FireMapper Standard Manual

Fire Front Solutions Pty Ltd

Jul 03, 2025

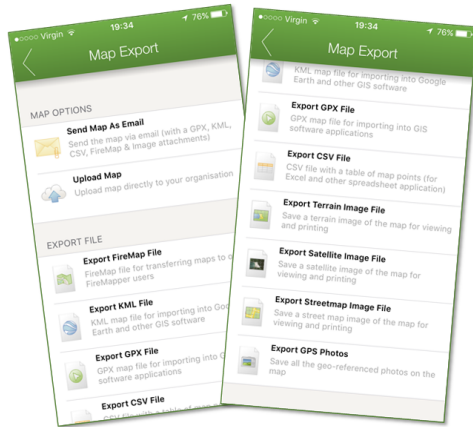# CONTENTS

FireMapper is a mobile app that allows individual users to quickly map bushfires and other incidents.

The Standard version is a light-weight version of FireMapper, available from the iTunes and Google Play stores as a once off purchase (~ $35 AUS). It contains a subset of the features that are available in the Enterprise version of the application.

Note: This manual is for FireMapper Standard. There is another manual that covers additional functionally in FireMapper Enterprise

FireMapper Enterprise includes:

- Real-time and collaborative situational awareness

- Real-time location sharing

- Map importing (GPX, KML, KMZ & GeoPDF)

- Additional export formats (KMZ, ZIP)

- ADS-B & Bluetooth GPS support

- Third party integrations (ArcGIS, TracPlus, Tablet Command, QGIS)

- Additional feature layers

- Custom base layers

- Mobile Device Management Integration (for managed device configs)

- Centralised management via the FireMapper Portal

CONTACT US

FireMapper Support Hub

For documentation and other user guides for FireMapper, check out our Support Hub:

https://docs.firemapper.app

Website

Find out more information about FireMapper on our website:

https://www.firefront.com.au/

Email

Contact our Support Team: *support@firemapper.app*

General questions: *contact@firemapper.app*

Facebook Page

Follow us on Facebook to stay up to date with the latest updates and features:

http://www.facebook.com/FireMapperApp/

FireMapper Users Group

This is a forum to discuss new features and seek help from other FireMapper users:

https://www.facebook.com/groups/firemapper/

1.1 Download FireMapper

FireMapper Standard

FireMapper Standard is free to download and use. It is designed for individuals who require a simple light-weight mapping tool.

Note: There is another more advanced version of FireMapper which supports collaborative mapping, situational awareness and interoperability, designed for organisations that require multiple users to share data in real time. This version also includes compatibility with the FireMapper Portal, a centralized high-level web-based management system for the entire organisation. Please see FireMapper Enterprise for more information.
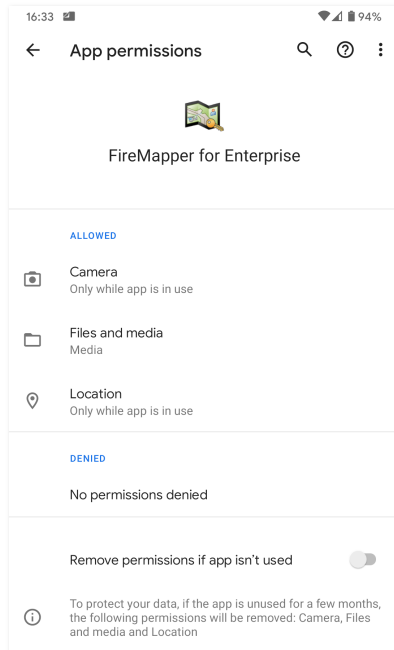

1.1.1 App Permissions

FireMapper requires location and camera permissions from your mobile device.

Android

1. Open the **Settings** App.

2. Tap **Applications**.

3. Tap **FireMapper** application from the list of applications in the Settings app.
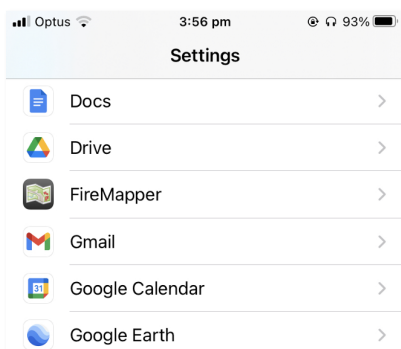

4. Tap **Permissions**.

5. Check that **Location** is enabled and set to **Allowed all the time**. This will allow FireMapper to display your location on the map, record GPS tracks and mark your location on the map. 'Allowed all the time' allows GPS tracks to be recorded even with the screen turned off.

6. Check that **Camera** is enabled and set to **Only While App in Use**. This will allow FireMapper to capture geo-referenced photos and use the camera for the internal QR scanner.

iOS

1. Open the **Settings** App.
2. Select **FireMapper** from the list of applications.

Tap **FireMapper** from the list.

3. Check **App Permissions**

   a. Set **Location** to While Using and **Precise Location** is Enabled. This is required to display your location on the map, record GPS tracks or mark a location.

   b. Set **Photos** to **Add Photos Only** to save photos from FireMapper to your photo gallery.

   c. Enable **Motion and Fitness** to record map features using user motion activity. This is used to automatically detect observations that have been recorded by ground crew.

   d. Enable **Camera** to capture photos and use the in app QR code scanner.

   e. Enable **Mobile Data** to use your device's Mobile Data connection.

f. Enable **Location Network** to connect to use location sharing or want to connect to an ADS-B receiver via the GDL90 protocol. This is only used by FireMapper Enterprise.
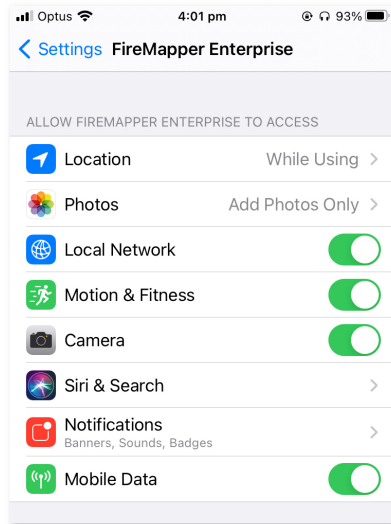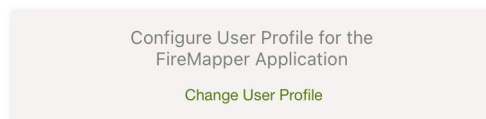

1.2 User Profile

The User Profile screen contains the settings for FireMapper. These settings are specific to your device.

How to edit your user profile:

1. Tap the **Change User Profile** link at the bottom of the *Main Menu Screen*.

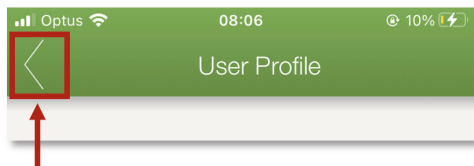2. **Edit your profile** to make the required changes

3. Click the **Back Button** at the top of the screen to save changes and return to the *Main Menu Screen*.

1.2.1 Organisation Access Code

Organisation Access Code is provided to users on an annual Enterprise subscription. This code can be used to enable the enterprise functionally and connect the application to your FireMapper Enterprise account.

This is useful if you need to transfer maps from FireMapper Standard to your enterprise account.

To connect to your organisation, enter the access code and tap enter to connect. This operation will required a internet connection to login.

Once you have provided a valid access code, FireMapper application will be configured the same as FireMapper Enterprise (different manual).
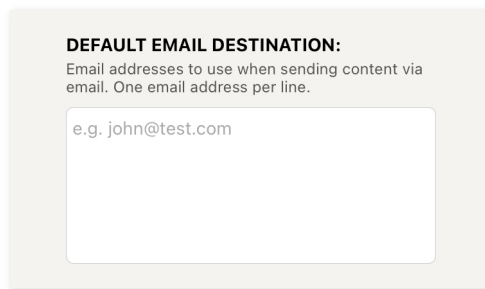
https://firemapper-enterprise.readthedocs.io

A FireMapper Enterprise Licence is required to enable additional functionally in FireMapper.

- Real-time Map Sharing

- Real-time Incident Feeds

- Additional Map Symbology

- Additional Base Layers

- Location/Resource Sharing

- Map Importing (GeoPDF, GPX, KML, KMZ)

- Additional Export Formats (GeoPDF, KMZ, GeoJson, Zip)

- Aviation Units (NM)

1.2.2 Default Email Destination

Default Email addresses to use when sending a email from FireMapper.

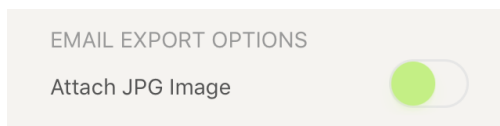This feature is useful if you are always sending email messages to the same user from FireMapper.

1.2.3 Attach JPG Image

This option allows you to disable the generation of JPEG map images when using the *Export As Map* option.

Generating JPEG images requires map tiles to be downloaded from the internet and slow down export times.

This option is intended for Advanced Users only.

Default is *enabled*.

1.2.4 Map Units

Measurement Units to use in the FireMapper application.

Aviation units are only available in the FireMapper Enterprise.

MAP UNITS:

Metric	Imperial/US

DISTANCE: Feet (ft); Miles(mi)
AREA: Acres
HOSE LENGTH: 50 feet
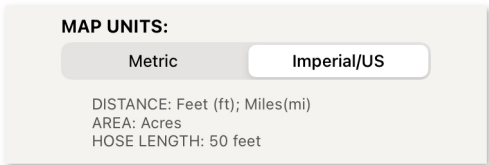
1.3 Map List

The *Map List* is the top level screen for FireMapper and contains all the maps available to your account. The Shared Maps list is available to Enterprise users only.

MAIN PAGE VIEW

EXPANDED MENU SIDEBAR
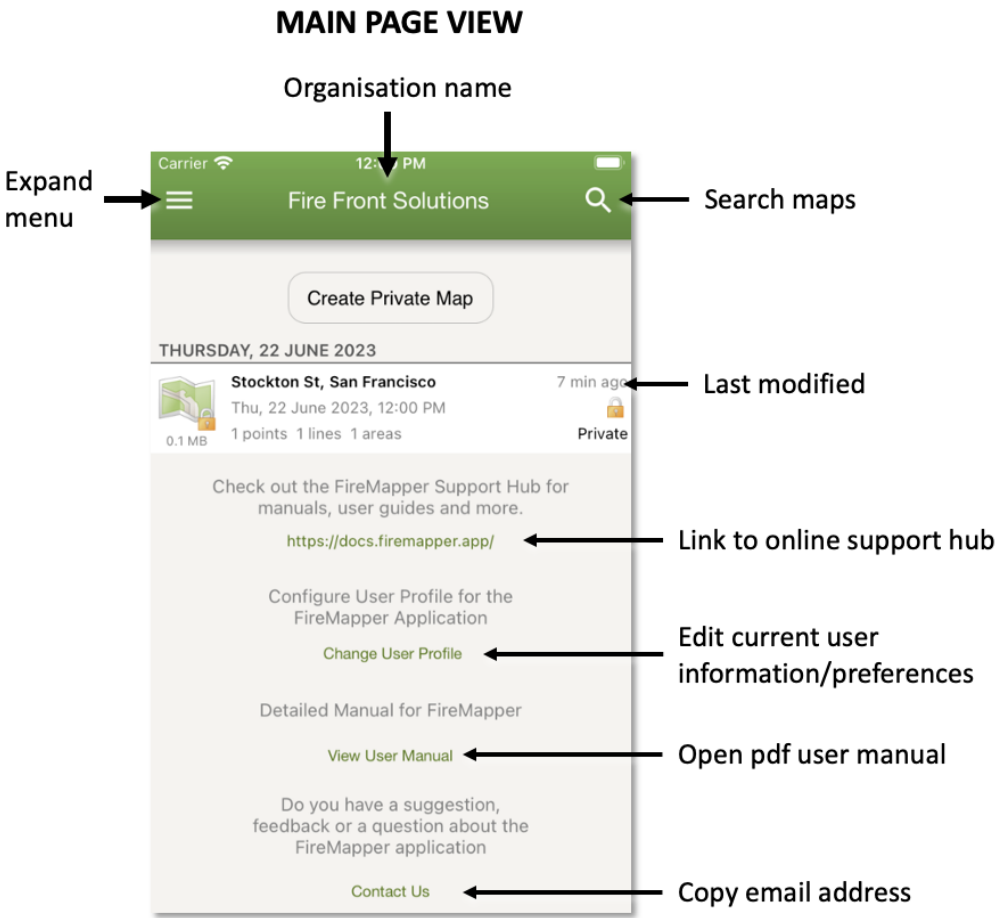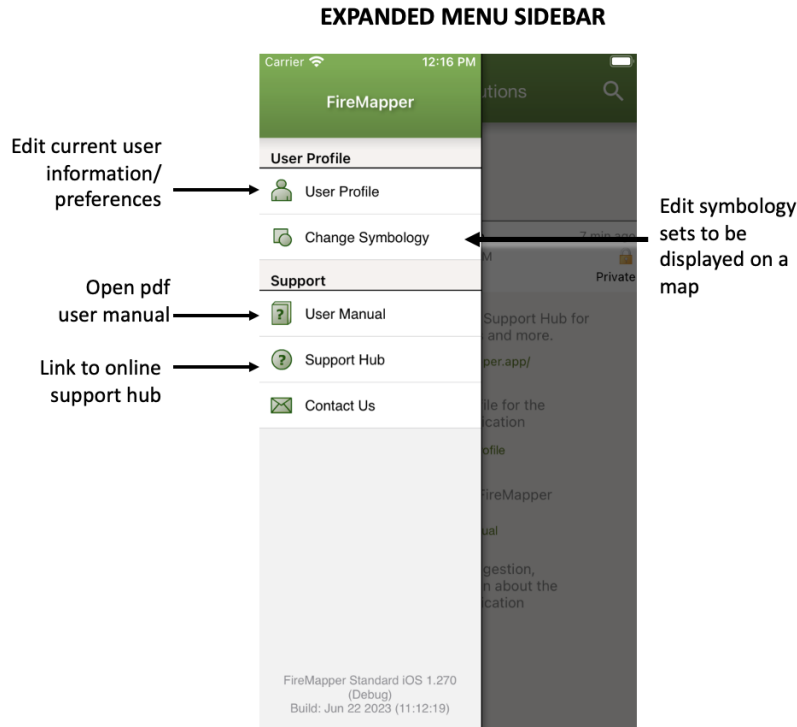
1.3.1 Create a Private Map

Private maps are stored locally on the device and are not shared with other users or devices.

1. Tap the **Create Private Map** button.

2. Enter a new name for the private map. This is optional for private maps. If you don't provide a map name, your current street address and date will be used.

3. The *Map Screen* will appear with a new map.

1.3.2 Export a Private Map

In FireMapper iOS you can export a map from the *Main Menu* screen as a zip.

