



AUSTRALIAN RAIL TRACK CORPORATION LTD

Ref No: 08-08-09-001

New Equipment & Systems Approval Traffic Signal on Level Crossing Mast

1. Determination of Need

Transport SA, in response to level crossing audits of high risk crossings following the Park Tce, Salisbury incident, have provided funding to ARTC for an upgrade of the South Road, Wingfield, level crossing (on the Dry Creek to Outer Harbour corridor). A component of the upgrade works involves the placement of traffic lights on ARTC's level crossing masts. Whilst not a precedent (ARTC has traffic lights installed on the Victoria Rd, Birkenhead crossing, with TransAdelaide having several locations with traffic lights installed) the positioning of the traffic light with respect to the rail signal light has required further discussion with Transport SA.

Discussions with Transport SA in consideration of past practice, has resulted in the attached schematic being adopted for the South Road works and proposed to be accepted as the standard configuration for future similar works.

2. Significant Change or Not

This change in equipment is assessed as MINOR

3. Review Panel

The equipment review panel for the Traffic Lights on LX masts was:

- John Cowie – Manager Engineering Services
- Neville Fletcher – Signal Systems Manager
- Matthew Hart – Project Manager

4. Equipment Suitability

- Use in other rail networks

As indicated above, traffic lights have been previously installed on ARTC Level Crossing Masts at Victoria Road, Birkenhead to a differing configuration (refer attached photo). Following further installations on TransAdelaide crossings throughout various locations within metro Adelaide, the attached configuration has been developed by TransportSA for use as a future standard for such installations. The primary reason for the change from the Victoria Rd configuration is to centre the motorists vision in one area rather than separate the motorists vision by the positioning of the rail cross butts (as is the case at Victoria Rd).

The attached configuration is already in existence at several crossings in metro Adelaide (South/Cross Rd intersection being one).

An issue was raised on the dwell time between the rail crossing ringing and the traffic lights showing a stop indication. This dwell time (ie the time that an amber indication is provided to motorists) is 4 seconds. Given that the auto gates take 15 seconds to commence dropping (and a total 35 seconds warning time provided) for South Road, this is considered acceptable and is current practice on all other installations in Adelaide. However, in other installations, this aspect needs to be considered and, wherever possible, pre-emptive indications provided to the traffic lights so that the red STOP indications complement on both signals.

Additionally, the flashing amber characteristic of traffic lights needs to be removed from the functionality of the lights to ensure there is no conflicting indication in the result of the traffic lights failing.

5. Approval

Approval is granted for the installation to proceed as indicated.

6. Conditions of Approval

ARTC's Level Crossing Construction Standard SC 03 01 is to be updated to reflect this type of installation.

The maintenance arrangements for the road traffic signals and the level crossing signals are to be clearly set out in the Interface Agreement between ARTC and TransportSA.

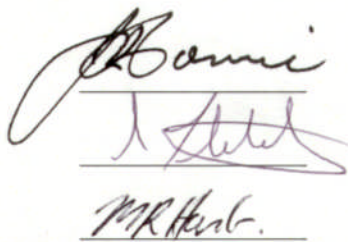
Signed:

Equipment Review Panel

John Cowie

Neville Fletcher

Matthew Hart



13th September 2004