

UK Road Race Course Measurement

Introduction

This paper has been approved by the UKA Course Measurement Working Party (CMWP) as their response to the Discussion Paper by UKA RRLG / RunBritain dated 18 November 2008.

The purpose of that paper is stated to be “..to initiate discussion about the current arrangements and to explore possible improvements to measurement of UKA licensed road races.”

The CMWP considers that the paper does not fully recognise the 'current arrangements' for measurement and their inclusion in the UKA Rules for Competition, with the result that the proposals made tend to address non-existent problems rather than the very few real difficulties.

This response is therefore written as an alternative discussion paper, rather than a commentary on the draft. It will also be placed on the UK Course Measurement website for comment.

Part 1 sets out the current arrangements for measurement and certification of road race courses in the UK, the training and upgrading of UK measurers, and administration of measurement.

Although UKA adopted a 'hands-off' approach to measurement for about 8 years, it accepted and approved the measurement structure which has been in place and operating satisfactorily for 20 years. In the last 3 years UKA has appointed a new CMWP chairman and assumed responsibility for financing the administration of measurement, formerly undertaken by the territorial associations.

Part 2 looks at the relationship between the race licensing system and the measurement system. The recent changes to the race permit/licence system have resulted in a partial loss of communication with the measurement system, and the CMWP considers that improvements to the operation of the licence system are urgently needed if the UKA rules regarding measurement are to be enforced.

Part 3 summarises the proposals made in Parts 1 & 2 for improvements to the current systems.

Part 1 – Current Arrangements

Standard Method of Measurement

- 1 The method of measurement universally followed in the UK was developed by the Road Runners Club following a paper by John Jewell in 1961. Similar development occurred in the US and the method was adopted by by AIMS and subsequently approved by IAAF as the international standard. Systematic measurement of UK courses started about 1982, and around 1985 it was adopted by the AAA and schemes of measurement were set up in the UK regions.
- 2 The method is described in the IAAF handbook *The Measurement of Road Race Courses* (see Appendix A)
- 3 This method of measurement has been incorporated in the Rules for Road Running of AAA, BAF and currently UKA. (Rule 205(4) of the Rules for Competition 2008 refers – see Appendix B.)
- 4 The method of measurement has remained essentially unchanged since it was introduced, although there have been some changes in detailed practice. Measurers internationally continue to seek improvements and to evaluate alternatives, but changes are only made after exhaustive testing and general acceptance.

PROPOSAL 1 – UKA Rules for Competition – Rule 205(4) to remain unchanged.

Course Measurers

Grading & Accreditation

- 1 In the UK, measurements are only accepted from trained and graded course measurers. New measurers initially qualify as Grade 2, and may be upgraded to Grade 1 after a period of acceptable performance and a further training and test session. Both grades are fully competent, but a Grade 1 measurer is required for certain Championship events.
- 2 The IAAF recognises 3 grades of measurers – Grades A, B & C. Grade C measurers can measure local courses, including National Championships, but no races in the AIMS/IAAF calendars. UK Grade 2 measurers are equivalent to IAAF Grade C. Grade 1 measurers have a level of competence equal to Grade B.
- 3 IAAF require that Grade C measurers have successfully completed a course measurement seminar managed by a Grade A measurer. In the UK, measurement seminars are provided by the Area Course Measurement Secretaries (ACMS), under the general direction of the International Measurement Administrator (currently Hugh Jones).
- 4 Training may be provided as a two-day seminar, covering theory and practice. The theory is now also available on the Course Measurement website <www.coursemeasurement.org.uk>. This is followed by a one-day practical seminar. Trainees are accredited as Grade 2 measurers on completion of the seminar and submission of a satisfactory measurement report for the practical session.
- 5 Measurers may be upgraded to Grade 1 on recommendation of the ACMS and completion of a one-day training and test session.
- 6 A list of accredited measurers was published by BAF, but has not been updated by UKA. Regional lists are maintained by the ACMS and are available on request or via the website.
- 7 The above system has operated successfully for over 20 years, and has proved robust.

