



Maintaining Standards







SYNTHETIC SPORTS PITCHES WERE ORIGINALLY SOLD AS MAINTENANCE FREE SURFACES, HOWEVER TIME HAS SHOWN THIS NOT TO BE THE CASE.

HAVING BEEN INVOLVED IN THESE EARLY INSTALLATIONS OUR MANAGERS HAVE AN EXCELLENT UNDERSTANDING OF WHAT CAN HAPPEN TO A PITCH IF IT IS NOT MAINTAINED CORRECTLY.

TECHNICAL SURFACES HAS USED THIS EXPERIENCE OVER THE LAST TEN YEARS TO EDUCATE CLIENTS ON THE CORRECT MAINTENANCE REQUIREMENTS.

Given this vast amount of knowledge it is hardly surprising that **Technical Surfaces** is now considered the leading synthetic sports pitch maintenance specialist in the UK. Our client base spans the length and breadth of the country and includes large local authorities as well as small clubs and private court owners. We can do this because we pride ourselves on being a national company that offers a local service.

Our motto is **maintaining standards** and we apply this not only to the work we do (ensuring pitches can be enjoyed at their best and safest) but also to the way we do business (we never forget that excellent customer service is of paramount importance to the continuing success of our business).





## What We Do

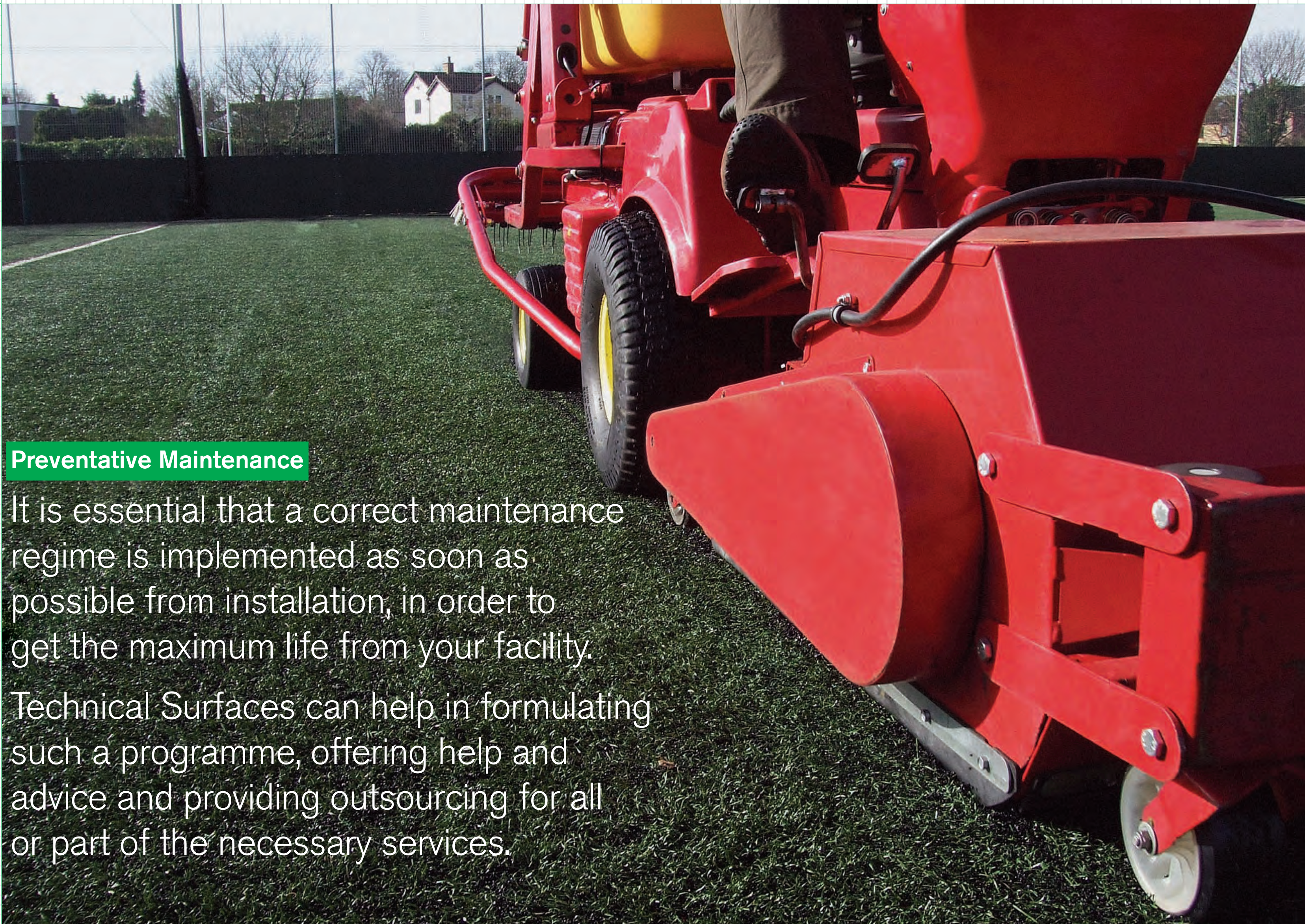
With over 25 years experience within the industry, it is this unique skill set that has led to many of the country's top pitch installers using Technical Surfaces as their preferred maintenance provider. These 'Partners in Excellence' understand the importance for their pitches to be looked after from day one to ensure maximum life expectancy and uphold their pitch building reputation.

