

# Sports Field Irrigation



**Access Irrigation Guide to  
Football/Rugby Pitch Irrigation**

# Guide to Sports Irrigation

A guide for Groundskeepers

	page
<b>Contents</b>	
<b>Company profile</b>	3
<b>Football/Rugby pitches introduction</b>	4
<b>Manual systems</b>	
Spot systems	5
Strip systems	6
<b>Semi-automatic systems</b>	
Travelling sprinkler system	7
Reel irrigator system	8
<b>Pricing guides</b>	9



Access Irrigation has been involved with the design and installation of irrigation systems for 50 years. Many of these projects involve systems for the sports industry from Football and Cricket clubs to Bowls clubs.

As irrigation is a specialist subject, and in a sports environment vital to ensure the enjoyment of players and spectators alike, we thought we would produce a booklet aimed specifically for the needs of groundskeepers and anyone else who has the responsibility for maintaining a club's biggest asset.

This booklet covers typical Football/Rugby pitch watering systems.

We do hope that you will find this guide helpful. Our website is packed with helpful information including downloadable specific product information and an on-line shop where new and replacement parts can be purchased directly. Look out for our SPORTS section on the website and in our catalogue.

If you have any comments on the guide, or would like any advice on any existing or proposed irrigation projects, please give myself or any of our Sales team a call.

Regards

A handwritten signature in black ink that reads "M Briley".

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## ***Football/Rugby Pitch Watering - Introduction***



A good playing surface is essential for any field sport, and for a Football or Rugby club, the condition of the pitch determines the enjoyment and challenge of the game for players and spectators alike.

The Groundskeeper has the unenviable task of keeping the pitch in peak condition in all weather conditions. Feeding, scarifying, mowing and aerating, the list is endless so having a suitable irrigation system will help cut down on one job at least.

When the weather is dry for long periods of time, it's too late to start thinking about how you are going to water. In fact it's difficult to get any water to penetrate a rock hard baked surface. A properly thought out solution needs to be in place ready for action before it's too late to do anything.

Encouraging root growth is the key to ensuring a tough, sustainable playing surface. Implementing a proper watering regime with the right equipment can help with this.

A pitch doesn't usually need watering on a daily basis - just once or twice a week should be sufficient. However, it is important that the right amount of water is applied and spread evenly across the grass area.

If your budget is limited, and a mains water supply is the only option, it is a good idea to find out exactly what flow and pressure is available (download our guide or watch our video), then you can select a suitable system around this. We have designed some standard kits to ease the selection process but we can always adapt the design to tailor the package specifically for you.

The following pages detail the most common types of pitch watering systems. If you would like to discuss your specific requirements you can contact us by phone or email.

## ***Manual Systems - spot watering***



**Spot watering kit**



**Sprinklers in action**

A simple and low cost method of providing the water required is to use mobile sprinklers. These consist of lightweight metal bases fitted with 360° sprinkler heads, linked together with flexible hose. These are easy to set up and relocate as they use 'Geka' twist lock fittings for coupling and uncoupling.

The 3 sprinkler kit is designed to provide spot watering anywhere on the pitch - covering an area of approx. 320m<sup>2</sup> - ideal for when areas need reseeding. The system has been sized to operate directly from an average mains water supply.

After initial set up and watering has taken place, the sprinklers are then relocated. A standard impact sprinkler head, which covers a diameter of around 19m, is used and this is mounted on a robust metal sled base. This unique design not only provides stability in operation but also enables them to be dragged, whilst still coupled, across the pitch surface for easy retrieval or repositioning without damaging the pitch surface.

When not in use the sprinklers are easy to store, simply disconnect the linking hoses from the individual sprinkler bases, couple the hoses together and then coil up. A hose trolley can be added to help with this and the sprinkler bases can then be collected and stored separately.

When using, a weeks amount of water (21mm) is usually applied at each position. This equates to a run time of approximately 6hrs.

## *Manual Systems - strip systems*



A simple and low cost method of providing the water required is to use mobile sprinklers. These consist of lightweight metal bases fitted with 360° sprinkler heads, linked together with flexible hose. These are easy to set up and relocate as they use 'Geka' twist lock fittings for coupling and uncoupling.

The strip system is designed to water a strip the width of the pitch by 11m wide. The smaller system is designed to water directly from a good mains water supply and uses 6 sprinklers. The larger strip system uses 7 sprinklers and includes a pump and storage tank and underground pipe to bring water to the edge of the pitch. Both systems have been sized to operate directly from an average mains water flow.

