

Equipment stores for sports halls

General

This briefing note reviews the accommodation requirements for sports hall equipment stores in the light of a recent Sport England survey and analysis of three existing sports hall facilities, a computer aided design (CAD) space planning study and consultation with sports equipment suppliers. The findings have been used as a basis for establishing indicative equipment store layouts for the 4 and 5 court halls included in Sport England's new document 'Affordable Sports Halls' (ASH). The work will feed into the next revision of the 'Sports Halls: Design and Layouts' Design Guidance Note.

Key points include:

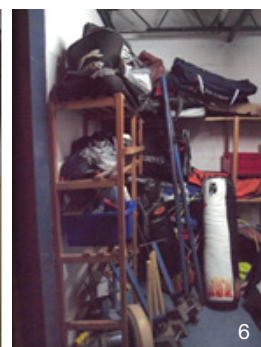
- The suitability of the recommended 12.5% minimum floor area (calculated as a percentage of the sports hall)
- A typical range of sports equipment items to be accommodated
- Variations between the requirements for the 4 and 5 court hall sizes.

Summary of findings from a short survey¹ of sports hall equipment stores in 3 sports centres in London

- **The average floor area for storage was 11.41%**
Based on an assumed area of 594 m² (33 x 18 m) sports hall areas, the individual areas of the stores were 10.38%, 11.46% and 12.40%.
- **Equipment stores were all full**
In one centre, although there were two sets of doors, access was only possible through one door as the other was blocked by the volume of equipment being stored. (Photographs 1, 2, 5 and 6)
- **Extra equipment was stored in the sports halls**
Five-a-side goals, trampoline and gymnastics equipment were stored in the sports hall and adjacent spaces. (Photographs 3 and 4)
- **Demand by sports clubs**
The greatest demand for storage space came from sports clubs based in the centres. In two centres, gymnastics equipment took up the most space. In another, it was the equipment associated with the short mat bowls club and the gymnastics club. (Photographs 1 and 2)



¹ Survey (09/05/2012) by Ethica Uk Ltd.



- **Sports with court markings**
Storage for badminton and netball equipment required less than 2 m²
- **Separate stores**
One centre had a community store (42 m²) and a separate store (20 m²) for use by the school for small items of sports equipment such as tennis bats, cricket bags, footballs etc.
- **Centre comments**
All managers commented that limited storage restricted the programme of activities that the centre could offer.

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CAD space planning study

The Ethica study measured the approximate footprint of the major elements of equipment in the storage areas. These were converted into CAD 'blocks' to allow the capacities of the storage area in the ASH indicative designs to be tested. Further information was supplied in CAD format directly from suppliers or obtained from their web sites.

The approximate space requirements for the individual items of loose sports equipment (as listed in Appendix 1 of the ASH documentation) and their arrangements within indicative equipment store layouts for the 4 and 5 court sports halls are set out as follows:

Equipment stores

Briefing Note

Schedule of loose sports equipment to be accommodated

(Footprint areas indicated represent equipment in stored configuration)

Sport	Description	4 court store (87 m ²)	Total area (m ²) / sport (% store)	5 court store (108 m ²) (additional items)	Total area (m ²) / sport (% store)
Badminton	4 sets of posts, 4 nets, 2 spare nets, interlocked		2.2 (2.5%)	(+ 1 set)	2.6 (2.4%)
Basketball	Basketball ball cage with table / chair / scoring equipment over		1.0 (1.2%)		1.0 (0.9%)
Bowls	4 no. short mat carpets, rolled, on trolleys		5.5 (6.3%)	(allowance for longer mats)	6.9 (6.4%)
Cricket	2 roll out mats (to ECB standards) on a trolley with protruding handles		2.5 (2.9%)		2.5 (2.3%)
Five-a-side	1 pair of portable goals with anchor points 3.66 m long x 1.2 (or 1.83) m high (folded)		1.2 (1.4%)		1.2 (1.1%)
Futsal / Hockey / Handball	1 pair of portable goals with anchor points 3.0 m long x 2.0 m high (folded)		1.0 (1.2%)		1.0 (0.9%)
Gymnastics	Gymnastics bars		4.9 (5.6%)	(additional allowance)	6.0 (5.6%)
	Gymnastics vaulting table				
	Gymnastic agility mat, rolled				
	Exercise mats (29 no.) on a trolley				
	High bars (folded)				
Judo / Karate	98 no. mats, each 2.0 x 1.0 m, on 4 no. trolley's (for full 14 x 14 m matted area with 8 x 8 m combat area)		10.7 (12.3%)	(+1 matted area)	21.4 (19.8%)
Netball	1 pair of adjustable posts, each 3.05 m high, interlocked		1.4 (1.6%)		1.4 (1.3%)
Table tennis	6 no. tables, with nets and support, folded and interlocked		2.8 (3.2%)	(+ 2 tables)	3.6 (3.3%)
School benches	6 no. benches, each with 3.30 x 0.26 m seating area, stacked		1.1 (1.2%)		1.1 (1.0%)
Trampoline	2 no. trampolines folded and interlocked		8.6 (9.9%)	(+ 1 trampoline)	12.9 (12.0%)
	8 no. trampoline spotting platforms folded and interlocked	(+ 4 spotting platforms)			
Volleyball	2 no. pairs of posts and nets, interlocked		0.5 (0.6%)		0.5 (0.5%)
Storage	Storage rack		0.8 (0.9%)	(additional allowance)	1.6 (1.5%)
Circulation	General manoeuvring space		42.8 (49.2%)		44.3 (41.0%)

