



FIFA FIELD TEST REPORT

Stadium / location		
Product name		
FIFA Licensee		
FIFA accredited Test Institute		
Field Test report identification	Type of test	FIFA Two Star
	Test number	
Date of test		

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Football Turf Field Test Report (FIFA Two Star)

1 – Introduction / The Process of Certification

In order to be certified, football turf fields must reach the performance and quality criteria established to be as close as possible to playing characteristics of natural grass. To this end, each field must undergo four steps as outlined below:

- a thorough composition and resilience test of the product in the laboratory (step 1)
- the installation of the product as declared, applying the outlined procedures (step 2)
- a test of the final installation for the relevant characteristics of the field as a whole system (step 3)
- if successful, certification as FIFA 1 STAR or FIFA 2 STAR field (step 4)

After expiration of the certificate, the field can be retested (step 3/4)

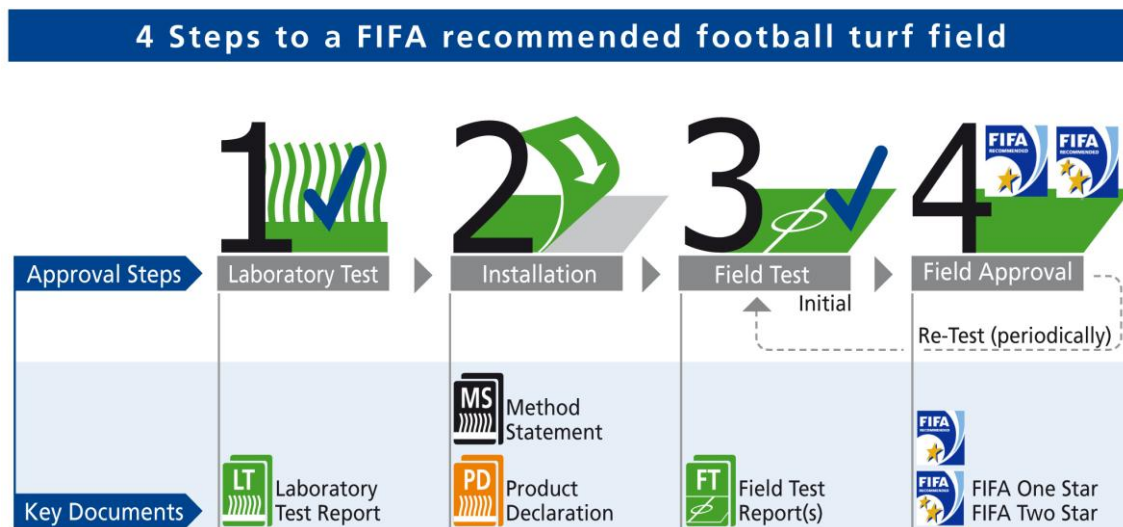


Fig. 1.2 Approval process steps and the related documents / parties

Legend:

Tests performed by FIFA accredited Test Institutes only
 Originated by the manufacturer (FIFA licensee)
 FIFA One Star / Two Star Certificates are issued after successfully passed fieldtests (initial or re-test)

This process is part of the FIFA Quality Concept for Football Turf in order to

- replicate the playing qualities of good quality natural grass,
- create a playing environment that does not increase the risk of injury to players
- achieve adequate durability (providing it is properly maintained)

For more details on FIFA Quality Concept for Football Turf see www.fifa.com.

This document covers the complete steps 3/ FIFA FIELD TESTS REPORT. Consider:

- The tests are performed on site by a FIFA accredited test institute
- The test report is only valid if reproduced in its entirety
- The results are only valid for the complete Football Turf described in this report


IMPORTANT:





- This report classifies the related field as FIFA Recommended Two Star (or One Star) certified
- In defined intervals, the field has to be retested to maintain the certificate.

