



UGL Regional Linx ETW Application Workbook
CRN-ASS-OPS-1523658499-3213

LINKING
COMMUNITIES.

CONNECTING
CUSTOMERS.

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1 Document Control

Function	Position	Name	Date
Originator	Train Control Manager	Jamie Dean	January 2022
Reviewer			
Controller			
Approver			

Revision	Issue Date	Revision Description
Draft	January 2022	Working draft











2 Using the application – The Basics

This section covers the basic operation and controls of the ETW user interface. It further introduces the interface layout, workflow and explains primary functionality.





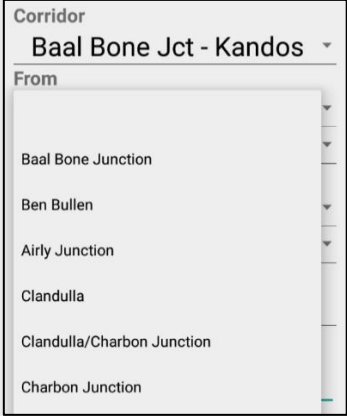
2.1 Screen interface actions

What you do...	What the application does...
Tap	Tap the Screen
Pinch / Un Pinch	Pinch Screen to Zoom / UnPinch to Zoom Out
Scroll	Scroll Screen with Finger
Swipe	Swipe down to Refresh

2.2 Symbols used in the application

	Refresh. This is used to refresh the application
	Map. This is used to open the Map screen. This is also used to request a train position and display it on the map
	Information. This symbol is used to notify the user that an update to an authority has occurred
	Train. This is used to show a requested train position
	Phone. This is used to initiate a call to the NCO
	Layers. This is used to select different map displays
	This indicates your position on the map
	Pins are used on the Map to display the limits of an authority
	The 'V' indicates the Track Vehicle Journey Start Point
	This icon indicates the Limits of the actual Fixed Worksite

2.3 Input controls used in the application

Element	Description	Example
Check Boxes	Check boxes are used in confirmation screens.	
Keyboard	The Keyboard activates when a field is selected that requires an input.	
Radio Buttons	The Radio buttons are used in Track Assurance questions. You can only select Yes or No.	
Date and Time Selector	The date selector allows the user to select a date from a calendar, choosing a month, year and day for Time Extensions.	
Combo Box	The Combo Box displays a list of options for you to choose from.	

3 Starting the application

The application is started by selecting the application icon on your device.

Starting the application will display the login screen for application.



3.1 Logging in to the application

Once you have selected and run the application icon, it will display the login screen.

3.2 Entering login credentials

To login the application, follow the steps below:

- Tap on the username to activate the keyboard.
- Enter the username then tap on the password field and enter your password - the username and password will be provided by UGL Regional Linx.
- Tap on the login button after entering your login credentials.
- If this is your first time logging in to the application, a disclaimer will be displayed, select “I Agree” to proceed to the main Home Screen.
- Selecting “I Disagree” will take you back to the login screen and the use of the application will not be permitted.

3.3 Home Screen

After a successful login, the Home Screen will be displayed.

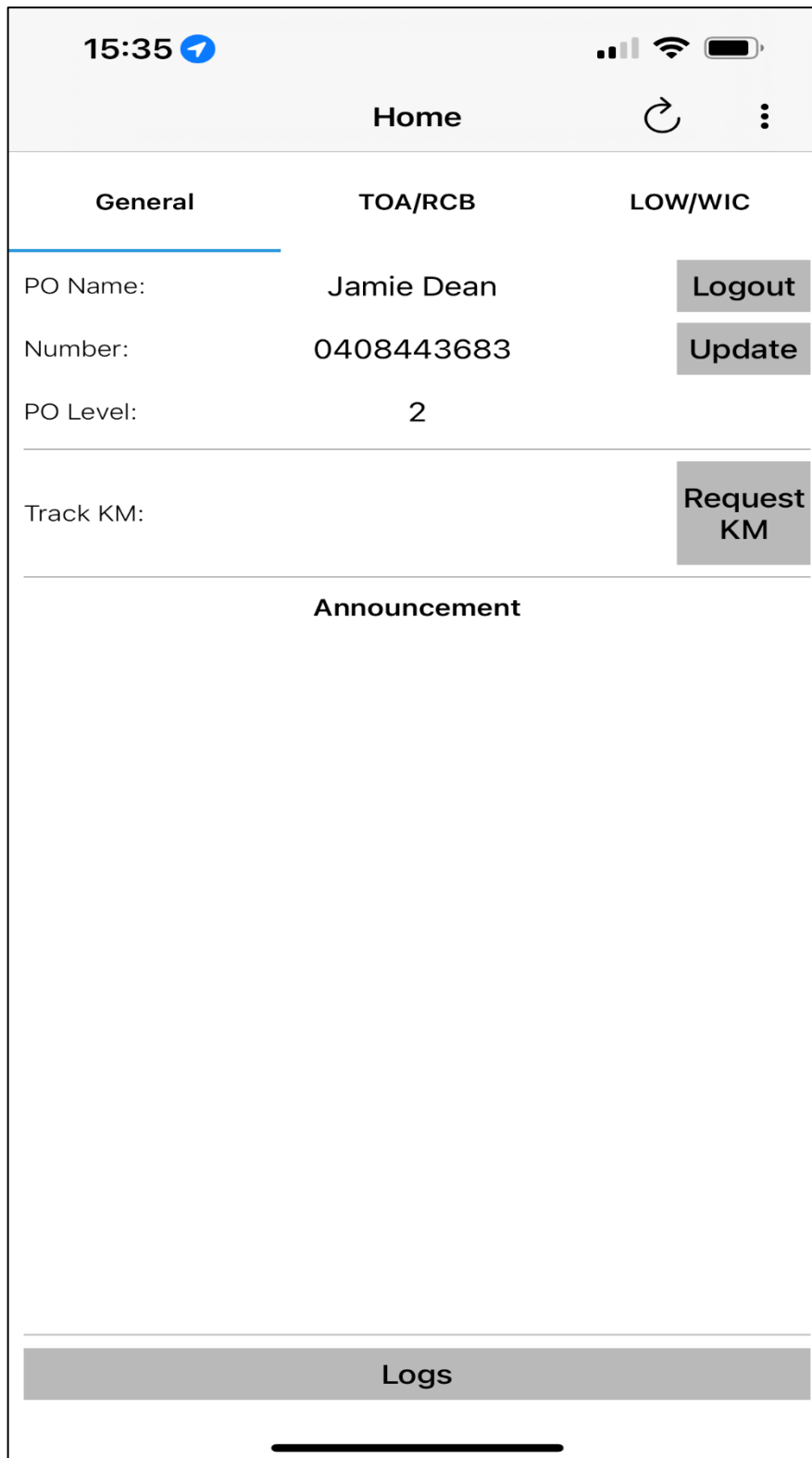
When logging in, always check that the correct name and mobile number are displayed on the Home Screen.

3.4 Logging Out

To log out of the application:

- Tap the logout button on the Home Screen – or,
- Tap the logout button from the Options Menu on the Home Screen.
- A confirmation dialog will be displayed after tapping logout.
- To proceed with logout and exiting the application tap logout.
- Tapping the cancel button will cancel this action.

3.5 Home Screen details

A screenshot of a mobile application's home screen. At the top, the status bar shows the time 15:35, a location icon, and signal/battery indicators. Below this is a header bar with the title 'Home', a refresh icon, and a menu icon. The main content area is divided into three columns: 'General', 'TOA/RCB', and 'LOW/WIC'. The 'General' column contains labels for 'PO Name:', 'Number:', 'PO Level:', and 'Track KM:'. The 'TOA/RCB' column contains the values 'Jamie Dean', '0408443683', and '2'. The 'LOW/WIC' column contains buttons for 'Logout', 'Update', and 'Request KM'. Below these columns is a large section titled 'Announcement'. At the bottom of the screen is a grey bar with the text 'Logs'.

4 Authorities

There are two (2) authorities that can be selected in the application, Route Control Blocking (RCB) and Track Occupancy Authority (TOA).

The types and states of an authority are described in the next section.

4.1 Types of Authorities

There are three (3) different types of Authorities you can receive which are outlined below:

1. Exclusive Occupancy;
2. Overlapping Limits; and
3. Following a Train.

4.1.1 Exclusive Occupancy

This is a standard type of a Track Occupancy Authority (TOA) and a Route Control Blocking (RCB) Authority.

The application will show the standard Authority detail when a TOA or RCB is of this type.

4.1.2 Overlapping Limits (TOA only)

The overlapping limits TOA indicates that your TOA track reservation is at least in part shared with another TOA.

Overlapping limits TOA, can only be obtained by use of the supplementary code for the initial TOA, as recognition of the Protection Officer agreed arrangements.

The application will display a unique field on the TOA Details screen when you have a TOA of this type.

Type	Overlapping Limits
------	--------------------

4.1.3 Following a Train

The Following Train Authority is for TOA and RCB and indicates that your Authority includes a section in which a train is still operating.

The RCB or TOA can only be issued in the direction to follow the train.

The application will display a unique field on the RCB or TOA Details screen when you have an Authority of this type.

Type	Following Train 8166	
------	----------------------	---

4.2 Application Authority States

When using the application, the RCB/TOA will transition through different states.

The following table describes these states and how they apply.

State	Definition
Proposed	<p>An RCB/TOA has been created by the NCO and sent to the App for review by the Protection Officer.</p> <p>The RCB/TOA details have not yet been confirmed by the Protection Officer. An RCB/TOA in a proposed state is not authorised for work on track activities.</p>
Current	RCB/TOA state when it has been confirmed and accepted by the Protection Officer and is authorised for work on track activities.
Fulfilled	This state is displayed on the application after fulfilment activities have been completed.

4.3 Application Pending States

The application has two pending states relating to partially completed transactions. While in a pending state work on track activities may continue. You will not be able to Fulfil a TOA in a pending state. The following table describes these states and how they apply.

State	Definition
Pending EOT	<p>This indicates a request to Extend the (Fulfilment) Time of an RCB/TOA that has been made via the application and has not yet been actioned by the NCO.</p> <p>Work on track activities may continue, the fulfilment time has not yet been updated.</p>
Pending Overlapping	<p>The state of a TOA after the supplementary code has been entered into the control system to permit the issue of an overlapping TOA. Work on track activities may continue.</p> <p>The TOA will return to a state of current after the overlapping TOA has been issued.</p> <p><i>Overlapping Limits is used for TOA's ONLY.</i></p>

4.4 Authority Colour Scheme

A colour scheme is used in the application to display the various states of an Authority making it easy to recognise what is happening. The below table represents the colours used and what state they represent:

State	Colour
Proposed	Light Grey
Current	Green
Pending EOT or Pending Overlapping	Yellow
Fulfilled	Dark Grey

Below are the colours as you will see them on the RCB/TOA Details screen banner.

TOA S0073 - Proposed

TOA S0073 - Current

RCB W191067 - Fulfilled

TOA S0073 - Pending Overlapping

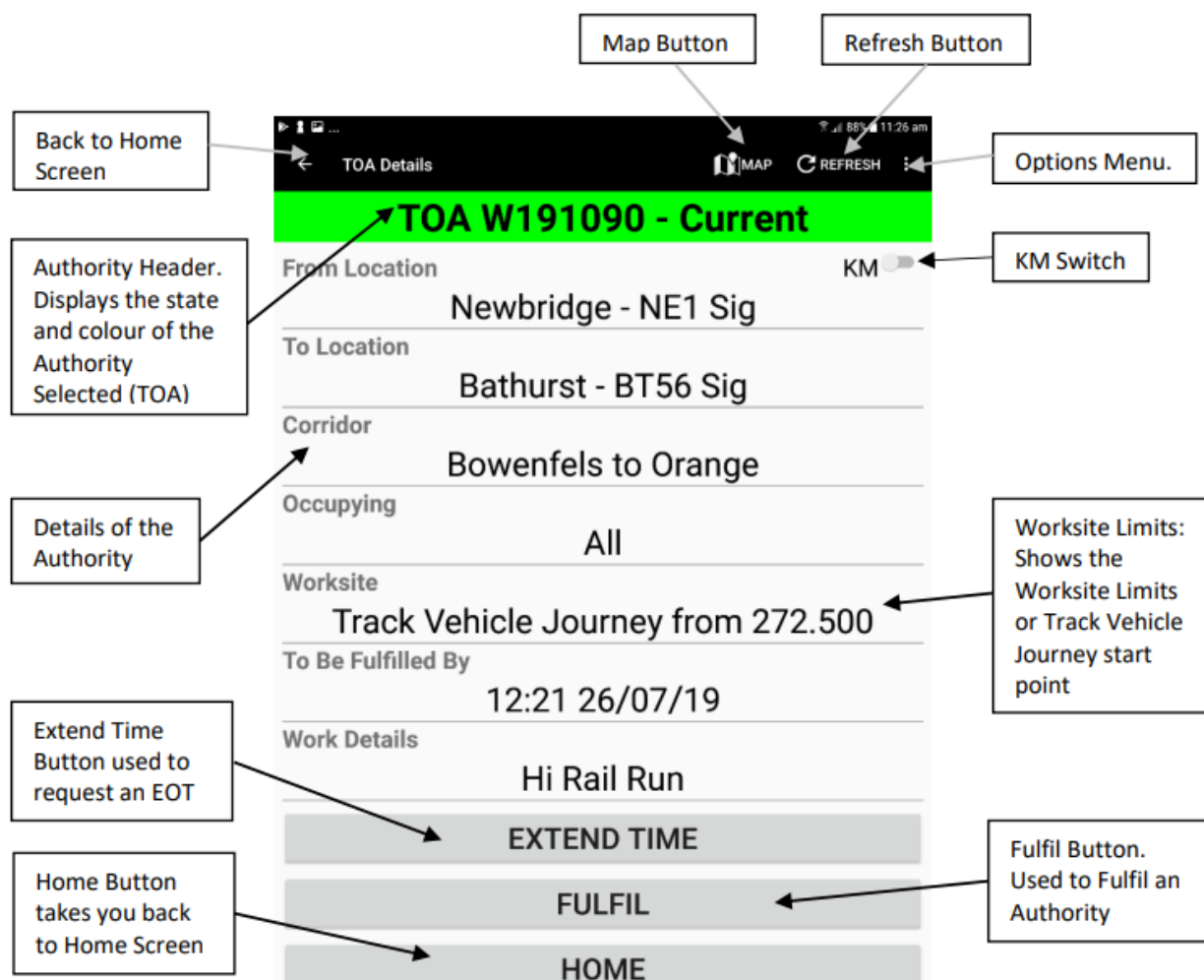
RCB W191067 - Pending EOT

4.5 Authority Details Screen

The Details Screen is accessed by tapping on a TOA or an RCB from the Home Screen.

