Austin Crime Zone

User Manual

Daniel Foad

HTTP://COMP4.DANFOAD.CO.UK
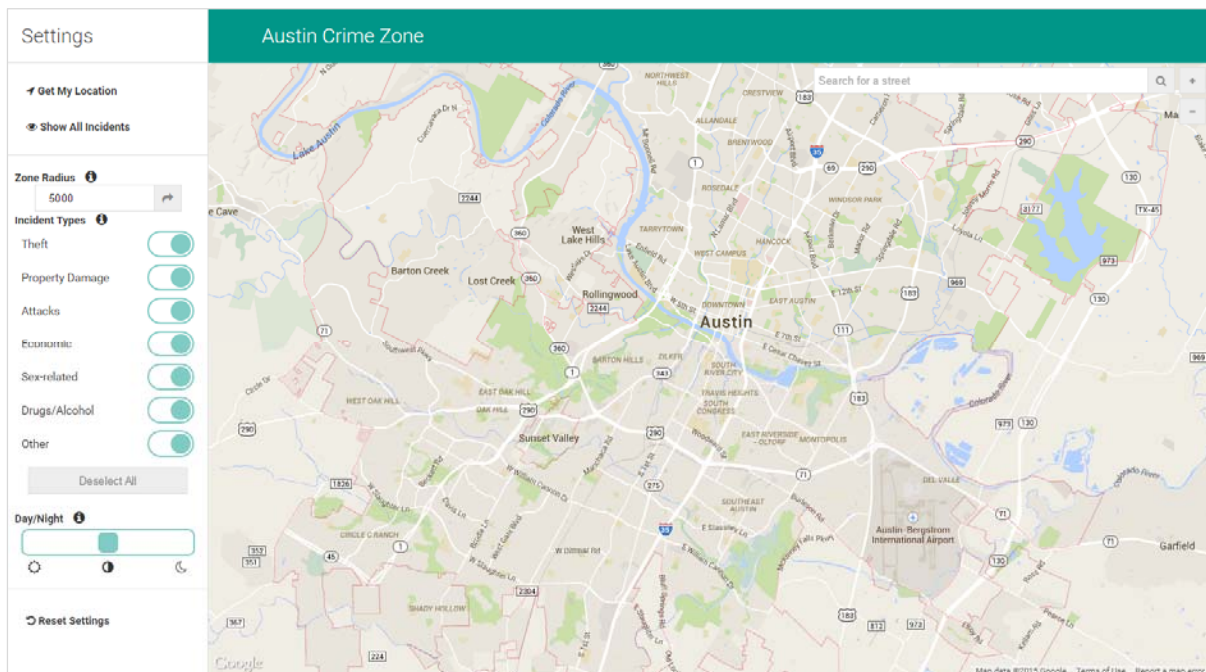
Contents

Introduction & Installation instructions

Austin Crime Zone is a web application that allows you to quickly find out how dangerous a certain area is within Austin, Texas, USA. The site is designed to work well with both desktop and mobile devices and was constructed to respond rapidly to your query.

Because it is a web application, there is no code installation required. To access the site open a supported browser from the list below and navigate to http://comp4.danfoad.co.uk

A 100% uptime cannot be guaranteed. Therefore, if you cannot access the site, please try again later.

The system is built with web technologies that require you to have one of the supported browsers, as well as meeting the listed minimum specifications.

This document assumes that the user has an internet access point and is comfortable in using both keyboard and mouse interfaces and a touchscreen interface. Note that if you are using this system over a mobile network, it will use up some of your data allowance if you do not have an unlimited data plan. It is left to you to manage your own data usage.

All images in this document were taken on Google Chrome. Your viewing experience may vary slightly.

Cookie Policy

This site uses cookies (a small text file stored locally on the browser) in order to save the previously used settings and chosen location so that reloading the page will bring you back to your previous state. Many sites make use of this technology and there is little-to-no risk associated with them.

Supported Browsers

> Mozilla Firefox 34+
> Google Chrome 35+
> Opera 26+
> Chrome for Android/iOS 40+
> Safari 8+

BROWSER SUPPORT DATA FROM HTTP://WWW.CANIUSE.COM

Minimum Specifications

> 512MB of RAM
> 128KB of graphics memory
> 1MB of free storage space
> Resolution of at least 720x480 on desktop
> Resolution of at least 240x360 on mobile
> 32 bit colour

If you require additional help, or you believe there is an error in the document, please contact technical support at contact@danfoad.co.uk

