5th September 2024

Manchester Communication Academy

In-fill Containment Measures

01491 827810 | enquire@mcardlesport.co.uk | mcardlesport.co.uk
McArdle Sport Tec Ltd, 1-2 Thames Park, Lester Way, Wallingford, Oxfordshire OX10 9TA
McArdle Sport Tec Ltd. Registered in England and Wales No. 3692607. Registered address as above.

1. Introduction

This document has been developed to explain the measures that will form part of this development to control the rubber in-fill that forms part of the artificial grass system at Manchester Communication Academy.

2. Infill Mitigation Boards "Trekboards"

Fixed to the inside base of the fence to the whole pitch fence perimeter including any gates/exits will be 500mm high Trekboards. The Trekboards sit flush with the sports pitch and do not allow any infill (rubber or sand) to migrate underneath, and any splash of in-fill will not splash over the 500mm high board. These Trekboards are installed before the rubber granules are placed into the surface.

Example photographs.

Figure 1

Figure 2

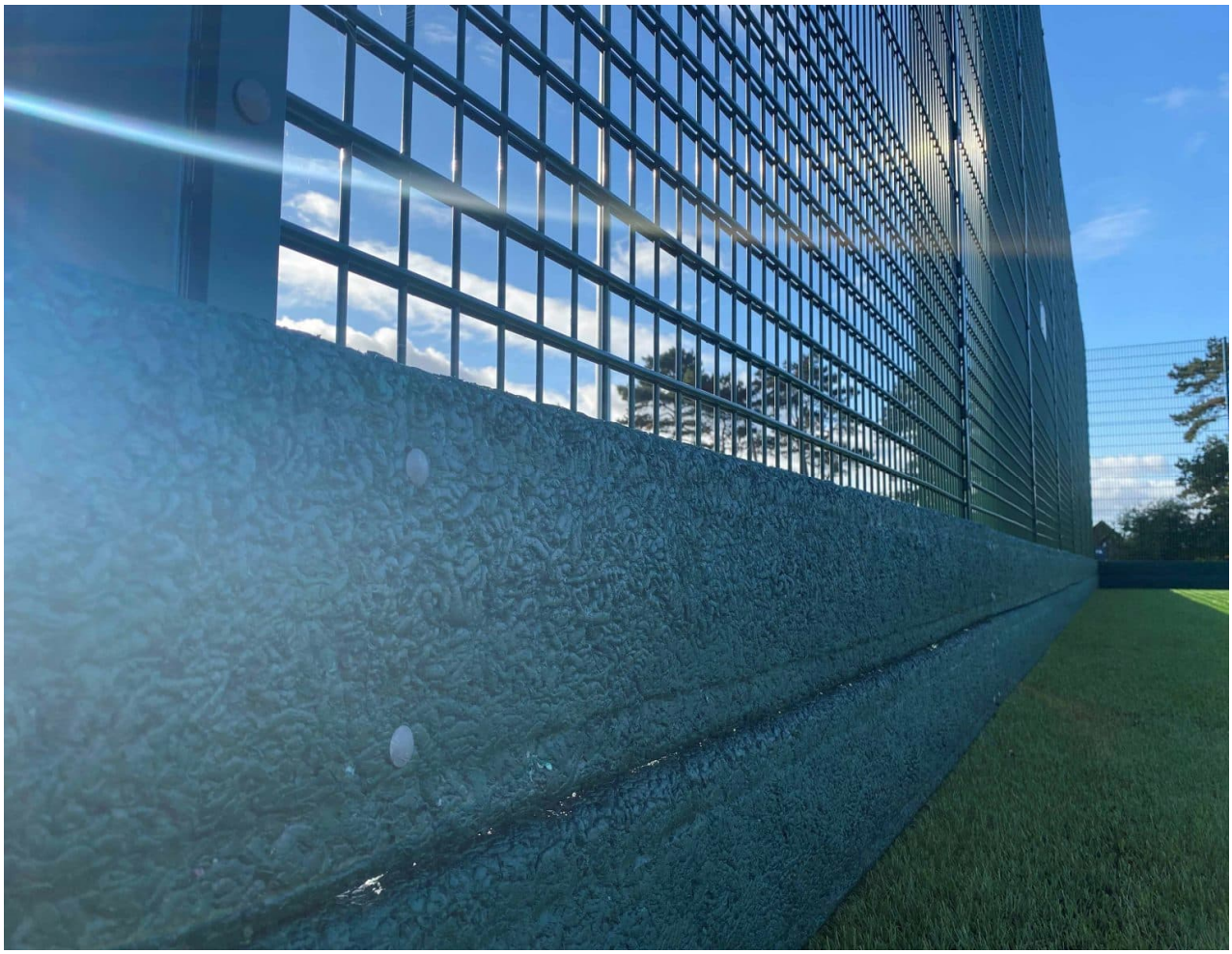


Figure 3

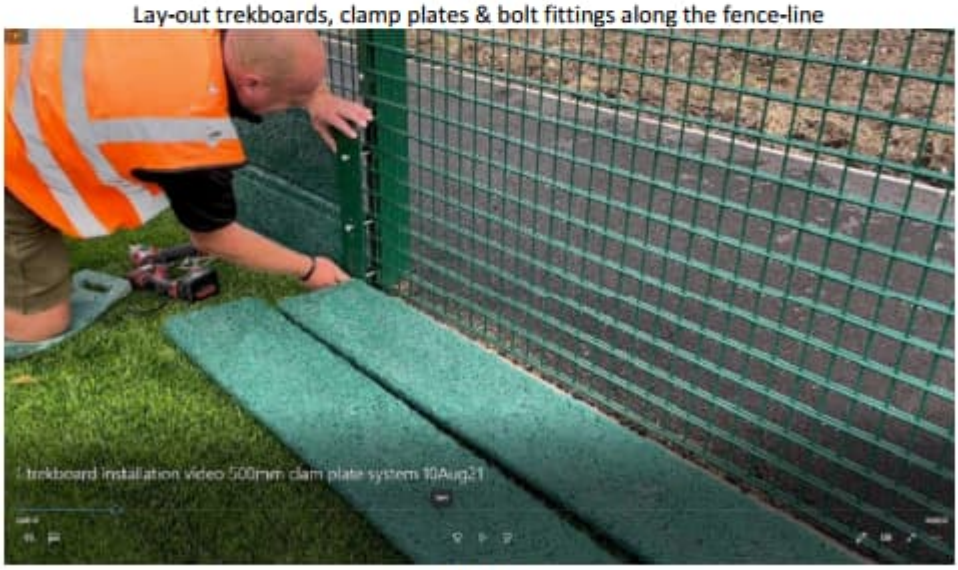
Trekboard Installation Guide

trekboards

Trekboards Installation Guidance Images

STEP 1

Lay-out trekboards, clamp plates & bolt fittings along the fence-line



STEP 2

Place a 500mm clamp plate in position, insert x3 bolts into the pre-drilled & tapped fence post holes

STEP 3

Locate the bottom 250mm trekboard in position and slide behind the clamp plate
Locate the top 250mm trekboard in position and slide behind the clamp plate

STEP 4

Tighten x3 off clamp plate fixing bolts

STEP 5

Repeat **STEPS 1 to 4**

3. Boot Cleaning Stations

Boot cleaning stations will be installed within the new macadam perimeter adjacent to each in-fill mitigation grate detailed in section 4. When users leave the 3G playing area they will brush the rubber off their footwear which will then collect within the grates; during normal maintenance the grates will be emptied of in-fill back into the playing surface.

Figure 4

4. Infill Mitigation Grates

To every entrance to the artificial pitch an in-fill retention grate is installed which comprise of a GRP grate to remove, capture and contain and residual infill material. Below the grate is a piece of short pile artificial grass carpet which is porous, but will not allow the rubber to migrate through, during normal maintenance the rubber captured will be emptied back into the 3G surface.
Example photographs:

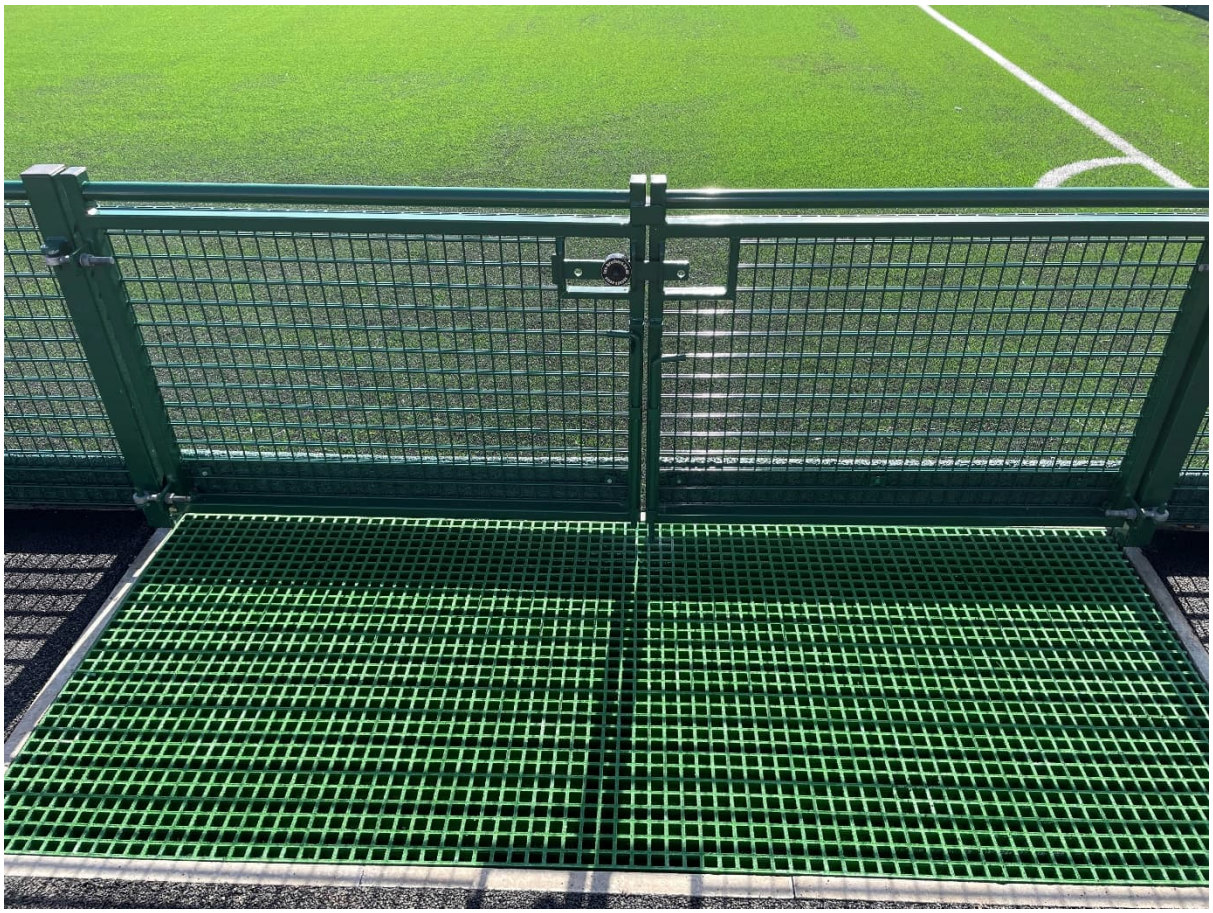


Figure 5

Figure 6

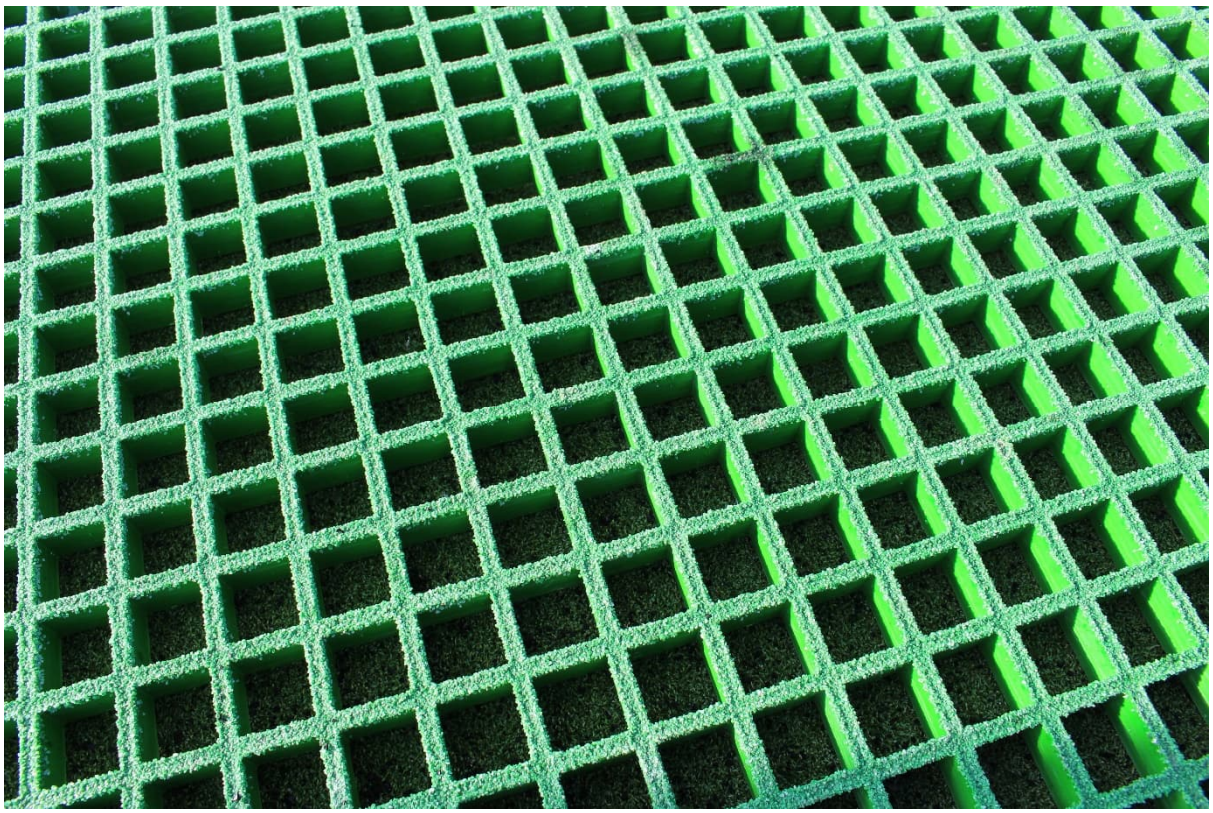


Figure 7

5. Installation of modern 3G systems

Historically artificial sports pitches were designed and installed using 60mm 3G synthetic carpet without a shock pad installed directly onto the shockpad which required 17 kilograms of rubber infill per m^2.

However, with development of designs and advancement of technologies and new systems available, we now install artificial sports pitches with 50mm depth 3G synthetic carpet with the inclusion of a shock pad which has reduced the requirement of rubber infill to 8 kilograms per M^2 rather than the previous 17 Kilograms per m^2 this has reduced the overall rubber requirements by 66,780 Kilograms.

<table>
<tr><td>Historic 3G Pitch Construction:

TigerTurf Atomic Pro 60 synthetic carpet
NO shock pad.</td><td>Rubber Infill requirement per M^2

17 kilograms
Total: 126,140 kilograms
(Pitch footprint 7420m^2)</td><td rowspan="2">Reduction of:
66,780 Kilograms
(66.78 tonnes)
Per 7420 M^2 footprint</td></tr>
<tr><td>Current 3G Pitch Construction:

TigerTurf Atomic Pro 50 synthetic carpet
Inclusion of a shock pad</td><td>Rubber Infill requirement per M^2

8 kilograms
Total: 59,360 kilograms
(Pitch footprint 7420m^2)</td></tr>
</table>

6. Drainage System

The drainage system is fully enclosed within the ground meaning that no rubber in-fill can pass through the construction build-up. Along with the omission of discharging into the adjacent brook the risk of rubber entering the brook has been designed out.

7. Following Latest Industry Guidance

Our construction methods follow latest guidance developed by SAPCA (the Sports and Play Construction Association) which has been included as an appendix to this document.

8. Conclusion

This document will form part of our proposals and will be implemented prior to the first use of the pitch. The risk of rubber escaping the pitch and entering the surrounding environment has been mitigated sufficiently.

01491 827810 | enquire@mcardlesport.co.uk | mcardlesport.co.uk
McArdle Sport Tec Ltd, 1-2 Thames Park, Lester Way, Wallingford, Oxfordshire OX10 9TA
McArdle Sport Tec Ltd. Registered in England and Wales No. 3692607. Registered address as above.