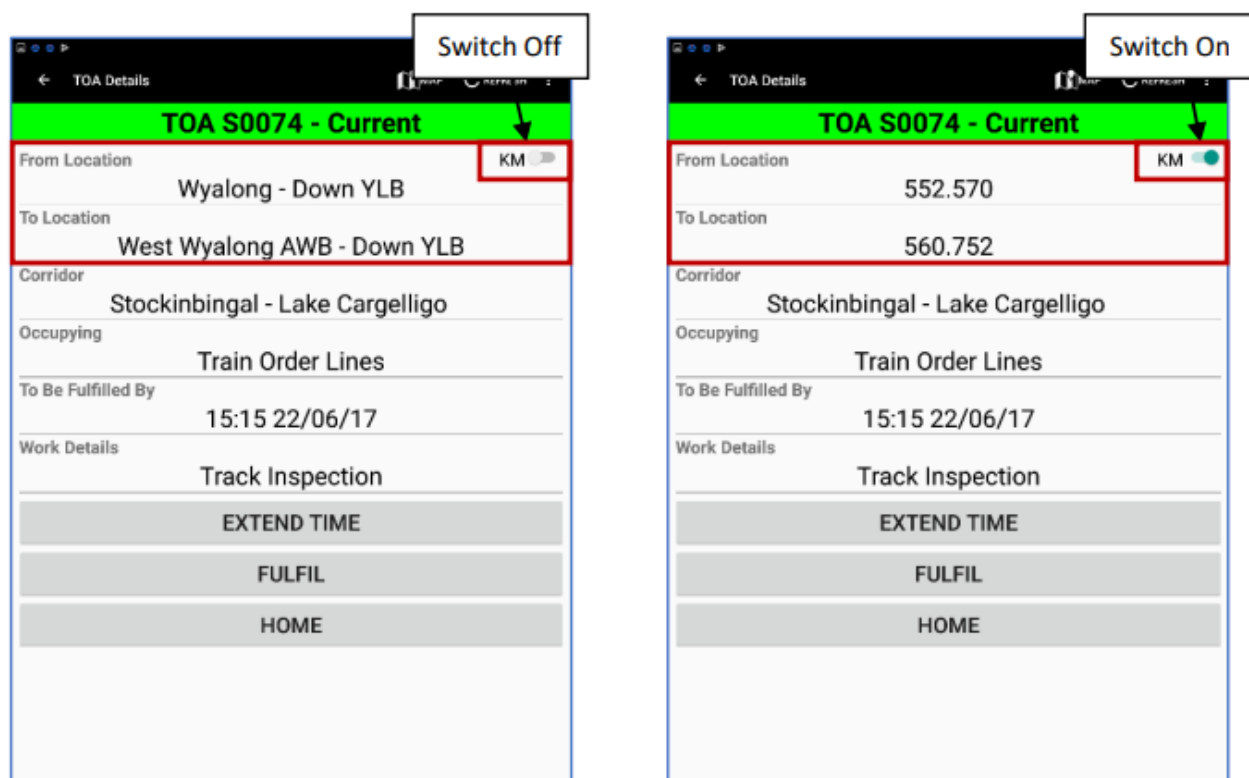
This will display the details of the authority selected. From this screen, the selected RCB/TOA can be actioned, for example accepting the RCB/TOA or fulfilling the RCB/TOA.

Below is a reference to the authority details screen:



4.5.1 Kilometrage (KM) Switch

The Authority Details screen has a Kilometrage (KM) Switch. When selected, this switch changes the display of the “From” and “To” locations from Location Names to Track Kilometres.



4.5.2 Map details

The application has a Map feature which is used to show the current position, the limits of the Authority and the position of the Train when the Authority is of the type ‘Following Train’.

The current position on the Map will be shown by a blue dot.



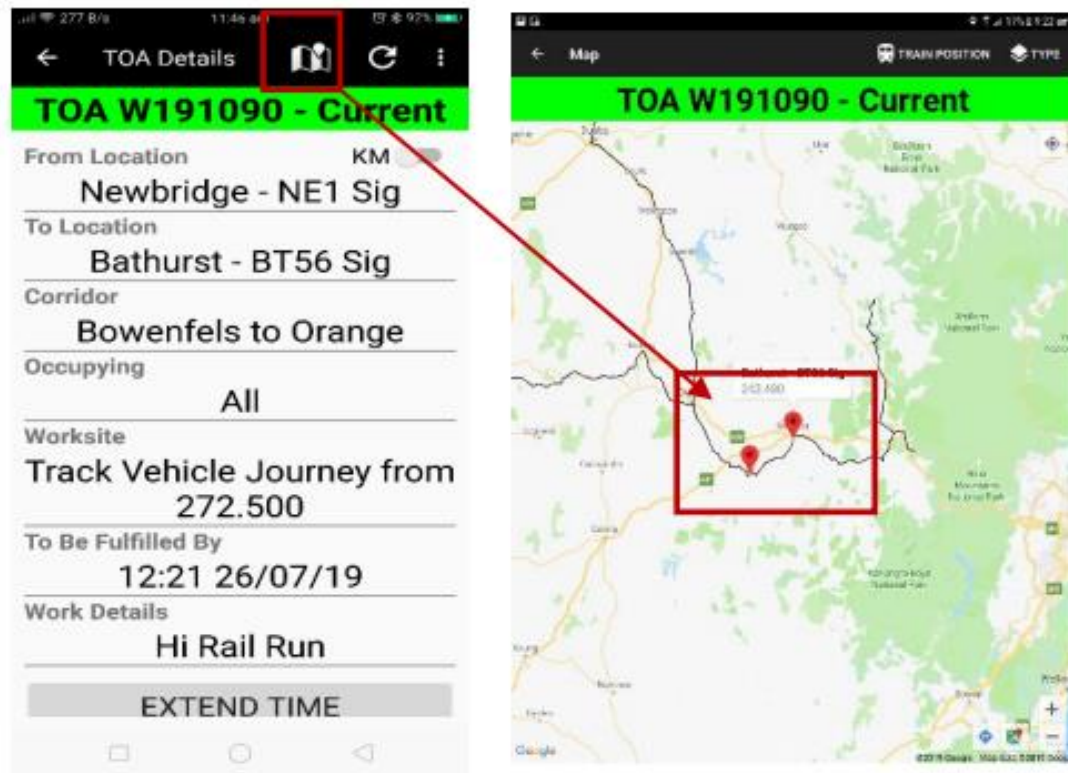
When opening the Map view, the Map will automatically scale to show the current position, the RCB/TOA limits, and the train position if it is requested.

The Map is opened by tapping the Map Button. When opening the Map from the Home Screen, all current Authorities will be shown on the Map with different map pins for limits.

When opening the Map from the Details screen, only the selected Authority is displayed.

4.5.3 Map Views

The limits of the Authority are viewable on a geographic map by selecting the map icon from the Authority Details Screen.



The Type of Map can be selected by tapping the Type button on the Map Screen.

The dialog shown below is displayed and can be selected to view the Map between these types.

Clicking on the 'Train Position' (top right-hand corner) requests the latest train position if any of the Authorities shown on the map are following a train.



4.5.4 Getting an Authority

To get an Authority, first speak to the UGLRL Network Control Officer (NCO) to discuss the details of the requested RCB or TOA.

The NCO will compile the RCB or TOA in the train control system and then queue the Authority ready for collection by the Protection Officer (PO) in the application.

To collect an Authority, refresh the device.


A telephone SMS will be sent to the PO phone when the RCB or TOA is queued. This will then prompt the user to refresh the application if needed.




4.5.5 Refreshing




Refreshing the application will initiate a connection to the control system and update the application with the latest details.




- The last refresh time will always be displayed near the bottom of the Home Screen.
- Refreshing can be done as required to make sure all information displayed is current.
- Refreshing is recommended before initiating any actions for an Authority.

To Refresh the application, tap the refresh button or pull down on either the Home Screen or RCB/TOA Details Screen.

11:30 

GENERAL		TOA/RCB		LOW/WIC	
ID	Limits	Fulfil By			
RCB W191076	Bungendore - Up YLB Queanbeyan - Down YLB	19:20 16/09/21			
RCB W191067	Wyalong - Down YLB West Wyalong AWB - Down YLB	11:29 20/10/21			
 TOA W191001	Newbridge - NE1 Sig Newbridge - NE2 Sig	17:22 30/10/21			
 TOA W191091	Newbridge - NE1 Sig Newbridge - NE2 Sig	15:30 23/11/21			
 TOA W191092	Wallerawang - WG1 Sig Tarana - TA32 Sig	20:00 07/12/21			

4.5.6 Authority changes on refreshing

Periodically when refreshing the application, you will notice an information symbol next to the Authority.

This is the icon you will see:



Open the Authority and review the information.

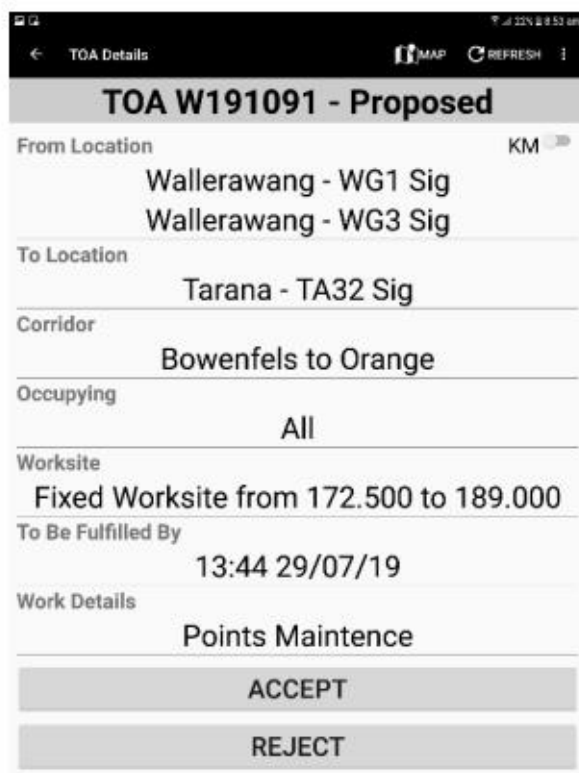
4.5.7 Accepting

Accepting the Authority can be done electronically from the application. Once the RCB/TOA has been accepted, it will become a current Authority.

To Accept an Authority, follow the steps below:

- To Accept the authority, tap on the RCB/TOA required,
- Review the details are correct,
- The Map must be viewed prior to accepting the authority. Tap on the Map button,
- After reviewing the Authority in the Map display, tap Back to return to the Details Screen,
- Tap Accept and again on the two-step confirmation dialogue.

The “View Map Before Accepting” button will change to “Accept” when returning to the Details Screen after the Map has been viewed to ensure the details are correct.



4.5.8 Rejecting

The operation can be cancelled at this point. Cancelling returns the user to the Authority Details Screen.

An Authority can be rejected if the details of the Authority are determined incorrect by the PO.

An Authority that has been rejected will be removed from the application.

A Rejected Authority will not be sent back unless the NCO has chosen to resend it.

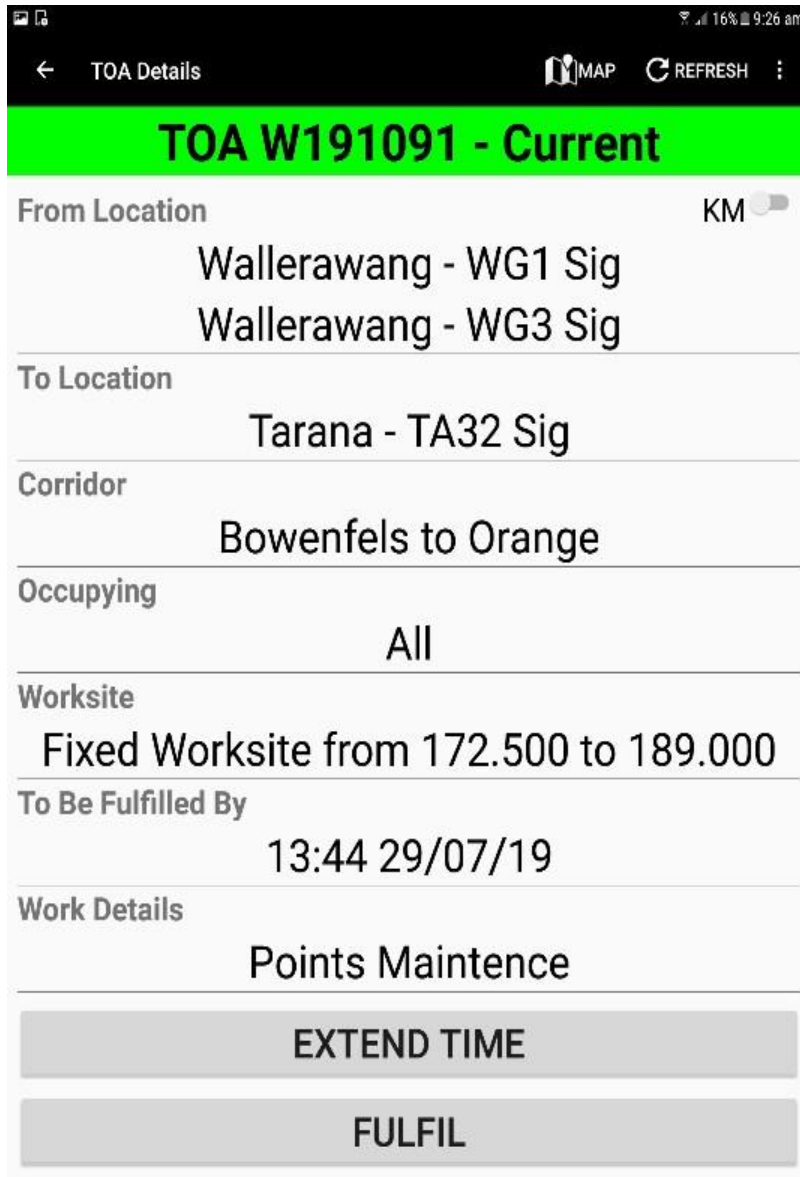


TOA Details	
TOA W191091 - Proposed	
From Location	KM <input type="checkbox"/>
Wallerawang - WG1 Sig Wallerawang - WG3 Sig	
To Location	
Tarana - TA32 Sig	
Corridor	
Bowenfels to Orange	
Occupying	
All	
Worksite	
Fixed Worksite from 172.500 to 189.000	
To Be Fulfilled By	
13:44 29/07/19	
Work Details	
Points Maintenance	
ACCEPT	
REJECT	

4.5.9 Authority acceptance

Acceptance is confirmed by the Control System and the Authority is now current.