1. **Swipe your finger** from right to left on the map item on FireMapper iOS.
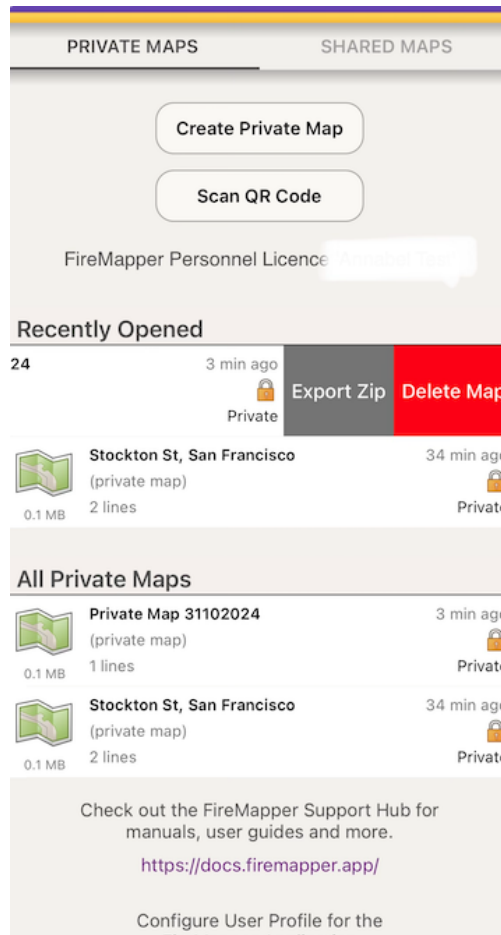
2. Tap the 'Export Zip' grey button to export the map as a zip file. The zip file will be saved to your iOS device's 'Files' app.

Note: You can import this zip file later back into FireMapper by going accessing it in the Files app, long holding, selecting share, then FireMapper Enterprise.

1.3.3 Delete Private Map

The steps for deleting a private map in FireMapper is different on iOS and Android devices.

In FireMapper iOS you can delete a map from the *Main Menu* screen.

1. **Swipe your finger** from right to left on the map item on FireMapper iOS. On Android you will need to long press on the map item.
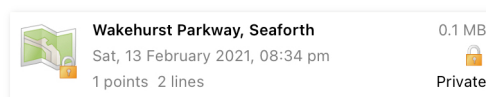
2. A red '**Delete Map**' button will appear on the right. Tap **Delete Map** to permanently delete the selected map file.

3. A confirmation dialog will appear if the map contains features. Click **Delete Map** to delete.
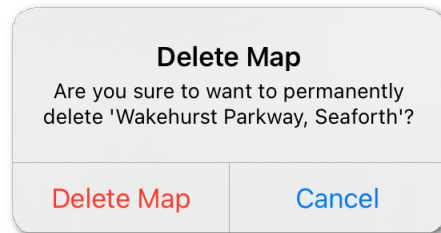
There is no confirmation dialog for blank maps. Blank maps will be deleted without an confirmation dialog.

1.4 Map

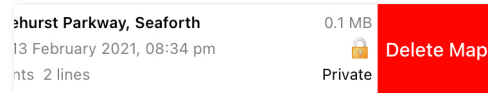The *Map Screen* displays map features (such as points, lines, photos and areas) and allows you to change between base maps (such as Google, Open Topo Maps, and others). FireMapper has various toolbars and popup views that automatically appear and disappear depending on whether a map feature is selected.

1.4.1 Locked Mode

Locked Mode is view only, blocking users from editing the map. This is the default mode entered when a shared map with features is opened.

Features cannot be added

Locked status

No symbology toolbar
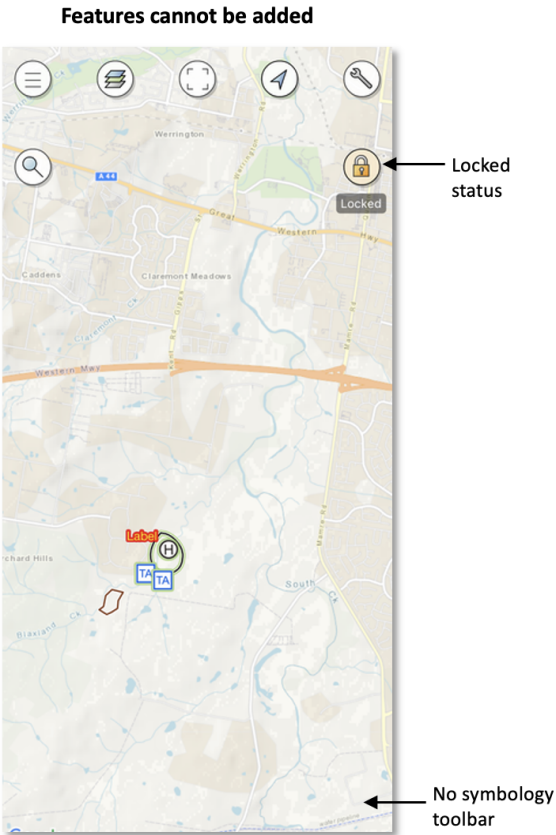
Features cannot be edited

No edit options.
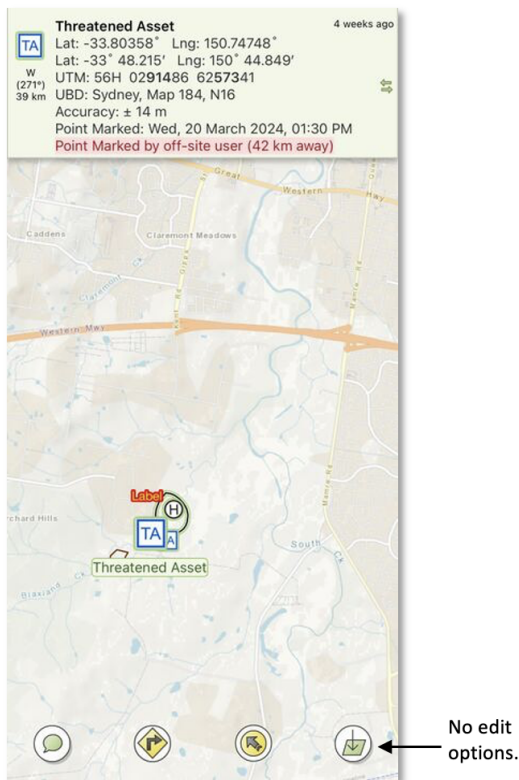
1. To enter Mapping Mode, tap on the lock icon, then 'Edit Map'.
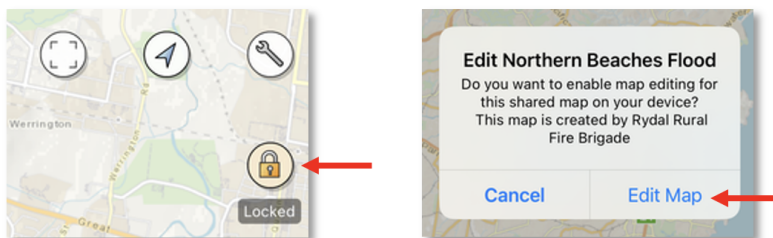
2. To return to Locked Mode, leave the map and reopen it from the shared maps list.

Note: Minimising the FireMapper app (eg. for location tracking) **does not** Lock the map. It remains in Mapping Mode to ensure changes are tracked and saved.

1.4.2 Mapping Mode

Map Toolbar

The *Map Toolbar* appears at the top of the *Map Screen*. The toolbar is visible in **Map Mode**, ie. when no features are selected and disappears when a feature is selected on the map.

Return to the main menu

Take Geo-referenced Photos (with location & bearing)

Show the layer sidebar (switch base layers, show/hide features)

Move the map to fit all map features

Move to my Location on the map

Show Map Properties Screen
(Export Map, Download Base Layers,
Undelete Features)

Location Search
(coordinates, nearby
features, etc)

Start/Stop a GPS Track Recording

Camera

When you take a picture, FireMapper automatically records the location and direction of the photos/image and displays it on the map. Photos taken with the GPS camera can be sha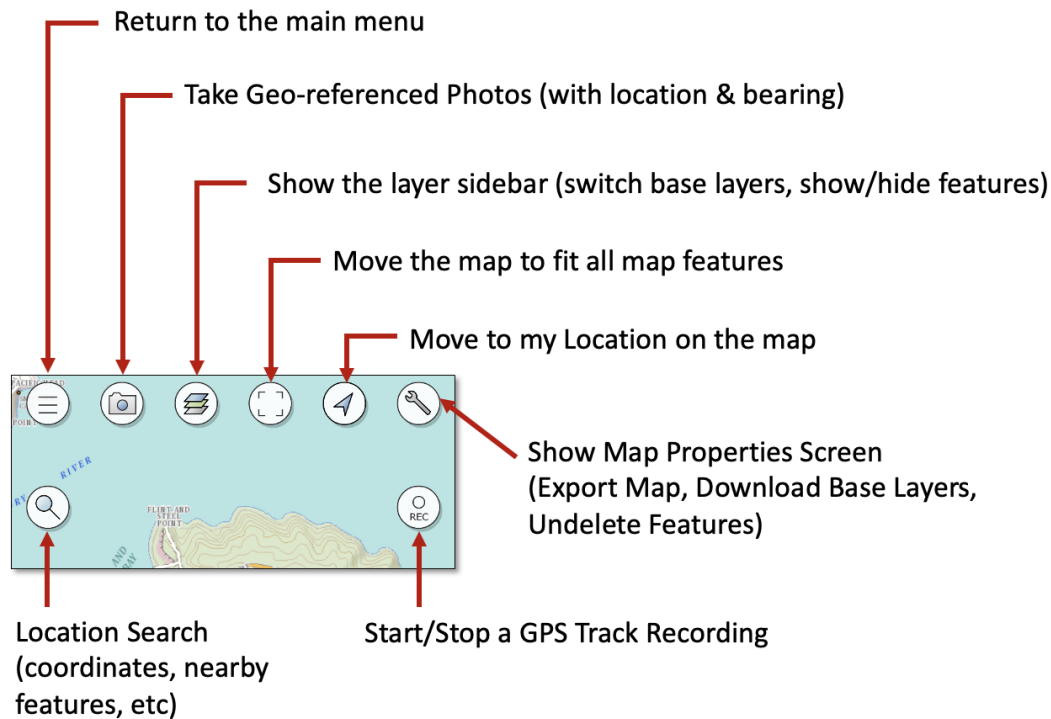red via text message, email and more via the 'Export Map' screen. FireMapper needs access to your location and camera to capture a photo.

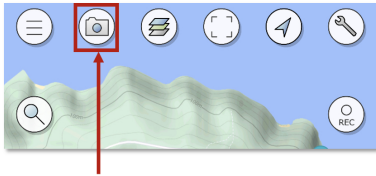**Note:** Images from your camera roll *cannot* be added to the map. This support is on our roadmap.

Note: The internal magnetic compass is used to determine the direction of the camera. Magnetic cases cause interference and will cause the photo on the map to be displayed in the wrong direction.

Taking a Photo

1. Tap the **Camera** button at the top of the *Map Screen*.

2. The *Camera Screen* will appear. Move the device is a figure 8 pattern to help calibrate the magnetic compass. This will reduce the error in the camera heading for the photo.

Close Camera
(without taking any more photos)

Camera Location
(6 Figure Grid Reference)

Camera Direction

Take multiple photos
(without closing the camera view)

Take a single photo
(close camera view and return to map)
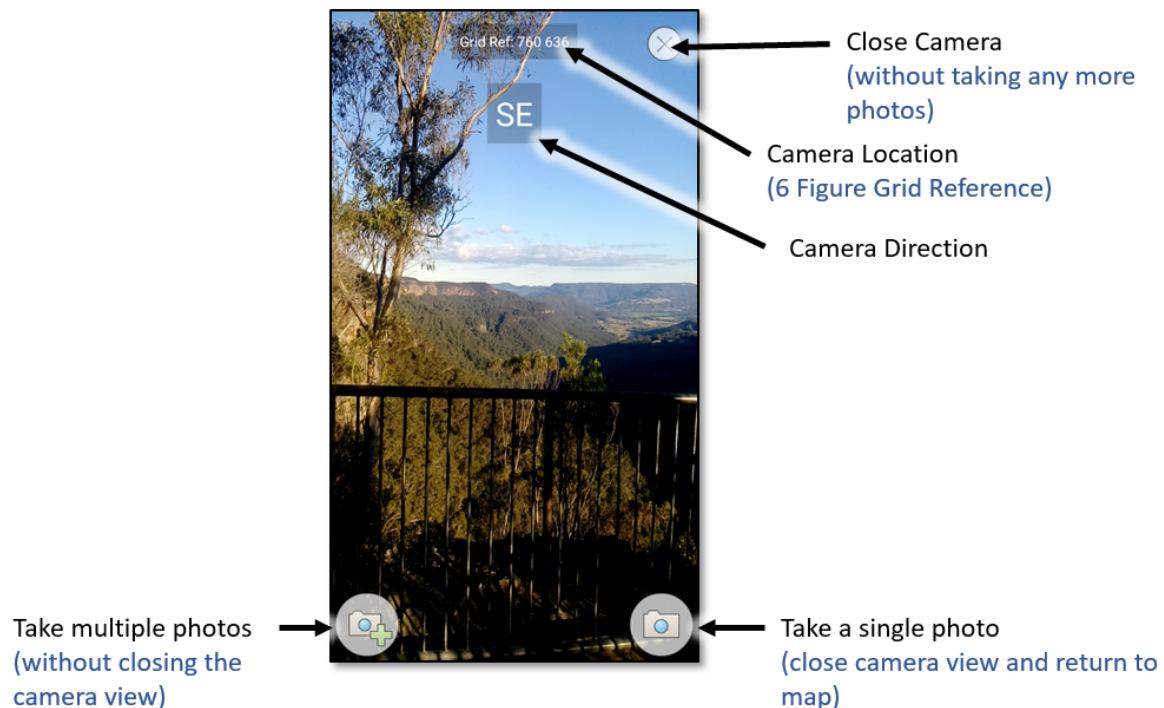
3. There are two buttons depending on the number of photos you want to capture. The button with the plus sign allows you to capture multiple photos without leaving the camera view and the other camera button allows you to quickly capture a single photo and return to the map.
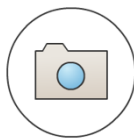
Single Photo Mode
If you just need to take a single GPS photo and return to the map view

Multi Photo Mode
If you need to take multiple GPS photos quickly, one photo per button press.

4. The photo will be displayed on the map with a camera icon. The icon's direction corresponds to the direction at

which you took the photo. Tap it to view the photo.

Sending Photo via Email

You can export single photos via Email from the *Map Screen*. This is useful if you quicky want to export a single photo.

Note: For FireMapper iOS, you can only send emails using the native iOS Mail application with the *Send Email* feature. You will need to have configured a valid email account with the native mail app if you want to use this feature. Other clients such as Gmail or Outlook are not supported with the *Send As Email* tool on iOS.

On FireMapper Android, you can use any email client.

1. Tap the **photo** feature on the map you want to export to select.
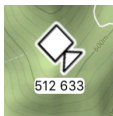
2. Tap the **email** icon to export that photo.

3. The email editor will appear. Enter the email address and modify the contents if required. You photo should be visible as an attachment to the email. If you need to sending emails to the same address, it is possible to set an default email destination on the *User Profile* screen.

