• NodaTime, version number 1.3.10, which is licensed under the Apache license, version number 2.0. The license can be downloaded from http://www.apache.org/licenses/LICENSE-2.0. The source code for this software is available from http://nodatime.org/.

• Chromium Embedded Framework, version 3, which is licensed under the New BSD License. The license can be downloaded from http://opensource.org/licenses/BSD-3-Clause. The source code for this software is available from http://code.google.com/p/chromiumembedded/downloads/list.

• Xilium.CefGlue, version 3, which is licensed under the MIT License (with portions licensed under the New BSD License). The licenses can be downloaded from http://opensource.org/licenses/MIT and http://opensource.org/licenses/BSD-3-Clause. The source code for this software is available from http://xilium.bitbucket.org/cefglue/.

• D3 Data Driven Documentation, version 3.4.1, which is licensed under the New BSD License. The license can be downloaded from https://github.com/mbostock/d3/blob/master/LICENSE. The source code for this software is available from http://d3js.org/.

• OpenLayers, version 2.12, which is licensed under the Modified BSD License. The license can be downloaded from http://svn.openlayers.org/trunk/openlayers/license.txt. The source code for this software is available from http://trac.osgeo.org/openlayers/browser.

• OpenLayers, version 3, which is licensed under the BSD 2-Clause Licence. The license can be downloaded from https://github.com/openlayers/ol3/blob/master/LICENSE.md. The source code for this software is available from https://github.com/openlayers/ol3.

• Proj4js, version 1+, which is licensed under the Apache License, Version 2, January 2004. The license can be downloaded from http://www.apache.org/licenses/LICENSE-2.0.html. The source code for this software is available from http://trac.osgeo.org/proj4js/.

• requireJS, version 2.1.2, which is licensed under the MIT License or the New BSD License. The license can be downloaded from https://github.com/jrburke/requirejs/blob/master/LICENSE. The source code for this software is available from http://requirejs.org/.

• Apache Cordova, version 4.2.0, which is licensed under the Apache License, Version 2, January 2004. The license can be downloaded from http://www.apache.org/licenses/LICENSE-2.0.html. The source code for this software is available from http://phonegap.com/download/.

July 26, 2018
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ConfirmConnect® is the ‘in the field’ offering for Confirm. It provides the ability to perform ‘in the field’ tasks quickly and easily.

This documentation will take Administrators through the requirements to install and configure the web server and Confirm host aspects of ConfirmConnect®. It will also provide users basic information required to install and use ConfirmConnect.

In this section

User Guide 6
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User Guide

The User Guide section will help users to both Install and get started with using ConfirmConnect®.

How to Install and Sign In to ConfirmConnect

All details required for URL's, QR codes and login details will be provided by your Confirm Administrator.

How do I install for the first time?

Android and iOS

ConfirmConnect can be installed onto devices via the iTunes App Store or Google Play Store by searching for ConfirmConnect in the relevant store.

Windows

ConfirmConnect can be installed to a Windows 7 and above devices/desktops by performing the following steps:

1. Download and install the Microsoft Visual C++ 2010 Redistributable
2. Download the ConfirmConnect.zip file from the supplied URL
3. Extract the Contents of the Zip file to a folder of your choice
4. Double click the ConfirmConnect.exe contained within your chosen folder.

How do I Sign In?

Tap on the ConfirmConnect icon to launch the application which will then present you with a Sign In screen.
• **URL** Enter the ConfirmConnect url.
• **username** and **password** Enter your Confirm user details. Not the Action Officer.
• **tenant** Enter the Confirm database Tenant name.

  **Note:** Tenant was historically referred to as database profile.

---

**Sign In when Task Redirect has been enabled**

Confirm allows tasks to be temporarily assigned to another officer should you be absent from work for a period of time. When signing back in you may be greeted with the message shown below:
• **Remove task redirect** will turn off task redirect and continue signing in as normal. A contact number may be shown for the Officer currently assigned to your tasks allowing you to contact them if needed.

• **Sign out** return to the sign in screen leaving the task redirection enabled for the officer specified.

**How do I upgrade?**

**Upgrading to v3.10.0 from any earlier version**

Follow the instructions below for your chosen platform:

1. **Android**
   • Install from the Google Play Store. Either browse the store or use the Android QR Code from the supplied URL.

2. **Windows**
   • Ensure that you complete any outstanding transfers, sign out and close ConfirmConnect.
   • Use the QR code from the supplied URL to download the ConfirmConnect.zip file.
   • Replace the contents of the previous install with the contents of this zip file.

3. **iOS**
   Versions pre-v3.10.0 are not compatible with the iTunes App Store release of ConfirmConnect. Follow the steps below:
   • Go to Menu > About and make a note of the **Installation ID**, pass the installation ID to your Confirm administrator.
   • Ensure that you complete any outstanding transfers and sign out.
   • Browse the iTunes store for ConfirmConnect and install.
     **Note:** This will install a second copy of ConfirmConnect on your device.

   • Remove the old version of ConfirmConnect.
Note: Uninstalling ConfirmConnect should only ever be done if advised to do so by Pitney Bowes as it can cause a device licence to be made redundant in Confirm.

Upgrading from v3.10.0 and above

Upgrading from version 3.10.0 to any later versions will be driven by the web service, unless otherwise specified. Once the web service has been updated, devices will react in one of the following ways:

ConfirmConnect will notify you once your server has been upgraded, follow the steps below:

1. When a user is already logged in.
   - A warning message will appear on the transfer screen indicating an update is available.
   - Complete any outstanding transfers and sign out.
   - Refer to "When a user is signed out" below.

2. When a user is signed out.
   - On the sign in screen, when you tap away from the URL field or when the sign in button is pressed a version check will occur and ConfirmConnect will be updated to the same version as the web service if required.
   - Once the update completes, the sign in screen will be displayed again with an updated version number displayed below the sign in button.
   - Sign in once more to continue working.

Menu and Refresh

This section covers the Menu and the Refresh buttons.

Menu

The Menu button will show a list of available actions and will vary depending on which modules your User has been granted. It also displays the number of unread Risks identified for the Tasks contained on your task list.
Risks

The count displays the number of unread Risks.
Tapping on this option will display a list, alphabetically ordered, of all the Risks associated with the Tasks on your task list.
Once you have viewed a Risk, the number will be updated.

Start of Day / End of Day

(Requires **Cost Capture** on page 36)

- **Start of Day** is used to set the Gang members and which Plant items are required for the day’s work.
- **End of Day** is used to at the end of the working day, to track travel time back to the depot.

**Note:** End of day replaces Start of Day in the menu once the first Task of the day has been started.

**Note:** A warning icon will appear on the End of Day option if a Task needs to be completed / paused before the End of Day information can be logged.

New SW Inspection

Create a new unattributable Street Works Inspection (requires ConfirmConnect® module 7040).

**Note:** This option will also be available if you have access to the Enquiry or Condition Survey modules but will be limited to Defective Apparatus category types.

New Enquiry

Create a new Enquiry (requires ConfirmConnect® module 7000).
New Defect Create a new Defect (requires either Enquiry or Condition Survey ConfirmConnect® modules 7000, 7010).

New Feature Create a new Feature (requires Asset Survey module 7020).

Refresh Lookups Will re-download all lookups applicable to the user. This can be used if lookup information has been changed within the Confirm host software.

Note: When you sign in to ConfirmConnect®, the lookups are downloaded automatically.

Select Routes Allows an Action Officer to assign all unassigned features on an entire Inspection Route to themselves (requires either Condition 7010 or Asset Survey 7020 ConfirmConnect® modules).

Settings / About

Settings
- Text Size: Use the + or - buttons to increase or decrease the font size used by ConfirmConnect®.
- Allow Map Rotation: On by default, turn off to prevent maps from rotating.
- Send application logs: Clicking the button will send any error logs recorded on the device to the ConfirmConnect® web server.

About ConfirmConnect® Displays information pertaining to ConfirmConnect, used for support purposes.

Sign Out Sign out of ConfirmConnect, any outstanding task transfers will be completed first before the sign out.

This can be used to:
- free up module licenses in the Confirm host software.
- sign in as a different user (sharing of devices).
- upgrade to a new version.
- Apply new module access. If you have been granted access to a new ConfirmConnect® module, you will need to sign out and sign in again to receive these changes.

Note: There is no need to sign out of ConfirmConnect® unless the above is required.

Refresh Button

The refresh button will download all tasks associated to the user. This should be used when a fresh list of tasks is required.

Task Redirect

Refreshing your task list, when has been enabled, will present a message indicating the tasks have been redirected to the specified officer.
• **Remove task redirect** will turn off task redirection and download your tasks.
• **Sign out** return to the sign in screen leaving the task redirection enabled for the officer specified.
• Tapping X on the Receive Tasks transfer message will cancel the Receive Task request and remove the task redirect message.

**Note:** When the Task Redirect message is the top most message, tasks below it will not transfer until the message is resolved by using one of the options mentioned above.

**New SW Inspection**

If you need to record a Street Works Inspection but cannot find the works in Confirm using the What's Going On Here on page 39 functionality, you can create an unattributable works by selecting Menu then **New SW Inspection**.

A list of Inspection Categories to choose from will be displayed.

**Filling in a New Street Works Inspection**

**Works**

**Locate**

**Locate / Relocate** on page 46 allows you to specify the location of the Works against which you are logging the Inspection.

**Note:** Once an Inspection has been located, this option will be renamed to Relocate.

**Select Site (required)**

Presents a list of Sites within 100 metres of the located Inspection.

**Note:** This list is only populated once a Locate / Relocate on page 46 action has been performed.

**Note:** This will send a query to the server to get a list of possible Sites. If the Site you need isn’t already in the list and you have no connectivity then
you may need to save the task as a draft and come back to it later once the query has completed.

**Select Promoter**
Choose the promoter who you believe is responsible for the works you are inspecting.

**Inspection**

**Category**
Set to the chosen category when creating the Works and can be changed if required. Changing the Category will also re-validate the specified Outcome or Inadequacy.

**Outcome**
You need to make sure that the outcome selected is consistent with the Inspection Item results that have been recorded. If there is a problem then this will be explained in a warning above the Complete button.

**Inadequacy**
The list of options will vary with the selected outcome. Again, the item selected must match this Inspection Item results.

**Inspection Items**
A list of all applicable Inspection Items will be shown allowing you to mark each one as Pass, Fail or Unseen. The All Acceptable button will set all items as Acceptable.

**Photo**
Camera (left) button - Activates the camera allowing a photo to be linked with the Street Works Inspection.

**Note:** On Windows devices, the Camera button does not launch the device’s camera, it will act as the Folder button instead.

Folder (right) button - Allows the selection of a photo from the device’s gallery.

**Save Draft**
At any time you may save the Inspection and return to your tasks by using this button.

**Complete**
Send the completed Inspection Confirm. This option will be disabled if any of the required fields have not been populated or the Outcome / Inadequacy is inconsistent with the Inspection Item results.

**Delete**
This will remove the inspection if it was raised in error.

**New Enquiry**
To create a new Enquiry select **Menu** then **New Enquiry**.
A list of Enquiry subjects to choose from will be displayed, select the required subject to continue.
Filling in a New Enquiry

The New Enquiry form will be displayed allowing you to enter details of the Enquiry.

**Enquiry Subject**
Can be changed from the default Enquiry Subject chosen when creating the New Enquiry.

*Note:* The **None** button will delete the New Enquiry and return to the Task, Map or Transfer screen (depending on which screen you were on when raising the New Enquiry).

**Locate**

*Locate / Relocate* on page 46 allows you to specify the location of the Enquiry.

*Note:* Once an Enquiry has been located, this option will be renamed to Relocate.

**Select Feature (required)**

Presents a list of Features within range. Please see **Locating Features** for further details.

*Note:* This list is only populated once a Locate action has been performed.

*Note:* This will send a query to the server to get a list of possible features. If the Feature you need isn't already in the list and you have no connectivity then you may need to save the task as a draft and come back to it later once the transfer has completed.

**Select Status**

Drop down list of available Enquiry Statuses. You only need to specify a status if you know that the default status for the Subject is not the one you want.

**add notes...**
Free text field to enter information on the Enquiry.

---

*Note:* The **None** button will cancel the New Enquiry and return to the previous screen.
Photo Camera (left) button - Activates the camera allowing a photo to be linked with the Enquiry.

**Note:** On Windows devices, the Camera button does not launch the device's camera, it will act as the Folder button instead.

Folder (right) button - Allows the selection of a photo from the device's gallery.

Assign To Assign this Enquiry to your chosen user.

Attributes Tapping the Add Attributes button will display a list of All Operational Attribute Types.

- Attributes specified against the Enquiry Subject will be automatically added to the Enquiry.
- Mandatory Attributes will be shown with an *.
- The value will be shown in yellow if the default value must be changed.

**Note:** You will not be able to complete the Enquiry until the default value has been changed.

- Attributes may only be deleted if they have been added to the Enquiry, those which are linked to the Enquiry Subject may not be deleted.

Offences Create one or more Offences against the Enquiry.

Select the appropriate Offence Type and enter the details. Fields highlighted in Yellow are mandatory. The "set offender email..." field must be in a valid email format, e.g. examplename@exampleemail.com

Save Draft At any time you may save the Enquiry and return to your tasks by using this button.

Send Send the completed Enquiry to Confirm. This option will be disabled if any of the required fields have not been populated.

New Defect To create a new defect select **Menu** then **New Defect**.

A list of Defect Types to choose from will be displayed, select the required Defect Type to continue.
**Note:** External Defect Types are displayed with (E) appended to the Defect Type name.

A second list may appear allowing you to select one of the available SOR groups. Tapping the None button will not include any SOR Groups.

**Note:** The SOR Group list will only present itself if the Defect Type you selected contains one or more SOR Groups. Additional SOR Groups/Items may be added later. Also, should you change the defect type at a later time, this action will not display the SOR Group list and you will need to change the SOR Items as required.

**Recent Defects**

Once you have created other defects, the Recent Defects tab will be populated with up to 20 of these previous defects. This allows you to create multiple similar defects without needing to manually populate all of the defects details.

**Filling in a New Defect**

The New Defect form will be displayed allowing you to enter details of the Defect.

**Locate**

*Locate* top right of the summary map, allows you to specify the location of the Defect. This can be drawn as a point, line or polygon.

**Note:** Once a Defect has been located, this option will be renamed to Relocate.
Defect Type

Can be changed from the default Defect Type chosen when creating the New Defect.

Select Feature (required)

Presents a list of Features within range. Please see *Locating Features* for further details.

The selected Feature will be displayed on the New Defect Map along with the Defect task.

*Note:* This list is only populated once a Locate action has been performed.

*Note:* This will send a query to the server to get a list of possible features. If the Feature you need isn't already in the list and you have no connectivity then you may need to save the task as a draft and come back to it later once the transfer has completed.

add location... add description...

Free text fields, enter location and description details.

Attributes

Tapping the Add Attributes button will display a list of All Operational Attribute Types.

- Attributes specified against the Defect Type will be automatically added to the Defect.
- Mandatory Attributes will be shown with an *.
- The value will be shown in yellow if the default value must be changed.

*Note:* You will not be able to send the Defect until this value has been changed.

- Attributes may only be deleted if they have been added to the Defect, those which are linked to the Defect Type may not be deleted.

Select Priority

Sets the priority for the Defect and subsequent Job, which is raised when uploaded and entered into Confirm.

Defaults from Confirm and can be changed as required.

Photo

Camera (left) button - Activates the camera allowing a photo to be taken and linked with the Defect.

*Note:* On Windows devices, the Camera button does not launch the devices camera, it will act as the Folder button instead.

Folder (right) button - Allows the selection of a photo from the device's gallery.

Assign To

This will assign the Job raised for this Defect to the chosen Action Officer. Leave this blank to assign the Job to yourself.

Select Contract

Sets the Contract on the Job raised for this Defect.

Select Cost Code

Sets the Cost Code on the Job raised for this Defect. You do not need to specify this if you want the default Feature / Overriding Cost Code to be used.

SOR Items

Add any required SOR items or Groups to the Defect.

The list of available Items or Groups are filtered based on the chosen *Feature*, *Priority* and *Contract*.
If the Defect contains existing SOR Items, changing the Feature, Priority or Contract can cause these items to be invalid for the defect. A message will indicate they are invalid and these items will need to be discarded prior to sending the defect or parent task.

**Fix Now**
(requires ConfirmConnect® Job module 7030)
Closes and Sends the Defect as well as immediately creating a Job Task based on the Defect details. After the Defect is closed the new Job task will be opened automatically. See [Job tasks](#) for more details on "Fix Now".

**Send**
Sends the completed Defect to Confirm. This option will be disabled if any of the required fields have not been populated.

**New Feature**
To create a new Feature select **Menu** then **New Feature**.
A list of Feature Types to choose from will be displayed, select the required Feature Type to continue.

**Recent Features**
Once you have created or edited other Features, the Recent Features tab will be populated with up to 20 of these previous Features. This allows you to create multiple similar Features without needing to manually populate all of the Feature details.

**Filling in a New Feature**
The New Feature form will be displayed allowing you to enter details of the Feature.

**Feature Type**
Can be changed from the initial Feature Type chosen, but only to another Feature Type in the same Feature Group.

**Note:** The **None** button will delete the New Feature and return to the Task, Map or Transfer screen (depending on which screen you were on when raising the New Feature).

**Locate**
Locate allows you to specify the location and create a digitization of the Feature. From Confirm v14.00 this can be a Point, Line or Polygon.

**Note:** Once a Feature has been located, this option will be renamed to Relocate.

**Select Site (required)**
Select Site (required) presents a list of Sites within 100 metres of the located Feature.

**Note:** This list is only populated once a Locate action has been performed.

**Note:** This will send a query to the server to get a list of possible Sites. If the Site you need isn’t already in the list and you have no connectivity then
you may need to save the task as a draft and come back to it later once the transfer has completed.

**Photo**

Camera (left) button - Activates the camera allowing a photo to be taken and linked with the Feature.