A green banner is an indicator that a current authority is in force.



TOA Details

TOA W191091 - Current

From Location KM ☐

Wallerawang - WG1 Sig
Wallerawang - WG3 Sig

To Location

Tarana - TA32 Sig

Corridor

Bowenfels to Orange

Occupying

All

Worksite

Fixed Worksite from 172.500 to 189.000

To Be Fulfilled By

13:44 29/07/19

Work Details

Points Maintenance

EXTEND TIME

FULFIL

4.5.10 Fulfillment

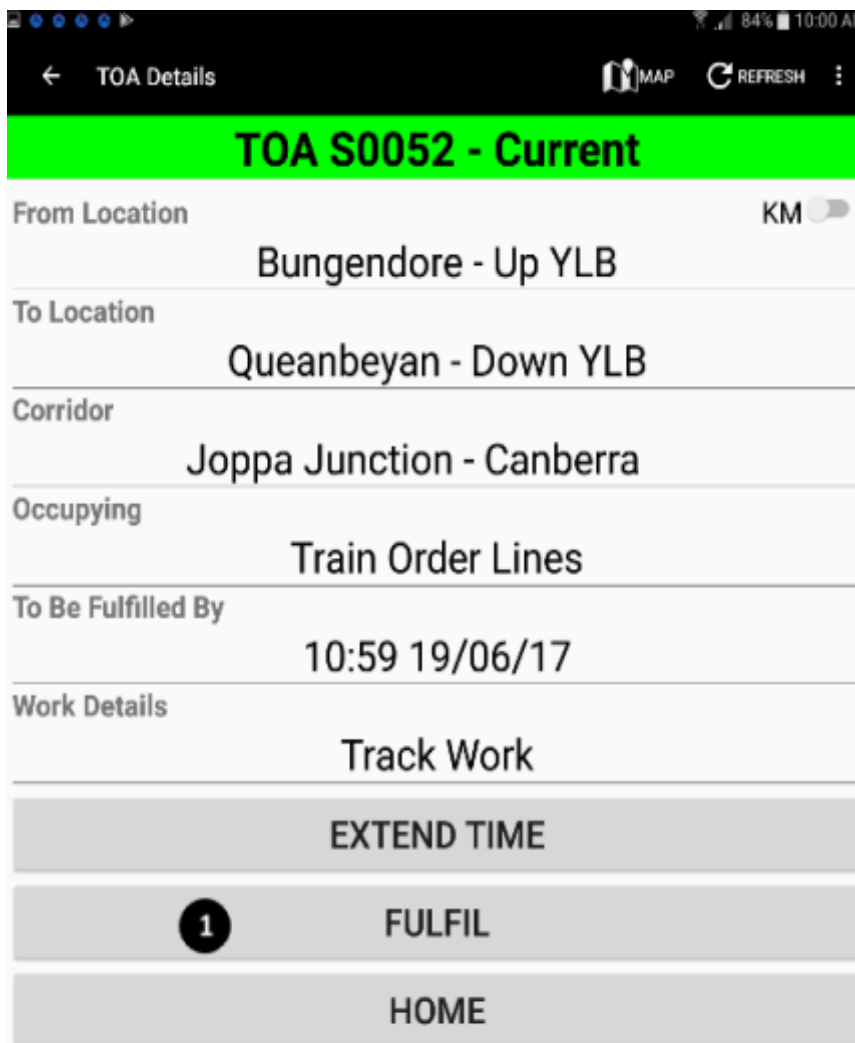
There are two methods to Fulfil an Authority on the application, these are:

- Via data on the application, or
- Via voice telephone call.

The application will guide the Protection Officer to using one of these methods based on the answers to a series of four (4) track / worksite condition assurance questions.

Initially the PO will only be shown the first question with the other questions will be shown if required

From the Authority Details Screen, tap the Fulfil button – this will display the relevant questions.



TOA Details

TOA S0052 - Current

From Location KM ☐

Bungendore - Up YLB

To Location

Queanbeyan - Down YLB

Corridor

Joppa Junction - Canberra

Occupying

Train Order Lines

To Be Fulfilled By

10:59 19/06/17

Work Details

Track Work

EXTEND TIME

1 FULFIL

HOME

4.5.11 Data fulfilment details

The PO is required to answer the track / worksite assurance questions. The relevant responses to the track / worksite assurance questions are required to permit a Data Fulfilment.

The operation can be cancelled at this point and cancelling returns the user to the Authority Details Screen.

To fulfil the Authority via Data perform the following actions:

- Tap Fulfil after answering the questions.
- A confirmation dialog is displayed.
- Tap Fulfil to continue with the operation.
- The application will connect to the train control system and Fulfil the Authority.
- The PO will be returned to the Home Screen and the Authority will no longer be displayed.

TOA S0052 - Current

Is this work continuing under another work on track authority or method? ☐ Yes ☒ No

Are all people and equipment clear of the danger zone? ☒ Yes ☐ No

Has ALL worksite protection been removed? ☒ Yes ☐ No

Is the track suitable for line speed operations? ☒ Yes ☐ No

FULFIL

CANCEL

4.5.12 Voice fulfilment details

The PO is required to answer the track assurance questions.

The relevant responses to the track / worksite assurance questions are required to permit a Voice Fulfilment.

The operation can be cancelled at this point and cancelling returns the user to the Authority Details Screen.

To fulfil the Authority via Voice perform the following actions:

- Select Voice Fulfilment Answer with work continuing under another work or authority method, or
- Any other combination Voice Fulfilment only radio buttons where the PO is required to advise the NCO of track restrictions / conditions.

A Voice Fulfilment confirmation dialog is displayed and the PO will be required to call the NCO

<div style="background-color: #00FF00; padding: 2px; text-align: center;">TOA S0052 - Current</div> <p>Is this work continuing under another work on track authority or method? <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <div style="background-color: #cccccc; padding: 5px; text-align: center; margin-bottom: 5px;">FULFIL</div> <div style="background-color: #cccccc; padding: 5px; text-align: center;">CANCEL</div>	<div style="background-color: #00FF00; padding: 2px; text-align: center;">TOA S0052 - Current</div> <p>Is this work continuing under another work on track authority or method? <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>Are all people and equipment clear of the danger zone? <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Has ALL worksite protection been removed? <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Is the track suitable for line speed operations? <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <div style="background-color: #cccccc; padding: 5px; text-align: center; margin-bottom: 5px;">FULFIL</div> <div style="background-color: #cccccc; padding: 5px; text-align: center;">CANCEL</div>
--	---

The 'Call NCO' function is only available on devices that have call capability and the user has given permission for the application to access same.

The call will be directed to the Train Control Board where the Authority was sent from.

The operation can be cancelled at this point and cancelling returns you to the Authority Details Screen.

After Fulfilling with the NCO, tap the check box - Fulfilment Acknowledged.

The application will Fulfil the authority and the user will be returned to the Home Screen and the authority will no longer be displayed.

If the PO has not confirmed the fulfilment with the NCO; when returning to the Home Screen, the authority will still be in view (with an information icon next to it) and will need the PO to complete the fulfilment of the TOA by confirming it with the NCO.

4.5.13 Manual Fulfillment

A manual Fulfillment function has been provided, in the event of a 'no data' connection being available. Manual Fulfillment requires the PO to contact the NCO and complete a Voice Fulfillment.

To perform a manual fulfilment do the following:

- From the Authority Details Screen, tap the options menu, then tap Manual Fulfil.
- A Manual Fulfillment confirmation dialog is displayed.
- The PO will be required to call the NCO.
- Tap Call NCO to initiate the call.
- After Fulfilling with the NCO, tap the check box - Fulfilment Acknowledged.

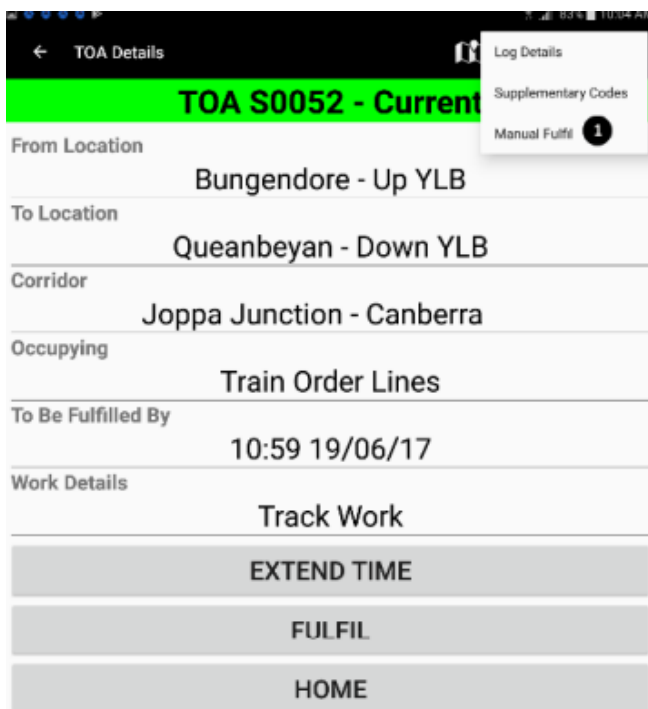
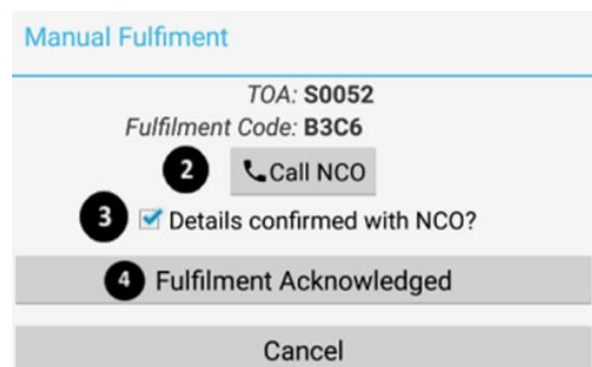
The application will Fulfil the Authority and the PO will be returned to the Home Screen and the Authority will no longer be displayed.

The 'Call NCO' function is only available on devices that have call capability and the user has given permission for the application to access same.

The call will be directed to the Train Control Board where the Authority was sent from.

The operation can be cancelled at this point and cancelling returns the user to the Authority Details Screen.

If the PO has not confirmed the fulfilment with the NCO; when returning to the Home Screen, the authority will still be in view (with an information icon next to it) and will need the PO to complete the fulfilment of the authority by confirming it with the NCO.

4.5.14 Requesting Train Position

When an Authority is of a type 'Following Train', the PO can request the position of the train that is being followed.

An Authority of this type will display a special line with the train number and a Map icon.

The train position can also be requested from using the train icon: -



To request the train position, follow the steps below:

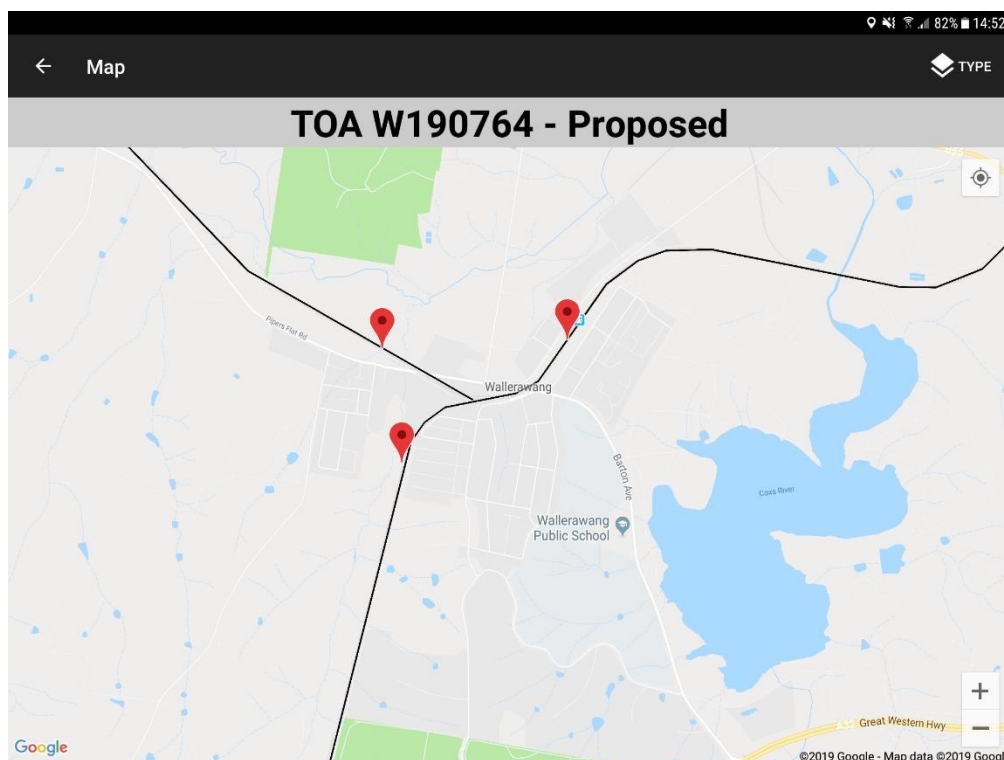
- Select the Map icon from the special field on the Authority Detail Screen.
- The Map will open and the train will be displayed.
- Only one position can be requested and does not update automatically.
- To select a new position, follow the steps again.



