



## CONDITION ASSESSMENT

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### SYNTHETIC PITCHES

### SUMMARY REPORT

Job No. 22129

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For

Moray Council


Sports Labs Ltd  
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**Contract Number:** 22129

**Issued by:** Sports Labs on behalf of Moray Council

**For:** Inspection of the existing artificial turf facilities in the Moray region by Sports Labs to report and determine the condition of the facilities.

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## 1 INTRODUCTION

1.1 Sports Labs Ltd carried out inspections of facilities under the auspices of Moray Council on the 22<sup>nd</sup> February 2021 and the 1<sup>st</sup> March 2021. The inspection was carried out by experienced site technicians Connor Munro and Ryan Latto. The scope was to determine and summarise the condition of these facilities. This report is intended to summarise the condition and also prioritise the facilities from most urgent for repair or replacement to least urgent with suggestions of the actions required with the table attached at APPENDIX 1.

1.2 5 different sites were visited and are listed below:

- Buckie High School
- Elgin High School
- Keith Grammar School
- Milnes High School
- Speyside High School

## 2 SCOPE OF WORK

2.1 The following table outlines the scope of the inspections at each facility and background to its purpose

Item	Background/Purpose
Performance Testing inc the following – <ul style="list-style-type: none"><li>- Shock Absorption</li><li>- Deformation</li><li>- Energy Restitution</li></ul>	Advanced Artificial Athlete testing measures variables which affect player interaction with the playing surface. Force Reduction is the measure of firmness of the field under foot, while vertical deformation is the depth that the player's foot would penetrate the surface during movement. The purpose of this test is to quantify surface stability as it relates to player interaction with the surface. Test results outside the ideal limits can indicate a surface is too unstable, or conversely, too compacted which can have performance implications for the athlete as well as raise the potential for injury.
Ball Roll	A calibrated ball is rolled down a ramp of 45 degrees from a height of 1.0m from the surface to the bottom of the ball. The distance is then measured from the point the ball contacts the ground to the middle of the ball. High ball roll results indicate the field performance is too fast and that the free pile values are too low (flat yarn). A low ball roll result indicates the field is too slow and hence performance levels would be reduced.
Surface Regularity	The Surface regularity, Planarity or Straight Edge test, is the assessment of how level the playing field is. Undulations over 6mm or 10mm (dependent on type of playing surface) are noted in terms of location and magnitude. Deviations, either high or low, are a risk to users' safety and can also adversely affect ball performance.
Visual Inspection	The surface is examined for details and imperfections that are deemed to be a key and important factor in determining the overall condition, playability and lifespan of the surface.

### 3 CONDITION SUMMARY

- 3.1 The most common issues encountered during the inspection was worn synthetic carpets with very flat yarn, see Figure 1 – Worn Yarn at Speyside below for a typical example of this.



Figure 1 – Worn Yarn at Speyside

- 3.2 In addition to this on the older facilities there were deviations present, Figure 2: Deviation at Buckie High School shows a typical deviation found at Buckie High.



Figure 2: Deviation at Buckie High School



## 4 RECOMMENDATIONS & ACTIONS

- 4.1 See APPENDIX 1 which ranks the facilities depending on their current condition and order of anticipated lifespan. Note that within the assessments there are immediate issues that require to be addressed to ensure the lifespan suggested is achieved.

## 5 CONCLUSION

- 5.1 In summary the following key points can be initially taken from the inspections carried out:
- The majority of issues encountered are mainly down to the age or the facilities inspected. Given that they have been constructed using a dynamic base any deviations found are not unexpected.
  - The client should seriously consider the full replacement of the following synthetic turf systems.
    - Speyside High School
    - Buckie High School
  - Overall, the remainder of the facilities require some additional care and, in some instances, repairs to restore the defects, prevent future damage and increase the life of pitches.
- 5.2 Sports labs would be delighted to continue our support and provide services to carry out any future design or testing including advise or assistance be required.

APPENDIX 1 – SUMMARY OF PITCH CONDITION

MORAY COUNCIL SYNTHETIC SURFACE - SUMMARISED CONDITION OF PITCHES INSPECTED

Rank*	Pitch Name	Surface Type	Year Built	m <sup>2</sup>	Facility Condition	Estimated Lifespan
1	Buckie High School	3G	2008	6185	The main concern on this field is with regards to surface hardness and fiber wear. Shock absorption values were found to be of the lowest rating. This will be primarily due to large scale compaction of the field over its 13 year lifespan coupled with the absence of a shockpad. The carpet fibers are very worn and tired and there is very little free pile height which adversely affects ball performance. There are also some deviations on the field which are recommended to be remediated at the earliest opportunity.	1 Year
2	Speyside High School	3G	2008	6171	This field was found to have many issues regarding surface levels and surface hardness. A vast number of deviations above the tolerance of 10mm were discovered. These are recommended to be corrected at the earliest opportunity as they pose a safety risk to users. Surface hardness was found to be below optimal and therefore a large scale top up of rubber infill is recommended in order to remediate this - however this will be difficult due to the high level of compaction found on the field.	1 Year - Provided Extensive Remedial Work
3	Keith Grammar School	3G	2011	6996	The biggest issue on this field is the yarn condition. Free pile is very low, resulting in a high ball roll average. A vast number of open or torn seams were also evident on the field. There pose a small health and safety risk to users and it is recommended that these be remediated as soon as possible. Surface vegetation and contamination in the surrounds was also found to be an issue and should be remediated where possible.	2 Years - Provided extensive remedial work
4	Milnes High School	2G	TBC	2829	Immediately prior to testing this field had undergone a sand replacement programme along with other standard maintenance. This resulted in there being a large amount of surface sand visible - this will be expected to work its way into the carpet with usage and weather. Visually the issues are open/torn seams and fiber wear due to the pitch being 10 years old. The seams should be addressed where possible as these pose a small health and safety risk to users. Performance of the field against the BS EN 15330 standard of hockey fields was found to be of a good standard.	3 Years - Provided Seam Repair
5	Elgin High School	3G	2018	6890	This field was found to be in good condition and was performing to a good standard. The age of the field is less than 3 years and therefore has not yet received a heavy period of compaction. The shock absorption, however, is not at the optimum level and therefore a top up of performance infill would be suggested over the short to medium term. The penalty spots should be monitored for condition - this is a common issue due to heavy player traffic in this area. Regular maintenance and visual assessments will ensure a prolonged lifespan of the pitch.	>3 Years

\*The pitches are ranked from most urgent for repair or replacement to least urgent.  
Priority will be given to pitches that pose a health hazard to the users.