



ETW Application Introduction Country Regional Network Network Operations

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LINKING
COMMUNITIES.

CONNECTING
CUSTOMERS.

ETW Application Introduction



UGL and 4Tel, in conjunction with TfNSW, have launched a new mobile application which will provide improved safety and efficiency outcomes for Protection Officers (PO) and Network Control Officers (NCO) working on the Country Regional Network (CRN).

The ETW Application (ETW) is a mobile application specifically designed to help PO's in their daily role, ultimately creating a safer environment and giving them more information to make decisions.

ETW Application Training Workbook



If you are new to ETW, this presentation is designed to assist you in understanding the features and operation of ETW.

A detailed ETW Application training workbook and assessment is available on the UGLRL website at <https://www.uglregionallinx.com.au/>

Although the implementation of ETW is revolutionary within the CRN, it is also important to note that the fundamentals of the rules and procedures within the network will remain the same.

What has changed?



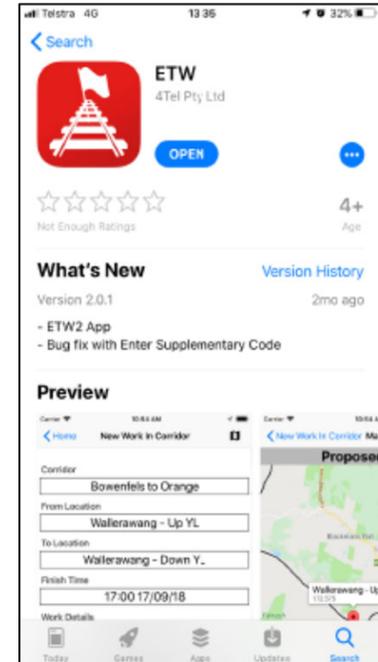
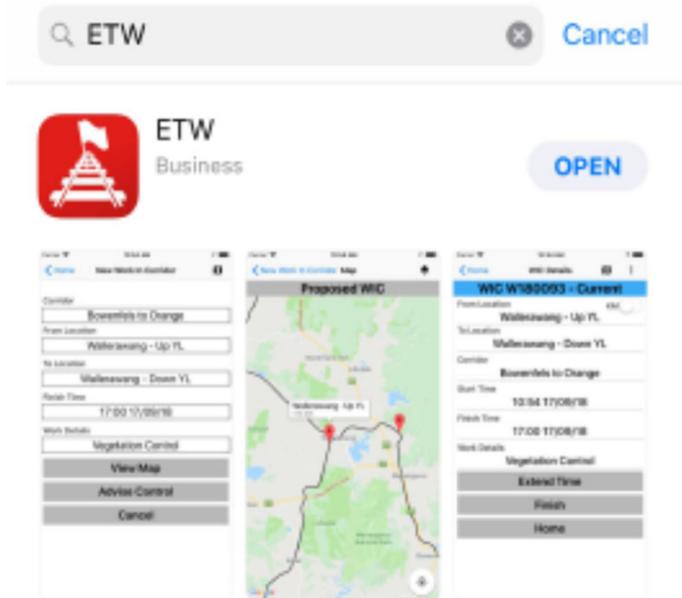
- Electronic transfer of information between the NCO and the PO,
- Electronic storage of confirmation data on the PO's mobile device,
- Capability for PO device to interface with the Train Control System,
- Provide an appropriate mobile device user interface,
- The safety system integrity remains unchanged,
- Train control system functionality remains unchanged,
- Network Rule and Procedure principles remains unchanged,
- Infrastructure and signalling standards remains unchanged.

Why use the ETW application?



- Reduction in communication errors,
- Reduction in need for written forms for the NCO and PO,
- Improved tools for managing overlapping worksites,
- Improve PO location assurance via map of limits and current location,
- Improved situation awareness for PO,
- Efficiencies for NCO and PO from reduction in voice communication,
- Improved safety through integration of control system and PO device,
- Competency assurance via the integration of the RIW database

How to find the ETW Application?



How to login to the ETW Application

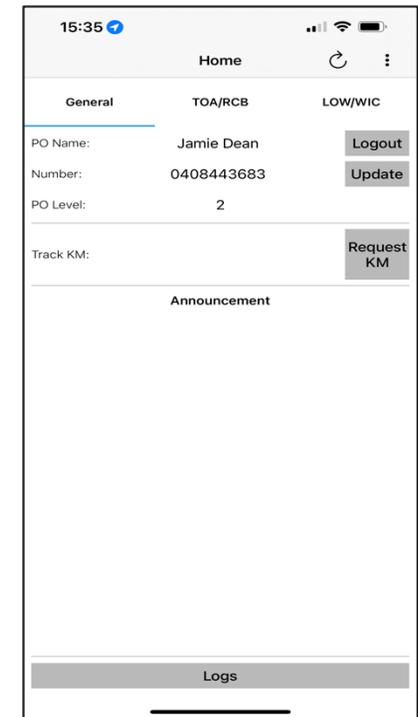


The ETW Application is started by selecting the ETW icon. (left)

To login, follow the steps below

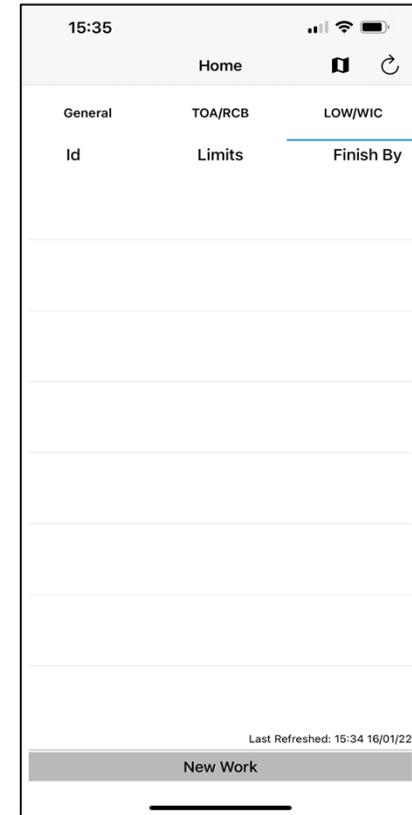
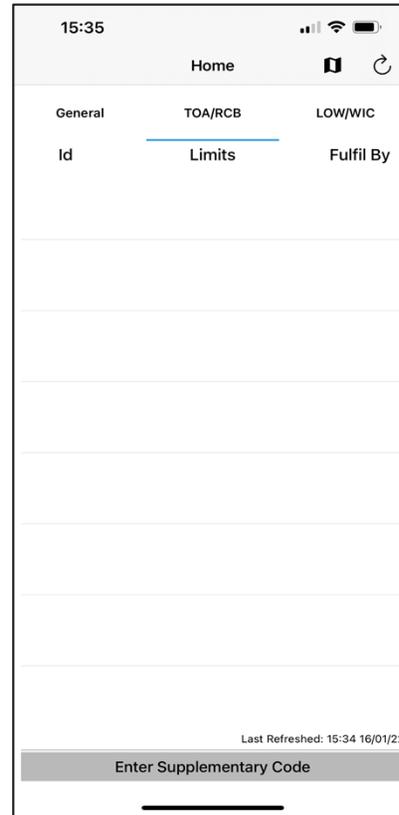
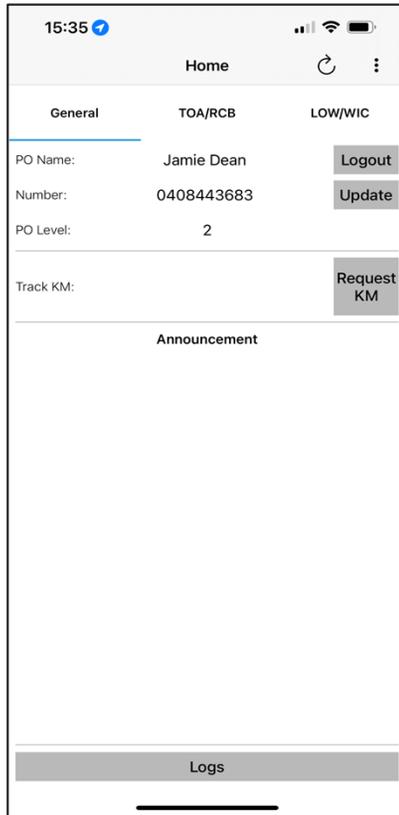
- Tap on the username to activate the keyboard
- Enter the username
- Enter the password
- Tap on the login button

Once started, the ETW Application will display the home screen. (right)



Your username and password will be assigned by UGLRL - <https://www.ugregionallinx.com.au/en/contact-us>

Example of the tab screens upon start-up...



Example of the tab screens with authority information...

ETW 9:16 am

GENERAL TOA (1) LOW/WIC

PO Name: Test PO LOGOUT

Number: 0407731741 UPDATE

PO Level: 4

Announcement
A reminder to ensure that your phone number is up to date in the app

LOGS

ETW 3:18 pm

GENERAL TOA (3) LOW/WIC (3)

TOA	Limits	Fulfil By
W0743	Wallerawang WG1 Wallerawang WG6	15:36 08/08/18
W0740	Wallerawang 55pts Wallerawang WG5	10:33 15/08/18
W0741	Wallerawang 55pts Wallerawang WG10	13:01 15/08/18

Last Refreshed 15:18 08/08/18

ENTER SUPPLEMENTARY CODE

ETW 3:18 pm

GENERAL TOA (3) LOW/WIC (3)

Id	Limits	Finish By
LOW S180036	Bungendore Down YLB Bungendore Up YLB	08/08/18 15:27
WIC N180039	Stuart Town Down YLB Stuart Town Up YLB	08/08/18 17:00
WIC N180040	Stuart Town Down YLB Wellington Down YLB	08/08/18 17:00

Last Refreshed 15:18 08/08/18

NEW WORK

Types of symbols used...

Symbol	Definition
	Refresh. This is used to refresh the ETW Application
	Map. This is used to open the Map Screen.
	Information. Used to notify you that an update has occurred
	Train. This is used to show a requested train position
	Phone. This is used to initiate a call to the NCO
	Layers. Used to select different map displays.
	This is your position on the Map
	Pins are used on Map to display limits of TOA

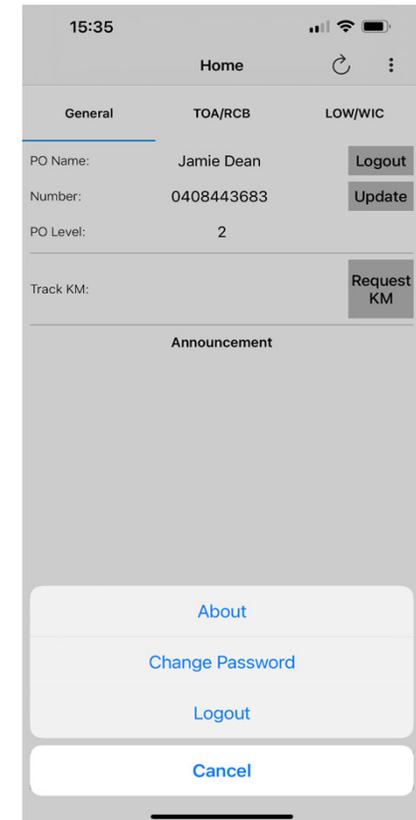
Changing your password

Once logged into the application it is a good idea to change your password. 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 re-enter your new password
- After entering the new password twice, tap the “submit” button





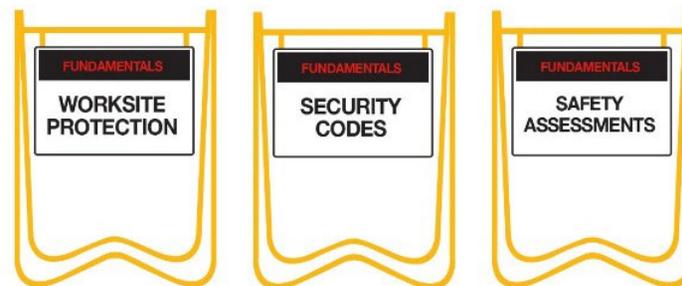
Obtaining TOA / RCB

Authority fundamentals

The fundamentals of the authorities remain the same!

- Safety Assessments
- Worksite Protection Plans
- Protection Officer Diaries
- Task Risk Assessments

ETW is a new way to transfer or communicate information between the Protection Officer and the Network Control Officer.



The TOA communication process...

Paper based TOA process



ETW Application TOA process



Verbal Communication

- Remove the reliance on verbal communication by using data transmission
- Protection Officer sees the same details as Network Control Officer
- Protection Officer now validates/accepts details transferred via ETW
- Reduce the use of paper forms



Location assurance

- Limits of authority will be shown on a geographical map and the Protection Officer will see their own location in relation these limits
- ETW shows both the kilometre and control point names of the TOA for the Protection Officer to validate
- Protection Officers must confirm that the limits shown on the map match the worksite protection plan



Agreed Arrangements / Supplementary Codes

- Currently Protection Officers provide verbal confirmation of agreed arrangements
- Introduction of a Supplementary Code will provide engineering control to limit the number of overlapping TOA's
- Supplementary Code will provide the assurance that both Protection Officer's have made agreed arrangements
- This process will apply to both ETW and paper based TOA's

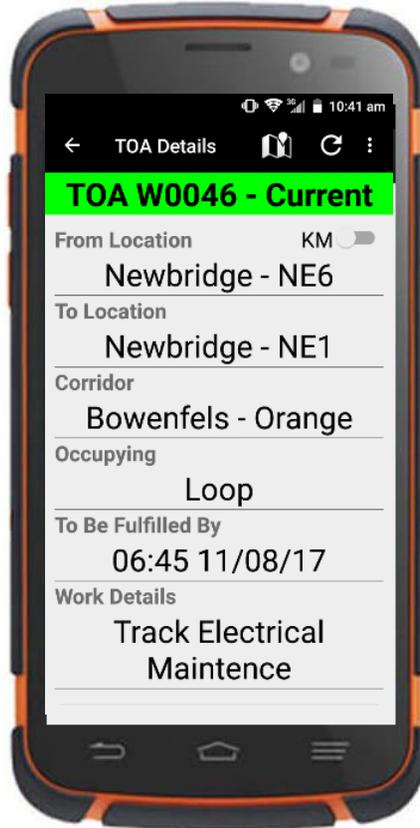


Competency Requirements

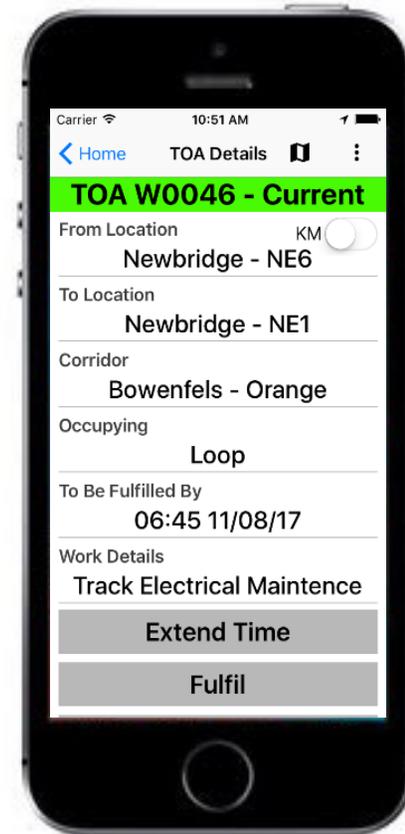
- Control systems interface with RIW database to confirm Protection Officers hold correct competency before authorising TOA
- ETW log-in will use Pegasus identification
- NCO will validate competency on application for all TOA's, whether this is by the ETW Application or paper form



