

# PROCEDURES FOR THE INSTALLATION OF ACTIVE ADVANCED WARNING SIGNS (AAWS) AT RAIL CROSSING SITES

Includes Amendment 1

## Forward

This guideline has been developed by VicRoads. It is one of a number of technical guideline, and associated standard drawings, which set out the requirements for roadside ITS devices, traffic signal equipment and other electrical equipment and associated devices and control systems.

This guideline is intended for use in all relevant works undertaken by or on behalf of VicRoads.

**Specification updates.** VicRoads guidelines and associated standard drawings are subject to periodic review. To keep the specifications up to date, amendments or new editions are issued as necessary. It is therefore important for users of VicRoads specifications to ensure that they have the latest version and associated amendments.

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#### Amendments

No.	Date	Description
No. 1	June 2009	Removal of Attachment 1. Available as separate document.

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## 1 GENERAL

### 1.1 Introduction

In June 2007 the Victorian government announced a program to improve level crossing safety in Victoria. Part of that program includes the installation of automated advance warning signs at 53 rail crossing sites across the state commencing in 2007. The signs will be constructed on the side of the roads approximately 250 metres prior to the level crossing and will be activated automatically when a train is approaching the crossing.

This document provides installation and maintenance guidelines to VicRoads staff and contractors for the new Active Advance Warning Signs (AAWS) system. It also provides step by step procedures in case of system faults or any other incidents.



Typical AAWS sign with two yellow flashing LED lights

### 1.2 Purpose

The purpose of Active Advanced Warning Signs (AAWS) is to provide an early indication to road users that a level crossing (with at least Flashing Light protection) is about to operate or is already operating. The signs are triggered by the approach of a train and provide additional visible warning to drivers.

### **1.3 System Description**

Details of typical AAWS layouts are given in the Australian Standard AS1742.7 – 2007 Manual of Uniform Traffic Control Devices, Part 7: Railway Crossing. Guidance is also given on the illumination and reflection of signs, on their installation and location, and on selecting the appropriate sign size.

VicRoads specification TCS057 specifies the requirements for the supply and installation of the roadway components of the system, including the signs and the signal controller. Flashing yellow lights are activated and deactivated upon receipt of appropriate input signals from the railway level crossing protection system. Details of the operation of the system and the various inputs and outputs between the railway system and the AAWS are specified in Section 3 of TCS 057-2-2007.

One sign per approach is adopted in a typical installation; more signs may be erected for approaches with poor site alignment. The VicRoads controller will be connected to the VicRoads Traffic Management Centre (TMC) for monitoring purposes. The communication back to TMC is achieved using 3G mobile technology.

A Program Delivery Overview is provided in *Appendix A*. The flowchart outlines the milestones of a typical AAWS installation and highlights the responsibilities of VicRoads Regional Services Support (RSS), regional staff and VicTrack in delivering the system

## **2 FACTORY TESTING**

### **2.1 General**

Each AAWS controller undergoes full factory testing prior to site installation. Complete system functionality is typically tested using the test site number 99998 or 99999. Any faults logged in the AAWS Host System using this test site number are not recorded into MMS. This is achieved by not ticking the “Send Alarm” box in the AAWS GUI (see Appendix B).

Final testing is then conducted using the actual site number.

## **3 PRE-INSTALLATION**

### **3.1 Access Card for AAWS Controllers**

VicTrack manages the program of controller installations as well as other civil works and provides a list of upcoming installations to Regional Services Support (RSS) about 6 months in advance. A bulk purchase of access cards is then organised by RSS and provided to VicTrack. After allocating the SIM cards to individual sites, a spreadsheet with relevant SIM card details will be distributed to RSS and relevant regional offices by VicTrack. Please note that the SIM cards are kept with VicTrack and will be passed directly to the installation contractors.