01 – Page Load

Upon loading the page, you will be met with the loading icon shown to the right until the map is fully loaded. No interaction is required on your part. If the icon shows for more than 30 seconds, there may be an issue with either your connection or Google's API servers, try reloading the page to solve the issue.
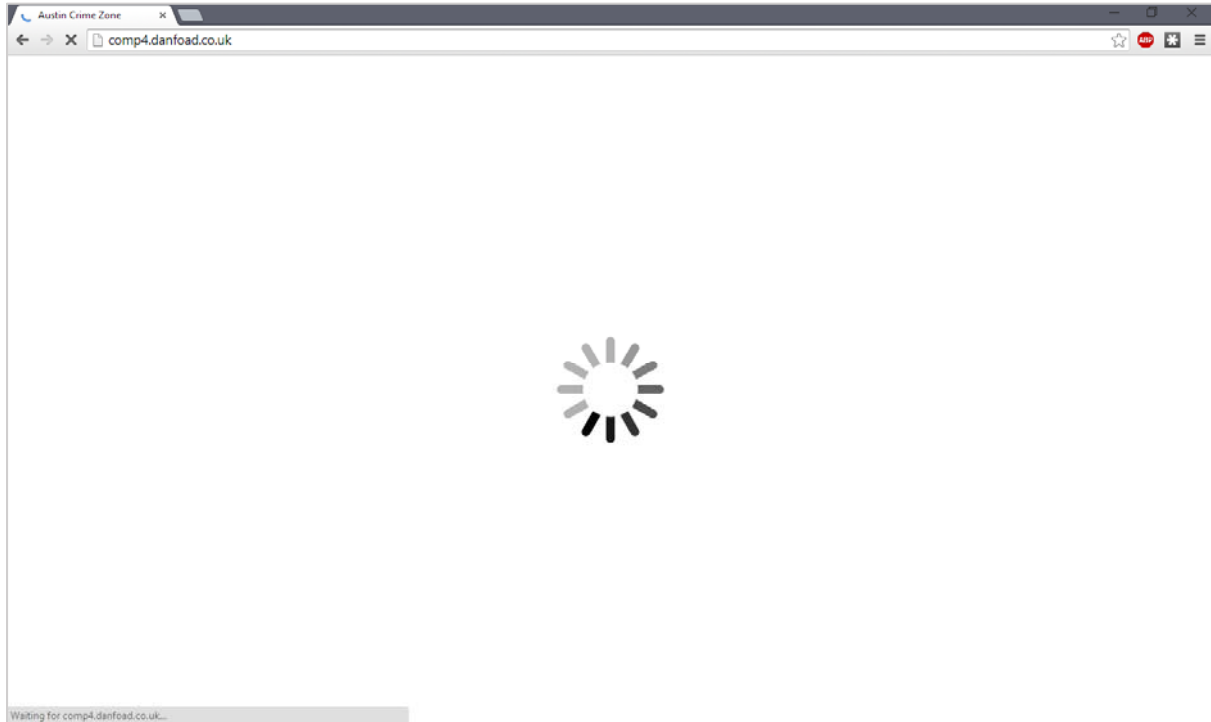
Figure 1 - Loading icon

02 – User Interface

Once the page has loaded, you will be met with a screen as follows if you're on a desktop/laptop:
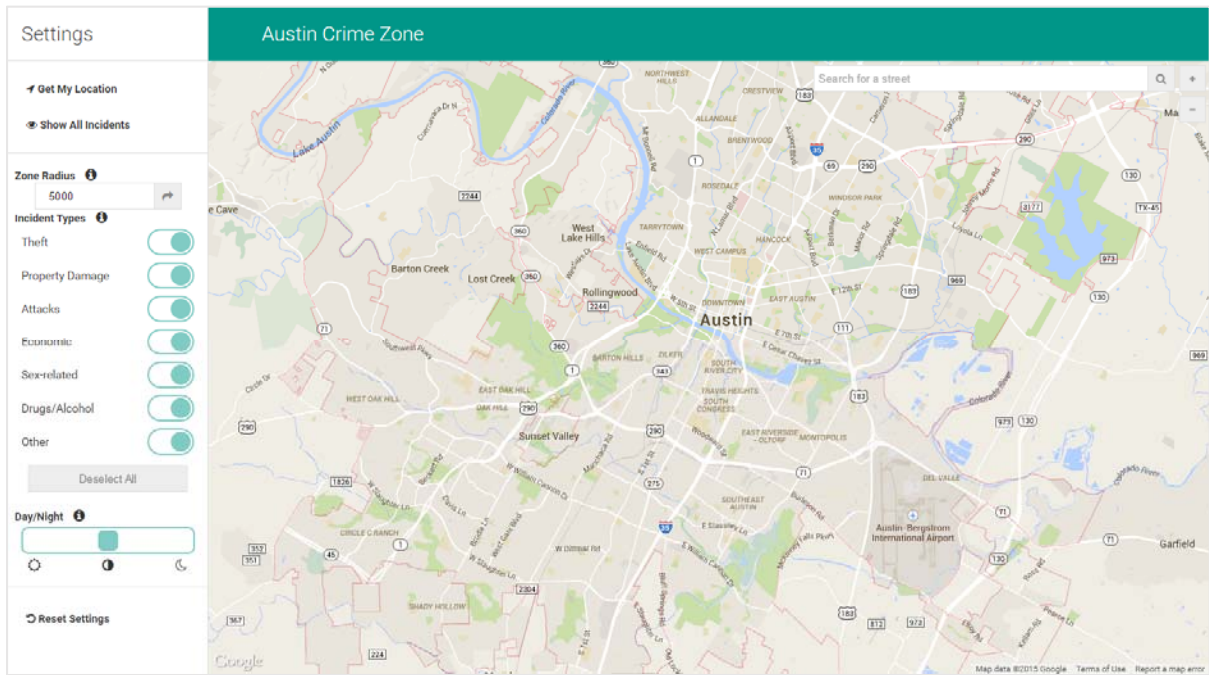