This FIFA LABORATORY TEST REPORT may only be used in relationship to Football Turf fields that are going to be submitted for certification under the *FIFA Quality Concept of Football Turf*. Any other use of this report is a violation of the report's copy right which is held by FIFA and breaches the terms of the FIFA Quality Concept of Football Turf licensing agreement.



Football Turf Field Test Report (FIFA Two Star)

2 – Test Object, Participants


2.1 Test Numbers					
 Report Identification	Type of test	INITIAL TEST – Two Star			
	Field Test report number				
	Related Laboratory Test No.				
	Related PD / MS existing yes/no (Y/N)	Product Declaration (PD)		Method Statement (MS)	
	Test Institute Project No.				

2.2 Test Object					
 Stadium / location	Name				
	Address City / Country				
	Contact	Phone		email	
	Club (if applicable)				
 Artificial Turf	Product Name				
	Product ID				
	Manufacturer				
	Manufacturing Plant				
	Installation	Date			
	Installer				
 Maintenance information	Training by the licensee	Date(s)	/ / /		
		Participants names (ground staff)			
 Maintenance requirements	Equipment* *supplied to site, required by the test institute for testing / inspections	Items received		YES, date (dd mm yyyy)	NO
		Tractor Unit			<input type="checkbox"/>
		Drag	Bush		<input type="checkbox"/>
			Mat		<input type="checkbox"/>
		Ball roll ramp			<input type="checkbox"/>
		Maintenance logbook			<input type="checkbox"/>
		Maintenance Manual			<input type="checkbox"/>
		Other, detail:			
Material	Top up infill material		<input type="checkbox"/>		

2 – Test Object, Participants

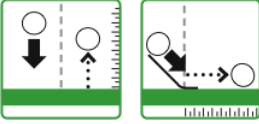
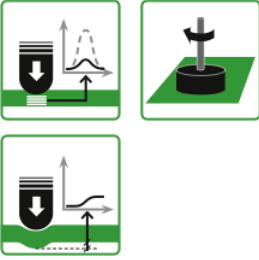


2.3 Parties involved, Addresses				
Applicant • FIFA preferred producer • Licensee • Site Owner (re-test)	Name			
	Address			
	Contact	Phone	email	
 	Name			
	Address			
	Contact	Phone	email	
FIFA accredited Test Institute	Name			
	Address			
	Contact	Phone	email	
Laboratory Director	Name			
FIFA accredited Engineer on site	Name			
Other Test Engineers on site	Name			
	Name			
Test report and approval request originated by	Name		Signature	
	Date			

3 – Test Conclusion, Field Approval

3.1 Approval, final test result		
 FIFA Two Star	The presented field / site has the given FIFA FIELD TEST requirements	
	«passed» or «failed»	



Confirmed by		
Director of the FIFA assigned Test Institute	Name	
	Date	Signature
Approved by		
FIFA Accredited Engineer on site	Name	
	Date	Signature

3 – Test Conclusion, Field Approval

3.2 Criteria that failed, if any:			Criteria	Failed
	Ball / Surface interaction		Vertical ball rebound	<input type="checkbox"/>
			Ball roll	<input type="checkbox"/>
	Player / Surface interaction		Shock absorber	<input type="checkbox"/>
			Rotational resistance	<input type="checkbox"/>
			Deformation	<input type="checkbox"/>
	Maintenance equipment on site		As required	<input type="checkbox"/>
	Sprinkler System on site		Conformity	<input type="checkbox"/>
	Construction requirements		Regularity	<input type="checkbox"/>
			Consistency of site and laboratory materials	<input type="checkbox"/>
	Field documents		Product declaration and method statement not presented	<input type="checkbox"/>