**Note:** On Windows devices, the Camera button does not launch the device's camera, it will act as the Folder button instead.

Folder (right) button - Allows the selection of a photo from the device's gallery.

All other details the same as when completing an Asset / Condition Survey on an existing Feature

**Save Draft**

At any time you may save the Feature and return to your tasks by using this button.

**Complete**

Send the completed Feature to Confirm. This option will be disabled if any of the required fields have not been populated.

**List**

The Task list view displays a list of all tasks currently assigned to you and is the first screen you see when you login for the first time.
### Identifying Task types

All task types are uniquely displayed to help distinguish between the different types. They are identified as follows:

<table>
<thead>
<tr>
<th>Task Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streetlight Route Survey</td>
<td>133 Features on Route, Route Survey Street Lights</td>
</tr>
<tr>
<td>ABBOTS CLOSE, MARGAM, PORT TALBOT</td>
<td>23300028/100000 O/S number 9, Mandatory - Investigate repairs (2000229) Job being Monitored 27 Nov 2014 15:53</td>
</tr>
<tr>
<td>BEECHWOOD ROAD, MARGAM, PORT TALBOT</td>
<td>Whole Site Feature [800000], Normal Asset Survey Route</td>
</tr>
<tr>
<td>BERTHA ROAD, MARGAM, PORT TALBOT</td>
<td>O/S no 60 (2000752) Abandoned Vehicles ENQ - Request Received 12 Dec 2014 10:59</td>
</tr>
<tr>
<td>BERTHA ROAD, MARGAM, PORT TALBOT</td>
<td>wexczc (2000756) Abandoned Vehicles JO - Job Raised 27 May 2015 15:21</td>
</tr>
</tbody>
</table>
Task Progress and Priority
In addition to the icons identifying the task type they also indicate the priority and current progress of the task by changing the colour of the icon and also by adding a symbol. Possible values are:

- **urgent**
- **normal**
- **draft**
- **done**

Filter Tasks...
Filters the tasks shown in the task List on page 19 and the Map on page 36 using both the text contained in the task, the task type, Feature Group, Feature Type and any retrieved What’s Going on here tasks.
For example:
- Using the filter of "Job" will show all Job tasks and any other task type containing the text "Job".
• Using the filter of "Job 200" will filter the list so that only the Job (numbered 200) and any task containing the text of both "Job" AND "200" will remain in the list.

Sort

Allows you to sort:

• Alphabetically - By Site name.
• By Due Date - The Due date (target completion) will be shown. Order will be tasks without dates and then oldest to newest.
• By Route Order - Tasks which have no route order will be shown at the top of the list, ordered by due date. Survey tasks are ordered by route name and then order number.
• By Schedule Date - The Estimated Start Date will shown. Order will be the Estimated Start Date for Jobs. Other tasks and Jobs without an Estimated Start Date will be sorted by Due date.

Street Works

Tasks with the Street Works icon relate to Programmed Inspection. Inspections are only shown if they are due in the next 7 days.

There are two general types of inspections, Trench based inspections (e.g. Category C) and whole Works inspections (e.g. category A).

Trenches

These are displayed for trench based inspections only. The top trench is the "primary" trench for the inspection and must have a result recorded against it. Recording results against other trenches is optional.

Inspection History

This shows previous inspections of any kind that have taken place for that works.

Trench

With Trench based inspections the Outcome, Inadequacy and inspection items are listed against each individual trench.

Works

With whole Works based inspections the Outcome, Inadequacy and inspection items are listed on the main screen.

Outcome

You need to make sure that the outcome selected is consistent with the Inspection Item results that have been recorded. If there is a problem then this will be explained in a warning above the Complete button.

Inadequacy

The list of options will vary with the selected outcome. Again, the item selected must match this Inspection Item results.

Photo

Camera (left) button - Activates the camera allowing a photo to be linked with the Inspection.

Note: On Windows devices, the Camera button does not launch the device’s camera, it will act as the Folder button instead.

Folder (right) button - Allows the selection of a photo from the device’s album.

Note: If you also have an Offence on this Inspection, photos taken on the Inspection will also be linked to the Offence.
Offence
Create one or more Offences against the Inspection.
Select the appropriate Offence Type and enter the details. Fields highlighted in Yellow are mandatory. The "set offender email..." field must be in a valid email format, e.g. examplename@exampleemail.com.

Follow Up From and To dates
The Follow Up From and To dates will take their default values from Confirm.
Changing the From date will retain the Inspection window and the To date will move accordingly.
Changing the To date allows you to increase duration of the Inspection window and the From date field will not change.

Save Draft
At any time you may save the Inspection and return to your tasks by using this button.

Complete
Send the completed Inspection Confirm. This option will be disabled if any of the required fields have not been populated or the Outcome / Inadequacy is inconsistent with the Inspection Item results. For Trench based inspection, the complete button will remain disabled until at least one Trench has been inspected.

Enquiries
Selecting an Enquiry from the task list will launch the Enquiry form which gives you the Enquiry details, status history, any commitments, customer details and any Linked documents. If the Enquiry has a Feature associated with it then any Defects not yet actioned for that Feature will be shown.
You will be able to perform the following: -

Relocate
If the Enquiry is in the wrong location you can use the Relocate button (located in the top right corner of the map) to locate it in the correct position.

Update Enquiry
Enquiry Subject
Change the Subject as required. Note the following: -
• Changing the Subject will automatically update the Service accordingly.
• If the Enquiry is linked to a defect, you may only change the subject type to one which allows defects to be created.
• Changing the Subject to one which doesn't allow creation of defects will remove the defect section from the Enquiry form.

Select New Status
Update the status of the Enquiry. You don't have to set this if the status hasn't changed

add notes...
Free text field to enter information on the status change.
Camera (left) button - Activates the camera allowing a photo to be linked with the Enquiry.

**Note:** On Windows devices, the Camera button does not launch the device's camera, it will act as the Folder button instead.

Folder (right) button - Allows the selection of a photo from the device's album.

**Note:** If you also have an Offence on this Enquiry, photos taken on the Enquiry will also be linked to the Offence.

Assign this Enquiry to your chosen Action Officer. You do not need to set this field to keep the Enquiry assigned to you.

Update any existing Attributes. You may not add further attributes.

### Select Feature

The rules for selecting or changing the Feature are as follows:

- Defaults to the Feature currently linked to the Enquiry, and the Defects list will show all Defects to be actioned for that Feature. When "Select Feature" is displayed the Enquiry is not linked to a Feature and Defects list will be disabled.
- If the Enquiry is linked to an existing Defect it will not be possible to change the Feature (the ... icon will not be visible).
- Changing the Feature will cause the Defect list to display those Defects applicable to the selected Feature.

**Note:** The Feature on the Enquiry will only be updated if the Enquiry is sent with a link to a new Defect.

### Defects

Displays existing and new Defects for the Enquiry Feature.

- If no Defects exist against the Enquiry Feature, the first new Defect raised will be automatically linked to the Enquiry.
- Subsequent new Defects can be raised on the Enquiry but they will not be linked. You may change which Defect is linked to the Enquiry prior to uploading to Confirm assuming no Defects were linked prior to downloading the Enquiry.
- An Enquiry may only be linked to a single Defect.
• If the Enquiry Feature already contains a linked Defect, it will not be possible to change the linked Defect.
• It is possible to supersede the linked Defect, in this scenario the superseded defect will be linked to the Enquiry.
• The Defect linked to the Enquiry will be positioned at the top of the list and displays a chain icon.
• For more information see Superseding Defects and New Defect.

Offences
Create one or more Offences against the Enquiry.
Select the appropriate Offence Type and enter the details. Fields highlighted in Yellow are mandatory. The "set offender email..." field must be in a valid email format, e.g. examplename@exampleemail.com.

Save Draft
At any time you may save the Enquiry and return to your tasks by using this button.

Send
Send the Enquiry to Confirm. This option will be disabled until changes have been made.

Job tasks
Opening a Job task will present you a Job screen displaying all the details of that Job and if applicable Street Works details including Permit Status.

Feature Attributes  Any Attributes applicable to the Feature will be shown in this list.
You are able to edit these Attributes but it is not possible to delete them or add any further Attributes.

Feature Conditions  Any Conditions applicable to the Feature will be shown in this list.
You are able to edit these Conditions but it is not possible to delete them or add any further Conditions.

Attributes  Any Attributes applicable to the Job will be shown in this list. You will also be able to add more Attributes and delete those which you have added but you are not able to delete attributes which were downloaded with the Job.

Photo  Camera (left) button - Activates the camera allowing a photo to be linked with the Enquiry.
Note: On Windows devices, the Camera button does not launch the devices camera, it will act as the Folder button instead.

Folder (right) button - Allows the selection of a photo from the device's album.
Note: If you also have an Offence on this Enquiry, photos taken on the Enquiry will also be linked to the Offence.
SOR Items Any SOR Items applicable to the Job will be shown in this list. You will also be able to add more SOR Items and amend or delete existing Items.

Jobs raised via Fix Now

Where the Job has been raised via the "Fix Now" button on a new Defect:

- The title will display "TBA" where the job number would normally be displayed.
- Feature Conditions and Attributes will not be available.
- Linked Documents will not available

Note: If the Officer is the Officer for a Work Crew the Job will have already been allocated to that Work Crew

Note: If Cost Capture on page 36 is enabled for both Jobs and Surveys and you create a Defect from the Survey and use Fix Now then the Survey will be automatically paused while the Job is worked on. In this scenario, when you start the Job you will be prompted to enter the time spent so far on the Survey as it is assumed there is no Travel / Break time between pausing the Survey and starting the Job

Status Buttons

There are four Status buttons at the bottom of the Job screen. When there are more than one Statuses associated with a button, a pop up screen will allow you to choose the appropriate status. Tapping on a status will immediately send the chosen Status update.

Note: Tapping a button except for the "Other" button when only one status is associated with it, will immediately send that Status and a pop up will not be displayed. A pop up will always be displayed for the "Other" button

Note: Ensure you enter any notes required in the notes field before tapping the chosen status button.

Start / Pause / Resume

The Start button will send a start status update and will change to "Pause" after it has been tapped. The Job screen will remain open and the Job remains on the device. A warning to take a before photo is displayed until a photo is taken or the Start button is first tapped.

Pause is displayed if the Job is already in progress and tapping this button will show statuses that stop the Job from being in progress but leave the Job on your device. Once this button has been tapped it’s text will change to Resume.

Resume behaves in the same way as Start except that the Actual Start Date of the Job will not be changed.

If any Attributes are set to 'On Start' on the 'Mandatory on ConfirmConnect® Jobs' setting on the Operational Attribute Type screen in Confirm Client then these will be blanked when the Job is first downloaded and you will be prompted to set a value before the Job is first Started or Resumed. If the setting is 'On Start and Resume' then these will also be blanked whenever the Job is Started or Resumed, e.g. after a Pause.

If Cost Capture on page 36 is enabled for Travel / Breaks then clicking Start / Resume will prompt you to record what you were doing up to the point that you started / resumed work on this Job. Clicking Pause will prompt you to enter the costs incurred to date on the Job

Note: You cannot start / resume one Job if another Task has already been started for Cost Capture
Other

The Other button is linked to those Job Statuses which will leave the Job on the device and assigned to you but will not change the In Progress state of the Job. The Job screen will remain open when a status update is sent using this button.

Remove

The Remove button is linked to those Job Statuses that are not Completing Statuses but will remove the Job from the device. The Job screen is closed and the Job is removed from the device after a Remove status has been sent.

If Cost Capture on page 36 is enabled and you have started the Job you will be prompted to enter the costs incurred to date on the Job. No costs are recorded if the Job is removed without being started.

Complete

The Complete button is linked to the Job Complete Statuses and is disabled until the Job has been Started (a start status has been sent). The Job screen is closed and the Job is removed from the device after a Complete status has been sent. A warning to take an after photo is displayed once the Start Status has been sent. This is displayed until a photo is taken or the Job has been Completed.

If Cost Capture on page 36 is enabled you will be prompted to enter the costs incurred on the Job.

Job Inspection tasks

Opening a Job Inspection task will present you a Job screen displaying all the details of that Job.

Feature Attributes

Any Attributes applicable to the Feature will be shown in this list. You are able to edit these Attributes but it is not possible to delete them or add any further Attributes.

Feature Conditions

Any Conditions applicable to the Feature will be shown in this list. You are able to edit these Conditions but it is not possible to delete them or add any further Conditions.

Attributes

Any Attributes applicable to the Job will be shown in this list. You will also be able to add more Attributes and delete those which you have added but you are not able to delete attributes which were downloaded with the Job.

Status

Update the Status of the Job. You don't have to set this if the status hasn't changed.

Reassign To

Assign this Job to your chosen Action Officer. You do not need to set this field to keep the Job assigned to you.

add notes...

Free text field to enter information on the status change.

SOR Items

Any SOR Items applicable to the Job will be shown in this list. You will also be able to add more SOR Items and amend or delete existing Items but only on Jobs that are not linked to an Order.
**Save Draft**
At any time you may save the Job Inspection and return to your tasks by using this button.

**Send**
Sends the updated Job to Confirm. This option will be disabled if no changes have been made. The Job will remain on the Task List if the update leaves the Job Inspection assigned to you and the Job still requires inspecting.

**Job Monitoring tasks**
Opening a Job Monitoring task will present you a Job screen displaying all the details of that Job.

| Outstanding Payment Requests | The Payment Request Reference, Request Header Notes and Request Job Notes are displayed for all Payment Requests that are not included on a committed Payment Batch. |
| Feature Attributes            | Any Attributes applicable to the Feature will be shown in this list. You are able to edit these Attributes but it is not possible to delete them or add any further Attributes. |
| Feature Conditions           | Any Conditions applicable to the Feature will be shown in this list. You are able to edit these Conditions but it is not possible to delete them or add any further Conditions. |
| Attributes                  | Any Attributes applicable to the Job will be shown in this list. You will also be able to add more Attributes and delete those which you have added but you are not able to delete attributes which were downloaded with the Job. |
| SOR Items                   | Any SOR Items applicable to the Job will be shown in this list but are not editable. The Quantity displayed in this list is the Completed Quantity, which is the total of all committed Payments plus the total of all outstanding Payment Requests for the Item. |
| Failures                    | Failures can be added to the Monitoring Task |

**Save Draft**
At any time you may save the Monitoring Job and return to your tasks by using this button.

**Send**
Sends the completed Monitoring task to Confirm.

**Asset / Condition Survey**
Selecting an Asset / Condition Survey task list will launch the Feature form. The list of options available then depends on whether the task is an Asset or Condition Survey:
Asset Survey

Relocate  Allows you to relocate the Feature. You are also able to change the overall shape of the Feature.

**Note:** The ability to change the shape of a Line or Polygon Feature is only available with Confirm v14.00 or above. Prior to this version all Features will appear as points.

Feature Type  You can change this to another Feature Type that is within the same Feature Group as the current Feature Type

Select Classification  You can change the Feature Classification as required.

**Note:** Changing the Classification will not alter the priority on any existing defects on this Feature.

Attributes  Mandatory attributes are flagged with a "**" and will have a yellow background if set to a default value which must be changed.

Condition Survey

**Note:** All of the Condition Survey fields are available for Asset Survey tasks if you have the Condition Survey module

Defects  General Defects against the Feature can be logged, which will not be linked to any particular Observation Type.

Existing Defects against the Feature are displayed and can be **Superseded** if required.

Conditions  The previous condition from the last inspection will be shown. Make sure you check that all of the Conditions are valid before completing the task

Condition linked Defects  A Defects option will be available under each Observation Type to which Defect Types have been linked.

Existing Defects against the Observation Type are displayed and can be **Superseded** if required.

Any Defects raised as part of a Survey task, by default, will only be sent to Confirm when the whole task is completed.

Save Draft

At any time you may save the Survey and return to your tasks by using this button.

Complete

Send the completed Survey to Confirm. This option will be disabled if any of the required fields have not been populated.
Fix Now on Defects
Closes and Sends Defects as well as immediately creating a Job Task based on the Defect details. After the Defect is closed the new Job task will be opened automatically. See Job tasks for more details on "Fix Now". Also available for Superseded Defects which are not linked to an existing Job.

Send Now on Defects
The Send Now button on Defects raised from an Inspection Survey can be used to immediately send the Defect back to the office so it can be actioned. This will not send the Survey back to Confirm. Using the Save Draft button will save the Defect against the Survey and will be sent when the Survey has been Completed. Also available for Superseded Defects.

Note: Using the Send Now button on the Defect will remove the Defect from the device. An active connection is required for the Defect to be sent immediately.

Feature Monitoring
Selecting a Feature Monitoring task from the task list will launch the Feature form.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relocate</td>
<td>Allows you to relocate the Feature. You are also able to change the overall shape of the Feature. Note: The ability to change the shape of a Line or Polygon Feature is only available with Confirm v14.00 or above. Prior to this version all Features will appear as points.</td>
</tr>
<tr>
<td>Defects</td>
<td>General Defects against the Feature can be logged, which will not be linked to any particular Observation Type. Existing Defects against the Feature are displayed and can be Superseded if required.</td>
</tr>
<tr>
<td>Conditions</td>
<td>The previous condition from the last inspection will be shown. Make sure you check that all of the Conditions are valid before completing the task</td>
</tr>
<tr>
<td>Condition linked Defects</td>
<td>A Defects option will be available under each Observation Type to which Defect Types have been linked. Existing Defects against the Observation Type are displayed and can be Superseded if required.</td>
</tr>
</tbody>
</table>

Any Defects raised as part of a Feature Monitoring task, by default, will only be sent to Confirm when the whole task is completed.

Save Draft
At any time you may save the Survey and return to your tasks by using this button.

Complete
Send the completed Survey to Confirm. This option will be disabled if any of the required fields have not been populated.
Fix Now on Defects
Closes and Sends Defects as well as immediately creating a Job Task based on the Defect details. After the Defect is closed the new Job task will be opened automatically. See Job tasks for more details on “Fix Now”. Also available for Superseded Defects which are not linked to an existing Job.