With both systems, after initial set up and watering has taken place, the sprinklers are then relocated. A standard impact sprinkler head, which covers a diameter of around 19m, is used and this is mounted on a robust metal sled base. This unique design not only provides stability in operation but also enables them to be dragged, whilst still coupled, across the pitch surface for easy retrieval or repositioning without damaging the pitch surface.

Both systems are easy to store, simply disconnect the linking hoses from the individual sprinkler bases, couple the hoses together and then coil up. A hose trolley is included to help with this and the sprinkler bases can then be collected and stored separately.

When using the strip system a weeks amount of water (21mm) is usually applied at each position. This equates to a run time of approximately 6hrs (on the smaller system that runs from the mains water supply 3 sprinklers at a time operate, making a total watering time of 12 hours). The line of sprinklers is then moved along the pitch to the next position. A pitch can be fully covered in around 5-10 days, depending upon the operating window and the available water flow.

To make things easier on the pumped package a supply pipe is included to run down one side of the pitch and quick take off points positioned at each of the strip positions. To avoid interfering with play this would normally be buried and the quick take off valves fitted inside underground valve chambers.

**For prices and drawing see drawing reference 5201 and 5202.** A full specification can be downloaded from the website.



## ***Semi Automatic System - Travelling Sprinkler***



**Rega Travelling Sprinkler**



**Sprinkler in action**

### ***Travelling Sprinkler***

A travelling sprinkler system can provide an easy way of watering a pitch without being too labour intensive. The sprinkler tractor is made of metal and has a 4 wheel design to give stability when operating. The fitted sprinkler head covers a diameter of 34m-38m which means the unit can cover half of the pitch in each pass. The sprinkler puts on around 12.5mm of water, so two passes will be required on each half of the pitch in order to give a week's water (25mm-1").

### ***Setting up***

The tractor unit is positioned at one end of the pitch, connected to the water supply via flexible hose. A steel cable is then pulled out and secured at the opposite end. When the water supply is switched on the sprinkler rotates and, at the same time, slowly winds back in the cable which means the sprinkler travels down the pitch providing even coverage of the pitch surface as it goes. The unit switches off when the cable is fully wound in. Total run time would depend upon pressure but, on average, would be around 12 hours.

### ***Water supply requirements***

As the water supply is not only providing the watering but also mechanically moving the tractor unit, a higher pressure of 3-7 bar with a flow of around 4m<sup>3</sup>/hour is required. This is beyond the range of most mains water supplies, therefore a separate water storage tank and booster pump would be required.

### ***Advantages***

The advantage with this system is the ease of set up. The initial cost is not excessive and the tractor can be used to provide water to one or two pitches.

**For prices and drawing see drawing reference 5203.** A full specification can be downloaded from the website.

## ***Semi Automatic System - Reel Irrigators***



### ***Reel irrigator***

A reel irrigator system can provide an easy way of watering a pitch without being too labour intensive. The reel irrigator is placed at one end of the pitch and the sprinkler and hose pulled down the length of the pitch. As it operates the hose reel slowly rewinds. The fitted sprinkler head covers a diameter of 18m-44m which means the unit can cover one third or half of the pitch in each pass.

### ***Setting up***

The reel is positioned at one end of the pitch, connected to the water supply via flexible hose. The reel irrigator is placed at one end of the pitch and the sprinkler and hose pulled down the length of the pitch. As it operates the hose reel slowly rewinds. The unit switches off when the hose and sprinkler is fully wound in. Total run time would depend upon pressure but, on average, would be around 12 hours.

### ***Water supply requirements***

As the water supply is not only providing the watering but also mechanically moving the sprinkler unit, a pressure of 1.5 - 8 bar with a flow of between 0.7 and 7.4m<sup>3</sup>/hour is required at the reel. This is beyond the range of most mains water supplies, therefore a separate water storage tank and booster pump would be required.

### ***Packages***

Two packages are available. The smaller package will water a single pitch with 3 passes. The larger system will water each pitch in two passes and is designed to water two separate pitches.