Comments

3 – Test Conclusion, Field Approval

3.3 Summary of general aspects tested / inspected					
		Item	YES	NO	
	Maintenance equipment on site	Tractor Unit	<input type="checkbox"/>	<input type="checkbox"/>	
		Drag	Brush	<input type="checkbox"/>	<input type="checkbox"/>
			Mat	<input type="checkbox"/>	<input type="checkbox"/>
			Ball roll ramp	<input type="checkbox"/>	<input type="checkbox"/>
			Up to date maintenance logbook	<input type="checkbox"/>	<input type="checkbox"/>
			Other (describe)	<input type="checkbox"/>	<input type="checkbox"/>
	Maintenance material on site	Top up infill material	<input type="checkbox"/>	<input type="checkbox"/>	
	Sprinkler System on site	a) Sprinklers within playing field / run-offs	<input type="checkbox"/>	<input type="checkbox"/>	
		b) if a) YES:	<ul style="list-style-type: none"> • additional - shock absorption and - deformation tests OK? • append - test results - Plan with sprinkler / test positions 	<input type="checkbox"/>	<input type="checkbox"/>
		>> see 4.6.2			

3.4 Test dates / weather conditions / field surface				
Date(s) of test	Day 1:		Day 2:	
Surface condition (dry or wet)				
Surface temperature [°C]	Min.		Min.	
	Max.		Max.	
Ambient temperature [°C]	Min.		Min.	
	Max.		Max.	
Humidity [%RH]	Min.		Min.	
	Max.		Max.	
Maximum wind speed [m/s] (during ball / surface interaction tests)	Ball rebound			
	Ball roll			

3.5 Comments

Football Turf Field Test Report (FIFA Two Star)

4 – Detailed Test Results

4.1 Overview – a typical product composition

The basic structure and composition of artificial turf varies. To reach the goal of defined quality and specific functional performances, a set of the relevant parameters for the products / materials used was defined. Materials / products typically used are as follows:

