



## **Artificial pitches, 3G technology and the environment - your questions answered**

### **What is meant by 3G?**

3G - or Third Generation - is a name for an artificial, all-weather pitch which looks, and more or less feels, like grass. Because it has been developed for intensive use, the 3G surface is hard-wearing and resilient, meaning more teams, more training and more matches. It provides a surface of consistent quality with excellent playing characteristics such as ball bounce and roll while also reducing the risk of injury and being almost maintenance-free.

### **What's wrong with just playing on grass – is the 3G pitch really needed?**

The Football Foundation and Suffolk Football Association have identified East Suffolk as being more than usually deprived in terms of football provision (bottom half nationally and even lower regionally). The need for more pitches is real. According to Sport England, a grass pitch "can sustain just six hours [of play] a week, accommodating an average of around 100 playing opportunities". By contrast, "a properly maintained AGP (artificial grass pitch) can sustain up to 80 hours of use a week, providing an average of around 1,400 playing opportunities". In addition, says the Football Foundation, "3G pitches can be heavily used all year round with no decline in quality. They almost completely negate annoying fixture cancellations during winter months, helping football to be a key part of a regular physical activity habit." It isn't just about football, however. 3G surfaces also offer year-round opportunities for multiple other sports and fitness activities.

East Suffolk District Council has identified a significant shortfall of 3G pitches, a position that is predicted to worsen given the rate of new housing being built locally. The council's position on the use of 3G technology is that good grass pitch condition is facilitated by the provision of artificial pitches – "an increase in 3G provision could also help to reduce grass pitch shortfalls through the transfer of play, which in turn can aid pitch quality improvements".

### **What exactly is a 3G pitch made from?**

A 3G pitch is made from longer lengths of synthetic fibres, the 'carpet pile', than other artificial grass pitches. This is to allow for two layers of 'infill' – sand at the bottom to stabilise the carpet and an upper layer of, typically, rubber crumb which helps provide the all-weather surface with optimum playing characteristics.

### **What is used for the infill in the 3G pitch?**

The rubber crumb used for infill is a recycled material sourced from end-of-life car or truck tyres which are readily available in the UK.

### **What are microplastics and is the 3G pitch an environmental threat?**

Microplastics, or rubber crumb, have come under scrutiny in recent years because of the way the surface wears over time with particles that can make their way off the pitch and

into the wider environment. This is indeed a cause for concern and sports organisations nationally are working to a national standard to mitigate crumb loss as much as is possible. These measures include:

- Fitting containment barriers on a pitch's perimeter fencing
- Installing decontamination grates and boot cleaning brushes at all player and vehicle entrance gates
- Ensuring all stormwater drains around a pitch have suitable microfilters to capture any infill being carried by surface run-off, etc
- Keeping a dedicated maintenance brush within the boundaries of the pitch, so it cannot carry infill into the surrounding environment
- Thoroughly removing any infill from maintenance tractors, etc. before they leave the pitch

The design and construction of Halesworth's 3G pitch will follow best practice as set out by national sporting bodies. When managed and maintained properly, crumb migration can be reduced by up to 98%, according to Sport England.

### **How long does the pitch surface last?**

Clearly, this would depend on usage and maintenance but it's safe to say the surface would last at least ten years. A best practice maintenance regime includes weekly drag brushing to redistribute rubber infill and keep fibres upright, removing debris, inspecting for damage (seams/tears), and managing infill levels, especially in high-use areas like goal mouths. Deep cleaning or specialised, periodic maintenance is recommended every 1–2 years. And, while the surface does degrade over time, it's possible to wash and re-use the crumb to refurbish the pitch. By the time our 3G pitch comes to the end of its life, we anticipate there being new technology which Halesworth Campus will be abreast of and ready to adopt.

### **Is there a better ecological alternative to rubber crumb?**

Not yet, unfortunately. Research is ongoing with a test centre in Sheffield, funded by the Football Foundation, which is testing different combinations of pitch systems. Some of these "vegetal" systems may not be suitable for play here due to our northern European climate. Some problems include buoyancy of crumb (cork floating), waterlogging, and susceptibility to fungal and algae growth requiring chemical treatments. Currently, these systems are also rather more expensive than rubber crumb. It's reasonable to hope, however, that an alternative will be found in the not-distant future. And we will be early adopters.

### **Could we have 4G instead (more artificial grass, no infill or sand infill)?**

According to Sport England, "testing has shown 4G surfaces are not able to satisfy the FIFA criteria for artificial grass football surfaces or the World Rugby criteria for artificial grass rugby surfaces. This is primarily due to the surfaces' inability to satisfy the criteria for skin/surface friction, meaning there is an increased risk of a player suffering from a carpet burn when they slide on the surface. Low foot grip has also been found to be problem with some 4G turf systems." We want our 3G pitch to be the best and most up-to-date recommendation for intensive play and so we are following the current advice from national sporting bodies.

### **I've heard 3G pitches are banned in Europe. Why do we still have them in the UK?**

While the above is true, this ban includes an eight-year transition period before the new restriction becomes effective, meaning that not until October 2031 will 3G pitches no longer be constructed in Europe. And 3G pitches built in Europe before 2031 will continue to be maintained and refurbished after that date until the end of their playing life. Despite Brexit, the UK continues to work closely with, and mirror regulations in, Europe. A technical report which was a joint enterprise from BSI Standards and the

European Committee for Standardisation (CEN) and which describes the procedures that should be used to control infill migration has now been published as a UK national standard. Meanwhile, we are watching the Football Foundation's test hub in Sheffield – the first of its kind in Europe – and when the time comes to resurface our 3G pitch, we will work to the very latest recommendations.

SOURCES: Sport England, Sports and Play Construction Association, East Suffolk District Council, Football Foundation

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