*As each facility manager's circumstances may be different, Technical Surfaces can individually tailor each maintenance package to include as little or as much in-house skills and resources as is available. To achieve this we would first carry out a comprehensive pitch assessment.*

*The assessment not only all includes all aspects of the pitch surface but also the surrounds, equipment and on site machinery. After discussions with site staff a maintenance programme would be formulated and guidelines given.*

As well as pitch assessments our technical managers, **fully qualified in risk assessment**, are also able to carry out safety inspection reports. These reports are included annually as part of our maintenance contracts.





## Preventative Maintenance

It is essential that a correct maintenance regime is implemented as soon as possible from installation, in order to get the maximum life from your facility.

Technical Surfaces can help in formulating such a programme, offering help and advice and providing outsourcing for all or part of the necessary services.





**At Technical Surfaces we can ensure that your synthetic sports pitch is maintained to the highest standard, resulting in improved performance, extended life and increased revenue.**

### Drag Brushing

Drag brushing is an essential part of any synthetic pitch maintenance programme. Through general use the infill levels will be naturally dispersed towards the edges of the pitch away from the high-traffic areas. As the infill acts as the wearing course it is essential that this is returned back to these high-use areas to prolong the life of the carpet. Drag brushing helps achieve this and is normally carried out with a drag brush or mat attached behind a suitable grounds maintenance vehicle on a weekly basis (industry standard).

Technical Surfaces are able to offer this service or supply various types of drag brush and other equipment to allow this process to be carried out in-house.

### Infill Levels

To ensure the maximum life expectancy of a synthetic pitch is achieved, it is vital that correct infill levels are maintained.

Too much or too little infill will accelerate the wear rate of the carpet pile (normally 1 millimetre per year). Excessive infill will cause attrition and break down the carpet fibres, while insufficient infill will cause the pile to fold over and expose a larger surface area of carpet to wear from players' footwear.

As well as affecting the wear rate, incorrect infill levels can also alter the playing characteristics of a pitch, detract from its appearance

and in severe cases, obscure the visibility of lines altogether.

The amount of infill to be added/removed will be dependent on a number of factors, one of which is the amount of infill lost through natural migration. Once assessed by our technicians, our specialist machinery can accurately control the exact amount of infill to be extracted or imported to ensure the correct tolerances are achieved.

### Power Sweeping

To complement drag brushing it is necessary to periodically remove the contaminants that build up on the pitch. Failure to do so will result in dirt simply being moved around and worked into the carpet pile by the drag brushing process. Debris can be blown onto the surface, washed down with rain or trafficked on by players' footwear. These contaminants consist of anything from dust and carpet fibre within the infill to glass and leaves. Larger items can more easily be collected however to remove the finer debris special sweeping machines will need to be employed.

Although finer debris may not be immediately apparent, over a period of time this contamination will begin to cause porosity problems, consolidate the surface and change the playing characteristics of the pitch. Technical Surfaces use different types of power sweeping machinery designed to combat this problem.

The machines clean the surface and process the infill using a series

of filters and vacuums which help remove the contaminants and dust before laying the clean infill back on the surface. At the same time a drag mat on the rear redistributes and levels the infill, providing a smarter appearance. All machines incorporate side brooms to ensure that edge to edge cleaning is achieved. This is particularly important where debris can be blown up against kickboards.