Types of mobile devices



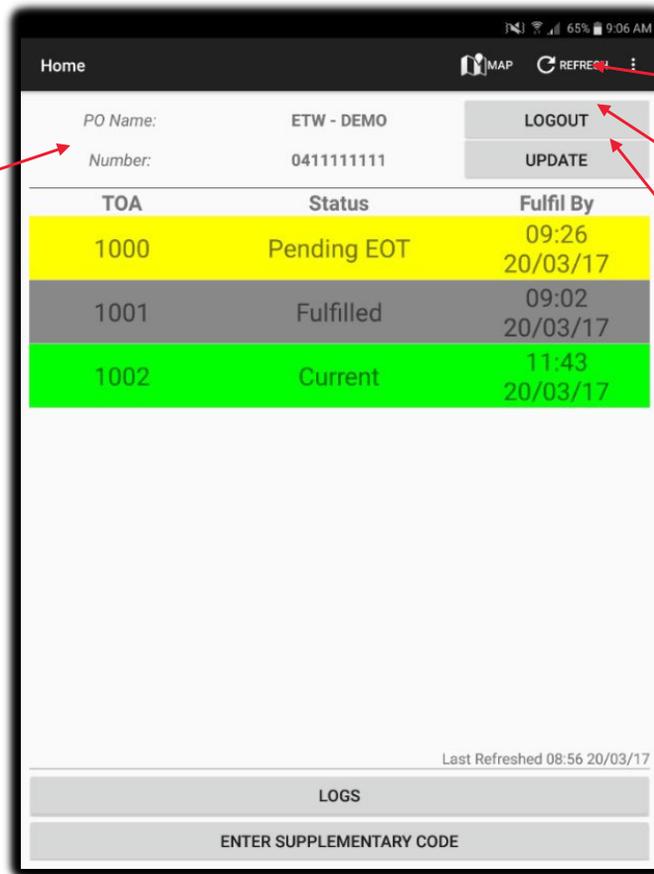
Android device



Apple device

Home screen...

PO details displayed

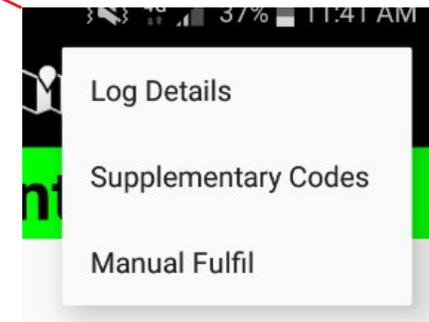
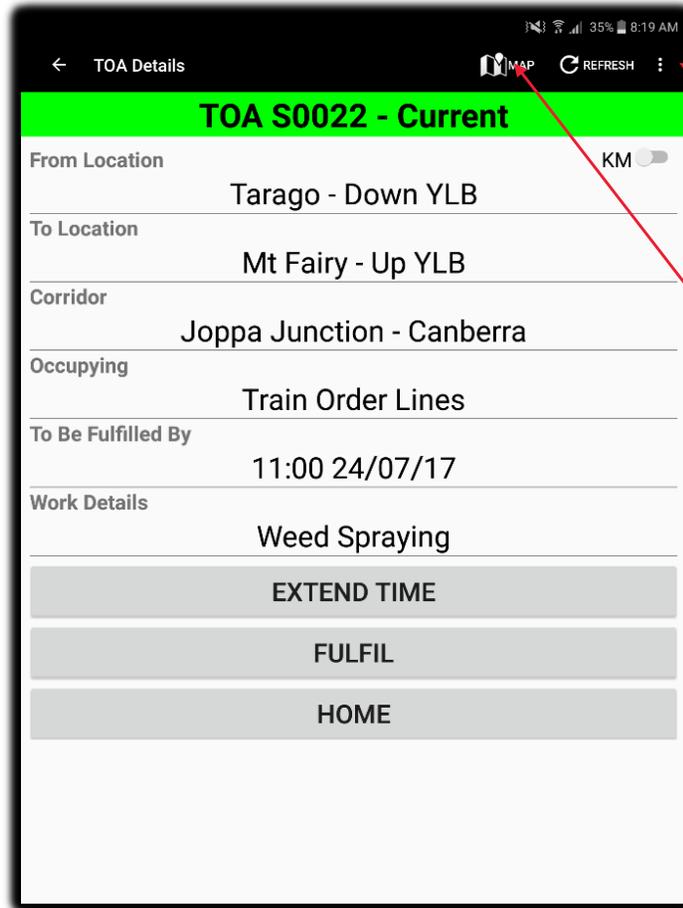


Refresh TOA list

Logout of ETW application

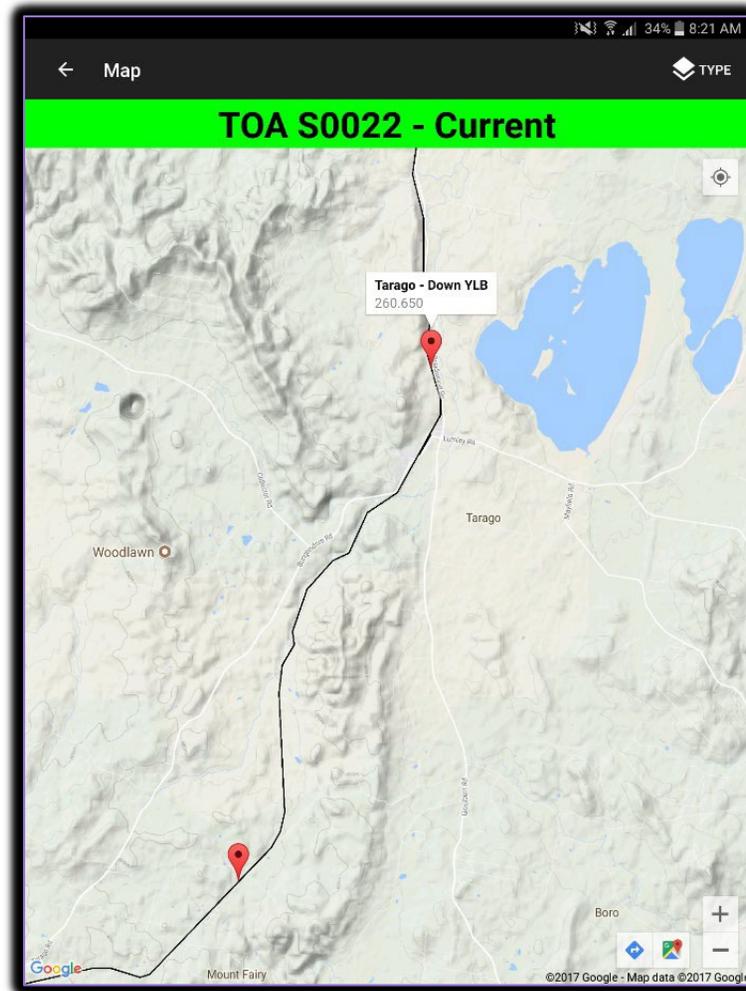
Update PO phone number

TOA screen details...



Access to the map

TOA screen map...



What do the status bar colours mean?

TOA 1001 - Proposed
TOA 1001 - Current
TOA 1000 - Pending EOT
TOA 1001 - Fulfilled

Planning Work

Work On Track

Continue Work

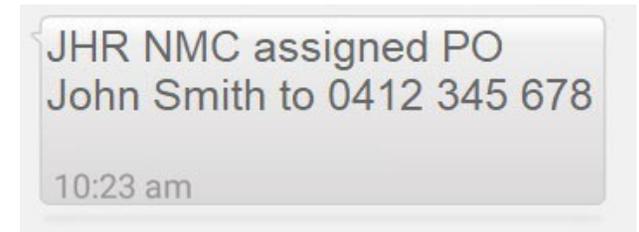
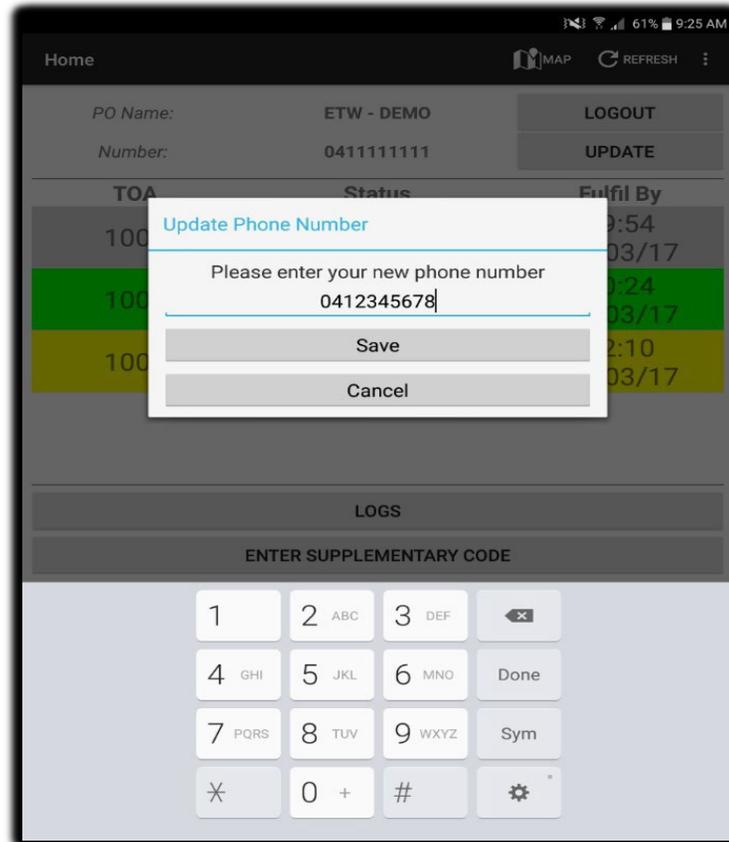
Clear

When do I get a SMS notification?

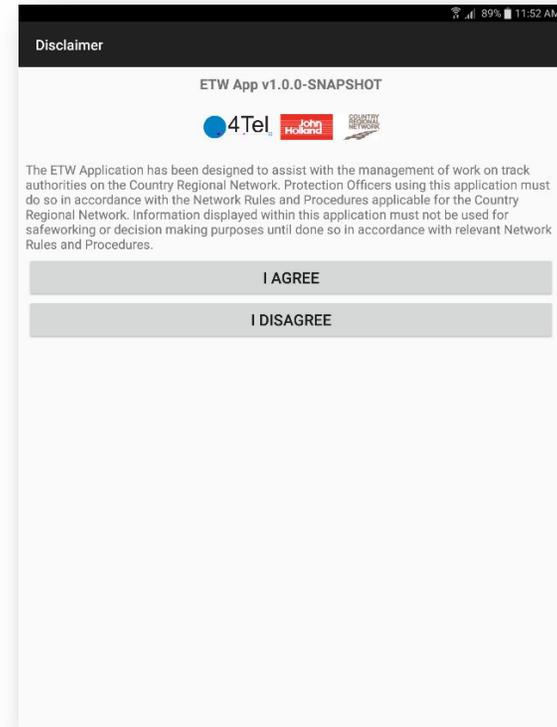
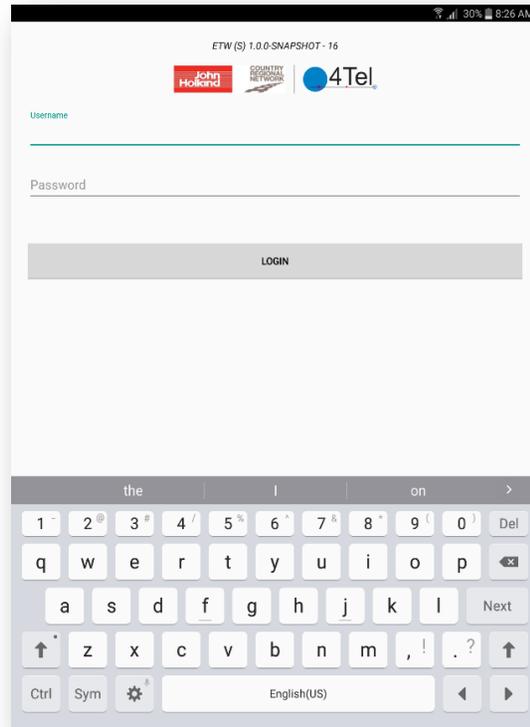
- New authority available
- When transferring an authority
- When fulfilling an authority
- When a time extension update has occurred
- When the status of your authority is updated
- When updating your contact details



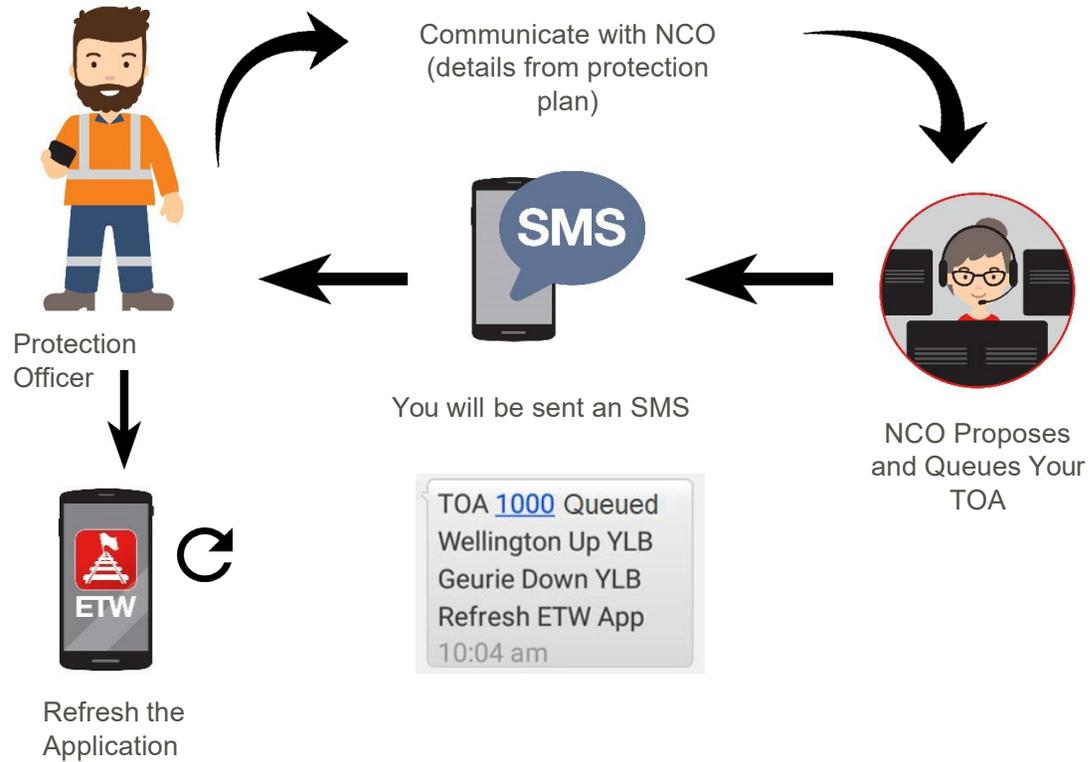
How do I update my phone number?