PROPOSAL 2 - UKA to formally adopt the long-established procedures for the training, grading and accreditation of course measurers.

Organisation

- 8 There is no national organisation or association of course measurers. Lists of active course measurers are maintained by the ACMS on a regional basis. The lists for England are also available on the UK Course Measurement website.
- 9 Course measurement is carried out for each event by arrangement between the race director and an individual measurer. Measurement of courses for affiliated athletic and running clubs is carried out on a voluntary basis and measurers do not charge for their time. There is a daily charge to cover costs of administration and equipment, with travel and subsistence costs in addition. For other organisations a negotiated fee replaces the daily charge. (The current guidelines are given as Appendix C.)
- 10 Measurers are required to send measurement reports to the race director as a record of the course defined for the race, and to the appropriate ACMS for checking and certification.
- 11 Measurers operate as free agents. They are under no obligation to measure a particular course or on a particular occasion, and may measure courses for any organisation or type of event.
- 12 Formation of an independent constituted body of UK course measurers has been suggested, but it is not clear that this would have any overall benefit compared with the current system. Additional work would be required in governing such an association, which would probably need to be self-financing. None of the current volunteers would wish to take on the additional work.

PROPOSAL 3 – UKA to continue to recognise the lists of accredited course measurers maintained by the ACMS on a regional basis.

PROPOSAL 4 – Arrangements for measurement to remain a matter for agreement between race directors and individual measurers.

Measurement Administration

- 1 The administration of course measurement is divided between 3 English areas (South, Midlands & North) plus Wales, Scotland & Northern Ireland. Administration systems in Scotland and Northern Ireland are still in development. Administration in the 3 English areas and Wales is based on uniform principles, but there are differences in detail. Significant differences between English areas are noted below.
- 2 The *Area Course Measurement Secretary (ACMS)* is responsible for the operation of the system. In the nature of the work, it is necessary that the ACMS is a Grade 1 measurer. Appointments are rare (each of the English areas have only had 2 ACMS since 1990) and volunteers are difficult to find. It is usually a matter of the retiring ACMS finding a measurer who is prepared to do the job. Appointments have been confirmed in the past by regional road running committees.
- 3 The ACMS:
 - receives measurement reports from measurers, checks them for completeness and quality, and issues a Certificate of Course Accuracy to the race director. [In the North, certificates remain valid for 10 years, or until the course changes. In the Midlands and South, renewal certificates are issued each year until remeasurement is required.]
 - renews Certificates annually on request from the race director or when notified via the licence system. [South: requests may be on-line via measurement website.]
 - maintains files of measurement reports and certificate issues.
 - provides lists of current measured courses and certificates issued to interested parties.
 - maintains and publishes a list of active measurers and identifies suitable measurers when requested by race directors.
 - advises race directors and other officials on measurement matters.
 - recruits and trains (theory and practical) new measurers, and recommends and organises upgrading of experienced Grade 2 measurers to Grade 1.
 - appoints Grade 1 measurers to carry out verification measurements when required because of queries regarding accuracy or claims of record times.
 - liaises with County Licence Officers and/or Athletics Services.
 - participates ex-officio as a member of the CMWP.
- 4 The role of the ACMS has remained unchanged since the system was set up in 1985. The costs of operating the system were met until April 2007 by the territorial associations. UKA assumed responsibility for some costs in 2006 and all costs from April 2007.

PROPOSAL 5 – UKA to confirm the existing arrangements for administration of course measurement by voluntary Area Course Measurement Secretaries.