The frequency of power sweeping will be dependent on each individual circumstance, taking into account the in-house equipment available, age of the pitch, its usage and so on. Normally a programme of monthly or bi-monthly sweeps complementing in-house drag brushing will ensure optimum pitch condition. Where no drag brushing is carried out, a fortnightly power sweeping programme should be adopted.

### Grooming or Raking

Particular carpets (especially longer pile soccer grass systems) will on occasion require 'grooming' or 'raking'. This process helps to stand the carpet upright and also regulates any granular infill taking out high spots that may have occurred through general play. Technical Surfaces can give advice on the best equipment to carry out this task or include it as part of a regular service contract.

### Chemical Treatments

Changes in climatic conditions have seen an increase in the number

of pitches affected by the growth of moss and algae. Clients should be particularly vigilant in areas which receive little sunlight due to overhanging trees, kickboards or general aspect of the pitch.

Although regular maintenance can help to reduce this build up, it is still essential that affected areas are chemically treated to remove existing material and reduce the spread of the spores.

All our technicians are fully certified in the spraying of a range of chemicals to help combat moss, algae and other vegetation growth.





### Corrective Maintenance

Apart from regular maintenance it will be necessary during the life of a synthetic pitch to carry out other non-routine works in order to prolong the life of the facility and ensure a safe environment for its users.

Technical Surfaces is able to provide these specialist services.





## Repairs

Problems can occur in a number of different areas that may require repair work to be carried out. All Technical Surfaces' technicians can carry out repair works in the following areas:

### Seams and Joints

No matter how well a pitch was installed the harshness of climatic conditions will over a period of time break down the components used. Frost in particular penetrates joints and will highlight any weaknesses that are present. It is important that such seam failures are rectified as soon as they become apparent. Delaying such work will not only represent a hazard to users but lead to further deterioration and stress on the other sections of carpet.

Using specialist machinery, Technical Surfaces are able to remove failed components and insert new sections of carpet and/or inlaid lines, shaving down the pile to achieve a near perfect finish. With over 15 dedicated maintenance vehicles we are normally able to attend to emergency repairs within 24 hours minimising risk to users and keeping your facility open.

### Granular Top Ups

As a synthetic pitch ages, granular top-ups can be required at regular intervals to overcome issues of infill migration and compaction caused by factors including wind, rain and play. Insufficient levels of infill are not only detrimental to the playing characteristics of a surface, impacting on ball roll and bounce, but will also increase the rate at which the carpet wears. By topping up the requisite amount of granular infill – matching the grade exactly to the existing material – the carpet fibres are protected and the playing characteristics are restored.

### Summer Revite®

A 'Revite®' is ideal to augment any ongoing maintenance programme. The process should be carried out annually or bi-annually dependent on levels of pitch usage and current maintenance procedures. The specialist brushing process is designed to get much deeper into the carpet than conventional Power Sweeping as it is far more intense, de-compacting the surface as well as lifting the pile. Due to the nature of the operation it is most effective during the summer months when the pitch surface is dry allowing the brushing action and powerful vacuum turbine to remove dust, debris and broken-down carpet fibres.

Failure to remove such detritus will result in the contamination filtering down through the infill ultimately affecting drainage and the playing characteristics of the surface.

This specialist process can take anything up to 8 man days to complete, depending on the level of contamination present in the pitch and the age of the facility. However in normal operations Technical Surfaces help to minimise pitch downtime and seize the window of opportunity in the weather by employing several teams on the surface at one time.

### Winter Revival™

Absence of an appropriate maintenance programme will over time lead to a build up of contaminants in the infill. This will not only change the playing characteristics of the surface but also lead to problems with pitch drainage. During periods of heavy rain clients may notice that tide marks or silt areas appear on the surface. These will have been caused by the water backing up and flushing out the contaminants from the infill, depositing it on the surface as it slowly drains.

It is imperative that these areas are removed due to obvious health and safety reasons and for the aesthetics of the surface. Our Winter Revival™ tackles this issue cleaning the surface and removing the silt. However clients should be aware that it will not necessarily address the core issues of the problem. The presence of this material should be regarded as a symptom of problems the surface is experiencing, and consider a full summer Revite® or Rejuvenation®.