Notes:

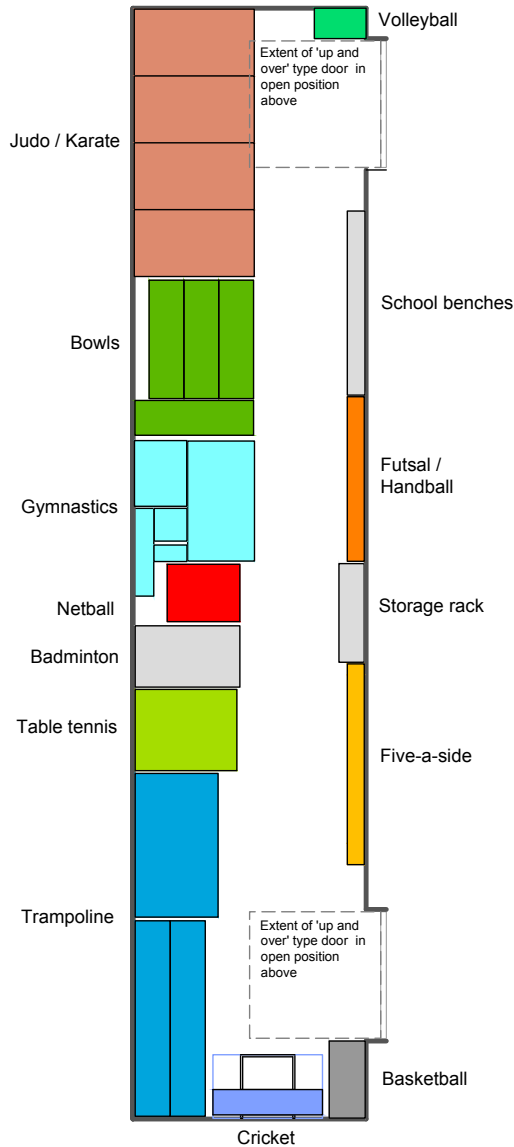
All sizes and layouts shown are indicative and based on typical interlocking items of equipment and storage trolleys currently on the market.

Accommodation based on *Loose Sports Equipment* table in *Appendix 1* of Sport England's 'Affordable Sports Halls'.



4 court hall equipment store (87 m²)

The diagram below shows the equipment listed above for a 690 m² (34.5 x 20 m) 4 court sports hall arranged in the 87 m² store with an access route between the two doors. The layout enables direct access to sports equipment without the need to remove other items.



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Conclusions

The findings of the short survey suggest that the recommended minimum equipment store size of 12.5% of the hall area is appropriate for a typical multi-sports hall (ref. Sport England's 'Sports Halls: Design and Layouts' Design Guidance Note). However, the need for storage space for sports equipment should be reviewed on an individual project basis.

The space planning study also demonstrates that the equipment listed in ASH Appendix 1 can be accommodated in the equipment stores shown in the ASH indicative designs for the 4 and 5 court halls.

5 court hall equipment store (108 m²)

The diagram below shows a similar arrangement for a 854 m² (40 x 21.35 m) 5 court sports hall.