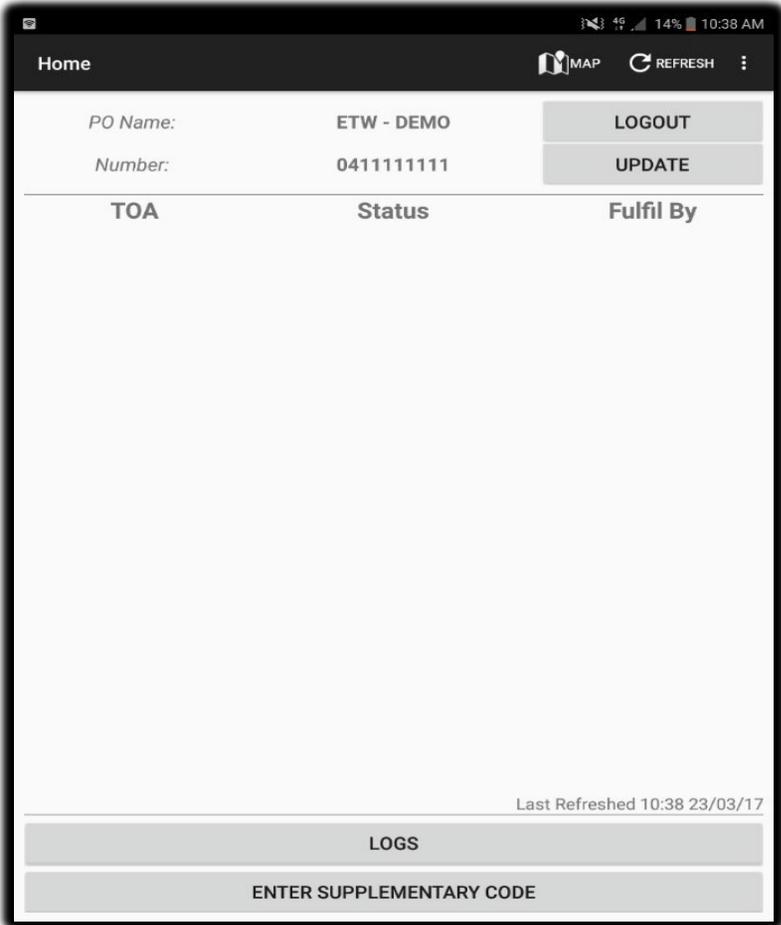
Launch and login to the ETW Application...



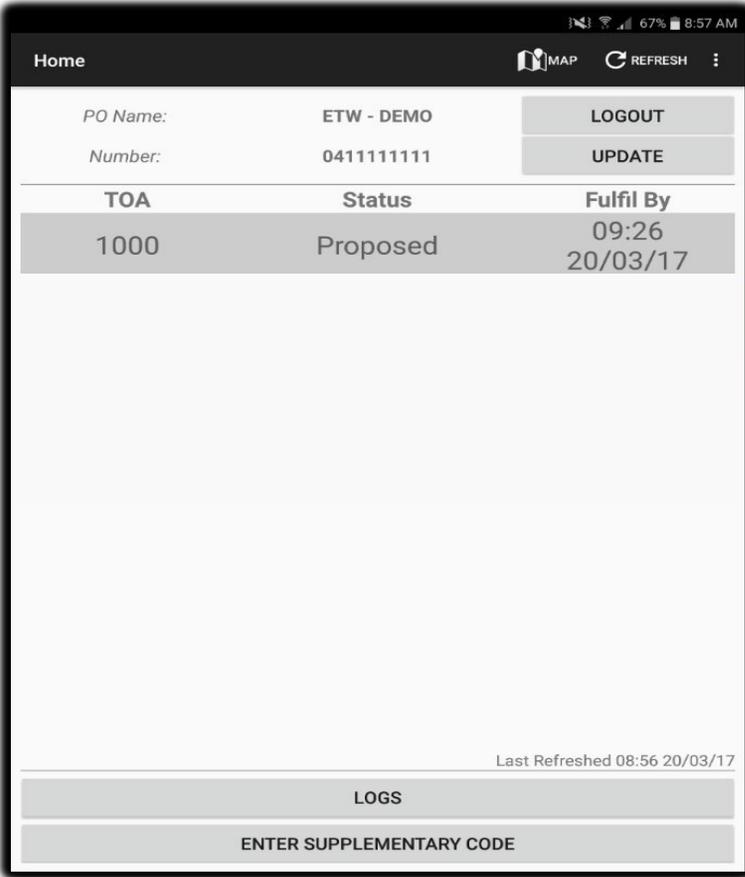
How does it work?



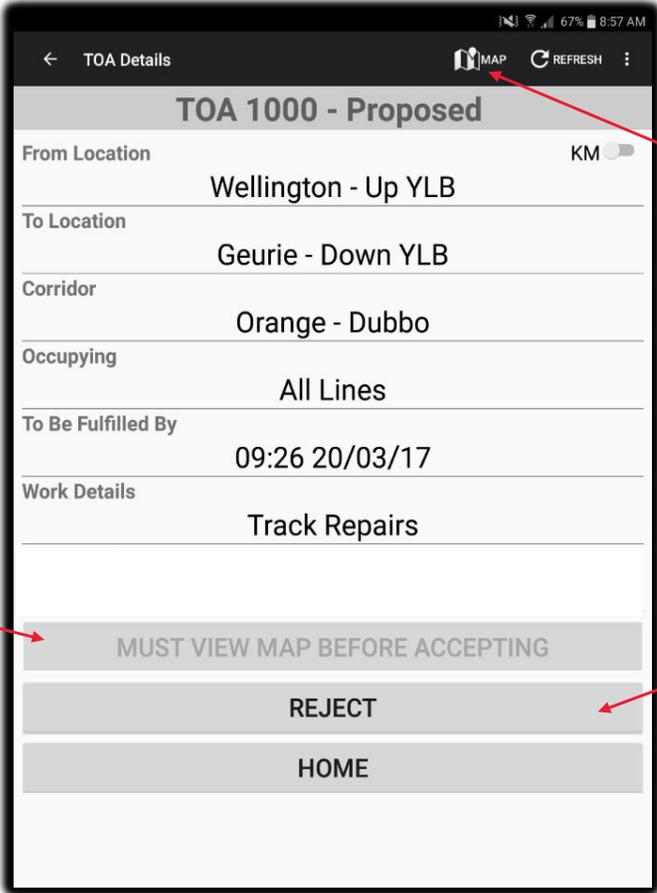
Refresh the ETW Application



Proposed TOA will be visible on the TOA screen...



Review the TOA details...

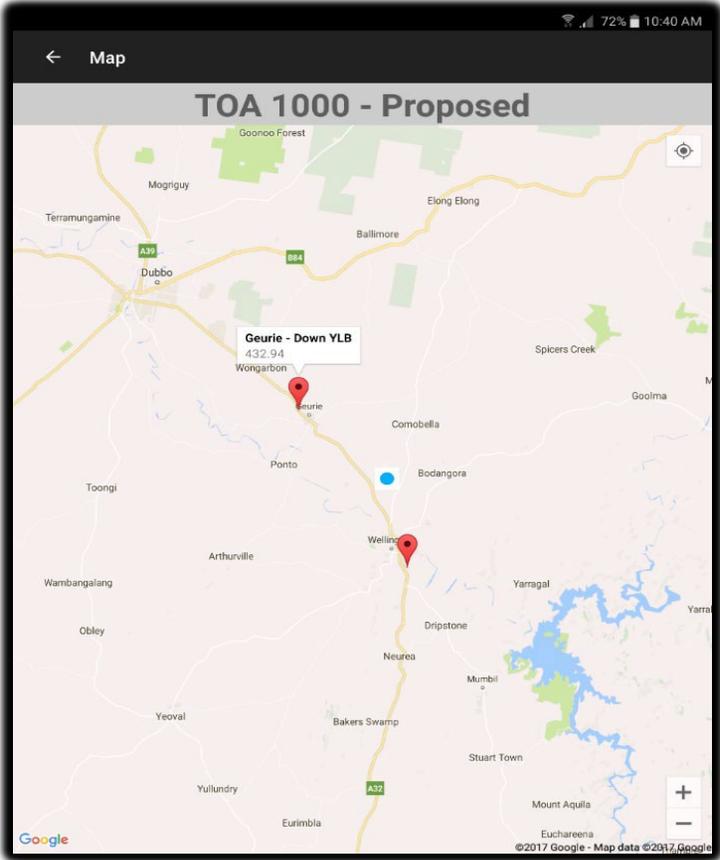


Press to open Map view

The map must be viewed before accepting

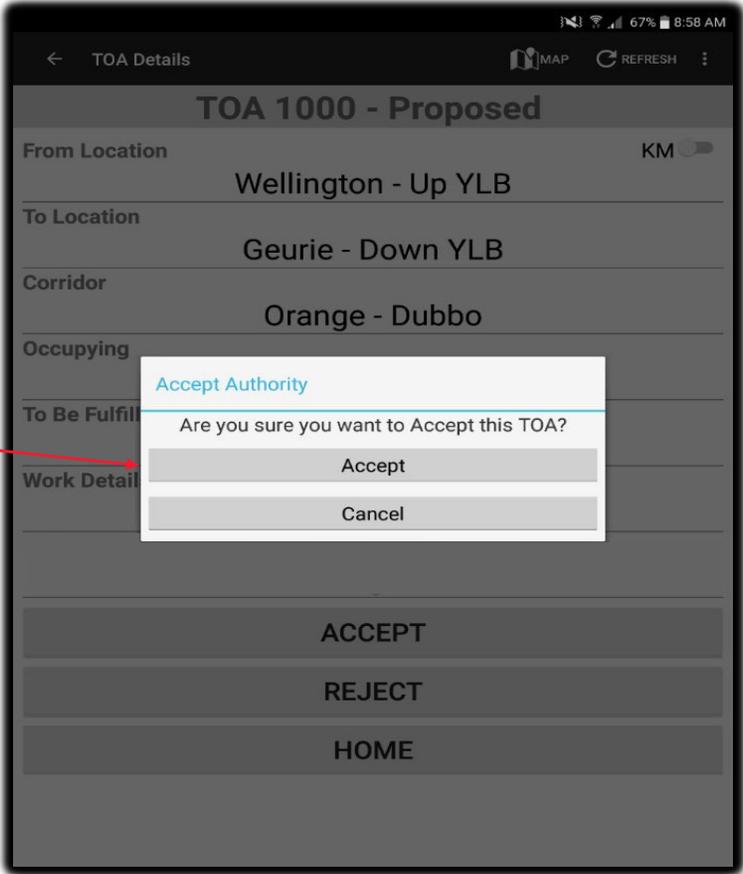
TOA can also be rejected

Check the map for the correct TOA limits...



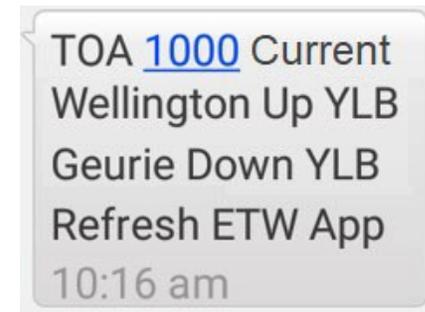
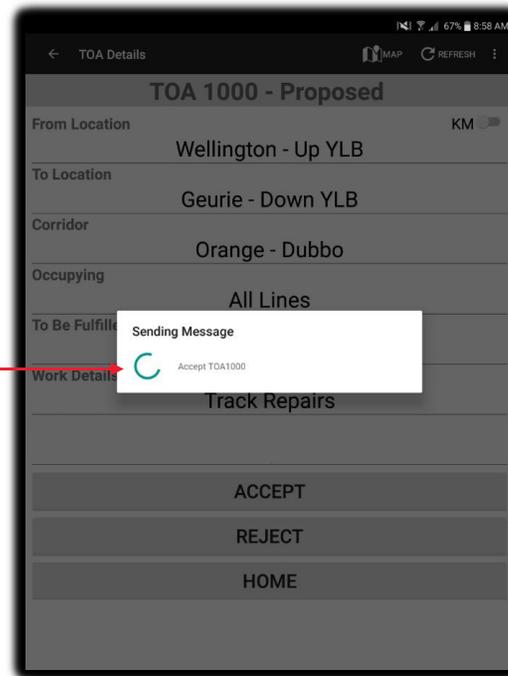
You can now accept or reject the TOA...

Accept is available after viewing the map

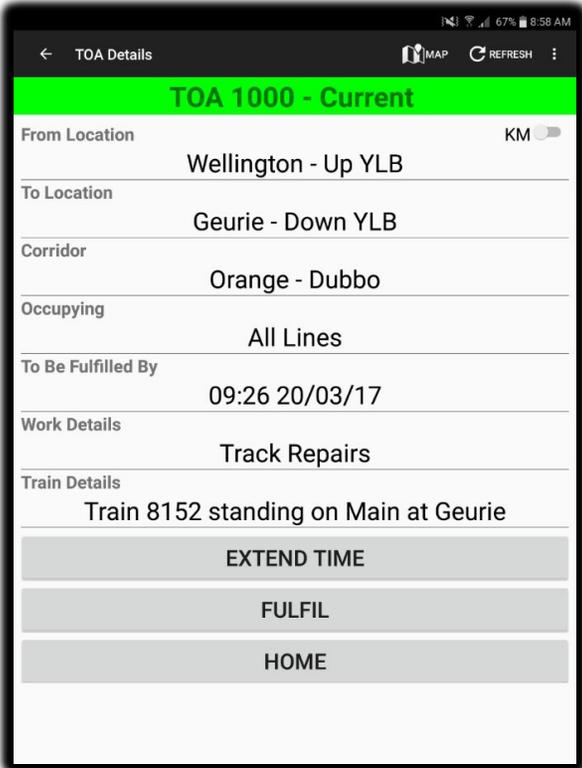
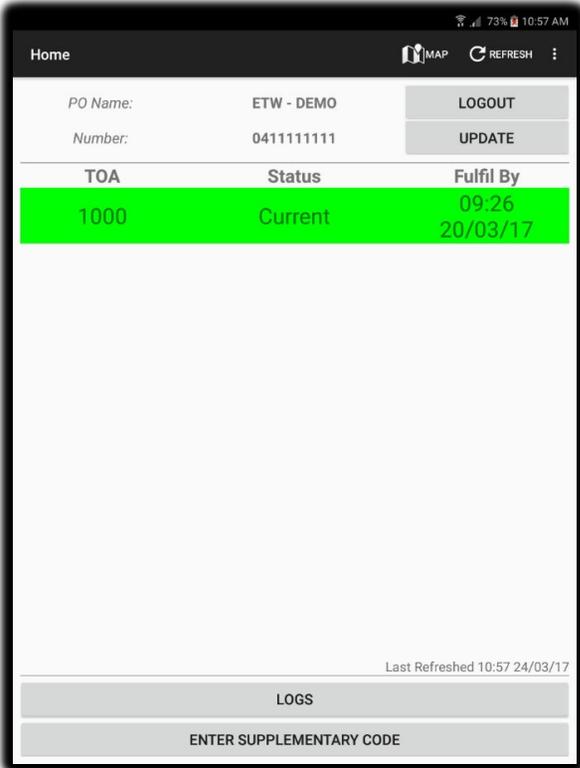


Transmission of message to the control centre...