4.5.15 Additional Limits

The application is able to support up to 4 control points at any one time. The 'Additional Limits' information is for multi-track areas and junction locations where there is a need to represent an Authority (TOA/RCB) with more than 2 limits. These will show up on the Authority details screen.

Only 2 limits will be listed on the home screen. All limits will be plotted on the map.



4.5.16 Extension of Time

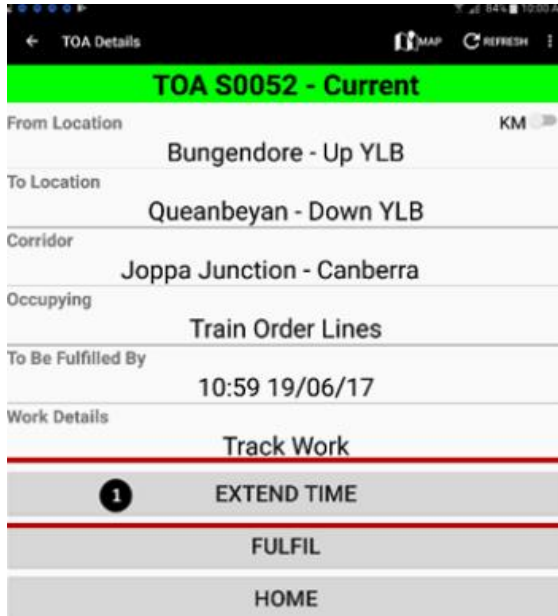
An extension to the fulfilment time can be requested through the application.

Once a request from the PO has been made via the application, the NCO will need to action the request. An extension of time request can be granted, modified or rejected by the NCO.

From the Authority Details Screen, tap the Extend Time button. Select the new return time. If required, tapping the date button will also display the date selector dialog.

After requesting the time extension, the PO will be taken back to the Authority Details.

An Authority with a Pending EOT is shown in yellow.



TOA S0052 - Current

From Location: Bungendore - Up YLB

To Location: Queanbeyan - Down YLB

Corridor: Joppa Junction - Canberra

Occupying: Train Order Lines

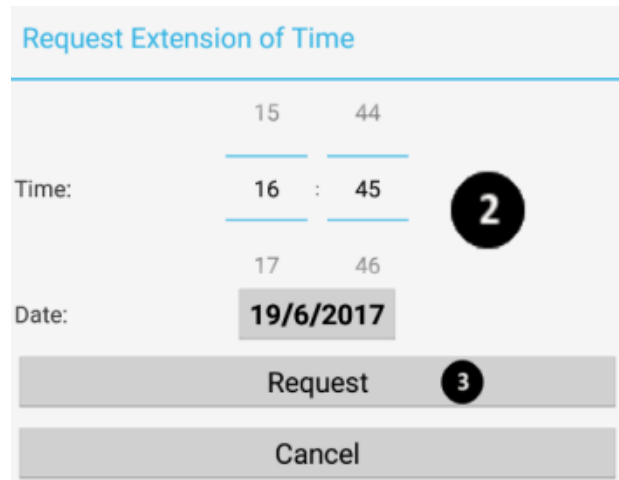
To Be Fulfilled By: 10:59 19/06/17

Work Details: Track Work

1 EXTEND TIME

FULFIL

HOME



Request Extension of Time

Time: 15 : 44

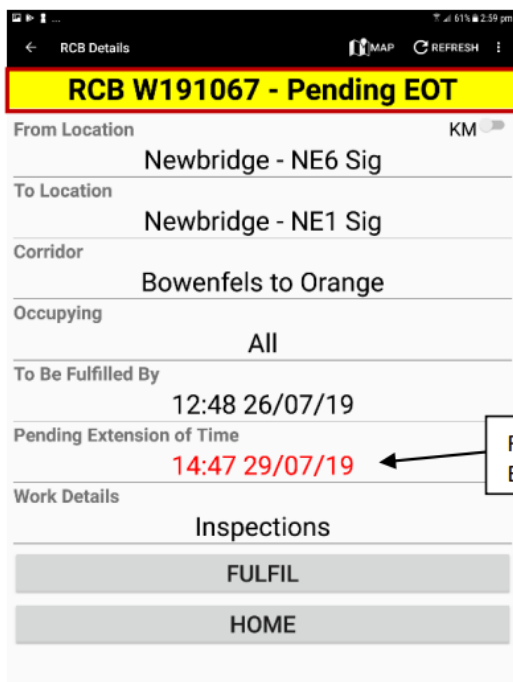
16 : 45 **2**

17 : 46

Date: 19/6/2017

Request **3**

Cancel



RCB W191067 - Pending EOT

From Location: Newbridge - NE6 Sig

To Location: Newbridge - NE1 Sig

Corridor: Bowenfels to Orange

Occupying: All

To Be Fulfilled By: 12:48 26/07/19

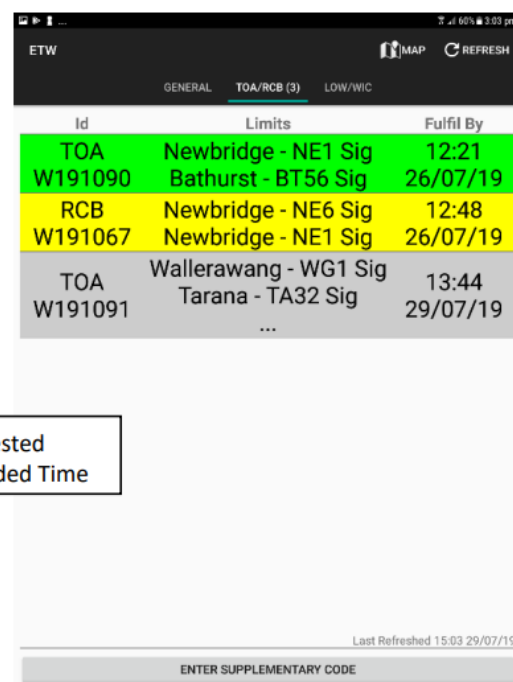
Pending Extension of Time: 14:47 29/07/19

Work Details: Inspections

FULFIL

HOME

Requested
Extended Time



Id	Limits	Fulfil By
TOA W191090	Newbridge - NE1 Sig Bathurst - BT56 Sig	12:21 26/07/19
RCB W191067	Newbridge - NE6 Sig Newbridge - NE1 Sig	12:48 26/07/19
TOA W191091	Wallerawang - WG1 Sig Tarana - TA32 Sig	13:44 29/07/19
...

Last Refreshed 15:03 29/07/19

ENTER SUPPLEMENTARY CODE

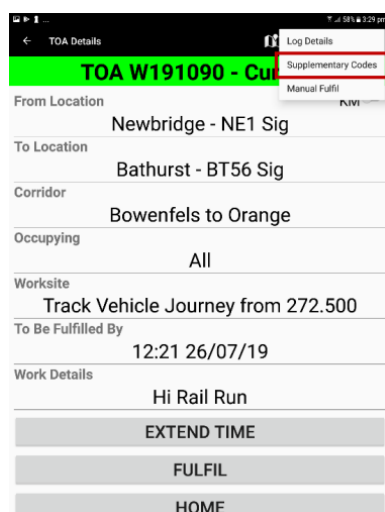
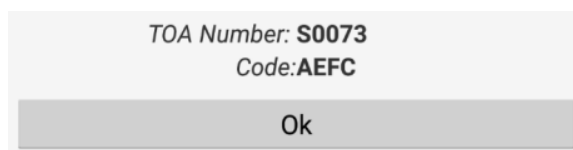
4.5.17 Sharing the Track

Sharing the track refers to another PO taking an overlapping TOA with the limits of the current PO's TOA. This is only possible with the application if the current PO gives the requesting PO a Supplementary Code.

Each application issued TOA will come with a maximum of three (3) Supplementary Codes that can only be used one at a time, with each consecutive code only available after the TOA overlapping the current TOA has been fulfilled.

Overlapping Limits is used for TOA's only. In the 'Options' menu, the 'Supplementary Codes' option will not be activated for an RCB Authority.

To view the Supplementary Code, select Supplementary Code from the Home Screen.

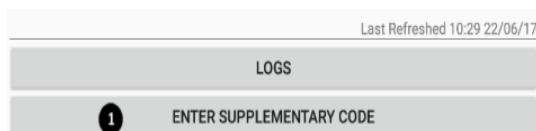
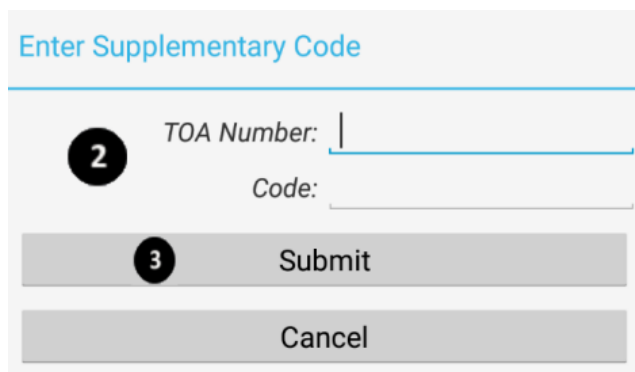



The Supplementary Code dialog is displayed. Dictate the TOA Number and Supplementary Code to the second PO. Once your TOA is Pending Overlapping or Overlapping you will not be able to access the Supplementary Codes.

To enter the Supplementary Code, from the Home Screen, tap Enter Supplementary Code.

The Supplementary Code entry dialog box is displayed. Enter the TOA Number and Supplementary Code given by the first PO.

A Supplementary Code can also be dictated directly to the NCO for processing.

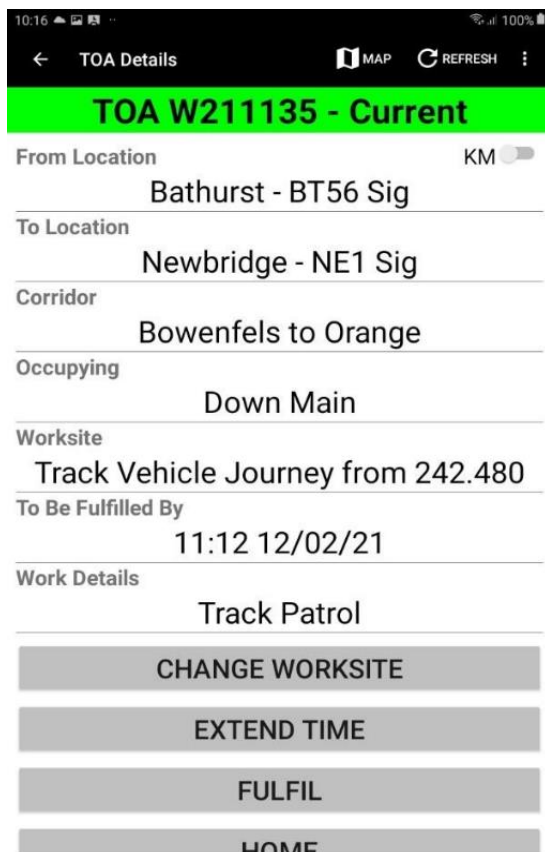
4.5.18 Worksite type change

Through the application you can request a change to your TOA Worksite Limits.

This allows change of type between Fixed Worksite and Track Vehicle Journey as well as adjustment of any worksite kilometer values.

On a current TOA select the Change Worksite button TOA Must be Exclusive Occupancy to change state

Enter the required kilometer values on the keypad, including the 3 digits following the decimal point – for example 445.500.