### Rejuvenation®

Dependent on the level of maintenance previously carried out, the constant accrual of contaminants in the infill will ultimately compromise the surface and affect drainage. The point at which the porosity slows to an extent that pitch usage is affected by standing water will probably indicate that effective remedial works with conventional

Brushing techniques will no longer be beneficial. At this stage 'Rejuvenation®' will be the only solution.

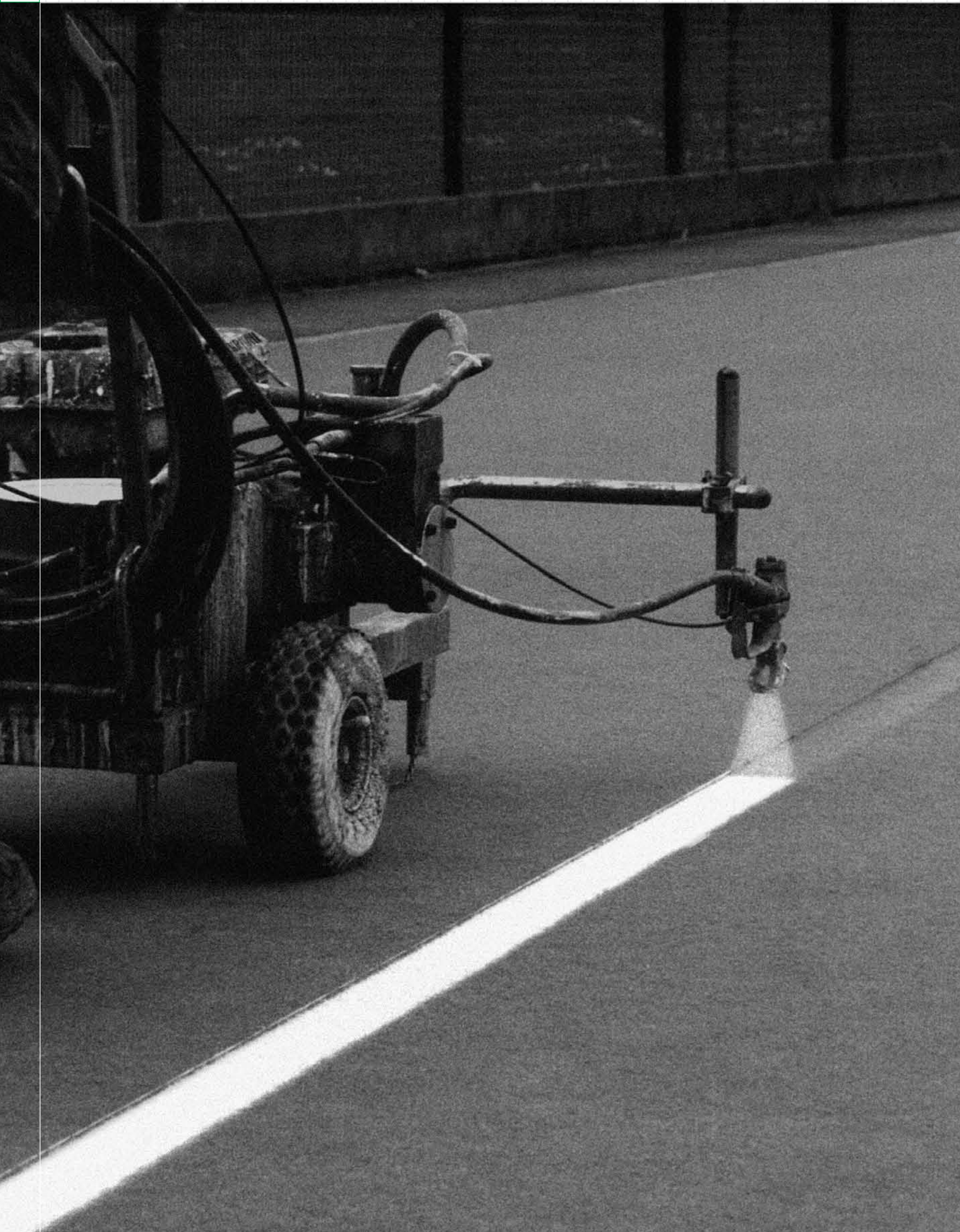
This patented process removes the contaminated infill (usually the top 12-14mm) by the use of compressed air. This ensures a very clean extraction, eliminating the possibility of further cross contamination that can occur through the use of Power Washers, which are likely to exacerbate the situation by washing contaminants deeper within the carpet infill. Fresh specialist aggregate is then imported to replace that removed, leaving an almost 'as new' surface

Following the successful Rejuvenation® and the onset of a suitable maintenance programme, clients can expect to add a further 5 years onto the life of a facility which would otherwise have had to be resurfaced.