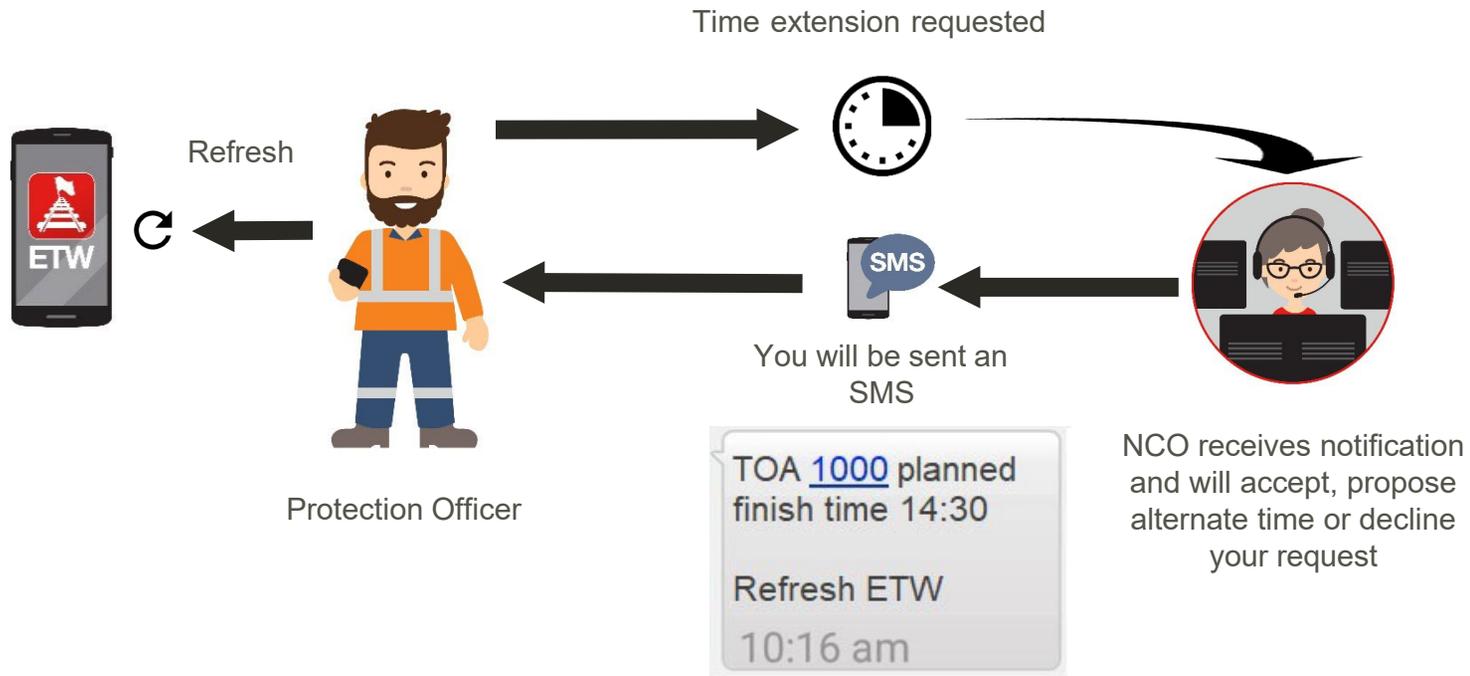
This notification tells you that the device is communicating with the control centre.



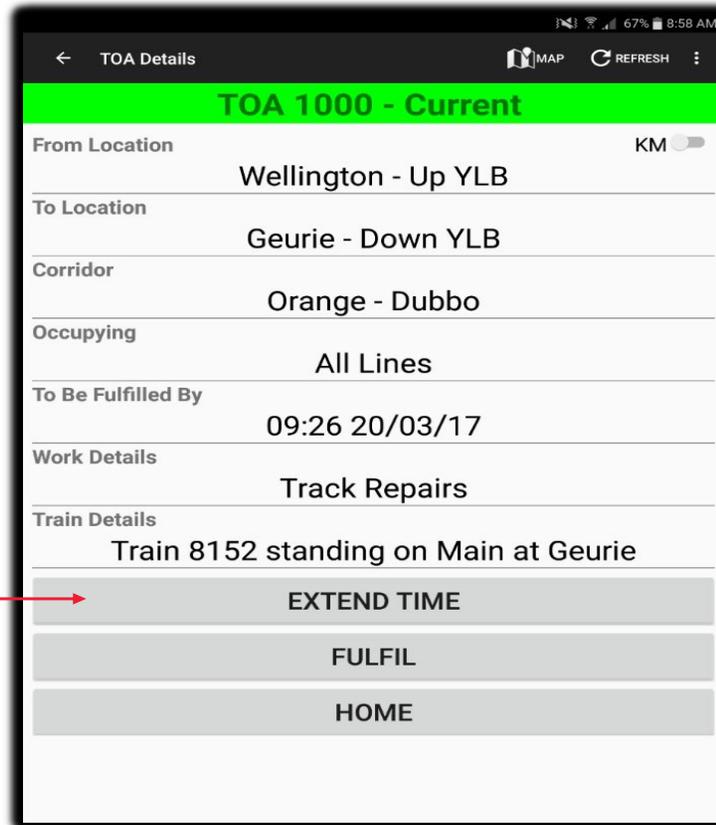
Current TOA screen...



Extension of Time



Extension of time via the ETW Application...



Select extend time

Extension of Time (EOT)

The screenshot shows a mobile application interface for 'TOA Details'. The main screen displays the following information:

- TOA 1000 - Current**
- From Location:** Wellington - Up YLB
- To Location:** Geurie - Down YLB
- Corridor:** (blank)
- Occupying:** (blank)
- To Be Fulfill:** (blank)
- Work Detail:** (blank)

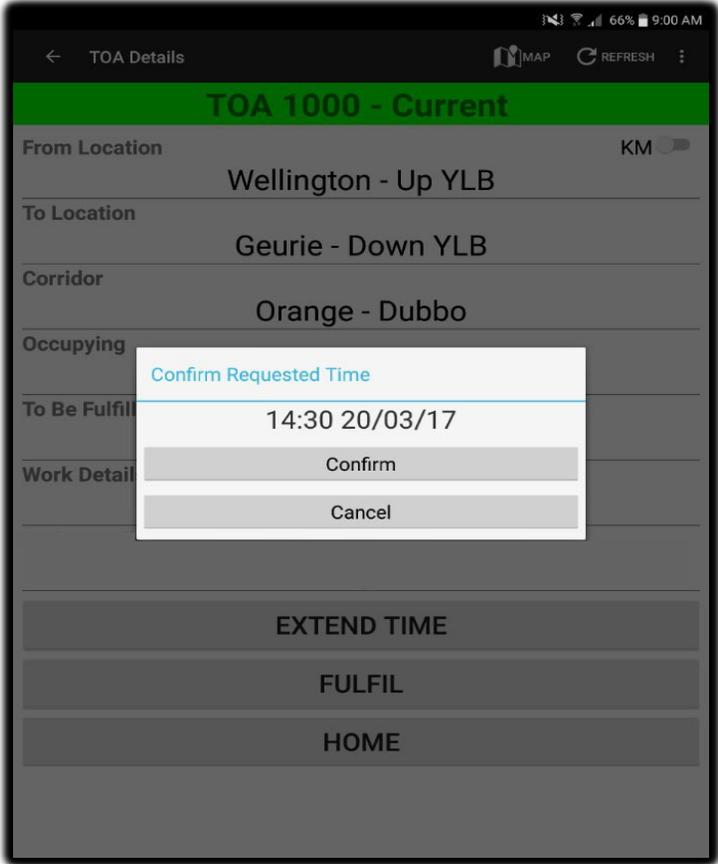
A modal dialog box titled 'Request Extension of Time' is overlaid on the screen. It contains the following fields and options:

- Time:** 14 : 30
- Date:** 20/3/2017
- Buttons:** Request, Cancel

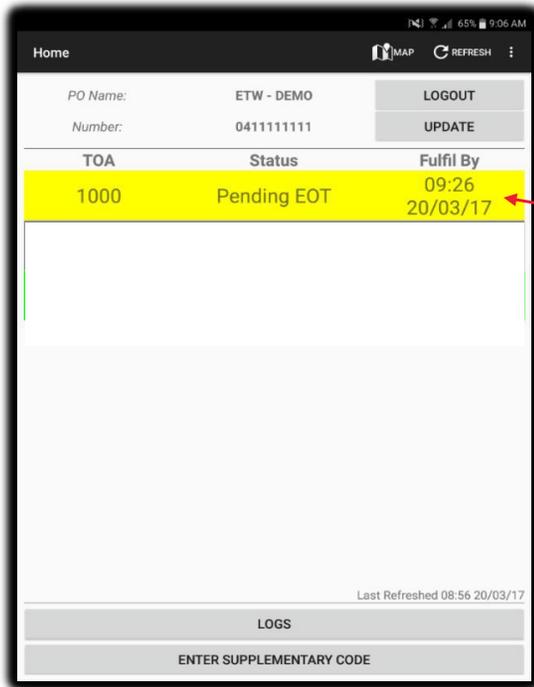
Red arrows indicate the following actions:

- 'Select request' points to the 'Request' button in the dialog.
- 'Select time' points to the 'Time' field in the dialog.
- 'Select date' points to the 'Date' field in the dialog.

Extension of time confirmation...



Pending the extension of time...

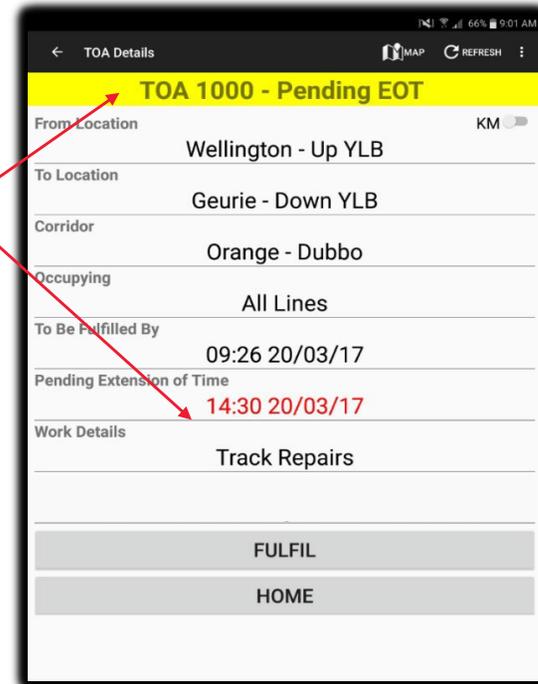


TOA is pending an extension of time

TOA 1000 planned finish time 14:30

Refresh ETW
10:16 am

Refresh ETW app after SMS confirmation of extension of time



Fulfilment of an authority...



Data Fulfillment

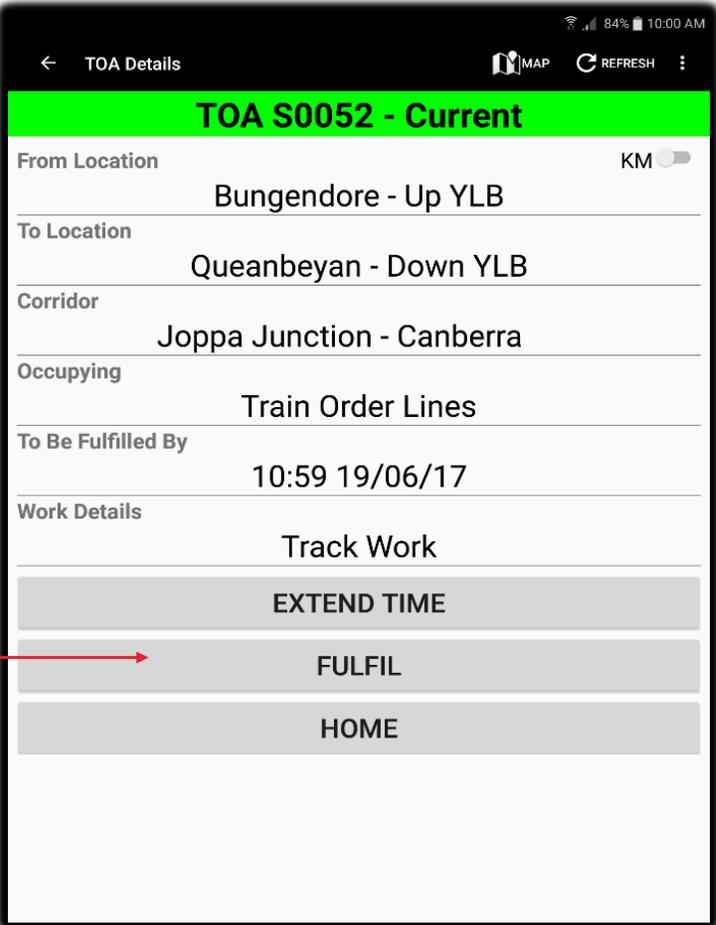
No conditions that need to be reported



Voice Fulfillment

Conditions affecting the network you may need to talk to the NCO.

Fulfilment of the TOA...

