# INFORMATION BULLETIN
AIRINSITE – AUDIT WIZARD

This information bulletin explains the features of Audit Wizard, recently updated on AIR-INSITE.COM V13.1.0.0 (4th Feb 2016).

Audit Wizard is one of a collection of 'feature' Wizards within the AIR-INSITE.COM cloud computing platform.
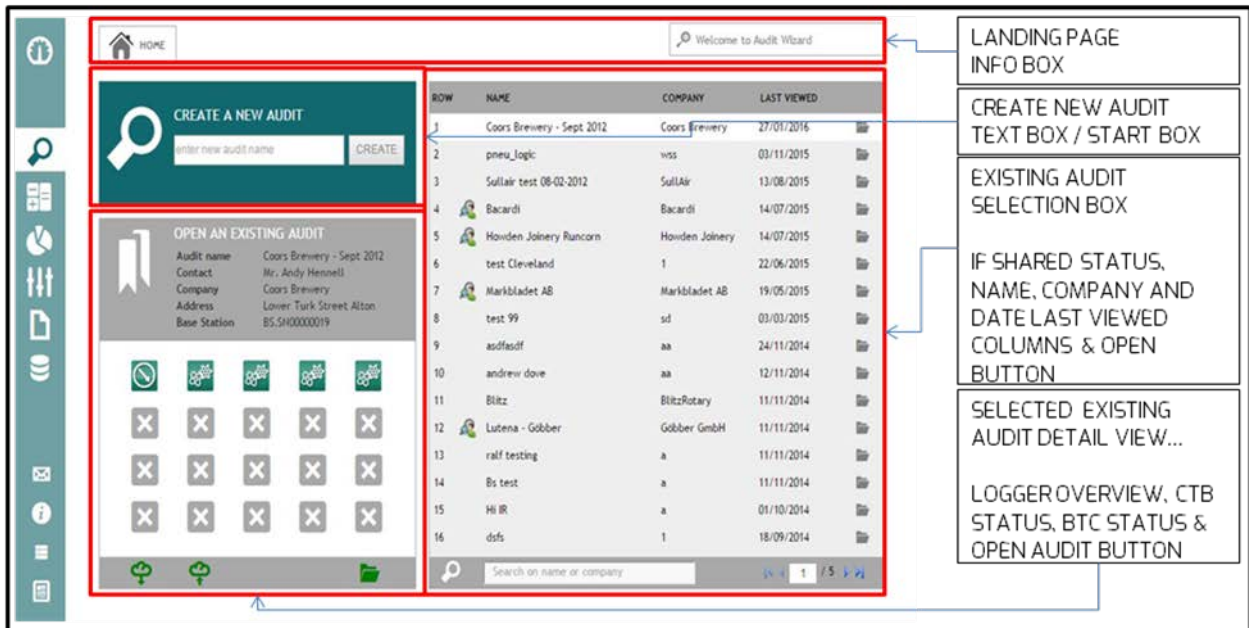
Before proceeding, USER's are advised to:

- Understand that AIR-INSITE.COM performs best in Google Chrome
- If USER's are unable to use Google Chrome, we recommend Mozilla Firefox
- Internet Explorer is our least favoured browser (Sorry Microsoft☹).
- Whichever browser you choose, we recommend the latest version (This is of particular importance when using Internet Explorer!). USER's must understand that some AIR-INSITE.COM features and functions will become slower or may not be compatible with older browser devices (e.g. your PC) or browser versions, there is no easy solution to this , if you want what modern browsers can offer then you need a modern browser version ☺
- Prior to using AIR-INSITE.COM V13.1.0.0 ensure the cached content of your chosen browser has been cleared!
- Understand how your browser uses memory and its memory limitations!

Users can reach 'Audit Wizard' by choosing it from the left hand Wizard selection (shown below) or from the Audit Wizard tile on the dashboard page displayed after user login. The Audit Wizard landing page looks like this…
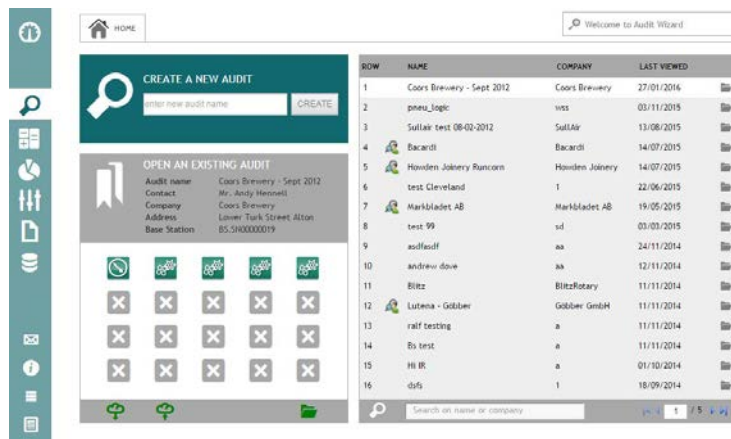
The style of the landing page is similar to other Wizards, a 'style' theme that will continue as we further develop AIR-INSITE.COM. The following is an explanation of the Landing page environment…

Create a new audit using the 'Create a new Audit' text box / start box. Do this by giving your audit a name and press 'CREATE' then follow the Audit Wizard steps to creating your new audit (discussed later in this document)!

