



Utilising Spoil Excavated from Rivers

10.1 Landforms at Keepsafe and Rockwell

RIVER SKERNE

LOCATION – DARLINGTON, CO DURHAM, NZ301160

DATE INSTALLED – AUGUST 1995, SUMMER 1996

AREA – 1.5HA ROCKWELL AND 1.1HA KEEPSAFE (CIRCA. 19,000M³ OF SPOIL CARTED TO LANDFORMS)

COST – £60,000 CARTING AND CREATION OF LANDFORMS



Rockwell after landform completion – 1998

Description

The restoration of the River Skerne necessitated the disposal of circa 19,000 m³ of surplus spoil (see *Technique 1.4*). Two locations on the adjacent valley slopes (known as Rockwell and Keepsafe) were considered suitable for re-profiling and accommodating the spoil. These were the only areas that had not been either modified through industrial landfill or developed for housing. Although they retained some desirable features, they were out of keeping with the severely modified landscape around them. New landforms were designed to ameliorate the impact of the old landfill and to enable planting to screen unsightly buildings.

Design

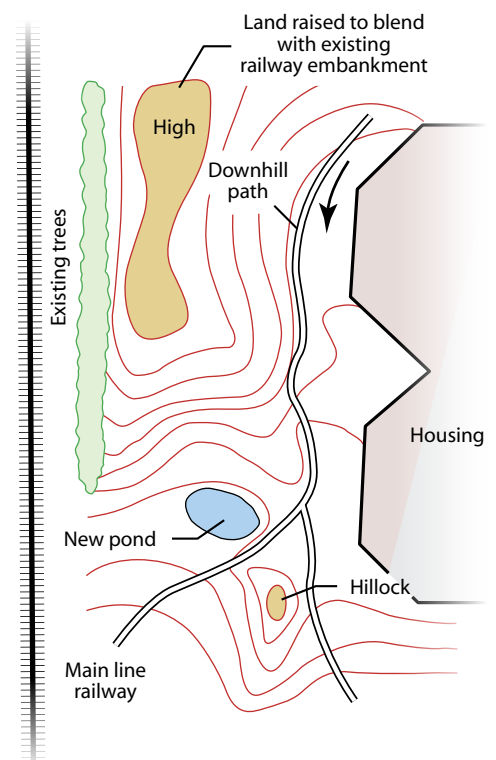
The landform of the two areas was generally designed to simulate naturally occurring 'gullies and hummocks' found in some parts of the north of England. Involvement of the community including schools, local wildlife trust and residents was deemed essential. Ideas for formal and informal paths were included for use in the detailed design.

Rockwell (Figure 10.1.1)

This area positioned between housing, the main railway and a nature conservation area, was rough land with some dumped builders rubble. As part of a community environmental project a pond was excavated in a former 'seep' on the valley side. Key features are gentle slopes facing the housing and small hummocks to provide topographical interest. French drains were installed in key places to prevent waterlogging of access routes and to alleviate surface water erosion problems.

Figure 10.1.1

PLAN OF ROCKWELL LANDFORM WORKS



Utilising Spoil Excavated from Rivers

10

Keepsafe (Figure 10.1.2)

This was a field gently sloping towards the river. The new landform has introduced a small valley feature and has raised the land adjacent to the industrial estate, built on landfill. Carefully positioned tree and shrub planting screens the industrial area on one side and ties in with an original hedgerow on the other. Most importantly, a smooth topographical transition has been created at the old tip face. A land drain was incorporated in the newly formed valley which also acts as a dry route for walkers.

Once the landforms were complete a landscape architect was appointed to design and install a suitable planting scheme. Each was seeded with a low maintenance grass mix incorporating wildflowers, followed a year later with 10,000 trees and shrubs planted in discreet planting areas. Bulbs were also planted on the lower slopes.



Keepsafe landform during construction



Similar view of Keepsafe after tree planting – 1998

Subsequent performance 1995 – 2001

Participation in landscape design and planting has given the community ownership of these open spaces and may be a factor in the minimal level of vandalism experienced. Both areas blend with the surrounding landscape and they are not obviously artificial. Each is now more widely used by walkers taking natural desire lines. The tree and shrub planting is already helping to screen the industrial area and the railway.

The creative use of spoil in this beneficial way has overcome what would otherwise have been a prohibitively expensive operation of carting off site.

Figure 10.1.2
PLAN OF RIVERSIDE PATH TO SKERNE RAILWAY BRIDGE