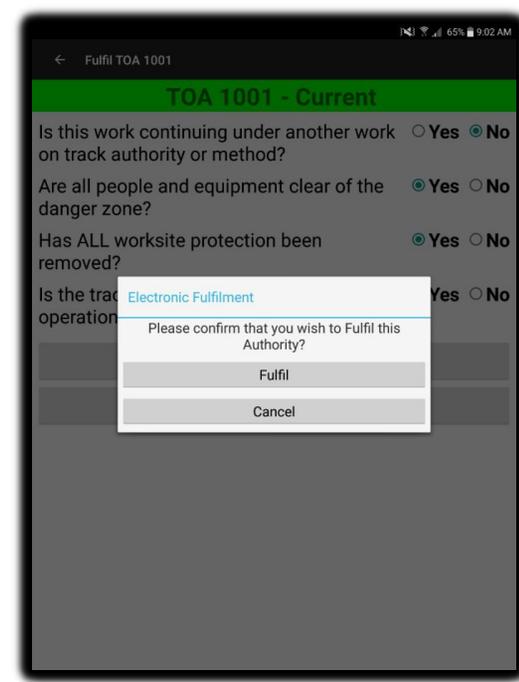
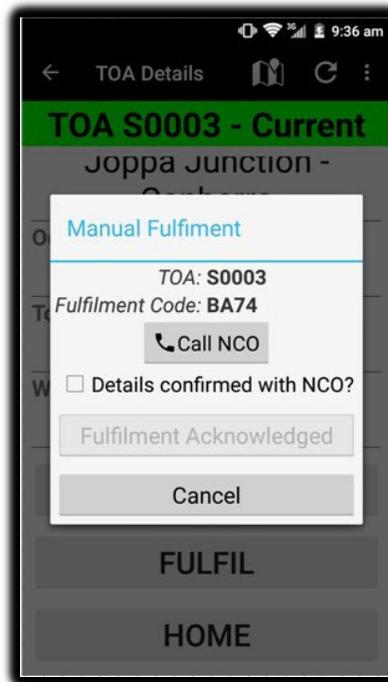
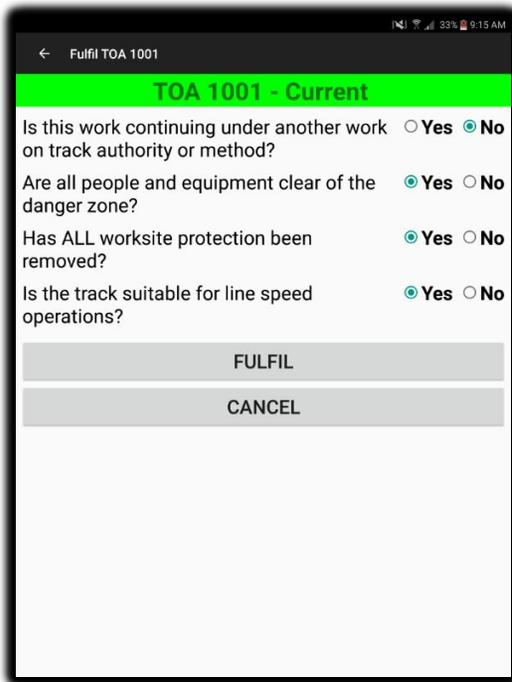


Select the fulfil button



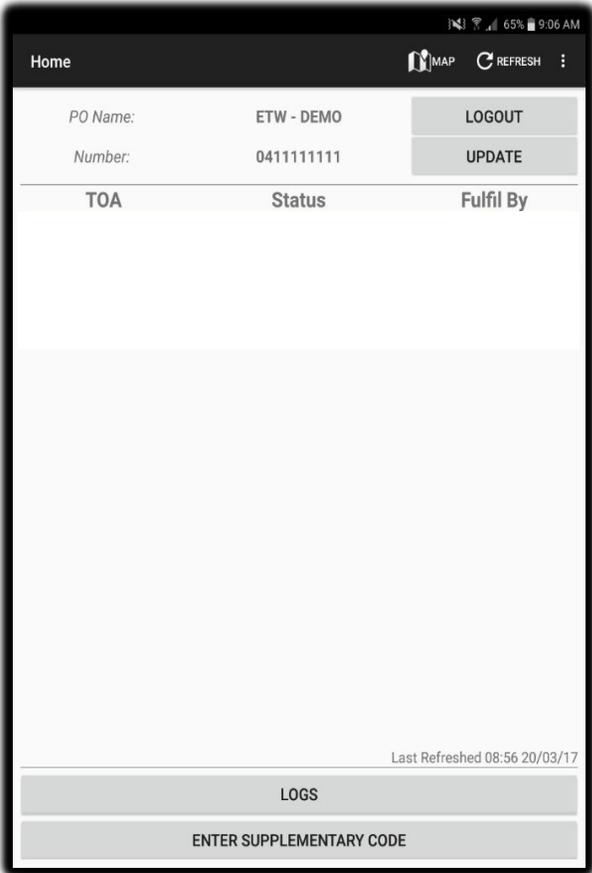
Fulfilment of the TOA...

Answering 'No' to the first question will display the other questions for data fulfilment



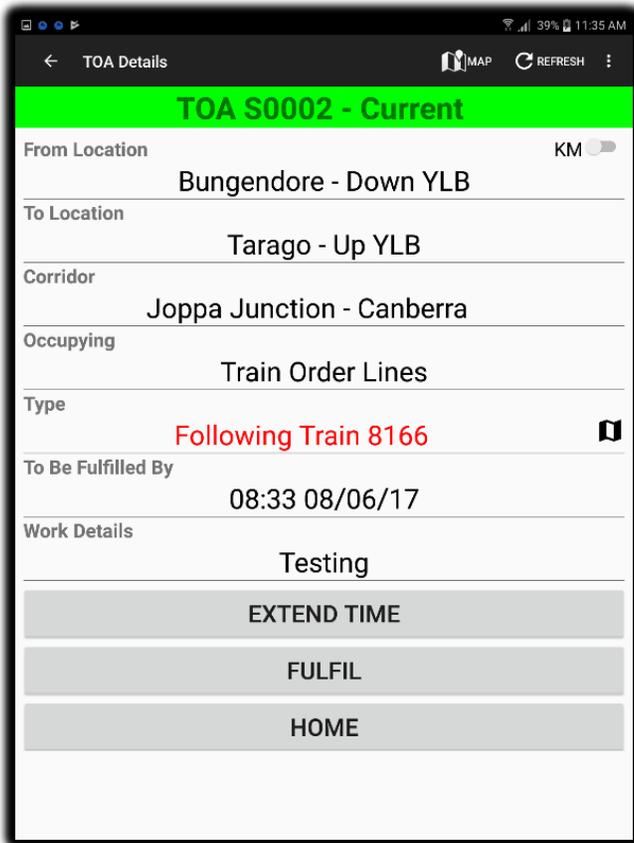
Answering 'Yes' to first question allows voice fulfilment

Fulfilment of the TOA...



TOA 1000 fulfilled
Wellington Up YLB
Geurie Down YLB
10:07 am

Types of TOA



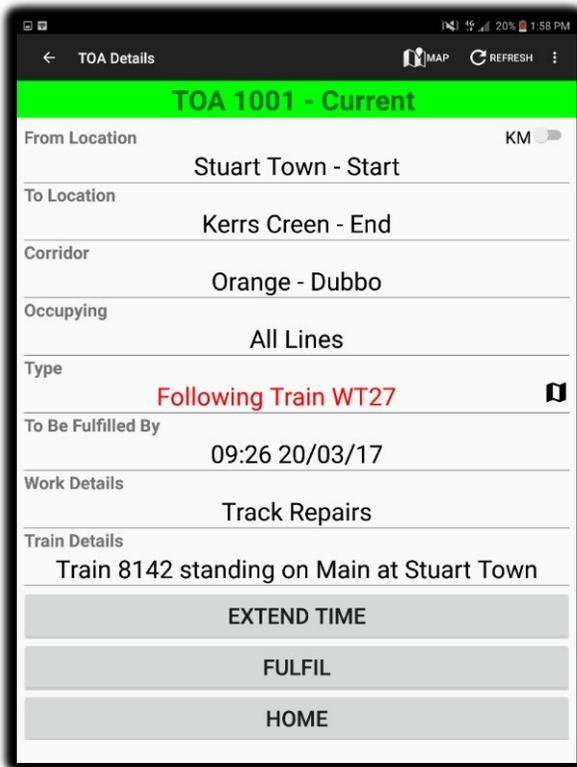
Type

Overlapping Limits

Type

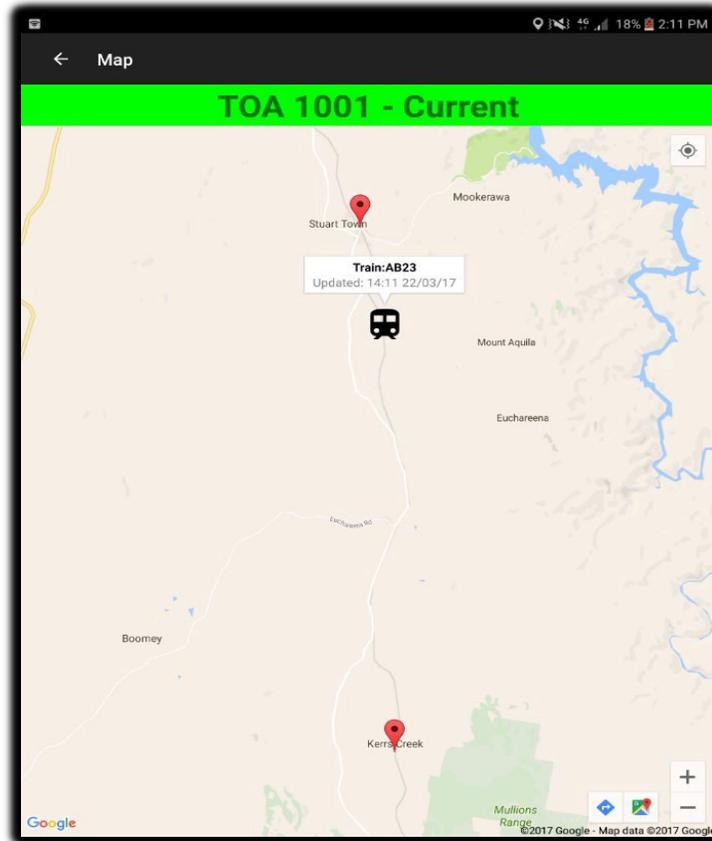
Following Train WT27

TOA following train...



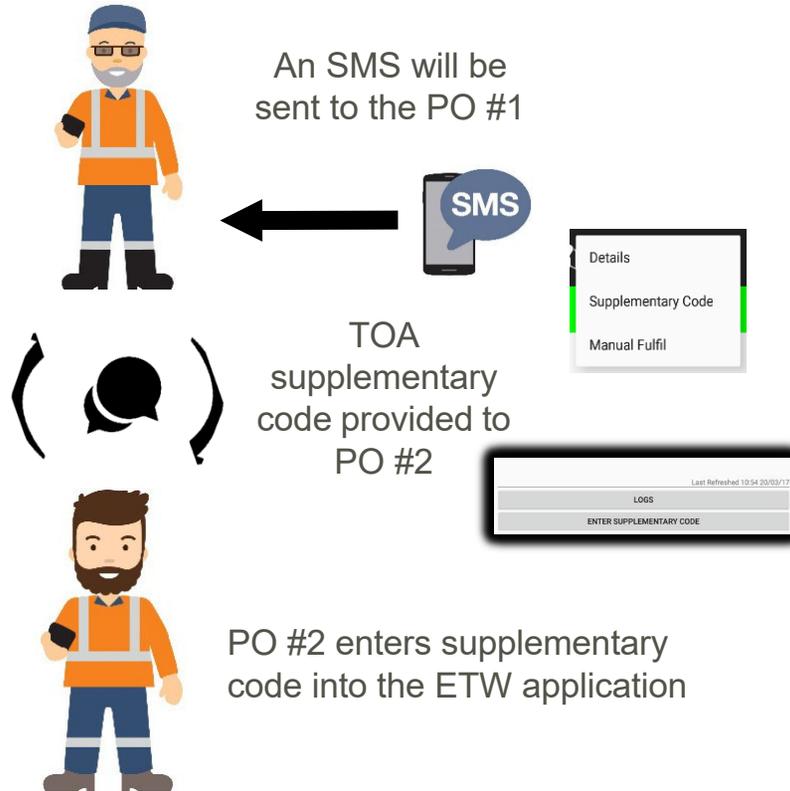
Selecting this icon will request and show the position of the train on the map

TOA following train...



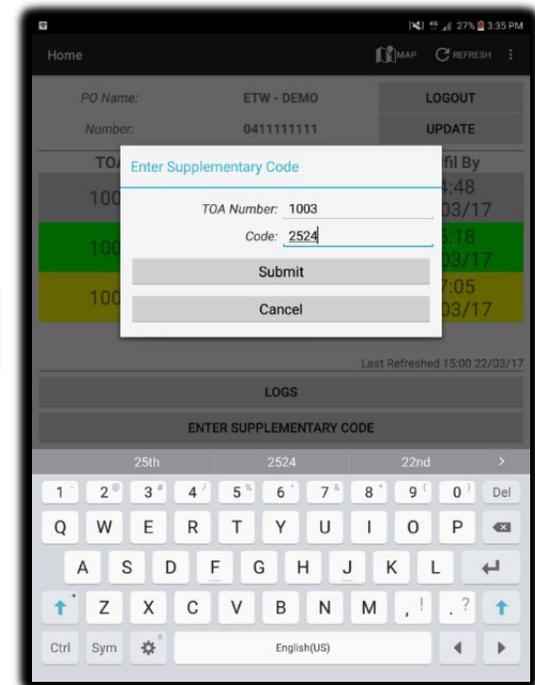
Overlapping TOA...

Protection Officer #1

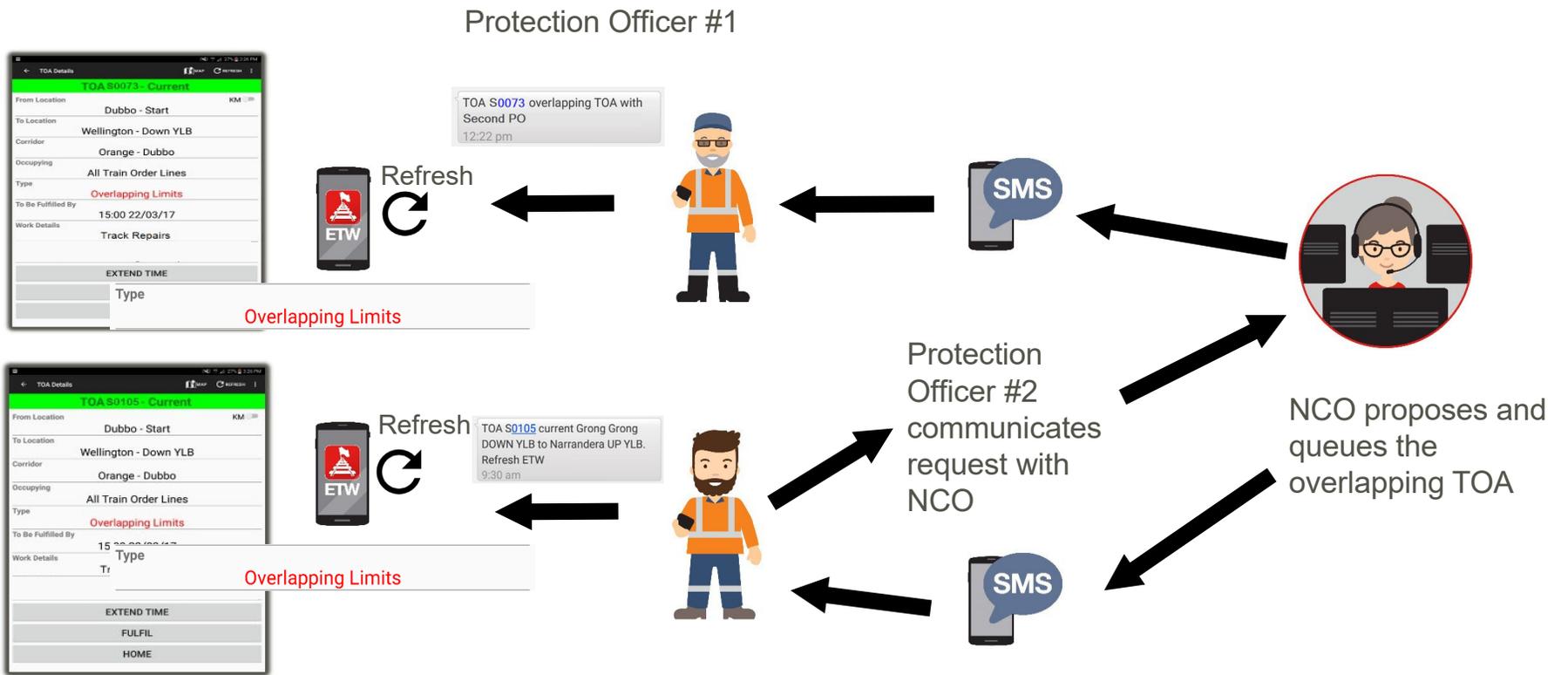


Protection Officer #2

TOA S0073 supplementary code entered, overlapping TOA pending
9:55 am



Overlapping TOA...