TOA Details

TOA W211135 - Current

From Location KM Bathurst - BT56 Sig

To Location Newbridge - NE1 Sig

Corridor Bowenfels to Orange

Occupying Down Main

Worksite Track Vehicle Journey from 242.480

To Be Fulfilled By 11:12 12/02/21

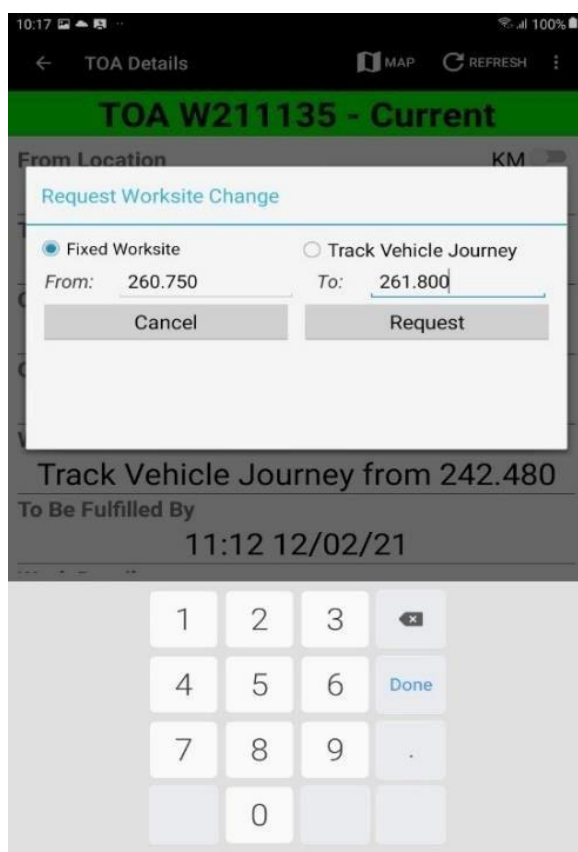
Work Details Track Patrol

CHANGE WORKSITE

EXTEND TIME

FULFIL

HOME



TOA Details

TOA W211135 - Current

From Location KM Bathurst - BT56 Sig

To Location Newbridge - NE1 Sig

Corridor Bowenfels to Orange

Occupying Down Main

Worksite Track Vehicle Journey from 242.480

To Be Fulfilled By 11:12 12/02/21

Work Details Track Patrol

Request Worksite Change

☒ Fixed Worksite ☐ Track Vehicle Journey

From: 260.750 To: 261.800

Cancel **Request**

Track Vehicle Journey from 242.480

To Be Fulfilled By 11:12 12/02/21

Work Details Track Patrol

1 2 3

4 5 6 Done

7 8 9

0

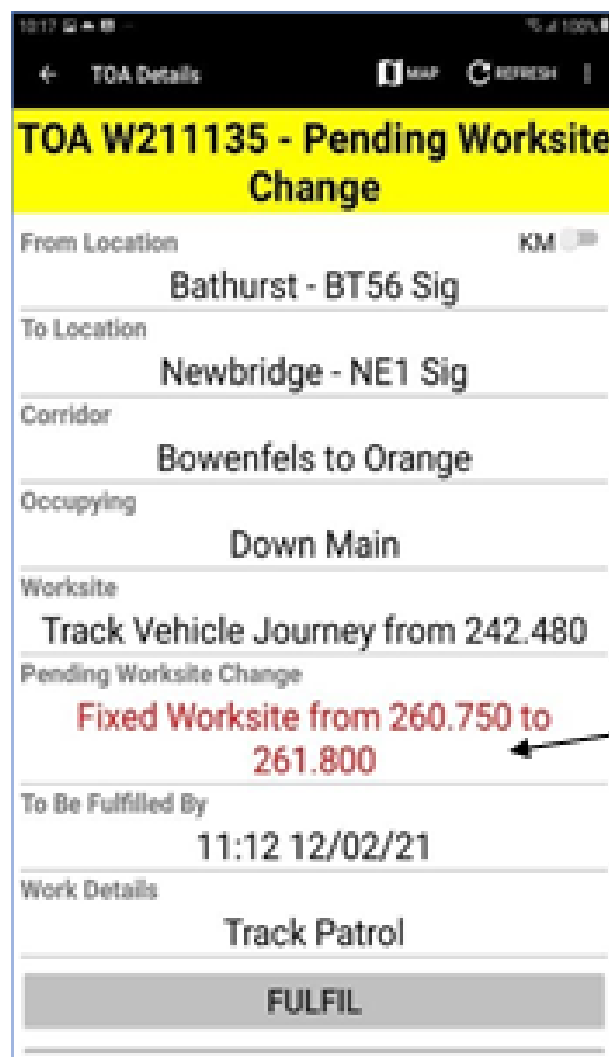
4.5.19 Pending worksite change

The worksite change request gets sent to the train control center. The request gets validated by the control system.

If the request is validated correctly then the TOA gets put into a Pending Worksite Change state. Otherwise, if the request is rejected for example it needs a 500m override an alert will pop up and you should contact Network Control if needed.

The NCO can approve/decline the worksite change request. Once this occurs an SMS will be sent to your phone number. When you refresh the application, the TOA goes back to Current, and the worksite type and limits will be updated.

There are no limits to the number of times a TOA may be switched between types.



TOA W211135 - Pending Worksite Change

From Location: Bathurst - BT56 Sig

To Location: Newbridge - NE1 Sig

Corridor: Bowenfels to Orange

Occupying: Down Main

Worksite: Track Vehicle Journey from 242.480

Pending Worksite Change: Fixed Worksite from 260.750 to 261.800

To Be Fulfilled By: 11:12 12/02/21

Work Details: Track Patrol

FULFIL

4.5.20 Transferring an authority

The application allows an authority to be transferred to another PO or device.

4.5.20.1 PO changeover

A Protection Officer can transfer an RCB/TOA on the current device to another Protection Officer; this may be necessary when changing shifts.

To do this,

- the incoming Protection Officer will need to contact the NCO and request the transfer of the RCB/TOA.
- Once the NCO has done this an SMS will be sent to both parties.
- Refreshing the application will remove the transferred RCB/TOA from the current device, and
- The incoming Protection Officer on refreshing their application, will receive the RCB/TOA.

4.5.20.2 Switching device

If there is a need to change devices, this can be done at any time provided you have the application on both devices.

To change devices, all that is required is to log into the application on the new device and the current Authorities will be refreshed onto that device.

Only one active application can be logged into a device at any one time.

Logging in to a new device will disable any actions on the previous device.

5 Look Out Working (LOW) / Work In Corridor (WIC)

There is one (1) type of LOW and WIC you can receive in the application and they both have two (2) states and one (1) completed state.

5.1 Types and States of LOW/WIC's

5.1.1 Types:

- LOW (Look Out Working)
- WIC (Work In Corridor)

5.1.2 States:

When using the application, the LOW/WIC will transition through different states.

The following table describes these states and how they apply.

State	Definition
Proposed	LOW/WIC has been created by the PO and waiting approval from 4ABS.
Current	State when the work is currently occurring.
Completed	Once work is completed the LOW/WIC will no longer be on the Home Screen. Details still viewable in the logs screen (if required).

5.2 LOW/WIC Colour Scheme

A colour scheme is used in the application to display the various states of a LOW/WIC making it easy to recognise what is happening.

The below table represents the colours used and what state they represent:

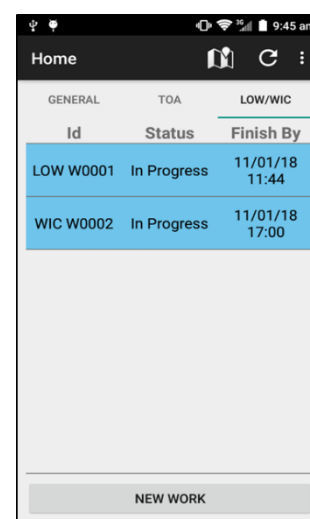
State	Colour
Proposed	Light Grey
Current	Blue
Completed	Dark Grey

The LOW/WIC tab shows all the current LOWs and WICs in a table layout.

Clicking 'New Work' at the bottom of the screen allows a PO to create a new LOW/WIC.

Unlike the RCB/TOA, which is created by the NCO and issued to the PO, LOW/WIC details can be entered by the PO into the application and then transmitted back to inform Train Control.

LOW/WIC may also be created by the NCO using the train control support software interface and then issued by voice or issued using data to the application.



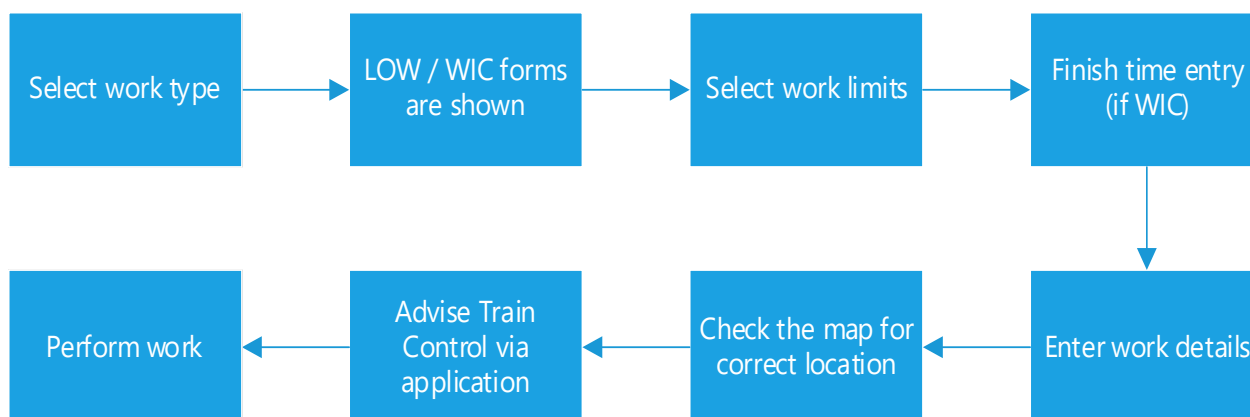
Id	Status	Finish By
LOW W0001	In Progress	11/01/18 11:44
WIC W0002	In Progress	11/01/18 17:00

5.3 New Work (LOW/WIC)

The application has the ability for the PO to create Look Out Working or Work In Corridor without the need to speak with the NCO.

This section details each step of the process to create these works.

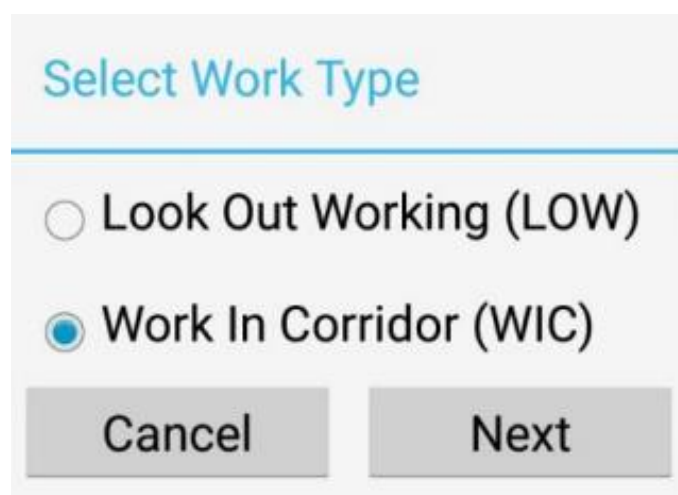
An overview of the function is shown below.



5.3.1 Select Work Type

The first step in creating new work is to select the type of work.

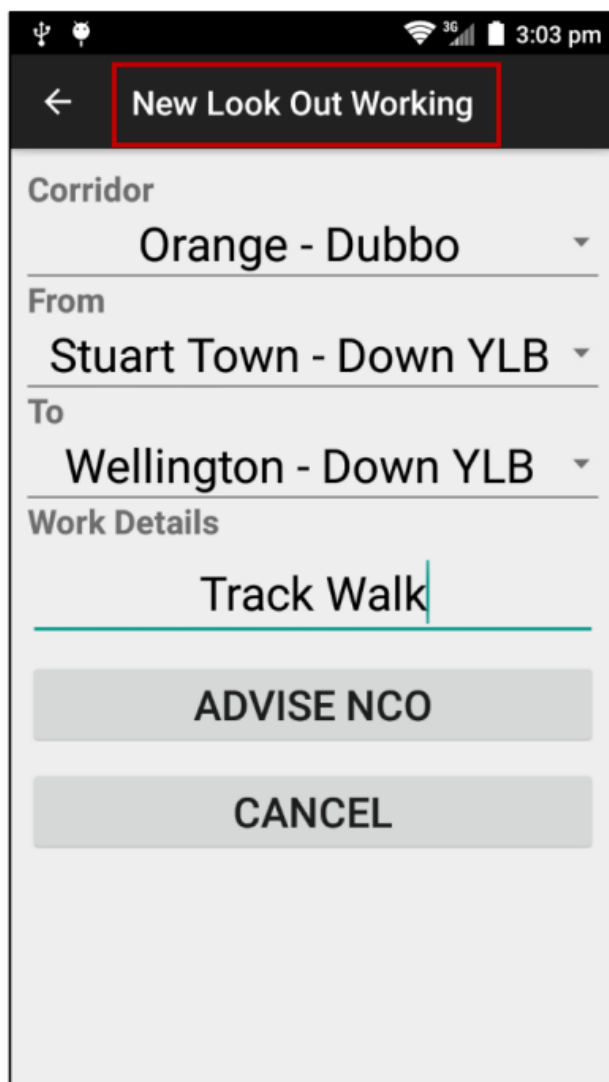
This dialog appears when you click 'New Work' from the Home Screen. By default, none of the radio buttons are selected when the dialog appears. The user is required to select either LOW or WIC before they can proceed.



The screenshot shows a dialog box titled "Select Work Type". It contains two radio button options: "Look Out Working (LOW)" and "Work In Corridor (WIC)". The "Work In Corridor (WIC)" option is selected, indicated by a blue dot. At the bottom of the dialog are two buttons: "Cancel" and "Next".

5.3.2 New LOW/WIC forms

The forms look and feel much the same the only difference is that the Work in Corridor form has an editable finish time. The finish time for LOW is set automatically to 2 hours after the creation time.

A screenshot of a mobile application form titled 'New Look Out Working'. The form has a dark header with a back arrow and the title. Below the header, there are three dropdown menus: 'Corridor' (Orange - Dubbo), 'From' (Stuart Town - Down YLB), and 'To' (Wellington - Down YLB). Under the 'Work Details' section, there is a text input field containing 'Track Walk'. At the bottom, there are two large grey buttons: 'ADVISE NCO' and 'CANCEL'. The status bar at the top shows the time as 3:03 pm.

← New Look Out Working

Corridor
Orange - Dubbo

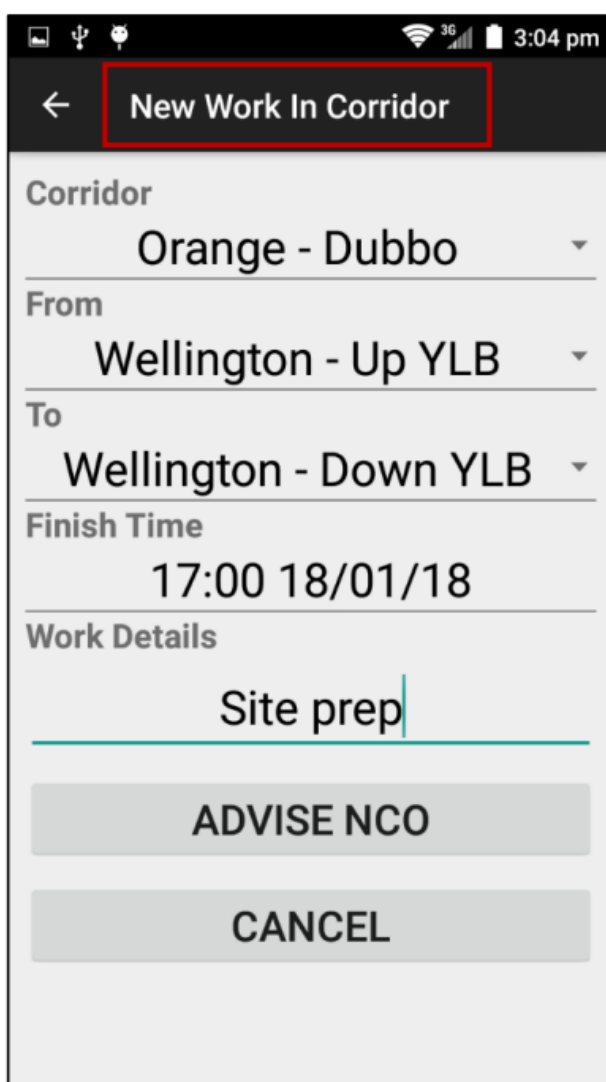
From
Stuart Town - Down YLB

To
Wellington - Down YLB

Work Details
Track Walk

ADVISE NCO

CANCEL

A screenshot of a mobile application form titled 'New Work In Corridor'. The form has a dark header with a back arrow and the title. Below the header, there are three dropdown menus: 'Corridor' (Orange - Dubbo), 'From' (Wellington - Up YLB), and 'To' (Wellington - Down YLB). Under the 'Work Details' section, there is a 'Finish Time' field showing '17:00 18/01/18' and a text input field containing 'Site prep'. At the bottom, there are two large grey buttons: 'ADVISE NCO' and 'CANCEL'. The status bar at the top shows the time as 3:04 pm.