### Hydrotech®

The Hydrotech® process is ideally suited to shorter pile carpets with little or no infill or hard standing areas. A series of pressurised rotary water jets are forced into the surface removing contamination and cleaning the carpet pile. This process is especially effective in removing moss and algae although we would recommend that in such cases these areas are chemically treated 2 weeks prior to the process.





## Line Marking

New markings may be required due to changes in the rules of a sport or to increase revenue from your existing facility by adding extra pitch layouts to the surface.

The use of water-based aerosols can be a short term solution but if used over a longer period can detract from the playability and enjoyment of the sport as the paints leach and fade. Excessive use can begin to contaminate the infill and cause the area around the lines to become a hazard. However, special line marking compounds have been developed which do not suffer the problems associated with water based products. These compounds can last over 12 months in normal conditions and are available through our specialist line marking service.

Alternatively, a permanent solution is to have the lines cut into the carpet. For small marks and nibs this may prove to be the most cost effective solution and we would be happy to advise you on the costings involved.

Permanent markings cut into the surface enhance appearance and playability, compared with temporary water-based line markings.



## Testing

Technical surfaces are constantly striving to research, engineer and develop new machinery and techniques. This is vital in a world where manufacturers are constantly improving surfaces with the introduction of next generation and hybrid systems. Whatever type of surface you play on – sand filled, sand dressed, water-based, rubber infill or new hybrid systems – pitch performance and ball roll is paramount. It is therefore critical that the correct maintenance machinery and techniques are used remembering that each surface and system will have its own inherent problems.

“Problems encountered by synthetic surfaces are wide ranging. Some are generic and common to all types of surface exposed to the elements with general dirt and debris being trafficked onto the pitch. Other instances can be quite unique and specific.

Changes to pitch designs and carpet manufacture can represent a whole new set of problems and for that reason we are constantly carrying our research into new techniques and machinery. Climate too has had a large bearing with shifts in seasons and extremes in weather having a major impact on surfaces.” Jonathan Gunn, Technical Director.

Having been maintaining pitches for over 15 years, Technical Surfaces has built up a wealth of knowledge. Our [annual pitch assessment and safety inspection reports](#) allow us to track the progress of a facility and using experience predict expected life cycles of a surface and take appropriate action should anything fall in or out of the expected tolerances.

As well as using this data for ourselves and our clients, we have happily let other institutions and academic establishments have access to the information to help advance studies on sports surfaces and how they react to use and maintenance techniques. One such study was recently carried out by Cranfield University. The doctorate, which took 4 years to complete, was focused on developing a set of guidelines for maintaining synthetic turf. The results, which can be downloaded from the university's website, confirmed to a large extent our own findings and helped to reinforce the need to adopt a focused maintenance plan.

The fast evolving nature of today's surfaces means it's even more important for us, at Technical Surfaces, to continue to adopt a forward thinking approach to maintenance. It is this philosophy of [maintaining standards](#) that has recently led us to enlist the help of Loughborough University in undertaking a study on wear rates of surfaces. Technical Surfaces not only use a vast array of machinery but also a large selection of different types of brush dependent on the carpet, system and climatic conditions. With [some of the surfaces we currently maintain now over 20 years old](#), knowledge of the effects various brushes have on different fibre types is paramount to ensure that little or no damage ever occurs to a pitch surface.







## Training

As part of our ongoing commitment in educating clients on how best to look after their synthetic surfaces, Technical Surfaces is happy to work with academic bodies and industry organisations to offer bespoke training courses.

We have historically worked alongside Pitchcare and the Institute of Groundsmanship (IOG) to deliver one-day seminars, split into half a day of theory and half a day of practical - tailored to suit both groundsman and facility manager alike.

The aim of our training courses is to help explain how synthetic surfaces are constructed and to demonstrate the various methods and best practice of maintenance for artificial and synthetic surfaces.