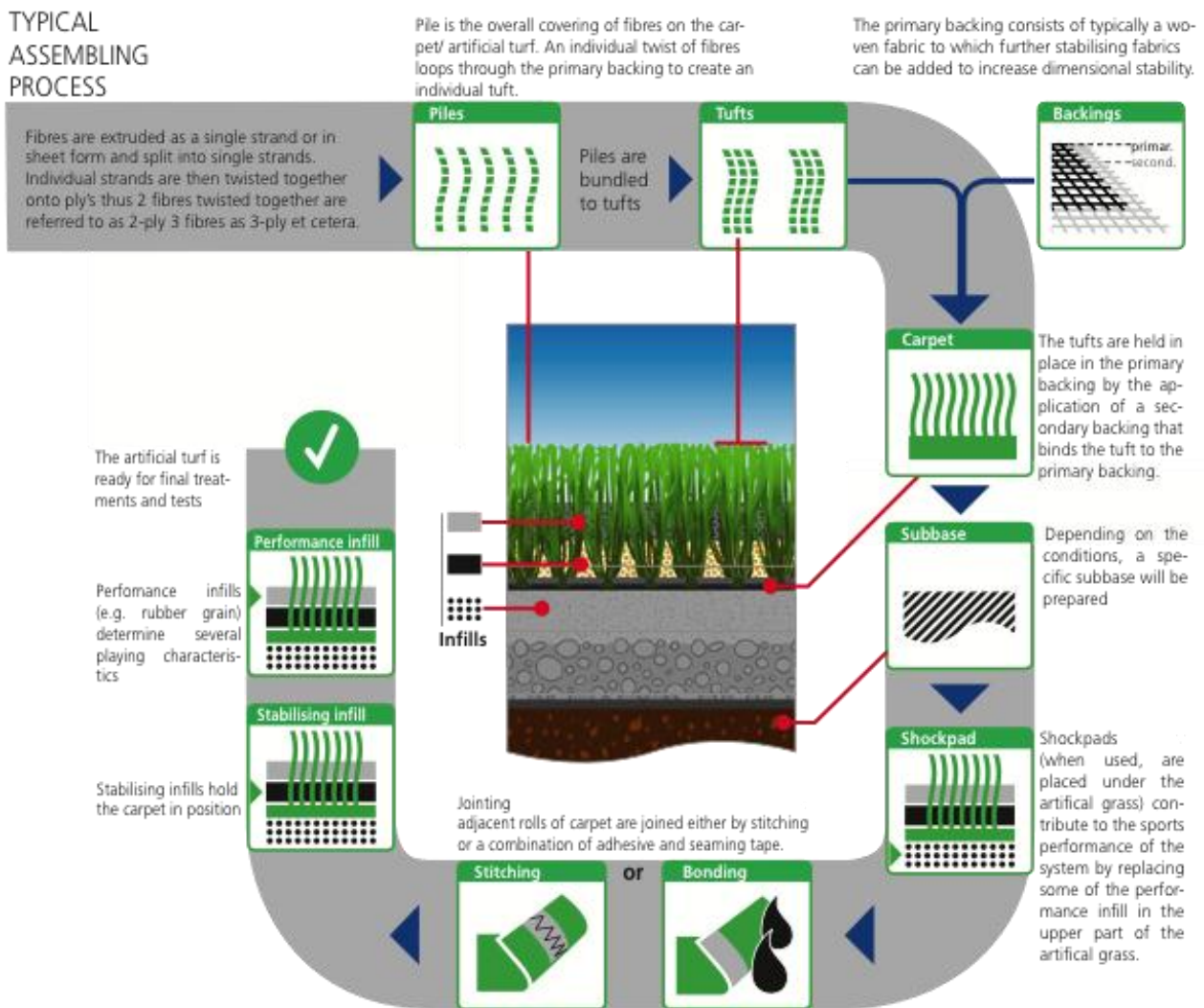





Fig. 1.3 Products / materials used to build up artificial turf

4 – Detailed Test Results

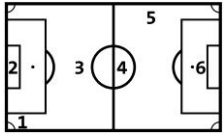
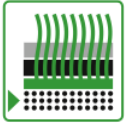
4.2 Product identification							
Component	Property	1 Sample (on site)	2 Product Declaration (Licensee)	Variation 1/2	FIFA Specification P= passed F= failed		
						P/F	
Artificial Turf 	Carpet mass				≤ ± 10%		
	Tufts / m ²				≤ ± 10%		
	Tuft withdrawal force [N]				≥ 90%		
	Pile length above backing	1				≤ ± 5%	
		2				≤ ± 5%	
		3				≤ ± 5%	
	Pile weight above backing [g/m ²]	1				≤ ± 10%	
		2				≤ ± 10%	
		3				≤ ± 10%	
	Pile yarn dtex [g/10000m]	1				≤ ± 10%	
		2				≤ ± 10%	
		3				≤ ± 10%	
	Pile yarn characteristics	1				Same polymer	
		2				Same polymer	
		3				Same polymer	
Water permeability of carpet [mm/h]			Lab result		≥ 180 mm/h and > 75% of lab result		
Performance infill 	Particle size range				≤ ± 20%		
	Particle shape				Similar shape		
	Bulk density [g/cm ³]				≤ ± 15%		
Stabilizing infill 	Particle size range				≤ ± 20%		
	Particle shape				Similar shape		
	Bulk density [g/cm ³]				≤ ± 15%		

Comments:

4 – Detailed Test Results

4.3 Overview – ball and player to surface interactions

If applicable:

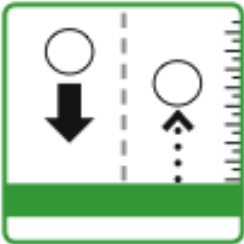




Shock pad / elastic layer		Positions, related results / variations (plan see 4.6.1)					
	Product Declaration (Licensee)*	1	2	3	4	FIFA Specification P= passed F= failed	
							P/F
Shock absorption [%]	Values						
	Variation Result / Declaration					Declaration ± 5%	
Thickness [%]	Values						
	Correlation Result / Declaration					≥90%	

Comments:

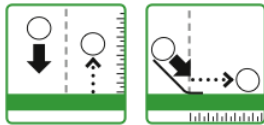
4 – Detailed Test Results

4.3 Overview – ball and player to surface interactions

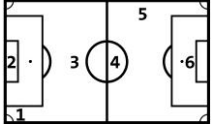
How is the field to play? By means of the following 8 parameters, this question can be answered very well. Furthermore, some values allow conclusions regarding maintenance in order to keep the field in top shape.