4. Tap the **Send** button in the top right corner.

Note: You can set the default email addresses for email messages in the :doc: *User Profile<index>*.

Sending Photo via MMS Text Message

You can export single photos via Text Message from the *Map Screen* . This is useful if you quickly want to export a single photo.

1. Tap the **photo** feature on the map you want to export to select.
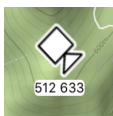
2. Tap the **text** icon to export that photo.

3. The MMS/iMessage editor will appear. The photo will be attached as a MMS to your message.
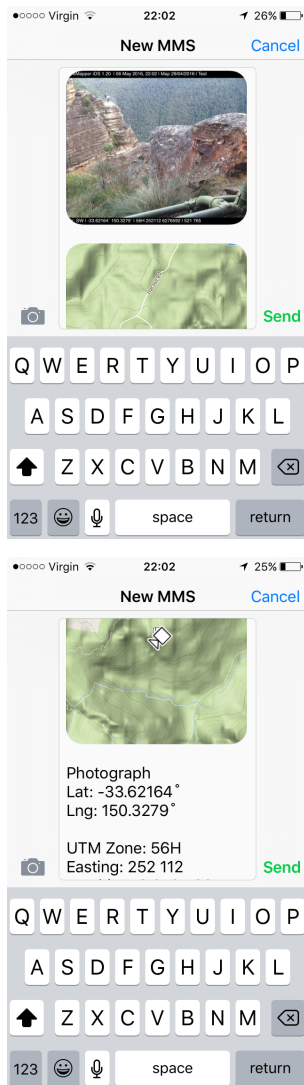
4. Tap **send**

Note: You can set the default mobile numbers for text messages in the *Main Menu->User Profile*.

Exporting All Photos

You can export all photos from a map from the Export Screen. The available options will depend on what applications you currently have installed on your device.

1. Tap the **Toolbox Icon** in the top-right corner of *Map Screen*

2. Tap the **Export** button

3. Tap the **Export All Photos** button.
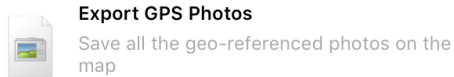
4. Select where you want to export photos.

All exported photos will send in this format:

APP – FireMapper Application Version
TYPE – Type of mobile device *(e.g. iPhone, iPad, ..)*
DEVICE ID – A unique ID for the device
NAME – Device name *(can be changed by the user in settings)*
EXPORTED – The date and time the photo was exported from FireMapper
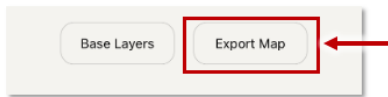**MAP NAME** – the name of the local map that the user was using *(can be changed from the Map Properties screen)*

PHOTOGRAPHED – The date/time the photo was taken
LATITUDE/LONGITUDE – location of the camera in latitude/longitude *(decimal degrees)*
UTM ZONE/EAST/NORTH – location of the camera in UTM coordinates
DIRECTION: direction the camera is facing *(magnetic north)*
GRID REF: location of the camera in 6 figure grid reference

Layers Sidebar

This Sidebar contains all filters available to be toggled on and off in the map view. It is accessed from the Map Viewer toolbar.
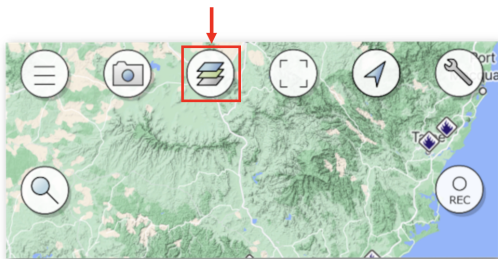
The Sidebar consists of the following sections:

List of base layers that are available for the current map extents and zoom level.

Map features that have been added to the current map.
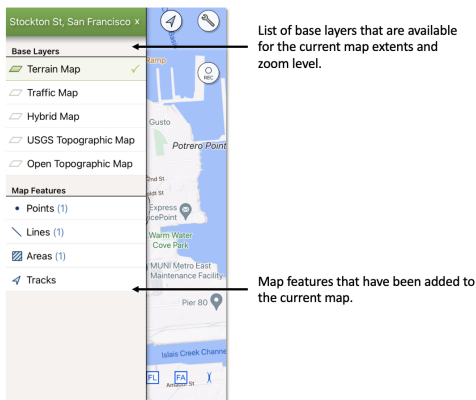
Base Layers

These are the base layer options for the map. These options will change depending on where you are on the map and the zoom level.

Overlays

Imported Geo PDFs will be automatically converted to an Overlay layer. These overlays are superimposed on top of the base layers at the correct extents. Only one overlay layer can be viewed at once. Clicking on the desired overlay will toggle it on/off, as well as move the Map View to its extents.

Feature Layers

Feature Layers are the read-only feature and incident feeds that are available with your current organisation configuration. This section on the layers sidebar lists all features visible with the current map extents and zoom. A feature type can be toggled on/off by clicking on its tab.

Map Features

Map Features are the features that have been added to the map by a user. This section displays the total number of each feature type added anywhere on the map. A feature type can be toggled on/off by clicking on its tab.
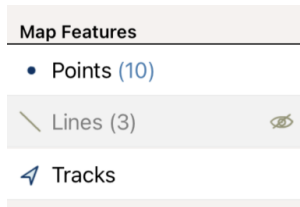
Exiting sidebar

To exit the Layers Sidebar view,

1. Cick the 'x' in the top right corner, or

2. Tap anywhere on the map, or

3. Swipe the right edge of the sidebar away in the left direction.

GPS Recording

The **record** button is used to start and stop a GPS recording.

- When recording you can not switch maps.

- The GPS will continue to record in the background even when the screen is off if GPS recording is enabled.

- The distance recorded will appear at the bottom of the label while recording.

- If your recording is less than 20 metres it will not be saved.

- The recording algorithm down samples the recorded line to 10 metre intervals. This reduces the size of the recorded line so it is easier to export and results in a significantly smaller file size.
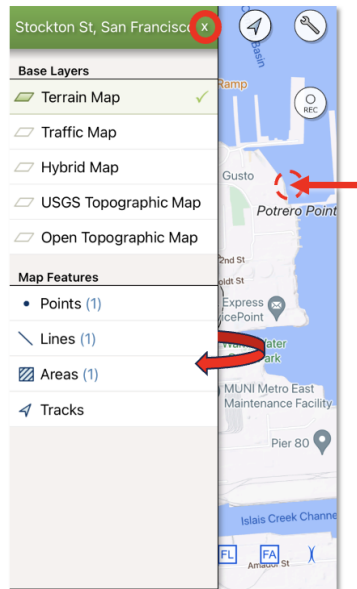

Note: On Android devices if you want to do GPS recordings with the screen off, you will need to update the location permissions for the FireMapper app to **Allow all the time** via the Android Settings app. This can only be done from the Android settings app due to security limitations of the Android operating system. These steps apply to Android 10 and higher. If this is not configured correct, GPS recordings will be paused when the FireMapper application is in the background or if the screen if turned off during a gps track recording.

1. Open the Android **Settings** App.

2. Go to **Apps** or **Applications** page

3. Go to **FireMapper Enterprise** page

4. Go to **Permissions** page for FireMapper Enterprise.

5. Select **Location permission** and change it to **Allow all the time**. This will allow FireMapper Enterprise to access your location when the app is in the background. This is required if you want to record a GPS track while you are using other apps on your phone or the screen is turned off.

Note: On Android devices the power saving mode may disable the GPS receiver when FireMapper is in the background or the screen is turned off. This behaviour has been observed on some HTC and Samsung devices. This issue can be

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resolved by turning off the Power Saving Mode during a GPS recording.

Directions:

1. Select the **line type** to use for the recording at the editor toolbar at the bottom of the *Map Screen*.

2. Tap the *Record* button to start the recording. The record button will change to a black background while the recording is in progress.

3. Walk, drive or fly over the track that you want to record. You can even turn your screen off and FireMapper will continue to record in the background.
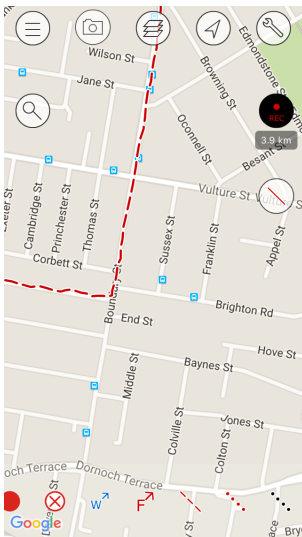
4. Tap the *Record* button again to *save* your recording.

5. The recorded line will appear on your map. The line will automatically be shared if you are using a shared map and auto-sharing map is enabled.

Main Menu Button: closes the map and returns to the *Main Menu*. Any GPS recording will stop.

Search: opens the Search screen. You can search for coordinates, addresses... *read more >*

Camera: opens the Camera. Users can capture geo-referenced photos... *read more >*

Layers: shows/hides the Layers Sidebar which is used to toggle layers on and off... *read more >*

Fit to Map Extents: moves the map so it fits all the current map features in the current extents.

My Location: moves the map to the user's current location. This button will change depending on the source of

the location information.

ADS-B Location: an ADS-B receiver.

Bluetooth GPS Location: a Bluetooth GPS receiver (eg. the Garmin GLO, Bad Elf).

External App Location: a third party application (eg. a GPS simulator app).

Network Location: nearby Wi-Fi networks and cellular towers.

No Location: location unknown (eg. app does not have location permissions).

Map Properties: opens the Map Properties. It lists a timeline of all changes... *read more >*

GPS Recording: starts/stops a GPS track recording which gets added to the map... *read more >*

Symbology Toolbar

The *Symbology Toolbar* contains all the symbology which can be added to the map. The toolbar disables when a feature is selected or if the map is zoomed too far out as editing the map is not supported when zoomed out at a statewide/country level. Swipe left and right to scroll through your list of feature types.

See the *Symbology* Page for how to configure the symbology in your toolbar.
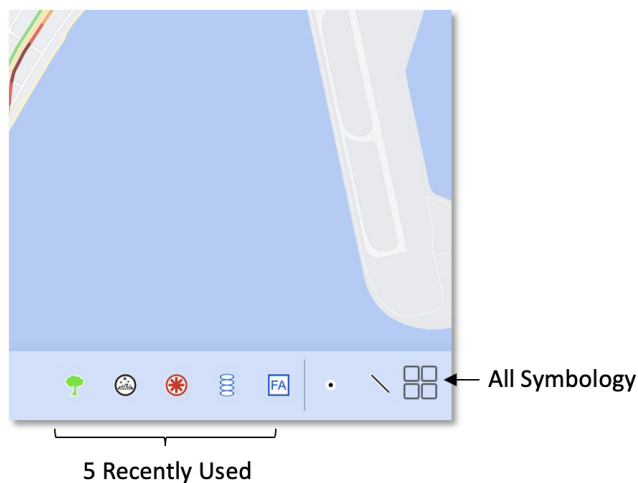
There are three different types of symbology; Points, Lines and Areas.

Points:

1. Select a **point type** from the bottom toolbar.
2. **Tap and hold** in the location you want to add your point.

Lines:

1. Move the map to the area where you want to draw as you can not move the map while drawing the line.
2. Select a **line type** from the bottom toolbar.

3. Draw a line on the map by dragging your finger across the screen.
4. Line distance will appear at the top of the map. If you close the shape, the enclosed area will also appear for the line.

Save 'Going Fire Edge' drawing?
Distance: 1.8 km

1. Tap the **tick** button on the *bottom left* to save.

Areas:

1. Move the map to the area where you want to draw as you can not move the map while drawing the area.
2. Select an **area type** from the bottom toolbar. You can scroll left to right to access different feature types.

3. Drag your finger to trace the perimeter of the area on the map. The area will auto-close when you either cut your drawn perimeter with your finger or when you lift your finger off the screen.
4. The perimeter and area will be displayed at the top of the screen as you draw the area.

5. Tap the **tick** button in the bottom left corner to save the area.

Mapping Mode allows you to add, edit and delete features from a map.
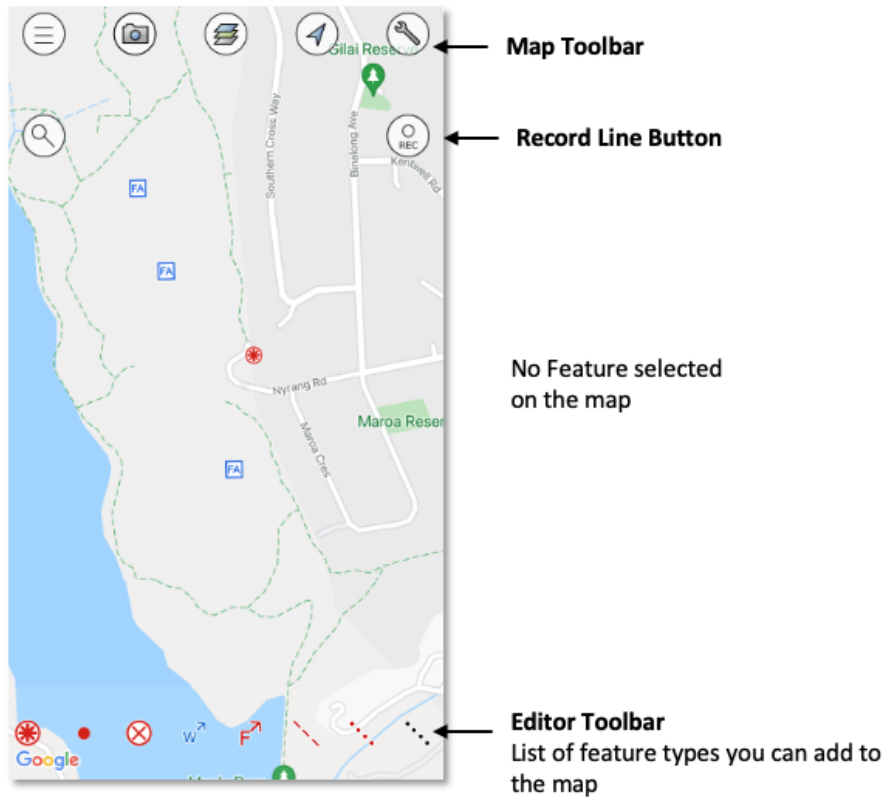
Map Toolbar

The Map Toolbar is visible at the top of the screen. It provides a range of actions for map, such as moving the map to your current location, changing the base layer, accessing the map properties... *read more >*

Symbology Toolbar

The Symbology Toolbar is visible at the bottom of the screen when sufficiently zoomed in. This toolbar contains all available symbology that can be added to the map... *read more >*

1.4.3 Features

Info Bar

The *Feature Info Bar* appears at the top of the *Map Screen* in **Feature Mode**, ie. when a map feature is selected. This bar displays a summary of the selected feature including the information that is most relevant to firefighters and other emergency responders.