Figure 2 - Initial display :: Desktop

The following screen is if you are on a mobile device:
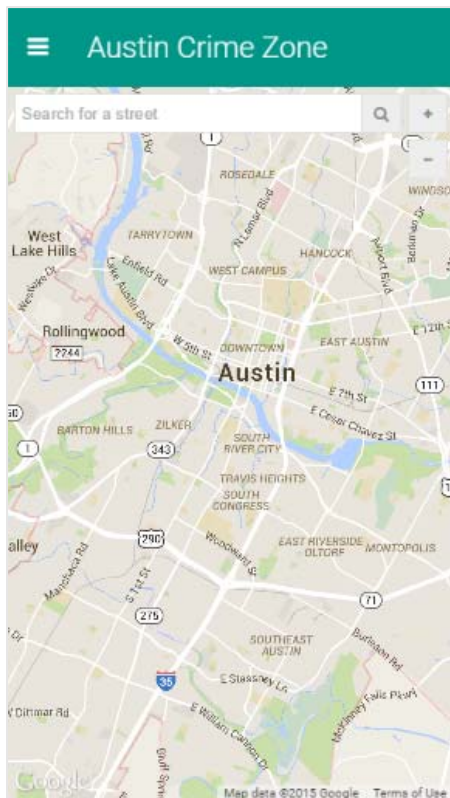

Figure 3 - Initial display :: Mobile

Desktop User Interface

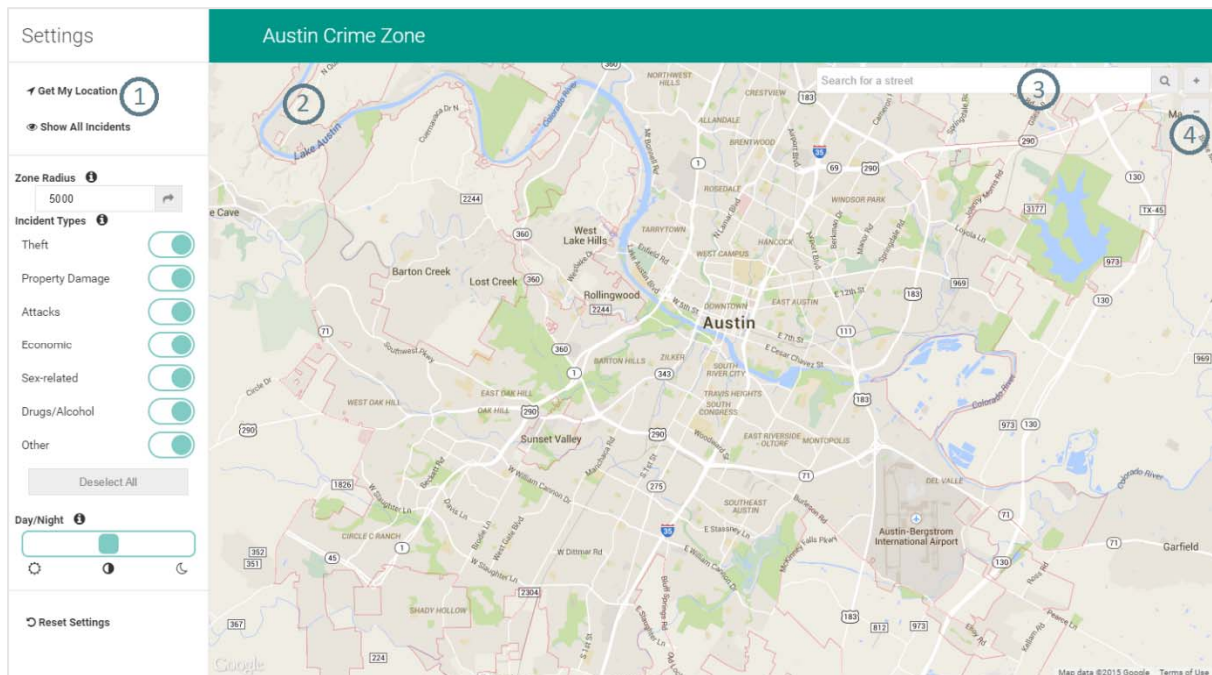The user interface for the system when on a desktop is as follows:

Figure 4 - User Interface numbered :: Desktop

1. The Settings Menu – Each item will be explained individually in section 04. This menu has controls to change which incidents you wish to take into account by changing which type of crimes to consider and/or the time of day that they occurred. There are also several other options to control miscellaneous items.
2. The Map – The main portion of the system that you will be interacting with. How to interact with the map will be explained in more detail in section 03. This map acts as a visual representation of the area that you wish to check for danger.
3. Search Menu – This search menu allows you to input a street name within Austin, TX and navigate to that point to check it for danger.
4. Zoom controls – These are controls that can be used to zoom in/out the map (within reason).

