

## South Wales Railway Regeneration



**Project:** Newport to Ebbw Vale Railway  
**Name of Client:** Amey Rail  
**Contractor:** Hammond (ECS) Ltd  
**Engineer:** Geotechnical Engineering

**Project:** Refurbishment and Protection of railway embankment and dry stone wall.

**Problem:** The dry stone retaining wall contained a substantial amount of loose stones, as did the embankment, which were likely to fall once the track reopened. As part of the regeneration program a secure and cost effective method of stabilisation was designed and implemented.

**Solution:** To stabilise the embankment and prevent the stones falling on the track, 184 Duckbill® MR-3 stainless steel anchors were driven 3m into the embankment, in 5 sections along the track and loaded to 30kN. The top and middle rows terminated with a plate to secure the geogrid netting and aid in stabilisation. The bottom row of anchors terminated in an eyenut through which a cable was pulled to prevent any stones which may come loose from rolling out onto the track.



**Cable tensioning detail:** The rigging screw was swaged to a short length of stainless steel cable which in turn was swaged to an eyenut with nylon thimbles to prevent bi-metallic contamination and reduce wear on the wire.