NATURAL TURF ALLIANCE

Fix the Field Before Replacing It: A Practical Natural Turf Upgrade Guide

A worn, muddy or unreliable oval is evidence of a problem to investigate, not proof that natural turf has reached its limit. Before replacing living grass with synthetic turf, councils should assess whether targeted improvements or best-practice natural turf reconstruction can meet the sporting need at lower long-term cost.

Why This Matters

An oval may struggle because water runs onto it, its soil is compacted, irrigation is uneven or training repeatedly wears the same small area. Replacing the grass without understanding these causes can waste money. Replacing the entire surface with plastic can bypass a viable natural turf solution.

The practical task is to identify what is limiting performance and what would change that outcome. Some fields need better management or targeted works. Others require substantial reconstruction. A natural turf assessment should examine both possibilities.

The goal is a field that reliably supports the intended users, with a maintenance plan the council can fund. A successful upgrade is measured by playing quality, recovery, closures and actual use, rather than by how new the surface looks at handover.

Diagnose the problem, define the required performance and cost the natural turf solution before deciding to change surface type.

1. The Evidence

The NSW Government's Best-practice guidelines for sporting fields (January 2025) includes a dedicated section on improving existing fields, covering growing media, drainage, irrigation and maintenance. It also recommends independent specialist design and construction checks. [1]

One example in the guidelines records a field previously proposed for conversion to synthetic turf. Following best-practice reconstruction, it completed five football seasons without turf patching, despite wear above that of about 97% of NSW sporting fields. This illustrates what diagnosis and reconstruction can achieve; outcomes remain site-specific. [1]

An underperforming old field should not be used as the benchmark for the potential of modern natural turf.

2. Understanding the Issue

Start with a field performance audit

NTA recommends commissioning a qualified, independent sports turf specialist to explain the causes of poor performance. Bring together site testing, maintenance records, actual use and observations after rain. Ask for a written diagnosis and a ranked improvement plan.

Wet or muddy: where is the water coming from?

Map the wet areas and observe when they appear. Is rain being trapped in low spots, is water entering from surrounding land, or are outlets backing up? Check soil and drainage conditions before assuming the answer is additional drains. Distinguish ordinary waterlogging from catchment flooding.

Hard or thin: what is happening below the grass?

Request an assessment of soil depth, structure, compaction, rooting and relevant laboratory results. Identify whether maintenance can relieve the problem or whether the soil profile needs rebuilding. Require a site-specific prescription for any soil amendment.

Bare patches: is the wear concentrated?

Map goalmouths, training drills, access points and heavily used sidelines. Compare those patterns with the rest of the oval. Ask whether moving training activities or adjusting the layout would reduce damage, and whether the turf cultivar suits the expected wear and local climate.

Dry patches: is water reaching the right places?

Audit sprinkler coverage, leaks, operating pressure and scheduling. Check whether poor distribution or soil conditions explain the pattern. Increasing total water use without diagnosis can be an expensive response to the wrong problem.

Keep a simple baseline: dated photographs, turf cover, recurring trouble spots, actual attendance, closure reasons and maintenance expenditure. Use it to test whether the upgrade works.

3. Impacts and Implications

Targeted work can preserve existing investment

If the underlying field system is sound, a focused upgrade may avoid unnecessary excavation and replacement. Request separate prices for management changes, localised repairs, targeted infrastructure work and full reconstruction. Identify which existing assets can be retained.

A new surface alone may repeat the failure

Fresh turf laid over an unresolved soil or water problem can deteriorate again. Require the design to explain how each identified cause will be addressed. The tender should specify performance and materials, rather than relying on a promise of “better grass”.

Drainage works need the right sequence

The NSW guidelines advise resolving soil and turf issues before installing slit drainage, to avoid compromising new drains during later works. Councils should require one coordinated design and work sequence, rather than treating each improvement as an unrelated purchase. [1]

Access during the works must be planned

Discuss establishment time and temporary closures with clubs before scheduling construction. Consider whether one field can be upgraded while another remains available. Do not promise immediate full use if it would undermine establishment and the investment.

4. Best Practice Approach

Step 1: Diagnose and set the performance target

Agree what the field needs to support and how success will be measured. Request independent evidence for the diagnosis, including uncertainties and further tests required.

Step 2: Compare practical natural turf options

Cost a targeted improvement package and, where appropriate, full best-practice reconstruction. For each option, show expected performance, downtime, risks and a funded maintenance plan.

Step 3: Check delivery and review the result

Specify inspection points and acceptance checks before work is concealed. Review performance through the following sporting season and agree how defects or missed targets will be addressed.

5. Recommendations

1. Investigate before selecting a surface. Obtain an independent diagnosis of soil, water, turf and wear issues before committing to conversion.

2. Assess the least extensive effective upgrade. Compare targeted works with reconstruction. Explain why each proposed element is necessary.

3. Use the NSW best-practice guidelines. Require specialists to show how the natural turf design responds to the January 2025 guidance. [1]

4. Fund ongoing performance. Include staffing, equipment, irrigation and planned maintenance in the option comparison. Set rules for protecting the field when conditions are unsuitable.

5. Verify the improvement. Publish baseline and post-upgrade results, including surface condition, closures, use and cost. Rectify the causes of any continuing problems.

Key Takeaways

Poor condition is a starting point for diagnosis

It does not, by itself, establish that natural turf is unsuitable.

Fix the cause, not just the appearance

New turf will not compensate for unresolved soil, water or wear problems.

The upgrade may be smaller than expected

Targeted works should be assessed before a complete surface replacement.

Some fields do need reconstruction

Best-practice natural turf reconstruction remains a serious option to evaluate.

Maintenance protects the investment

A field improvement needs a realistic operating budget and performance review.

“Before replacing natural turf, establish what is preventing it from performing - and what a properly designed upgrade can deliver.”

References

1. NSW Department of Climate Change, Energy, the Environment and Water. Best-practice guidelines for sporting fields. January 2025. Section 5: planning, design and delivery; section 6, pp. 44-57: improving existing fields. Figure 23, p. 45: reconstruction example; section 6.2, pp. 47-51: drainage and sequencing.

https://www.water.dcceew.nsw.gov.au/sites/default/files/2025-07/best-practice-guidelines-for-sporting-fields%20%281%29_0.pdf

2. Natural Turf Alliance. Modern Natural Turf: A New Generation of High-Performance Sporting Fields. July 2026. Companion fact sheet explaining the integrated natural turf system.

https://naturalturfalliance.org/fact-sheets/

Related NTA fact sheets
The True Cost of a Sporting Field: Looking Beyond Construction.
Flooding and Sporting Fields: Choosing for the Site.
Before Council Decides: Ten Questions Every Community Should Ask.

Visit the NTA Document Library:

https://naturalturfalliance.org/document-library/

How to use this guide

The audit questions, staged process and recommendations are NTA's practical framework for requesting an improvement plan. They are not construction specifications. Soil amendments, drainage, turf selection and irrigation should be designed for the site by suitably qualified specialists.

Require council to explain whether targeted works can meet the need, whether reconstruction is necessary and how the proposed solution will be maintained. A staged approach is useful only where the stages are technically compatible and do not create avoidable rework.

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Natural Turf Alliance Inc (NTA) is a Registered Association consisting of community groups committed to preserving and developing natural grass open spaces including sporting fields.
Our core focus is engaging with local councils and sporting groups in relation to best practice natural turf construction and maintenance.