Mobile User Interface

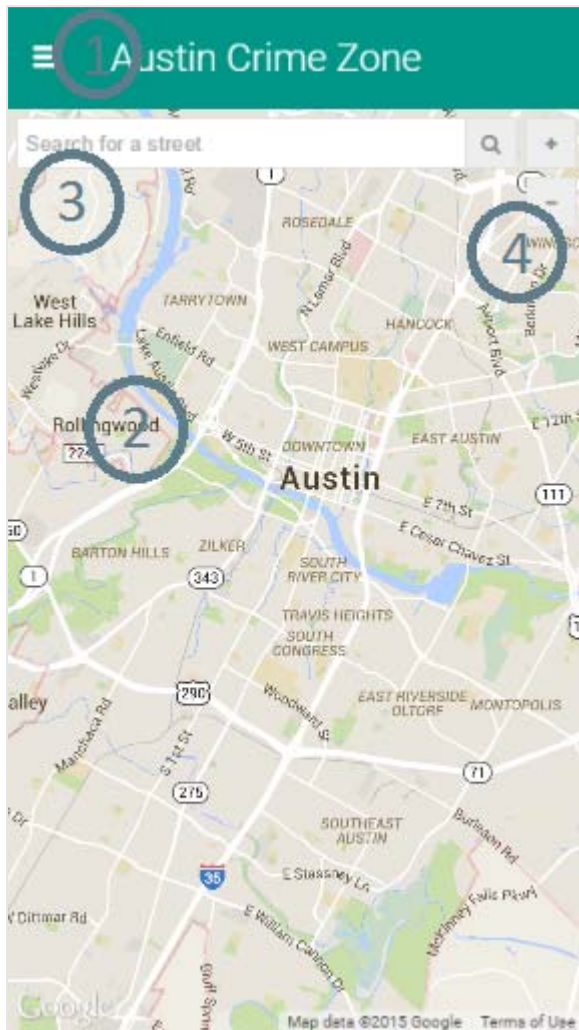The user interface for the system when on a mobile device is as follows:

Figure 5 - User Interface numbered :: Mobile

1. The Settings Menu – Clicking this button will slide out the settings menu as shown in figure 06. Each item in the menu will be explained individually in section 04.
2. The Map – The main portion of the system that you will be interacting with. Methods of interacting with the map will be explained in more detail in section 03. This map acts as a visual representation of the area that you wish to check for danger.
3. Search Menu – This search menu allows you to input a street name within Austin, TX and navigate to that point to check it for danger and incidence of crime.
4. Zoom controls – These are controls that can be used to zoom in/out of the map.
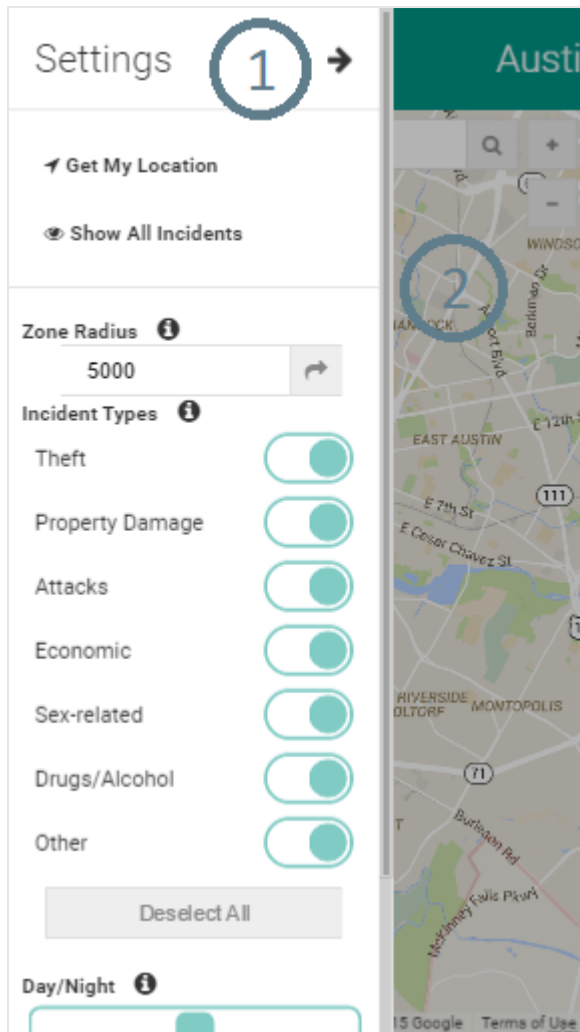
Figure 6 - User Interface numbered - Expanded menu :: Mobile

1. Back button – This button, when clicked, hides the menu so that normal interaction with the map can resume. It will result in a screen as seen in figure 5.
2. Overlay – Clicking outside of the settings menu in the darkened section performs the same function as the back button, hiding the menu.

03 – Map Interactions

This section outlines the basics of working with the map, search bar and zoom controls. Interactions made through the settings menu will be covered in section 04.

Selecting a point on the map :: Manually

This is the easiest way to choose a point on the map, as well as the most intuitive. Simply click/tap on the map within the red boundary and a zone marker will appear at the selected point. Note that the red boundary should be taken as more of a guideline than a strict boundary. There are a few points outside of Austin which are deemed to be inside, but these add data for you to view rather than reducing it.