Handover of TOA to another PO...



Handover to device or if a device fails...



Simply login to another device and your authority will be refreshed to the new device...

Route Control Blocking...

- RCB is obtained in the same way as a data Track Occupancy Authority (TOA)
- Blocking facilities applied for RCB identical to TOA for excluding trains
- Overlapping RCB permitted – maximum of 5
- RCB available in Train Order Territory and Rail Vehicle Detection area
- The available RCB limit objects are the same as TOA:
 - including signal,
 - points and
 - some yard limit objects.
- The available RCB limit objects are the same as a TOA.



... but not in non-Train Order Yards and Terminus Locations



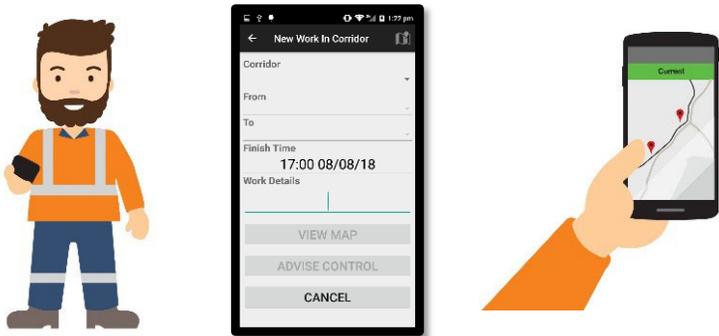
Obtaining WIC / LOW

Work in Corridor(WIC)/ Look out Working(LOW) Process

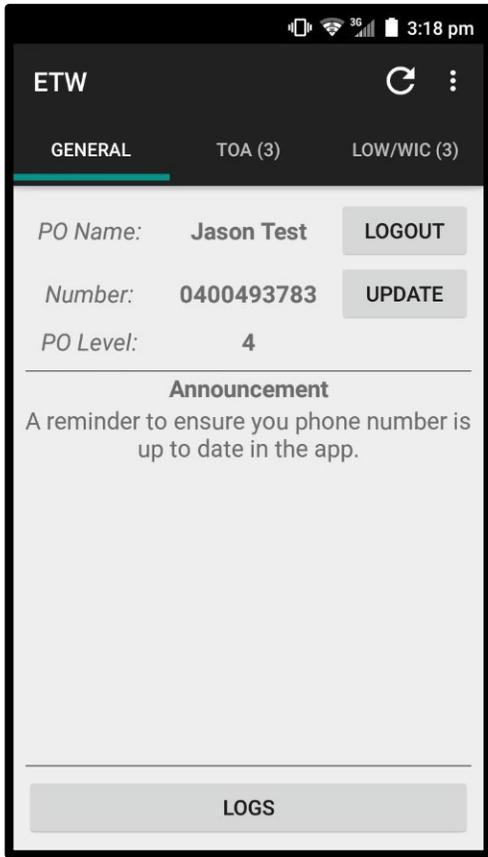
WIC/LOW
Creation
by NCO



WIC/LOW
Creation
from ETW



The Home Screen

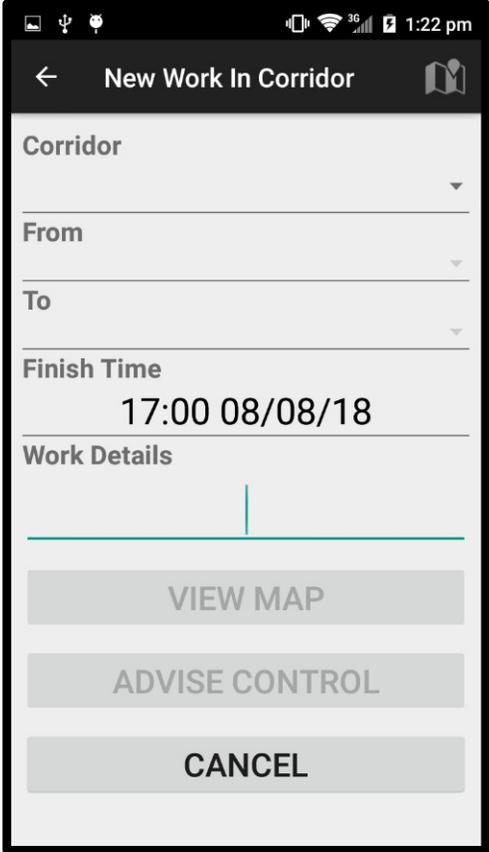
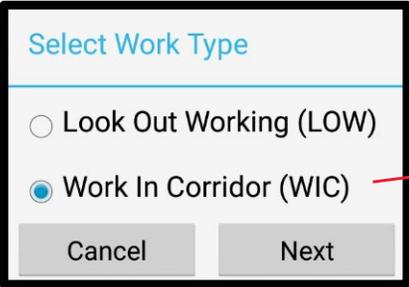
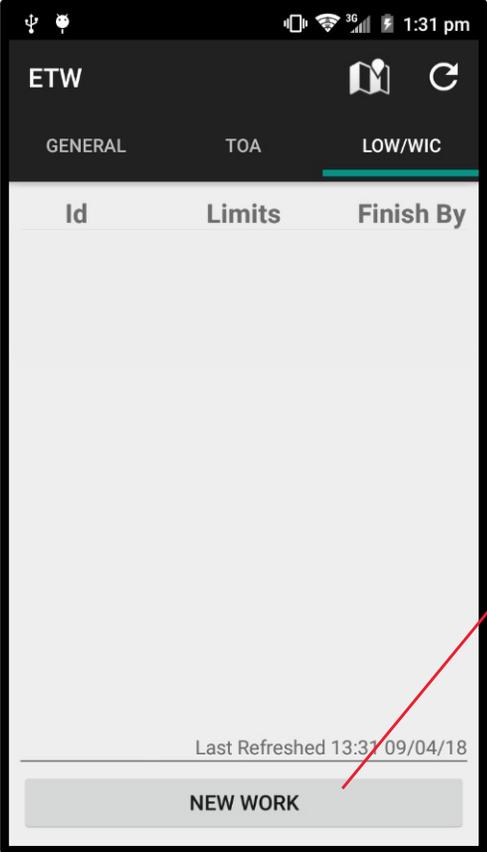


LOW/WIC Status Bar



SMS sent on every change

How to create a Work In Corridor?



How to create a Work In Corridor?

New Work In Corridor

Corridor

From

To

Finish Time
17:00 08/08/18

Work Details

VIEW MAP

ADVISE CONTROL

CANCEL

New WIC Screen



New Work In Corridor

Corridor

- Baal Bone Jct to Kandos
- Bogan Gate North to Tottenham
- Bowenfels to Orange
- Burren Junction to Merrywinebone
- Camurra West to Weemelah
- Dubbo to Coonamble
- Griffith to Hillston
- Joppa Junction to Canberra
- Junee to Griffith

Pick Corridor



New Work In Corridor

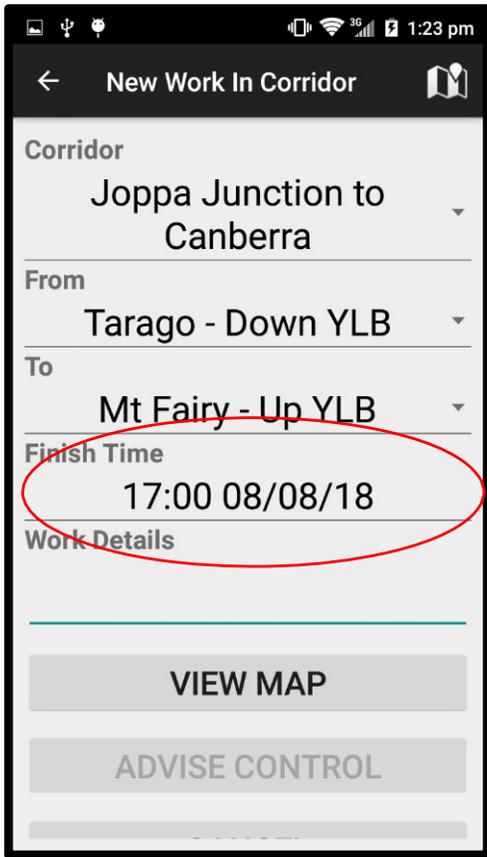
Corridor
Joppa Junction to Canberra

From

- Joppa Junction - End TOW
- Joppa Junction - Begin TOW
- Springfield - Down YLB
- Springfield - Up YLB
- Tarago - Down YLB
- Tarago - Up YLB
- Mt Fairy - Down YLB
- Mt Fairy - Up YLB

Pick From and To Limits

How to create a Work In Corridor?



New Work In Corridor

Corridor
Joppa Junction to Canberra

From
Tarago - Down YLB

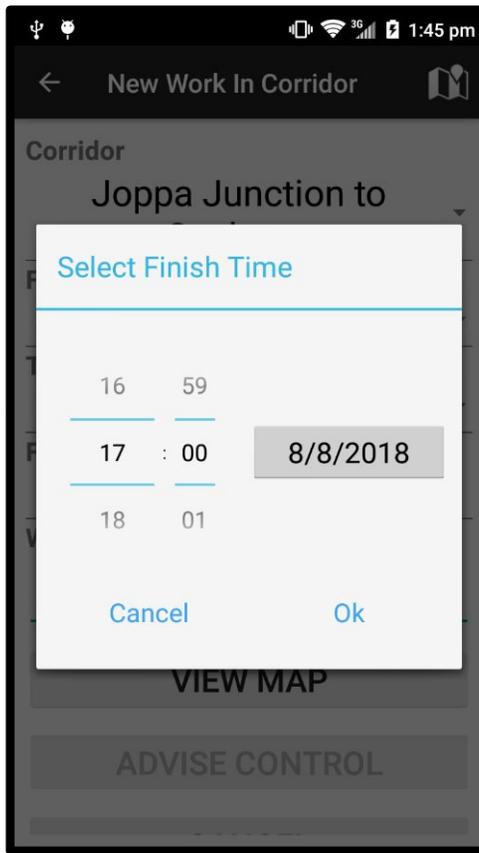
To
Mt Fairy - Up YLB

Finish Time
17:00 08/08/18

Work Details

VIEW MAP

ADVISE CONTROL



New Work In Corridor

Corridor
Joppa Junction to Canberra

Select Finish Time

16	59
17	00
18	01

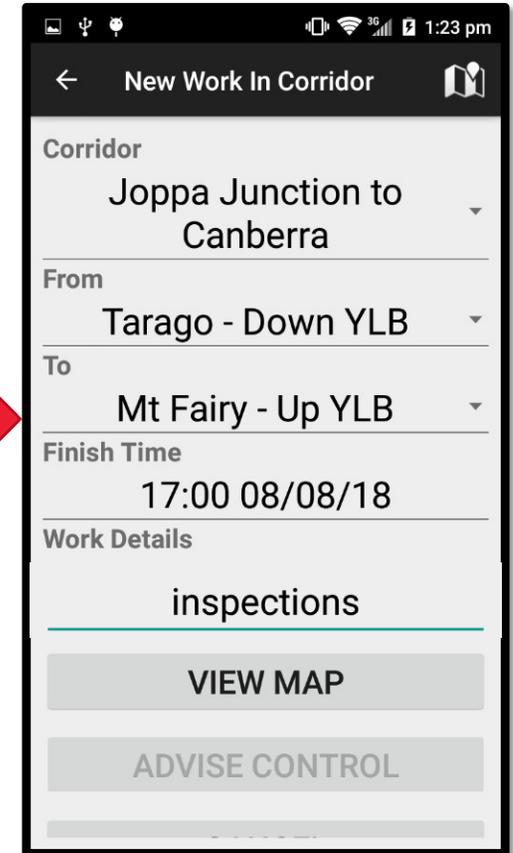
8/8/2018

Cancel Ok

VIEW MAP

ADVISE CONTROL

Select Finish Time



New Work In Corridor

Corridor
Joppa Junction to Canberra

From
Tarago - Down YLB

To
Mt Fairy - Up YLB

Finish Time
17:00 08/08/18

Work Details
inspections

VIEW MAP

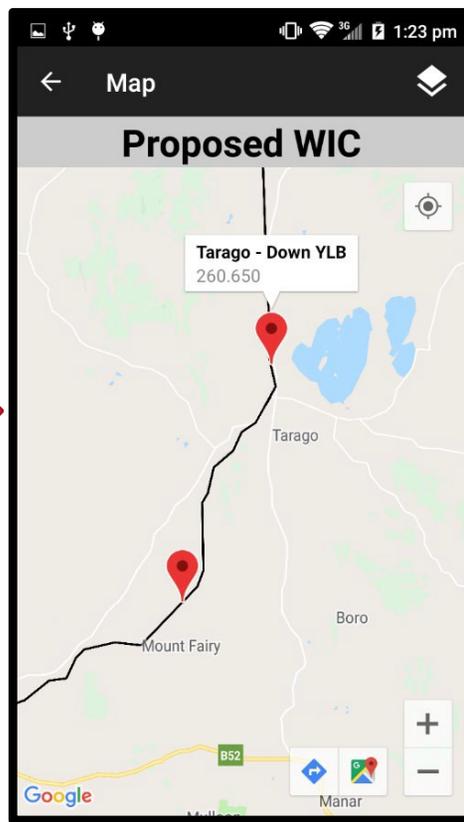
ADVISE CONTROL

Enter Work Details

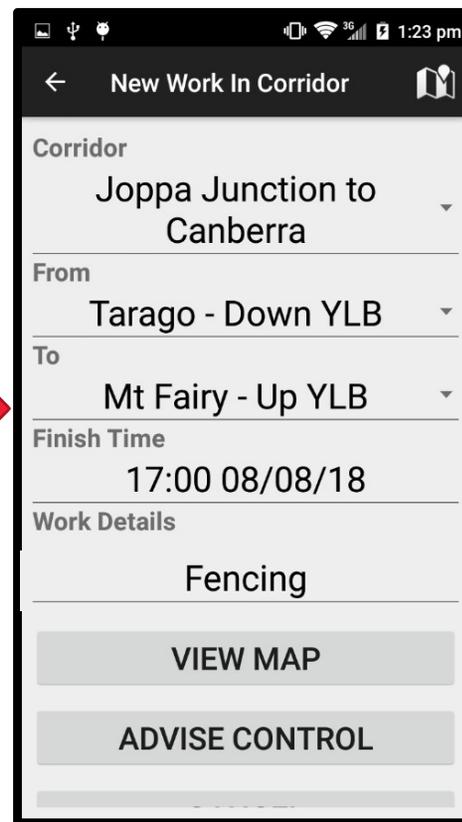
How to create a Work In Corridor?