The bar automatically disappears when the feature is unselected, by clicking a blank area of the map on the screen.
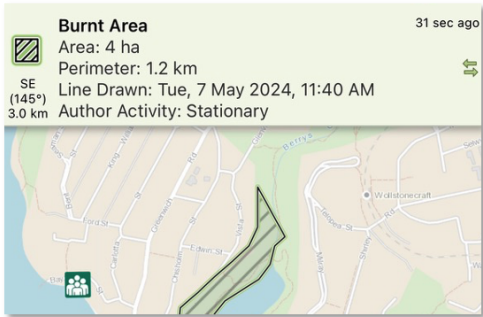
Tap on the Feature Info Bar to open the details view for the selected feature. This will allow you to view additional information about the selected feature and also edit fields such as the feature name and feature type.
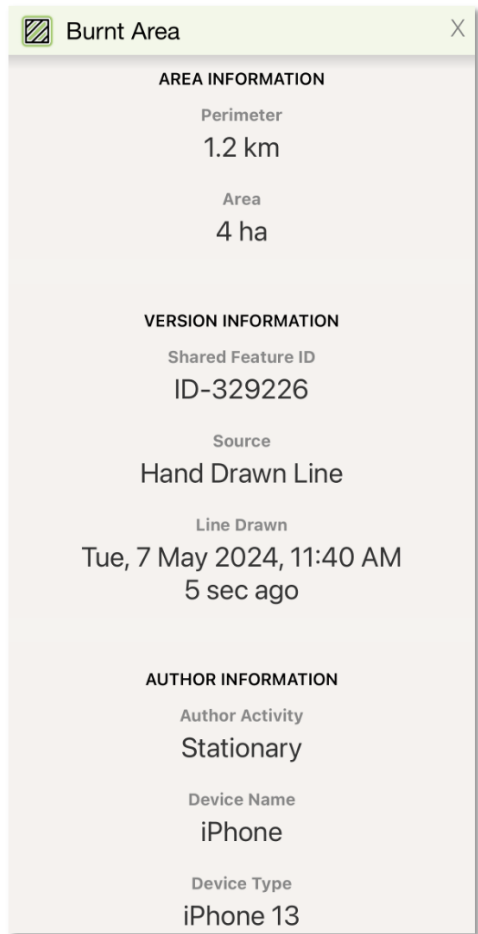
Feature Toolbar

The *Feature Toolbar* only appears at the bottom of the *Map Screen* whenever a feature is selected on the map. The buttons that are available in the bar are dependent on the selected feature type and if the feature is editable. The toolbar automatically disappears when a feature is unselected. The options on the Feature Toolbar will change depending on the type of feature selected.

🗑 **Delete: Deletes the selected feature.**
This deletes the feature from all devices that have access to the map.

Note: Deleted features can be restored. See *Info Bar* for more information.
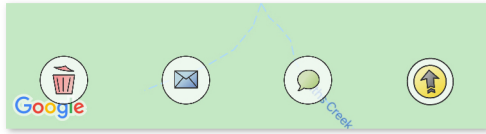

✏️ **Edit**
This functionality exists for LINES or AREAS only.

1. Lines: Either end of the line can be moved. Tracing a line intersecting the existing line 2 times will replace that section of the line with your new geometry.

2. Areas: Tracing a line intersecting the existing area 2 times will replace that section of the area with your new geometry. You can cut or add area.

- – *a. Cut*: Removes the selected area from the existing area.
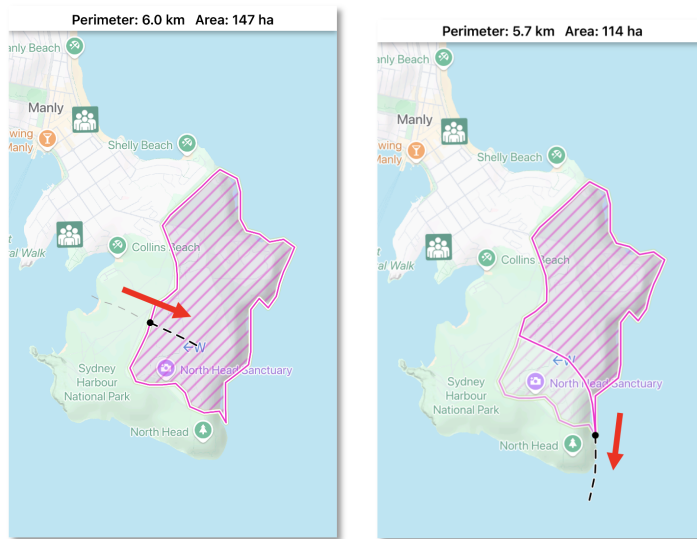
- – *b. Add*: Adds the selected area to the existing area.
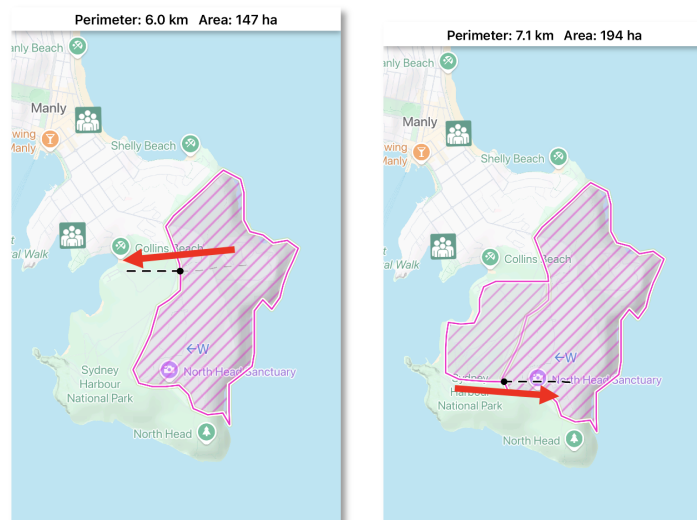
Email: Sends the selected feature as an email message.
The email message includes a screenshot of the map and any GPS photos that are attached to the selected feature if available. This option is available for all map features. You can set the default email addresses for email messages in the *Main Menu->User Profile*.

Note: On iOS devices, this uses the Apple email client. You will need to have your email account configured in it for this to work.
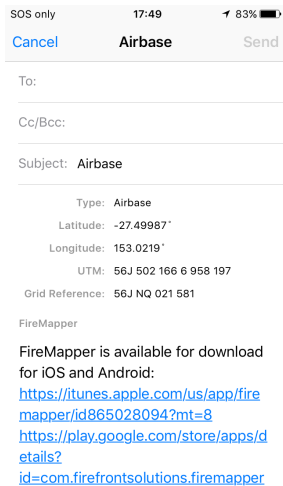
Text: Sends the selected feature as a text message.
The text message includes a screenshot of the map and any GPS photos that are attached to the selected feature if available. This option is available for all map features. You can set the default mobile numbers for text messages in the *Main Menu->User Profile*.
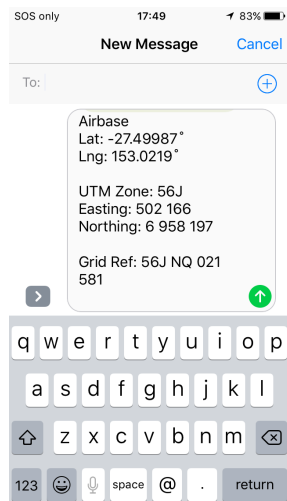
Rotate: Rotates the selected point by 45 degrees.
This option is only available for directional point types (eg. fire/wind direction).

Flip: Flips the selected line style.
This option is only available for asymmetrical lines (eg. control lines, backburns).

 Navigate With FireMapper: Navigates in a straight line to the selected point in FireMapper.
The button will point in the direction of the selected feature using the internal compass. This is handy if you
need to know the approximate direction of the feature on the map without having to start a navigation.
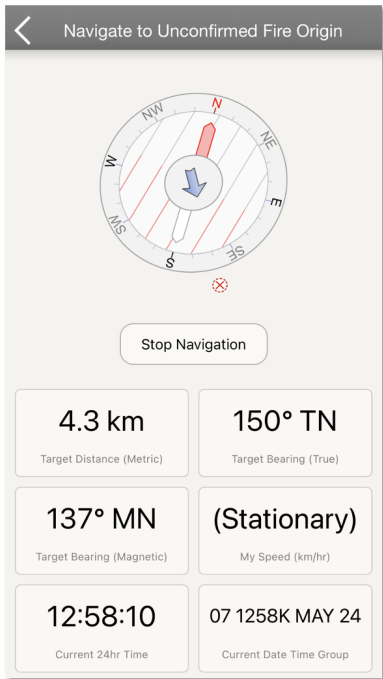
Note: This functionally is not available yet on the Android.

Tap on a feature to select it. You may view all information about the feature, and perform a range of actions on it.
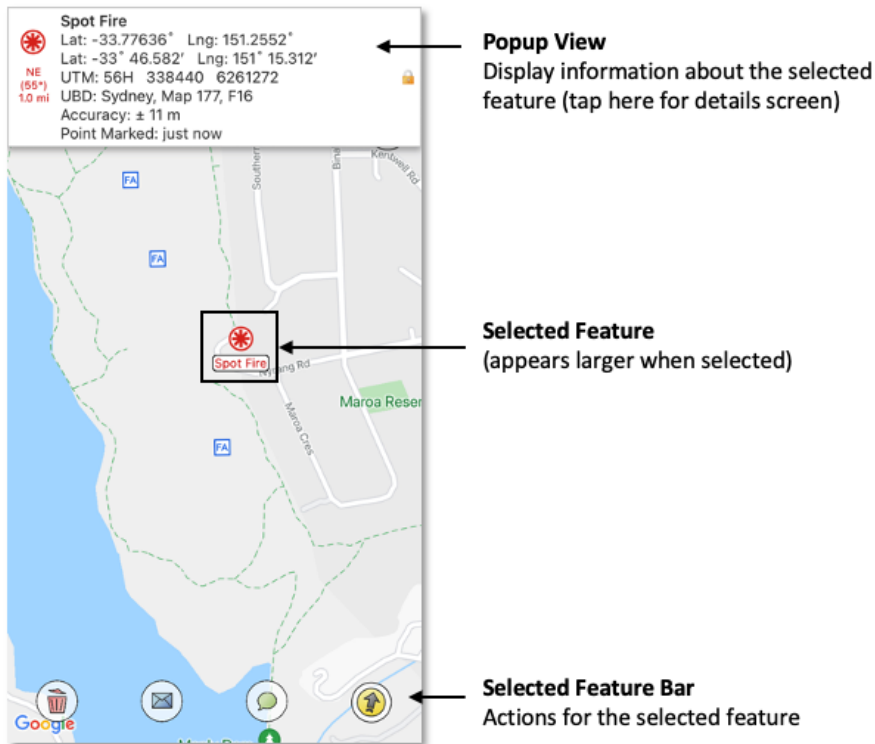
Info Bar

The Info Bar is visible at the top of the screen. This displays a summary of the selected feature as well as the distance and bearing to it. Tapping the Info Bar will open an expanded view... *read more >*

Feature Toolbar

The Feature Toolbar is at the bottom of the screen. The options on the Feature Toolbar will change depending on the type of feature selected. Options include... *read more >*

1.5 Symbology

FireMapper contains bush firefighting symbols that are commonly used in Australia, USA & Canada with support for:

- EMSINA All Hazards Symbology
- USA National Wildfire Coordinating Group Symbology

1.5.1 Configuring Symbology

The *Symbology Toolbar* contains symbols that can be added to a map. It only contains symbology that you have turned on. You can therefore ensure that your symbology toolbar is personalised by leaving out irrelevant symbology sets.

1. **Open symbology configuration page.**

   - Open a map and zoom until the *Symbology Toolbar* is visible. Tap the rightmost icon.
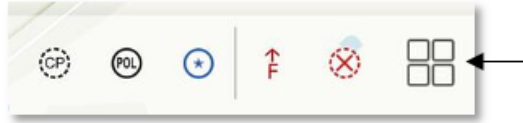
2. **Choose symbology.**

   The available symbology is grouped based on type and context. Starring or 'turning on' a group will add it to the symbology toolbar that you use in the map view. You may search for specific symbols or symbol groups using the search bar.
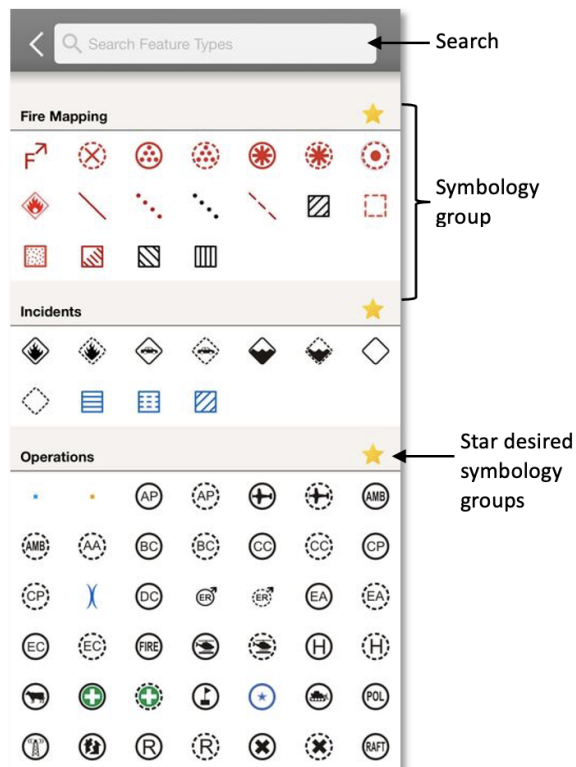
Symbology Sets

The following Map Symbology sets are built-in to the FireMapper Standard application.

Standard

-

Aircraft

Aircraft (Proposed)

Assets

Boundaries

Fire Incident

Firefighting Operations

Hazard Reduction

Fire Investigation

Fire Trails

Flight Plan

Incidents

Unconfired Incidents

Operations

Operations (Proposed)

Impact Assesment

Flood & Storm Operations

Vehicle Locations

Vehicle Locations Proposed

Tree Hazards

Hazards

Dangerous Goods

USA - Air Ops

USA - Assignment Break

USA - Communications

USA - Fire

USA - Logistics

USA - Ops Completed

USA - Ops Reference

USA - Reference

USA - Repair

USA - Safety

USA - Water

USA - Extras

NZIC Operational Points

NZIC Operational Lines

NZIC Incidents

NZIC Other
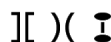
Numbers

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Contact us if you would like us to add additional symbology to FireMapper.

1.6 Map Properties

The *Map Properties* screen allows you to edit the metadata for your map.
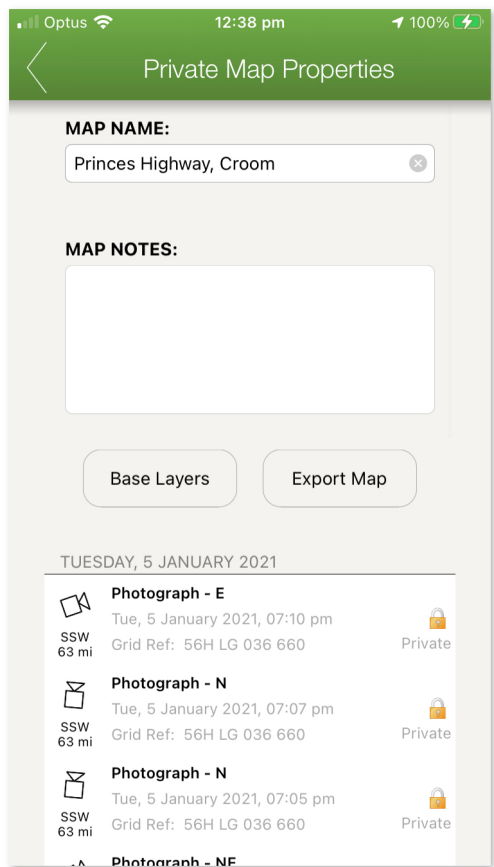
1.6.1 Map Name

Name of the current map.