Send Now on Defects
The Send Now button on Defects raised from an Inspection Survey can be used to immediately send the Defect back to the office so it can be actioned. This will not send the Survey back to Confirm. Using the Save Draft button will save the Defect against the Survey and will be sent when the Survey has been Completed. Also available for Superseded Defects.

Note: Using the Send Now button on the Defect will remove the Defect from the device. An active connection is required for the Defect to be sent immediately.

Route Survey
Selecting a Route Survey from the task list will launch the Route Survey form which will display the details of the Inspection Route including any defects you may have already logged.

You will be able to quickly survey the entire route and raise “Fast” defects on any of the Features on the Route.

Start
Using the Start button will launch the Route Survey Drive screen that, by default, will show all of the features contained on the route and your current location (requires GPS to be enabled). See below for further details on the Route Survey Drive screen.

Defects
Displays a list of all existing and newly created Defects.

Newly created defects, those raised via the Route Drive screen, can be edited by tapping on the New Defect on page 15 in this list.

Existing defects may not be deleted but they can be reviewed and superseded by tapping on them in this list.

Note: You may change the feature, on a new defect, to a feature which exists on the route. You may not change the feature on an existing defect.

Emergency Defects
Defects raised on a Route Survey can be sent immediately using the Send Now button, which is enabled when all the required fields on the defect are populated.

If you do not need to send defects immediately you can use the Save Draft option which will leave the defect on the survey until the survey is completed.

Fix Now
(requires ConfirmConnect® Job module 7030)
Closes and Sends the Defect as well as immediately creating a Job Task based on the Defect details. After the Defect is closed the new Job task will be opened automatically. See Job tasks for more details on "Fix Now".

**Route Survey Drive Screen**

The Route Survey Drive screen will allow you to raise Defects against a feature on the route. It will also track your GPS location keeping you in the center of the map.

You can raise defects in two ways:

1. **Raise a defect on a feature**. Typically used for point features like streetlights and trees where the location of the defect can be accurately determined from the feature location.
ConfirmConnect®

A feature which does not contain existing defects.

A feature containing existing defects.
Tap to display the feature and a list of all existing defects.
• Tap the feature from the list to create a new defect.
• Tap any defect from the list to review and supersede that defect.

A feature containing a new defect.
To edit the details of a new defect you must stop the driven survey and tap on the draft defect in the list of defects.

2. **Raise a defect at a point on the map.** Typically used for features such as road sections where the defect needs to be located within the bounds of the feature. Tap anywhere on the map and tap on the required fast defect type to create the defect at that location.

**Note:** Panning, pinch zoom or raising a defect will stop the GPS location from being tracked. You can restart the GPS tracking by tapping on the GPS button on the left of the screen.

**High Speed Surveys and Drop Marker**
With high speed surveys it is very difficult to provide the details of a defect when travelling at speed. The drop marker button, shown above, allows you to place a marker on the map, at your current GPS location.

This allows you to pull over at a later time and fill in the details of the defect by tapping on the marker.

**Note:** The marker may or may not display the purple dot of the GPS breadcrumb, this simply depends when the marker was placed.

**Route Survey Breadcrumb**
Route Survey Drive screen will display a breadcrumb trail of GPS points as a series of purple dots which fade to a lighter shade over time. This allows you to see where you have previously been. ConfirmConnect® will begin recording the breadcrumb trail once you have signed in.

Signing out of ConfirmConnect® will remove any existing breadcrumb trails.

A maximum of 1000 points will be recorded, once you reach 1001 the oldest point will be removed from the Route Survey Drive screen.
Save Draft
At any time you may save the Route Survey and return to your tasks by using this button.

Complete
Complete the Route Survey. This option will complete the route and create an inspection batch in the host software setting the last inspection date to today's date for every feature, it will also submit all defects you have logged during the survey.

Routine Works

The task list will display any Routine Works that are currently assigned to you, which fall within the date range defined by the 'Show Tasks in Advance' setting found on the ConfirmConnect® Settings screen in Confirm Client.

Displaying the Site, number of Features and Regime name. The date displayed is the current due date of the earliest Regime Item.

Selecting a Routine Works from the task list will launch the form which displays the details of each Regime Item applicable to the Feature/s and giving you 2 options to choose from for each Item.

Note: The Notes field is only available for each regime item when it is either skipped or completed.
### Regime Items

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Area (sq m)</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand Weed - Heather Bed (G0000450)</td>
<td>60</td>
<td><strong>Completed</strong></td>
</tr>
<tr>
<td>East General (GEN1)</td>
<td>24 Apr 2017 00:00</td>
<td><strong>Skip this Occasion</strong></td>
</tr>
<tr>
<td>Clear Leaves - Heather Bed (G0000397)</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>East General (GEN1)</td>
<td>06 Nov 2017 00:00</td>
<td><strong>Undo</strong></td>
</tr>
<tr>
<td>Prune - Heather Bed (G0000480)</td>
<td>60</td>
<td><strong>Completed</strong></td>
</tr>
<tr>
<td>East General (GEN1)</td>
<td>26 Mar 2018 00:00</td>
<td><strong>Skip this Occasion</strong></td>
</tr>
<tr>
<td>Cult &amp; App 50mm Calcifuge Mulch - Cal...</td>
<td>60</td>
<td><strong>Completed</strong></td>
</tr>
<tr>
<td>East General (GEN1)</td>
<td>26 Mar 2018 00:00</td>
<td><strong>Skip this Occasion</strong></td>
</tr>
</tbody>
</table>

**Skip this Occasion**
When Skip has been selected: The Completed checkbox and its label will be hidden

**Note:** Next to the message there will be a link with the words: Undo: When Undo is selected the Item displayed will revert to having the Completed checkbox and Skip link.

**Complete**
Use to complete the work.
Complete will be defaulted to selected on Regime Items, which are due within the Routine Works earliest Due Date Tolerance.

**Add Routine Occasion**
The 'Add Routine Occasion' option is available on the main Connect menu, to add any Routine Works that is not currently shown in the Task List (only available if there are any Routine Maintenance tasks on the device).
Cost Capture

This section describes the workflow changes to Tasks when Cost Capture is enabled.

Starting the Day the Menu option "Start of Day" will be available and allows you to define your Gang members and Plant items to be used for the day.

The Task status buttons will now allow you to record productive and non-productive time as follows:

- **Start and Resume** allows recording of non-productive time prior to starting or resuming work against the current Task, for example: Travel time and going on a break.
- **Pause, Remove and Complete** allows recording of productive time against the current Task, for example: Actual time spent by the gang with plant and materials prior to going on a break or completing work.

Removing a Gang Member

Should you have the need to remove a Gang member from your team during a Task, it is recommended to pause the Task and leave them on the list, this ensures their time is logged. You then immediately Resume the Task and remove them from the Gang at this stage.

For example: John, Louise and Steve are working on a Job, Steve needs to leave. John pauses the Job but leaves Steve in the list of Gang members, this ensures Steve’s time working on the Job is captured. John then resumes the Job and removes Steve from the list, this indicates that Steve has now left so that no further time capturing occurs for Steve. Time capturing will continue for both John and Louise.

Gang members may return (added) at a later stage of the work, at which point, the Task would be Paused retaining the current Gang members and then a Resume will be done, at which point the new Gang member is added to the list.

Plant Items

When recording time for plant items you have the option to check or uncheck specific items. Checking the item indicates that it was used during the work. Having an item unchecked indicates that the item is with your Gang but wasn’t used on the Task, so would not suffer any wear and tear.

Ending the Day

Once the first Task has been completed or paused the "Start of Day" option will change to "End of Day", this option allows you to specify non-productive travel time against the last Task being worked on. Adding Materials at this stage could cover things like tipping costs and disposal of unused perishables.

**Note:** You cannot complete the End of Day process if a Task is still in progress. You will need to pause the outstanding Task before you can enter the End of Day details

Map

The Map view displays all tasks currently assigned to you and, the first time you use it, will position itself to show your current location (requires GPS/Wireless functionality) and all of the tasks assigned to you.

Identifying Task types

The Map view will show each task with the same Icons you have seen on the Task list view with some minor differences. These are as follows:

- **Accurate Location**
  
  If the task has coordinates stored in Confirm the icon will display a shadow and a small pin or arrow at its base.
Approximate Location
If the task does not have coordinates stored against it in Confirm, the approximate icon is used to show the position based on its associated site or feature location.

Task Clustering
When you have multiple tasks assigned to you and your map extent is zoomed out far enough, these tasks will be shown as a clustered icon displaying the total number of tasks within that area.
The colour of the cluster icon will match the task, it believes, takes priority. The following list shows the priority order:

- Draft (orange) - one or more incomplete tasks in this cluster has been edited.
• Urgent (red) - one or more incomplete tasks in this cluster is urgent but there are no draft tasks.
• Normal (blue) - there are multiple incomplete tasks in this cluster and none of them are urgent or draft tasks.
• Done (green) - all tasks in this cluster have been completed (sent to Confirm).

Filter Tasks...
Filters the tasks shown in the task List on page 19 and the Map on page 36 using both the text contained in the task, the task type, Feature Group, Feature Type and any retrieved What's Going on here tasks.
For example:
• Using the filter of "Job" will show all Job tasks and any other task type containing the text "Job".
• Using the filter of "Job 200" will filter the list so that only the Job (numbered 200) and any task containing the text of both "Job" AND "200" will remain in the list.

Map Tools
In addition to the map tools such as Zoom in and out, it is also possible to rotate the map using multi-touch (pinch and rotate) on handheld devices. For Windows machines without touch, you can use Shift+Alt, hold left-click and move the mouse to rotate the map.

Create New from the Map
It is possible to create new Street Works Inspections, Enquiries, Defects and Features directly from the Map.

Creating a new Street Works Inspection, Enquiry, Defect or Feature from the Map
Tap on a location where you wish to create the new SW Inspection, Enquiry, Defect or Feature.
Creating a new SW Inspection, Enquiry, Defect or Feature from the map is the same as creating them from the Menu button with the following differences:
• The location at which you tap on the map will be used, preventing the need to Locate the task. You may still relocate as required.
• Tapping on a single existing task (map icon) will set the Feature field for a new Defect or Enquiry and the Site field for a new SW Inspection or Feature.
• Tapping on a cluster of existing tasks will automatically set the Feature fields for a new Defect or Enquiry and the Site fields for a new SW Inspection or Feature if all of those tasks contain the same Feature/Site.

Note: The options are displayed beneath existing tasks, you may need to pan down when tapping on a large cluster.

What's Going On Here
What's going on here allows you to view information on tasks already recorded in the local area. Tapping the what's going on here button will pop out a list of items to choose from.
Due Inspections: Show all unassigned features that are due for inspections up to a maximum of 1 kilometre from the center of the map view.

Note: You may only select from Due Inspections or Routes, you may not perform both.

You can assign a Due Inspection by tapping on the appropriate icon and then tapping on the desired Route displayed in the information panel.

Routes: Show Inspection Routes that have unassigned features that are due for inspection in the current map view.
Route containing one or more live and unassigned features and no overdue unassigned features.

Route containing one or more live and overdue unassigned features.

**Note:** If the map icon appears with a number (clustered), more than one Route has been found.

**Note:** It is possible that the icon for the route will appear off screen, this is because it will be placed in the centre of all live and unassigned features found for that Route.

You can assign a Route by tapping on the appropriate icon and then tapping on the displayed information panel.

**Features**
Show all features logged in Confirm up to a maximum of 1 kilometre from the center of the map view.

You can raise an Adhoc Asset/Condition Survey by tapping on the appropriate icon and then tapping on the displayed information panel.

**Note:** This default icon is shown for all Features which have no custom symbol specified. Custom symbols can be specified by the Confirm administrator for each Feature Type.

**Current Defects/Jobs**
Show all current defects not linked to a Job, and all Jobs which have not been completed, up to a maximum of 1 kilometre from the center of the map view.

**Defects.**

**Current Jobs.**

**Completed Jobs**
Show all Completed Jobs up to a maximum of 1 kilometre from the center of the map view.

**Completed Jobs.**

**Enquiries**
Show all Enquiries that are up to a maximum of 1 kilometre from the center of the map view and have had a status update in the last 180 days.
Enquiries where the follow up date has not yet been reached.

Enquiries whose follow up date has passed.

**Completed Street Works**

Show all Completed Street Works containing Sites which are within their guarantee date, not older than 3 months and up to a maximum of 1 kilometre from the center of the map view.

If the guarantee date is not specified and the completion notice was sent within 3 months then the Street Works will be shown. If the completion date is outside of 3 months, the Street Works will not be shown.

**Note:** Existing Unattributable works / Defective Apparatus notices appear here.

You can create an ad-hoc inspection on a trench by tapping on an existing Completed Street Works icon and then tapping on the displayed panel.

**Current Street Works**

Show all Current and Proposed Street Works up to a maximum of 1 kilometre from the center of the map view.

**Note:** Proposed works will not appear if the planned start date is more than 1 calendar month ago.

**Note:** Only Current and Proposed Street Works that have been updated in the last three months are displayed.

You can create an ad-hoc inspection on an existing Current Street Works by tapping on the appropriate icon and then tapping on the displayed information panel.

If you select a trench based Inspection Category the inspection will be recorded against the primary trench for the works (site number 1)

**Task Map**

Most Tasks include a map at the top of the form. This is designed to show where you currently are and where the Task is.
Navigate to Task

Clicking this icon will launch the navigation app on your device to give turn-by-turn directions to the Task location. Once navigation has completed you can return to ConfirmConnect® using the appropriate method for your device:

- iPad / iPhone: Click on the "Return to Confirm" message in the notification area
- Android: Use the back button, switch applications or by closing the navigation app
- Windows: Close the navigation app
Spatial Data

If a task has any spatial data available then this is displayed on the task map. The colour of an item depends on its relationship to the task:

- **Surveys**
  - The Feature is displayed in orange.
  - Defects are displayed in grey.

- **Defects**
  - The Defect is displayed in orange.
  - The Feature is displayed in blue.
Jobs

Jobs are displayed in orange.

Enquiries

Defects linked to enquiries are displayed in orange.
Features are displayed in blue.
Feature defects are displayed in grey.

Locate / Relocate
Locate your task using the map.

- For point features, enquiries and defects, placing the cross-hair on your chosen location and tapping the OK button will then use those coordinates for the task and return to the task form.
- Use the address field to zoom to a location by typing in an address (street name) and selecting from the options provided.
- Switch between Road and Aerial views.
- Locating / Relocating defects will also display the linked feature in blue.
GPS Location

Will be shown as a blue dot on the map and is your current approximate location. If you zoom/pan away from your current location, you can tap the GPS button on the left to return to your current approximate location.

Note: GPS Location functionality (blue dot) requires GPS to be enabled on the device.
Draw Tools

Allows the digitization of a feature task. Select from Point, Line and Polygon. The left most icon shows the currently selected tool.

Note: These tools are only available with Confirm v14.00 and above. Prior to this, only the crosshair is available.

•

Point, will show a crosshair allowing you to pan the map to place the crosshair where you wish the feature to be located. Tap OK to complete the location.

•

Line, draw a line by tapping once to place the first point on the map, tapping further will create a line by joining each point you tap. To finish, either double tap on the final point or tap OK. Tapping OK will close the locate/relocate screen and return you to the task form.

•

Polygon, draw a polygon by tapping once to place the first point on the map, once a third tap has been performed a polygon will be drawn. To finish, either double tap on your final point or tap OK. Tapping OK will close the locate/relocate screen and return you to the task form.

Note: Selecting a different draw tool will clear the current digitization, if this was done in error you can tap the Cancel button to return to your task and undo any edits made.

Transfer

Transfer Tab

The Transfer tab displays all tasks currently being performed. It can include the following transfer message types:-
ConfirmConnect®

- **Lookups** - these can be seen once you have signed in or when a **Refresh from the Menu** has been performed.
- **Tasks** - Tasks are transferred upon sign in and when the **Refresh** button is used.
- **Photos** - A message will appear for each photo being uploaded.
- **Map Caching** - When online via wireless connectivity only. Message indicates that it is caching maps for use when offline. See **Offline vs Online (caching)** for further details.
- **Get Features at Task Locations** - (Feature Caching) will cache all features for use when offline. See **Offline vs Online (caching)** for further details.
- **Officer Location** - GPS Tracking will create an Officer Location message for each update.
- **Warnings** - See the Warning messages section below for further details.
- **Errors** - These can occur if communication with the Web Service is lost. These messages and underlying tasks will automatically be resent once the service is accessible again.

**Deleting Task Transfers**

Tapping on the red delete button will remove the task from the transfer list and prevent the completion of that task. Should the transfer task be an update, a confirmation warning will appear indicating that deleting this task will cause loss of data. An exception to this update rule are the Officer Location tasks. Download tasks such as Receive Tasks and Lookups will not prompt for confirmation.

**Photo Messages**

Photo Messages will display the Task Type they belonged to as well as the document link name. There is one additional line of information with 3 possible results:

1. **Gallery Filename: 123456789.jpg** - Android Only: Indicates the photo was taken using the Photo button. This filename may still be found in the device's gallery.
2. **Taken on 10 Feb 2015 at 16:26** - iOS Only: Indicates the photo was taken using the Photo button and the date/time in which the photo was added to the task.
3. **Taken from Gallery on 10 Feb 2015 at 16:26** - iOS and Android: Indicates the photo was added to the task using the Folder button at the specified time.

**Note:** For points 2 and 3, we are unable to obtain the actual filename.
Task Redirect

Refreshing your task list, when has been enabled, will present a message indicating the tasks have been redirected to the specified officer.

• **Remove task redirect** will turn off task redirection and download your tasks.
• **Sign out** return to the sign in screen leaving the task redirection enabled for the officer specified.
• Tapping **X** on the Receive Tasks transfer message will cancel the Receive Task request and remove the task redirect message.

**Note:** When the Task Redirect message is the top most message, tasks below it will not transfer until the message is resolved by using one of the options mentioned above.

Warning messages

Warning messages are shown on the Transfer tab with an exclamation icon to the left of Transfer. Each warning message will display text indicating what has occurred during the transfer process.

