpG91 on Birdcage Walk
FINISH (42195.00m)	The Mall, 1m before lp25E (RHS)

#### **Movement of splits since 2003 race:**

0 – 25km marks are: 13.22m forward

16 mile mark is: 17.84m back

17 mile – 22mile marks are: 17.14m back

23 miles - 42.195km marks are unchanged

#### **RED ROUTE**

reading	counts	distance	adj. distance	location
65000	00000	0.00	<b>2.58m</b>	Red start reference – lp12H0289 on Charlton Way
82691	17691	1587.23	<b>1589.81m</b>	Charlton Road, lp before Furzefield Rd (RHS)
00824	35824	3214.12	<b>3216.70m</b>	Little Heath, post on traffic is after Cemetery La
18880	53880	4834.01	<b>4836.59m</b>	John Wilson Steet, lp22 (LHS) before Castile Road
20770	55770	5003.67	<b>5006.25m</b>	John Wilson Street, lp12 (LHS) after Kingman St
36611	71611	6424.92	<b>6427.50m</b>	Woolwich Road, sign M23/M24 on central divider*

\*At this point on the blue route 6427.50m has elapsed, so the adjustment to the red route should be +2.58m. **The Red start is therefore 2.58m west of lamp-post12H0289 on Charlton Way**

#### **Splits on Red route:**

**1 mile** Charlton Road, 19.53m past un-numbered lp before corner of Furzefield Rd (RHS)

**2 miles** Little Heath, 1.99m past post on traffic is after Cemetery La, o/s Maryon Wilson Park

**3 miles** John Wilson Street, 8.56m before lp22 (LHS, before Castile Road) **& 2.1m past new lp**

**5km** John Wilson Street, 6.25m before lp12 (LHS, after Kingman St) **& 7.03m before new lp**

#### **GREEN ROUTE**

reading	counts	distance	adj. distance	location
79000	00000	0.00	<b>25.49m</b>	Green start reference – middle lamp-post along footpath
96894	17894	1605.44	<b>1618.30m</b>	Shooters Hill Road lp113D1285, after Marlboro' La*

\* At this point on the Blue route 1618.30m has elapsed, so the adjustment to the green route should be +12.86m. **The Green start is therefore 12.86m west of the middle lamp post on the footpath (west of St John's Park).**

## **CALIBRATIONS**

### **Basic Measurement:**

On 400m steel-taped calibration course on Charlton Way, 1999-04-11

#### **Pre-measurement, 03.30, 7C**

start	end	reading
47000	50755	3755
51000	54754	3754
55000	58755	3755
59000	62754	3754

Average: 3754.5 (x 2.5, x 1.001)

Working Constant: 9.3956362/m

**Constant for the Day (Average) = 9.391882/m**

#### **Post-measurement, 08.10, 9C**

start	end	reading
95000	98751	3751
99000	02752	3752
03000	06751	3751
07000	10752	3752

Average – 3751.5 (x 2.5, x 1.001)

Finish Constant: 9.3881287/m

### **Amendments of main route:**

On 500m steel-taped calibration course on Rotten Row cycle path, Hyde Park, 2002-02-10

#### **Pre-measurement, 06.50**

start	end	reading
48000	53610	5610
53610	59218.5	5608.5
59218.5	64830	5611.5
64830	70437	5607

Average – 5609.25 (x 2, x 1.001)

Working Constant – 11.229718/m

**Constant for the Day (Average) – 11.228717/m**

(All amending measurements completed by 08.00)

#### **Post-measurement, 08.55**

start	end	reading
85000	90607.5	5607.5
90607.5	96216.5	5609
96216.5	01824	5607.5
01824	07433	5609

Average – 5608.25 (x 2, x 1.001)

Finish Constant 11.227716/m

On 500m steel-taped calibration course on Rotten Row cycle path, Hyde Park, 2003-02-02

#### **Pre-measurement, 06.15**

start	end	reading
14000	19589	5589
19589	25182	5593
25182	30772	5590
30772	36365	5593

Average – 5591.25 (x 2, x 1.001)

Working Constant – 11.193682/m

**Constant for the Day (larger)– 11.193682/m**

#### **Post-measurement, 09.10**

start	end	reading
53000	58588	5588
58588	64179	5591
64179	69767.5	5588.5
69767.5	75359	5591.5

Average – 5589.75 (x 2, x 1.001)

Finish Constant 11.190679/m

#### **Pre-measurement, 2004-04-11, 06.45**

On 400m steel-taped cal.course on E Ferry Rd

Start	end	reading
29000	33475	4475
33475	37948.5	4473.5
37948.5	42424	4473.5
42424	46099	4475