1.6.2 Map Description

Additional description for a map.

You can only edit the *map description* for private maps. Map description is not available for shared maps.

This notes are included in the exported kml, kmz and gpx files.

MAP DESCRIPTION:
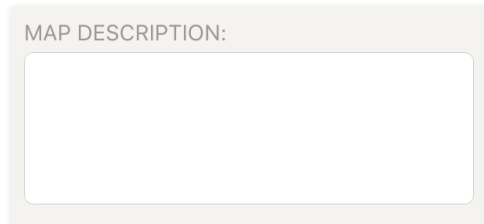
1.6.3 Restoring Deleted Features

Restoring a Deleted Feature (FireMapper iOS):

1. Select the spanner button at the top right corner of the *Map Screen*.
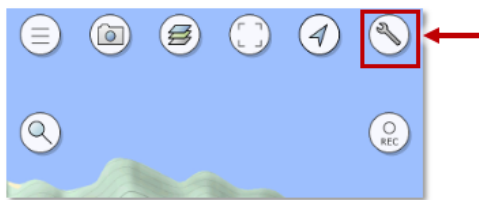
2. On iOS devices, swipe right to left on the deleted feature to reveal the Undo button.

   FRIDAY, 4 MARCH 2022

   DELETED - Completed Control Line   just now
   Fri, 4 March 2022, 22:17
   NNE
   1012 km Length: 17 km   Private

3. Tap the '**Undo**' button to restore the deleted feature.

   FRIDAY, 4 MARCH 2022

   ETED - Completed Control Line   just now
   4 March 2022, 22:17   Undo
   gth: 17 km   Private

Restore a Deleted Feature (FireMapper Android):

1. Select the spanner button at the top right corner of the *Map Screen*.

2. On Android devices, long press on the deleted feature and tap '**Restore Feature**' from the popup menu.

FRIDAY, 4 MARCH 2022

	DELETED - Shovel	2 min ago
NW 103 km	UTM Grid Ref: 55G DN 387 562	🔒
	Mar 4, 2022 10:48:33 PM	Private

Tap and hold on the
deleted feature

3. Long press on the deleted feature and tap '**Restore Feature**' from the popup menu.

DELETED - Shovel Options

🗑 Restore Feature

✉ Send as Email

💬 Send as Text

◈ Navigation To Feature

⬇ Download Feature

CANCEL
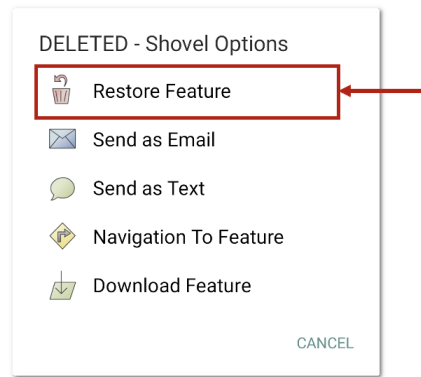
1.7 Base Layers

The *Base Layers* Screen lists all the non Google base layers stored on your device and the amount of storage space they're using.

Base layers are stored locally on your device for performance reasons and to improve offline availability. There are 2 ways that this happens. FireMapper downloads and stores tiles as you view the map in the map screen, and users have the ability to bulk download all tiles within a certain area.

Each base layer is stored as a folder as a Compact Cache V2 in the FireMapper documents directory. There is a layer.json file in each base layer directory that contains the configuration for the offline layer.
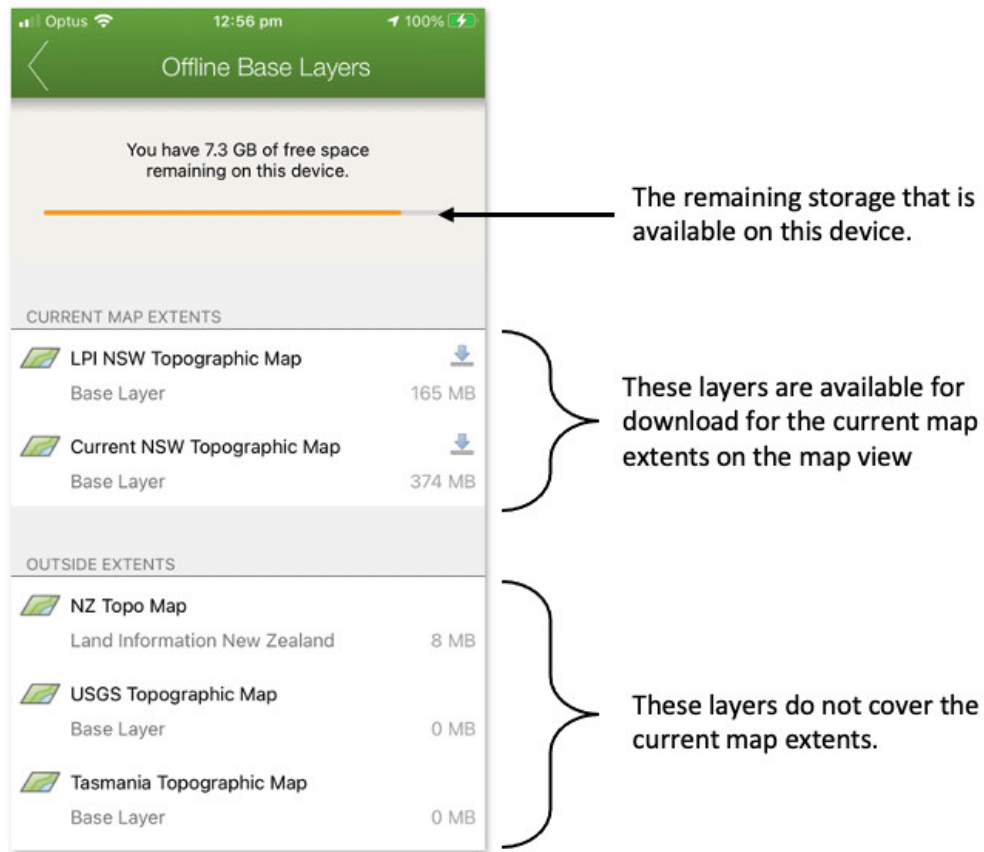
1.7.1 Downloading Base Layers

1. On the *Map Screen* move the map to the region/area that you want to download

Move the map to
select the area you
want to download

2. Tap the **Spanner** button in the top right corner of the *Map Screen*

3. Tap the **Base Layers** button on the *Map Properties screen*
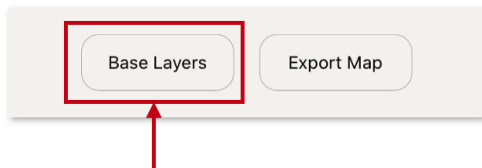
4. Tap on the Base Layer(s) that you would like to download to the device. Only layers that are available for the current map extents can be downloaded.

This layer is available for download for the current extents

This is the amount of local disk space that the layer is currently using on the device.

5. The download may take a few minutes to complete. You can download multiple layers at the same time. FireMapper will download the tiles to the local device for the current map extents. There is a limit on the number of tiles that can be downloaded for each layer to limit the size of the download, especially for large areas. FireMapper will only download a maximum of 800 tiles per any one zoom level.

6. Wait for a download complete message before closing the base layer screen. If you close the base layer screen while the download is in progress, the download will be aborted.

1.7.2 Deleting Base Layers

You may want to delete a base layer if you are running out of local storage on the device. You can also delete base layers generated from imported PDFs.

1. Tap the **Spanner** button in the top right corner of the *Map Screen*

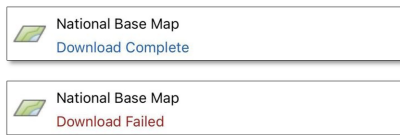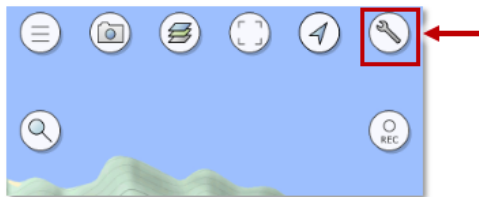2. Tap the **Base Layers** button on the *Map Properties screen*
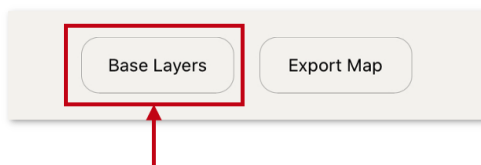
3. **Swipe right to left** on the base layer you want to delete on iOS. On Android press and hold on the base layer that you want to delete.
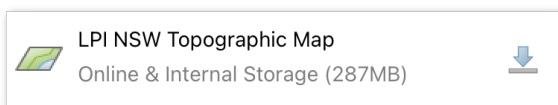
4. Tap the red **Delete Layer** button on the right side base layer item.
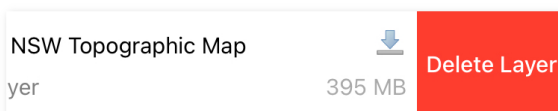
5. Tap **Delete Layer** button on the dialog to delete the local copy of the base layer. This will free up any space used by the layer. You can not undo this operation!

Delete 'Current NSW Topographic Map'?

Are you sure you want to delete the local copy of this layer?

This layer not longer be available offline!

Delete Layer | Cancel

1.7.3 Copying Base Layers

Copying Base Layers with FireMapper iOS and MacOS

The base layers can be accessed from FireMapper iOS using a MacOS computer. This is useful if you want to copy base layers between devices.

1. Connect your iPhone/iPad to your MacOS computer.

2. Open the **Finder** app on your MacOS computer.

3. **Select your iOS device** from the left side bar in Finder window.

   iCloud

   ☁ iCloud Drive

   Locations

   📱 David iPhone SE ⏏

   📱 David's iPad ⏏

   🌐 Network

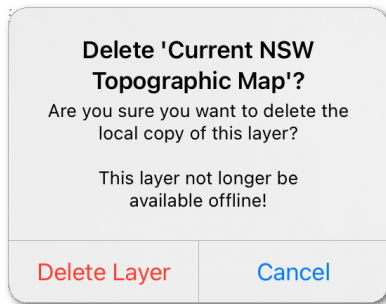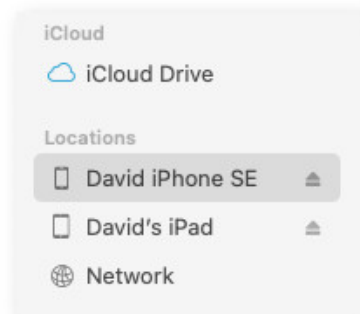4. **Select the Files tab** at the top right corner of the Finders window.

   David iPhone SE
   iPhone SE (2nd generation) · 52.53 GB (25.95 GB Available) · 99%   Manage Storage...

   General   Music   Movies   TV Shows   Podcasts   Audiobooks   Books   Photos   **Files**   Info

   Name   Size   Date Modified
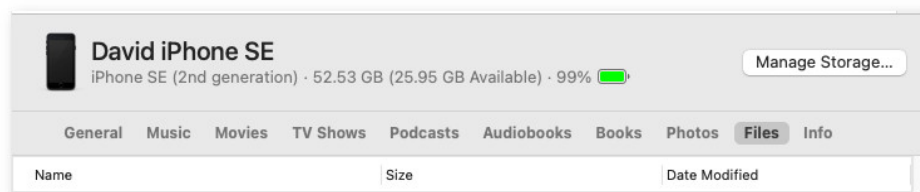
5. **Select FireMapper application** to view the list of base layers. Some of these base layers may be autogenerated by FireMapper as you view the map. Each base layer is stored as a compact cache v2. Ignore the inbox folder, this is a special folder for imported maps.

Download Base Layer Folder from iPhone/iPad to Mac OS

To download a folder, drag it from the Finder window to your desktop (or another folder). This may make a few minutes to complete, MacOS will not display any status while the download is occurring which can be confusing. The folder will appear on your desktop after the download is complete.

Upload Base Layer Folder from Mac OS to iPhone/iPad

Drag a previously downloaded folder from the desktop to the FireMapper application in the finder window. This may take a few minutes to complete, MacOS will not display any status while the download is occurring which can be confusing. The folder will appear in the FireMapper base layer group after the upload is complete.

This process can used to copy base layers between iOS devices.

Delete Base Layer Folder

Right click on the base layer folder under the FireMapper application and select delete. This will permanently delete the folder from the device.

Copying Base Layers with FireMapper iOS and Windows PC

The base layers can also be accessed from FireMapper iOS using a Windows PC using Apple iTunes application.

1. **Connect your iPhone/iPad** to your Windows computer.

2. **Open the iTunes** app on your Windows computer.

3. **Select the iPhone/iPad button** near the top left of the iTunes window.

4. **Click File Sharing**, select an FireMapper in the list

Copying Base Layers with FireMapper Android and MacOS

You will need a copy of Android File Transfer application to transfer files between MacOS and an Android device. Your computer must be using Mac OS X 10.5 and up.

1. Download and Install Android File Transfer on your computer

   https://www.android.com/filetransfer/

2. Open **Android File Transfer**. The next time that you connect your Android device, it opens automatically.

3. Unlock your Android device.

4. Connect your Android device to your computer with a USB cable

5. On your Android device, tap the **Charging this device via USB** notification.

6. Under "Use USB for," select File Transfer.

7. An Android File Transfer window will open on your computer.

8. If your Android device has an SD card reader, there may be two locations that your can store base layers; one using internal storage on the device and the other using external storage on the SD card.

9. Copy the base layer folders into the **Android/data/com.firefrontsolutions.firemapper.enterprise/files/base_layers/** or **Android/data/com.firefrontsolutions.firemapper/files/base_layers/** depending on which version of FireMapper you are using. Due to Android restrictions, FireMapper is not able to read outside these directories.

Copying Base Layers with FireMapper Android and Windows PC

1. Connect your Android device to your computer with a USB cable.

2. On the Android device, open the USB Preferences notification and update "Use USB for" to "File transfer".

3. Windows will display the Android device under "This PC" in File Explorer.

4. If your Android device has an SD card reader, there will be two locations that your can store base layers; one using Internal storage on the device and the other using External storage on the SD card.

5. Open "Internal storage" (or "SD Card", or whatever your device calls its external storage) on the device and then browse to **Android/data/com.firefrontsolutions.firemapper.enterprise/files/base_layers/**.

6. You will see a folder for each base layer on the device; open the base layer you want to copy files into, and then use the File Explorer to copy into the "_alllayers" folder. The contents of the "_alllayers" folder are a series of folders named "L09", "L10".

