

Will rail take the strain when

What will happen to transalpine traffic when the Gotthard road tunnel closes for maintenance work? Can rail take the strain from the roads on this vital axis, and if so, how? Regional editor **Anitra Green** takes a look at the possibilities and the wider implications.

EVEN if the Swiss say yes to the construction of a second SFr 3bn (\$US 3.1bn) Gotthard road tunnel when they go to the polls next year, it is widely assumed that it cannot possibly be ready for operation before the existing tunnel closes for essential maintenance work, which ideally will happen between 2018 and 2020.

Studies have been completed and plans are already being drawn up for rail transport to carry the vast amount of traffic that uses this route. The Gotthard Base Tunnel is due to open in 2016 and the existing mountain route will be retained for regional and tourist services, as well as for other freight and passenger traffic if required.

According to a study by the Swiss Federal Office of Transport (FOT), the best option would be to divide the traffic. A car shuttle would operate through the existing railway tunnel on the mountain route between Göschenen and



Airolo, while lorries, buses and other large vehicles would travel on a rolling road service through the base tunnel between Rynächt/Altdorf and Biasca. This is the only variant that meets all requirements: the mountain route could not take all the traffic - there is no land available to construct loading terminals in the Alpine valleys - and diverting traffic

to the Lötschberg route or setting up a longer rolling road service (eg Basle - Lugano/Chiasso) would not cover regional needs.

Precedents exist for both types of service. BLS, Switzerland's second largest railway company runs an efficient and successful car shuttle operation year-round on the Lötschberg between

Kandersteg and Goppenstein. BLS has already made it clear that it is prepared to offer its expertise and resources on the Gotthard route, and the shuttle trains that will have to be acquired could be used by BLS afterwards on the Lötschberg.

As for lorries, intermodal operator RALpin runs equally efficient and successful rolling road services between

Gotthard road tunnel closes?



Photo: David Gubler

Freiburg-im-Breisgau, Germany, and Novara near Milan via the Lötschberg and to Lugano via the Gotthard. RAlpin's expertise could also help in setting up a similar, much shorter, service on the Gotthard, possibly with two or even three loading points on each train to speed up turnaround times at terminals.

However, both services will

only work successfully if the turnaround time and frequency is regular and efficient enough to avoid unacceptably long queues. In this context it is worth looking at Innovatrain, a competence centre for developing intermodal systems for time-critical goods over short distances.

Innovatrain focuses especially on heavily populated areas, where space for transshipment and interim storage is scant and local rail facilities are limited. The system relies on precise planning, careful siting of hubs, good timing, the right rolling stock and a system for horizontal transshipment of 20-foot containers and standard swap-bodies called ContainerMover 3000. Retailers, the postal service and major manufacturers such as Coca-Cola, Nestle, are all turning to intermodal operations in Switzerland in the face of chronic congestion on major roads. Innovatrain's expertise could also be utilised in the organisation of the new services.

Wider view

No firm decisions have been reached on precisely when these new services will have to be in operation, or exactly what form they will take. But this situation has wider implications, which existing and potential players on the Gotthard route are already looking at. Whether the Swiss

voters decide in favour of a second road tunnel or not, will road haulage firms immediately shift back to pure road transport when the maintenance work is finished or will they become intermodal? In other words, will the new facilities still have a job to do?

To a certain extent, this depends on whether the Alpine initiative of 1994 to halve the number of lorries passing through Gotthard road tunnel to 650,000 units a year can be achieved. Traffic has averaged around 1.25 million units a year since 2000, but it is difficult to see how further reduction can be achieved in the face of projected growth rates on the north-south trade routes, and there is already a move to readjust the target to a higher, more realistic level.

Nonetheless, there is an opportunity here, which innovators in the intermodal field have already scented. Most road freight travels in semitrailers, the vast majority of which cannot be lifted by gantry crane or reachstacker. Around 3.5% of semitrailers have been modified to be cranable and can be handled in all intermodal terminals. For the rest, the only intermodal transport possibilities are the rolling road, which is inherently uneconomic and has to be subsidised, or to use one of the new transshipment techniques developed in the last few years.

All of these have been tried out in commercial service with

varying degrees of success, and all have their advantages and disadvantages.

CargoBeamer, developed in Germany, is perhaps the most versatile: the semitrailer is driven on to a cradle which can then be lifted normally, or moved horizontally onto a wagon, in which case specially-equipped terminals are needed. With Nikrasa (Germany), the semi-trailer is also driven onto a cradle which can be lifted, but this needs a portable ramp. Modalohr (France) needs special terminals and wagons, while Megaswing (Sweden) also needs special wagons: both are purely horizontal systems with a swivelling section which enables the semitrailer to be driven directly onto the wagon.

The question of who is the first to commit to using one of these systems on the Gotthard route has already been answered. Last month BLS Cargo launched a new Cologne - Melzo (Italy) service with CargoBeamer for semitrailers with a corner height of 4m. This represents a breakthrough in every respect, and it will be interesting to see how long it takes for others to follow suit, what system they will choose, and how quickly road hauliers respond.

In the meantime, the priority is to establish a basic concept for rail operation during the closure of the road tunnel. **IRJ**