### 3.2 Site Number Request

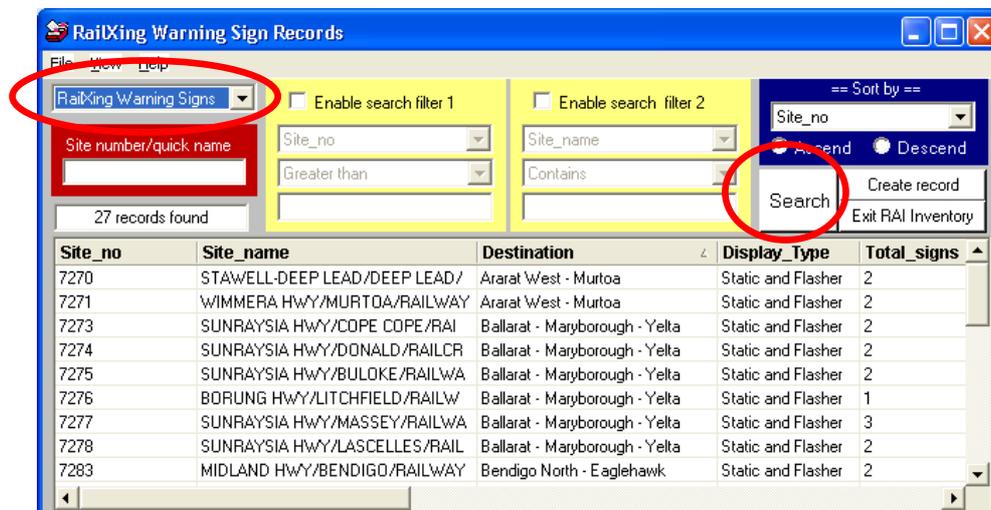
A site number request shall be placed in the ITS Site & Slot Number Requests Database as it would be for a traffic signal site. The Regional Office shall provide the Site Number to VicTrack within two weeks upon receiving the forecast installation list.

Before launching a request for site number, the responsible VicRoads Officer should check if there is a site number already allocated to the AAWS. To do this, open the Road Asset Inventory Database (RAI Inventory.NET).



*RAI Inventory log-in page*

After logging in to RAI Inventory, select **RailXing Warning Signs** from the top left drop down box and click **Search**. The result will give all records of AAWS which are currently in the system, as shown in 0.



*Rail crossing search results from RAI Inventory*

If there is no match result in the database, a request for a Site Number shall be submitted using the Lotus Notes database by opening the **ITS Site & Slot Number Requests** database shown in 0.



*ITS Site & Slot Number Requests Database icon*

After selecting a Site Request, the system comes up with the *Site Type Selection* screen as shown in 0. Select **RAILWAY CROSSING ADVANCE WARNING SIGN** as circled below and then click **OK**.

Site Type	Site Description
HAZARD SIGN	Warning sign
HAZARD WARNING	Flashing red/yellow warning
HEIGHT GAUGE	Height of Gauge
ICE WARNING	Ice hazard warning signs
ILLUMINATED SIGN	Illuminated sign (not variable)
INTERSECTION	Intersection signals
LIGHTING	Lighting Schemes
MEDIAN GATE	Median gate
MUX	Multiplexer
O/H LANE SIGNALS	Overhead lane designation signals
PEDESTRIAN OPERATED SIGNALS	Pedestrian Operated Signals
PUMPING STATION	Pumping Station
RAILWAY CROSSING ADVANCE WARNING SIGN	Flashing Yellow Warning
RAMP METERING SIGNALS	Ramp Metering Signals on freeway ramps
RAMP SIGN	Drivetime ramp control sign
REFERENCE SITE	Reference site
ROAD MGT	Traffic management device
ROAD WORK SIGNALS	Road work signals
ROUNDBOUT METERING	Roundabout Metering Signals
SAFETY CAMERA	Safety Camera
SCHOOL SPEED ZONE	School Speed Zone
SECURITY	Building security
SHOPPING SPEED ZONE	Shopping Centre Speed Zone
SIGN OTHER	Other sign
SPEED ADVISORY	Speed Advisory Sign, inc Too Fast, Slow Down, etc

**Site Type selection**

All mandatory fields are marked with a star in the application form as shown in 0. For any additional information or site details, enter in the **Comments** field. Hit the Submit button when finished.

\*\* Please ensure the **SIM card details** such as Mobile Number, Data Number and the SIM Number are entered in the **Comments** field at the bottom of the request form so that Mobile Information of the controller can be entered into RAI accordingly.

Site Number Request Details

★ = Mandatory Field

Site Type: RAILWAY CROSSING ADVANCE WARNING SIGN    Flashing Yellow Warning

Site Name: ★

Region: ★

Municipality: ★

Suburb: ★

Primary Road: ★

Nearest Intersection: ★

X Coordinates: ★

Y Coordinates: ★

Directory Type: ★

Directory Reference: ★

Maintenance Area No.: ★

Between Road 1: ★

Between Road 2: ★

Road Classification: ★

Owner: ★

No. of signs: ★

Zone Speed: ★

Power Type: ★

Power Authority: ★

Connection: ★

Comments:

Submit

**Site Number Request Application Form**

An email advising the allocated Site Number will be sent from the database manager within one week of application. The responsible VicRoads Officer is to provide the Site Number to VicTrack so that Public Information Label can be installed on the controller cabinet accordingly at site commissioning.

