Compost holds back erosion

Erosion can be a serious problem in vulnerable areas particularly on construction sites. PAS 100 compost proved to be an effective solution in protecting a steeply sloping housing development near Falkirk, Scotland.

A sloping site offers a great deal of potential to landscape practitioners, but the benefits are countered by the risk of erosion. At Redding Park near Falkirk, topsoil contaminated through industrial use had been removed as part of a remediation exercise and, as domestic building commenced, developers needed to ensure that an open area within the site be enhanced to prevent further erosion. With the help of WRAP, PAS 100 green compost was applied to the slope, successfully proving that increased germination helped to create a stabilising layer of vegetation to impede erosion.

George Pashke, Partner, Head of Environment at Wren and Bell, which managed the project, described the outcome as very positive, saying: “It confirmed there is a clear potential for using compost blankets as a suitable material for reducing soil erosion.”

The problem of erosion

The solution

Exemplar Case Study
The trial employed a variety of applications; principally the use of compost socks – a mesh containment system that holds compost in place – and berms, mounds of compost created across the slope that, in effect, terrace the plot. In addition, the entire site was covered with a compost blanket - a 25mm layer of fine grade (0 -10mm) quality compost with certain plots sown with grasses and others left as control.

The solution
According to Pashke, the use of compost socks together with the compost blanket was found to be the most effective solution at reducing erosion from the slope, although even the areas where compost blankets were applied without the sock proved beneficial. Where berms were employed, they provided genuine relief from sheet erosion and gulleying but were likely to need annual maintenance after a period of two years.

He added: “We were very impressed by the compost, and it had a number of additional benefits; because we’ve exported and imported material to and from the site, we have always looked for material that was exempt from waste management licensing. PAS 100 compost is classified as a product in Scotland – not as a waste – so it is exempt from licensing requirements. It also is free from the residual seed bank that you sometimes encounter with topsoil. But most important is the fact that it’s recycling and reusing material which was otherwise going to be finding its way through the waste stream and into landfill, and the more we can divert from landfill and put to good use, the better.”
This case study is one of a series of examples that investigate the use of compost as a bioengineering solution in slope stabilisation and erosion control.

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- the Good Practice Guide;
- tools and guidance;
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