

Milford Road Avalanche Control Programme

Celebrating 25 years of keeping a vital link in Fiordland's economy open

Today, Thursday 12 June 2008, marks the start of the 25th anniversary celebrations of the internationally acclaimed State Highway 94 Milford Road Avalanche Control Programme which keeps this vital link in Fiordland's economy open and safe most of the winter.

The Minister of Transport Annette King will unveil a commemorative plaque at a community celebration in Te Anau this morning. The plaque will later be installed along State Highway 94 Milford Road.

The 119-kilometre alpine road is vital to local industry, in particular tourism. It is the only land link to Milford Sound, New Zealand's top tourist destination and is used by about 1500 vehicles a day, many of them buses, at the height of the tourist season.

Until the late 1970s the road was closed all winter. The avalanche control programme was established in 1983 to predict and manage the risk. Today Transit's internationally acclaimed programme keeps the road open on all but eight days of the year on average.

"The avalanche control programme is one of the key factors in the burgeoning growth of the Fiordland economy and, for each day it is kept open, it is estimated to potentially add between \$200,000 and \$600,000 to the economy depending on the time of year," Transit Dunedin acting regional manager Bruce Richards says.

One man's tragedy leads to safety for travellers

In 1983, the first of six weather stations was set in place to monitor conditions at known avalanche start points. But, on 23 September that year, highly regarded road supervisor and Te Anau resident Robert "Pop" Andrew was killed by an avalanche while helping to clear the road. He was the fourth road worker to die as a result of an avalanche since work started on the road in the 1930s.

The determination of bulldozer operator and friend Wayne Carran that such a tragedy should never happen again gave added impetus to the development of the avalanche control

programme. Today Wayne is avalanche programme manager with contractor EDi Works which run the programme on Transit's behalf.

Transit has recently entered into a new contract with Downer EDi Works which has a key focus on developing new people with the necessary skills to manage this programme – and perhaps others world-wide. It will ensure this major risk-management process is sustainable into the future.

How we keep the road open and safe

a) Monitoring and predicting

The key to avalanche control is a combination of weather forecasting, automatic measurement and transmission of data (telemetry) and local experience. The avalanche team regularly checks the start zones of 85 avalanche paths, of which 50 could potentially affect the road.

Six weather stations transmit data on weather and snow conditions every hour to the programme's Te Anau base. Even tiny changes in data can indicate a risk of avalanche. The team has developed world-first tools to increase the accuracy of its risk assessment, including equipment that:

- Measures the timing and volume at which water filters through the snow pack
- Measures down-slope creep and tension of snow packs
- Transmits temperature of the snow pack
- Improves the function of weather stations
- Measures the weight of the snow.

b) Active control

Active control involves assessing an avalanche risk and dropping 25 kilograms of explosives from a helicopter to start an avalanche in a controlled manner before it can become a danger to human life. New Zealand's Milford programme is the only one in the world to be totally reliant on avalanche control by helicopter.

The road is always closed before active control begins. The air crew checks the area to ensure it is clear of vehicles and people before dropping explosives on to the snowfields.

Precise handling techniques and a clear code of communication between "bomber", observer and pilot have ensured no incidents since the programme began. Once the avalanche settles, the road crew clears the debris before re-opening the road.

c) **Passive control**

Passive control combines controlling access to the road with an awareness programme informing travellers of the conditions. This is supported by continuing road improvements to provide a smoother drive.

During winter, Transit operates an information kiosk just north of Te Anau where staff inform drivers of the avalanche risk and how to drive safely in often tricky conditions. They check travellers have the correct chains and know how to fit them.

How the local economy benefits

To keep Milford Road open costs just over \$1 million a year for the avalanche control programme but makes it possible to extend the tourism season and maintain a land link for the fishing industry.

It is easy to see why this is a good investment when Tourism Ministry figures indicate more than a million people visit Fiordland each year, spending a total of \$120 million. A Department of Conservation report shows Fiordland National Park adds \$228 million to the economy per year.

Closures of the road are estimated to cost the economy between \$200,000 and \$600,000 a day. If the road was closed for about three months as in the past, this would mean about \$18 million lost to the economy. Today, closures have been reduced to around eight days of the year.

For more information, visit www.milfordroad.co.nz