



# MAINTENANCE & WARRANTY MANUAL

## TigerTurf Synthetic Soccer Pitch

EXAMPLE

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## **SECTION 1 - INTRODUCTION**

This manual sets out the basic housekeeping requirements for TigerTurf synthetic systems.

The use of the following information is intended to assist in the enjoyment of the facility whilst helping to maximise its life and performance.

The few basic rules being:-

1. Keep the surface clean.
2. Keep heavy machinery and loads off it (especially when wet).
3. Any minor repairs should be attended to as soon as possible and by TigerTurf approved installers.
4. If any damage occurs, or if technical advice is needed, please do not hesitate to contact TigerTurf Australia Pty Ltd.
5. Your system represents a substantial investment. Please take the time to read the enclosed recommendations and ensure that whoever is given the task of looking after your facility is familiar with them.

**It is the responsibility of the owners of this TigerTurf pitch to read and adhere to the maintenance guidelines that follow. Failure to do so may affect the pitch guarantee.**

**PLEASE NOTE: It is normal for the surface to be slippery underfoot during the first few weeks after installation. This is due to lubricants which are used to aid the manufacturing process.**



## SECTION 2 - PROTECTION

To protect and prolong the life of your facility, please take note of the following recommendations:-

1. Keep areas around the pitch free of litter, mud and debris.
2. Put signs around prohibiting smoking, chewing gum and carrying food and drink onto the pitch. Also prohibit the carrying of glass onto the pitch.
3. Adhere to recommended load limits.
4. Repair minor damages quickly.
5. Follow TigerTurf suggested maintenance and cleaning procedures.

*There are some perceptions that artificial sports surfaces are maintenance-free, as opposed to natural turf pitches which require intensive maintenance. The reality is that artificial pitches do require regular, on going maintenance if the playing and draining criteria of the surface are to be preserved. This guide outlines the essential maintenance works that are required to ensure that the facility remains in good condition.*

*A crucial tip for maintaining the pitch surface is to **do a little often**, rather than neglecting maintenance procedures for months and then facing large expenses to restore the pitch to its optimum performance capabilities. Failure to maintain the pitch may affect the guarantee.*

*A TigerTurf Pitch needs to be maintained on a regular basis in order for it to provide the best possible playing characteristics over its lifespan. The pitch will respond favourably provided it receives adequate maintenance. The following pages have been designed to help you ensure that the full life expectancy of the surface is realised.*



## **SECTION 3 - INFILL LEVELS**

The infill helps to support the carpet fibre, thus ensuring that the surface performs in the manner it was designed to. In order to keep the surface in its optimal playing condition, it is extremely important to constantly monitor and maintain correct infill levels. In addition, the infill also acts as a wearing course by protecting the fibres from accelerated wear. Maintaining the correct infill levels will help to ensure that the full life expectancy of the surface is realised.

Please note that it is normal for infill levels to settle within the first few months depending upon usage.

### **RUBBER / RUBBER & SAND INFILL SURFACES**

Surfaces using rubber and sand infill systems will soon accrue contamination and will also develop surface compaction over time. As such, these surfaces will perform best with a programme of regular maintenance and de-compaction over the life of the surface. This can be achieved by using a suitable drag mat / drag brush system in addition to using specialist sweeping machinery. At times a specialist de-compaction service maybe required depending upon the age and usage of the surface.

### **MAINTAINING UNIFORMITY OF THE INFILL**

Regular grooming of the field will maintain the infill in a uniform state; however, intensive use of the field may cause the infill material to be displaced in high traffic areas. In particular for football fields, these areas are:

- Football Goal Area
- Football Penalty Spot
- Football Centre Spot
- Football Corner Kick area
- Field Entrances

If the infill becomes depleted in localised areas it can be replaced or regulated by the following procedure, (the grass and infill should be completely dry):



1. The areas should be raked to lift the grass fibres into a vertical position.
2. A quantity of infill should then be evenly distributed over the area using a wide flat shovel.
3. The infill should then be worked into the grass by lightly agitating the fibres. If the grass is over worked at this stage the infill will have a tendency to come to the surface rather than settling in between the fibres.

Steps 2 and 3 should be repeated as often as necessary until the grass is properly filled to within five to twenty millimetres of the tips of the fibres. The grass should then be gently agitated one last time to ensure that the infill “drops” completely into the surface.

Replacing infill in wet conditions is more difficult as the infill will stick to the fibres and it will be necessary to water it in with a hose or a watering can after lifting the fibres.

EXAMPLE



## **SECTION 4 - DRAG BRUSHING**

Drag brushing of a synthetic surface remains the primary and fundamental maintenance operation. During active play, the rubber / sand infill will become dispersed from the high wear areas. As such, regular drag brushing will help to ensure that the dispersed infill material is redistributed across the surface, thus protecting the fibre against accelerated wear.