Average – 4474.75 (x 1.001/400)

Working constant = 11.198061/m

**Costant for the Day (larger) = 11.198061/m**

#### **Post-measurement, 2004-04-11, 09.20**

On 500m steel-taped cal course on Rotten Row

start	end	reading
54000	59590	5590
59590	65181.5	5591.5
65181.5	70772.5	5591
70772.5	76363.5	5591

Average – 5590.875 (x 1.001/500)

Finish constant = 11.192131/m

### **Measurement of Red and Green routes:**

On 400m EDM-measured calibration course on Bower Ave, Greenwich Park, 2001-03-11

#### **Pre-measurement, 08.25, 11C**

start	end	reading
45000	48454.5	4454.5
49454.5	53907	4452.5
53907	58361.5	4454.5
58361.5	62815.5	4454

Average – 4453.875 (x 2.5, x 1.001)

Working Constant 11.145821/m

**Constant for the Day (larger)– 11.145821/m**

#### **Post-measurement, 09.45, 12C**

start	end	reading
22000	26454	4454
26454	30908	4454
30908	35362	4454
38000	43453	4453

Average – 4453.75 (x 2.5, x 1.001)

Finish Constant 11.145509/m

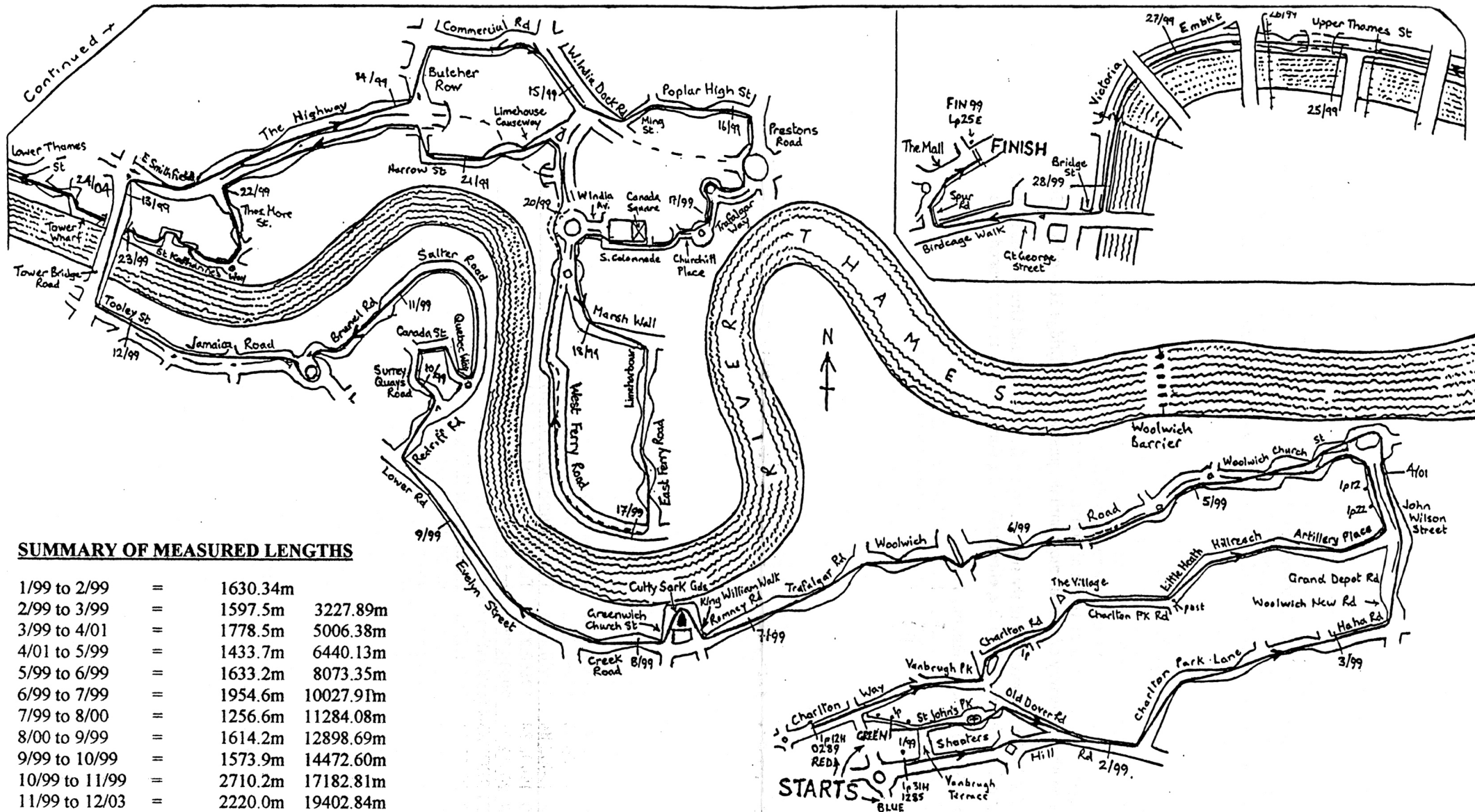
### **SUMMARY OF MEASURED LENGTHS**

1/99 to 2/99	=	1630.34m	
2/99 to 3/99	=	1597.5m	3227.89m
3/99 to 4/01	=	1778.5m	5006.38m
4/01 to 5/99	=	1433.7m	6440.13m
5/99 to 6/99	=	1633.2m	8073.35m
6/99 to 7/99	=	1954.6m	10027.91m
7/99 to 8/00	=	1256.6m	11284.08m
8/00 to 9/99	=	1614.2m	12898.69m
9/99 to 10/99	=	1573.9m	14472.60m
10/99 to 11/99	=	2710.2m	17182.81m
11/99 to 12/03	=	2220.0m	19402.84m
12/03 to 13/99	=	1009.2m	20412.01m
13/99 to 14/99	=	2188.4m	22600.38m
14/99 to 15/99	=	1425.1m	24025.45m
15/99 to 16/99	=	1007.7m	25033.13m
16/99 to 17/99	=	879.6m	25912.74m
17/99 to 18/99	=	1486.3m	27399.03m
18/99 to 19/99	=	2208.9m	29607.95m