1.7.4 Create Your Own Tile Cache

FireMapper will automatically create tile caches on the map as you use the application. There is a folder for each base layer that is automatically generated as you view the map.

Before creating your own tile cache, a good starting point is to copy an existing tile cache off the device.

Tile Cache Format

FireMapper only supports a Compact Cache v2 format with the following configuration:

• Esri Compact Cache V2 (More details: https://github.com/Esri/raster-tiles-compactcache)

• Raster tiles only (Vector tiles are not supported)

• PNG, JPG or WEBP compression only

• 256 x 256 tile size only

• Web Mercator projection (EPSG 3857) only

• Standard Web Mercator levels of details and tile for the cache (Example: https://github.com/Esri/raster-tiles-compactcache/blob/master/sample_cache/conf.xml)

Layer Configuration File

You will need to add a **layer.json** in the layer folder. This file is required for the FireMapper application to discover the tile cache folder.

This file is specific to FireMapper and is not created by third party tools. It is a JSON file with configuration information for the base layer. This needs to be a valid JSON file. You can use an online JSON validator to ensure that the file is a valid JSON file to check the file. The last item in the JSON dictionary must not end with a comma.:

```
{
    "title": "LPI NSW Topographic Map",
    "min_zoom": 5,
    "max_zoom": 19,
    "priority": 10,
    "min_latitude": -36.39,
    "max_latitude": -28.100,
    "min_longitude": 141,
    "max_longitude": 153.599
}
```

- **title** - the name for the base layer that is displayed in the app

- **min_zoom** - the minimum zoom level that the layer is visible in FireMapper. This should be the smallest L<zoom> folder in the cache.

- **max_zoom** - the maximum zoom level that the layer is visible in FireMapper. This should be the largest L<zoom> folder in the cache.

- **priority** - the order that the layer appears in FireMapper. Use 5 if you want it to be the default layer in FireMapper. Use 150 if you want it to be one of the last layers to appear in the list. Do not use anything less than 3.

- **min_latitude** - this is the minimum latitude extents covered by the tile cache.

- **max_latitude** - this is the maximum latitude extents covered by the tile cache.

- **min_longitude** - this is the minimum longitude extents covered by the tile cache.

- **max_longitude** - this is the maximum longitude extents covered by the tile cache.

Tile Folder Name

Use lower case letters and underscores only for the base layer folder name (e.g. lpi_nsw_topographic_map). This should be the same as the title (but with lower case letters and underscores for spaces).

Do not use the same folder name as an existing FireMapper base layer. Each layer must have a different name.

1.7.5 Converting a TPKX File

You can import a TPKX tile into FireMapper iOS and it will automatically be converted into a compact cache on the device.
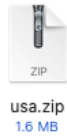
It is also possible to manually create the compact cache layer format required by FireMapper using the following steps.

1. Create a TPKX with the following settings:

   - Raster Tiles (Vector tiles are not supported)

   - PNG or JPG compression for the tiles
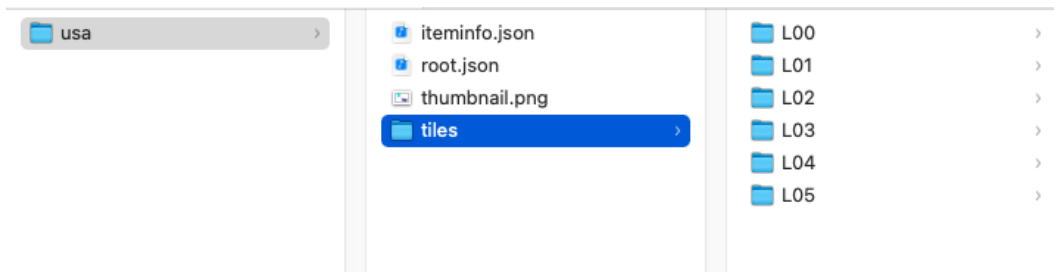
   - 256 x 256 Tile size

- Web Mercator projection only (EPSG 3857)

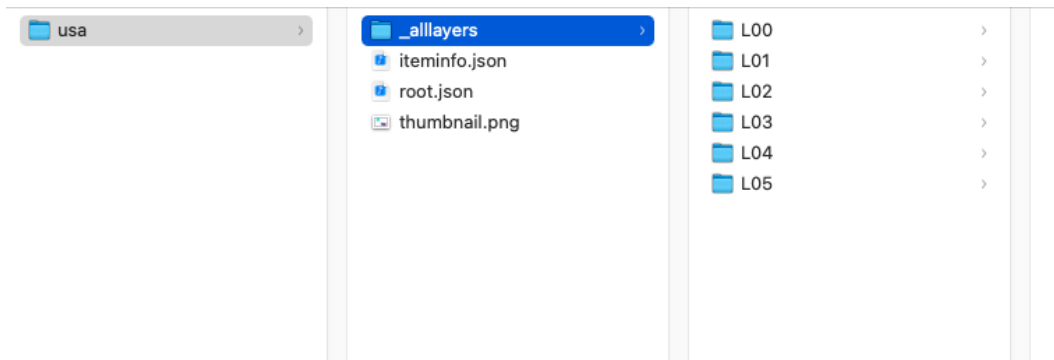https://github.com/Esri/tile-package-spec/blob/master/Sample%20TPKX%20Files/Usa.tpkx

2. Rename the generated TPKX file from a .tpkx file extension into a .zip file extension. Use a lower case name for the file (e.g. usa.zip)

usa.zip
1.6 MB

3. Extract the contents of the zip folder

usa		iteminfo.json		L00	
		root.json		L01	
		thumbnail.png		L02	
		tiles		L03	
				L04	
				L05	

3. Rename the **tile** folder to **_alllayers**.

| usa		_alllayers		L00	
		iteminfo.json		L01	
		root.json		L02	
		thumbnail.png		L03	
				L04	
				L05	

4. Add a **layer.json** file in the same directory as the **_alllayers** folder. This file is required by FireMapper and the base layer will not be loaded into FireMapper without it.

Use a text editor to create the layer.json. Make sure the extension is '.json'.

Following is sample layer.json that matches the sample USA.tpkx file:

```
{
  "title": "USA",
  "priority": 10,
  "min_zoom": 0,
  "max_zoom": 5,
  "min_latitude": 18.9247817,
  "max_latitude": 71.4062354,
  "min_longitude": -178.2175983,
  "max_longitude": -66.969271
}
```

{
    "title": "USA",
    "priority": 10,
    "min_zoom": 0,
    "max_zoom": 5,
    "min_latitude": 18.9247817,
    "max_latitude": 71.4062354,
    "min_longitude": -178.2175983,
    "max_longitude": -66.969271
}
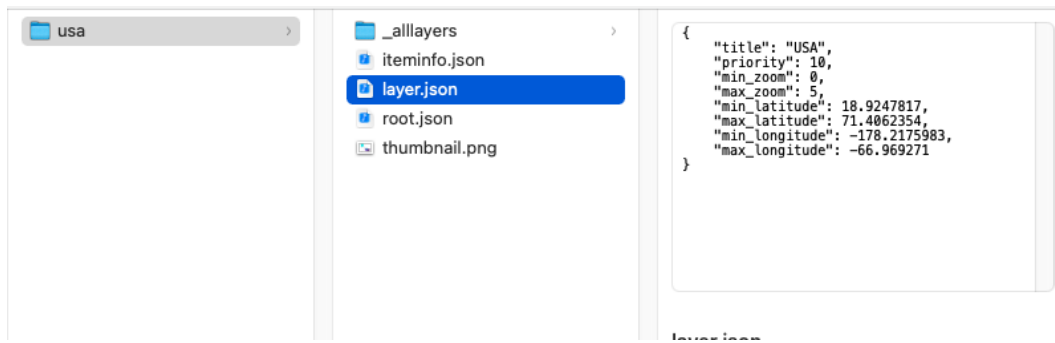
5. Copy the base layer folder (e.g. USA) onto the device.

6. Restart FireMapper. FireMapper only detects new layers when the application is restarted. The new layer should be visible in the Base Layer screen.
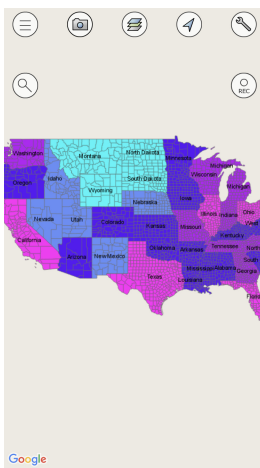

FireMapper does not currently use the iteminfo.json, root.json, thumbnail.png or config.xml files. It does not matter if these files exist or not in the layer folder.

1.8 Navigate to Feature

You can use FireMapper to navigate to a location using the internal compass.

Note: This functionally is not implemented yet on the Android. This is on the product roadmap for Android. Some fields has not available on iOS yet such as bearing and estimated time remaining. These will be added in a future release.
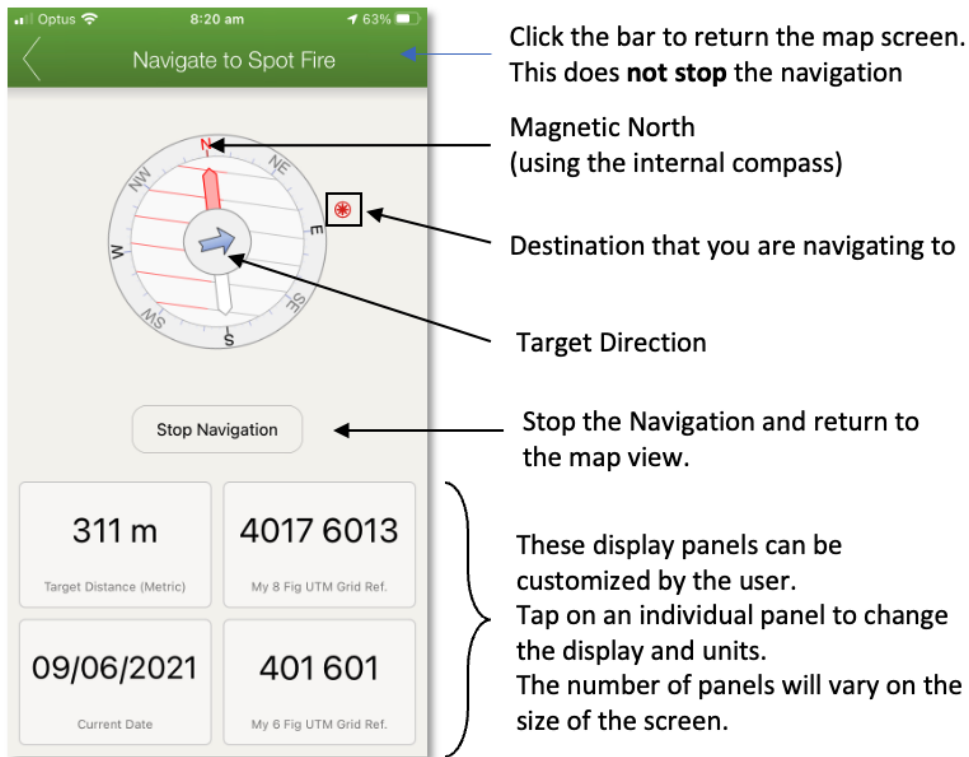
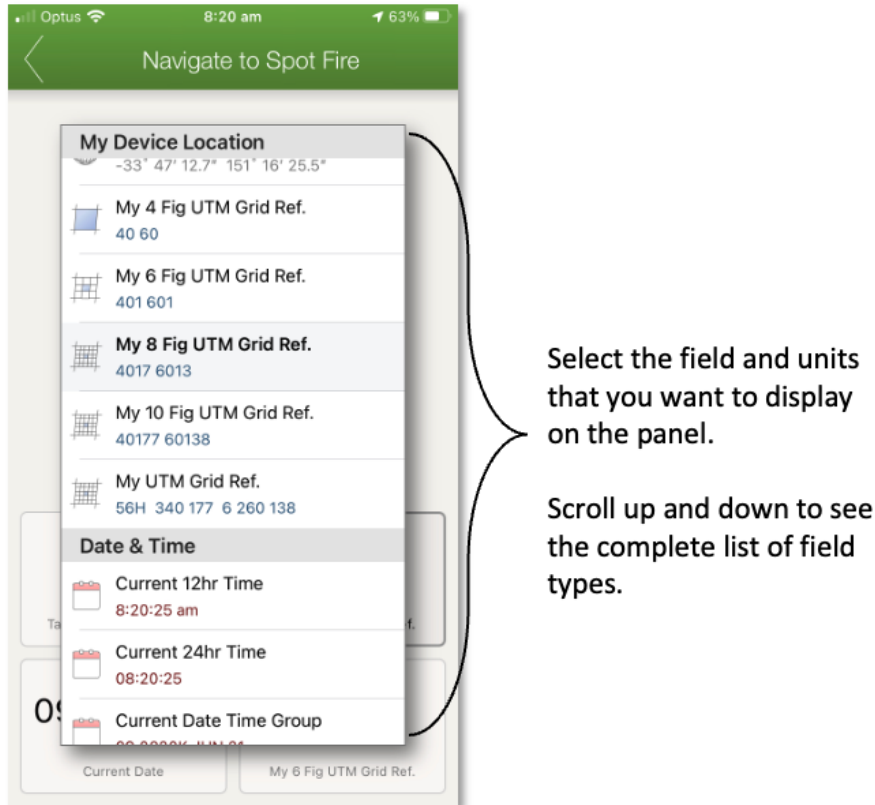1. **Select a Point or Photo** on the *Map Screen*.
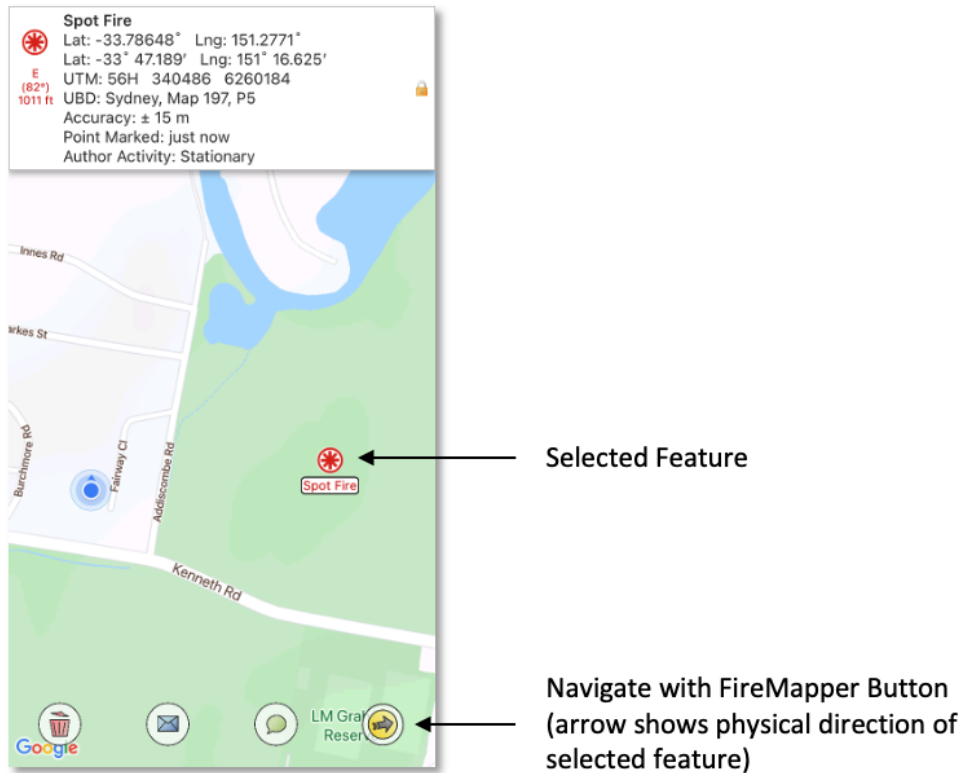
2. Tap the **Navigate using FireMapper** button in the bottom toolbar. The yellow/black arrow button will point the approximate physical direction of the target. This is handy if you want to know the direction of the selected feature on the map without starting the navigation tool.