← New Work In Corridor

Corridor
Orange - Dubbo

From
Wellington - Up YLB

To
Wellington - Down YLB

Finish Time
17:00 18/01/18

Work Details
Site prep

ADVISE NCO

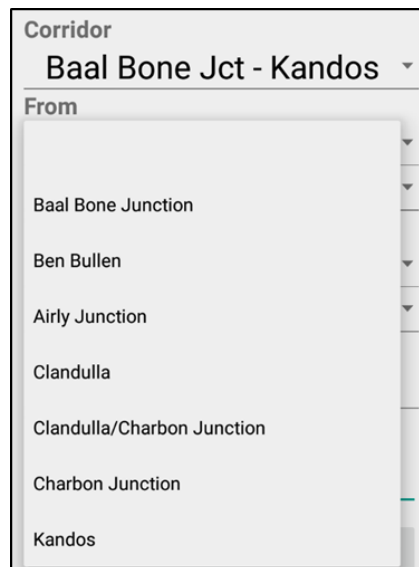
CANCEL

5.3.3 Selecting Work Limits

The Corridor, From and To fields are selected from lists provided. Tapping on the field presents a list of location options.

When starting the form by selecting a corridor, it will filter down the options selectable in the 'From and To' locations.

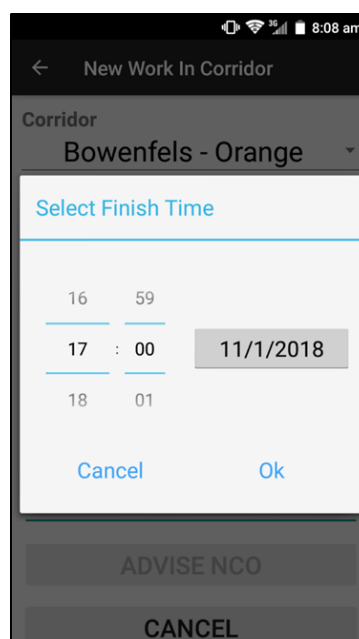
Each selection filters subsequent lists available for the option chosen. Locations are displayed in geographical sequence.



5.3.4 Time Selection

For a new Work in Corridor, tapping on the finish time displays a dialog box which allows the user to adjust the finish time for the work.

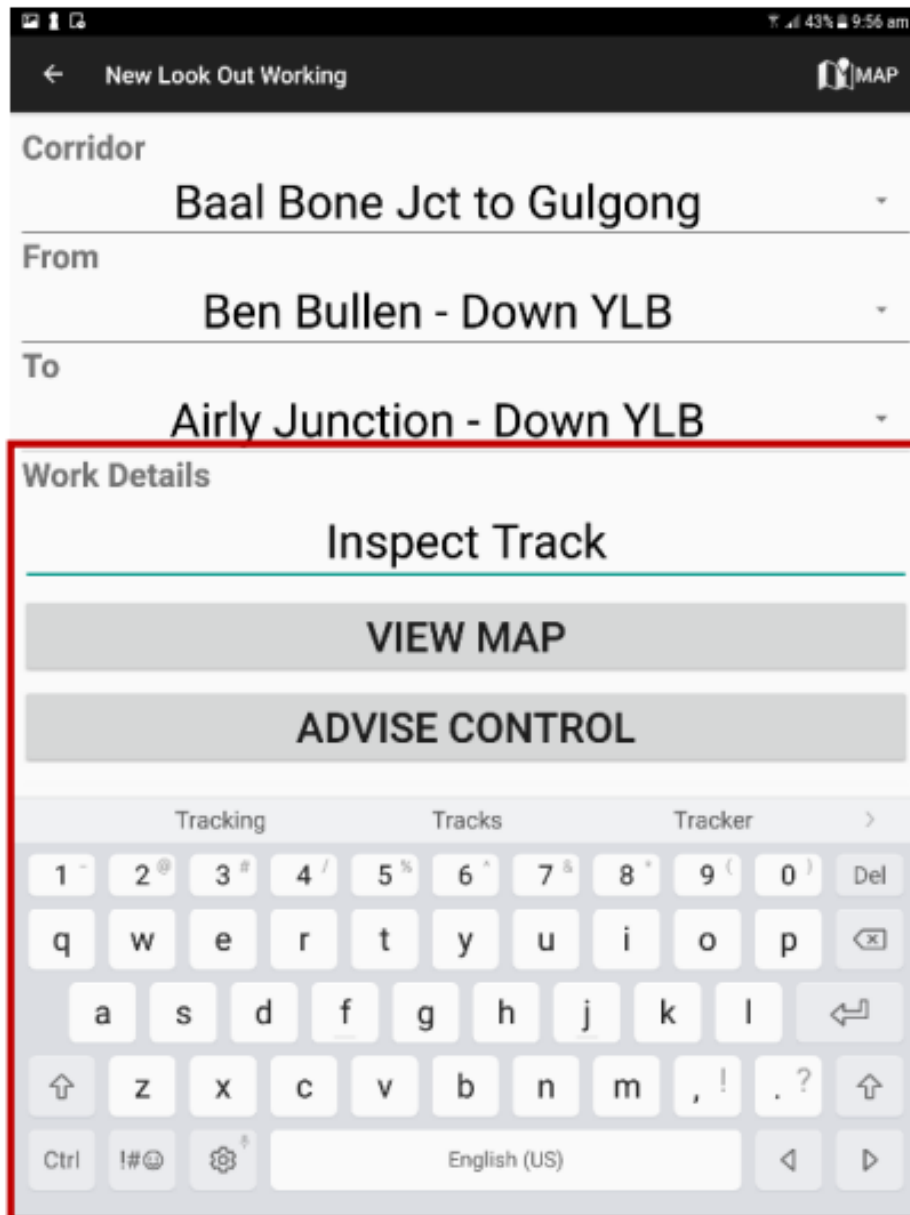
The work finish time defaults to 1700 for the day of operation. If the current time is after 1500 then the time defaults to 2 hours from the current time. The date can also be edited if required.



5.3.5 Work Details

The Work Details is a free text field and is limited to a maximum of 50 characters.

Clicking on the field pulls up the 'On Screen' keyboard for entry of work details.

A screenshot of a mobile application interface titled "New Look Out Working". The interface has a dark header bar with a back arrow, the title, and a "MAP" icon. Below the header, there are three dropdown menus: "Corridor" with the value "Baal Bone Jct to Gulgong", "From" with the value "Ben Bullen - Down YLB", and "To" with the value "Airly Junction - Down YLB". Below these is a "Work Details" section, which is highlighted with a red border. Inside this section, there is a text input field containing "Inspect Track", followed by two large grey buttons labeled "VIEW MAP" and "ADVISE CONTROL". At the bottom of the screen, an "On Screen" keyboard is visible, showing a standard QWERTY layout with a language indicator for "English (US)".

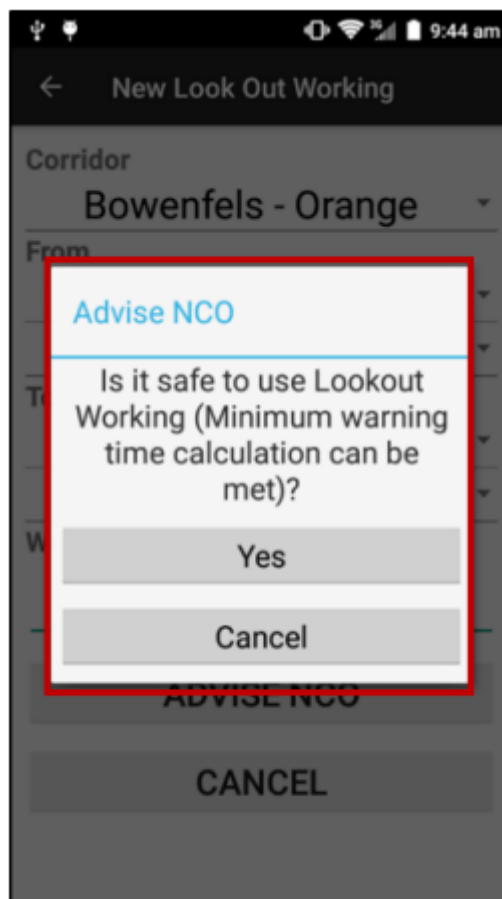
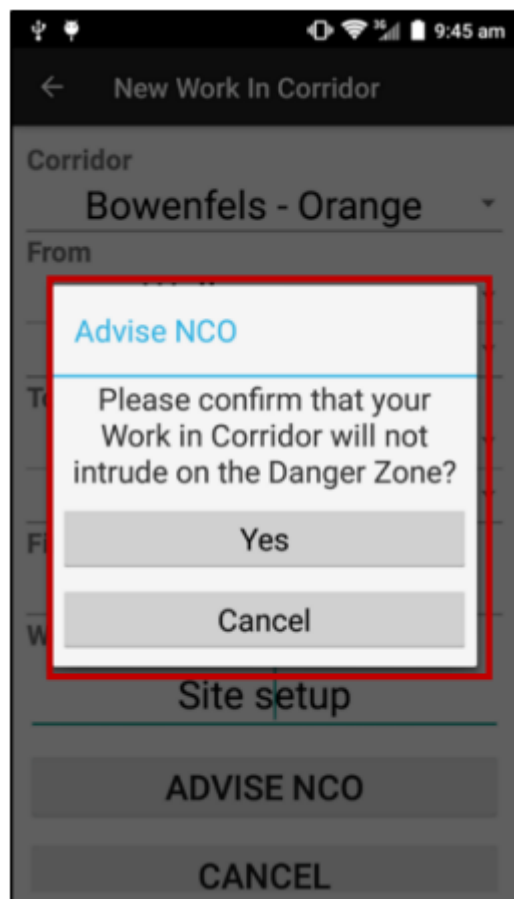
5.3.6 Advise NCO Button

The 'Advise NCO' button remains disabled until all the fields of the form have been filled in and are valid.

When the user clicks the 'Advise NCO' button there is a confirmation dialog shown to the user.

The PO must confirm they can comply with the work requirements before proceeding.

The assurance message provided is the same as asked by the NCO using the existing voice process.



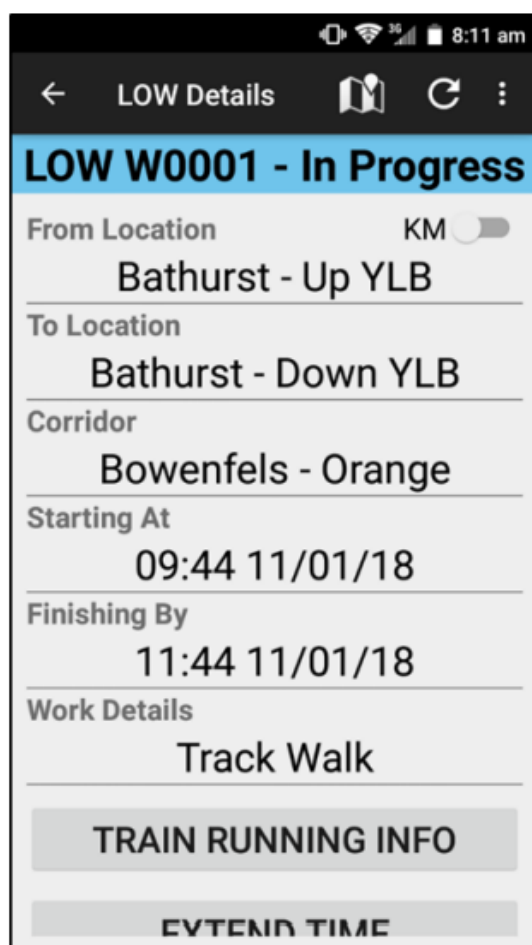
5.4 LOW Details

Once either the PO or the NCO has created the Look Out Working, it will appear in the list on the Home Screen.

Clicking on the LOW opens the LOW Details page that shows the layout of the LOW Details and all the fields on a single scrollable page and shows all the actions that are available for an 'In Progress' LOW.

The limits of the LOW are viewable as names or as kilometre values by pressing the KM toggle switch.

Clicking the map icon in the menu bar also shows the limits for the LOW on the geographic map.



LOW Details

LOW W0001 - In Progress

From Location KM ☐

Bathurst - Up YLB

To Location

Bathurst - Down YLB

Corridor

Bowenfels - Orange

Starting At

09:44 11/01/18

Finishing By

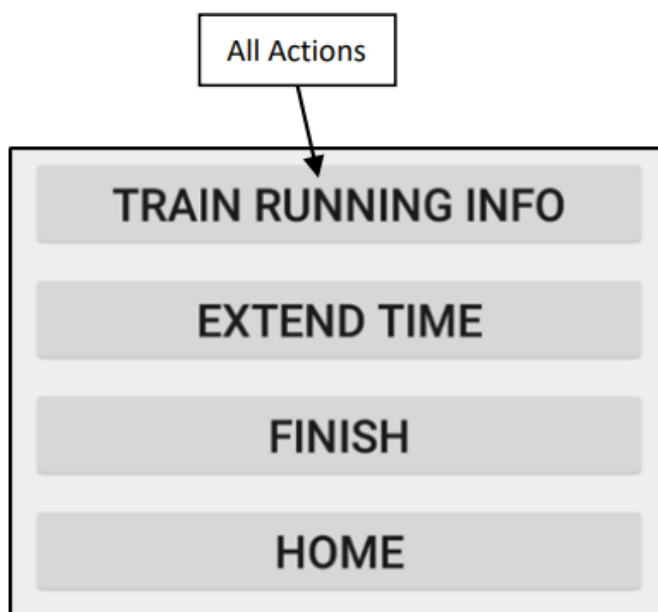
11:44 11/01/18

Work Details

Track Walk

TRAIN RUNNING INFO

EXTEND TIME



5.4.1 Train Running Information



Train	Direction	Departed	At
8938	Up	Georges Plains	10:56
WT27	Down	Wallerawang	11:04
WN17	Down	Lithgow	12:34
WN11	Down	Wallerawang	12:45
BHR01	Up	Coxs River	13:16

The Train Running Information specific to the corridor of work, is available for viewing by the PO.