Management

- 1 There is no 'top-down' management of measurement in the UK. The ACMS is fully responsible for all measurement activities in the area. Policies and practice across the country are coordinated by the Course Measurement Working Party (CMWP), originally set up shortly after the inception of regional measurement schemes around 1986.
- 2 The original CMWP fell into abeyance with the demise of BAF in 1997, although John Disley did convene one meeting in 1999. Following this meeting UKA recognised the CMWP as the body organising course measurement nationally and a CMWP member was invited to represent course measurement at a number of meetings of the UK Road Running PST in 2000 and 2001. Unfortunately, UKA made no provision for funding the CMWP and there were no further meetings. The ACMS continued to support each other and liaise on policy until 2006, when Hugh Jones was asked by UKA to chair and revitalise the CMWP.
- 3 The CMWP now comprises:
 - Hugh Jones (IAAF International Measurement Administrator) (Chairman)
 - The 6 Area Measurement Secretaries:
 - Mike Sandford (South), Phil Holland (Midlands), Alan Ritchie (North)
 - John Glover (N. Ireland), Alan Young (Scotland), Tim Glasser (Wales)
 - Paul Hodgson (IAAF measurer, former North ACMS and original member of CMWP)
- 4 The CMWP:
 - may co-opt other experienced measurers if required.
 - meets annually to discuss all measurement matters. Between meetings, discussion and dissemination of information is by email. Minutes of the meeting are published promptly on the UK Course Measurement website (www.coursemeasurement.org.uk)
 - coordinates training and upgrading seminars
 - coordinates measurement practice between areas.
 - maintains and issues guidelines for charges by measurers.
 - maintains and issues a Safety Code for Measurement.
 - operates a website containing information for measurers, race organisers, officials and runners.
 - liaises with and advises UKA RRLG on measurement matters
- 5 The CMWP has no formal constitution and does not need one to function effectively. Decisions are reached by consensus – a vote has never been necessary.

PROPOSAL 6 – UKA to continue to recognise CMWP as their body organising course measurement nationally.

Finance

- 1 The costs of operating the UK course measurement system fall into four main categories – equipment, training, administration and meetings.
- 2 Equipment - includes Jones Counters and high visibility bibs. Counters are bought in batches from USA, which minimises delivery charges, and issued as required to measurers. High visibility bibs are dealt with in the same way. New measurers may also be provided with initial supplies of small items. Measurers provide all other equipment.

- 3 Training - covers initial training seminars and upgrading seminars. The costs are mainly travelling and lunch expenses and hire of premises. There are also some costs of preparing course materials.
- 4 Administration - includes the routine office costs of the ACMS (printing, postage, filing, telephone, etc) and the operation of the UK Course Measurement website by Mike Sandford.
- 5 Meetings – there is normally one CMWP meeting a year. Costs are usually limited to travelling, lunch and premises hire. There may occasionally be other meetings – in 2007 there was a meeting with Athletics Services.
- 6 The costs of actual measurements are paid directly by race directors to the measurer. There is no central charge for measurement or certification.

PROPOSAL 7 – UKA to continue to fund the activities of the CMWP and ACMS as at present.

Dispute Resolution

- 1 There are two possible areas of dispute – those arising between a race director and a measurer over arrangements or payment for measurement, and those querying accuracy of a measurement. In both cases, any dispute is referred to the ACMS. (If the dispute involves that ACMS, it is referred to another ACMS.)
- 2 It should be noted that course measurement disputes differ from other disputes, in that they are not 'live' – they do not require judgement or measurement at the time of the race. The course remains there to be remeasured at any time.
- 3 Disputes between race directors and measurers are resolved by negotiation – the relationship between the two is direct, and outside the control of any measurement body. Where the dispute is over the performance of the measurer and is not easily resolved, the ACMS may offer an alternative measurement without charge. Disputes over payment are rare – the basis for payment is published and should be agreed in advance, and the measurement report is supplied to the race director on payment.
- 4 Disputes over accuracy of measurement are resolved by a verification measurement by another Grade 1 measurer. The case is first referred to the ACMS, who decides, after re-checking the measurement report, whether a re-measurement is necessary, in which case it is done without charge. It is always open to the race director, preferably after consultation with the ACMS, to engage another measurer for a second measurement at normal charges.
- 5 If measurement accuracy is disputed after the event, the ACMS will require evidence from the race director and officials regarding the course actually laid out and run, in addition to consideration of the measurement report.
- 6 The CMWP (excluding the ACMS who is already involved) will act as an appeal body in the event of failure to resolve the dispute as above. (It should be noted that this has not yet been necessary.)