3. Move the device in a figure 8 pattern in the air a few times to help calibrate the digital compass and reduce the magnetic error.
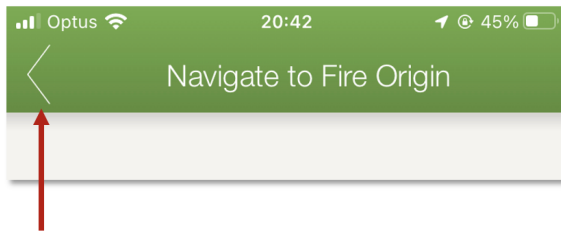
Click the bar to return the map screen.
This does **not stop** the navigation

Magnetic North
(using the internal compass)

Destination that you are navigating to

Target Direction

Stop the Navigation and return to
the map view.

These display panels can be
customized by the user.
Tap on an individual panel to change
the display and units.
The number of panels will vary on the
size of the screen.

5. On the navigation screen, you can tap any display panels you would like to change.

Select the field and units
that you want to display
on the panel.

Scroll up and down to see
the complete list of field
types.

5. You can return the *Map Screen* without stopping the navigation using the top bar.

6. A blue dotted line will show the course on the map view. The arrow on the left side will show the physical direction and distance to the destination. Tap the arrow to return to the navigation screen.

7. Tap the **Stop Navigation** button to stop the navigation and return to the map.
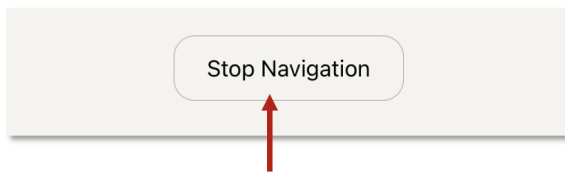
1.9 Map Search

The Search screen in a FireMapper map is an intelligent search that allows you to search for coordinates, nearby features, addresses and more.
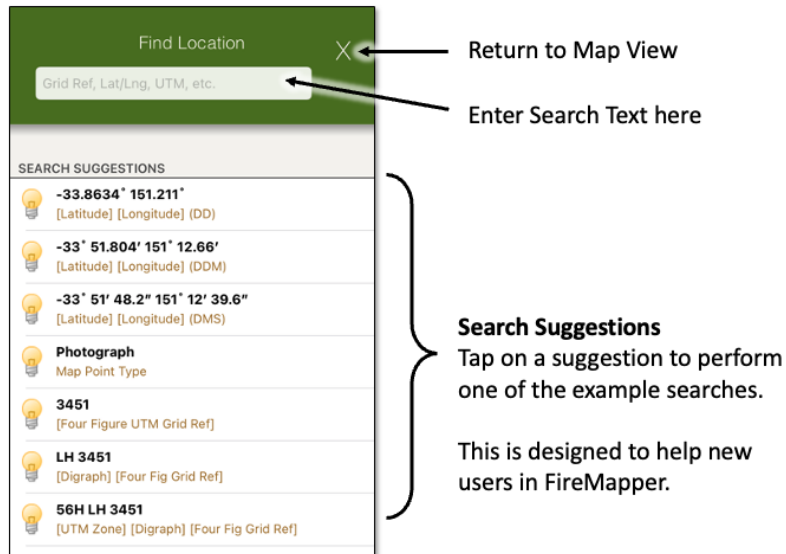
How to perform a location search:

1. Tap the **Search** button on the left side of the *Map Screen*. The search button is only visible when no features are selected on the map
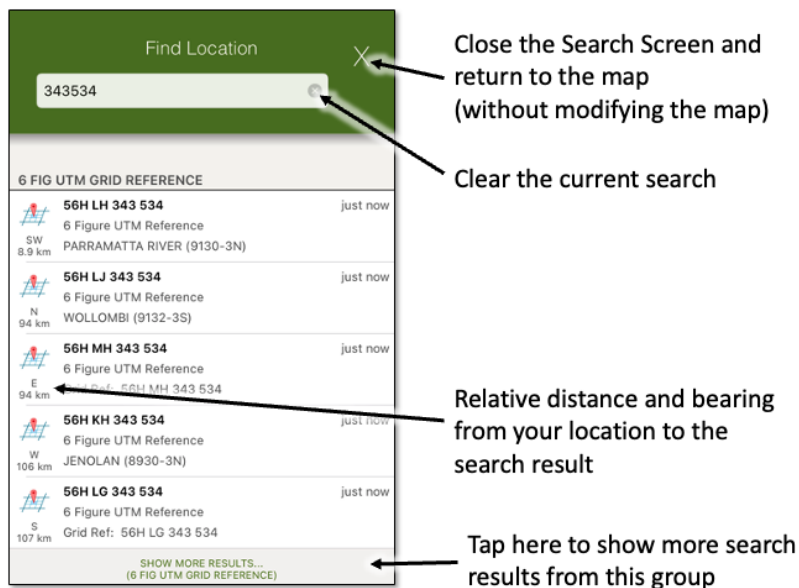

Search Button

2. **Enter the search text** in the text box at the top and tap Enter. This is a list of search suggestions when no search text is entered.

3. **Tap the search result** you want to add/view on the map. If the feature does not exist yet, a new point will be added to the map.
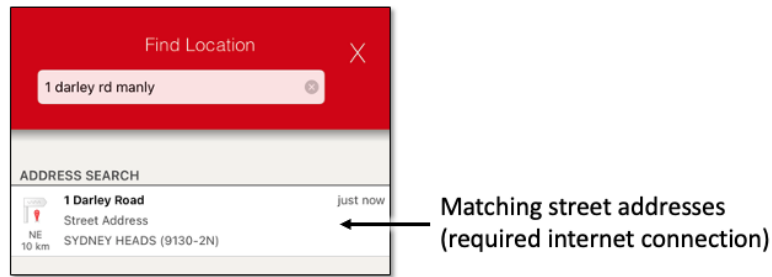

1.9.1 Address Search

The address based search requires an internet connect to work.

> **Examples:**
>
> - Street Address (e.g. 1 Darley Rd, Manly)
> - Suburb (e.g. Manly)
> - Intersection (e.g. Darley Rd Marshall St)
> - State & Postcode (e.g. 2095 NSW)

Matching street addresses
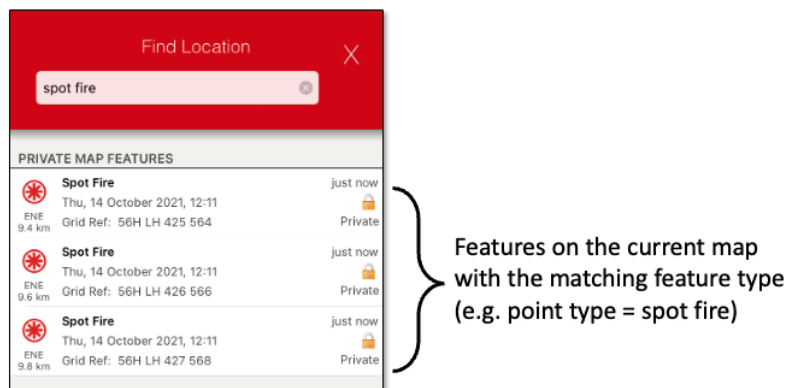(required internet connection)

1.9.2 Map Feature Search

You can search for features on the current private or shared map by feature type, feature name or feature notes. This is useful for quickly finding an existing feature on the current map.

Examples:

- Spot Fire
- Photo
- Asset
- Fire Edge

Features on the current map
with the matching feature type
(e.g. point type = spot fire)

1.9.3 4 Figure Grid Reference

As four figure grid references repeat every 100km, so make sure you pick the correct location from the result list.

You also provide the UTM Zone (e.g. 56H) and/or digraph to refer to a specific grid reference. 4 Figure grid references repeat every 100km north/south/east/west.
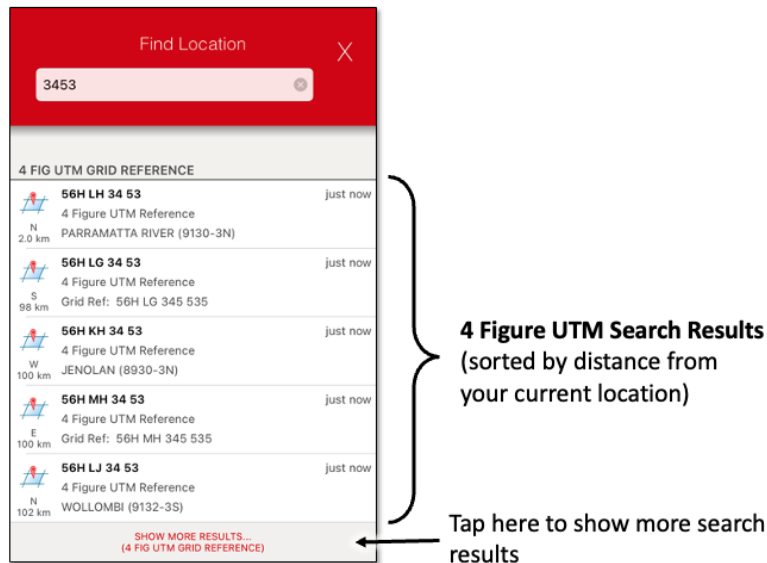
Spaces and dashes in the four grid reference are optional.

Due to the limited resolution of 4 figure grid references, most users will instead use either 6 or 8 figure grid references.
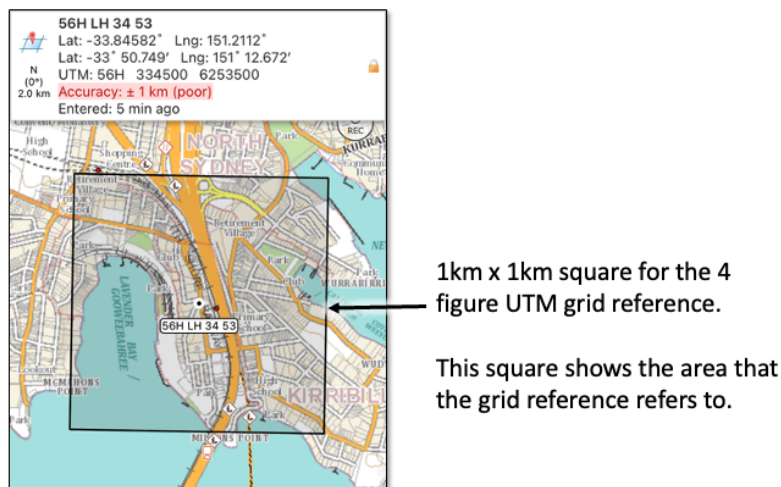
Examples:

- 3453
- 34 53
- 34-53
- LH 3453

- LH 34 53

- 56H LH 3453

- 56H LH 34 53

A four figure grid reference has a low accuracy of 1km by 1km. FireMapper will show the square that the four figure grid reference refers to when the point is selected on the map.

1.9.4 6 Figure Grid Reference

As six figure grid references repeat every 100km, so make sure you pick the correct location from the result list.
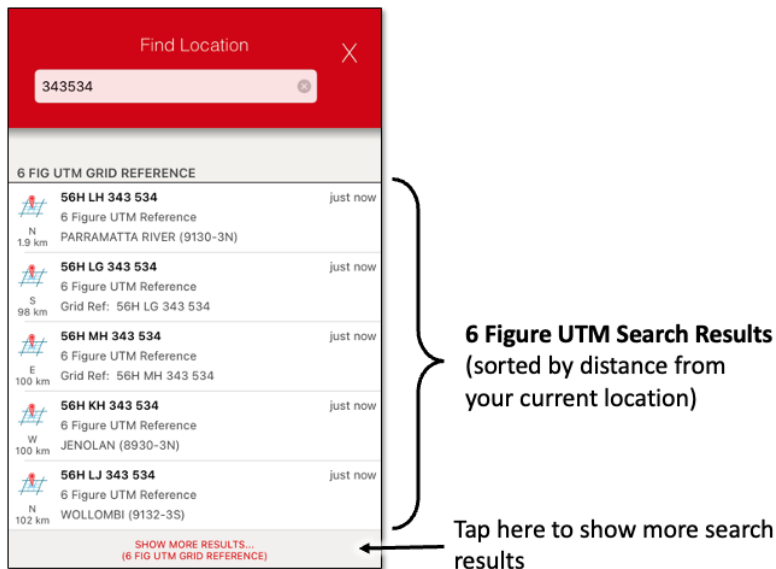
You also provide the UTM Zone (e.g. 56H) and/or digraph to refer to a specific grid reference. 6 Figure grid references repeat every 100km north/south/east/west.

Spaces and dashes in the six figure grid reference are optional.
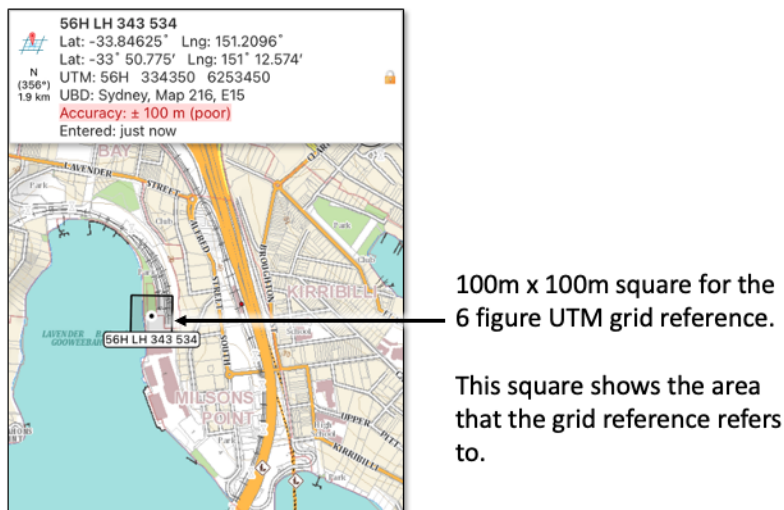
6 Figure grid references are commonly used by ground based users.

Examples:

- 242534

- 242 534

- 242-534

- LH 242534

- LH 242 534

- LH 242-534

- 56H LH 242534

- 56H LH 242 534

- 56H LH 242-534

A six figure grid reference has a resolution of 100m by 100m. FireMapper will show the square that the six figure grid reference refers to when the point is selected on the map.