It is recommended to check this text and inform your Confirm administrator before removing them as they may indicate that a correction is needed in the main system.

**Note:** It is possible to continue working whilst these messages are displayed.

Examples

Below are some examples of the types of warnings that may occur.

• A Duplicate Job.
• A Defect which has been uploaded with a Cost Code that is invalid for the Contract.
• A Defect being uploaded where the defect type has it's dead flag checked.
• Photos may also produce a warning message in cases where their associated task failed to be created in Confirm.
Note: Should this occur, the task and photos will have been removed from the device.

Linked Documents

If a task contains one or more linked documents such as a photo or a pdf document, these will be shown in the Linked Document section of each task.

Image documents will be displayed as a thumbnail version of the full sized image and other documents will show a thumbnail image of a blank document.

If the document was not retrievable an "Access Denied" or "File not Found" thumbnail image will be shown.

Access Denied - ConfirmConnect® is unable to access the location specified in the document store location.
• File not Found - ConfirmConnect® has access to the location specified in the document store location but is unable to locate the document.

• Non-image document - ConfirmConnect® will display this icon when a document has been found and identified as a non image document.

• URL document - ConfirmConnect® will display this icon when a document has been stored on a Web based document management system.

**Note:** Document links can only be viewed while online as the full document is only retrieved when selected for viewing.

**Job Documents**

Job document links and any associated Defect document links will be displayed on Job tasks. Any duplicated document links will only be displayed once, showing the Job document links in preference to the Defect document links.

**Risk Attributes**

If a task is linked to a Feature and this has Risk Attributes then these will be shown alongside the details of the Feature.

A summary of all the different Risk Attributes that are on any downloaded tasks can be viewed by opening the Start of Day page or by selecting the Risks button at the top of the Task List and Map (Risk button will only be displayed if there is at least one Risk Attribute downloaded).

A total of all unique Risk Attributes downloaded to ConfirmConnect® is shown on the Risks button at the top of the Task list and Map.

**Superseding Defects**

Available for Condition Survey module (7010).

This functionality allows you to view the details of any existing Defects and supersede (update) them if required.
Superseding an existing Defect

To supersede a Defect tap on an existing Defect in the Defect list on your task. You can now view the defect details and use the edit option to make any changes required.

If you make a mistake, and haven’t yet sent the Defect back to Confirm, tap the discard button to return to the original Defect details.

Defect Icons

Each Defect in the list will have an icon to represent its current status.

- An existing Defect which has a Job linked to it.
- An existing Defect which has a Job linked to it that has been superseded (edited).
- An existing Defect
- A Defect which has been superseded (edited).
- A Defect has been superseded and sent back to Confirm.

**Note:** A superseded Defect is no longer editable once it has been sent back to Confirm.

- A New Defect which has been added but not sent to Confirm.

**Note:** Draft Defects are only visible on the task they were created on. They will no longer be shown once they have been sent to Confirm.

Link to Enquiry

The Link to Enquiry button allows you to link a Defect to an Enquiry which has been assigned to you (on your task list). Enquiries which already have a linked defect will not be available as you may only link one defect to an Enquiry.

**Note:** It is not possible to Link Adhoc Defects (those raised from the Menu > New Defect option).
Document Links and Superseding Defects

Any document link which exists for the Defect being superseded will be displayed on the superseding Defect. Should a superseded Defect be linked to a Job, the Job document links will also be displayed.

Defects linked to existing Jobs

When a Defect is linked to an existing Job it is still possible to supersede the Defect. The superseding Defect allows you to view and update the current status of the Job.

The following fields will not be available when the Defect is linked to a Job:

- Assign To
- Contract
- Cost Code
- SOR Items

The "Job X" (X = Job number) section will contain the following fields:

- Priority (read only)
- Preferred Contract (read only, if applicable)
- SOR Items (read only, if applicable)
- Current Status
- Notes
- Current assigned Officer (can be re-assigned)

**Note:** The "Fix Now" option will not be available when the Defect already has a Job.

Superseding a Defect that exists on multiple tasks

Changes can be made to a superseding Defect from any parent task. However, the superseding Defect can only be sent or discarded from the task it was originally created against.

Comment Library

The Confirm Comment Library can be used in ConfirmConnect® to insert predefined or template text when editing text fields.

Tapping on the following Comment Library icon on any text field will display a list of Comments that can be inserted:-

![Comment Library Icon](image)

**Note:** The Comment Library icon will only be present if there is at least one Comment in the library.

See **Comment Library** for more information on creating and maintaining the Comment Library.
Administration Guide

The Administration section will cover how to both setup your web server and Confirm host so that your users will be able to sign in and use ConfirmConnect® on their devices.

Supported Platforms and Device Minimum Specifications

Android Support Policy for older devices

From October 2017, support will be withdrawn for devices running Android versions 4.4.4 (Kitkat) and below.

From December 2018, support will be withdrawn for devices running Android versions 5.1.1 (Lollipop) and below.

Pitney Bowes device support policy will include support for the last 4 years of Android releases. See the following list of Android versions for details on release dates. This will typically provide devices with a 3 year lifespan before replacement devices would be recommended.

Android devices require Google Play Services 11.2 or higher.

Future Device Operating System Support

ConfirmConnect® will support new Android and iOS versions automatically, should any issues arise as a result of a new Android or iOS version, we aim to resolve them with the next ConfirmConnect® release. For critical issues caused by a new Android or iOS version, we will use our best endeavours to release a solution as quickly as possible.

Minimum Specification

Over time changes to operating system, especially with iOS, and changes to the ConfirmConnect® application does increase demand on devices. This can have a negative impact to older devices as resources become stretched causing devices to experience reduced performance.

Pitney Bowes recommends the following minimum specifications for all Android and iOS devices:

<table>
<thead>
<tr>
<th>Platform</th>
<th>RAM without Local SQL lite Maps</th>
<th>RAM with Local SQL lite Maps</th>
</tr>
</thead>
<tbody>
<tr>
<td>iOS</td>
<td>1GB</td>
<td>2GB</td>
</tr>
<tr>
<td>Android</td>
<td>1GB</td>
<td>2GB</td>
</tr>
<tr>
<td>Windows</td>
<td>2GB</td>
<td>4GB</td>
</tr>
</tbody>
</table>

Devices with lower RAM than shown may encounter reduced performance and, in some cases, ConfirmConnect® being closed by the operating system due to the device running out of available RAM.

ConfirmConnect® version against Confirm Client

From v5.00.0, ConfirmConnect® is supported with the Confirm version it was released with and the last two major versions. For example:

<table>
<thead>
<tr>
<th>ConfirmConnect®</th>
<th>Released with Confirm</th>
<th>Oldest Supported Confirm version</th>
</tr>
</thead>
<tbody>
<tr>
<td>v5.00.0</td>
<td>v17.00</td>
<td>v15.00</td>
</tr>
</tbody>
</table>
Installing the ConfirmConnect® Web Server

There are two methods to deploying ConfirmConnect® onto a Web Server. These are “de-coupled” (preferred method) and "Integrated".

- **Integrated** - installs ConfirmConnect® with the Confirm Connector. All versions must be kept in sync.
- **de-coupled** - allows the installation of ConfirmConnect® to be kept independent of Confirm versions, in other words there is no need to upgrade Confirm host systems to use this version.

Pre-requisites

Below is a list of pre-requisite steps required for ConfirmConnect®, these are required for both **Integrated** and **de-coupled** installations.

- IIS Web Server role is installed with the ASP.NET Role Service installed.
- A supported version of the Confirm Connector Installed. This can be installed on a different server.
- Confirm Access Code with ConfirmConnect® device licenses enabled. Please request an access code from your Confirm Project Manager.
- Ensure that .NET Framework 4.6 is installed.
- Create an application pool (named as you wish) configured to use .NET 4 with the Managed pipeline mode: set to Integrated.

  **Note:** For 64bit machines only: Once the application pool has been created, ensure you have the “Enable 32-Bit Applications” option set to True via the advanced settings.

  **Note:** This application pool must be separated from the one used by the Confirm Connector.

- Roles and Features: HTTP Activation feature is required for both .NET Framework 3.5 and 4.5. These can be added via the Server's Add Roles and Features Wizard.
- Install MapXtreme 8.1, this can be downloaded from [http://confirm.dev-pb.com/connect](http://confirm.dev-pb.com/connect).

  **Note:** MapXtreme 8.1 does not need need a separate licence file.

Web Server Installation

- **Integrated** - installed with the Confirm Connector installation.
  
  - Run the Confirm Connectors setup.exe provided on the installation media.
  - Once installed, run the IISConfigurationUtility.exe from the Confirm Connectors application directory (e.g. C:\Program Files\Pitney Bowes\Confirm\Connector). This utility will configure all components required for a Confirm Connector Web Service which can also be used with ConfirmConnect®.
  - Provide the URL to your device users. The URL will be in the following format https://ServerName/VirtualDirectoryName
• **de-coupled** - installed using an installer package which can also be downloaded from [http://con-firm.dev-pb.com/connect](http://con-firm.dev-pb.com/connect).

  **Note:** The download link is on the "Server Installation" page. This URL will always link to the latest version of ConfirmConnect® available.

• Run the ConfirmConnectWebService.exe and specify a location to install the web service. Default location is set to "C:\inetpub\wwwroot\confirm\ConfirmConnect".
• Enabling Confirm UEIP will allow both Web Service and all devices to send anonymous usage information to Pitney Bowes to help us improve our products and services.

### Active Directory Configuration

To enable Active Directory authentication for ConfirmConnect®, set the registry values to the below mentioned path:

<table>
<thead>
<tr>
<th>O/S Type</th>
<th>Registry Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 bit Machines</td>
<td>HKEY_LOCAL_MACHINE\SOFTWARE\Pitney Bowes\Confirm</td>
</tr>
<tr>
<td>64 bit Machines</td>
<td>HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Pitney Bowes\Confirm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Registry Key</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AuthProviderType</td>
<td>• Confirm - To Use Confirm Authentication.</td>
</tr>
<tr>
<td></td>
<td>• ActiveDirectory - To Use ActiveDirectory.</td>
</tr>
</tbody>
</table>

### Web Server Configuration

Follow the steps below for both **Integrated** and **de-coupled** installs:

• Within IIS, navigate to Default Web Site and use ‘Add Application...’
• Enter an Alias name of ‘ConfirmConnect' and set the Application Pool to the one created in the prerequisite steps. Set the ‘Physical path:' to the location you installed ConfirmConnect® to.

  **Note:** It is advised to use a separate application pool from the one being used by the Confirm Connector.

• ConfirmConnect® needs to know where the Confirm Connector is running so that it can process data into the Confirm database. To enable this, launch the registry editor and navigate to the Confirm.AM.Connector folder and add a 'New > String Value' called 'ConnectorAspNetURL'.
• Set the value to the url for the ConnectorAspNet.aspx file (located in the Connectors published application location) e.g. [http://localhost/Connector/ConnectorAspNet.aspx](http://localhost/Connector/ConnectorAspNet.aspx).
Double check that the CFGFile and LogFile settings are correct and the latter should point to a directory the Application Pool's user has write access to.

Note: ConfirmConnect® log files are created prefixed with "MS_".

Testing

This section covers how to test the installation of the ConfirmConnect® web service.

- Within IIS, browse to the TestConnection.dita file located in the root of the ConfirmConnect® website. e.g. https://ServerName/VirtualDirectoryName/TestConnection.dita
- When this page loads you will be presented with the following screen.

```
ConfirmConnect®

Test Page
Use this test page to ensure ConfirmConnect® has been configured correctly.

Enter tenant authentication details
username  password  tenant

Perform Test
```

- Enter a username, password and tenant (profile) and click the Test button. You may use either Http or Https.
- Review the results to help diagnose any problems encountered.

v3.10.0 and above

From ConfirmConnect® version 3.10.0, the web service will issue version updates to every device which connects to its URL.

The web service will create a temporary file which is then sent to the device. Any subsequent requests (devices) will use the existing file assuming it still exists.

Should IIS be restarted for any reason the temp file will be removed and the next request requiring the update will generate the file again.
Registration
This section requires a new Access Code to be provided by Pitney Bowes

ConfirmConnect® Registration
All of ConfirmConnect® Licensing is controlled through the Confirm Registration screen. This allows device licenses to be controlled centrally without needing to manually enter access codes on each device.

Once the new Access Code has been applied, you can then create ConfirmConnect® Profiles and assign them to your users to enable them to login with their devices.

It is possible to monitor device and module licenses in use and suspend devices via the ConfirmConnect® Registration screen.

Setting up a Confirm user
This section will list the requirements to enable a Confirm user to login to ConfirmConnect®

Licences and User configuration
In order to enable users to login to ConfirmConnect® you must have the following setup in the Confirm host:-

• A Confirm Licence with ConfirmConnect® Devices and Module/s enabled.
• A ConfirmConnect® Profile with the required ConfirmConnect® Modules enabled.
• A User with an appropriate ConfirmConnect® profile enabled.
• An Action Officer assigned to the user. It is not possible to login ConfirmConnect® with an Action Officer. The Action Officer must be associated to a user.

Setting up Confirm data
This section list the requirements needed to view the various lookups and tasks for your users.

How to setup your data to appear on your user's devices
Ensure that you have read through and applied a ConfirmConnect® Profile to your user as instructed by the Setting up a Confirm user page.

Review the relevant sub section of the help for the different areas of ConfirmConnect® functionality.

Enabling Task Redirect
It is possible to redirect tasks from one Officer to another, please see .

Risks

Setting up ConfirmConnect® to display Risks
ConfirmConnect® will display a total number of Risks on the Menu button and will display a list of all Risks (in Alphabetical order) identified on all of the tasks contained on the users task list. When the following has been configured: -

Feature Attribute Values
• Any Task with a Feature containing one or more Attributes with their values specified and where that value has its 'Risk Warning' field populated.
Street Works

Setting up ConfirmConnect® with Street Works data

There are no specific Data Key restrictions for Street Works Inspection Lookup tables.

Note: Only inspections that are due in the next seven days are uploaded to the device.

The following considerations apply to the general tables used in Street Works inspections:

Select Site (new SW Inspections only)

Sites will be displayed if the following conditions are met:

- Sites have coordinates where the rectangle formed by the minimum and maximum Eastings and Northings is within 100m of the Inspection location.
- The Site’s Street Record Type has Applicable to Street Works/Addressing enabled.

Promoter

These are Organisations that are live (not dead and where their To date has not passed) and your user’s Data Security Group must have access to the Organisation’s Device Data Key.

Offence

Offence Types will be available if the following conditions are met:

- At least one Offence Type is part of a Penalty Scheme which has its Related Entity set to Street Works.
- Confirm "Fixed Penalty Notices" (2700) and ConfirmConnect® "Street Works" (7040) modules are enabled.

Enquiries

Setting up ConfirmConnect® with Enquiry data

Various elements of the Enquiry form require lookups from the host to be available to the user, this involves setting up various data securities. Review the below information for what is required on each field.

Note: Linked (underlined) items refer to the Confirm screen and bold items refer to a field on the linked screen.

Enquiry Subject

Enquiry Subjects appear in this list if the following conditions are met:

- Your user’s Data Security Group must have access to the Enquiry Subjects Data Key.

Select Feature (required)

Features will only appear if the following conditions are met:

- Your user’s Work Group has Contract Area security on the Feature.
- The Features Feature Group has Select for Adhoc Inspections enabled.
- The Feature is within range. Please see Locating Features for further details.

Select Status

Enquiry Statuses appear in this list if the following conditions are met:

- Your user’s Data Security Group must have access to the Enquiry Status Device Data Key.
• The **Send to Device** option must be enabled for the status on the **Enquiry Status** screen.

**Assign To**

Action Officers appear in this list if the following conditions are met:

• Your **user’s Data Security Group** must have access to the **Action Officers Device Data Key**.

**Offence**

The Offence section will only appear if the following conditions are met:

• Confirm Fixed Penalty Notices module (2700) enabled in your Confirm **System Registration**.
• At least one Offence Type is a part of a **Penalty Scheme** which has its **Related Entity** set to Enquiry.

**Defects**

**Setting up ConfirmConnect® with Defect data**

Various elements of the Defect form require lookups from the host to be available to the user, this involves setting up various data securities. Review the below information for what is required on each field.

**Note:** Linked (underlined) items refer to the Confirm screen and **bold** items refer to a field on the linked screen.

**Defect Type**

Defect Types appear in this list if the following conditions are met:

• Your **user’s Data Security Group** must have access to the **Defect Types Device Data Key**.

**Select Feature (required)**

Features will only appear if the following conditions are met:

• Your **user’s Work Group** has **Contract Area** security on the **Feature**.
• The Features **Feature Group** has the **Select for Adhoc Inspections** flag checked or the Feature exists on the task list.
• The Feature is within range. Please see **Locating Features** for further details.

**Select Priority**

Priorities appear in this list if the following conditions are met and is Mandatory:

• Your **user’s Data Security Group** must have access to the **Priority Device Data Key**.

**Assign To**

Action Officers appear in this list if the following conditions are met:

• Your **user’s Data Security Group** must have access to the **Action Officers Device Data Key**.

**Select Contract**

Contracts will appear in this list if the following conditions are met:

• Your **user’s Work Group** has **Contract Area** security on the **Contract**.
• Your **user’s Data Security Group** must have access to the **Contracts Device Data Key**.
• **Contract** has its **Works Inspected** check box enabled.
• **Contract** is still in date *(Finish Date)* and is not marked as **Dead**.

**Select Cost Code**

Cost Codes will appear in this list if the following conditions are met:

- Each required **Cost Code** has it’s **Send to Device** option enabled.
- Your user’s **Data Security Group** must have access to the **Cost Code Device Data Key**.
- Your user’s **Work Group** has **Contract Area** security on the **Cost Code**.

**Note:** This is only applicable if you have the Site System Defaults field **Enable Cost Code Segregation** is enabled.

**Photo**

Photos will be uploaded into the Confirm database as a "blob".

**Note:** They are not automatically loaded into an external document management system. This is done via the existing Photo Upload Agent within Task Processor.

