| **Level Crossing Interconnected Test Plan (NSW only)** | | | | | | | |  | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Level Crossing Name:** | | | | | Inspection & Test Plan No.: | | | | | |
| **Location:** | | | | | Level Crossing with multiple input | | | | | |
| **Road:** | | | | | Date: | | | | | |
| **Rail Line:** | | | | | **Km:** | | | | | |
| **TASKS TO BE UNDERTAKEN** | | | | | | | | | | |
|  | | Responsibility – RA = Road Authority; ARTC = rail authority | | | | | | | | |
| ID | | **Activity / Criteria** | **Responsibility** | **Inspected** | | | | | | Test Result |
| **Conformance Criteria** | | **Initl.** | | | **Date** |
| 1 | | **Preliminary Work** | | | | | | | | |
| 1.1 | | Set out work area | RA / ARTC |  | |  | | |  | Y/N |
| 1.2 | | Configuration of traffic light sequence  Notification to TMC | RA | Authorised RA representative | |  | | |  | Y/N |
| 1.3 | | Notification to Network Control Centre | ARTC | ARTC Signal Maintenance Engineer | |  | | |  | Y/N |
| 1.4 | | Initiate maintenance mode on level crossing monitor  Test timer relays | ARTC | * Press and hold reset button for 5 sec * Observe monitor in Maintenance mode ( light flashing) 45min time limit   Record results for below timer tests  Gate Delay :  Train Demand Response Time – TDJR : | |  | | |  | Y / N  Y / N  Y / N  Y / N |
| 2 | | **Functional Tests** | | | | | | | | |
| 2.1 | | ***Functional Test 1*** Minimum clearance phase start delay  May not be required – dependent on traffic light configuration | RA/ARTC | Initiate Train Demand   * Observe “TDR” de-energised, then “TLR” energised, then “XR” de-energised. Record Time between TDR and XR: * Traffic lights leading to the level crossing return to stop * Green clearance phase commences prior to level crossing operation. * Green clearance phase terminates(>2 sec) after booms commence to descend   Cancel Train Demand and observe   * Level crossing ceases to operate and traffic lights resume normal operation * Relay sequence to be observed “TDR” energises then “TLR” de-energises, then “XR” energises | |  | | |  | Y / N  Y / N  Y / N  Y / N / NA  Y / N / NA  Y / N  Y / N |
| 2.2 | | ***Functional Test 2*** Maximum clearance phase start delay  May not be required – dependent on traffic light configuration | RA/ARTC | Initiate Train Demand   * Observe “TDR” de-energised, then “TLR” energised, then “XR” de-energised. Record Time between TDR and XR: * Traffic lights leading to the level crossing return to stop * Green clearance phase commences prior to level crossing operation. * Green clearance phase terminates(>2 sec) after booms commence to descend   Cancel Train Demand and observe   * Level crossing ceases to operate and traffic lights resume normal operation * Relay sequence to be observed “TDR” energises then “TLR” de-energises, then “XR” energises | |  | | |  | Y / N  Y / N  Y / N  Y / N / NA  Y / N / NA  Y / N  Y / N |
| 2.3 | | ***Functional Test 3***  Manual operation of Level Crossing | RA/ARTC | Turn the “Manual Operation switch “ON” and observe “**TDR**” de-energised and “**XR**” de-energised   * Level crossing operates immediately * Traffic lights proceed through the Train Demand Phase and Clearance Phase   Cancel Train demand and observe   * Level crossing ceases to operate and traffic lights resume normal operation * Relay sequence to be observed “TDR” energises then “TLR” de-energises, then “XR” energises | |  | | |  | **Y / N**  **Y / N**  **Y / N**  **Y / N**  **Y / N** |
| 3 | | Fault Test Scenarios | | | | | | | | |
| 3.1 | | TDR false indication  Inputs off  Inputs on | RA/ARTC | * TDR links open on NC and NO contacts * Traffic Lights go into train demand phase * Reinstate links * TDR links closed on NC and NO contacts * Traffic Lights go into train demand phase * Reinstate links | |  | | |  | **Y / N**  **Y / N**  **Y / N**  **Y / N**  **Y / N**  **Y / N** |
| 3.2 | | Lights false indication  Inputs off  Inputs on | RA/ARTC | * XE links open on NC and NO contacts * Traffic Lights go into train demand phase * Reinstate links * XE links closed and false feed on NC and NO contacts * De- energise TDR * Traffic Lights go into train demand phase * Reinstate TDR | |  | | |  | Y / N  Y / N  Y / N  Y / N  Y / N  Y / N  Y / N |
| 3.3 | | Traffic Light Relay (TLR) false indication  Inputs off  Inputs on | RA/ARTC | * Remove N12 to TLR * De-energise TDR * Level crossing operate as per normal * Reinstate TDR * Check 1 sec delay between TDR energises and then XR energises * False feed TLR * De-energise TDR * Level crossing operate as per normal * Reinstate TDR * Level crossing continues to operate * Traffic lights go into flashing yellow state after xx seconds | |  | | |  | Y / N  Y / N  Y / N  Y / N  Y / N  Y / N  Y / N  Y / N  Y / N  Y / N  Y / N |
| 4 | | Re-instatement | | | | | | | | |
| 4.1 | | Restore road traffic signals to normal operation. | RA | * Restore traffic light signals back to normal operation * Ensure any interfaces have been disconnected * Observe behaviour of traffic signals * Ensure operation to current design * Advise work complete | |  | | |  | Y / N  Y / N  Y / N  Y / N  Y / N |
| 4.2 | | Restore level crossing to normal operation | ARTC | * Reset Level crossing monitor to normal mode * Check to ensure any pins\ fuses removed for testing has been restored * Test level crossing to ensure correct operation (lights, Bells and booms) * Ensure all equipment locked and secure * Advise Network Control Centre | |  | | |  | Y / N  Y / N  Y / N  Y / N  Y / N |
|  | |  |  |  | |  | | |  |  |
|  | | | | | | | | | | |
| **ENGINEER CLOSE OUT** | | | | | | | | | | |
| 25 | **CERTIFIED BY** | |  | |  | |  | | | |
| First name and family name | | Position | | Organisation | | | |
|  | |  | |  | | | |
| RIW No. | | Signature | | Date | | | |
|  | **Comments:** | |  | | | | | | | |