Parameter	Comments / hints	Parameter	Comments / hints
1- Vertical ball rebound  <p>The higher the value the higher the ball will rebound. The ball should not bounce too high or too low.</p> <p>Ball / surface interaction</p>		4- Shock absorption  <p>Shock absorbency is an indicator of how hard the field feels to the player. A value that is too low indicates a hard field and causes damage to player's joints too soon and the surface is energy sapping resulting in increases in fatigue and over-use injuries.</p> <p>Player / surface interaction</p>	
2- Ball roll  <p>The higher the value the faster the ball will run over the surface. The ball should not be too fast or too slow.</p> <p>Ball / surface interaction</p>		5- Deformation  <p>A surface that deforms too much will result in overstretching of ligaments particularly the around the ankle.</p> <p>Player / surface interaction</p>	
3- Rotational resistance  <p>This simulates the player's ability to alter direction, too high a value and stress can occur across knee ligaments, too low and the player will not be able to grip the surface and may slip causing ligament damage.</p> <p>Player / surface interaction</p>			

4 – Detailed Test Results

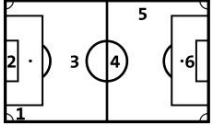


4.4 Ball / surface interaction

Positions / test results (see plan appendix 4.6.1)								 FIFA Specification P= passed F= failed	
1	2	3	4	5	6		P/F		
Property									
Vertical ball rebound							0.6 – 0.85 m		
Ball roll							4.0 – 8.0 m		



4.5 Player / surface interaction

Positions / test results (see plan appendix 4.6.1)								 FIFA Specification P= passed F= failed	
1	2	3	4	5	6		P/F		
Property									
Rotational resistance							30– 45 Nm		



4.5 Player / surface interaction

Positions / test results (see plan appendix 4.6.4)											FIFA Specification P= passed F= failed	
Property	A	B	C	D	E	F	G	H	I	J		P/F
Shock absorption											60 – 70 %	
	K	L	M	N	O	P	Q	R	S			
											60 – 70 %	



4.5 Player / surface interaction

Positions / test results (see plan appendix 4.6.4)											FIFA Specification P= passed F= failed	
Property	A	B	C	D	E	F	G	H	I	J		P/F
Deformation											4.0 – 10.0 mm	
	K	L	M	N	O	P	Q	R	S			
											4.0 – 10.0 mm	

