

# On the boards

A player will know immediately if a squash court floor is right or not – if it is slippery or lacking suspension. Dominic Bliss talks to flooring expert Tommy Smith, of Courtcraft, on what is required for a modern court floor and reviews the types available

**E**lite players love to talk about the ‘playability’ of a squash court floor. So fine-tuned is their craft that they can tell the difference between maple and beech, or solid and engineered boards, just from the way their body moves and the ball bounces – or so they claim.

Tommy Smith, boss of Courtcraft, one of the UK’s leading sports floor installation companies, does not believe this is possible. “I think it’s all psychological,” he says. “Even at tournament level, the types of floor they’re using have been laid a few days before and will play differently to a floor that has been laid 12 months before. I think it’s a bit naive for even the top pros to stand there and say they can tell the difference.”

He points out that timber expands and contracts depending on the humidity and temperature inside the court. “One day it will feel springier than another day,” he explains. “It’s all subjective.”

Courtcraft has been in business since the mid-1990s, growing all the time. The company now employs 15 people from its offices and warehouse on the outskirts of Manchester. Smith estimates that his company has worked on between 200 and 300 squash courts over the years, mostly in the UK and Ireland, but also in Norway, Denmark, the USA and Gibraltar. The company turnover is between £2million and £2.5million a year.

He explains how most of the world’s

squash court floors fall into two categories, either solid hardwood floors (normally made of beech or maple) or engineered board floors (normally plywood beneath with a hardwood layer on top). The quality difference between the two is minimal, he says, although it is important to remember that engineered boards cannot be sanded nearly as many times as solid floors.

“For that reason most leisure centres choose solid boards,” he adds. “In a traditional squash club the members will wear non-marking soles, so the floor won’t need sanding as often. But in leisure centres the staff can’t police what shoes players are wearing. Chances are they’ll play in the same footwear they wore to come down to the leisure centre.”

It is a sad fact that squash players in leisure centres treat the courts with less respect than players in a members’ club. As well as dodgy footwear, you sometimes see sports drinks and energy gels taken onto the court. This explains why leisure centres often opt for floorboards with a light protective lacquer on them. Members’ clubs, on the other hand, tend to install completely unlacquered boards. They may need more sanding, but they provide a better playing surface.

“The more seal you put on the floor, the more slippery and unsafe it is for playing squash,” Smith says. “Too much seal and people will be slipping all over the shop.”

Courtcraft likes to sand the courts to

the optimum level of grip, or nap, as it is known. In squash this is generally considered to be a 60-grit finish.

Below the wooden top layer of the court floor is a suspension system with battens and cushioning pads – or in the case of uneven sub-floors, there is now something called a cradle system which sees the battens sitting in adjustable cradle seats and lasers used to ensure an even finish.

Finally, there is a damp-proof membrane before you get down to the concrete floor beneath, designed to prevent excessive moisture in the sub-floor penetrating the underside of the hardwood flooring.

A relatively new development in court floors is underfloor heating. Both electric and hot-water pipe systems can be used. “It wasn’t viable several years ago, but we’re doing more and more now,” Smith says. “They’re becoming really popular. You’ve got to make sure the courts are warm enough to play on in winter and keep the temperature correct, so that the boards don’t expand and buckle.”

While professional players may not be able to tell the difference between a maple floor and a beech floor, they would certainly have no problem spotting a buckled floor.

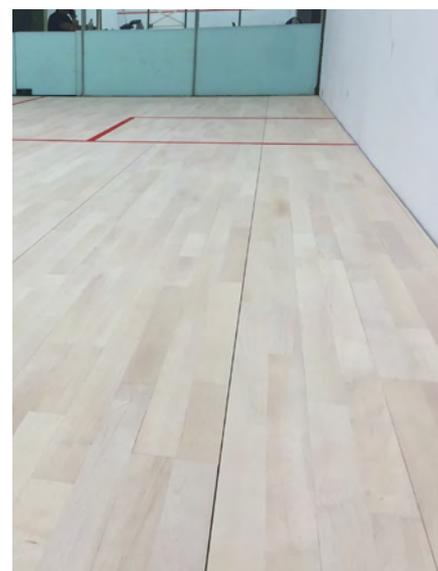
**Thanks to Tommy Smith, from Courtcraft, one of the UK’s leading installers of squash court floors**  
[www.courtcraft.co.uk](http://www.courtcraft.co.uk)



Floor battens set out in adjustable cradle seats above the damp-proof membrane (DPM). This DPM is rolled out in sheets, overlaid, taped and lapped up at the edges. In this U-shaped cradle and batten system the cradles can be packed out with plastic spaces (in multiples of 2mm) to allow a court floor that sits on an undulating base to be levelled. This is done by taking measurements from a laser. A cushion pad (or foam pad) sits in the cradle. This provides the springability of the floor



The boards are tongue and groove on all edges, and fit together. A modern court like this is secret-nailed in the tongue at an angle of 45 degrees which allows the groove of the next board to sit snugly against its neighbour. Nails are not then visible on the surface, as you see in older courts. The boards in this Junckers system have a header joint where the end of the boards sits on a batten; this supports the end. The credit-card size black spacers are for a 2mm ‘washer gap’ to allow for expansion so that the floor does not buckle. This closes over time



The final floor provides a smooth and level surface with good grip. The floor is well supported throughout and is sprung for playability

## WHAT THE MANUFACTURERS SAY

While most squash floors are made of either solid hardwood boards or engineered boards, the details and methods of each manufacturer and installer vary enormously.

