

AUSTRALIAN CYCLING TEAM

***ENVIRONMENTAL
STANDARDISATION
PROTOCOL***





ENVIRONMENTAL STANDARDISATION PROTOCOL

1. CONDITIONS FOR RECORDING A VALID TIME FOR SELECTION PURPOSES:

1.1 All competition or timed trials conducted for the purpose of achieving specific performance selection criteria are to be conducted only within UCI/Cycling Australia sanctioned competitions, or in Cycling Australia (CA) conducted trials - and be in controlled conditions that must satisfy the following:

1.1.1 Be witnessed by at least one of the following:

- a National Team Coach;
- a State Institute/Academy (SIS/SAS) Coach;
- a member of a National Selection Panel; or
- a suitably experienced person appointed by the National Discipline Head Coach or Performance Director where one of the above is not available.

1.1.2 Be conducted on an empty track (no other athletes) with marker sponges where dictated by relevant regulations or during a sanctioned competition. This includes team sprint races for the timing of a standing start 250m time trial.

1.1.3 For any trial in or out of competition, the athlete will be required to use UCI compliant clothing, helmet, and bicycle for that specific event.

1.1.4 Proper starting gates are to be used for trials involving a standing start (ie 250m, 500m and 1000m trials). A handheld start with an electronic timing device activated by movement of the front wheel will only be permitted for timing of an individual and/or team pursuit trial.

1.1.5 For all standing trials/races, the first lap must be recorded, in addition to the total time for the performance.

1.1.6 Electronic timing (inclusive of light gates) is to be used for all trials.

1.1.7 In the event that electronic timing is unavailable, times may be considered at the discretion of the HPD or National Head Coach if the performance is recorded in accordance with clause 1.8.

- 1.1.8 A digital video camera with the following minimum settings shall be used to capture each trial. The specifications for video format are:
- **Resolution** of at least 1280x720 (min. 921,600 pixels);
 - **Frame Rate** of at least 50 frames per second **progressive scan**;
 - **Shutter Speed** of at least 1/250th of a second.
- 1.1.9 In any standing start event the video must include the red and green lights on top of the semaphore board during the countdown.
- 1.1.10 The athlete must be in full for the entire duration of the trial for the video to be considered valid.
- 1.1.11 A nationally accredited commissaire should be in attendance.
- 1.1.12 A performance may only be recorded on a UCI homologated velodrome at below 500m altitude.
- 1.1.13 The following environmental information must be recorded at track side by a National Team Coach, SIS/SAS Coach, SIS/SAS Sports Scientist, or National Selector, within 15 minutes prior or post performance, using an AIS or State Sports Institute approved/calibrated Environmental Conditions Measurement Instrument. The instrument needs to be turned on and left running for approx. 60 minutes prior the first trial. The parameters that should be recorded are:
- **Temperature** in degrees Celsius (°C);
 - **Atmospheric Pressure**, in Hectopascals (hPa);
 - **Relative Humidity** in percent (%).
- 1.1.14 For all events the environmental conditions will be applied against the times recorded through the latest version of CA's Environmental Conditions Correction Tool (software).
- 1.1.15 The baseline (zero) standards set for environmental conditions to calculate air density is:
- **Temperature:** 26°C
 - **Atmospheric Pressure:** 1013 hPa
 - **Relative Humidity:** 50%
- 1.1.16 The resultant **standard** air density is:
- 1.172298 kg/m³
- 1.1.17 Standardised times will be calculated with an error margin based on the standard error of a Kestrel 5200 Weather Meter as stated by the manufacturer:
- **Temperature:** +/- 0.5°C

- **Atmospheric Pressure:** +/- 1.5 hPa
- **Relative Humidity:** +/- 2%
- **Coverage Factor (k):** 2

1.1.18 In the event that two times recorded at different events fall within this error margin, they will be considered the same time for selection purposes. This will not apply if the times are recorded at the same event, where errors will be considered identical.

1.2 In cases where an incorrect environmental parameter is recorded, e.g. Barometric Pressure instead of Atmospheric Pressure (Station Pressure), the correct value may be approximated using provided values, map data, and local weather station data; according to CA's conditions approximation process.

1.3 If two performances are need to be compared, where electronic timing is not available for one of the performances; the result recorded on electronic timing should be rounded down to the nearest 100th of a second.