### **3.3 Risk Workshop**

Risk Workshops are organised by VicTrack to brief risk assessments on AAWS installations. Officers from VicRoads regional offices will be invited to attend Risk Workshop.

### **3.4 Site Meeting**

It is intended that VicTrack will inform the VicRoads Regional Office at least four weeks in advance of installation. Prior to any installation, a meeting should be held with VicTrack and the responsible VicRoads Officer.

## **4 PRE SWITCH-ON**

### **4.1 Construction Audit**

Before commissioning, the Regional Office should inspect and sign off all works associated with the AAWS system.

### **4.2 Controller Functional Tests**

Full functional testing is conducted in the factory. The only tests required on site are as follows:

- Normal Controller Operation functions on
  - “Cable Monitor”
  - “Call” function operations
  - “System Operational” indicator
  - “Indicator Light”
  - “System in Manual Mode” indicator
  - “Manual Test Switch”
  - “Flashing Lights”
  - “Battery Back-Up”

### **4.3 Communications Test**

Communications Test shall be conducted on site as listed in Section 6.2 of this document.

## 5 SWITCH-ON

### 5.1 Commissioning

At commissioning, the responsible VicRoads Officer shall be present to sign off on the installation. It is recommended that the Maintenance Contractor is also present for the commissioning. In addition, a representative from ITS will typically be invited to attend also.

At this hand over meeting any required on-site training, any spare parts and manuals should be provided by VicTrack to the VicRoads Maintenance Contractor. The responsible VicRoads Officer shall seek warranties and / or defects period information from VicTrack. A list of contact details in case of emergency must be provided to the responsible VicRoads Officer, including after hours telephone contacts.

### 5.2 Controller Communications Tests

Following the Controller Functional Tests, Communications Tests between the controller and TMC shall be conducted if power is available. The Communications Tests shall satisfy the followings:

- Ability to establish communications from site to TMC utilising Rail Crossing GUI in TMC
- Ability to establish communications from TMC to site using Rail Crossing GUI

Guidelines for on site Communications Tests can be found in *Appendix B*.

## 6 RAI UPDATE

### 6.1 Site status and details update in RAI

Once the site is in operation, the Site Status and Switch-On details require updating in the RAI Database. The responsible VicRoads Officer shall enter this information within 24 hours after commissioning. This will ensure that the region and TMC know a new site is connected to the network and who to contact if there is any problem.

The responsible VicRoads Officer shall update details in **both** “Sites” and “RailXing Warning Signs” views in RAI database.

**View RailXing Advanced Warning Sign Record**

Site No.: 7260 [View on Map](#)

Site Name: MIDLAND HWY/BYRNESIDE/RAILWAY CROSSING

Rail Line: Toolamba - Echuca

Display Type: Static and Flashers No. of Signs: 3

**Communications Type & Information**

Hardwired Information

Frame relay No:

Kew termination No:

Line Speed:

Mobile Information

Mobile No: 0448 593 832

Data No: 0458 553 689

**Sim Card**

Serial No: 5908 2226 8P

PIN:

Service Provider: Telstra

IMEI No:

Last modified by WONGJ on 19/11/2008 16:08:05

***Rail Crossing Advanced Warning Sign record in RAI***

## 7 MAINTENANCE

### 7.1 Variation to Maintenance Contracts

The responsible VicRoads Officer is to inform the Maintenance Contractor of when the new equipment is installed, and any maintenance requirements including required response times. Where appropriate, variations to existing maintenance contracts may need to be negotiated and agreed.

### 7.2 Incident Management

VicRoads is responsible for the maintenance of the controller, signs and lights. The railway infrastructure manager is responsible for the maintenance of the railway signals and detectors.

When the TMC receives an advice that a fault has been detected in an AAWS, the Maintenance Contractor will be responsible for the initial response and investigation.

In case of a fault, the Maintenance Contractor shall keep the TMC informed of the progress and the responsible VicRoads Officer (business hours) or TMC (after hours) shall advise the rail infrastructure manager of the incident and its progress through the relevant Train Control Centre phone number if applicable.

