

Netball Performance Standards for Outdoor Courts (Class 3 and 4 Surfaces)

Construction and test verification criteria for certification

- The requirements for slip resistance, ball rebound, shock absorption and vertical deformation shall be satisfied in all reasonable conditions in which the court may be expected to be used (or in the conditions defined by the surface manufacturer);
- Verification tests should be undertaken in the positions shown on Figure 1 (below) plus any other areas of concern to the facility owner, the test institute or England Netball;
- Verification tests shall be undertaken under the prevailing conditions at the time within the range 5°C - 25°C.
- Slip resistance tests should be undertaken in both dry and wet conditions.
- These performance standards also apply to covered outdoor courts e.g. domes and airhalls.
- Line markings must conform to performance standards as they are an essential part of the playing surface.

| General Description | Test Method | Class 3 Shock absorbing | Class 4 Non / low shock absorbing | Qualifications / Additional consistency requirements |
|--|--|-------------------------------|--|--|
| Slip resistance and consistency ¹ | $\frac{\text{Dry}}{\text{Wet}^2}$ BS EN 13036-4 ² | ≥75 | As Class 3 | All test positions shall give mean results within ±5 of the overall mean for the court |
| Rotational resistance | $\frac{\text{Dry}}{\text{Wet}^2}$ BS EN 15301-1 ⁴ | 15-45 Nm | As Class 3 | Nm = Newton metres |
| Ball rebound and consistency | $\frac{\text{Dry}}{\text{Wet}^2}$ BS EN 12235 ⁵ | ≥ 80% (≥1.0m) | As Class 3 | All test positions shall give mean results within ±5 of the overall mean for the court |
| Shock absorption | $\frac{\text{Dry}}{\text{Wet}^2}$ BS EN 14808 | 25-45% | No requirement | |
| Vertical deformation | $\frac{\text{Dry}}{\text{Wet}^2}$ BS EN 14809 | ≤ 4.0mm | No requirement | |



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|---------------------------|--------------------------|--|---|
| Surface regularity | BS EN 13036-7 | No undulation greater than 6mm | Subject to the tolerance detailed in note 6 below |
| Water permeability | BS EN 12616 | ≥ 150 mm/h | |
| Gradients | Surveyors level | Permeable surfaces Recommended fall: 0.5% (1:200) Maximum fall: 0.83% (1:120) Impermeable surfaces Minimum fall: 0.83% (1:120) Maximum fall: 1.0% (1:100) | Falls measured on a single plain |
| Accuracy of line markings | Steel tape or equivalent | All line markings shall be within ±15mm of their specified positions | |

Notes:

- 1 Whilst it is recognised that the slip resistance of a playing surface will reduce with wear and some players will adjust to lower values, England Netball's experience is that the majority of players will find such courts unacceptable. It is therefore recommended that the maintenance and refurbishment of a playing surface is tailored to ensuring a slip resistance value of 75 throughout the life of the court.
- 2 Wet conditions shall be produced by saturating the surface and then allowing it to drain for 5 ± 0.5min. and testing within a further 15 minutes.
- 3 Using the CEN rubber slider as described in BS EN 13036-4
- 4 Using the smooth rubber test sole
- 5 Measured using a Mitre Venturi netball inflated to 10psi and giving a ball rebound of 1.25 ± 0.05m when dropped from 2.0m onto a concrete floor
- 6 A certain number of deviations (of up to 4mm) are permitted from the tolerances providing when measured under a 1m straightedge, the deviation does not exceed the tolerances stated above for the maximum gap beneath a 3m straightedge. Deviations over 1m in length are considered to be multiple deviations e.g. a 1.8m long ridge is considered to be two deviations.

Performance Verification Testing

Courts should be constructed to satisfy the requirements of England Netball and independently tested by an accredited test institute to verify whether the above specifications have been met.

Verification testing should be undertaken on completion of construction works, although it is recognised that some types of surfaces do not reach their normal playing performance until after the surface has settled down in which case testing should be undertaken a few weeks after completion.

Verification testing should be undertaken on each court at the locations as indicated below.



Position 8 may be located anywhere on the run-off area and shall only be tested for slip resistance and rotational resistance.

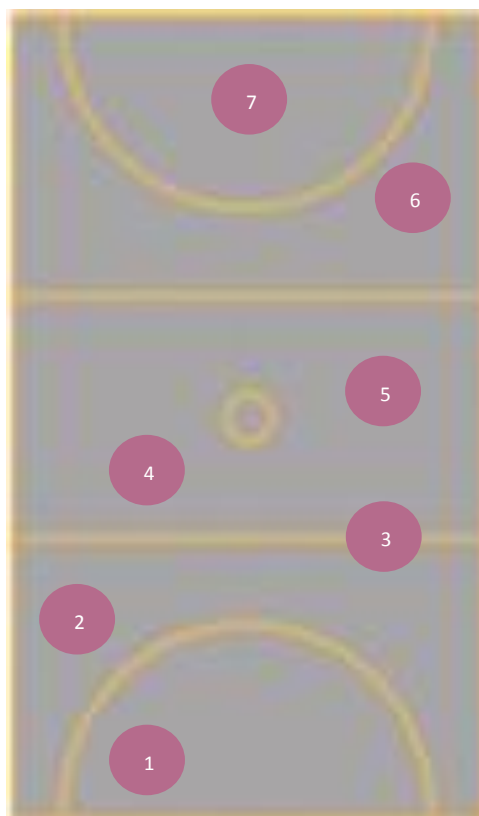


Figure 1 - Location points of performance verification tests

For further information on performance verification testing, please contact facilitydevelopment@englandnetball.co.uk