Note, if you select a point which the system believes to be outside the boundaries of Austin, TX your browser will display a message like the following:
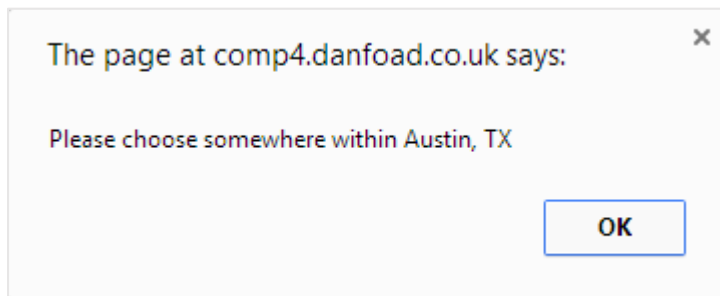

Figure 7 - Error :: Point chosen outside of Austin

This can be remedied by selecting a point within the boundaries of Austin.

Selecting a point on the map :: Search Bar

The search bar that is overlaid on top of the map can also be used to select a point on the map. Type a street name within Austin and select the option from the drop down menu that appears. It will then navigate to roughly the centre of that street and place the zone marker there. Typing a street name that is not within Austin, TX will yield no results.
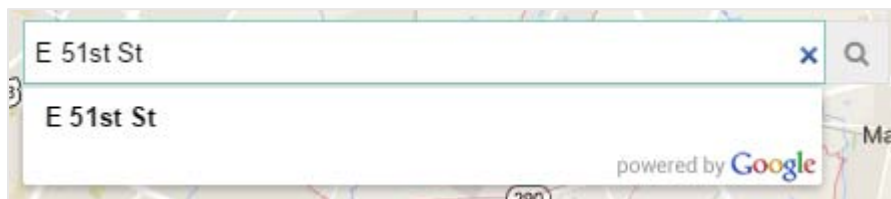

Figure 8 - The drop down menu for when a street name is typed in
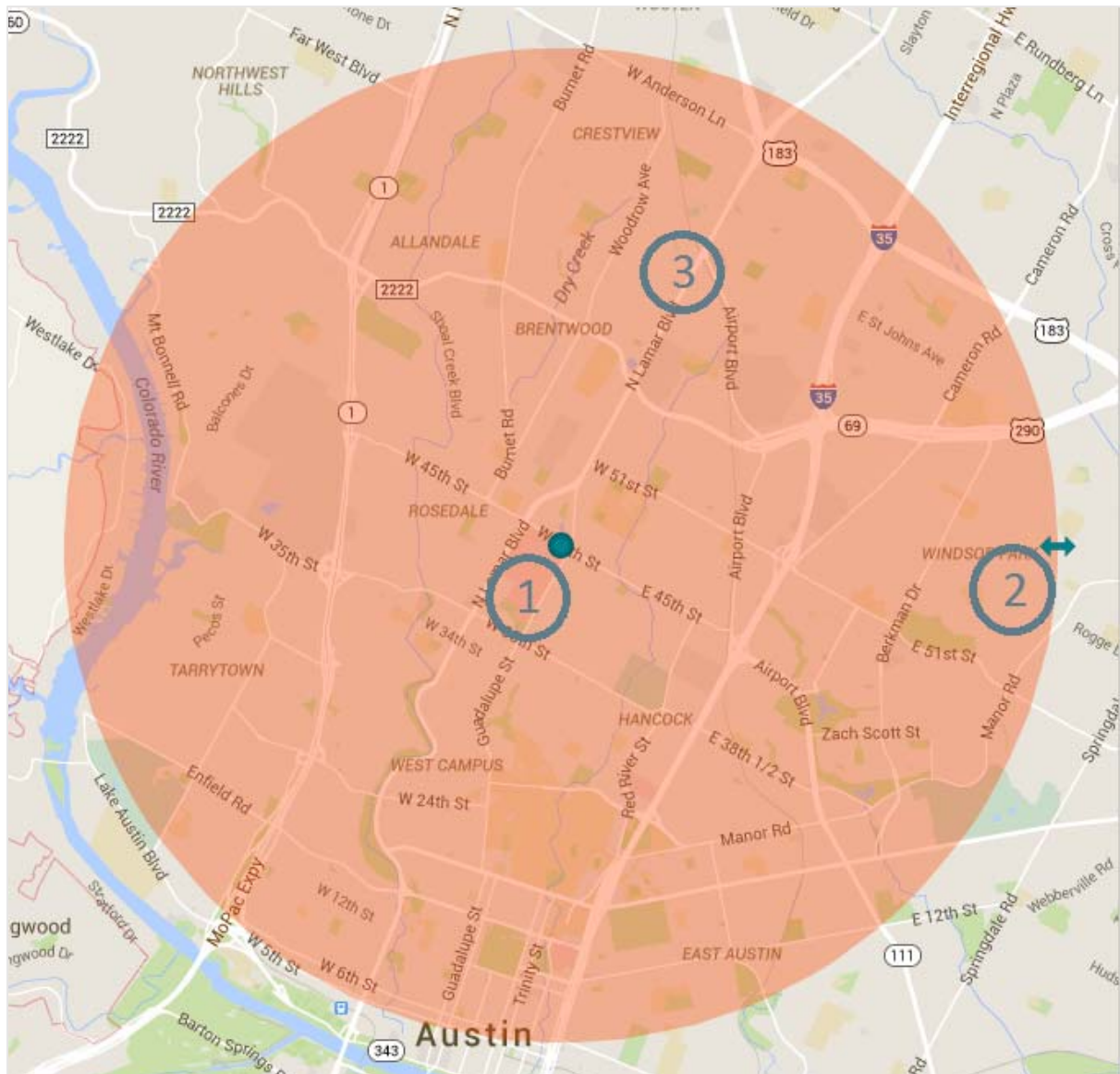
Details of a zone marker