1.9.5 8 Figure Grid Reference

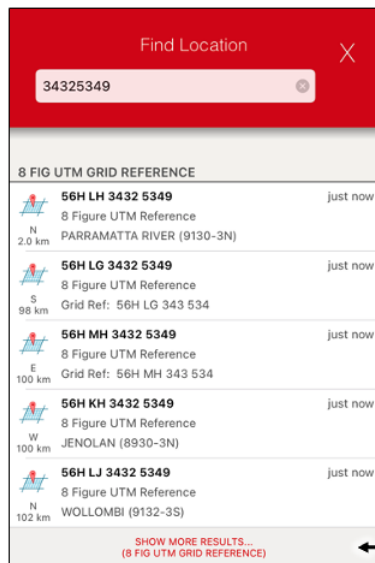A eight figure grid reference has a higher resolution of 10m by 10m.

When searching using a 8 figure grid reference, you can also provide the UTM Zone (e.g. 56H) and/or digraph to refer to a specific grid reference. If you don't provide a UTM Zone or digraph, FireMapper will return a collection of matching grid references near your location, as each grid reference repeats every 100km.

Spaces and dashes in the eight figure grid reference are optional.

8 Figure grid references are used by ground based users when a higher level of accuracy is required.

Examples:

- 34325349
- 3432 5349
- 3432-5349
- LH 34325349
- LH 3432 5349
- LH 3432-5349
- 56H LH 34325349
- 56H LH 3432 5349
- 56H LH 3432-5349

1.9.6 10 Figure Grid Reference

10 Figure grid references repeat every 100km north/south/east/west and has a resolution of 1m x 1m.

The first five digits in the grid reference refers to the easting in metres and the last five digits refers to the northing in metres. To convert an easting/northing into a 10 figure grid reference, use the last 5 figures of the easting and the last 5 figures of the northing.

When searching using a 10 figure grid reference, you can also provide the UTM Zone (e.g. 56H) and/or digraph to referer to a specific grid reference. If you don't provide a UTM Zone or digraph, FireMapper will return a collection of matching grid references near your location, as each grid reference repeats every 100km.

The spaces and dashes in the ten figure grid reference are optional.

Examples:

- 3432853497
- 34328 53497
- 34328-53497
- LH 3432853497
- LH 34328 53497
- LH 34328-53497
- 56H LH 3432853497
- 56H LH 34328 53497
- 56H LH 34328-53497
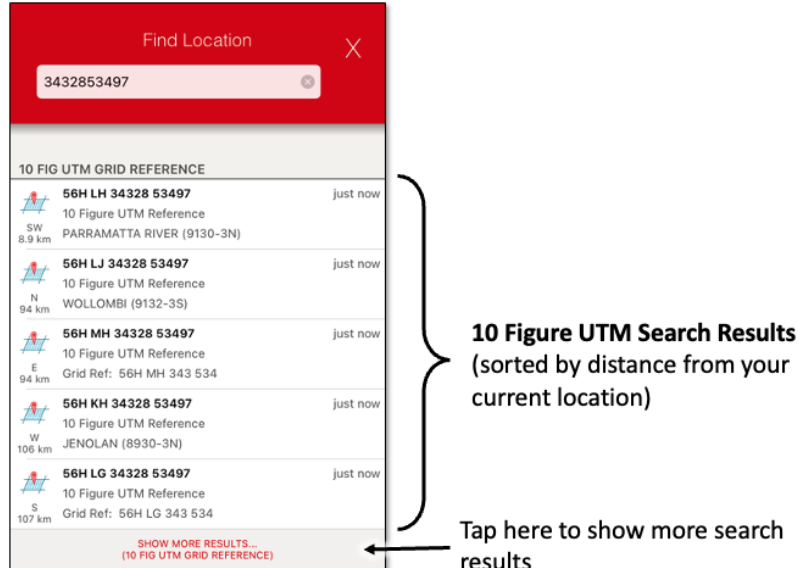
1.9.7 14 Figure Grid Reference

14 Figure references have an accuracy of 1m x 1m. This is a unique location in a UTM zone band (56N, 56S, 55N, 56S etc.). FireMapper will use the current device location to determine the current UTM zone to use.

In a 14 Figure reference, the first 7 figures is the easting and the last 7 figures is the northing. In order to have 7 figures for the easting, a zero is is added at the start of the easting to get 14 figures.

The leading 0 is optional when searching for using a 14 Figure Grid Reference.

Examples:

- 03424926257387

- 03424926-257387

- 0342492 6257387

- 3424926257387

- 3424926-257387

- 342492 6257387
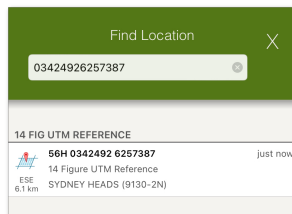
1.9.8 Easting/Northing

A easting/northing is used to unqiuely identify a location inside a specific UTM zone. FireMapper will use your current location to determine the UTM zone, if only a easting and northing are provided. Sometimes an easting is written with a leading 0.

Examples:

- *[Easting] [Northing]*

- 398 313, 6 260 424

- 398 313,6 260 424

- 398313, 6260424

- 0398313, 6260424

- 0398313E, 6260424N

- 0398313 E, 6260424 N

- 0398313 mE, 6260424 mN

- 0398313mE, 6260424mN

- 398313, 6260424

- 0398313 6260424

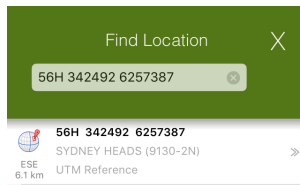- 0398313E 6260424N

- 0398313 E 6260424 N

- 0398313 mE 6260424 mN

- 0398313mE 6260424mN

- 0398313,6260424

- 398313,6260424

- 398313E 6260424N

1.9.9 UTM Reference

A UTM reference has a high accuracy of 1m x 1m. This is a unique location which refers to a single location on the Earth's surface

Examples:

- 56H 342492 6257387

1.9.10 Decimal Degrees (DD)

Latitude/Longitude expressed in decimal degrees. This is a unique location which refers to a single location on the Earth's surface. Latitude/Longitude is commonly used by aircraft as they have to operate over long distances and can easily be entered by the pilot.

Examples:

- *[Latitude] [Longitude]*

- -33.81200 151.2987

- 33.81200S 151.2987W

- S33.81200 W151.2987

- -33.81200° 151.2987°

- 33.81200° S 151.2987° W

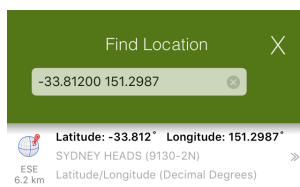- -33.81200deg 151.2987deg

- -33.81200d 151.2987d

1.9.11 Degrees Decimal Minutes (DDM)

Latitude/Longitude expressed in degree decimal minutes. This is a unique location which refers to a single location on the Earth's surface

Degrees Minutes are commonly used by aviation users in Firefighting. Latitude/Longitude is commonly used by aircraft as they have to operate over long distances and can easily be entered by the pilot.

Examples:

- *[Latitude] [Longitude]*

- -33 48 151 17

- -33d 48m 151d 17m

- -33dec 48min 151deg 17min

- -33° 48' 151° 17'

- 33 48S 151 17W

- S33 48 W151 17

- -33 48.72 151 17.89

- 33 48.72S 151 17.89W

- S33 48.72 W151 17.89
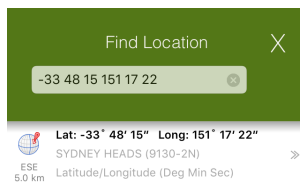
1.9.12 Degrees Minutes Seconds (DMS)

Latitude/Longitude expressed in degree minute seconds. This is a unique location which refers to a single location on the Earth's surface

Examples:

- *[Latitude] [Longitude]*

- -33 48 15 151 17 22

- -33d 48m 15s 151d 17m 22s

- -33deg 48min 15sec 151deg 17min 22sec

- 33 48 15S 151 17 22W

- S33 48 15 W151 17 22

- -33 48 15.11 151 17 22.34

- 33 48 15.11S 151 17 22.34W

- S33 48 15.11 W151 17 22.34
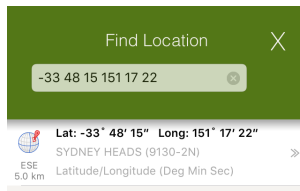
1.9.13 NTZM Coordinates

If your device is located in New Zealand, you can also search by NZTM coordinates. NZTM coordinates are commonly used by emergency services (including FENZ). NZTM is also used when working with NZ topographic maps.

You can search for 4, 6, 8, 10 and 14 grid references in NZTM. The FireMapper app will show results for NZTM coordinates before UTM coordinates, as this NZTM coordinates is the most common format for NZ.

Examples:

- 95 08 *(4 figure grid ref)*
- 957 083 *(6 figure grid ref)*
- 9572 0838 *(8 figure grid ref)*
- 95721 08381 *(10 figure grid ref)*
- 1795721 5708381 *(NZTM coordinates)*

1.9.14 Quadrillage Romer Reference

If your device is located in Quebec, you can also search by the quadrillage romer grid that is used in Quebec. This grid format is used by emergency services in Quebec.

Examples:

- 3612-1
- 3612-1-2476

1.10 Export Map
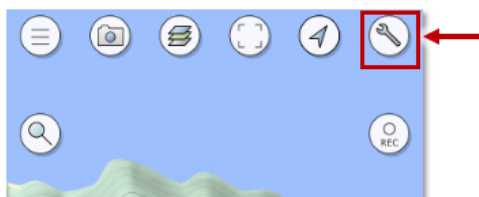
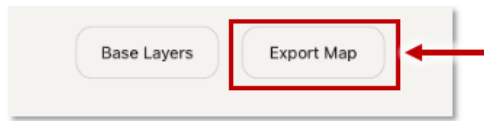The *Export Screen* lists all the available map export options.

The export options will vary depending on the map content. Photo export formats such as KMZ are only available if there are photos on the current map.
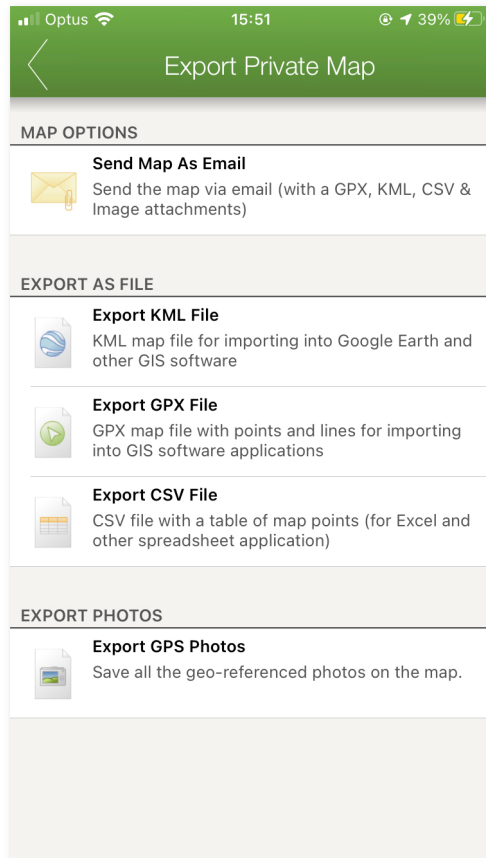
How to Export a Map:

1. Tap the **Map Properties** button in the top right corner of the *Map Screen*.

2. Tap the **Export Button** on the *Map Properties screen*.

3. Select the format that you want to export as from the list of export formats. *Please note that the KML, KMZ, GPX file formats only support WGS84 as part of their file format standards.*

1.10.1 Send Map As Email

Send map as an email message with the map in multiple file formats attached.

Note: For FireMapper iOS, you can only send emails using the native iOS Mail application with the *Send As Email* feature. You will need to have configured a valid email account with the native mail app if you want to use this feature.

Other clients such as Gmail or Outlook are not supported with the *Send As Email* tool on iOS. If you want to use another email client such as Gmail, select an export format such as GPX, KML, PDF, etc and then select the email client from the list of application. This workaround will allow you to send an email with just a single attachment and no autogenerated email body.

This export option is recommended when sending map via email, as it includes multiple attachments and also generates a email body with a summary of the map.

Send Map As Email

Send the map via email (with a GPX, KML, CSV & Image attachments)

1.10.2 Export KML File

Exports the map as a KML file.

This format is used by most GIS applications including Google Earth, QGIS Desktop, ArcGIS Pro, ArcGIS Map and more. Only points and lines are supported by KML. Photo attachments are not stored in the KML format. If you need to include photos, use the KMZ format instead.

FireMapper tries to format KML maps with similar line styles, however some line styles can not be reproduced in KML format with third party applications. KML only supports solid lines (not dotted or dashed). This will cause your lines to appear different compared to FireMapper.

FireMapper Enterprise supports importing KML back into FireMapper including the geometry and metadata for points and lines.

Export KML File

KML map file for importing into Google Earth and other GIS software

1.10.3 Export GPX File

Exports the map as a GPX file.

This format is used by most GIS applications including QGIS Desktop, ArcGIS Pro, ArcGIS Map and more. Photo attachments are not stored in this format. If you need to include photos, use the KMZ format instead.

Export GPX File

GPX map file with points and lines for importing into GIS software applications

1.10.4 Export Image File

Exports the map as an image file that can be used for viewing or printing.

This format is useful as no additional software is required to open this file.

The map image can be viewed on any mobile device or desktop.

Export Map Image

Save an image of the map for viewing and printing

1.10.5 Export CSV File

Exports all the points on the map as a CSV file. This export format only contains points. Lines, areas and photos are not included in this format.

This format can be opened in most spreadsheet applications including Microsoft Excel, Open Office and Google Spreadsheets.

Export CSV File
CSV file with a table of map points (for Excel and other spreadsheet application)

1.10.6 Export GPS Photos

Exports all the GPS Photos from the map.

The list of available options will depend on which applications are installed.

This *Export GPS Photos* option is only available if the map contains photos.

Export GPS Photos
Save all the geo-referenced photos on the map.

1.11 Frequently Asked Questions

1.11.1 Installing FireMapper Standard on a new device

Transferring between iOS to Android or Android to iOS is not supported, and you will need to purchase another copy when changing operating systems/app stores or email addresses.

This process only works for iOS to your new iOS device and Android to your new Android device.

iOS Device -> iOS Device

The same Apple ID email address that you used to install the first time and transferring between your iOS device to another iOS device. You must use the Apple ID in the app store across as your old device.

1. Open the App Store app

2. Tap the sign-in button or your photo at the top of the screen.

3. Tap Purchased.

4. Tap "Not on this [device]".

5. Find FireMapper, then tap the download button (cloud icon with arrow)

Android Device -> Android Device

The same Google Play email address that you used to install the first time and transferring between your Android device to another Android device. You must use the same Google Play email address as your old device.

1. Open the "Play Store" app.

2. Select the "Menu" Android menu button icon located at the upper-left corner, then choose "My apps & games".

3. Swipe to the left to get to the "Library" area. All the apps you ever downloaded will be listed here including paid apps.

4. Tap the "Install" button next to the FireMapper app.