

A staged approach to school sports field upgrades

The upgrading or enhancement of a school sports field can be a costly and sometimes intimidating process.

These days it is not as simple as just replacing like for like or throwing some sand and seed down and seeing what comes up! There are a wide range of surfacing options available some of which include:

- Sand carpet
- Soil profile
- Artificial (3G)
- Hybrid (blend of artificial matting or fibres with natural turf grass component)

The key factor to consider is that no single option will provide your school with a 'maintenance free' or 'silver bullet' solution.

The table on the right briefly summarises (in general terms) the various pros and cons of each option. This information is generic, but provides a great starting point from which your school can identify your best option(s) for your site and resources.

From experience, most schools' sports field expectations will be achieved through installing a well-constructed, drained, watered and reasonably maintained soil field. Where 'premier' rugby or a relatively high level of multi-use of the sports platform is likely then sand carpet sports surfaces are preferable. For instance, in the case of a rugby/soccer field that also doubles up as a cricket outfield in summer, sand carpet surfaces (with full irrigation) will perform best and may well justify the financial investment.

Whichever option is available to your school, staging the entire upgrade process can help. As with any form of resource investment staging the order of priority should be reflective of the need. For example, where a school needs to have a decent rugby field up and running in a relatively short period of time and



Field	Pros	Cons	Build cost ¹	Annual maintenance cost
Sand carpet	<ul style="list-style-type: none"> • Superior surface drainage • Typical playable hours per week = Average of 18 • 'Cleaner' surface in winter (i.e. less mud) 	<ul style="list-style-type: none"> • Costly construction (in comparison to soil field) • Requires irrigation. • Requires fertiliser applications • Surface likely to erode 	\$200,000- \$250,000	\$25,000- \$30,000
Soil profile	<ul style="list-style-type: none"> • Cheaper to build compared to sand field (from new) • Cheaper to maintain (from new) • May not require irrigation 	<ul style="list-style-type: none"> • Typical playable hours per week = Average of 10 • Surface likely to become muddy in winter • Surface likely to erode • May require secondary drainage (i.e. slits) 	\$49,000- \$120,000	\$15,000
Artificial	<ul style="list-style-type: none"> • All year round surface • Typical playable hours per week = 30-40 • No surface erosion • No loss of turf grass • No mud 	<ul style="list-style-type: none"> • Expensive to install • Ecological issues • High disposal costs • Comparatively high maintenance costs that require specific machinery • vulnerability to vandalism • 'Potential for injury' 	\$1.2M-\$2M	\$25,000- \$42,000
Hybrid	<p>(See above)</p> <ul style="list-style-type: none"> • Slight reduction in weekly hours due to natural turfgrass component 	<ul style="list-style-type: none"> • Expensive to install • Fewer accredited contractors able to install • Long-term issues unknown (relatively new technology) • Expensive on-going maintenance costs 	In line with artificial	In line with artificial

where resources dictate that a soil sports field is the only realistic option, a staged approach to works could be as follows:

Stage 1 (Year 1)

- Site survey and sports field design,
- Installation of primary drainage (i.e. lateral and main drains with connections as required),
- Remediation of any localised low spots existing on the field,
- Application of up to 10 mm of sand topdressing, seed and feed,
- Installation of temporary irrigation system (i.e. irripods).

Stage 2 (Year 2)

- Design and installation of an appropriate irrigation system,

- Further application of 10 mm sand topdressing and feed.

Stage 3 (Year 3)

- Installation of secondary drainage (i.e. gravel bands or sand slits),
- Allowance for further sand application to top up secondary drains and feed.

Notes:

- The extent and scope of steps (a) to (e) should be identified through an initial (brief) feasibility report of the site.
- The above scenario is based upon maintaining the existing surface of the sports field platform(s).

When considering an upgrade, or any sort of significant improvement of your sports field asset it is advisable to make provision for an initial (site

specific) investigation. In my last article I described the various key components of such an investigation and how important this small investment is in regards to the long-term success of any upgrade project. A site-specific investigation will identify what is actually required, how this should be achieved (i.e. staging) and independently provide some technical assurances and safeguards on behalf of the school when it comes to contractors proposing or tendering for physical works etc.

Where multi-code sports fields exist (as most schools have) the scope of upgrade works should be dictated by reviewing the most appropriate use of the existing space and deciding upon the optimal layout of sports fields, cricket wickets etc. As school fields evolve over time the original layouts can often become limiting factors in relation to the management of reasonable (and safe) playing surfaces. Prior to making any financial commitment to any form of staged upgrade it is advisable for the school to clearly identify the most appropriate orientation of each sports field asset – what can realistically fit on-site and how can this be managed?

In summing up, any significant enhancements your school is planning to carry out to sports field assets need to be carefully planned, resourced, and any decisions regarding appropriate surface options and associated infrastructure should be made in full appreciation of all current options, costs of installation and the on-going commitment to maintenance demanded to each option. [S11](#)

SSDM is an independent turf consultancy able to assist your school in all aspects of sports field scoping and design option.

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