Advise Control is disabled until the map is viewed



View limits on map



Advise Control enabled



How to create a Work In Corridor?



New Work In Corridor

Corridor
Joppa Junction to Canberra

From
inspections

Advise Control

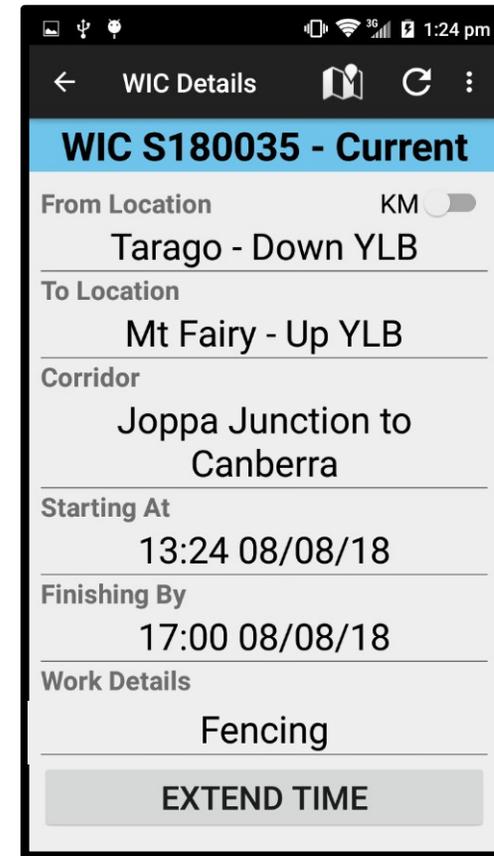
Please confirm that your Work in Corridor will not intrude on the Danger Zone?

Cancel Yes

VIEW MAP

ADVISE CONTROL

Message sent to Control Centre



WIC S180035 - Current

From Location KM
Tarago - Down YLB

To Location
Mt Fairy - Up YLB

Corridor
Joppa Junction to Canberra

Starting At
13:24 08/08/18

Finishing By
17:00 08/08/18

Work Details
Fencing

EXTEND TIME



How to create a Work In Corridor?

Home Screen shows the WIC you just created

WIC/LOWs now have a unique ID



Id	Limits	Finish By
WIC S180035	Tarago Down YLB Mt Fairy Up YLB	08/08/18 17:00

Last Refreshed 13:24 08/08/18

NEW WORK

What are the differences between WIC and LOW?

Work In Corridor (WIC)

WIC S180035 - Current

Corridor
Joppa Junction to Canberra

Starting At
13:24 08/08/18

Finishing By
17:00 08/08/18

Work Details
Fencing

EXTEND TIME

FINISH

HOME

Adjustable
Finish Time

Look Out Working (LOW)

LOW S180036 - Current

Corridor
Joppa Junction to Canberra

Starting At
13:27 08/08/18

Finishing By
15:27 08/08/18

Work Details
points visual inspection

LIKELY RAIL MOVEMENTS

EXTEND TIME

FINISH

HOME

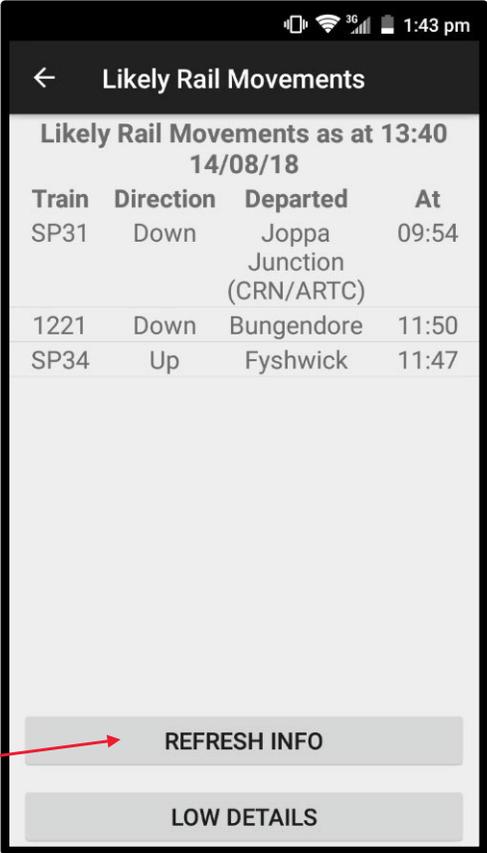
Finish time 2
hours from start
time

View of Likely
Rail Movement
Information

Time
extendable by 2
hours

Likely Rail Movements

Shows list of last reported locations of rail movements as recorded by the NCO

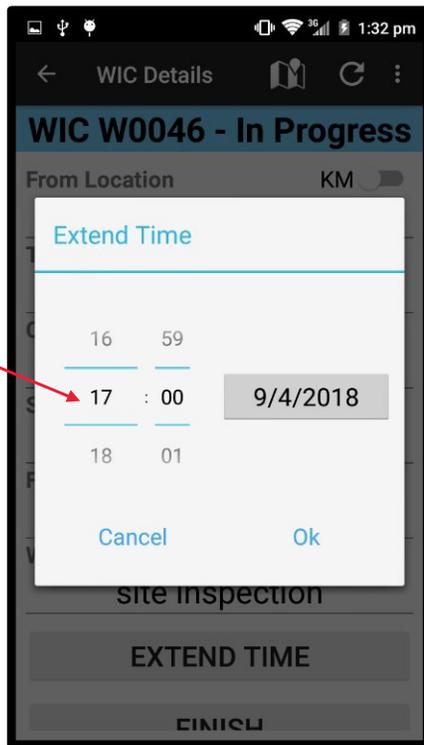


Ability to refresh

Extension of Time

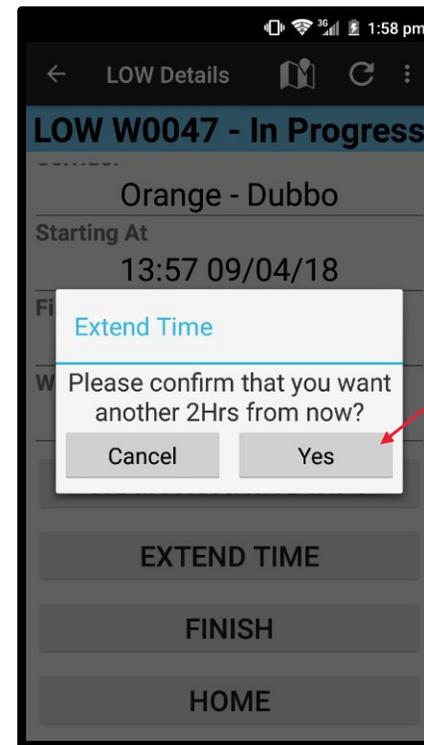
Work In Corridor (WIC)

Adjustable finish time

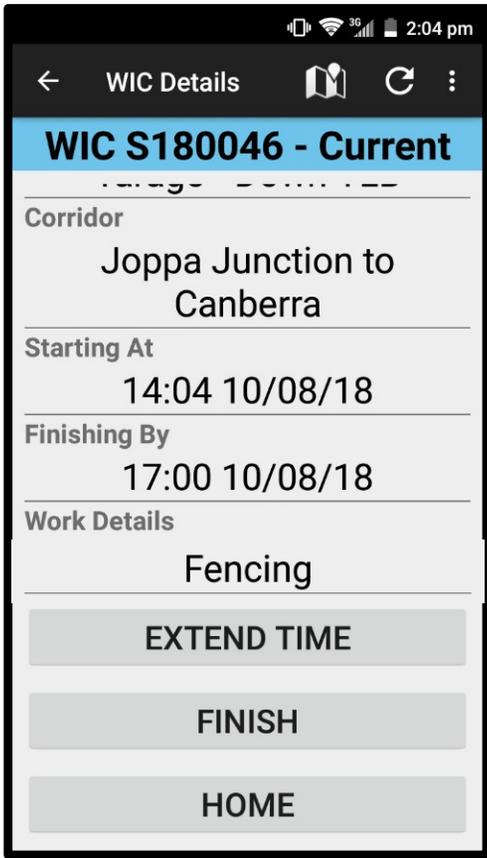


Look Out Working (LOW)

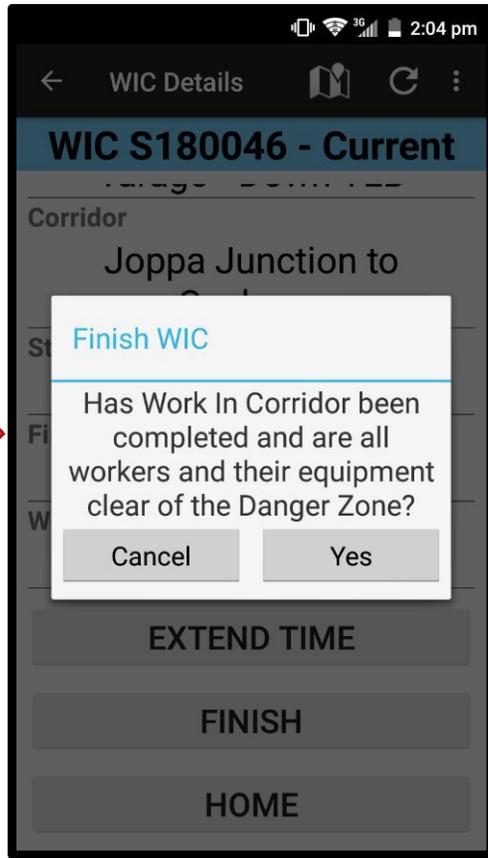
Extendable by 2 hours



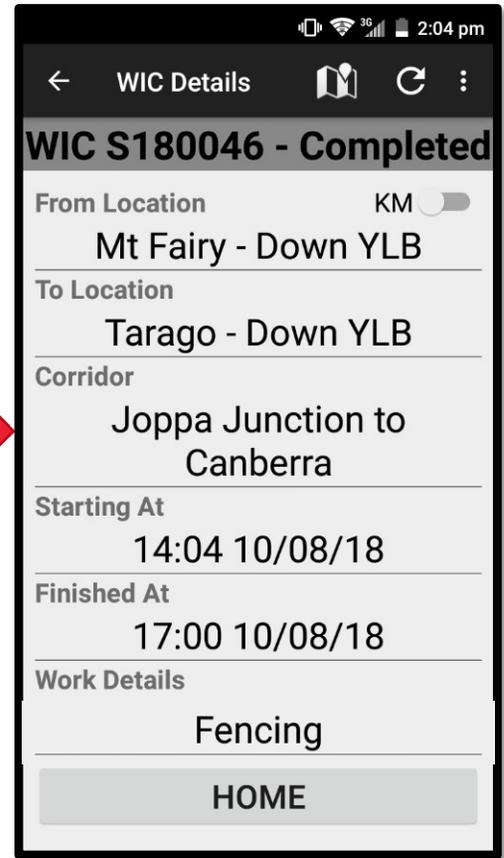
Finish



Current LOW/WIC



Confirmation



Completed

Finish

Once completed the WIC/LOW will no longer be on the Home Screen



Logs

Details of LOW/WIC are viewable in the Logs

Log Details - WIC S180035

From: **Tarago - Down YLB**
To: **Mt Fairy - Up YLB**
Corridor: **Joppa Junction to Canberra**
Start Time **08/08/18 13:24**
Finish Time **08/08/18 17:10**
Work Details: **inspections**

Time	Action
08/08/18 13:24	CURRENT
08/08/18 13:25	Request for time extension
08/08/18 13:25	Time adjustment success
08/08/18 13:26	Completed

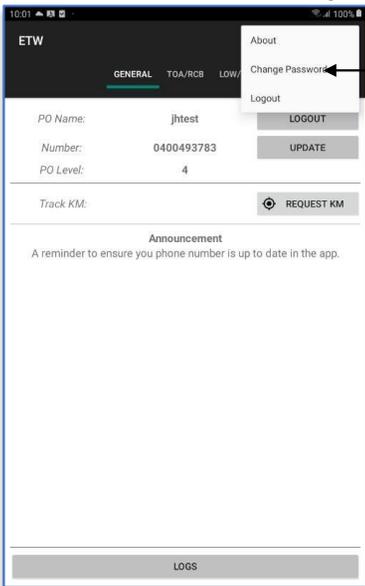


Special Features

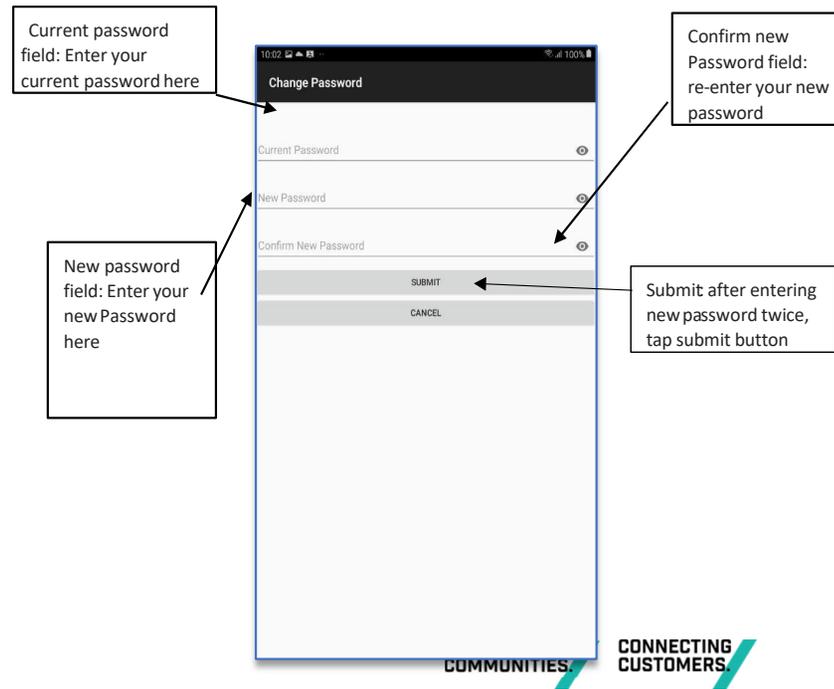
Changing your password...

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

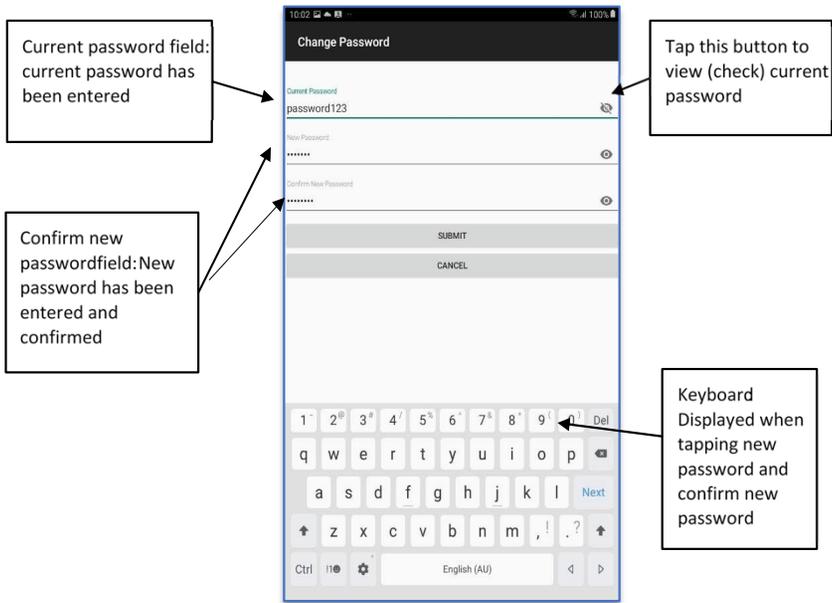
1. Tap on change password
2. This will then open a separate screen



Tap this button to change password



Changing your password...