4.6 Explanatory graphs / pictures

4.6.1 Playing field, test positions / directions

4.6.2 Playing field, sprinklers (if applicable), surface undulations, pitch dimensions

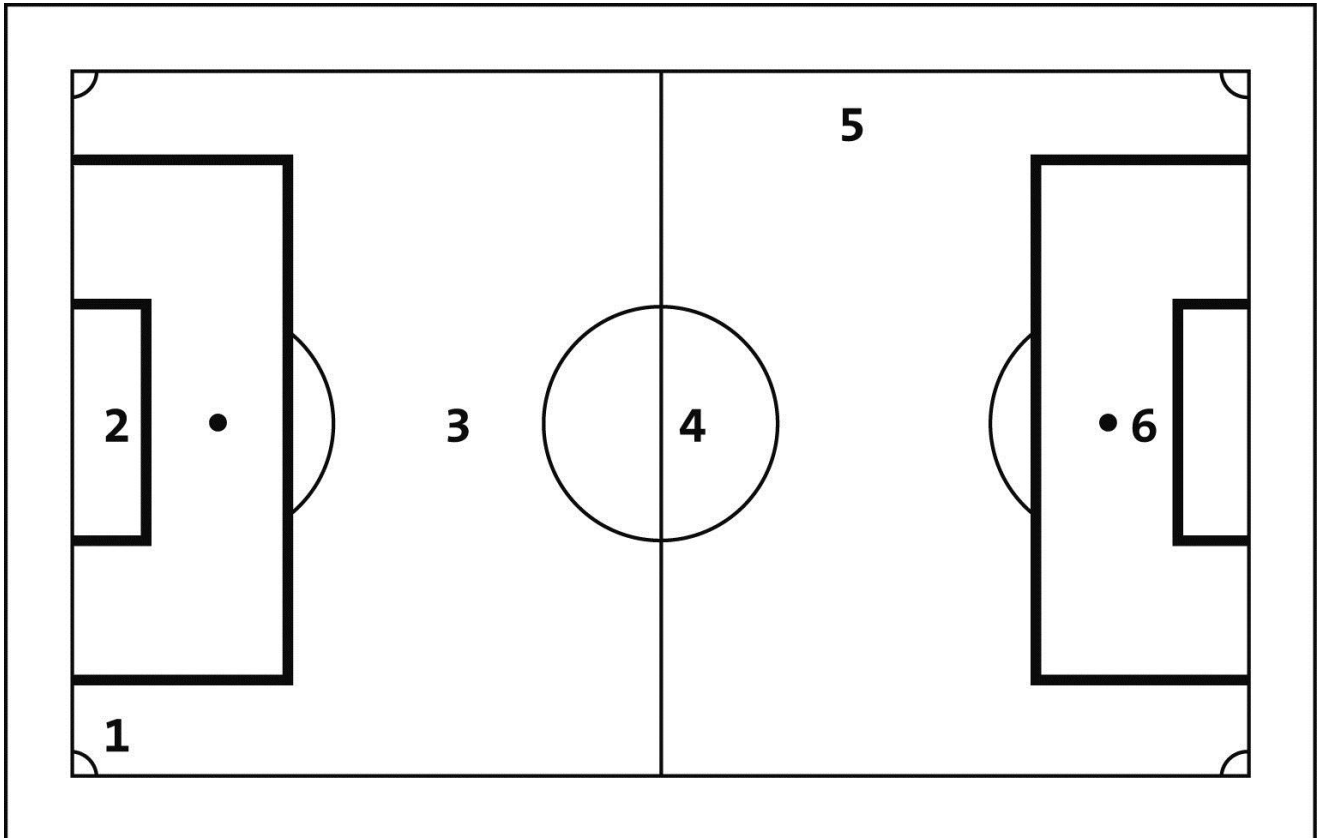
4.6.3 Photo report maintenance equipment

4 – Detailed Test Results

4.6 Explanatory graphs / pictures

4.6.1 Playing field, test positions / directions

Mark orientations on the drawing:



Comments:

4 – Detailed Test Results

4.6 Explanatory graphs / pictures

4.6.2 Playing field, sprinklers (if applicable), surface undulations, pitch dimensions

Sprinklers

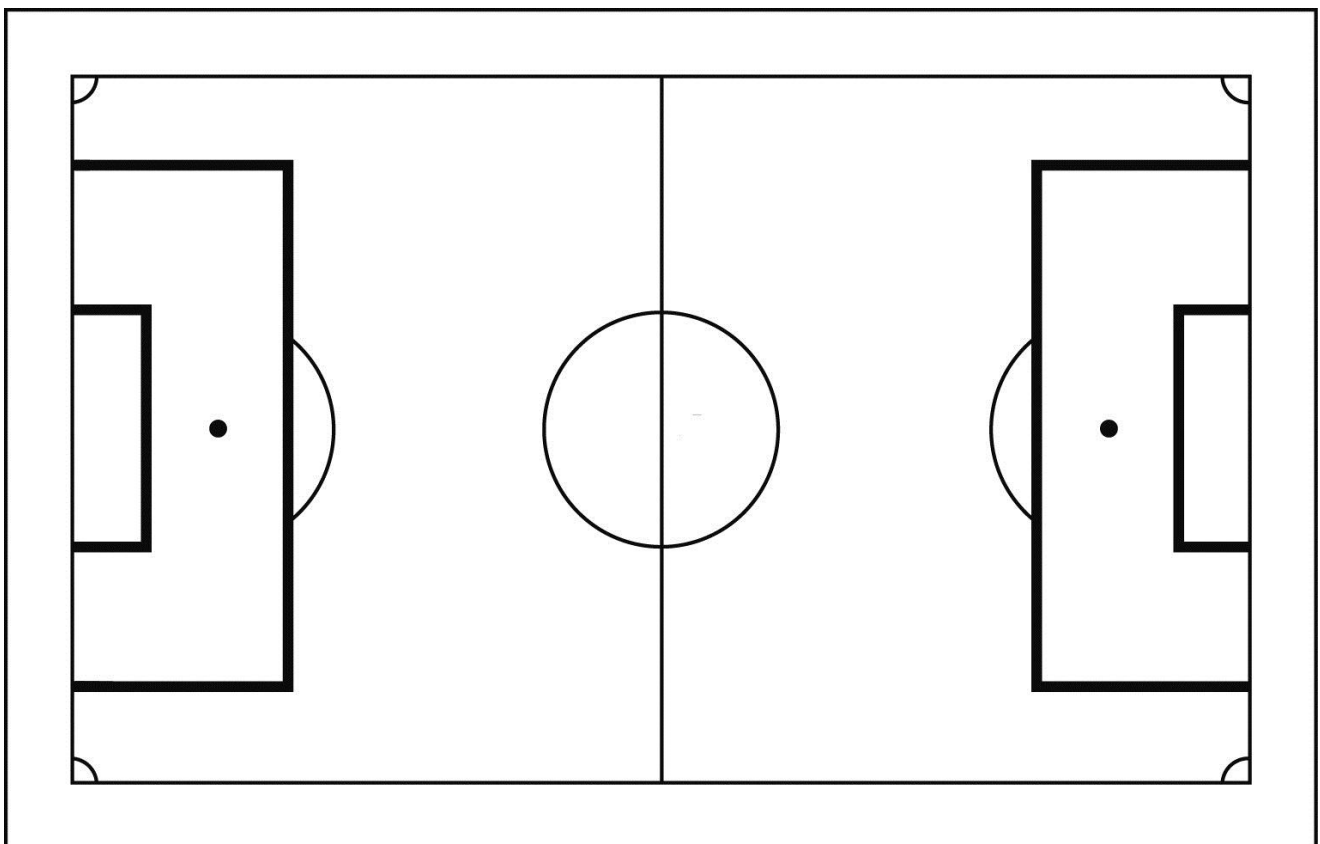
(if applicable)

- mark sprinkler positions on field / run offs (**○**)
- mark test positions for additional shock absorbance / deformation tests
- shock absorption and deformation tests OK?
- add test results to this appendix or below

Undulations

(> 10mm)

- mark localization (**X**)
- record magnitude



Pitch Dimensions



Length	min. 90/ max.120 [m]	Measured:	[m]
Width	min. 45 m / max. 90m	Measured:	[m]

Comments



4 – Detailed Test Results

4.6 Explanatory graphs / pictures

4.6.3 Maintenance equipment (photo report)

		Page:	of:

Comments: _____



Football Turf Field Test Report (FIFA Two Star)

4 – Detailed Test Results

4.6 Explanatory graphs / pictures

4.6.4 Test positions (Advanced artificial athlete)