### 7.3 Fault Procedures

The AAWS system will be maintained by the local maintenance contractor. Faults should be responded to as detailed in the following Table:

Fault	Description	Response
Communications Fault	Unable to establish communications with site	Manually try to connect to site.  Check that there is no fault in VicRoads equipment. If no fault at VicRoads end, call out Contractor.
Mains Failure (BO)	The mains have failed.	Contact local Supply Authority to determine if there is a problem in the area.  No need to call out Contractor.
Battery Critical	The controller has been running on batteries for 4 hours.	Call out Contractor.  Advise Train Control Centre.
Lamp Fail	A yellow warning light has failed.	Call out Contractor.
Lamp Supply Fault	Mains supply to the flashing lights has failed.	Call out Contractor.  Advise Train Control Centre.
Rail Cable Monitor Fault	The cable connecting the railway control box with the AAWS controller has failed.	Contact VicTrack to determine if they have a railway fault on site.  If VicTrack have a fault, no action required.  If VicTrack do not have a fault, call out Contractor.
Facility Switch in 'Manual' Mode	The system has been activated manually.	Attempt to confirm if anyone is on site.  If no one is known to be on site, call out Contractor.
Door Open	The controller door has been opened.	Attempt to confirm if anyone is on site.  If no one is known to be on site, call out Contractor.

**Table 7.3 - Rail Crossing Advanced Warning Sign Record in RAI**

**APPENDIX A**

**Program Delivery Procedures**

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### AAWS Program Delivery Procedures

VicRoads Responsibility	Action	Ref
	Contract awarded to VicTrack for design and construction	
	↓	
Team Leader - Road Safety	Review and approve detailed design plans submitted by VicTrack	
	↓	
RSS	Organise and provide SIM cards to VicTrack upon receipt of upcoming installations list (prepared by VicTrack)	4.1
	↓	
Signal Main. Officer and Surveillance Officer	Attend Risk Workshop(s) organised by VicTrack	4.3
	↓	
Signal Main. Officer	Provide site number(s) to VicTrack upon receipt of upcoming installation list and allocated SIM details	4.2
	↓	
Signal Main. Officer / Surveillance Officer	Attend pre-installation site meeting(s) organised by VicTrack	4.4
	↓	
Signal Main. Officer	Inform Maintenance Contractor regarding new installation and make variation to existing contract if appropriate	7.1
	↓	
Signal Main. Officer / Surveillance Officer	Conduct construction audit and Controller Functional Tests	5.1, 5.2
	↓	
VicTrack, Region, & Maintenance Contractor	Attend Test, Switch on & Commissioning on site and sign off installation	6.1, 6.2
	↓	
Signal Main. Officer	Update RAI and manage site with Maintenance Contractor	7.1

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## **APPENDIX B**

### **AAWS GUI Operation and Communications Testing Guidelines**

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# AAWS GUI Operation and Communications Testing Guidelines

## B1 General

The following information is intended to provide operational for TMC officers.

## B2 The AAWS GUI

A Graphical User Interface (GUI) has been developed for use by TMC operators to simplify the commissioning and interrogation procedures for AAWS. This GUI can also be used to add new sites to the AAWS system. Figure B1 show a screen capture of the GUI. There are a total of nine fields for each site entry. These fields are detailed below.

ID	PHONE	ALARM CODE	DESCR.	LAMPS	DIAL OUT?	SEND EMAIL?	SEND ALARM?	STATUS
12345		TESTCRX		4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5038	52396391	RAILCRX	PHW/Wamcoort Rail C...	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:00:28 ...
7246	0439505420	RAILCRX	KERANG NTH Rail Cr...	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:05:35 ...
7249	0437914471	RAILCRX	Inverleigh	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:05:04 ...
7255	0458100447	RAILCRX	Wimmera hwy/Jung	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:07:48 ...
7259	0428182708	RAILCRX	Strathmerton	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:00:38 ...
7260	0458653689	TESTCRX	Byrneside	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Incoming call Thu Jan 08 1:30:17 F...
7268	0439544008	TESTCRX	Westmere	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7269	0447835380	RAILCRX	Bairnsdale	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:00:38 ...
7270	0427155839	TESTCRX	Deep Lead	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Outgoing call Wed Jan 07 2:33:00 ...
7273	0409675386	TESTCRX	Cope Cope	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7274	0427397427	TESTCRX	Donald	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7275	0458565452	TESTCRX	Lake Buloke	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7276	0448652607	TESTCRX	Litchfield	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7277	0447796012	RAILCRX	Massey	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:00:37 ...
7278	0447796012	TESTCRX	Lascelles	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7279	0429690342	RAILCRX	Tarnagulla - Bendigo	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Mon Jan 12 8:01:14 ...
7282	0427762716	TESTCRX	Rochester	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7283	0428775517	TESTCRX	Bendigo	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
99998	0437651343	TESTCRX	AAWS TEST SITE 2	8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
99999	0437651343	TESTCRX	AAWS TEST SITE 1	8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Figure B1