Tap on Current Password and enter your current password

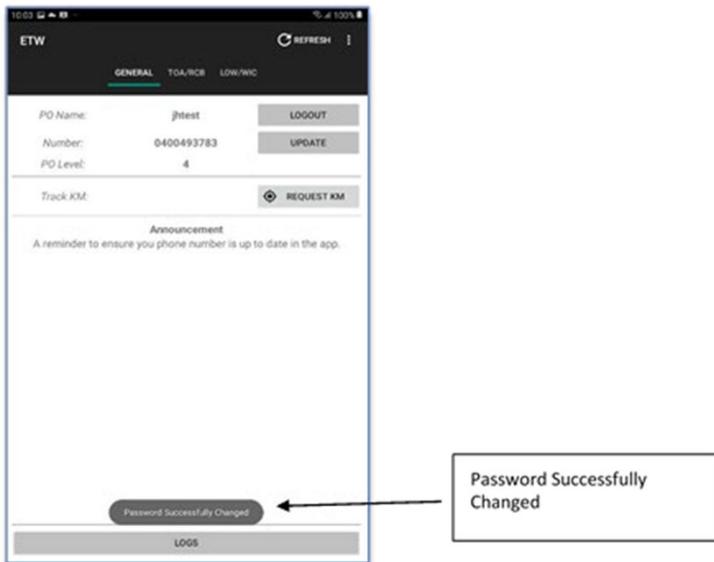
Tap in the New Password area and enter your new password

Tap in the Confirm New Password area and re-enter your new password

After entering the new password twice, tap the "submit" button

Changing your password...

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”



Password Requirements...

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

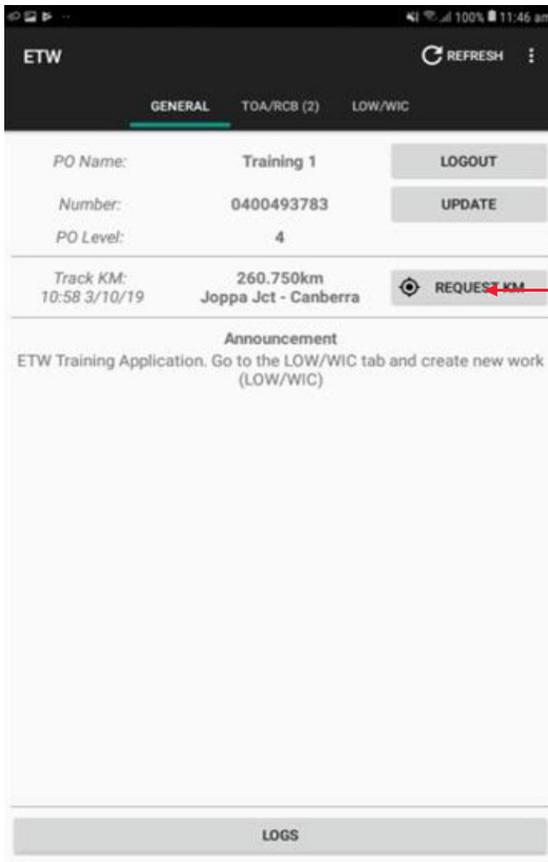
Passwords must contain characters from three of the following categories:

- Uppercase characters / Lowercase characters
- Numbers (0 through 9)
- Non alphanumeric characters:
• ~!@#\$%^&* _-+=`|\(){}[]:;'"<>,.?/

For example – ETW_User1 – or Jamie1sGr8



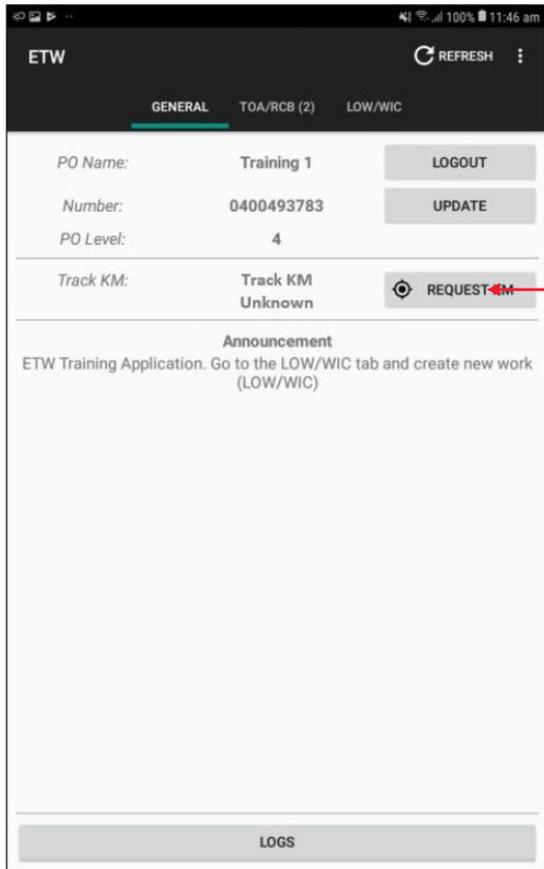
Request Km Feature...



ETW 4 introduces a new feature that allows a Protection Officer to use ETW to obtain an approximate track km of their current location within the CRN.

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

Track Km Unknown...



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

If the corridor and Track Km cannot be returned by ETW 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 ETW will always return Track Km Unknown.

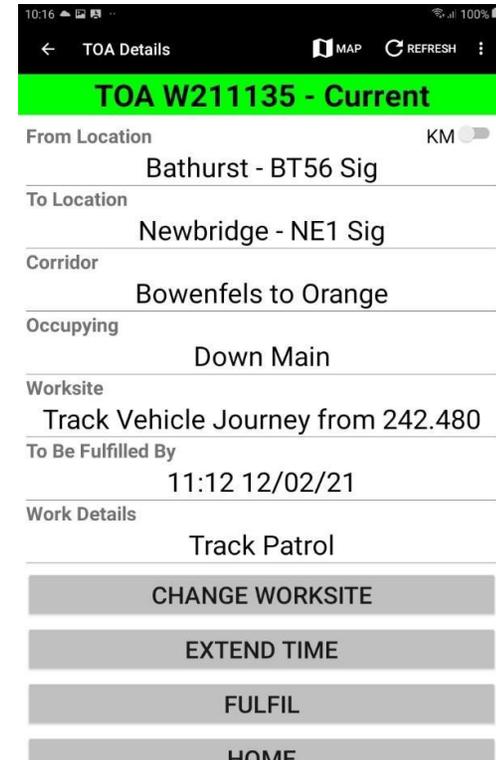
Changes to TOA...

Through the ETW 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 kilometre values.

On a current TOA select the Change Worksite button

TOA Must be Exclusive Occupancy to change state or Worksite KM.

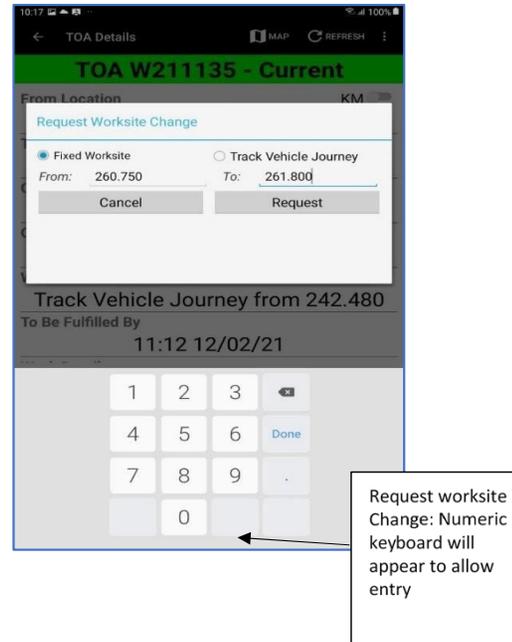
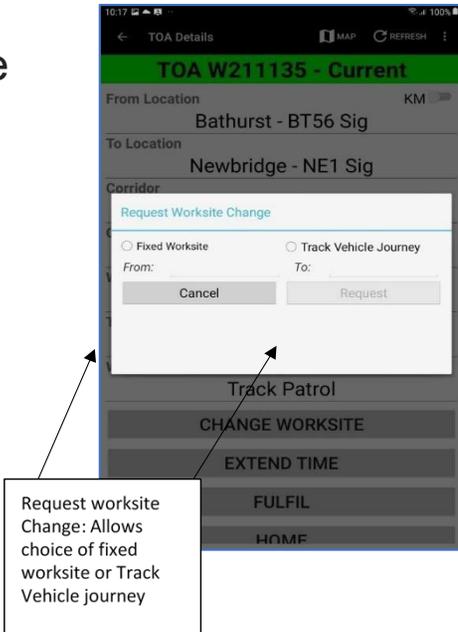


Changes to TOA...

Through the ETW App 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 kilometre values.

Request change box appears

Select the change you would like

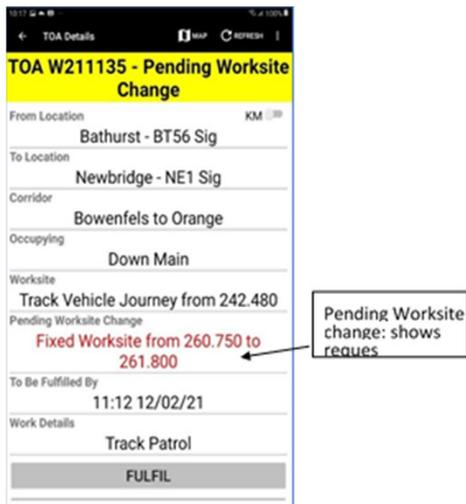


Enter the required values on the keypad, including the 3 digits following the decimal point

When entered click on the request button

Changes to TOA...

The worksite change request gets sent to the control centre. 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 Network Controller can approve/decline the worksite change request. Once this occurs an SMS will be sent to your phone number. When you refresh the ETW app 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.

Toggle between ETW V

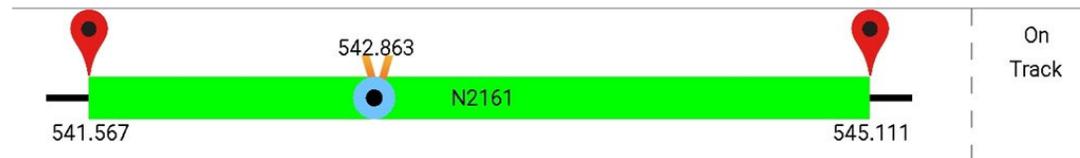
When switching between Track Vehicle journey and fixed worksite special considerations need to be made when using ETW and ETW V.

07:12
39%

Vehicle: M123365
MAP REFRESH

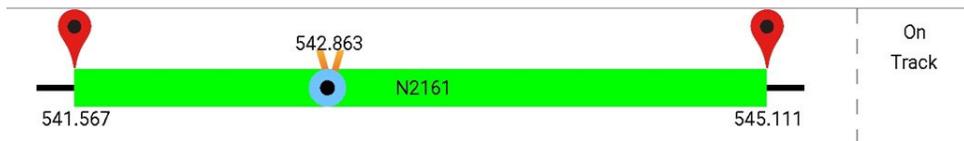
Test PO
On Track
0427 123 456

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



Track Vehicle Journey to Fixed Worksite

TOA	Current
Tullamore - Up YLB	ETWV TESTING
Tullamore - Down YLB	



Ensure TOA is displayed as valid and you are within your authority limits on ETW V

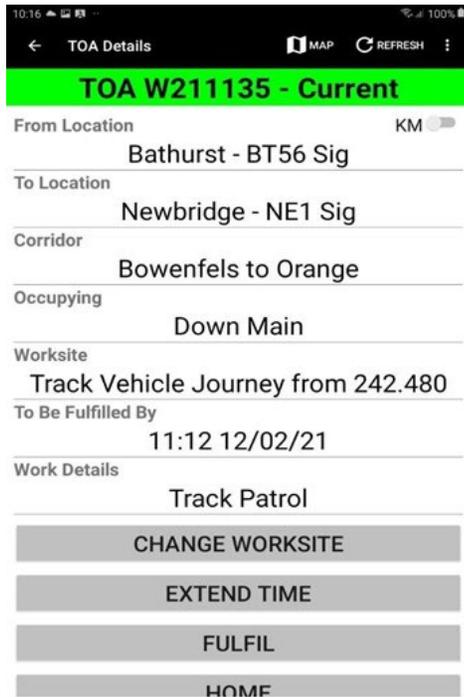
Log out of ETW V

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

Fixed Worksite to Track Vehicle Journey



Ensure TOA is displayed as valid on ETW 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 Kilometre start value you have supplied

Log out of ETW on your mobile device Log in to ETW V and confirm TOA is valid

Expanded Function to Log...

User logs that are available on the ETW application, have now been expanded to allow sorting of the records and open individual entries TOA and RCB entries.

To open an individual authority tap on the authority number

Time	Id	Action
29/07/19 14:04	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
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

When this is done the following is an example of what appears, this can be used when reviewing PO diary entries and for quality and assurance activities.

Log Details - RCB W191067

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

Sorting the ETW Log...



Time	Id	Action
	W191090	Q4=X
29/07/19 14:04	TOA	Voice Fulmiment (code:8745)
	W191090	
	TOA	



To sort the logs, tap on the sort button at the top of the screen.

A selection box appears allowing the user to decide the order in which the logs are displayed.

Sort Logs

Time Ascending

Time Descending



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

The log is now presented in the order you have selected

Saving and sending ETW log files...



Time	Id	Action
29/07/19 14:04	W191090 TOA W191090 TOA	Voice Fulfillment (code:8745) Q4-X

To Download the logs click on the download button at the top of the screen

When this has completed the following message will appear

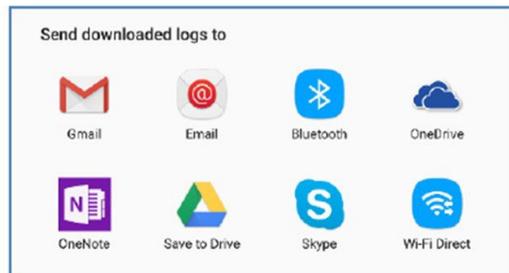
The Logs are now downloaded and saved to the 'download' directory your mobile device in .CSV format, the files will be:

If you select the Share button on the download notification you will have the option of sharing by the following methods:

Logs Saved to Downloads Directory

SHARE

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



Questions?





Thank You