This information is provided to the PO on creation of the LOW.

Train times and locations are as at time of LOW creation and are not automatically updated by the application.

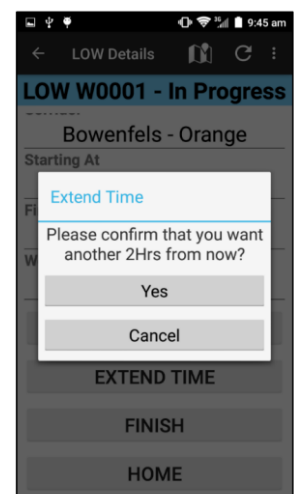
An option is available for the PO to refresh the train running information by clicking the refresh menu button.

Never rely on Train Running Information as the only means of protection.

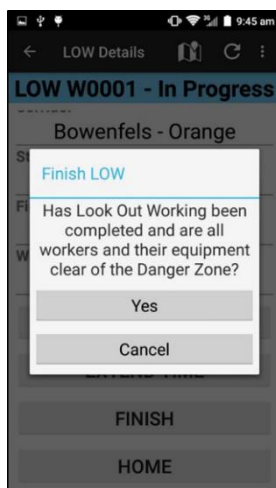
5.4.2 Extend Time

Extensions of time for Look Out Working are limited to 2 hours.

The PO will have the ability to obtain another 2 hours work time from the within the application by using the extend time button.



5.4.3 Finish LOW



When the PO selects 'FINISH' on their LOW an assurance question is shown.

This question is the same as what the NCO already asks the PO in the voice process.

Once the PO answers Yes to the assurance question, the work is placed in a completed state and the PO is returned to the Home Screen.

All details of the LOW are logged, so even once completed the PO can retrieve the important details.

5.5 WIC Details

Once either the PO or the NCO has created the Work in Corridor (WIC), it will appear in the list on the Home Screen.

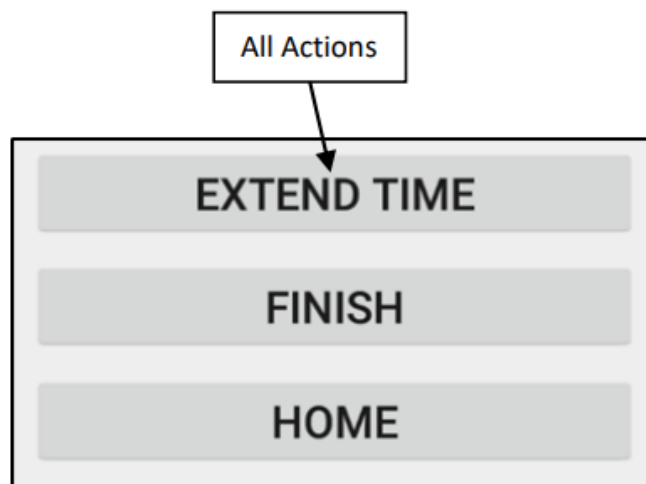
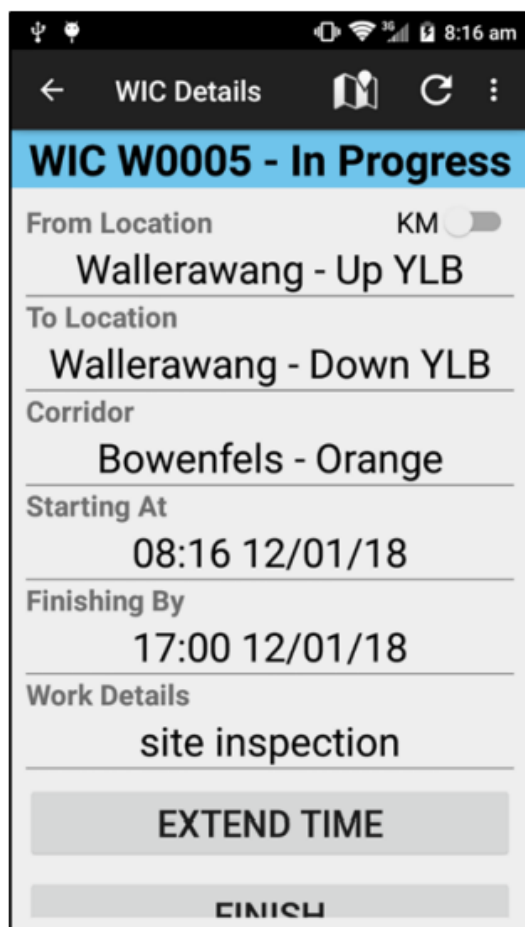
Clicking on the WIC opens the WIC Details page and this shows the layout of the WIC Details.

The WIC Details page shows all the fields on a single scrollable page and shows all the actions that are available for an 'In Progress' WIC.

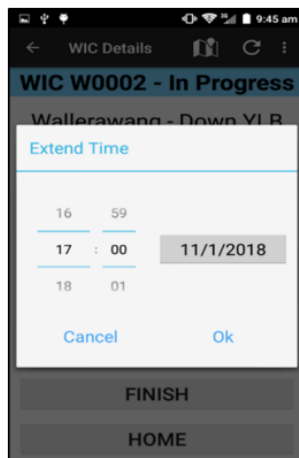
The actions, Extend Time and Finish are covered in detail in the following sections.

The limits of the WIC are viewable as names or as kilometre values by pressing the KM toggle switch.

Clicking the map icon in the menu bar also shows the limits for the WIC on the geographic map.



5.5.1 Extend Time



The PO is able to adjust the finish time of their WIC at any point.

The time can be adjusted by scrolling the time wheels.

The date can also be adjusted as required.

Upon completion, the system notifies the NCO of the updated time.

No further actions are then necessary.

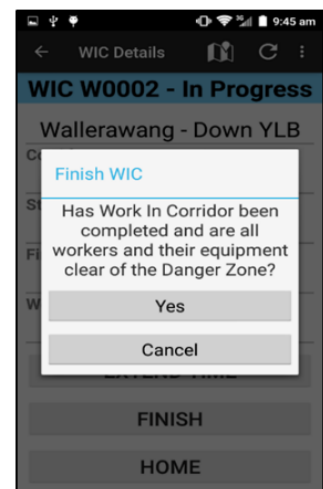
5.5.2 Finish WIC

When the PO selects 'FINISH' on their WIC, an assurance question is shown.

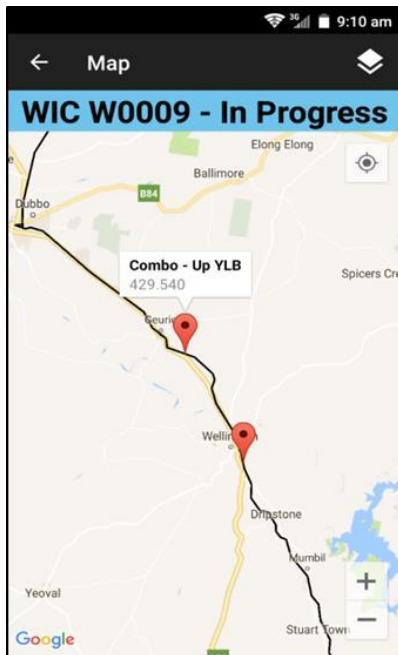
This question is the same as what the NCO already asks the PO in the voice process.

Once the PO answers Yes to the assurance question, the work is placed in a completed state and the PO is returned to the Home Screen.

All details of the WIC are logged and available for review as required.



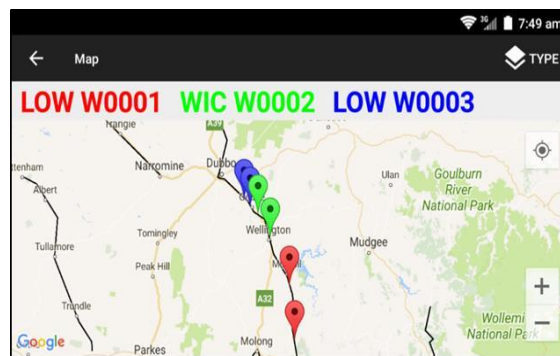
5.5.3 Map Display



The map display of the WIC/LOW limits functions similar to how TOA's are plotted. Selecting the pin shows a popup of the limit of the WIC/LOW as well as the kilometre value.

The map view has three different layers: satellite, terrain and normal. Selecting the Map Icon from the WIC/LOW details screen plots the single WIC/LOW on the map.

The map button on the Home Screen has multiple functions. If the RCB/TOA tab is selected and the map button is pressed then all current RCB/TOA's are plotted on the map, where as if the map button is selected with the LOW/WIC tab, then all the LOW/WIC's are plotted on the map.



6 Administration and features

The following sections detail some administrative functions on the application.

This will cover:

- Updating the user Phone Number.
- Viewing current user Logs.

6.1 Use of SMS for RCB/TOA, LOW and WIC

The application makes use of SMS to notify the PO of updates to the TOA, RCB, LOW and WIC.

The PO will receive an SMS to the Phone Number registered and displayed on the Home Screen.

The PO will receive an SMS for the following updates:

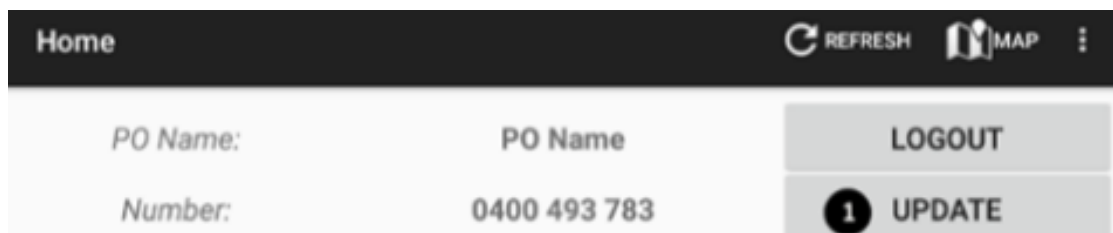
- The RCB/TOA has been queued.
- The RCB/TOA has changed state to Current.
- The RCB/TOA has been Fulfilled.
- An Extension of Time has been granted.
- An Extension of Time has been Rejected.
- A Supplementary Code has been entered and an Overlapping TOA is pending.
- The TOA is now overlapping with another PO.
- The TOA is no longer overlapping with another PO.
- The RCB/TOA has been handed over to another PO.
- A new Phone Number has been registered.
- The LOW/WIC has been made current.
- The LOW/WIC has been extended.
- The LOW/WIC is finished.

6.2 Updating the user Phone Number

The application has the functionality to update user mobile contact details.

Updating a mobile number will update the control system allowing the NCO to view the contact details.

The mobile number entered here is also used to send an SMS about the current authorities or methods of work on track. To update the phone number tap 'Update' from the Home Screen.



Home		REFRESH	MAP	
PO Name:	PO Name	LOGOUT		
Number:	0400 493 783	1 UPDATE		

6.3 Changing your password

Once logged into the application you can change your password anytime from selecting the options menu on the General tab and clicking change password.

- Tap on change password
- This will then open a separate screen

When the separate screen opens:

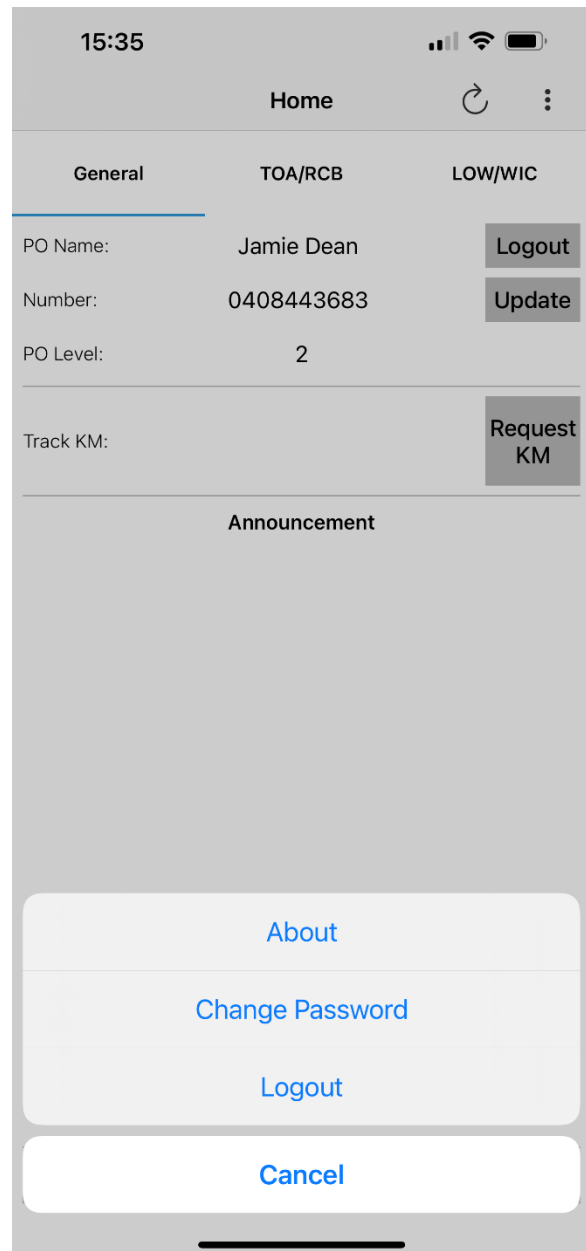
- Tap on Current Password and enter your current password
- Tap in the New Password area and enter your new password
- Tap in the Confirm New Password area and reenter your new password
- After entering the new password twice, tap the “submit” button

After the submit button has been clicked the passwords entered get checked by the system.