Synthetic surfaces are now available to all sports and our training courses are therefore suitable for groundsmen from all sporting disciplines. Please note that for our larger clients, such as David Lloyd Leisure, we have arranged for training of their regional facility managers in-house.



## AstroTech®

A range of equipment designed specifically for synthetic surfaces.

The AstroTech® range has been chosen to overcome the many problems faced by facility managers. Better design techniques and higher grade materials where necessary ensure that the products conform to latest British and European Standards.

Computerised tracking during the manufacturing process optimises quality control whilst ensuring that delivery times are met. Indeed many of the products in the AstroTech® range are carried in stock to allow for a fast turn around whether pre or mid season.

Unlike other companies most of the products in the AstroTech® range are available as single items and not just sets. This helps clients who may suffer vandalism or damage to the equipment and need to replace just one goal or net.

The AstroTech® range is specific to synthetic surfaces and has been formulated by looking and listening to facility managers across the country. We have tried to limit the products on offer to those that will supply you best value over the longer term as well as ensuring utmost safety.

Indeed, the AstroTech® range goes far beyond compliance, striving to resolve safety issues whilst ensuring its usability from both the perspective of the player and facility manager. Latest innovations include 'folding' football goals which can be easily moved into position for play but store away safely after use and the weighted roller goals which remove the need for additional anchors points entirely.



## Machinery

AS WELL AS PROVIDING OUR SERVICES, TECHNICAL SURFACES ARE ALSO ABLE TO OFFER VARIOUS MACHINERY TO ALLOW CLIENTS TO CARRY OUT REGULAR ROUTINE MAINTENANCE THROUGH TO SPECIALIST DEEP SWEEPING DEPENDENT ON THE LEVEL OF IN-HOUSE EXPERTISE.

### R.E.D Range

Our 'R.E.D' range has been specifically **Researched, Engineered and Developed** to provide you with the perfect partner for your artificial facility. The compact tractor unit provides the perfect base onto which various attachments can be fitted dependent on the task in hand. Small enough to manoeuvre through a single gate but powerful enough to carry out the required daily or weekly activities to keep your surface in perfect shape.

Packages include the various attachments required dependent on your surface.

### SMG Range

The SportsChamp, engineered in Germany, has been specifically designed for cleaning and maintaining sand and granular filled artificial grass surfaces.

Extremely robust, the machine can carry out everything from regular maintenance through to specialist deep cleaning. Various attachments are available allowing the SportsChamp to be used to collect litter, leaves and even move snow. Indeed SMG offer a wide range of ancillary tools and equipment manufactured specifically for use on artificial surfaces. As sole UK distributor for the SMG range we would be confident to find a solution to any maintenance requirement.

Technical Surfaces remains committed to offering the best advice and cost effective solution for our clients. Having carried out a comprehensive assessment of your needs and in house resources we would be happy to formulate a package of services and machinery accordingly. Technical Surfaces can also include training packages and even discuss the possibility of the 'hire' of more specialist equipment.

# glossary of terms/21

A glossary of terms has been included to aid your understanding of various terminology used within the industry including our registered trademarks.

### //Drag Brushing

*An essential part of any synthetic pitch maintenance programme. Through general use the granular infill will be naturally dispersed towards the edges of the pitch away from the high traffic areas. Drag brushing helps to eradicate this.*

### //Power Sweeping

*To complement drag brushing it is necessary to periodically remove the contaminants that build up on the pitch.*

### //Grooming

*Particular surfaces, especially long pile soccer grass systems, will require a raking action to lift the pile and regulate the granular infill.*

### //Granular Top Ups

*Infill will migrate from a surface due to the wind, rain and play. Maintaining infill levels using specialist machinery will sustain the performance properties and extend the life of the surface.*

### //Summer Revite®

*A specialist process which can only be carried out in the drier summer months. The machinery decompacts the surface, removes the granular infill, cleans and replaces it helping to restore the original porosity and performance properties.*

### //Winter Revival™

*A winter process which helps to remove contamination which has become evident especially after heavy rain or flooding.*

### //Rejuvenation®

*A patented system using compressed air which removes all the contaminated infill, allowing fresh granule to be imported. With a good maintenance programme in place this should add a further 5 years onto a surface's life.*

### //Hydrotech®

*A water based process which removes contamination and cleans the surface. Ideally suited for shorter pile carpets with little or no infill.*

### //AstroTech®

*A range of equipment designed specifically for synthetic surfaces.*









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