

### 3 Quality Control, Warranties and Testing

During the course of the works, the Employer / Employer's Representative / Contract Administrator will carry out random checks on the facility.

#### 3.1 Inspection / Testing Procedures (ITPs) for Works and Materials

The Contractor will provide a statement describing their proposed general and detailed arrangements and methods for carrying out the checking of the works and the order in which it proposed that this inspections / testing shall be executed.

##### Aim / Purpose

To ensure the facility is constructed to the highest quality levels, a programme of Inspection / Testing Procedures (ITPs) is required.

These ITPs must be completed at each critical stage of construction and throughout the sequential programme of works; all in accordance with the contract specification and Performance Quality Standard (PQS).

The absolute requirement of ITPs is to ensure that the completed works may be accepted by the employer with the reassurance that at the point of handover, the works contain no significant faults or omissions in the work which would require the Contractor to re-enter the site to carry out further works ('zero defects').

The Contractor is expected to carry out the following ITP schedule and report immediately to the Employer / Employer's Representative / Contract Administrator upon completion of each successive test:

Construction Stage	Requirement	Suggested Method
Sand Envelope Base	Material/s Quality	Visual / Delivery Check
	Constructed Depth / Level / Slope	Laser Survey
	Adequate Compaction	LWD / Similar
	Finished Consistency	Visual
	Smoothness / Surface Regularity	Straight Edge
Surface	Material Quality / permeability	Delivery Check / Laboratory Test
	Setting Out (As Producer Cutting Plan)	Desk Top
	Joint Quality	Laboratory Test
	Line Markings Position / Width / Straightness	Measure
	Infill Application	Depth Probe / Prism Gauge
	Finished Consistency	Visual
	Smoothness / Surface Regularity	Straight Edge
	Surface and Infill Technical Characteristics	Laboratory Test
	Performance Quality Standard	Field Test / Laboratory Test / Certification

##### Material Sampling

During the construction works, site samples of materials shall be provided by the contractor and retained on site for inspection.

The following records shall be included with all samples:

Date and time that the sample was taken
Sample identification
Intended application and location
All samples shall be coded as above so any defective materials can be identified and removed

For each particulate material (sand, gravel, granulate rubber, etc....), used in the construction, 2kg representative samples will be retained by the Contractor for inspection.

Failure to do so may result in an entire section of work being replaced.

##### Material identification

In order to ensure the components of synthetic turf system installed on a pitch are the same as the Approved Turf Product, the initial field test shall include the material identification tests.

The maximum variation between the installed materials and the manufacturer's declaration, shall be as specified within appropriate publications.

Material sampling shall be as follows:

Component	Sample Size	No. Samples
Synthetic turf carpet	0.5 x 0.5m	1
Infill	3kg	1 per component.

The samples supplied should be representative of materials installed on different areas of the pitch.

The Licensed Manufacturer (or their agent) has responsibility for ensuring samples submitted to the accredited laboratory conducting the tests comply with this requirement.

The samples of synthetic turf, and infill shall be supplied to the laboratory when they undertake the pitch test.

### **3.2 Codes of Practice**

The Contractor will supply a full and detailed Code of Practice and System of Works.

These will include details of all the works to be carried out and the manner in which they will be carried out. These will include details of authorised persons, environmental restraints, appropriate Health and Safety requirements, training that personnel will, or have, undertaken prior to working on site, storage of materials and procedures for receiving and checking materials on site.

The Code of Practice shall indicate areas of work that will be sub-contracted and detail the Sub-Contractors that will be employed, and their relative experience.

All works shall be carried out using the Contractors submitted system of works. Unless changes to methods have been submitted to the client and /or their representatives and such changes have been accepted.

### **3.3 Materials**

All materials liable to deterioration or damage shall be stored in such a way that they shall be in accordance with the specification at the time of use.

### **3.4 Inspection**

The employers' representative will have free access to carry out cross referencing random performance quality testing and access to the quality logs at such times as they or the client feel appropriate, following telephone notification of intended arrival on site.

### **3.5 Maintenance**

Prior to completion of the works, the Contractor will provide a statement describing the general and detailed maintenance required on the newly developed facility. The statement shall include details of the maintenance programme.

It shall detail procedures to ensure the specified parameters are maintained, the appropriate climatic conditions in which work can be carried out, the appropriate health and safety requirements and training the personnel may require. The Contractor will include in their tender price an appropriate cost to cover the training and advising of the grounds maintenance staff.

### **3.6 Warranty Requirements**

The contractor will provide written statements on the validity and scope of any warranties given before commencement of works.

Collateral warranties may be required from suppliers and sub-contractors.

All warranties are to be offered via the tendering contractor, for the period of warranty; however, they should be transferable from the original manufacturer/supplier to the Employer, in the event the contractor ceases trading during the warranty period.

The Artificial Grass Pitch shall be provided with a minimum warranty recommended for Football Turf pitches for community football uses as follows and in conjunction with appropriate consistent periodic maintenance input:

Criteria	Warranty / hours of use per week		
	Less than 30	Between 30-50	More than 50
Performance	8 years	6 years	3 years
Player / Surface Interaction (i.e. Durability)	9 years	7 years	6 years

Aspect	Requirements	Minimum cover
3G Artificial Grass Pitch	<p>All workmanship and materials will be to a standard that ensures the specified Performance Quality Standard (PQS) is fully retained for the warranty period, in accordance with:</p> <ul style="list-style-type: none"> <li>• BS EN 15330-1:2013</li> <li>• The FA 3G Football Turf Pitch Register</li> </ul>	<p>Performance – 6 years inclusive of materials and labour</p> <p>Player / Surface interaction – 7 years inclusive of materials and labour</p>
Artificial grass	All joints must remain secure and fit for purpose and with seam strength not less than stipulated in the above PQS for the entire duration of the warranty period.	3 years inclusive of materials and labour
Artificial grass surfacing system	UV stability of synthetic materials	8 years inclusive of materials and labour

### 3.7 Repairs Under Warranty

The contractor shall undertake and complete fully to the satisfaction of the client and their representative/s; general repairs under warranty within 15 working days of notification in writing (or other agreed form of communication).

Specialist repairs shall be completed within 10 working days of notification in writing (or other agreed form of communication) to the full satisfaction of the client.

Emergency repairs (for example structural / electrical failures) shall be completed within 5 working days of notification in writing (or other agreed form of communication) to the full satisfaction of the client.

In all cases, identical materials to the original installation shall be used. Furthermore, the contractor shall schedule any repair works to avoid detrimental impact to the Employer's planned programme of use on the pitch / facility.

### 3.8 Failure of Tests

Should any samples or intermediate stages of construction tested or formal performance testing be found, in the opinion of the Employer or Contract Administrator, to be unsatisfactory or likely to produce or has produced unsound work, the defective material or the consignment which the sample represents shall be removed from the site or suitable corrective action taken, as approved by the Employer or Contract Administrator, to achieve the specified performance outcome. Notwithstanding that, any sample or intermediate work stage, which has been accepted by the Employer or Contract Administrator, may subsequently be rejected if they shall decide that the quality has in any way deteriorated.

The Contractor shall, at his own expense, remove and replace all rejected materials, or correct any intermediate work stage shown to be outside specification. Any delays consequential upon the rejection of any sample or work stage shall not in any way relieve the Contractor from his responsibility with regard to completion within the Contract Period.

Work corrected or materials replaced for these reasons will be re-checked or re-tested by the Employer or Contract Administrator.

The additional costs of testing any material replaced for this reason or re-inspecting any work stage subjected to remedial works shall be recovered from the Contractor by an appropriate deduction from the contract sum.