Field Title	Description
ID	Site number as listed in the RAI database.
PHONE	Data number of the mobile SIM card. Note: One site has a hard wired telephone connection.
ALARM CODE	RAILCRX: This code indicates that the site is active. TESTCRX: This code indicates that the site is still in the test phase and has not been activated.
DESCR	The address of the site.
LAMPS	Indicates how many single aspect yellow lanterns are connected. Note: Each sign includes two single aspect yellow lanterns.
DIAL OUT?	If this box is 'ticked' it indicates that the AAWS system will automatically dial the site each day to check the status.
SEND EMAIL?	If this box is 'ticked' it indicates that any system reported faults will be automatically emailed to a specified list of recipients.
SEND ALARM?	If this box is 'ticked' any system reported faults will be passed to MMS.
STATUS	'Outgoing call' indicates the last system requested status response. 'Incoming call' indicates the last incoming fault report from site.

### B3 GUI operation

The GUI allows the user to carry out the following tasks:

- Get site status;
- Add a new site; and
- Look at the details of the last data received from the site.

#### B3.1 Site status

To check the status of a site simply click the drop down menu titled '**Get site status**'. A message will appear saying '**.....dialling station xxxx...**'. When the request has been received this message will change to '**Dial out status: Site status received for xxxx**'. A pop-up window will then appear displaying the site status details.

ID	PHONE	ALARM CODE	DESCR.	LAMPS	DIAL OUT?	SEND EMAIL?	SEND ALARM?	STATUS
12345		TESTCRX		4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5038	52336391	RAILCRX	PHW/Wamcoort Rail C...	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:00:29 A...
7246	0439505420	RAILCRX	KERANG NTH Rail Cr...	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:06:39 A...
7249	0437914471	RAILCRX	Inverleigh	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:01:33 A...
7255	0458100447	RAILCRX	Wimmera hwy/Jung	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:07:22 A...
7259	0428182708	RAILCRX	Strathmerton	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:57:11 A...
7260	0458553689	TESTCRX	Byneside	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Incoming call Thu Jan 08 1:30:17 F...
7268	0439544008	TESTCRX	Westmere	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7269	0447835380	RAILCRX	Bairnsdale	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:00:37 A...
7270	0427155839	TESTCRX	Deep Lead	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Outgoing call Wed Jan 07 2:33:00 ...
7273	0409675386	TESTCRX	Cope Cope	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7274	0427397427	TESTCRX	Donald	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7275	0458565452	TESTCRX	Lake Buloke	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7276	0448652607	TESTCRX	Litchfield	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Incoming call Sat Jan 17 4:22:16 A...
7277	0447796012	RAILCRX	Massey	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:00:36 A...
7278	0447796012	TESTCRX	Lascelles	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7279	0429690342	RAILCRX	Tamagulla - Bendigo	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:05:57 A...
7282	0427762716	TESTCRX	Rochester	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7283	0428775517	TESTCRX	Bendigo	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
99998	0437651343	TESTCRX	AAWS TEST SITE 2	8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
99999	0437651343	TESTCRX	AAWS TEST SITE 1	8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

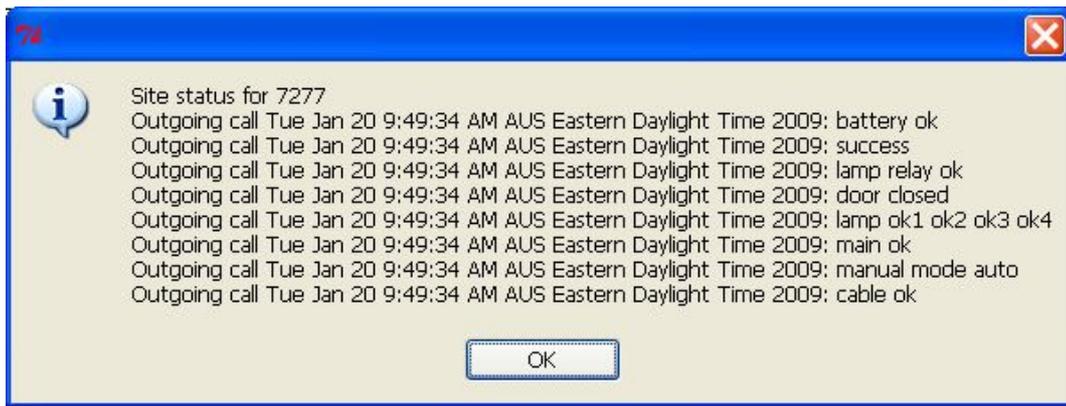
Help Update Server Add site Remove site Get site status 7269 ... dialling station 7269 ...