Figure 9 - Zone marker numbered

1. Central marker – A position marker showing the centre of the zone, this will be the point that was selected on the map
2. Resize marker – This marker is draggable and allows you to resize the zone radius by dragging it out or in. Note that you will not be able to drag it past the minimum and maximum values allowed for the radius (min: 1000 metres, max: 10000 metres)
3. Zone marker – This circle is the zone marker, it's background colour is the main part of this system. It is a visual representation of how dangerous a particular zone is based off a ratio of the number of crimes within the zone, the number of incidents on the map, the radius of the circle and the maximum and minimum values allowed for the radius.

Zooming in/out on the map

There are three ways to zoom in or out of the map, depending on whether you are on desktop or mobile. Both desktop and mobile, however, allow for zooming via the controls in the top right corner of the map. Note, however, once you have zoomed in or out to the maximum, the app removes the option to go further to keep you within the relevant confines of Austin, at a level where both precision and majority view of the zone can be achieved. Also note that when selecting a point through any of the methods, the system will automatically zoom you in/out to the point where you can see most of, if not all, of the zone marker.

Figure 10 - Zoom controls, Left: Both visible and most zooms, Middle: Zoom-in control hidden at max zoom, Right: Zoom-out control hidden at min zoom

If you are on a desktop or laptop, you can also zoom by positioning the cursor over the map and using the `Mouse scroll` to zoom in/out.

If you are on a mobile device you can zoom via the standard pinch-to-zoom gesture assuming your device is multi-touch enabled and you are making the gesture over the map.

Checking the type of incident

With incidents being shown on the map (see section 04) it is possible to check details of a particular incident and when it occurred. Click/tap on an incident and an information window will appear explaining what exactly the incident was and when it occurred.
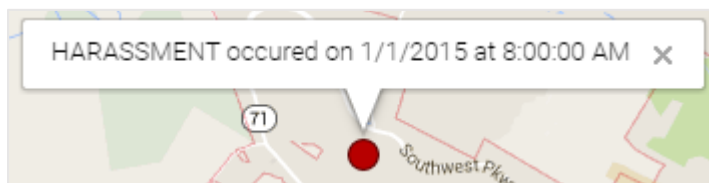

Figure 11 - Info window explaining a specific incident

04 – Settings Menu

Selecting a point on the map :: Geolocation

The third method of selecting a point on the map is through the geolocation service. Assuming your device has support for geolocation and you are within Austin, TX this option will allow you to find out how dangerous the point where you are. If you meet the constraints above, the map will navigate to your current location and place the zone marker. The following are error alerts that you may receive:

⏶ Get My Location

Figure 12 - Geolocation option

If you choose to deny the application knowledge of your location, you will receive the following message:

The page at comp4.danfoad.co.uk says:
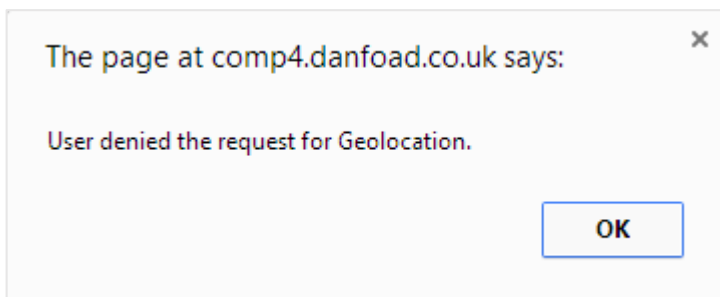
User denied the request for Geolocation.

OK

Figure 13 - Error :: Denial of access to location

This can be remedied by clearing the cache for your browser and allowing the system to access your location when you next click on the button. In order to clear your cache, refer to the instruction manual for your specific browser.

If you do allow the application to have access to your location, but you are not physically within Austin, TX you will receive the following message:
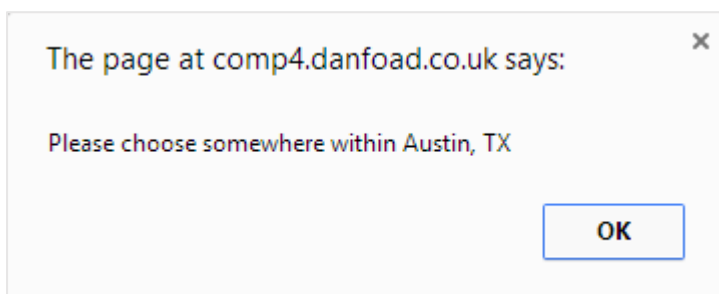
The page at comp4.danfoad.co.uk says:

Please choose somewhere within Austin, TX

OK

Figure 14 - Error :: User is not within Austin, TX

If you are in Austin and the system is giving you this error, please contact the technical support for Google at https://support.google.com/

If your device does not support geolocation, you will receive the following message:

Figure 15 - Error :: Device does not support geolocation

To fix this you must access the application with a device that does support geolocation.