PROPOSAL 8 – RunBritain and CMWP to produce proposed dispute resolution procedures based on the existing practice.

Part 2 – Interface with Licensing System

Interface with Licence System

- 1 UKA rules for road races advertising a fixed distance require that the course is measured, or at least arrangements have been made for a measurement, before a licence for the event is issued. The licence application package spells this out clearly. The current system for ensuring this in England is not working effectively.
- 2 The previous system for the issue of permits in the Midlands required the race director to forward a second copy of the measurement sheet of the permit application to the ACMS. In the South and North, the Permit Secretary forwarded the measurement sheet to the ACMS. These requirements were not incorporated in the new licence system, and there is now no effective coordination between the issue of licences and the issue of measurement certificates.
- 3 There are two problems at present. Race directors applying for a licence are informed of the requirement for measurement, but are not made aware that they need to apply separately for the measurement certificate, and the licence issuing system does not automatically pass information to the ACMS. Secondly, the system allows the issue of a licence even when no course measurement information is provided with the application.
- 4 The situation is not uniform over the country, but analysis for the Midlands for the first 8 months of 2008 shows that 56 of 138 races claiming a distance were issued with a licence without a valid course measurement certificate. At least 8 of these races had no valid measurement. There are similar problems in the South and North.
- 5 Discussions between the English ACMS and Athletics Services have established a link, but it is too cumbersome and slow to be effective. It requires considerable manual input from Athletics Services to produce a spreadsheet report which is difficult for the ACMS to use. Worse, it is updated infrequently and only includes details for licences already issued, and is therefore at least a month too late to be effective in enforcing the rules.
- 6 The fault is not with Athletics Services, who have been very helpful in trying to provide the information required. We understand that they cannot automatically extract the information from the licence database on a daily basis, which is what is needed.
- 7 There are two clear system requirements for races claiming a distance. The system must not allow a licence to be issued until the required measurement information is provided, and the system must pass this information to the ACMS promptly to allow the issue of a measurement certificate.
- 8 Ideally, this would all be done automatically by the licence database system. This is unlikely to be possible in the short term, and alternative methods must be found. Possible approaches include:
 - Race director to be required to send copy of measurement form to ACMS
 - County Licence Officer/Athletics Services to check for measurement form, chase if necessary and send to ACMS
 - ACMS to have read-only access to licence database

PROPOSAL 9 – RunBritain to facilitate early discussion between Athletics Services, County licence Officer and ACMS to develop and implement effective communication between licence and measurement systems.

Part 3 – Summary of Proposals

- 1 UKA Rules for Competition – Rule 205(4) to remain unchanged.
- 2 UKA to formally adopt the long-established procedures for the training, grading and accreditation of course measurers.
- 3 UKA to continue to recognise the lists of accredited course measurers maintained by the ACMS on a regional basis.
- 4 Arrangements for measurement to remain a matter for agreement between race directors and individual measurers.
- 5 UKA to confirm the existing arrangements for administration of course measurement by voluntary Area Course Measurement Secretaries.
- 6 UKA to continue to recognise CMWP as their body organising course measurement nationally.
- 7 UKA to continue to fund the activities of the CMWP and ACMS as at present.
- 8 RunBritain and CMWP to produce proposed dispute resolution procedures based on the existing practice.
- 9 RunBritain to facilitate early discussion between Athletics Services, County Licence Officers and ACMS to develop and implement effective communication between licence and measurement systems.

Course Measurement Working Party

12 December 2008

Appendix A

Extract from IAAF handbook *The Measurement of Road Race Courses* [highlighting added]

A calibrated bicycle fitted with a Jones Counter is the only approved method of measuring road race courses. The Jones Counter, which is mounted at the hub of the bicycle's front wheel, is named after its inventor, Alan Jones, and the original manufacturer, his son Clain Jones.

