

Project: TasWater Rock Catch Fence  
Date: September 2012  
Client: TasWater (formally known as Southern Water)  
Contractor: M.S.D Constructions PTY LTD  
Location: Tasmania

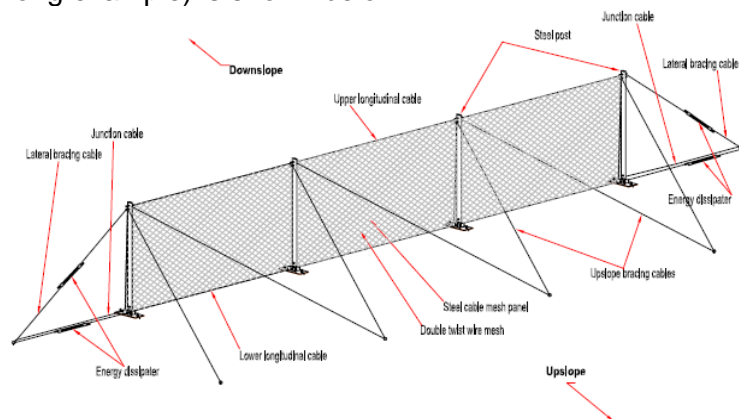


## Rockfall Protection – Rock Catch Fence

TasWater (formally known as Southern Water) have an access track that was often being impacted by rockfalls, especially during inclement weather. These events would occasionally block the track completely and heavy machinery was therefore required to clear the debris to make it passable. M.S.D Constructions approached **Geofabrics Australasia** to provide information on suitable proprietary rock catch fences that would absorb multiple impacts and therefore protect the access track and its users. The fence needed to be placed right next to the track which means deformation during impact is limited to a tolerable distance.

The fence type selected was the **CTR-05-07-B** system which has a Maximum Energy Level (MEL) of 528kJ and a Serviceability Energy Level (SEL) of 178kJ. That equates to rock impacts of 1610kg and 540kg respectively at 25m/s.

The catch fence was supplied by **Geofabrics Australasia** in a kit form and contained all posts, base plates, cables, mesh, braking elements and anchors for a standard installation. A schematic of this fence type (30m long example) is shown below:



**Geofabrics Australasia** provided typical anchor requirement details for the lateral and upslope anchors as well as the base plate rod bars. The two 50m long x 2m high catch fences were installed well within the required timeframe.



An example of the size and amount of boulders that have detached from the slope and impacted the access road prior to the installation of the proprietary catch fence



An existing single twist mesh (chain link type) low energy rock catch fence that has been destroyed by a rockfall event at the site





A number of rockfall events have taken place since the installation of the **CTR-05-07-B** rock catch fence. No maintenance to the fence has been required.



The track is now protected by the 100m long x 2m high rock catch fence. Note the combination of high stiffness High Energy Absorption (HEA) cable mesh panels and Double Twist (DT) mesh. This combination of intercept meshes means that during an impact, the deflection/elongation is less than that of a high tensile strength mesh with low stiffness. This makes the **CTR-07-07-B** fence suited for installations close to roads and infrastructure.

## How Rockfall Protection Systems work.

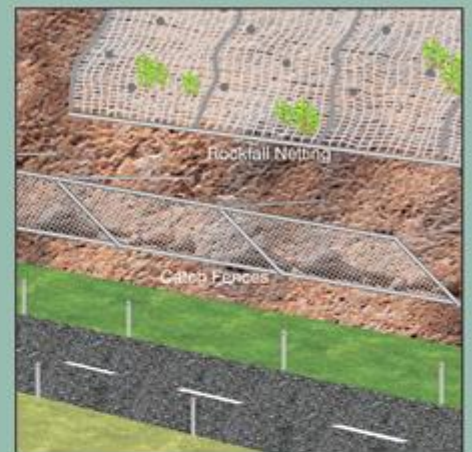
**Rockfall protection systems** are a crucial element in the design and maintenance of road and railway infrastructure networks and keep users safe from unstable rock slopes.

It's important to make a distinction between the different types of **Rockfall protection systems** and ensure the most suitable system is selected.

Secured drapery and surface stabilisation systems are designed to work in conjunction with anchorages, to increase the stability of the unstable surficial layer of the rock slope. The stiffer the mesh, the more effective it is in limiting propagation of the instability.

Passive systems (draperies, catch fences and rockfall embankments) do not affect the process of rock detachment. Instead they focus on containing and intercepting falling and sliding debris, and thereby averting any danger for road or rail users.

Geofabrics offers a range of **rockfall protection systems**, including hybrid, attenuator and debris flow barriers and supports our systems with design advice and installation support.



**Rockfall Protection Systems**