It is also likely that larger pieces of surface debris can also be removed during drag brushing. Testing has also shown there to be great benefit in the use of specialist drag mats as they are specifically designed to help remove both surface debris and contamination. Wherever possible, a drag mat should be used in conjunction with a drag brush, except in very wet conditions where a drag mat only should be used.

Brushing or grooming of the field can only be done when the surface temperature is between 5 and 40 degrees centigrade.

EXAMPLE



## **SECTION 5 – CLEANING**

The most obvious requirement is the cleaning up after players and spectators. Ensure there are plenty of rubbish bins available and try to minimise unnecessary use of the pitch by spectators / maintenance crews by directing traffic around, instead of across the pitch. If litter or loose dirt is left on the pitch, pick it up promptly before it penetrates into the pile.

If trees over hang the pitch surface, it is advised to implement a programme of tree pruning. This will limit the amount of leaves and sap dropping on the surface. In addition, leaf collection should also be carried out twice yearly or as required.

Ensure that surrounding paths and gateways are clean. This will prevent dirt from being walked onto the pitch. It is advised to have the following at all pitch entrances:

- (i) A walk on, walk off mat
- (ii) A dirt lock with grids
- (iii) Footwear brushes
- (iv) A ban on players going on the pitch with muddy shoes.

### **TURF LOADING**

The brush may need to be run over the field several times to successfully remove surface contamination. Any sweeper used which weighs over 140kg should be equipped with pneumatic tyres with a maximum tyre pressure of 25psi.

In addition, when sweeping the surface, pay attention to the turning circle of the machine. This should be as wide as possible so as to avoid over exertion of the carpet in specific areas.

**DO NOT PARK VEHICLES OR LEAVE EQUIPMENT STANDING ON A TIGERTURF SURFACE.**

N.B. Also see Section 6 Limitations.



## **MOSS/WEED CONTROL**

Moss / weed killing should take place two or three times a year to ensure that the pitch does not accumulate vegetation on the surface. Both the moss and weed killer agents must be water-based systematic products. Please also ensure that when the moss / weeds have died off, dead matter (including roots) is removed or in the case of moss, swept out of the turf structure.

## **STAIN REMOVAL**

### General Instructions

The first rule here is to act promptly because fresh spills are always easier to remove than dried or hardened ones. Remove any solids with a plastic spatula. Blot up excess liquids with plenty of paper towels or a dry absorbent such as 'kitty litter' or Fullers Earth. Dry absorbents can then be swept up or vacuumed up.

### Procedure

Polyethylene surfaces have good resistance to staining. However, the surface is only one part of a sophisticated system of components designed for overall pitch performance. Some cleaners safe to use on Polyethylene could be harmful to other parts of the system. This means cleaning fluids should be grouped into two sets – those which can be used liberally on the surface and those which should only be applied by rubbing with a cloth soaked in the cleaner to minimise possible effect on the under-pad.

The following are some cleaners in the first group which can be applied without any special precautions:

1. A warm mild solution of granular household detergent in water OR a neutral low foaming detergent recommended for delicate fabrics. Use with approximately 5 litres of water.
2. Stains removed with detergent solution:

Coffee	Tea	Grape Juice
Tomato Juice	Cocoa	Water Colour
Milk	Ice Cream	Ketchup
Food Colouring	Mustard	Margarine
Butter	Beer	Cola



3. A 3% solution of ammonia should be used for more severe problems. Thoroughly flush the surface with lots of cold water afterwards.
4. Clean, dry absorbents such as paper towels or commercial 'kitty litter' for stains which can be blotted up.

The second group of cleaners includes chemicals such as pH neutral dry cleaning fluids. These cleaners **must** be applied sparingly using a damp cloth/rag, with care taken to avoid penetration beneath the turf include. Before using any such chemicals, clarification should be sought from a member of TigerTurf's technical team.

Stains removed with the second group of cleaners:

Asphalt	Ball Point Ink	Shoe Polish
Cooking Oil	Suntan Oil	Lipstick
Floor Wax	Crayon	Scuff Marks
Motor Oil/Grease	Chewing Gum*	

\*Chewing Gum is a common hazard and can be removed by using dry cleaning fluid or by freezing. Aerosol packs or refrigerant can be sourced from carpet cleaning suppliers for this purpose, or dry ice could be used. When using such products care should be taken to ensure that the user instructions are strictly complied with.

To neutralise animal waste, use a mixture of white distilled vinegar with equal amounts of water. Flush thoroughly with water after the application.

Do not use Chlorine based bleaches or caustic detergents on your surface as this will cause discolouration.

If in doubt, please consult TigerTurf for clarification.