**Attributes**

Add Attributes will display a list of All **Operational Attribute Types**.

**SOR Items**

All SOR Items are downloaded to the device if the following conditions are met:

- Your user’s **Data Security Group** must have access to the SOR **Schedule Device Data Key** for each SOR Item.
- Your user’s **Data Security Group** must have access to the **Device Data Key** on a **Contract** with the SOR Item in its BoQ. This only applies if the **Restrict Device SORs by Contract** option is enabled in the Condition Survey System Settings screen.

The SOR Item List is filtered based on:

- **Contract BoQ:** **Contract** and the **Priority’s Price Factor**.
- **Site level BoQ:** **Contract**, **Priority’s Price Factor** and the Feature's Site.

**Note:** This also requires the **Contract** to have the **Site Billing** and the required **Site/s** to have **Allow Site Rates** enabled.

SOR Groups with at least one filtered SOR Item will be displayed.

**Note:** Adding the SOR Group will only add the SOR Items which meet the filtering defined above.

**Defects on Enquiries**

Enquiries may have a defect raised against them. This requires the **Enquiry Subject** to have the **Defect** option enabled. If this option is not enabled you will not be able to raise a defect against an Enquiry of this Enquiry subject type.

There is a **ConfirmConnect® System Setting** to cater for defaulting the Defect Description and Location from the Enquiry Subject, Number and Location.
Setting up ConfirmConnect® with Job data

Job Rules
The following rules must be met before Jobs will be available to the User.

- The Job must not be Archived.
- The Start Date (Estimate) of the Job is blank.
- The Start Date (Estimate) is set and is within the Device Job Future Start Date Tolerance set in Job System Settings.

Note: If a task refresh is requested after the end of the working day (specified in the Working Day values in the General System Settings screen) Jobs for the following day will be included.

Example: The Device Job Future Start Date Tolerance is set to 1 day with the Working Day set to end at 16:00. An update request is made at 16:30 on Friday evening, only Jobs which are currently overdue and those with a start date up to midnight of Saturday evening will be included. Any Jobs with a start date specified after midnight on Saturday will not be included.

The following rules also apply if the Work is being carried out by an Officer.

- The Job is assigned to the Action Officer.
- The Job’s Status has Send Jobs to Device for Officer ticked.
- The Action Officer is linked to the ConfirmConnect® user.

The following rules also apply if the Action Officer is also linked to a Gang.

- The Job is allocated to the Gang.
- The Job’s Status has Send Jobs to Device for Gang ticked.
- The Gang has the same Contractor as the Job’s Contract. The Contractor is specified on the Gang Lookup.

Job Inspection Rules
The following rules must be met before Jobs will be available for Inspection.

- The Job must not be Archived.
- The Job is assigned to the Action Officer.
- The Job’s Status has Needs Inspecting ticked.
- The Action Officer is linked to the ConfirmConnect® user.

Fix now Jobs, auto-committing and auto-allocate to a Gang
The following rules must be met for the fix now Job to be automatically committed:

- The Defect’s Priority must be set to commit.
- A Contract must be selected.
- The Defect must have one or more SOR Items.
- The currently signed in Officer is set as the Device Action Officer for only one Gang.

Note: If the Officer belongs to more than one Gang or does not belong to a Gang, the Job does not get automatically allocated.
Performance Monitoring Rules
(ConfirmConnect® Condition Survey module 7010) Only applicable to Non-routine Works.

ConfirmConnect® requires the same prerequisites as outlined in Monitoring Inspections - Step-by-step

Additional Job Information

Various elements of the Job form require lookups from the host to be available to the user, this involves setting up various data lookups. Review the below information for what is required on each field.

**Note:** Linked (underlined) items refer to the Confirm screen and **bold** items refer to a field on the linked screen.

**Feature Attributes**
Displays a list of all Feature Attributes applicable to this feature if the following conditions are met:
- Download Feature Conditions and Attributes with Jobs on the Job System Settings is checked.
- Your **user’s Data Security Group** has access to the **Device Data Key** on the **Attribute Type**, **Measurement Type**, and **Date Type**.
- Your **user’s ConfirmConnect® Profile** has access to the Asset Survey (7020) module.

**Feature Conditions**
Displays a list of all Feature Conditions applicable to this feature if the following conditions are met:
- Download Feature Conditions and Attributes with Jobs on the Job System Settings is checked.
- Your **user’s ConfirmConnect® Profile** has access to the Condition Survey (7010) module.
- Your Ad hoc Inspection Route’s **Inspection Type** must contain the required **Observation Types**.

**Job Attributes**
Add Attributes will display a list of All **Operational Attribute Types**.

**Job Statuses available on device**
Statuses will be available if the following conditions are met:
- Your **user’s Data Security Group** must have access to the **Job Status Device Data Key**.
- If your Officer is a Contractor Officer (as determined by being listed on the **Contractor Officer** Tab for any Contractor) this list will be filtered to show only those **Statuses** where the **Available to Contractor** checkbox has been checked.
- **Send Buttons on the Job Form (only applicable to work crews)**
  - Start / Resume - Statuses with In Progress and Send to Officer or Send to Gang checked are associated with this button
  - Pause - Statuses with In Progress unchecked and Send to Officer or Send to Gang checked are associated with this button
  - Other - This shows Start / Resume statuses if the Job is already in progress and Pause statuses if the Job is not in progress, i.e. all statuses with Send to Officer or Send to Gang checked that do not change the in progress state of the Job are associated with this button
  - Remove - Statuses without Complete, Send to Officer and Send to Gang checked are associated with this button
• Complete - Statuses with Complete checked and without Send to Officer and Send to Gang checked are associated with this button

Add Attributes Will display a list of All **Operational Attribute Types**.

SOR Items SOR Items will be available if the following conditions are met:

- Your *user's Data Security Group* must have access to the SOR *Schedule's Device Data Key*.

The SOR Item List is filtered based on:

- Contract BoQ: **Contract** and the **Priority's Price Factor**.
- Site level BoQ: **Contract**, **Priority's Price Factor** and the Feature's Site.

  **Note:** This also requires the **Contract** to have **Site Billing** and the required **Site/s** to have **Allow Site Rates** enabled.

SOR Groups with at least one filtered SOR Item will be displayed.

**Note:** Adding the SOR Group will only add the SOR Items which meet the filtering defined above.

**Cost Capture**

**Cost Capture** on page 36 allows Gangs to capture time against their work which includes Travel, Breaks and changes to Gang members and equipment.

**Activation**

Cost Capture is only enabled where the **Action Officer** linked to the device User is linked to a **Labour Type, Capture Job Costs** and / or **Capture Survey Costs** need to be enabled.

There are two options available for both Jobs and Surveys:

- Record only productive time. Time spent working on the Task.
- Record both productive and non-productive time. Both time spent working on the Task and Travel times and any breaks.

**Gang Members**

In order for individuals to appear in the list of available Gang members, their **Action Officer** must be linked with a **Labour Type**.

**SOR Items**

Costs can optionally be tagged against an SOR Item for analysis purposes. This can be enforced by checking the "SOR Required for Cost Capture" option on the ConfirmConnect® Settings screen.
Asset / Condition Survey & Feature Monitoring

Setting up ConfirmConnect® with Feature data

Various elements of the Feature form require lookups from the host to be available to the user, this involves setting up various data securities. Review the below information for what is required on each field.

**Note:** Linked (underlined) items refer to the Confirm screen and **bold** items refer to a field on the linked screen.

**Feature Type**

Feature Types appear in this list if the following conditions are met:

- Your **user's Data Security Group** must have access to the **Feature Group's Device Data Key**.
- Your **user's Data Security Group** must have access to ALL Mandatory attributes on the **Feature Group**.

**Note:** Not used by Feature Monitoring

**Select Site (required)**

Sites will only appear if the following conditions are met:

- Your **user's Work Group** has **Contract Area** security on the Site (only applies if the Show Sites by Workgroup General System Setting is set).
- A "Site" has been created (not just a Central Site) and the Street Record type is applicable to Feature Creation.
- The Site has coordinates (on the Additional tab) and that the rectangle formed by the minimum and maximum Eastings and Northings is within 100m of the Feature location.

**Note:** Not used by Feature Monitoring

**Site Classification**

Your **user's Data Security Group** must have access to the **Site Classification Device Data Key**.

**Note:** Not used by Feature Monitoring

**Attributes**

Attributes will only appear if:

- Your **user's Data Security Group** has access to the **Attribute Type, Measurement Type** and **Date Type Device Data Keys**.
- Attributes will only be shown if the Inspection Type associated with the tasks is set to Asset Survey and the user has the Asset Survey module.

**Note:** Creating a new feature: If a user does not have data security access to a mandatory attribute within a feature group, that feature group will not be available to the user.

**Note:** If a user does not have data security key access to an attribute (including mandatory attributes) on an already assigned survey feature the attribute will not be available to the user.

**Note:** Not used by Feature Monitoring

**Conditions**

Conditions will only appear if:
• Your **user’s Data Security Group** must have access to the **Observation Type Device Data Key**.
  
• Only the Observation Types that are listed on the Inspection Type that also currently occur on the Feature being inspected are listed.

**Note:** ConfirmConnect® does not use the **Export all Observation Types** setting on the **Condition Survey System Settings** screen.

**Note:** For Adhoc Inspections, you must specify the Observation Type against the Adhoc Inspection Type.

**Note:** It is possible to set the Notes field to be mandatory if the Condition has been left at a Not Assessed state. This can be done from the **ConfirmConnect® Settings** screen.

**Defects**

Lists Defects that the user has logged against this Feature during the survey. Also includes all Existing 'Internal' Defects without a Job that are at a Status of 'Action Required' and all Existing Defects that have a Job where the Job is still outstanding but not complete (no actual completion date set)

**Condition linked Defects**

A Defect option will only appear under an individual Observation Type if one or more Defect Types have been linked to that Observation Type and if the user’s Data Security Group has access to the Device Data Key of that Defect Type.

Existing Defects will be shown in this list if they were originally logged against the corresponding Observation Type.

**Feature Monitoring**

(ConfirmConnect® Condition Survey module 7010)

ConfirmConnect® requires the same prerequisites as outlined in **Monitoring Inspections - Step-by-step**

**Emergency Defects and Inspection Batches**

When an Officer sends an Emergency Defect via the **Send Now on Defect** option, the Defect will create an incomplete inspection batch on the Inspection Route of the Feature.

The following rules are used to determine if the inspection batch is marked as complete or incomplete for Asset and Condition Surveys Tasks:

• If a Defect is raised on a Task and the Send Now button is used, ConfirmConnect® will send that Defect immediately and a new incomplete inspection batch will be created. The Defect will be removed from the Device.

• If a second or subsequent Defects are raised on the same Task and the Send Now button is used, the original inspection batch will be updated with the additional Defect and the inspection batch will remain incomplete because the inspection still has not been completed. The Defect will be removed from the device.

• If a Defect is raised on a Task but the Send Now button is not used, the Defect will remain on the Task and will remain on the device.

• Once the Inspection is completed and the officer uses the Complete button, all conditions and all remaining Defects will be sent. If there is a previous Inspection batch for this inspection feature the batch will be updated with the new details and will be marked as Complete. If there isn’t an existing Inspection batch for this Inspection feature then an Inspection batch will be created and completed.
The following rules are used to determine if the inspection batch is marked as complete or incomplete for Route Surveys:

• If a Defect is raised on a Route Survey Inspection feature and the Send Now button is used, ConfirmConnect® will send that Defect immediately and a new incomplete inspection batch will be created.
• If a second or subsequent Defects are raised on the same Route Survey Inspection feature and the Send Now button is used, the original inspection batch will be updated with the additional defect and the inspection batch will remain incomplete because the inspection still has not been completed.
• If a Defect is raised on a different Inspection feature on the same Route Survey and the Send Now button is used, a new incomplete inspection batch will be created containing this Defect and the first inspection batch will remain untouched.
• If a Defect is raised on a Route Survey Inspection task but the Send Now button is not used, the Defect will remain on the Route Survey Inspection on the device.
• Once the Route Survey Inspection is completed and the officer uses the Complete button, all remaining Defects which are still on the device will be sent. If there are any previous incomplete Inspection batches for this Route Survey they will be completed and any additional Defects on those features will be included. Any additional Defects on different Inspection features will be logged in a separate Inspection batch which will also be completed.

Route Surveys

Setting up ConfirmConnect® with Route Surveys

For an Inspection Route to be valid as a Route Survey task you must setup the Route in the following way: -

Inspection Route
- All features on the Route must be assigned to a single Action Officers
- The Inspection Routes Inspection Type must be set to Condition Survey.
- The Inspection Type must not have any Observation Types against it.
- It is advised that Route Surveys have no more than 3000 features to avoid long delays when the task is uploaded from ConfirmConnect devices.

Fast Defects
- Only Fast Defects will appear in the list of defects available to users, they use the following rules: -
  - The Defect Type Classification must be set to Internal.
  - The Defect Type may only be linked to one SOR Group.
    - Note: The SOR Group will only be available if the user has data security access to at least one of the SOR Items in he Group.
  - The SOR Item download conditions listed on Defects also apply for Fast Defects.
    - Note: SOR Items are automatically added to the Fast Defect if your user's Data Security Group has access to the SOR Schedule Device Data Key.

Routine Works

Setting up ConfirmConnect® with Routine Works data

Requires Confirm host "AM - Routine Maintenance 0720" & "ConfirmConnect® Jobs 7030".

Several steps are required in order to see Routine Works appear on ConfirmConnect®. The steps below detail what is needed:
• A Routine Maintenance Regime has been created.
• Your chosen Regime has been applied to One or more Features on one or more Sites. This can be done using the Regime Allocation tools.
• The Set Regime Due Date has been used to set an initial due date on each Regime Item retrieved from chosen filter criteria.
• Now that you have applied a regime to one or more features, you need to Allocate a Gang to each SOR Item required on that Regime. This can be done by using the Default Gang Allocation tool.
• Finally, you need to specify a Device Action Officer for your chosen Gang/s.
• Routine Works are due within the Routine Works earliest Due Date Tolerance.

This officer will receive the Routine Work tasks. Each task will contain a Feature on a Site with all of the applicable Regime Items for each Gang this officer is specified for and which are applicable to that feature.

Document Upload Process

This section describes the process of uploading a Document Link into Confirm.

When a document is uploaded into Confirm, it is stored using one of the following methods:

• FTP Site
• Document Management System (DMS)
• File Store
• Database

The document upload process is configured based on the Document Links System Settings. Further to this, the process of uploading documents for Street Work Inspections is also configured through a combination of the Street Works Initiation System Settings and Organisation.

The upload process will attempt to upload documents into Confirm working through each method in turn until it is successful.

FTP Site

Note: This applies to documents uploaded for Street Work Inspections only.

Document Links will attempt to be uploaded to an FTP site if the following prerequisites are true:

• The Document Link FTP has been configured within the Street Works Initiation System Settings screen.
• a valid Attachment URL has been specified for the Initiating Organisation.

Document Management System (DMS)

Document Links will attempt to be uploaded to the DMS when the following prerequisites are true:

• The DMS must be accessed via a service that conforms to Document Management Web Application Interfacing Specification (CHA18373).
• The Document Store field has been set to Web (PUT/POST) on the Document Links System Settings screen.
• The Web Service URL has been configured within Document Links System Settings screen.

Note: Documents uploaded via Street Works will not use this step if FTP settings are in use. Instead, the document will be passed on to the Document Store Folder location. If FTP settings are not in use then the Street Works document link will attempt to be uploaded to the DMS.
Document Store Folder

If the Document Store Folder has been configured within the Document Links System Settings screen then the process will attempt to save the document to the specified location if the following condition is true:

• ConfirmConnect® web service has been given read/write permissions to the Document Store Folder location. These permissions must be granted to the user assigned to the application pool running the ConfirmConnect® web service.

Database

If attempts to save to other locations fail or are not configured, then the document will be saved within the database.

What's Going On Here and Select Routes

Select Routes

Select Routes functionality (from the Menu) uses the Earliest Follow Up field on the Inspection Type to determine which features qualify to be assignable to the officer.

What's Going on Here

Due Inspections and Routes

The Earliest Follow Up field on the Inspection Type is used to determine which features qualify to be assignable to the officer.

Features

All Features with a Contract Area available to the User's Work Group will be retrieved.

It is also possible to change the default icon so that each Feature can appear with a different symbol and background colour. See Web Map Symbol Settings for details.

Completed Jobs

Completed Jobs will appear if the following conditions are met:

• Contractor Officers will only see those Jobs which have the Preferred Contract set to a Contract awarded to their Contractor.
• The Jobs Actual Completion date has been set to any date.

Note: If a Job has been re-opened and assigned to an officer, it may still appear as a Completed Job if the Actual Completion date is still set. The Actual Completion Date can be cleared on the Confirm Job screen.

Current Defects/Jobs

Current Jobs will appear if the following conditions are met:

• The Job Status has its Outstanding flag checked
• Contractor Officers will only see those Jobs which have the Preferred Contract set to a Contract awarded to their Contractor.

Current Defects will appear if they are not linked to a Job.
GPS Tracking

GPS tracking for ConfirmConnect® uses the existing GPS tracking settings detailed below. It will create an Officer Location Transfer Tab each time the officer’s location is due to be sent to Confirm.

In order for GPS tracking to update Confirm with the officer's current location, an active connection on the officer’s device is required.

Configuration

1. Set the Frequency of storing GPS information, Distance Tolerance for logging GPS information and Tracking Frequency settings on the ConfirmConnect® System Settings screen.
2. Specify the tab file name and location that will be updated by the Referential Integrity Agent. This is set in the GPS Logging RI Tab File setting on the Map Settings screen.
3. Setup and configure the Referential Integrity Agent to run periodically to update the GPS Position Map Layer tab file.
4. Add the GPS Logging Layer to the Map so that the Action Officer current locations are shown.

Can GPS Tracking be turned off?

Yes, entering 0 in the Tracking Frequency setting on the ConfirmConnect® Settings screen will prevent the device from sending the officer location data up to Confirm.

