Case Study
D-Greece
National Road 3 (Domokos)

The information detailed in this Case Study has been provided by RSI ‘Panos Mylonas’. National Road 3 (NR3) connects the border station of Niki on the border with Northern Macedonia with Elefsina crossing the eastern side of Western Macedonia, western Thessaly and eastern Central Greece. The road section has one lane per direction and its layout is winding (moderate speed limits and sharp curves).

The point of interest is located near Domokos village, where the Annual Average Daily Traffic (AADT) in 2013 was 5,000 vehicles. Figures 1 and 2 show the location and an aerial view of NR-3 (Domokos) respectively.
Maintenance Remedies

Figure 3 shows the precise location of, and evidence for, the various elements requiring maintenance.

The maintenance measures that should be applied are as follows:

- Re-surface those parts of the road that are in a poor condition
- Apply shoulder and centerline rumble strips
- Reinstate other delineation, as required
- Add a new metal barrier (on the driver-side roadside edge) to protect from the cliff hazard.
Road Assessment

The Star Rating Score (SRS) has been analysed for 100 meters of this road section before and after the proposed maintenance works.

Before the maintenance remedies, the Star Rating Score is 111.96 for vehicle occupants, 135.36 for motorcycles and not applicable for pedestrians and bicyclists, as local information suggests that pedestrians and cyclists have not been observed on this road section and are therefore not rated.

The Star Rating is 1 star for vehicle occupants and motorcycles.

Improving the Star Rating by one star is generally associated on average with a halving in the crash costs per kilometre travelled for vehicle occupants and step-changes in safety benefits too for other road users.

After the completion of the maintenance works that are proposed, the Star Rating Score is 11.28 for vehicle occupants, 16.37 for motorcycles and not applicable for pedestrians and bicyclists.

So, by providing only maintenance remedies, the Star Rating would be increased for the users (from 1 star to 3 stars for vehicle occupants, and from 1 star to 2 stars for motorcycles).

Conclusions

The maintenance that should be carried out would potentially increase safety and reduce the risk for vehicle occupants, motorcyclists and cyclists on this road section substantially. The Star Rating for these road users would be improved by one (motorcyclists) or two (vehicle occupants) risk bands.

The maintenance-only remedies proposed are considered an effective investment.