Once they are successfully checked then you are returned to the home screen in the app and it shows a short popup “Password Successfully Changed”

The password must adhere to the following requirements:

- Password must be a minimum of 8 characters
- Password must be different to the last 15 passwords used
- Passwords must contain characters from three of the following four categories:
 1. Uppercase characters
 2. Lowercase characters
 3. Numbers (0 through 9)
 4. Non alphanumeric characters:
~!@#\$%^&* _+=`|(){}[]:;'"<>.,?/



6.4 Request Kilometer feature

The application allows a PO to use application to obtain an approximate track km of their current location within the Country Regional Network (CRN).

The feature will be available from the home screen of the application and return the corridor and Track KM to the nearest 50m following the 'Request KM' button being selected.

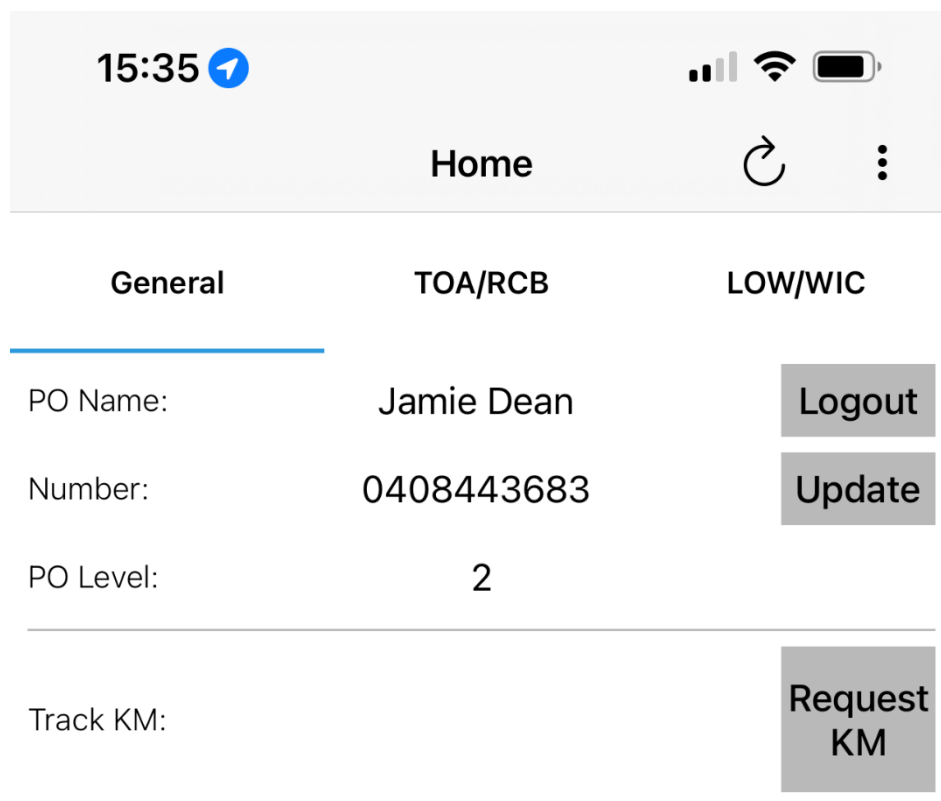
Within the CRN there will be some areas where the application will be unable to return a Track Km when requested.

If the corridor and Track Km cannot be returned by the application it will respond with "Track Km Unknown".

The inability to identify the track km could be due to proximity to multiple tracks, discrepancies with the track km definition, or changes in the rail alignment

If unable to provide the track Km the app will display Track Km Unknown and no time or date will be displayed.

There are some areas within the CRN where the application will always return Track Km Unknown such as junction locations and interface boundaries.



The screenshot shows the home screen of the UGL Regional Linx application. At the top, there is a status bar with the time 15:35, a location icon, and signal/battery indicators. Below the status bar is a header with the word "Home" and two icons: a refresh icon and a menu icon. The main content area is divided into three columns: "General", "TOA/RCB", and "LOW/WIC". Under "General", there are three rows: "PO Name:" with the value "Jamie Dean", "Number:" with the value "0408443683", and "PO Level:" with the value "2". To the right of these rows are two buttons: "Logout" and "Update". At the bottom, there is a row for "Track KM:" with a "Request KM" button.

General	TOA/RCB	LOW/WIC
PO Name:	Jamie Dean	Logout
Number:	0408443683	Update
PO Level:	2	
Track KM:		Request KM

6.5 Viewing the Current User Logs

User logs are available on the application which may be useful for record keeping for the PO in their diary or during training assessments.

Access to these logs is via the Log button on the Home Screen.

Tapping the Logs button will display all logs which can be sorted by ascending or descending time. To select the sort order for the log, tap the Sort Button.

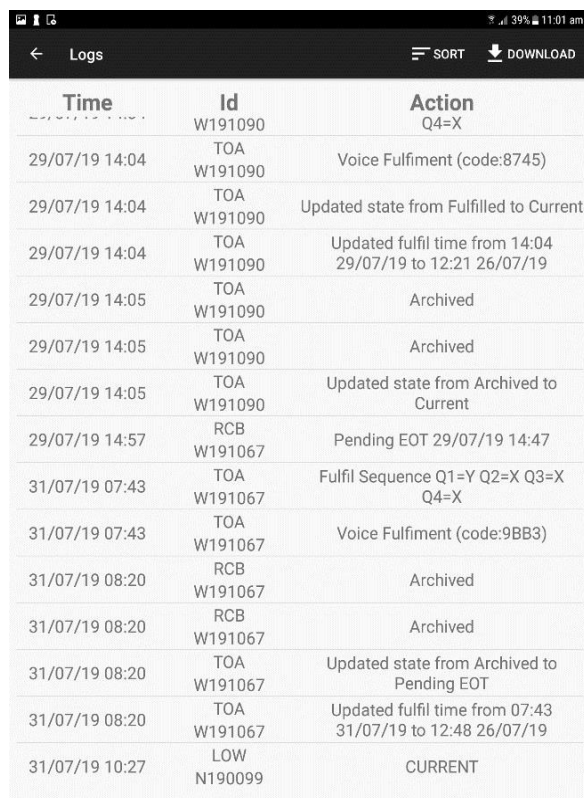
Each log details can also be viewed individually by selecting on the authority number from the main log screen. The Log Detail screen is also available from the Options menu on that authority detail screen.

The user logs can be accessed externally or saved by downloading the log.

To download the log, tap the Download button on the main log screen. This will save the log to the download directory on the device in .csv format. There will be two files downloaded:

- EventLog-POID.csv and
- ToaLog-POID.csv

Log files can be exported to the mobile devices installed reader / viewer software such as Microsoft, Apple and Google proprietary document editors.



Time	Id	Action
	W191090	Q4=X
29/07/19 14:04	TOA W191090	Voice Fulfilment (code:8745)
29/07/19 14:04	TOA W191090	Updated state from Fulfilled to Current
29/07/19 14:04	TOA W191090	Updated fulfil time from 14:04 29/07/19 to 12:21 26/07/19
29/07/19 14:05	TOA W191090	Archived
29/07/19 14:05	TOA W191090	Archived
29/07/19 14:05	TOA W191090	Updated state from Archived to Current
29/07/19 14:57	RCB W191067	Pending EOT 29/07/19 14:47
31/07/19 07:43	TOA W191067	Fulfil Sequence Q1=Y Q2=X Q3=X Q4=X
31/07/19 07:43	TOA W191067	Voice Fulfilment (code:9BB3)
31/07/19 08:20	RCB W191067	Archived
31/07/19 08:20	RCB W191067	Archived
31/07/19 08:20	TOA W191067	Updated state from Archived to Pending EOT
31/07/19 08:20	TOA W191067	Updated fulfil time from 07:43 31/07/19 to 12:48 26/07/19
31/07/19 10:27	LOW N190099	CURRENT



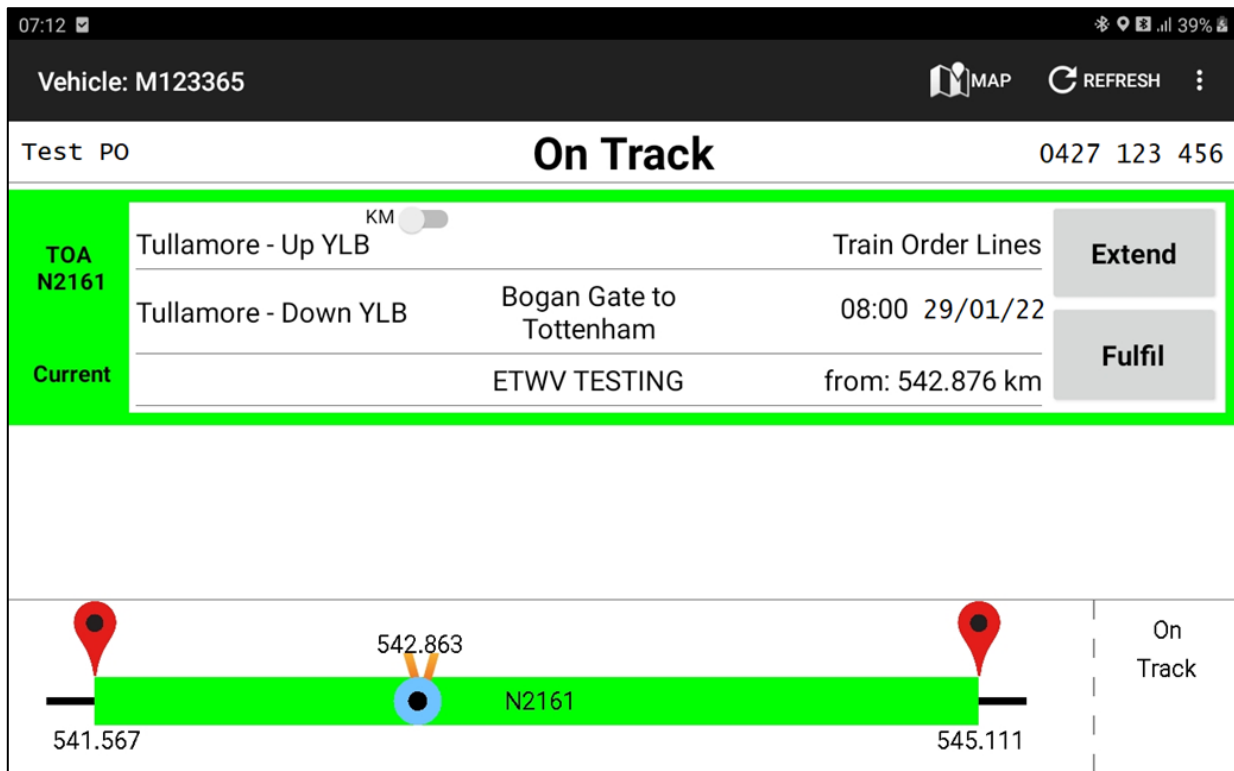
From: **Newbridge - NE6 Sig**
 To: **Newbridge - NE1 Sig**
 Corridor: **Bowenfels to Orange**
 Occupying: **All**
 Fulfil Time: **26/07/19 12:48**
 Type: **Exclusive Occupancy**
 Work Details: **Inspections**
 Train Details:

Time	Action
29/07/19 09:42	Current
29/07/19 14:57	Pending EOT 29/07/19 14:47
31/07/19 07:43	Fulfil Sequence Q1=Y Q2=X Q3=X Q4=X
31/07/19 07:43	Voice Fulfilment (code:9BB3)
31/07/19 08:20	Archived
31/07/19 08:20	Archived
31/07/19 08:20	Updated state from Archived to Pending EOT
31/07/19 08:20	Updated fulfil time from 07:43 31/07/19 to 12:48 26/07/19

6.6 ETW V Vehicle Application

When switching between Track Vehicle journey and Fixed Worksite special considerations need to be made when using ETW and ETW V.

- Ensure TOA is displayed as valid and you are within your authority limits on ETW V
- Log out of ETW V
- Log in to ETW on your mobile device and confirm TOA is valid
- Perform TOA Type Change on your mobile device
- Refresh mobile device to reflect changes when accepted by the NCO
-



07:12 [Signal Icons] 39%

Vehicle: M123365 [MAP] [REFRESH] [Menu]

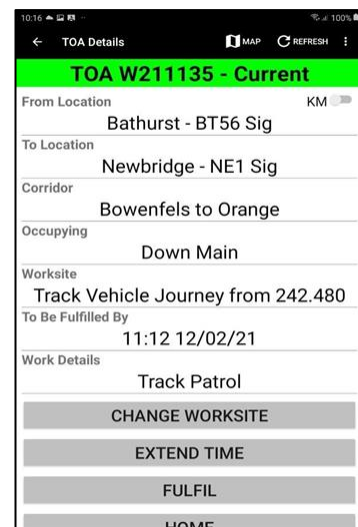
Test PO **On Track** 0427 123 456

TOA N2161	Tullamore - Up YLB <input type="checkbox"/> KM		Train Order Lines	Extend
	Tullamore - Down YLB	Bogan Gate to Tottenham	08:00 29/01/22	
Current	ETWV TESTING		from: 542.876 km	Fulfil

541.567 542.863 N2161 545.111 On Track

When switching between Fixed Worksite and Track Vehicle journey special considerations need to be made when using ETW and ETW V.

- Log out of ETW 4.0 on your mobile device,
- Ensure TOA is displayed as valid on your mobile device,
- Perform TOA Type Change on your mobile device,
- Refresh mobile device to reflect changes when accepted by the NCO,
- Check the Location assurance map to confirm you are within the proximity of the defined Kilometer start value you have supplied,
- Log in to ETW V and confirm TOA is valid.



10:16 [Signal Icons] 100%

← TOA Details [MAP] [REFRESH] [Menu]

TOA W211135 - Current

From Location Bathurst - BT56 Sig KM

To Location Newbridge - NE1 Sig

Corridor Bowenfels to Orange

Occupying Down Main

Worksite Track Vehicle Journey from 242.480

To Be Fulfilled By 11:12 12/02/21

Work Details Track Patrol

CHANGE WORKSITE

EXTEND TIME

FULFIL

HOME



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