**For prices and drawing see drawing reference 5204 and 5205.** A full specification can be downloaded from the website.





# Football/Rugby Pitch Watering

<b>Drawing Ref:</b>  <b>N/A</b>	<b>Description:</b>  Portable spot sprinkler basic system includes 3 no. Naan 5022U impact sprinklers on sled risers, with 100m of 3/4" hose, brass quick couplings. Addition 1 - hose trolley Addition 2 - professional battery timer	<b>Guide Price (supply)</b>  <b>Basic £400</b>  <b>Addition 1 £410</b> <b>Addition 2 £100</b>
<b>Drawing Ref:</b>  <b>5201</b>  <b>Web code: STPW6</b> A full specification can be downloaded from the website	<b>Description:</b>  Portable strip sprinkler system basic system includes 6 no. Naan 5022U impact sprinklers on sled risers, with 100m of 1" hose, hose trolley, 2-zone battery timer, 2 zone manifold and connection fittings.	<b>Guide Price (supply)</b>  <b>Basic £1,995</b>
<b>Drawing Ref:</b>  <b>5202</b>  <b>Web code: STPW-P</b> A full specification can be downloaded from the website	<b>Description:</b>  Portable strip sprinkler system basic system includes 7 no. Naan 5022U impact sprinklers on sled risers, with 100m of 1" hose, hose trolley, and connection fittings. 150m underground supply pipe with 5 take-off fittings and 12,500 litre tank with auto-start pump. Addition 1 - single zone timer for night time watering.	<b>Guide Price (supply)</b>  <b>Basic £4,595</b>  <b>Addition 1 £115</b>
<b>Drawing Ref:</b>  <b>5203</b>  <b>Web code: EHTS-1P</b> A full specification can be downloaded from the website	<b>Description:</b>  Large travelling sprinkler system, 100m of 1" hose, hose trolley, brass connection fittings. Supply system including, 20,800 litre storage tank, automatic pump and 50m distribution pipework.	<b>Guide Price (supply)</b>  <b>Basic £7,895</b>



# Football/Rugby Pitch Watering

<b>Drawing Ref:</b> <b>5304</b> <b>Web code: EHRI32-1P</b> A full specification can be downloaded from the website	<b>Description:</b> 32/90 reel irrigator with 100m underground pipe and hydrant box. 5,000 litre storage tank with auto-start pump.	<b>Guide Price (supply)</b> <b>Basic £5,545</b>
<b>Drawing Ref:</b> <b>5205</b> <b>Web code: EHRI40-2P</b> A full specification can be downloaded from the website	<b>Description:</b> 40/130 reel irrigator with 150m underground pipe and hydrant box. 30,000 litre storage tank with auto-start pump.	<b>Guide Price (supply)</b> <b>Basic £12,995</b>
<b>Drawing Ref:</b>	<b>Description:</b>	<b>Guide Price (supply)</b> <b>Basic</b>
<b>Drawing Ref:</b>	<b>Description:</b>	<b>Guide Price (supply)</b> <b>Basic</b>