**The handling and use cleaning chemicals in general, should be undertaken in strict adherence to the manufacturer's instructions.**



## **SECTION 6 – LIMITATION**

You may find your list of uses for your new surface will expand, these may include different types of equipment being moved about on it. Providing you take proper steps and precautions, most requirements can be met.

Protecting the surface and infill is especially important. As a general rule, TigerTurf recommends that no long term still load of more than 17 Kpa (2psi) or any rolling load of more than 25psi be applied to your surface. Rolling loads of up to 25psi are acceptable now and then.

It is a good idea to eliminate any unnecessary long term static loads but do keep the necessary static ones as low and brief as possible. To further minimise the risk of damage to the turf system you can use sheets of 20mm exterior plywood to spread major still loads (see Section 6).

**NOTE:** Under static loads the surface should be protected by Polyethylene sheet to keep it clean.

Even some new plywood contains materials that may leach out and stain the surface if it gets wet, so a barrier, as suggested above, can prevent this happening.

## **PROHIBITIONS**

The following should not be allowed on the pitch, and a special sign near the gate should continually draw the attention of the users to these regulations:

- (i) No glass, tin or ceramics
- (ii) No smoking or fireworks
- (iii) No dirty or muddy footwear
- (iv) No chewing gum
- (v) Correct footwear: No blades or metal studded boots.
- (vi) No vehicles, except small maintenance vehicles
- (vii) No animals



If mud and rubbish is allowed to be walked on to the pitch this will quickly affect the turf performance. The cost of cleaning the turf is expensive, therefore, observation and policing of these restrictions is advised. A client that has not put these restrictions into practice, or has failed to police them, must accept liability for any future failings of the turf surface.

## **DRAINAGE & WATER REMOVAL**

Outdoor pitches are either sloped to allow good drainage thus minimising the need for mechanical water removal, or are the modern 'drainage-through' type with a permeable sub-base.

All manhole / catchment pits and drainage pipes should be checked and cleared bi-annually.

EXAMPLE



## **SECTION 7 – SPECIAL EVENTS**

Most of the questions asked regarding surface usage are concerned with assemblies, shoes and concerts or musical events. Concerns with surface loading and crowd management may arise here.

The first precautions to keep the long term static loads below 1,450KG per square metre by using plywood or other load spreaders. Usually 1200 x 2400 mm sheets of 20mm plywood will be satisfactory, as long as the load is not situated closer than 150mm from the edge of the plywood. To avoid staining the surface a polyethylene sheet should be placed under the plywood.

**DO NOT PLACE CHAIRS DIRECTLY ONTO THE SURFACE OR ANY OTHER OBJECTS WITH HIGH POINT LOADINGS.**

### **ROCK SHOWS / CONCERTS**

Problems with surface loading to support stages and sound equipment can again usually be overcome by using proper load spreaders. A much more serious problem here is crowd control and concert crowd behaviour.

If you find it necessary to hold any of the above events, contact TigerTurf, for suggestions of ways to minimise the risk of damage. Once the protective material has been removed, it is advisable to drag brush and drag mat the surface before play resumes.

**IN CASE OF ALL ALTERNATIVE USES FOR YOUR SPORTING SURFACE, THE OWNER SHOULD BE AWARE THAT ANY RESULTING DAMAGE IS NOT COVERED UNDER GUARANTEE.**



## **SECTION 8 – MINOR REPAIRS**

Your new surface has been carefully engineered to provide you good service for many years. However, in the unlikely event that small problems occur, please take note of the following:

### **WHEN TO REPAIR**

Awareness of the optimum characteristics is the first step of any maintenance programme, together with a day-by-day knowledge of the current usage and condition of the facility. Maintenance of synthetic pitches is no exception. Minor damage can soon develop into large scale failure if not repaired quickly, particularly under heavy use. As such, a daily inspection of the surface and immediate repair of any highlighted failures by Tiger approved contractors is essential.

As well as routine care, every pitch should be given a twice yearly thorough inspection, preferably in the spring with a follow up early autumn. Inspect ALL seams and note any loose areas. Go over the surface of each roll of turf and note any rips or tears.

Repairs are more easily undertaken in warm, dry weather as adhesives hold better and cure faster. Adhesives should not be used when the system is wet except under expert guidance.

### **SEAM REPAIRS**

Contact TigerTurf for all repairs, minor or otherwise, if you are not an expert in the area.



## SECTION 9 – MAINTENANCE SCHEDULES

The schedule overleaf indicates a suggested maintenance routine and a time management programme to ensure its success.

The information and recommendations in this document should be regarded as the minimum amount of activities based on a pitch of 8000sqm with usage up to 35 hours a week. Higher pitch usage means the frequency of activities needs to increase to reflect the additional hours e.g. pitches with usage of 60 hours a week will require double the basic maintenance activities. This also equates to hours of use versus players per square metre, so a smaller field of 5000 m2 with the same usage as a field of 8000 m2 will require more maintenance.

