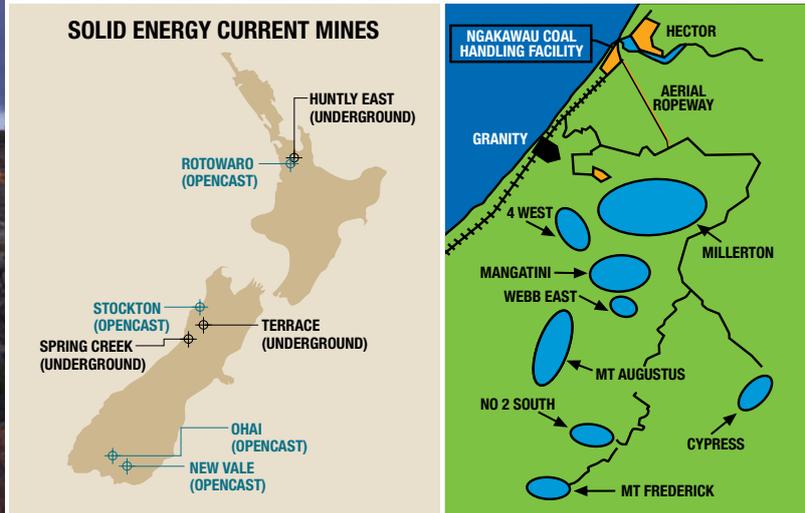


Stockton Mine



Left: Ridgeline, Stockton Opencast Mine. Top right: Relocated tussock land near Mt Frederick.

Solid Energy's Stockton opencast mining operation is located high on a plateau in the Buller coalfield, north of Westport on the West Coast of the South Island. Most Stockton coal is exported for use by Asia's leading steel mills and coke makers.

The mining operation is an important contributor to the Buller community and to New Zealand's economy, directly employing more than 500 people and regularly supplying work for up to another 200 consultants and contractors. Many other local and national businesses derive substantial income from work relating to the mine.

In recent years, Stockton production has been around 2 million tonnes (mt) a year of high-value coal. By continuing to develop its available resources in the area, Solid Energy expects the Stockton operation to continue production at these levels for up to 20 years (to 2028).

The plateau presents a number of environmental challenges, including very high rainfall, scarcity of topsoil, material in the rock which can affect water chemistry, and the presence of native species and

plant communities of particular conservation interest. To meet these challenges at Stockton, Solid Energy has developed expertise in water quality and wildlife management, mine rehabilitation and pest control.

Environmental planning and management is fully integrated with coal mining at Stockton and the mine has annual rehabilitation targets. Each year more than 30 hectares of rehabilitation is completed, an operation which regularly includes the planting of several hundred thousand native seedlings each year. Naturally occurring plants are the most tolerant of Stockton's low soil fertility, high rainfall and cold. Seedlings are propagated and grown by a number of nurseries from seed collected at the mine.

In removing the overburden, care is taken to minimise the area of land disturbance, to place the overburden in specially-formed disposal areas and to rehabilitate the area following mining.

Rehabilitation of disturbed areas has been designed as a result of extensive trials carried out to prove the most suitable vegetation and best planting techniques in

this sub-alpine environment.

The very high rainfall has eroded, over time, most of the top soil from the plateau, so the replanting programme needs to ensure that plants are hardy.

Coal is extracted from seams just below the surface. Developing an area for mining includes systems to divert clean surface water around the area and ensure any water from the work site which is carrying sediment is collected and channelled into the mine's water treatment infrastructure.

Soil and vegetation are carefully lifted and taken to a holding area or immediately placed in an area of the mine undergoing rehabilitation. At Stockton, Solid Energy has developed a system of vegetation direct transfer (picking up and moving in clumps the top layers of mulch and soil and all its associated living organisms) which accelerates site rehabilitation.



Stockton Plateau.

Controlled explosions are used to fracture the next layer, a hard sandstone which is then removed by excavator and truck and placed in an adjacent mined-out area. These landforms are built up in layers and, while under construction, care is taken to ensure any water coming from them is properly treated. When fully built up, these landforms are capped with a layer of rock and other material designed to limit the entry of air and water. A final topsoil layer allows native plantings to become established.



Water treatment.

Excavators load the coal into trucks to be taken for sizing and blending or further processing.

The coal is then trucked to the head of a 2.2 km aerial ropeway which carries it down to the Ngakawau coal handling facility at sea level. Up to six trains a day transport the coal 400 km through the Southern Alps to Lyttelton Port of Christchurch for export.

Specifications of Stockton Coal

Stockton coal is bituminous, with ash levels which can be lower than 1%. The low ash and low phosphorus content of Stockton's best coal mean it is in strong demand internationally for steel making. It also swells strongly on heating, an essential property for the production of good coke for steel making.

To ensure the mine can derive maximum value from the plateau's remaining stocks of very high-quality coal, coals from a number of pits across the plateau are blended to meet customer specifications.

Markets for Stockton Coal

Most of the coal mined at Stockton is exported for use in steel mills in India, China, Japan, South Africa and Brazil. The very low ash content of some Stockton coal means it is also in demand from the makers of activated carbon and silicon metal.



Solid Energy Rescue Helicopter.

Community Support

Solid Energy recognises its commitment to its local communities through community support programmes and regular consultation with community groups and other key stakeholders. On the West Coast, Solid Energy's community support includes the Solid Energy Rescue Helicopter, tertiary scholarships, the Buller Gorge Marathon and Relay and the Solid Energy Centre, a purpose built recreation and events centre which opened in Westport in 2009. Solid Energy also supports a wide range of education, sporting, cultural and service groups in the area.

REMOVING OVERBURDEN

MINING COAL SEAM

REPLACING OVERBURDEN

SOIL SPREAD AND LEVELLED

VEGETATION REPLANTED