If you leave the dialogue bow allowing the application access to your location to stay open for too long (the time is dependent on your browser) the request will time out and you will receive the following message:
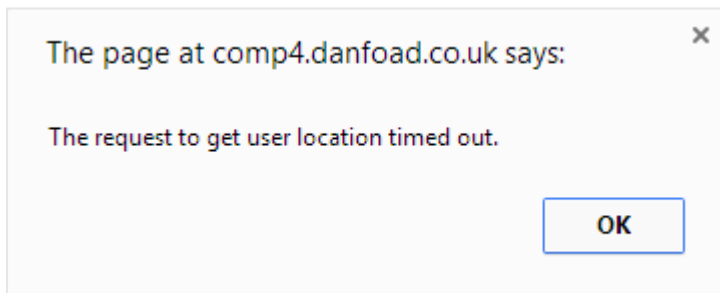

Figure 16 - Error :: Request timed out

This can be fixed by pressing the "Get My Location" button again and selecting "Yes" at least within a few minutes of the option appearing.

If you allow the system access to your location from the browser but have a system setting that denies applications access to your location, you will receive the following message:
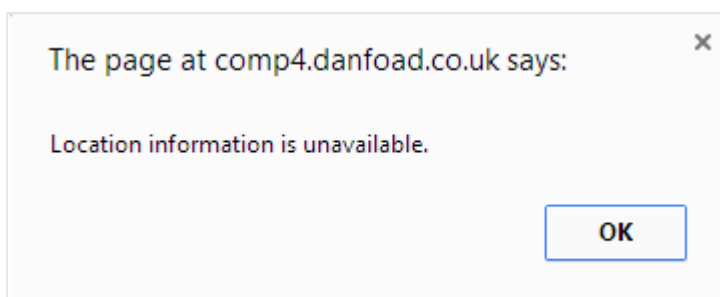

Figure 17 - Error :: System denial of location

This can be fixed by changing the system settings on your device to allow applications access to your location.

There is also the possibility that an error occurs that the system does not expect. This should not normally happen, but may occur due to unreliable connections, a problem with your browser or device, or simply a technical error that could not have been foreseen. If this happens you will receive the following message:
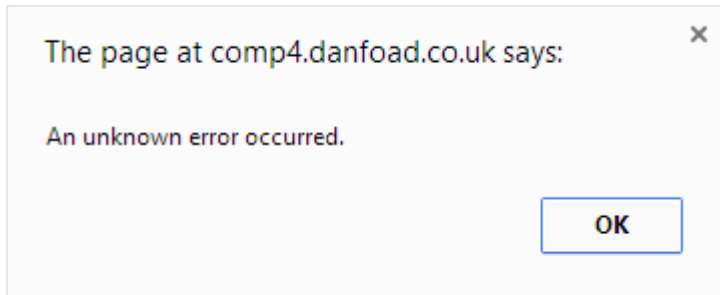

Figure 18 - Error :: Unknown geolocation error

There is no hard-and-fast way of fixing this error. Try to select the Get My Location button again, and if this issue persists please contact technical support for your device.

Showing/hiding all incidents

This button allows you to show/hide all incidents that the system is considering following your filter setting choices. This is useful as it allows you to select a specific incident when they are all shown to gain further insight. It is also useful for a quick overview of the clustering of incidents in certain areas. Clicking this button yields a view like the one below:
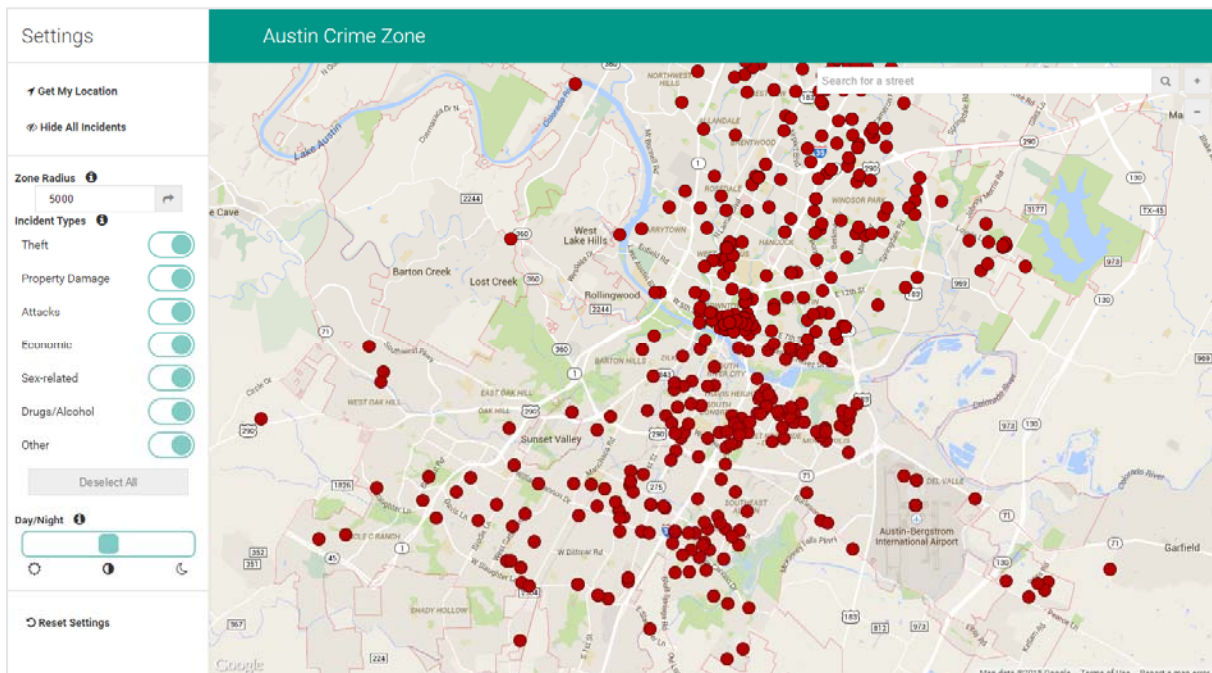

