WM PLANT HIRE
long reach excavators

Case Study - Rock slope stabilisation and reprofiling

Client: Alfred McAlpine
Duration: 7 weeks
Location: Chipping Sodbury, nr Bristol

Background
The potential movement of the steep rock faces on this rail cutting required stabilisation works. Two years of planning enabled trains to be diverted and allow a 9 day blockade on the line for the main works.

Scope of Works
Over 400m of the north rock face had to be re-profiled, with a shelf formed above the existing brick retaining wall. Over 7,000m^3 of overburden material had to be excavated and the underlying rock cut to a new profile some 15m out and 12m deep inside the cutting.

Solution
WM Plant Hire provided three heavy duty long reach excavators working around the clock. From the top of the slope, the CAT 330, 345 and 375 machines were put to work in a highly effective sequence. The powerful 26m reach CAT 375 fitted with a 2.5m^3 bucket took the lead, stripping the overlying material. The 60 tonne CAT 345 was fitted with a rotating rock wheel to cut the rock faces to the new profile. The smaller machine followed behind clearing loose material from the newly created rock shelf working with a team of abseilers.

To overcome visibility problems a CCTV camera was fitted on the dipper arm and linked to a screen in the cab. This worked alongside a computerised dig system to achieve the exact profile. A two way radio enabled the operator to speak with the banksman attached to a safety line, to assess the slope stability and monitor the excavation inside the cutting.

With the blockade lifted on time, the remainder of the works carried on working high above the live rail line, demonstrating the benefits of these specialist excavators with the additional reach.

Tel: **01746 769555** • Fax: **01746 769666**
E-mail: info@wmplanthire.com • Web: www.wmplanthire.com