

Road Condition Signs – Automation

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The Department of Planning, Transport and Infrastructure have installed 32 changeable message signs at the start of major unsealed roads across South Australia's 10,000km outback road network to inform motorists of road closures and restrictions.

Each sign lists between one and eight roads or sections of roads. Adjacent to each listed road is a four sided rotating tumbler that can display 'open', 'closed', '4WD', or '4WD HV' (Heavy Vehicle). Each tumbler can be dialled up remotely using the Thuraya Satellite Communication System to rotate it and display the status of that road. It sends confirmation back to the office showing the time that the sign was changed. The signs are self testing and self diagnostic and each sign maintains an event log of all activities and status.

Power is provided through a solar panel with battery backup.

The mechanical and electronic components of the tumbler, power and communications systems were designed to withstand extreme temperature (in excess of 50oC), wind and dust conditions.

South Australia's Department of Planning, Transport and Infrastructure (DPTI) maintains 10,000km of unsealed roads across 640,000 km² (9% of Australia) of its outback. To manage public safety and reduce damage to the road network, DTEI temporarily closes or restricts use of these roads during rain events.

The public is informed of road closures and restrictions through an internet site, phone service, a road condition report sent to 120 businesses and road condition signs.

Previously, DPTI managed a group of volunteers to change a hinged metal flap next to each listed road on the signs to show the status of the road. This system was time consuming for DTEI staff following up volunteers, relied on volunteers being immediately available to change signs and did not provide an accurate record of when a sign was changed.