# Football/Rugby Pitch Watering

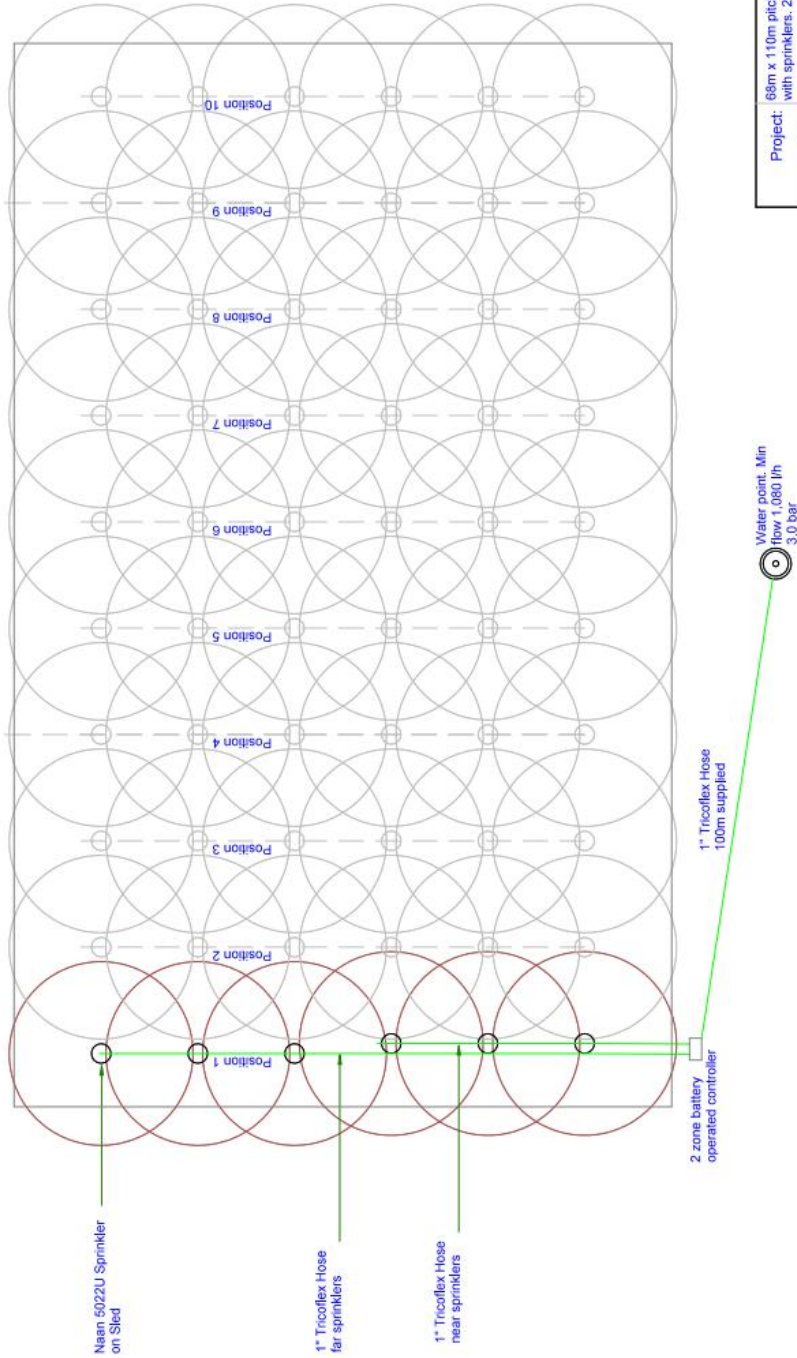
Drawing Ref:  
5201

Notes:

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Do not scale off this drawing  
All dimensions should be checked on site  
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Project:	68m x 110m pitch with temporary risers with sprinklers. 2-zone battery controller
Title:	
Scale:	
Date:	
Drawing No:	