A maintenance log must be maintained which records the activities carried out on a week-by-week and monthly basis. In addition, a section on the hours of usage per week must be kept as part of the log. This information will assist in the management of pitch maintenance, and will be an essential document to submit to TigerTurf in the unlikely event of a claim under the guarantee (see separate document).

Challenger pitches should be maintained ie. brushed / drag matted, between sessions of football and hockey to ensure an even level of rubber is created.

### Examples of Usage and Maintenance logs

Based on a field size of 8000m2

#### Usage Book

Week Number	Type of use	Hours of Use
1	Football	34
2	Touch Rugby	27
	Football	24
3	Football	18
4	Football	39
5	Football	45
6	Football	48



## Maintenance Log

<b>Date</b>	<b>Maintenance Activity</b>	<b>Comments</b>
1-08-09	Dragmat and Brushing	Added 4kg rubber to penalty spots
10-08-09	Annual Major Service	Separate report from TigerTurf.
18-08-09	Dragmat and Brushing	
25-08-09	Dragmat and brushing	Checked drains

EXAMPLE



## **MAINTENANCE SCHEDULE**

<b>ITEM</b>	<b>FREQUENCY</b>	
	<b>Minimum</b>	<b>Recommended</b>
<b>PITCH INSPECTION TO INCLUDE SEAMS / GENERAL CONDITION</b>	Annually	Bi Annually
<b>BRUSHING/DRAW MAT GROOMING</b>	Monthly	Fortnightly
<b>LITTER AND LEAF/FLORA COLLECTION</b>	As Required	Weekly or as required
<b>CHEMICAL WEED/MOSS TREATMENTS</b>	Quarterly	Quarterly
<b>SPECIALIST MAINTENANCE</b>	Annually	Bi Annually
<b>SAFETY INSPECTION REPORT</b>	Annually	Annually
<b>LINE MARKING</b>	As Required	As required
<b>CHECK DRAINS AND CESSPITS/WALK ON MATS/FENCING</b>	Bi Annually	Quarterly



## **SECTION 10 – RECOMMENDED MAINTENANCE EQUIPMENT**

The following list gives an outline of the type of maintenance machinery and equipment TigerTurf International recommends for its FIFA Football surfaces. The following **MUST** be on site **PRIOR** to any field test taking place:

- Compact tractor unit or ride-on with towing capability
- Drag brush / drag mat
- Ball roll ramp / ball rebound device
- Additional infill materials for topping up
- Maintenance log book

EXAMPLE



## SECTION 11 – EQUIPMENT AND TRAINING CHECKLIST

### Equipment Checklist

No.	Equipment	Type (make, model etc)	Location	Checked by (initial)
1	Tractor / ride on unit			
2	Drag brush			
3	Drag mat			
4	Ball roll eqt			
5	Infill materials			
6	Other (specify)			
7	Log book	N/A		
8	Training manual	N/A		

### Training Checklist

No.	Category	Training	Checked by (initial)
1	Equipment	Maintenance Correct use	
2	Surface grooming	Drag matting Drag brushing Frequencies	
3	General	Cleaning & litter/debris collection Weed killing & treatments Infill levels Frequencies	
4	Performance Testing		
5	Other		



**TigerTurf Australia Pty Ltd by:**

**Client / End User by:**

**Signature**

**Signature of Director**

\_\_\_\_\_

\_\_\_\_\_

**Name & Title**

**Name of Director**

\_\_\_\_\_

\_\_\_\_\_

**Date**

**Date**

\_\_\_\_\_

\_\_\_\_\_

EXAMPLE



## SECTION 12 - TIGERTURF PREVENTATIVE MAINTENANCE CONTRACT

(Copy to be retained by Client)

The **TigerTurf** Australia Maintenance Contract provides for periodic preventative maintenance and inspections to be carried out according to the following schedule:

Services are to be conducted at regular and mutually pre-agreed intervals. **TigerTurf** Australia will provide a written inspection report at the conclusion of each service.

### ***Service Cost:***

The price of the periodic preventative maintenance service may be adjusted from time to time in line with cost increases. **TigerTurf** Australia will provide one month's written notice of any price increase.

Official Facility Name:

Date of Practical Completion: TBA

Site Address:

Billing Address

.....

Phone:(W)..... Mobile: .....

.....  
(Signature)

.....  
(Name)

.....  
(Title)



## SECTION 12 - TIGERTURF PREVENTATIVE MAINTENANCE CONTRACT

(Original to be completed and returned to **TigerTurf** Australia Pty Ltd.)

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Site Address:

Billing Address

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Phone:(W)..... Mobile: .....

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(Signature)

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(Name)

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(Title)