### THE EUROPEANS

One of the best known is Danish company **Junckers**. For squash it offers a European beech floor “made of strong and flexible laminated veneer lumber, which is installed on a batten system with integrated shock pads and a levelling system”. It is particularly proud of the way the wood is press-dried to ensure “an extremely durable floor specially made for squash to provide the right grip”.

Another major player in squash is German company **ASB**, which has built more than 7,000 squash courts all over the world. It offers a floor system that features 3.5mm of either maple, oak or ash on the top. “Cross layering makes this floor elastic in every direction and no longer that sensitive to humidity,” it explains. This top layer sits on rubber pads, while creaking is avoided thanks to foil placed between the upper layer and the substructure.

One of Europe’s longest-established floor manufacturers must be **Hamberger Flooring**, founded in 1866 and now based in the German city of Stephanskirchen. Under its brand Haro Sports Flooring, it manufactures a squash court floor called Melbourne 65. It features a solid hardwood top layer on top of a parquet floor. The company boasts how its floors have been used at major WSF tournaments in Canada, USA, Kuwait and Bermuda.

Norwegian sports floor

manufacturer **Boen** traces its history even further back than Hamberger Flooring. Its first sawmills date back to 1641. Nowadays it produces engineered squash court floors. “The cross-layered construction provides a very dimensionally stable product,” it claims. “In tests it’s as much as 70 per cent more stable than an equivalent solid hardwood board. This has provided the solution to problems of gapping and swelling of solid hardwood floors on site.”

### THE AMERICANS

**Aacer Sports Flooring** is part of a huge hardwood flooring company in Wisconsin capable of producing over 10 million metres of board annually. The maple it uses hails from the forests of northern Michigan and Wisconsin “where rich soil, cold winters and short growing seasons combine to create the perfect atmosphere for producing dense hardwoods of unrivalled excellence and beauty”. The pads it uses in its squash court floors are certified by both the World Squash Federation and the basketball federation FIBA. “The ball rebound is more than the minimum requirement of 90 per cent, making our systems more responsive to the athletes during game play,” it claims. “It’s a more resilient system that helps reduce injury during play time by providing better force reduction, lower vertical deformation and consistent ball rebound.”

**Action Floor Systems**, also based in Wisconsin, uses maple grown in “the northern climates of the United States”. It offers a variety of sub-floor options using natural rubber pads “which provide comfort and fast play”. “Our northern hard maple is the perfect surface material, providing good light reflection and contrast to

the ball and is very aesthetically pleasing,” it says. “Various configurations of the sub-floor provide options for speed, performance and sound characteristics.” The company is also very proud of its environmental record, stressing that it “has been certified as a carbon negative provider following an assessment conducted by the University of Wisconsin and Carbon Clear, an international independent auditor”.

Founded in 1872, Michigan-based **Connor Sports** claims to have “designed more sports flooring systems than any other sports flooring manufacturer”. Neoshok is its squash court floor system, consisting of 20mm of North American maple on top of a 24mm plywood sub-floor, suspended on a 19mm polyurethane cushioning system. “When the player impacts the floor during play, 65 per cent of the impact is absorbed by the floor, leaving only 35 per cent to be absorbed by the body and the joints,” it claims. “This safety factor of the floor is continually relieving the joints of stress, and reduces fatigue and stress-related injuries.”

**Tarkett Sports** is part of the Tarkett Group, an American company first established in 1886. Specifically for squash it offers a floor called Proflex M, a multi-layer board manufactured in Sweden and made of European hardwood and fast-growing soft wood “from Swedish forests close to the factory”. It says its double-batten system provides “excellent shock absorption and consistent ball bounce”, while the multi-layer board is more stable and kinder to the environment because it requires less slow-growing wood.

## COURT FLOOR MANUFACTURERS

**Junckers** - junckers.com

**ASB SquashCourts** - asbsquash.com

**Haro Sports Flooring** - harosports.com

**Boen** - boen.com

**Aacer Sports Flooring** - aacerflooring.com

**Action Floor Systems** - actionfloors.com

**Connor Sports** - connorsports.com

**Tarkett Sports** - tarkett.com

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