Figure 19 - Show/Hide incidents button

Figure 20 - All incidents shown

Note that the button's text has changed to show that all incidents are shown. Clicking the button again will hide all of the incidents. Each incident is rendered as a red dot.

Zone Radius input

It is also possible to resize a zone marker numerically through the zone radius input shown in Figure 21. This radius takes a number between 1000m and 10000m inclusive. To input the number, either press the submit button to the right of the input or press the enter key.

Figure 21 - Zone Radius input

If a number is entered outside of the range or a non-numerical input is made, the following alert is given:
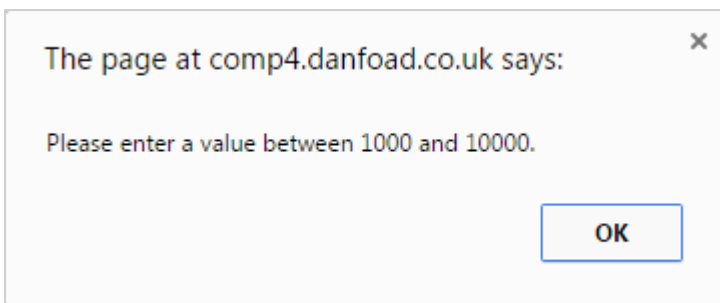

Figure 22 - Error :: Invalid input for zone radius

This can be fixed by entering a value inside the range and making sure you have no extra characters that are not numbers. On the majority of browsers, the zone radius input itself will also be highlighted in red to give you a visual idea that the input is incorrect.

Figure 23 - Invalid zone radius input highlighting

Incident Filters

To narrow down your results further, it is possible to decide which types of crime you wish to include in the danger rating of a zone. The incident filters are as pictured in Figure 24.

By default, all incidents are considered. To turn a filter off, click/tap the toggle switch to the right of each type. A green filter is on, whilst a grey filter means that particular filter is off.

It is also possible to turn all incidents on/off by clicking/tapping the Deselect All button or Select All button.
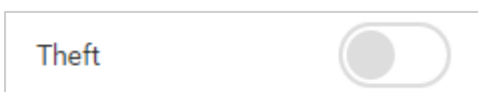An inactive filter looks like the following:

Figure 25 - Inactive filter

Figure 24 - Incident filters

Day/Night Filter

Another filter option is to choose whether you want incidents that occurred in the daytime, night-time or both to be considered. For instance, to consider only incidents that occurred during the day, slide the slider to the left.

The symbols below the slider correspond to the time to be considered. The key is below:

Figure 26 - Day/Night filter

☼   Consider only daytime incidents

◐   Consider both daytime and night-time incidents

☾   Consider only night-time incidents
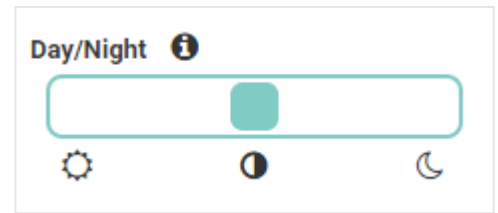
Reset Button

To revert back to the default settings, click the Reset Settings button as pictured in Figure 27. This will also override previously saved settings on your device, meaning that refreshing the page will give you the defaults as if it were the first time you have viewed the site.
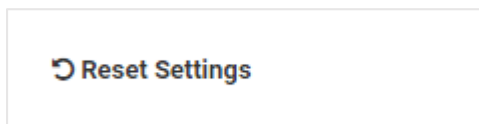

Figure 27 - Reset Settings button

Exiting the system

Once you are done with the system you may navigate away to another webpage using the address bar at the top of the browser, or by closing the tab with the Close Tab button shown as red in the figure below. Note that this button is browser specific and may appear different on different browsers.
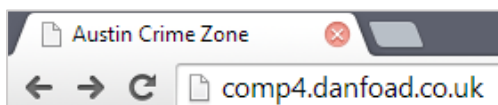

Figure 28 - Close Tab button