The Jones Counter does not measure distance directly. It measures the revolutions and part-revolutions of the bicycle (front) wheel. Current models of the Jones Counter, of which there are several versions, have a gearing through which they register 260/11 counts (23.6363) for each revolution of the wheel. Because the circumference of bicycle wheels normally used in measurement is about 2.1m this means that each count represents approximately 9cm on the ground.

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The basis of the method of measurement is to compare the number of revolutions of the bicycle wheel (recorded in 'counts') needed to cover the race course with the number of revolutions needed to cover a standard 'calibration course' of known length. The method is simple and direct, but there are many important details to follow in order to obtain an acceptable measurement.

The following eight steps are necessary to measure a road race course:

1. Define the road race course
2. Select and measure a calibration course
3. Calibrate the bicycle on the calibration course
4. Measure the road race course
5. Re-calibrate the bicycle on the calibration course
6. Calculate the length of the road race course
7. Make final adjustments to the road race course
8. Document the measurement.

Appendix B

UKA Rule 205(4) of the Rules for Competition 2008 [highlighting added]

RULE 205 THE COURSE

- (1) The responsibility for providing a proper course rests with the Promoter who must:
- (i) Take account of any advice given by the local Police Force, Local Authority, and the UKA Course Measurer before publishing details of the course.
 - (ii) Adequately signpost the course.
 - (iii) Appoint marshals to direct runners throughout, particularly at intricate parts of the course and at road junctions. The marshals must be fully briefed as to their duties and responsibilities. At major road junctions at least one marshal should be an adult.
- (2) Races shall be run on tarmac, concrete or paved roads. When traffic or similar circumstances make it unsuitable the course, duly marked, may be on a bicycle path or on a footpath alongside the road, but should not be on soft ground such as verges or the like.
- A course that includes a railway level crossing will only be deemed safe and a permit issued where a written undertaking has been obtained from the Railway Track Authority that no train will use the line on the day of the race.
- (3) The Start and Finish area may be in an enclosed ground or athletic arena. If possible the Start should not be on a main road.
- (4) If the race is advertised as being of a particular distance, then the correctness of that distance must be verified by a UKA registered and graded Course Measurer.
- (i) The course must be measured along the ideal line of running, i.e. the shortest possible route, in the section of the road permitted for runners. The method of measurement shall be by a bicycle fitted with a Jones Counter and calibrated to IAAF standards.
 - (ii) The measured distance must not be less than the advertised distance of the race, nor should it exceed the advertised distance by more than 0.1%.

Appendix C

Guidelines for Measurement Charges and Expenses (CMWP 2006)

Measurement Charges & Expenses – Affiliated Clubs

Charges and expenses for measurement services are a matter for agreement between race organisers and the measurer, and should be discussed at the first contact.

The following new guidelines have been agreed for measurements in the UK by the UKA Course Measurement Working Party, and apply to races organised by affiliated athletic and running clubs. They apply from 1 January 2007.

Daily Measurement Charge

The measurer may charge a maximum of £30 per day or part day of measuring. This charge should be set by the measurer to cover average administration costs of a measurement (stationery, printing, postage, telephone, etc), a contribution to the costs of the measurer's equipment and consumables, and other incidental costs. (Where an affiliated club has a big sponsor onboard, a market price, as for other organisers, may be appropriate.)

Travel

Travel by car will be charged at a rate depending on the car used, up to a maximum of 40p/mile. Travel by public transport will be charged at cost. Use of taxis should be agreed with the race organiser in advance. Measurers travelling to and from the measurement by bicycle may claim a contribution to the maintenance costs of the bicycle.

Subsistence

Where the location, duration or timing of the measurement requires, the measurer may claim the reasonable cost of meals and accommodation. Alternatively, the race organiser may provide these.

Measurement Charges & Expenses – other organisers

This includes commercial race organisers, local authorities, voluntary bodies and charities.

Measurement Charge

The measurer will negotiate the fee with the race organiser to cover his costs and professional services. (This is likely to vary considerably, depending on the financial position of the event.)

Travel & Subsistence

Travel and subsistence will be charged as above.

Note:

It can be helpful if measurers provide an itemised invoice detailing mileage, meals, and other expenses.