Tracking in the Foreground

Foreground operation applies only when ConfirmConnect® is the active application on the device.

ConfirmConnect® will use the Frequency of storing GPS to track Officer's location on the device and upload to the server at the Tracking Frequency interval.

Tracking in the background

Background operation applies when any of the following applies:

- A different application is active (e.g. taking a phone call, reading emails)
- After pressing the home key
- When the device goes to sleep or is in standby mode

For Android and iOS devices, a combination of the Frequency of storing GPS and the Distance Tolerance settings are used. In background mode activity, i.e. movement, is used as the trigger for tracking, rather than being time based.

At walking speeds ConfirmConnect® only uses the Distance Tolerance and will upload to the server whenever the Officer has travelled that distance.

At driving speeds ConfirmConnect® uses an elastic distance filter that approximates the Frequency of storing GPS setting. If the Officer's speed is variable this may compress or extend the timing, however at a constant speed the timing will be evenly spaced.

The Tracking Frequency is not used in this mode, whenever the distance filter triggers the location will be sent to the server.

Note: When an iOS devices has been stationary for 2 or more minutes the Operating System will impose a 200 metre movement boundary before activity tracking is resumed, at which point ConfirmConnect® will behave in the background as above.
Walking survey - tracking based on distance only.

Driven survey - at constant speed the gaps are consistent

Driven survey - at variable speeds the gaps are variable. Closer in traffic and slower speeds, spread out at speed.

Setting up Mapping data

ConfirmConnect® can support a single, user-specified, background map which can be used to replace the default bing maps. This is done by configuring some Map Settings that will read from any of the following Mapping Services:
• Bing
• Tile Services
• Web Mapping Service (WMS)
• Local SQLite Maps

Please refer to each section on how to configure the Map Settings required for ConfirmConnect® to use your chosen mapping service.

I have my own Map Service, how do I get ConfirmConnect® to use it?
There are two ways to store the Map Settings required for your mapping service, these are: -

• Settings.js file. This allows each device to be configured independently from each other.
  Note: Removing ConfirmConnect® from the device will also remove the settings.js file. The presence of a settings.js file will override any settings stored in the database.

• Confirm Database. This applies to all users of ConfirmConnect® who do not currently have a settings.js file loaded on their device. Database settings are applied using the Web Map Layer Settings screen in the Confirm Client. You will need a settings.js which has been configured and tested with the service you require.

We suffer from black spots, can we use maps locally on devices?
Yes, ConfirmConnect® can be configured to hold maps locally on the device so there is no reliance on an active Internet connection in order to see them. This is available using one or more local SQLite databases, for more details see the section on configuring Local SQLite Maps.

Note: This is not the same as map caching.

Multiple Map Layers
When you need to use map layers from one or more mapping sources please refer to the Multiple Map Layers section of the help.

Bing™ Maps

Mapping for ConfirmConnect® uses Bing maps by default, the only requirement is to have an active connection to the Internet.

If ConfirmConnect® is unable to connect to the Internet, the maps will not be displayed.

Caching Bing maps

Bing maps can be cached on ConfirmConnect® for a 24 hour period, after which ConfirmConnect® must have an active connection to the Internet in order to update the cached mapping data.

Note: Map Caching only occurs when ConfirmConnect® has a wireless network connection due to the quantity of data downloaded.

Note: Map Caching is disabled for the Win32 version of ConfirmConnect®. This has been done as there is currently no method to identify if the Win32 client has a Wireless or 3G/GPRS connection.
Tile Services

Overview of a Tile Server

Tile services provide a grid of uniformly sized images (typically 256x256 pixels) with a different set of images for each zoom level / resolution.

Each tile is uniquely identified by the combination of row (y) and column (x) of that tile in the grid for the zoom level (z).

The URL for a tile is found by taking these values and substituting them into a placeholder in the "url" parameter provided to ConfirmConnect®. For example, if the url in ConfirmConnect® was set to:

"http://stratus.pbondemand.eu/connect/gettile?mapcfg=Main&name=Base&level=${z}&row=${y}&col=${x}&output=image/gif"

Then the URL generated for zoom level 3, row 5 and column 7 would be:

"http://stratus.pbondemand.eu/connect/gettile?mapcfg=Main&name=Base&level=3&row=5&col=7&output=image/gif"

Note: For tile services the row starts at the top (north) and increases going south, which is the opposite from the way that coordinates typically go. This is depicted in the following diagram:

In order to work out the column, row and zoom of the tile that ConfirmConnect® needs for a particular map coordinate (x,y) it goes through the following process:

- The zoom is set to the zoom level. Zero is the most zoomed out level.
- The resolution is determined from the zoom level.
- The distance of the x and y from the tile origin is determined (top left corner of the maximum extent of the map).
- These distances are converted to pixels by dividing them by the resolution.
- The distances in pixels are then divided by the tile size and rounded down to determine the row and column.

For example, if a Tile server had an origin of 0,1000000 a tile size of 256x256 pixels and resolutions 1000,500,250,125 then the row and column for point 400000,300000 at the second most detailed zoom level would be calculated as follows:

- Zoom is 1 (as the least detailed zoom level is zero).
- The resolution is 500 (second item in the list of resolutions).
- Distance from origin is 400000 for x and 700000 for y (1000000 – 300000).
- These distances in pixels are 800 for x and 1400 for y.
• The column is therefore 3 (800 / 256, is 3.125 rounded down) and the row is 5.

In the above example, this would generate the following URL:
"http://stratus.pbondemand.eu/connect/gettile?mapcfg=Main&name=Base&level=1&row=5&col=3&output=image/gif"

ArcGIS Tile Cache

The below is an example settings.js file for use with an ArcGIS Tile Cache.

```json
{
  "mapSettings": {
    "roads": {
      "type": "ArcGisCache",
      "url": "Server Name/ArcGIS/rest/services/Map Name/MapServer",
      "resolutions": [
        92.6043518753704,
        26.4583862501058,
        13.2291931250529,
        6.61459656252646,
        5.29167725002117,
        3.96875793751588,
        2.64583862501058,
        1.32291931250529,
        0.661459656252646,
        0.264583862501058
      ],
      "tileSize": [512, 512],
      "tileOrigin": [-5220400, 4470200],
      "projection": "EPSG:27700",
      "projectionDef": "+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no_defs",
      "units": "m",
      "restrictedExtent": [230000, 629267, 320000, 704092],
      "maxExtent": [230000, 629267, 320000, 704092]
    }
  }
}
```

How do I obtain the settings required for the above?

Most of the required settings can be determined by querying the map layer to get its properties, by appending "?f=json&pretty=true" to the end of the url in a browser, e.g.:

http://server name/ArcGIS/rest/services/map name/mapserver?f=json&pretty=true

This will return a JSON description of the map from which the settings can be obtained:

```
"type": this value must be set to "ArcGISCache"

"url": This is the base URL for the ArcGIS Tile Cache.

"resolutions": Enter a list of all the resolutions required for ConfirmConnect®.

Find the section that begins with "lods" under "tileInfo" and list the resolution values separated by commas.

e.g. "resolutions" : [42.3334180001693, 21.1667090000847, 10.583354500423],
"tileSize": This is in the "tileInfo" section. List the values for "rows" and "columns" separated by a comma. e.g. [256, 256] or [512, 512].

"tileOrigin": List the "x" and "y" found under "tileInfo" > "origin"

"projection": Refer to Projections page for details.

"projectionDef": Refer to Projections page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"restrictedExtent": List the xmin, ymin, xmax, ymax values. These are shown under the "fullExtent". It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

"maxExtent": Set to the same as the "fullExtent" entered in the "restrictedExtent" entry. It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

**Spatial Server**

The below is an example settings.js file for use with a Web Map Service.

```javascript
{
    "mapSettings":{
        "roads":[
            "type": "TileServiceLayer",
            "url": "server name/rest/EnterpriseMapping/MapTilingService",
            "mapName": "Map Folder/Map Name",
            "maxResolution": Maximum resolution,
            "projection": "Projection Code",
            "projectionDef": "Projection Definition",
            "units": "m",
            "maxExtent": [Maximum extent]
        ]
    }
}
```

"type": this value must be set to "TileServiceLayer"

"url": This is the base URL for the Spatial Server named tile service.

"mapName": Map Folder/Map Name - as configured in your mapping service.

"maxResolution": Maximum resolution - as configured in your mapping service.

"projection": Refer to Projections page for details.

"projectionDef": Refer to Projections page for details.

"units": must be entered as "m", as shown in the example. m = metres.
"maxExtent": This is the minimum and maximum northings and eastings that the map covers. It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X, Minimum Y, Maximum X, Maximum Y

**Stratus**

The below is an example settings.js file for use with a Stratus service containing a Base and Business layer.

```javascript
{
  "mapSettings":{
    "roads":{
      "type": "Group",
      "projection": "EPSG:27700",
      "projectionDef": "+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no_defs +nadgrids=ostn02 ",
      "attribution": "(c) Crown Copyright",
      "maxResolution": 390.625,
      "maxExtent": [531000.0, 161000.0, 631000.0, 261000.0],
      "layers": {
        "Base": {
          "type": "StratusLayer",
          "url": "Servername/folder/controller/tiling/gettile?mapcfg=Configuration%20Name&name=Map%20Name&level=${z}&row=${y}&col=${x}&output=image/gif",
          "Business": {
            "order": 1,
            "type": "StratusLayer",
            "url": "Servername/folder/controller/mapping/getmap?layers=/foldername1/foldername2/Layer%20Name&width=${tw}&height=${th}&x=${bx}&y=${by}&zoom=${bw}&srs=EPSG:27700&output=image/png"
          }
        }
      }
    }
  }
}
```

"type": this value must be set to "StratusLayer"

"url": This is the base URL for the Stratus service.

"maxResolution": Maximum resolution - as configured for your map service.

"projection": Refer to **Projections** page for details.

"projectionDef": Refer to **Projections** page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers.
It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X, Minimum Y, Maximum X, Maximum Y

The following settings are only required for Stratus Business layers:

"tw" and "th": These are the tile Width and Height.

"bx" and "by": These are the coordinates of the tile bounds.

"bw": The width of the tile bounds in Map units.

**Generic Tile Server**

There are various different Tile Services options available, if you are using one which is not mentioned previously then you can configure ConfirmConnect® using the details here.

```json
{
    "mapSettings":{
    "roads":{
        "type": "XYZ",
        "url": "URL with placeholders for $\{z\}, $\{y\} and $\{x\}\",
        "resolutions": [Resolution list],
        "tileSize": [tile size],
        "tileOrigin": [Tile origin],
        "projection": "Projection Code",
        "projectionDef": "Projection Definition",
        "units": "m",
        "restrictedExtent": [Restricted extent],
        "maxExtent": [Maximum extent]
    }
}
```

"type": Set this value which is applicable to your Tile Service.

**Note**: If your tile service is one based, rather than zero based (i.e. the most zoomed out zoom level is 1 and the first row and column is 1 rather than 0), then use a "type" of "StratusLayer" rather than "XYZ".

"url": This is the full URL for an individual tile. ConfirmConnect® will substitute in the relevant zoom, row and column into the $\{z\}, $\{y\} and $\{x\} placeholders.

"resolutions": Enter a list of all the resolutions required for ConfirmConnect®.

e.g. "resolutions" :[42.3334180001693, 21.1667090000847, 10.5833545000423],

"tileSize": This is the width and height of an individual tile, in pixels.

e.g. [256, 256] or [512, 512].

"tileOrigin": This is the coordinates of the top left hand corner of the tile at row zero, column zero. This is only needed if it is different from the maxExtent

"projection": Refer to [Projections](#) page for details.

"projectionDef": Refer to [Projections](#) page for details.
"units": must be entered as "m", as shown in the example. m = metres.

"restrictedExtent": This is the maximum extent of the map that a user would be allowed to see. Does not need to be supplied if this is the same as the maxExtent below.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers. It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

**Web Map Service (WMS)**

The below is an example settings.js file for use with a Web Map Service.

```javascript
{
  "mapSettings":{
    "roads":{
      "type": "WMS",
      "url": "Service URL",
      "projection": "Projection Code",
      "projectionDef": "Projection Definition",
      "units": "m",
      "maxExtent": [Maximum extent],
      "parameters": {
        "layers": ["Layer name"]
      }
    }
  }
}
```

"type": this value must be set to "WMS"

"url": This is the base URL for the WMS service. e.g. "http://www.osmgb.org.uk/ogc/wms":

To test this in a browser, enter the base URL followed by "?Service=WMS&REQUEST=GetCapabilities", e.g. if the base URL was "http://www.osmgb.org.uk/ogc/wms" then enter: [http://www.osmgb.org.uk/ogc/wms?REQUEST=GetCapabilities](http://www.osmgb.org.uk/ogc/wms?REQUEST=GetCapabilities)

This should return an XML document describing the capabilities of the service.

**Note:** Do not include anything after the "?" in the Service URL setting for ConfirmConnect®.

"projection": Refer to [Projections](#) page for details.

"projectionDef": Refer to [Projections](#) page for details.

"units": must be entered as "m", as shown in the example. m = metres.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers.
It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

"parameters": You can add other parameters to this list in the format "name":"Value". These will be added to the end of the URL that is sent to the WMS service in the format "&NAME=Value".

The following parameters are currently supported (all in lower case):

• “format”:
• “transparent”:
• “login”:
• “password”:
• “country”:
• “key”:
• “product”:
• “url”:
• “tiled”:
• “resolutions”:
• “tileOrigin”:
• “maxExtent”:
• “layers”:

Note: "layers" - You may specify a single layer in this list. Multiple layers are currently not supported.

Note: All parameters are passed in plain text, so be aware of this when passing passwords and other secure information over the network.

Cached WMS
Some WMS services, such as Geoserver, pre-cache data on the assumption that the client will always ask for discrete ranges of data. If this is the case then you may also need to provide other tile-related parameters in the settings, such as the list of "resolutions" and the "tileOrigin" or "maxExtent". Most vendors provide OpenLayers examples of how to access their services, so you can obtain most of the settings you need from these examples.

Local SQLite Maps
ConfirmConnect® can access local vector and raster maps stored in SQLite databases.

The steps involved in getting local SQLite maps onto your device are as follows:

• Convert your maps into the SQLite format
• Prepare the map settings
• Copy the settings and SQLite files onto your device

Converting Maps to SQLite Format
We recommend using the tools provided in the Geospatial Data Abstraction Library (GDAL) to convert map data into the SQLite format. You will need to use a version of this tool that support SQLite databases, which can be obtained from:

• https://www.gisinternals.com/release.php
• Select a package for your environment. e.g. release-1900-gdal-2-3-0-mapserver-7-0-7
• From the available list, download the file with the description “Generic installer for the GDAL core components”. e.g. gdal-203-1900-core.msi

**Note:** The GDAL tools, in theory, can also extract data from spatial databases such as Oracle / SQL Server Spatial or ArcSDE. However, we are not able to offer support on using the tools in this way.

### Converting Vector Maps

Vector mapping formats include MapInfo TAB files and ESRI SHP files. These types of map are stored in the SQLite database using the SpatiaLite format. Vector maps can be converted to the SpatiaLite format using the “ogr2ogr” utility provided with the GDAL tools. A typical command line might look like this:

```
ogr2ogr -f "SQLite" -dsco SPATIALITE=yes -nlt GEOMETRY -simplify 1 -select featcode,labeltext -gt 65536 mydb.sqlite mymap.TAB
```

Some of the most commonly used options are described below:

- `-f "SQLite"` This setting tells the ogr2ogr utility to translate into SQLite format and must always be specified when converting vector maps.

- `-dsco SPATIALITE=yes` This is needed when creating a database for the first time to ensure that the SpatiaLite vector format is used. **Note:** This parameter is not needed if you are adding a new table to an existing database or refreshing an existing table.

- `-append` Use this option to add a new table to an existing database.

- `-overwrite` Use this option to replace the content of an existing table, e.g. if newer versions of the map become available.

- `-nlt GEOMETRY` The ogr2ogr utility will attempt to determine the geometry type (e.g. point, line, polygon, multi-polygon, etc.) from the source data. However, in some cases where there is a mixture of types in the source table this isn't reliable. The “-nlt GEOMETRY” option ensures that the created table is able to support all geometry types.

- `-simplify` If you are using maps that might be used at wide zoom levels then performance can be significantly improved by using the "-simplify" option. This takes a tolerance parameter which is in map units (typically metres) and summarises all of the coordinates from a geometry that are less than this distance apart into a single coordinate.

- `-select` By default, all of the attribute data in the source layer will be copied into the SpatiaLite table. If you have a particularly large layer with lots of attributes than you may be able to save some space on the device by limiting the number of attributes that are copied into the SpatiaLite database. If specified, you will need to ensure that any attributes that you want to use for styling, labelling or information are included in this list.

- `-gt` This option determines how many features will be loaded into memory at a time before being written to the SpatiaLite database. Most modern computers have sufficient memory to support a large value here, which will significantly speed up the conversion process.
**Note:** This has no impact on the end result or the amount of memory needed on the actual device.

- **mydb.sqlite** This is the name of the SQLite database that will be produced
- **mymap.TAB** This is the name of the source file from which the vector data is being copied.

### Preparing map settings for SpatiaLite maps

A SpatiaLite map can be configured in the settings.js file using settings similar to the following:

```javascript
{
    "mapSettings": {
        "roads": {
            "type": "SpatiaLite",
            "url": "mydb.sqlite",
            "table": "mymap",
            "column": "geometry",
            "projection": "EPSG:27700",
            "projectionDef": "+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no_defs +nadgrids=ostn02",
            "attribution": "(c) Crown Copyright",
            "maxExtent": [290000, 190000, 510000, 410000],
            "numZoomLevels": 25,
            "style": {
                "fillColor": "orange",
                "fillOpacity": 0.5,
                "strokeOpacity": 0.2,
                "strokeWidth": 1
            },
            "styleBy": "featurecode",
            "styles": {
                "10021": {"fillColor": "red"},
                "10053": {"fillColor": "brown"},
                "10172": {"fillColor": "grey"},
                "10111": {"fillColor": "green"}
            },
            "info": "Feature Type: \$\{featurecode\}"}
    }
}
```

- **"type":** this value must be set to "SpatiaLite"
- **"url":** This is the name of the SQLite database. ConfirmConnect® will search for the database in the normal "root" location for your device.
  
  **Note:** This value is case sensitive and must include the file extension e.g. "mydb.sqlite".

- **"table":** The name of the SpatiaLite table in the database.
  
  **Note:** Only one table can be specified here. To view data from multiple layers, you will need to use a **Group Layer**.
"column": This is the name of the column in the SpatiaLite table that contains the geometry of the feature. This is normally called "geometry".

"projection": Refer to Projections page for details.

"projectionDef": Refer to Projections page for details.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers. It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

"numZoomLevels": Specify how many zoom levels will be supported. Zoom levels start at the maximum extent and increase by a factor of two at each step.

"style": This is a style definition in the format described below.

"styleBy": You can style map features based on an attribute by using the styleBy setting with a list of styles definitions, where each style name corresponds with the value of the styleBy attribute, e.g.

"style": {"fillColor": "orange", "fillOpacity": 0.5, "strokeOpacity": 0.2},
"styleBy": "featurecode",
"styles": {
  "10021": {"fillColor": "red"},
  "10053": {"fillColor": "brown"},
  "10172": {"fillColor": "grey"},
  "10111": {"fillColor": "green"}
}

"info": ConfirmConnect® is able to display basic information from SpatiaLite layers when the user clicks on the map. To enable this, include an "info" setting which should contain the text you want to show with placeholders for the various data fields you want to include from the map, e.g.:

"info": "Feature Type: ${featurecode}"

**Vector Style Definition**

Styles are defined using a number of different properties surrounded by curly brackets {}. For example:

```
{
  "fillColor": "#ff8800",
  "fillOpacity": 0.5,
  "strokeOpacity": 0.2,
  "strokeWidth": 1
}
```

The following style properties are supported:

- **"fillColor"**: The color in which polygons and the inside of symbols will be filled. Can be supplied as a Red-Green-Blue (RGB) hex value, e.g. "#ffffff" is white, or a colour name, e.g. "blue", "black", etc. Note that not all colour names may be supported on all devices, so it is safest to use an RGB value.

- **"fillOpacity"**: 1 is fully opaque, 0 is fully transparent
"fill": Whether to draw polygons. Defaults to "true". Set this to "false" if you want to have a layer that just shows labels without the associated feature.

"strokeColor": The RGB color used for lines and the outline of polygons and symbols.

"strokeOpacity": 1 is fully opaque, 0 is fully transparent.

"strokeWidth": The width of outlines in pixels.

"stroke": Whether to draw lines. Defaults to "true". Set this to "false" if you want to have a layer that just shows labels without the associated feature.

"graphic": Whether to draw points for certain features when using styleBy. Defaults to "true". Set this to "false" if you want to have a layer that just shows labels without the associated feature.

"graphicName": The name of the symbol used for drawing points. The default is a circle. Valid options are "circle", "square", "triangle", "cross" and "x".

**Note:** This option requires "pointRadius" option to exist in order to work, not including "pointRadius" will prevent the layer from appearing when you include the "graphicName" option.

"pointRadius": Size of the drawn points. Set this to "1" or a higher, value is valid. Setting to 0 is an invalid option.

**Note:** If you want to have a layer that just shows labels without the associated feature, do not include this or the "graphicName" options.

"label": The text displayed next to a feature. Can include attributes from the layer by including these in placeholders, e.g. "${feature_type}"

"labelAlign": How the label text will be aligned with the centroid of the feature. The first character is the horizontal alignment, which can be "l"eft, "r"ight or "c"entre and the second character is the vertical alignment: "t"op, "b"ottom or "m"iddle. e.g. "cm" will centre the label both horizontally and vertically.

"fontColor": The RGB colour used for labels.

"fontOpacity": 1 is fully opaque, 0 is fully transparent.

"fontStyle": "normal", "italic" or "oblique".

"fontWeight": "normal", "bold", "bolder", "lighter" or a number from 100 to 900 (whole hundreds only).

"fontSize": The size of the font to use, typically specified in pixels, e.g. "16px"

"fontFamily": The name of the font to use. Note that your device may only support a limited set of fonts, but the generic families of "serif" and "sans-serif" should work on all devices.

"labelOutlineColor": Used to draw a "halo" around text labels to make them stand out more.
"labelOutlineWidth": The width of the label outline in pixels.

"labelOffsetX": The horizontal offset of text labels in pixels, e.g. "10"

"labelOffsetY": The vertical offset of text labels in pixels, e.g. "10"

## Converting Raster Maps

Raster maps are image files with associated georeferencing information describing where they are in the world. Typical raster formats include TIF, PNG and JPEG files. In some cases the georeferencing information is embedded within the file (in the case of a GeoTiff) or in other cases it is contained in an accompanying World File or Tab file.

**Note:** When the georeferencing information is contained in the accompanying World file or tab files, ensure these files exist alongside the raster files prior to importing, this will ensure the georeferencing information is also imported.

Raster maps are stored in SQLite using the RasterLite format. The `gdal_translate` utility is used to load raster image files into a SQLite database. A typical command line might look as follows:

```bash
gdal_translate -of Rasterlite -co DRIVER=PNG input.tif RASTERLITE:mydb.sqlite,table=myraster
```

Some of the most commonly used options are described below:

- `-of "Rasterlite"` This setting tells the `gdal_translate` utility to translate into Raster Lite format and must always be specified when converting Raster maps.

- `-co DRIVER=PNG` This specifies the image format that will be used when storing the raster data in the database. When source images are anything other than JPEG or PNG, this setting is mandatory.

  "PNG" format is recommended as it has high compression without any data loss.

  **Note:** Supported options are JPEG or PNG

- `input.tif` The name of the source image file

- `mydb.sqlite` The name of the SQLite database

- `myraster` The table name into which the image will be loaded.

- `-co WIPE=YES` If you want to refresh an existing database with new versions of your raster maps, then you must include the "-co WIPE=YES" option with the first image that you load which will clear all of the old images out of the existing table.

- `-expand RGB` Some types of raster image use a colour palette to lookup the appropriate Red, Green and Blue value for each pixel in an image. If your images use a colour palette then you will need to add the "-expand rgb" option as otherwise the colours of your maps will not be displayed properly in ConfirmConnect®. You can find out if your images use a palette using the `gdalinfo` utility with the "-noct" option, e.g.:

  ```bash
gdalinfo -noct input.tif
  ```
Look for the lines that begin with "Band" and check the "ColorInterp" value. If this says "Palette" then you will need to use the expand option with this set of files.

Typically a large number of raster maps are provided which fit together to form a mosaic of the entire area you are interested in. The above command can be repeated to append further maps into an existing table.

**Note:** A separate table name should be used for maps that show different levels of detail.

The `gdal_translate` utility is only able to translate one image at a time. To assist in translating multiple images you might find it useful to create a batch file as follows:

```bash
@ECHO OFF
SETLOCAL ENABLEDELAYEDEXPANSION
set WIPE=-co WIPE=YES
for %%f in ("%1") do {
  ECHO %%f
gdal_translate -of Rasterlite !WIPE! -co DRIVER=PNG %4 %5 %6 "%%f" RASTERLITE:"%2",table="%3"
  set WIPE=
}
```

If you were to name this file "ConvertRaster.bat" then a typical usage might be as follows:

```
ConvertRaster *.tif mydb.sqlite myraster -expand rgb
```

### Preparing map settings for RasterLite maps

A RasterLite map can be configured in the settings.js file using settings similar to the following:

```json
{
  "mapSettings":{
    "roads":{
      "type": "RasterLite",
      "url": "mydb.sqlite",
      "table": "myraster",
      "projection": "EPSG:27700",
      "projectionDef": "+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no_defs +nadgrids=ostn02",
      "attribution": "(c) Crown Copyright",
      "maxExtent": [290000,190000,510000,410000],
      "numZoomLevels": 25
    }
  }
}
```

- **"type":** this value must be set to "RasterLite"
- **"url":** This is the name of the SQLite database. ConfirmConnect® will search for the database in the normal "root" location for your device.
- **"table":** The name of the RasterLite layer in the database.
  - **Note:** Only one table can be specified here. To view data from multiple layers, you will need to use a **Group Layer**.
- **"projection":** Refer to [Projections](#) page for details.
"projectionDef": Refer to Projections page for details.

"maxExtent": This is the minimum and maximum northings and eastings that the map covers. It is specified as a comma separated list of coordinates inside the square brackets as follows: Minimum X,Minimum Y,Maximum X,Maximum Y

"numZoomLevels": Specify how many zoom levels will be supported. Zoom levels start at the maximum extent and increase by a factor of two at each step.

Copying the maps onto your device

See the section on copying files onto devices for detailed instructions on how to copy SQLite databases and settings onto your device.

Multiple Map Layers

ConfirmConnect® only allows the "Roads" layer to be defined when customising map settings. However, it is possible to overlay data from multiple sources on top of each other using a "Group" layer. This might be useful where background data is stored in a Tile Service but additional layers are only available in a separate WMS service.

Group Layers are also likely to be needed when working with local vector or raster data as one would typically not want to show all layers at all zoom levels (in fact, ConfirmConnect® will automatically limit the number of features displayed from any one SpatiaLite layer to 2000).

The group layer sets overall properties that are shared between layers within that group and also determines the zoom levels at which different layers are displayed. A typical settings.js file with a Group layer might look like this:

```javascript
{
    "mapSettings": {
        "roads": {
            "type": "Group",
            "projection": "EPSG:27700",
            "projectionDef": "+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no_defs +nadgrids=ostn02",
            "attribution": "(c) Crown Copyright",
            "maxExtent": [290000, 190000, 510000, 410000],
            "resolutions": [33.866734, 16.933367, 8.466684, 4.233342, 2.11667, 1.058335, 0.5291675, 0.264584, 0.132292, 0.066146],
            "layers": {
                "Overview": {
                    "minimumResolution": 2.11667,
                    "order": 1,
                    "type": "RasterLite",
                    "url": "raster.sqlite",
```
"table": "overview"
},
"Place Labels": {
  "maximumResolution": 0.264584,
  "order": 3,
  "type": "SpatiaLite",
  "url": "labels.sqlite",
  "table": "CartographicText",
  "column": "geometry",
  "style": {
    "label": "${textstring}",
    "labelAlign": "cm"
  }
},
"Features": {
  "maximumResolution": 1.058335,
  "order": 2,
  "type": "SpatiaLite",
  "url": "areas.sqlite",
  "table": "TopographicArea",
  "column": "geometry",
  "style": {
    "fillColor": "orange",
    "fillOpacity": 0.5,
    "strokeOpacity": 0.2,
    "strokeWidth": 1
  },
  "styleBy": "featurecode",
  "styles": {
    "10021": {"fillColor": "red"},
    "10053": {"fillColor": "brown"},
    "10172": {"fillColor": "grey"},
    "10111": {"fillColor": "green"}
  },
  "info": "Feature Type: ${featurecode}"
}
}

"type": This value must be set to "Group"

"projection": The projection for all of the layers in the Group. Note that all layers must share
the same projection. Refer to Projections page for details.

"projectionDef": Refer to Projections page for details.

"maxExtent" These settings are determined by the layers that are contained within the group
and must be consistent for all layers in the Group. Typically, if the group contains
a Tile Service then the settings from the tile service should be used. If only local
SQLite maps are being used then it is possible to simply specify the "maxExtent"
and "numZoomLevels".

"resolutions" "maxResolution"

"numZoomLevels":

"layers": This contains the list of layers that are contained within the group, enclosed in
curly brackets {}. Each layer should be given a unique name, followed by a colon
and then the specific settings for that layer.

In addition, the following settings can also be specified for each layer:
"minimumResolution": These determine when the layer is switched on and off as the user zooms in and out.

"maximumResolution": Values represent the number of metres to show per pixel on the current zoom scale. In other words the more detailed map you have the lower the setting you should use. For example:

"minimumResolution": 0.0 will never turn off the layer no matter how far in you zoom.

"maximumResolution": 5.0 would show items until the user zooms out beyond 5 metres per pixel. This equates to an approximate scale of 1:20000 (1 metre screen size = 20000 distance to the ground) on a 96dpi device.

"order": Use the "order" to control which layers appear on top if more than one can be displayed at a time (e.g. draw labels on top of areas). The layer with the highest order appears on top.

**Projections**

ConfirmConnect® is able to transform all data coming from Confirm into your specified coordinate system so that it can be displayed properly on the map. The popular visualisation system (EPSG:3785) used by Google and bing is included as standard, but for other coordinate systems the definition needs to be given. These are required for all map service types.

"projection": This is the EPSG code of the coordinate system that you want to use. E.g. "EPSG:27700" is the EPSG code for British National Grid.

"projectionDef": ConfirmConnect® uses the Proj4 format for coordinate system definitions.

You can find the Proj4 definition for your coordinate system here: [http://spatialreference.org/](http://spatialreference.org/).

For example, [http://spatialreference.org/ref/epsg/27700/proj4/](http://spatialreference.org/ref/epsg/27700/proj4/) gives:

```
+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no_defs
```

**Note:** Enter this on a single line in the projectionDef parameter.

**Grid Shift**

Some countries apply a grid shift in order to provide high accuracy coordinate conversions from default GPS coordinate systems into their own native coordinate systems. For example, in the UK the Ordnance Survey base maps use the OSTN02 grid. See the section entitled The National Grid transformation OSTN02 on the Ordnance Survey website for details.

In order for ConfirmConnect® to accurately plot tasks in countries where this type of conversion is required, Pitney Bowes needs to be notified of the grid used so the grid shift file can be included. These files have not all been included by default due to their initial size and potential performance implications.

The OSTN02 grid shift file has been included with ConfirmConnect®, if you use OS background maps, you will need to include an additional projectionDef value. Append '+nadgrids=ostn02' onto the end of the current line. For example:

```
+proj=tmerc +lat_0=49 +lon_0=-2 +k=0.9996012717 +x_0=400000 +y_0=-100000 +ellps=airy +datum=OSGB36 +units=m +no_defs +nadgrids=ostn02
```
Navigate to Task

ConfirmConnect® can launch a native Navigation application on the device to provide the user with turn by turn directions to the Task concerned.

The default is to use Google Navigation on all devices except Windows 8+ where Microsoft Maps is used.

**Note:** Google Maps will need to be installed for this to work

The default can be overridden by adding a "navigateTemplate" setting to the "settings.js" file on the device. On Android devices this setting corresponds to the URI that ConfirmConnect® will invoke with the "ACTION_VIEW" intent. On other devices it is a URI that will automatically launch the associated app.

If you need to customise this setting consult with the technical documentation for your Navigation application to determine the appropriate URI to use. Use the "${lat}" and "${lon}" placeholders to substitute the latitude and longitude of the Task into this template.

An example "settings.js" file to launch the **Waze** application is shown below:

```javascript
{
  "navigateTemplate": "waze:///?ll=${lat},${lon}&navigate=yes"
}
```

**iOS only:** To launch the Apple Maps app use the following:

```javascript
{
  "navigateTemplate": "http://maps.apple.com/?daddr=${lat},${lon}"
}
```

**Android only:** An example "settings.js" file to launch the default Navigation app is shown below:

```javascript
{
  "navigateTemplate": "geo:0,0?q=${lat},${lon}"
}
```

**Can we use both custom maps and Navigation?**

Yes, both navigation and custom map settings can be combined in the settings.js file using standard JSON conventions, e.g.:

```javascript
{
  "navigateTemplate": "...",
  "mapSettings": {...}
}
```

**Troubleshooting**

**Navigation icon does not appear on Android:**

- On Android devices the native container must be version 5 or later

Nothing happens when clicking the navigation icon

- Check that the Google Maps application is installed (Android and iOS) or Microsoft Maps (Windows 8+)
- Check that a generic URL based link works using the following settings:

```javascript
{
  "navigateTemplate": "http://maps.google.com?saddr=My+Location&daddr=${lat},${lon}"
}
```
Use the Navigation Test page from theConfirmConnect® web site to test your navigation template from the browser on the device. The example below will launch the Waze application using the coordinates specified as the required destination:

**Note:** This test page requires GPS location to be on the device browser to establish the starting location for the route. The test page can be found in the root of the web service and is called TestNavigation.html.

Make sure that ConfirmConnect® is re-started before applying any custom settings

iOS is only showing Apple Maps and ignoring my navigationTemplate setting

On iOS, versions of the native container prior to version 5 only support navigation templates that begin with "http" or "https". From version 5 onwards the following prefixes are allowed: "citymapper", "comgooglemaps", "navigon", "transit", "waze", "yandexnavi", "uber", "tomtomhome", "com.sygic.aura", "here-route" and "moovit"

Creating the Settings.js file

Create a blank document and name it settings.js. To populate the settings.js file you need to refer to the pages below for your required Map Tile Service.

- ArcGIS Tile Cache
- Spatial Server
- Stratus
- WMS

If your tile server is not one of the ones listed above, then you will need to configure the Map Settings using the example shown [here](#).

All of the examples show how to configure the "roads" background mapping. By default ConfirmConnect® will use Bing for Aerial mapping, but this can also be configured by including an "aerial" map settings. For example:

```json
{
    "mapSettings": {
        "roads": {
            "** Put the settings for your roads maps here **
        }
    }
}
```
"aerial":{
  "** Put the settings for your aerial maps here **"
}
}

In addition to the map options, it is also possible to add settings to include launching a Navigation application to show a route to the task.

**Copy the settings.js file to the device**

Once you have configured the settings.js file, refer to Copying Files to Devices to install them onto your chosen device/s.

**Copying Files onto Devices**

**Settings.js, FakeGPS.js and SQLite database files**

In order to copy the settings.js, fakeGPS.js and/or SQLite database files onto a device so that ConfirmConnect® can use them follow the steps below:-

**Android Devices**

1. Ensure ConfirmConnect® is not running.
2. Connect your Android tablet to your pc via a sync cable.
3. Once the device has been detected navigate to the devices route directory, this should contain folders: DCIM, Android etc.
4. Create a directory called “Confirm”.
5. Place the file/s into this directory.

**SQLite Databases on External SD Cards**

Android devices give you the additional option of placing the SQLite mapping databases on an External SD Card, doing so requires a change in the settings.js file.

1. Identify the full path to the root of the external SD card, for example "/storage/ext_sdcard". A file manager application can be used to identify the full path.
2. Create a Confirm directory on the root of the external SD card, for example "/storage/ext_sdcard/Confirm".
3. Enter the full path in the settings.js "url" field for each of your layers and prefix the path with file://, for example "file:///storage/ext_sd/Confirm/maps.sqlite"
   
   **Note:** You must maintain the 3 forward slashes and include the quotes shown in the example.

4. The settings.js (and fakegps.js if required) file must be placed in the Confirm directory on the internal device and not the external SD card, as explained in the previous steps.

**iOS Devices**

1. Connect the device to a PC or Mac and, using iTunes.
2. Ensure ConfirmConnect® is not running.
3. Select the device and then the Apps tab.
4. Select Confirm in the Apps section, this will display a section called Confirm Documents.
5. Click the add button and select the file.
6. Finally, sync the change to the device.
7. Start ConfirmConnect®.

Win32 Client
Win32 version of ConfirmConnect® requires the Settings and Fakegps files to be placed into the application data directory.

1. Ensure ConfirmConnect® is not running.
2. Launch Windows Explorer and navigate to "%LocalAppData%\ConfirmConnect"
3. Place the file/s into this directory.
4. Start ConfirmConnect®.

Note: This will need to be done for each user of ConfirmConnect® on each device.

Web Client
If you are using a browser such as Chrome to test or train with, you can use your map settings by performing the following.

1. On the server hosting the web service and client, place the file in the client folder e.g. "C:\inetpub\ConfirmConnect\Client".
2. Using a browser refresh the main Task list page.

Note: Web Browser caching can prevent the settings.js file from being loaded. The above steps should be enough but in cases where you are still not seeing your maps, try clearing the browser's cache. Close all browser windows and then relaunch the ConfirmConnect® page.

Faking a GPS signal
Faking a GPS signal can be used during training to show how ConfirmConnect® behaves in the field without needing to be on the move with an active GPS signal.
ConfirmConnect® will emulate a GPS signal which is moving by reading a series of coordinates stored in a text file which is manually copied to the device.

How do I setup fake GPS?
In order to have ConfirmConnect® use fake GPS, you must first create a file called fakegps.js Edit this file with a text editor such as Notepad. Enter details as shown below and ensure you replace the coordinates with coordinates you require.

```javascript
{
  "accuracy": 5,
  "interval": 1000,
  "positions": [ 
    [0.509681,51.275193],
    [0.509701,51.275173],
    [0.509721,51.275153],
    [0.509741,51.275133],
    [0.509761,51.275113],
  ]
}
```
[0.514781,51.270093]
}

Note: You may include any number of coordinates. Format is [X,Y],[X,Y]

The accuracy is in metres and determines the size of the blue “halo” around the current GPS location. The interval is in milliseconds and determines how often ConfirmConnect® will move to the next location in the file. When the last location is reached ConfirmConnect® will loop back to the start of the file and repeat this indefinitely.

Installing the fakegps.js file

Refer to the Copying Files onto Devices page for details on installing the fakegps file.
FAQ
This section will cover any frequently asked questions for the software.

Superseding Defects

Why hasn't my Defect been sent to Confirm?
With superseding Defects, the Defect will be linked to the Task is was first created against and not the one it was completed with.
For example:
• Inspection Route A and Inspection Route B both contain Feature 123 and are assigned to Officer ABC.
• Feature 123 has Defect 567 logged against it.
• Defect 567 is displayed in the Defects panel when viewing the Survey details of Feature 123 on both Inspection Routes.
• Tapping Defect 567, when viewing the Survey for Inspection Route A, displays the Defect details on a separate Defect page.
• Editing Defect 567 causes it to be superseded, and the superseding Defect will be displayed in place of Defect 567 on both Inspection Routes.
• The superseding Defect is associated with Inspection Route A, when it is Sent, because that was the Inspection Route from which it was superseded.

Note: Using the scenario, in the above example, the following clarifications apply:
• Using Send Now on the Defect 567 from the Survey on Inspection Route B will still upload Defect 567 as part of Inspection Route A.
• Completing the Survey on Inspection Route B will NOT send the Defect as the Survey for Inspection Route A has not yet been completed.

Font Size

How can I change the font size?
You are able to change the font size by tapping on the Menu and then the About button. This will present you a + and - button to increase or decrease the size of the font used by ConfirmConnect®.

Offline vs Online (caching)

What can I do when my device is offline?
ConfirmConnect® is designed to allow you to continue working even when your device has no connection to the server, e.g. no signal. This page will help you to identify what can and can not be done when your device is offline.

Online
When a device is online, full functionality is available to you.
Offline
When a device is offline, functionality is limited in the following ways:

Note: When any transfer task is unable to communicate to the server a “Server Error” message will be displayed. These tasks will continue to retry until successful.

- Completed tasks along with any Photos will be queued in the Transfer tab until a connection to the server is re-established.
- The Refresh Lookups menu option will queue each of the lookup requests on the Transfer tab and they will complete once a connection to the server is re-established.
- The Refresh button will queue a request to refresh your task list on the Transfer tab. Your task list will automatically refresh itself once a connection to the server is re-established.
- The Select Routes menu option will not work while offline and will just present an empty list. You can cancel from this screen and try again later.
- Requests for Features e.g. new Defect select Feature, will only display Features which have been cached on the device. ConfirmConnect® will also queue a request to the server for Features near to the location you have specified, so if the Feature you require isn’t available then you can save the item as a draft and come back to it later once a connection to the server has been re-established.
- Requests for Sites e.g. new Feature select Site, will only display Sites which are linked to other tasks on the device. ConfirmConnect® will also queue a request to the server for sites near to the location you have specified, so if the site you require isn’t available then you can save the feature as a draft and come back to it later once a connection to the server has been re-established.
- Maps - If you are using server based mapping services, you will only see maps if you have recently viewed that location or if the maps for the location have been cached when ConfirmConnect® was last connected via WiFi. See Map Caching below for further details.
- Whats Going on Here - these requests will not work while offline, a transfer message will appear in the transfer tab and will complete when a connection is established.
- A sign out request will not work. This is because the request needs to communicate with the server to release any assigned modules.

Feature Caching
ConfirmConnect® will cache any feature which is within a set distance of any Enquiry tasks.

- Enquiry has its own coordinates or is linked to a point Feature = point Features within 25m and non-point Features within 250m, or the distance set on the locate features system setting, of the point location.
- Enquiry is linked to a non-point Feature or not linked to a Feature = point Features within 25m and non-point Features within 250m, or the distance set on the locate features system setting, of the rectangle formed by the minimum and maximum Eastings and Northings of the Feature / Site the Enquiry is linked to

Feature Caching will also cache the Feature associated on any task you have on your task list, regardless of the task type.

Map Caching
ConfirmConnect® will perform a Map Caching task only when it is connected via WiFi to the ConfirmConnect® server and when no other transfers are currently taking place. This process will cache map tiles which surround each task in your task list. This will allow maps to be displayed when the device is offline.

Note: If Map Caching is Paused, it will remain in this state until you Resume.
**Note:** Map Caching is disabled for the Win32 version of ConfirmConnect®. This has been done as there is currently no method to identify if the Win32 client has a Wireless or 3G/GPRS connection.

**ConfirmConnect® Logging**

This section is for Confirm Administrators.

The ConfirmConnect® service can be configured to output log files in order to help diagnose any errors encountered. There are two types of logging that can occur:-

1. **Provider:** Provider logging will log process and error messages prior to accessing the database. For example: Login attempts and connection transactions between service and database.

2. **Tenant:** Tenant logging will log process and error messages between device, service and database when transferring data. For example: Download of lookups and signing in.

In addition to the above logging, the Confirm Connector will also be used to log process messages between client, service and database for any upload transactions such as the creation of a new defect or updating a Street Works inspection.

See the **Log File Format** specification for more details on the content of log files.

**How to configure ConfirmConnect® logging**

ConfirmConnect® uses several log files depending on the task being performed. The below is a list of each log file and how to configure them.

- **Provider log:** Configured in the server registry and shares the entry used by the Confirm Connector. Any log entries will be made into a log file of the same name with a prefix of "MS_"

- **Error log:** In addition to the Provider log, which will contain all the information (successful or not), an error log will also be generated. This log file name will have prefix of "ErrorMS_" and will only contain error information.

**Note:** Using the information shown in the above screen shot, the Provider Log files will be generated as follows: C:\Confirm\Logs\MS_provider.log and C:\Confirm\Logs\ErrorMS_provider.log

- **Tenant log:** Can be configured through the Confirm client in the same way as the current Confirm Connector log files. This is done by setting the **Logging** option to enabled and specifying a valid **Log File** entry on the **Connector Settings** screen. The ConfirmConnect® log file will be generated with a prefix of "MS_".
Troubleshooting Connection/Transfer Errors

Errors can occur when using ConfirmConnect® and this page is designed to help diagnose and resolve them.

ConfirmConnect® has three main components which work together with the main Confirm system to deliver its functionality.

2. ConfirmConnect® Service: Installed on a server. Downloads data from the main Confirm system to the ConfirmConnect® Client.
3. Confirm Connector: Installed on a server. Uploads data to the main Confirm system from ConfirmConnect® Client.

Server Based Errors

The following message is returned from the ConfirmConnect® Web Service.

- **Server is Busy**
  
  Server is busy message indicates that a connection to the server has been made but a response has yet to be received. This message will automatically retry after a period of time and does not require any further action.

Device Based Error Messages

The following is a list of errors that occur with the ConfirmConnect® Client.

- **Cannot Connect to Server. Check data Connection.**
  
  Occurs when a connection to the URL is not available. This means that the device has either gone offline or there is a temporary delay receiving data from the server. The transfer will be tried again when the timer reaches 0.

- **ConfirmConnect® service not found. Check URL.**
  
  ConfirmConnect® has connected to the server but the web service has not been found.

  If this error is encountered on the Sign in screen, the URL may have been entered incorrectly. Check with your Confirm Administrator that you have entered the correct URL.

  If this error is shown on the Transfer tab, it is likely that the WebSite is down. Check with your Confirm Administrator.

- **ConfirmConnect® service is currently unavailable.**
  
  ConfirmConnect® has found the web service but it is not working correctly.

- **Device is currently offline**
  
  Occurs when the timer on the **Cannot Connect to Server** message reaches 0 and the device has no 3G or Wireless connection.

  The **Retry Now** can still be used to retry the transfer once a 3G or Wireless connection has been re-established.

  **Note:** ConfirmConnect® will attempt the transfer again once the device regains a 3G or Wireless connection.

- **I have received one of the above errors, what do I do?**
  
  Perform the following steps to help identify where the problem lies:-
1. Does the device have an active 3G or Wireless connection? - Launch the Web Browser application on the device and perform a web search. If the web search succeeds, move to step b. If the web search fails, a connection will need to be re-established before transfers will continue or a login can be achieved.

2. Can the device browse the server URL? - Launch the Web Browser and navigate to the server URL, entered on the login screen, and append "testconnection.dita" onto the URL. If this page displays move to step c. If this fails, then the URL is not accessible to the device and you should check with those responsible for the web service.

3. Enter your login details and tap the test button. If results are returned, move to step d. If no results are displayed after 5 minutes and you only see “Connecting to service. Please wait!”, then arrange for the same test to be run directly on the server.

   **Note:** 5 minutes will allow enough time for the request to be processed by the server in the event of multiple queued requests.

   If the test directly on the server does not respond after 5 minutes please contact Pitney Bowes support.

4. Review the results of the “testconnection.dita” page. If the results are all green ticks then move to step e. If there are some red crosses, then supply these results to the Confirm Administrator to investigate the cause of the error mentioned.

5. With all pass results on the test page, retry/re-check ConfirmConnect®.

   If ConfirmConnect® is still failing after running through these 5 steps, you will need to manually stop the application.

   Relaunch ConfirmConnect®. If, after relaunching ConfirmConnect®, the problem still persists, contact Pitney Bowes support with the details shown on the Transfer tab or the login page (if you were logging in).

**Authentication Required**

The Authentication Required message can appear when a User's password (in Confirm) has changed. You will need to enter the password and tap the submit button to resume transferring.

**Server based Error Messages**

The following is a list of errors that appear on the Client but are server (service) based problems.

If you are experiencing any of these errors, you will need to contact the Confirm Administrator. You will need to provide the Administrator with your ConfirmConnect® user name, the time at which the error occurred and a brief description of what you were doing.

- **Build version V**.** is not compatible with database version V**.**

  ConfirmConnect® has connected to the server but the Confirm Connector and the Confirm main system Database versions are not compatible.

- **The maximum supported version of ConfirmConnect® is V**.**

  ConfirmConnect® client has connected to the ConfirmConnect® service but the client version is newer than the service.

  Resolve this issue by either upgrading the ConfirmConnect® service or installing the older version of ConfirmConnect® on the device.

  **Note:** Un-installing the current version of ConfirmConnect® will remove the installation ID and a new one will be used once you have installed and signed in with the older version. This will use another device licence from Confirm.

- **An Internal ConfirmConnect® service error occurred**
This is a http 500 error indicating that there has been a problem with the ConfirmConnect® Service configuration. Run through the steps outlined in the **How to troubleshoot Server based errors** section below to help identify the cause of this error.

**How to troubleshoot Server based errors**

There are many different types of errors which can occur, the steps below will help to identify their cause. These steps should be used when encountering errors not listed on this page.

1. Using a web browser, browse to the testconnection.dita page by appending "testconnection.dita" (excluding quotes) to the URL used when signing into ConfirmConnect®.
2. Review the results of testconnection.dita page to identify any problems.
3. If the test page just hangs then replace "testconnection.dita" with "confirmmobileservice.svc/status". Confirmmobileservice.svc/status will either fail to run and produce a message indicating the problem or it will succeed.
4. If the confirmmobileservice.svc/status succeeds (as shown with text displaying a version number) then you will need to review the ConfirmConnect® Logging files to identify what the problem could be.

**How to manually stop ConfirmConnect®**

It is sometimes necessary to stop ConfirmConnect® the details below explains how.

**Android** go to Settings > Apps (Application Manager) > Confirm and use the Force Stop option.

**iOS - prior to version 7** press the Home button to return to the home screen and then double tap the home button to pull up a list of all running applications, now tap and hold the Confirm icon, finally, tap the minus symbol on the top left of the icon.

**Note:** You will not lose any work when manually stopping ConfirmConnect®

**iOS - version 7 and above** double tap the home button to pull up a list of all running applications, now tap and flick the Confirm window up.

**Blank Maps**

**I'm using my settings.js file but I have a Blank Map?**

A blank map indicates that the settings.js file has been found by ConfirmConnect® but it is unable to access the data specified within the file.

This could be because ConfirmConnect® is positioning the map in a location that is not covered by your mapping service. To test this, create a new Enquiry or Defect and use the Locate option to open a map. Then use the Search tool to find an address that is definitely covered by your map service. If your maps display you can toggle between your maps and the Bing Aerial maps to make sure that everything lines up correctly.

The other likely causes of a blank map will be incorrect entries in the settings.js file or you have no network access to the service specified in the URL entry.

When investigating network access issues, consider the following:

- Do devices which connect via a VPN have access to the mapping service?
- Does the device have access to the service if the Mapping Service is located within your organisations internal network but the device connects to the Internet via a mobile service provider?
Windows Touch Screens

My Windows 8 touch screen device does not correctly register where I tap.
Windows 8 touchscreen devices may require display scaling to be disabled in order for ConfirmConnect® to correctly register where you have tapped. To change this setting:
• Go to the directory where ConfirmConnect® is installed and locate the ConfirmConnect.exe file.
• Select the properties for the application file and select the "Compatibility" tab.
• Tick the box next to "Disable display scaling on high DPI settings".
After performing these steps touch screen events should occur in the correct location.

Locating Features

How does the locate features functionality find our features?
ConfirmConnect® will find all features containing spatial data which are within 25m of the located point on the map.
If there is no spatial data for the feature then ConfirmConnect® will use the Easting and Northing information stored against the Feature in Confirm:
• Point Features within 25m of the located point will be displayed in the list of available features.
• For non-point Features, a bounding box is created using the Features' Easting and Northing extents, and all Features whose bounding boxes intersect within 250m, or the radius specified in the locate distance system setting, of the located point will be displayed in the list of available features.
A maximum of 50 Features will be shown in the list. This limit is generally sufficient, so when a Feature is not listed the cause could be any of the following:
• Point Features having coordinates in Confirm that incorrectly classify them as non-point (having extents with different values) could cause more than 50 results found.
• Features not having any coordinate information. These will never be shown.
• The Feature is not in a group flagged as selected for adhoc inspection.
• Linear Features (non spatial) whose extents create bounding boxes that do not encompass the entire feature. See example below:

Example: In this example the Feature is not within 250m (this is the default search distance when not overridden by the locate distance system setting) of the located point. The orange dot represents extent 1, red dot is extent 2 and the centroid is either not populated or it has the same coordinates as either extent 1 or 2.
Can the locate features search distance be changed from the default 250m?
Please contact Pitney Bowes for SQL to set the system setting to the required distance in metres.

User Terminology

Does ConfirmConnect® use Confirm user Terminology?
Yes, When logging in, ConfirmConnect® will use any configured user terminology set in the Terminology System Settings screen within the Confirm Host. Full Term is used and, if not found, Medium Term and finally Short Term.
Photos

Are photos taken with ConfirmConnect® backed up on the device?
Yes, a copy of each photo taken with the camera button will be placed into the device's gallery and will not be automatically removed by ConfirmConnect®.