GUI display while dialling a site

ID	PHONE	ALARM CODE	DESCR.	LAMPS	DIAL OUT?	SEND EMAIL?	SEND ALARM?	STATUS
12345		TESTCRX		4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5038	52336391	RAILCRX	PHW/Wamcoort Rail C...	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:00:29 A...
7246	0439505420	RAILCRX	KERANG NTH Rail Cr...	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:06:39 A...
7249	0437914471	RAILCRX	Inverleigh	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:01:33 A...
7255	0458100447	RAILCRX	Wimmera hwy/Jung	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:07:22 A...
7259	0428182708	RAILCRX	Strathmerton	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 9:47:32 A...
7260	0458553689	TESTCRX	Byneside	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Incoming call Thu Jan 08 1:30:17 F...
7268	0439544008	TESTCRX	Westmere	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7269	0447835380	RAILCRX	Bairnsdale	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:00:37 A...
7270	0427155839	TESTCRX	Deep Lead	6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Outgoing call Wed Jan 07 2:33:00 ...
7273	0409675386	TESTCRX	Cope Cope	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7274	0427397427	TESTCRX	Donald	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7275	0458565452	TESTCRX	Lake Buloke	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7276	0448652607	TESTCRX	Litchfield	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Incoming call Sat Jan 17 4:22:16 A...
7277	0447796012	RAILCRX	Massey	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 9:49:34 A...
7278	0447796012	TESTCRX	Lascelles	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7279	0429690342	RAILCRX	Tamagulla - Bendigo	4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outgoing call Tue Jan 20 8:05:57 A...
7282	0427762716	TESTCRX	Rochester	2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7283	0428775517	TESTCRX	Bendigo	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
99998	0437651343	TESTCRX	AAWS TEST SITE 2	8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
99999	0437651343	TESTCRX	AAWS TEST SITE 1	8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Help Update Server Add site Remove site Get site status 7277 Dial out status: Site status received for 7277.

GUI display after successful request



**Pop-up window showing requested site status**

### B3.2 Adding a new site

A new site can be added to the system by clicking the 'Add site' button and filling in the relevant details.

### B3.3 Checking last site status message

The last status message can be viewed by left clicking the mouse in the 'STATUS' column. A pop-up window will then appear displaying the last site status details received.



**Pop-up window showing last status message**

## B4 Testing Communications

This section provides guidelines to TMC officers, responsible VicRoads Officers and Maintenance Contractors for the Switch-On of Active Advance Warning Signs (AAWS) system.

#### *B4.1 Prior to installation*

At least 24 hours prior to installation of the controller, the Contractor shall notify TMC of the programmed works detailing the date and time this will take place.

#### *B4.2 Communications Testing*

The switch-on/commissioning phase includes testing communications between the site and the TMC.

- a. After successful completion of Controller Functional Testing (see Clause 4.2), the Contractor shall notify TMC that the Switch-On is under way;
- b. When the above notification is received, the TMC officer shall open the Railway Level Crossing GUI;
- c. The Contractor shall simulate a fault and confirm with the TMC officer that it appears in the GUI 'STATUS' column and in MMS. This will confirm the controller can establish communications with VicRoads;
- d. After confirmation, the Contractor will remove the simulated fault;
- e. Using GUI, the TMC officer shall dial the controller and confirm that communications can be established from VicRoads.

Successful completion of the above confirms that communications can be established.

#### *B4.3 Setting the site to Active*

The site should now be set to 'active' in the GUI. This is done as follows:

- a. Click on the 'ALARM CODE' box and delete 'TESTCRX';
- b. In the 'ALARM CODE' box type in 'RAILCRX';
- c. Tick the 'DIAL OUT' box;
- d. Remove the tick from the 'SEND EMAIL' box;
- e. Tick the 'SEND ALARM' box;
- f. Click the 'Update Server' button.

The GUI has now been updated. It may be necessary to close the program and restart it to see the changes.