

Case study: Compost on sporting fields



The lush green Kahibah Oval is a regional showpiece for Lake Macquarie Council. Picture: AgEnviro Solutions

Kahibah Oval has been transformed into the showpiece of the Newcastle District Cricket Association
– Chris Oliver,
President,
Charlestown District
Cricket Club

Composted fields ready to swing into summer of sport

Sports fields treated with compost survive the winter season ready for summer sport with minimal work.

Optimal playing surfaces

Compost can play a major role in turf management by improving the quality and longevity of sporting fields, a project has found.

The project, delivered by environmental consultancy AgEnviro Solutions with a \$350,000 grant from the NSW Environment Protection Authority's (EPA) Organics Market Development program, assessed 408 fields identified through a partnership with NSW Football and Northern NSW Football.

AgEnviro assessed each field's soil type, sport usage levels, turf species, climate, microclimate and irrigation before recommending field treatments.

The site-specific recommendations were then provided to the councils and associated soccer associations.

Recommendations could include using compost as part of a field's total reconstruction or using compost blends for topdressing and filling depressions.

The results have been so successful that councils have requested another 150 fields be assessed for compost turf management.

Grass-covered sporting grounds



Canterbury's Ewen Park in very poor condition before the rebuild (left) and the same field at the very end of the winter sport season after the rebuild (right).
Photos: AgEnviro Solutions

“Compost’s major contribution is it holds the soil open, so the soil doesn’t become compact like a brick.

This is a big thing as it means the soil can hold more water whilst remaining aerated and when combined with a balance of nutrients from the compost, the turf becomes more resilient.”

**- Dr Mick Battam,
principal soil and
irrigation scientist,
AgEnviro Solutions**

Rebuilding council ovals with compost

Five councils opted to rebuild specific fields. Several other councils, including Wingecarribee Shire Council and Hunters Hill Council implemented topdressing, patching and filling as recommended.

Compost made to NSW regulatory requirements and Australian Standard AS4454 from source-separated kerbside food and garden organics was recommended for use.

Since starting the project Lake Macquarie Council’s high-use suburban Kahibah Oval has become a regional showpiece.

The field, which is situated on top of a hill, received moderate to high use, exposure to wind and featured an uneven surface. A detailed assessment found the field’s soil was hard-setting, low in nutrients and shallow in places with an uneven surface that was prone to localised water logging.

Recommendations included:

- turf removal
- incorporating specified compost into the soil
- laser levelling the field
- infilling localised shallow areas
- sowing turf via sprigs
- watering, fertilising, top dressing and resting for summer.

“The field is holding up well. and now is a very good field when it previously was poor.

Visiting teams are saying it’s the best field in the area.”

- Steve Dinsdale,
Team Leader,
Parks & Property,
City of Canterbury-
Bankstown

Healthy fields at low cost

The outcome was a low-cost solution that produced a resilient regional-level sporting field on a limited budget.

The City of Canterbury-Bankstown followed recommendations to rebuild two fields – which were in poor condition with thin cover and unevenness spread over large areas - at Ewen Park.

The rebuild included laser levelling the field, installing an irrigation system, incorporating specified compost into the soil, a second levelling, laying of turf rolls, watering until turf was established and resting the field for the summer.

Before the rebuild the high-use fields were at times considered dangerous to play on. After the treatment the fields were in very good condition, safe for play throughout the winter season and were handed to the cricket club in good condition in the summer, with the fielding areas still grassed.

Spreading the green coverage

Dr Mick Battam, principal soil and irrigation scientist at AgEnviro Solutions , delivered recommendations directly to 31 councils, plus follow-up discussions and presentations at training days and conferences plus tours of the rebuilt fields. So far:

- one compost supplier has reported a five-fold increase in councils buying compost blends
- several councils have followed initial recommendations
- councils have requested another 150 fields to be assessed.

Compost to shine in turf management practice

Compost improves sporting field quality and longevity as it holds the soil structure open for less compaction and more moisture and adds nutrients, micronutrients as well as nitrogen.

Success depends on using quality blends with site specific management and ongoing maintenance.

AgEnviro predicts as more fields are amended, and the results are there to see, compost will become the preferred option in turf management practices.

NSW Environment Protection Authority
Email: info@epa.nsw.gov.au
Website: www.epa.nsw.gov.au
ISBN 978 1 925790 71 9| EPA 2018P1129
September 2018

The EPA [disclaimer](#) and [copyright](#) information is available on the EPA website.



Dr Mick Battam,
AgEnviro’s
principal soil and
irrigation scientist.
AgEnviro
specialise in soil,
turf and landscape
water savings.