19/99 to 20/99	=	2611.6m	32219.57m
20/99 to 21/99	=	958.8m	33178.38m
21/99 to 22/99	=	2379.1m	35557.45m
22/99 to 23/99	=	958.4m	36515.83m
23/99 to 24/04	=	356.5m	36872.33m
24/04 to 25/99	=	1071.3m	37943.67m
25/99 to 26/99	=	676.4m	38620.01m
26/99 to 28/99	=	2043.6m	40663.67m
28/99 to FIN99	=	1545.0m	42208.63m

FINISH POSITION 1m BEFORE FIN99

COURSE FROM REF 1/99 TO FIXED (2004) FINISH = 42207.63m

STARTLINE POSITION IS 12.63m EAST OF REF 1/99 (lp31H1285)



### SUMMARY OF MEASURED LENGTHS

1/99 to 2/99	=	1630.34m	
2/99 to 3/99	=	1597.5m	3227.89m
3/99 to 4/01	=	1778.5m	5006.38m
4/01 to 5/99	=	1433.7m	6440.13m
5/99 to 6/99	=	1633.2m	8073.35m
6/99 to 7/99	=	1954.6m	10027.91m
7/99 to 8/00	=	1256.6m	11284.08m
8/00 to 9/99	=	1614.2m	12898.69m
9/99 to 10/99	=	1573.9m	14472.60m
10/99 to 11/99	=	2710.2m	17182.81m
11/99 to 12/03	=	2220.0m	19402.84m
12/03 to 13/99	=	1009.2m	20412.01m
13/99 to 14/99	=	2188.4m	22600.38m
14/99 to 15/99	=	1425.1m	24025.45m
15/99 to 16/99	=	1007.7m	25033.13m
16/99 to 17/99	=	879.6m	25912.74m
17/99 to 18/99	=	1486.3m	27399.03m
18/99 to 19/99	=	2208.9m	29607.95m
19/99 to 20/99	=	2611.6m	32219.57m
20/99 to 21/99	=	958.8m	33178.38m
21/99 to 22/99	=	2379.1m	35557.45m
22/99 to 23/99	=	958.4m	36515.83m

23/99 to 24/04	=	356.5m	36872.33m
24/04 to 25/99	=	1071.3m	37943.67m
25/99 to 26/99	=	676.4m	38620.01m
26/99 to 28/99	=	2043.6m	40663.67m
28/99 to FIN99	=	1545.0m	42208.63m

FINISH POSITION 1m BEFORE FIN99

COURSE FROM REF 1/99 TO FIXED (2004) FINISH = 42207.63m

STARTLINE POSITION IS 12.63m EAST OF REF 1/99 (lp3 1H1285)

## FLORA LONDON MARATHON

### 18 APRIL 2004

