



WARNER
COMPANY

Specialising in Ground Engineering & Slope Stabilisation

Ground Engineering & Slope Stabilisation for the
Road, Rail, Construction & Mining Industries



Company Profile

Warner Company is proudly an Australian owned and operated business which has been specialising in the methods of slope stabilisation and ground engineering since 1985.

We have proven capabilities and expertise to complete difficult and specialised projects and have no hesitation in undertaking and performing priority works safely, on time and within budget.

P J Warner Australia established in 1985 and has since operated successfully as Warner Company.

Since that time, Warner Company has earned a reputation as being a leading civil engineering contractor specialising in slip stabilisation and ground engineering works. Our staff successfully perform all safety operating methods and procedures that are required in our industry.

The company has continued to expand and develop over the years with long term employees, constant plant and equipment upgrades and regular interest from clients in our work reflecting this. Local and state government departments, major construction contractors, the mining industry and structural and geotechnical engineers have been our main clients over the years, whilst smaller private companies have provided the balance of work. Warner Company is based in Rutherford in the Hunter Valley, NSW, but have completed projects Australia wide.

Specialist Drilling & Anchoring

We have excavator mounted drilling rigs ranging from four tonne through to twenty five tonne fitted with both rotary and rotary percussion drifters.

These drilling rigs have the ability to reach up 9 metres or down to 6 metres below the machine. When access is limited our hydraulic slide drills can be mounted onto scaffolding or elevated work platforms to complete the drilling task. Our drill range also includes hydraulic crawler drill rigs which can drill and case large diameter holes in any material.

Tensioned Anchors

Tensioned Anchors also known as ground anchors are most commonly used in bridge construction, pile walls and dams. They are made from either a steel reinforced bar (rebar) or single strand or multiple cables depending on the load applied. Warner Company has installed many of these anchors in temporary and permanent situations and have the capabilities to apply loads up to 3,000kn.

Soil Nails

Soil Nailing is a common method used to prevent landslips by installing steel reinforced bars into drilled holes and anchoring them to the soil strata by grouting. Soil nails are most commonly used in steep cut batters. Often steel reinforcing mesh is fixed to the bars and then shotcrete is applied. Warner Company has all resources to complete these works in house.

Rock Bolts

Rock Bolts are used to anchor a rock formation to the parent rock mass. The rock that is at risk of falling is drilled, continuing into a solid rock formation. A steel bar, cable or fibreglass bolt is then installed into the hole and fixed with either chemical resin or a cement grout. A bearing plate is then installed and the bolt is tensioned. Rock Bolts are also used in Rockfall Protection Netting Systems (RPNS) on unstable cuttings to tension the netting to the rock. Warner Company has a variety of drills to install rock bolts. Top hammer drills are used most often because of their efficiency. If access is difficult, hydraulic slide drills can be utilised from scaffolding, an EWP basket or onto a small excavator. In other cases Warner Company has installed rock bolts with held equipment from ropes.

Micropiles

Micropiles are small diameter drilled and grouted friction piles generally ranging from 150mm to 350mm in diameter. Warner Company has used micropiles as an economical alternative to large diameter drilled shaft foundations. Micropiles can replace conventional piles where there is limited or difficult access or work area due to existing structures such as overhead power, bridges or buildings. Warner Company has several rigs we can use for micropiles depending on requirements.

Horizontal Drains

Warner Company has installed horizontal drains into existing cuttings and batters, soil nail walls and highwalls. We have installed drains up to 70m long. A horizontal drain is a hole that is usually drilled just above horizontal to the required depth, then a slotted pipe is installed to allow water to enter the pipe and flow to the outlet at the batter face. The main reason to install drains is to relieve hydrostatic pressure which can cause major landslips and rockfalls.



Plant and Equipment

We have some of the best plant and equipment available to complete our projects.

All of our machinery complies with the Australian Standards and Workcover requirements.

The following is a list of plant and equipment we have to offer.

- Excavator mounted drilling rigs
- Hydraulic crawler drilling rigs
- Hydraulic slide drills
- Trailer mounted concrete pumps
- Air compressors
- Elevated work platforms
- Crane trucks
- Colloidal and pneumatic grout mixers
- High pressure grouting station
- Packers for pressure grouting
- On site high pressure water tanks
- Numerous hand held rotary and rotary percussion drills and accessories



Grouting

Grout is normally a mixture of cement, water and admixtures but specialty grouts are readily available. Grouting is a technique most commonly used to fix soil nails, bolts and anchors in place.

Grouting is also used as a means of filling voids, cracks and fissures which creates ground consolidation. Warner Company has completed grouting works filling voids beneath roads, culverts and old mines. By filling the voids with grout, you prevent the ground above the void from collapsing.

Mine void grouting requires drilling a number of holes from the surface down into the void. The holes are then used to inject the grout. Warner Company has plant and equipment for this method with drills that can drill up to 100 metres in depth and grout stations

that can mix and pump large volumes of grout in short periods of time.

Several pumping and mixing techniques are available to the company depending on the quantities, pressures or mix design requirements. We have a number of different machines that range from small portable electric and pneumatic mixers to larger batching stations that are diesel/hydraulic units. The larger machines have the capabilities to inject grout from pressures 50psi to 1,450psi (100 bar).

We have a range of inflatable packers, pressure gauges to record the grout injection pressure as well as electric flow meters to record the quantity and rate of grout being injected.