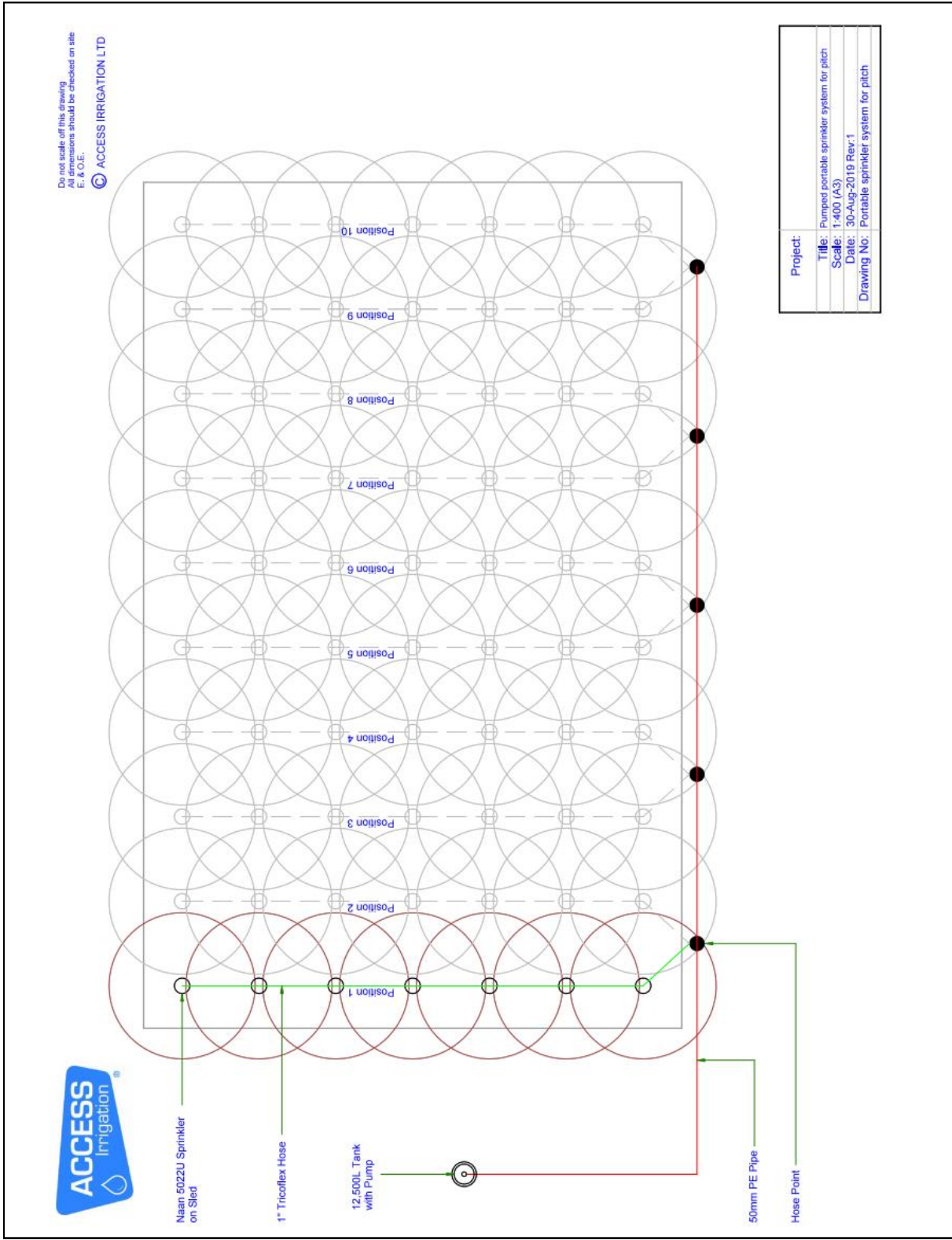


# Football/Rugby Pitch Watering

Drawing Ref:  
5202

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# Football/Rugby Pitch Watering

Drawing Ref:  
5203

Notes:



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Travelling Sprinkler EHTS4

POSITION 1

POSITION 2

STOP

START

1" Tricoflex Hose

Hose Point

50mm PE Pipe

20,000L PE Tank  
& Automatic Pump

Project:	TRAVELLING SPRINKLER SYSTEM FOR PITCH 98m x 110m
Title:	SYSTEM LAYOUT
Scale:	1:500 @ A3
Date:	25/10/18
Drawing No:	

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# Football/Rugby Pitch Watering

Drawing Ref:  
5204

Notes:

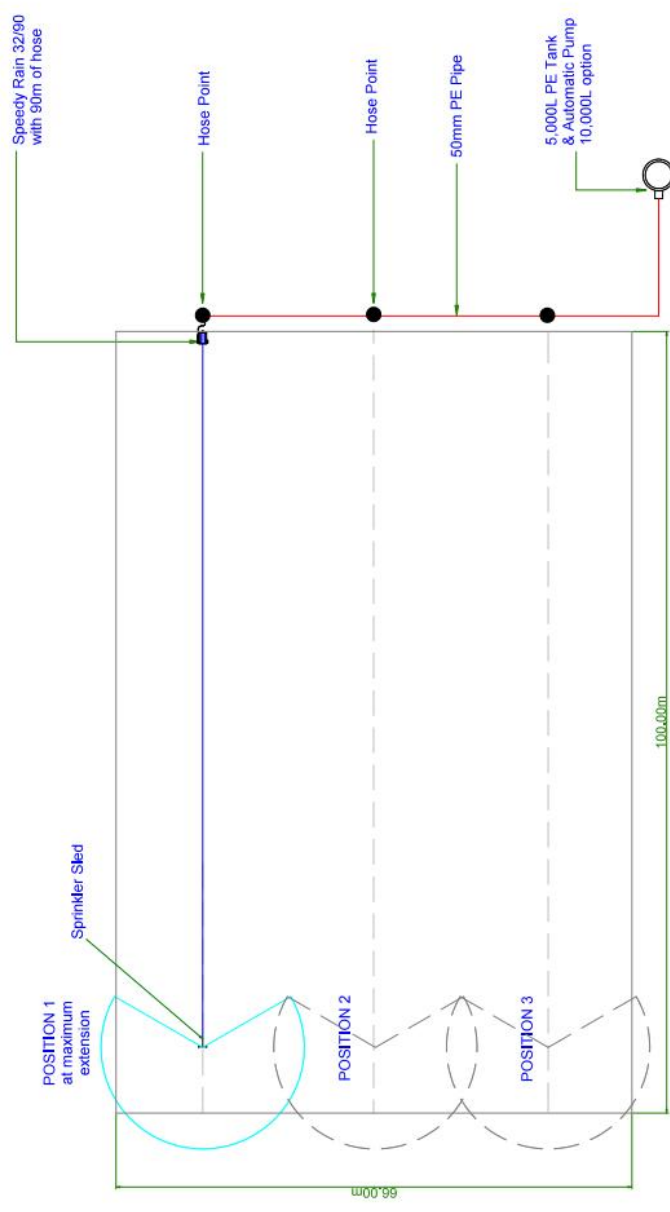
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Design and pricing guides/Football or rugby pitch watering



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Project:	SPEEDY RAIN 32/90 IRRIGATOR
Title:	SYSTEM FOR PITCH 66m x 100m
Scale:	1:500 @ A3
Date:	12/02/19
Drawing No:	

Rev: 3 Feb 20



# Football/Rugby Pitch Watering

Drawing Ref:  
5205

Notes:

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