Shotcrete

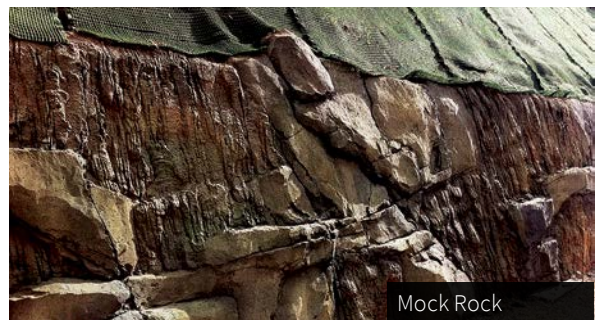
Warner Company has applied shotcrete as a means of ground support and erosion control.

In the mining industry it is used underground, on box cuts and highwalls. The civil industry mainly uses shotcrete for batter stabilisation and lined drains.

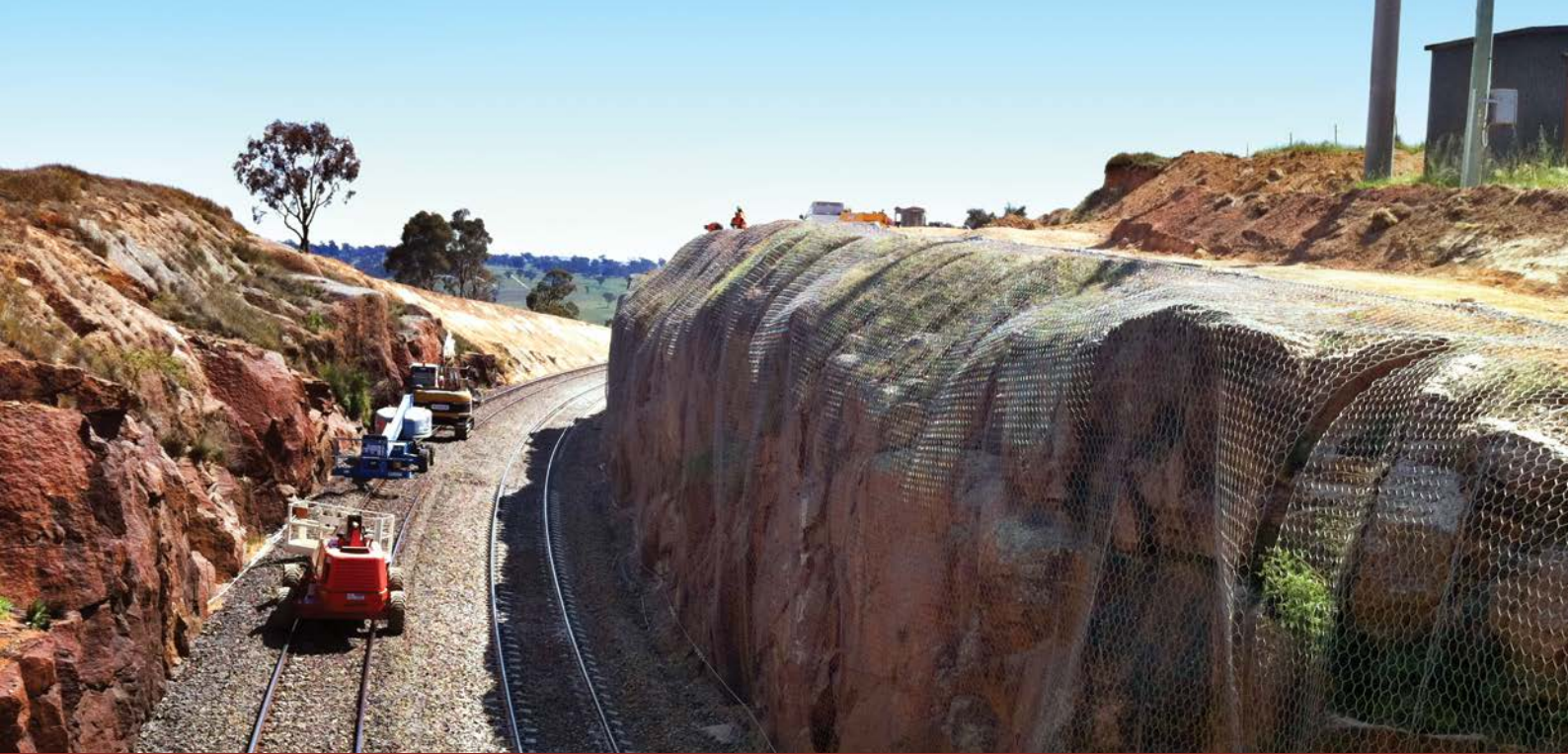
Warner Company has completed many projects requiring shotcrete and its associated works throughout New South Wales, Queensland and Victoria. Employing the same staff for many years, Warner Company has confidence in knowing that any job can be completed by our crews to the required standard. Our employees not only do shotcreting but also understand the workings of the concrete pump and equipment and can deal with any problems that may arise.



Shotcrete



Mock Rock



Associated Works

Warner Company has experience in techniques used today and is equipped to provide them for any particular job.

The following list highlights a range of associated services that we provide. (It is not comprehensive so call us if you require other services and we can discuss our capabilities.)

- Earthworks
- Rock removal and scaling
- Drainage systems
- Hydrostatic pressure relief
- Highwall stability
- Installation of mesh and steel fixing
- Rockfall Protection Netting Systems
- Rock catch fences and barriers
- Piling

Mock Rock

Mock Rock is formed by carving and sculpting shotcrete whilst it is still wet to match the surrounding geological formations in both shape and colour. This provides a natural looking, yet structurally sound retaining wall.

We have completed mock rock walls for National Parks and in more populated areas because it is more aesthetically pleasing to the public.

There is varying quality when it comes to mock rock finishes. The high level to detail we offer can be time consuming. To achieve this we mould the shotcrete to create the basic outline when it is still wet.

When the shotcrete is dry we then spray it with a mortar that bonds to the sprayed shotcrete and then sculpture it to required finish. Colouring of the mock rock is the last procedure.



Contact Us

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