- Audit names are unique and cannot be used repeatedly (observe the name availability text in the info box)
- If the text box outline is RED then the name is not available, choose a different name!
- Consider audit names carefully, AIR-INSITE.COM frequently uses audit names as a reference

The remainder of the landing page is dedicated to opening existing audit configurations…

Review existing audit configurations on the left list. Scroll through pages using the forward and back buttons at the foot of the list or use the Search box to filter by the 'name' or 'company' used in a specific audit configuration.

Click the audit row to select an existing audit configuration. When you select an existing audit configuration you can review additional information about the audit selected on the right side of the landing page. Details about the audit selected inclusive audit name, contact, company, address and the Base station configured for use with the audit data is displayed.

Additional icons clarify the loggers configured for use with the audit as well as the status of audit data. Observe that the icon layout follows the layout of the Base station graphical user interface. If you hover over a logger icon the logger specific serial number will be displayed. Further down, the progress of the audit is indicated using one of 2 cloud / arrow icons (discussed later).

Open an audit configuration using the 'file' icon within the row of the selected audit or using the file icon at the foot of the detail view box.

The remainder of this document discusses creating and completing a new audit. Observe however that after an audit configuration has been used and the audit completed with logged data, it's still possible to re-visit an audit configuration and edit much of the configuration. This can be necessary (e.g. if you wanted to edit the performance data of an air compressor after audit).

Start a new audit by giving your new audit a name and click CREATE. The audit configuration page will reveal. Observe the progress and navigation bar at the foot of the page and its colour coding. The colours emulate traffic light logic (GREEN = GO, RED = STOP & AMBER = SOMEWHERE IN BETWEEN). Here for example AMBER means you're not yet ready to progress to the next step until necessary field data has been entered…

Once you have entered necessary field data, the progress and navigation bar colour will change to green. This means that you can now progress to the next step. Use the progress and navigation bar to select 'configure base station and loggers'…
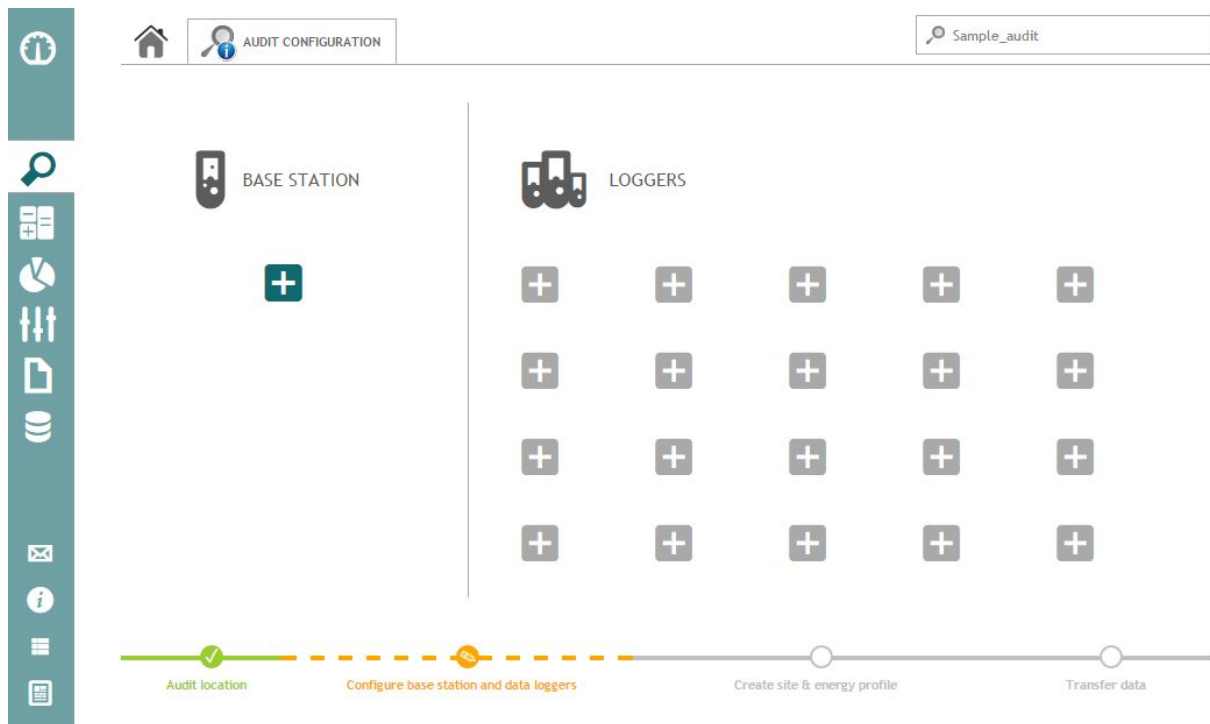
Start by selecting or entering the serial number of the physical base station you intend to use and click OK (observe that Base stations and data loggers are unique, each has a serial number ID which you will find on the physical device!).

Observe…

- When adding devices for the first time, enter the serial number of the device concerned and click OK. Note: it's not necessary to enter all of the 000 on the device decal… if your decal reads BS SN 000602 for example, you need only enter 602

- Once a device serial number has been entered AIR-INSITE.COM will remember it… Note the presence of the list box to the right of the numeric field box!
- Once a Base station has been selected AIR-INSITE.COM will indicate the Base station device state…
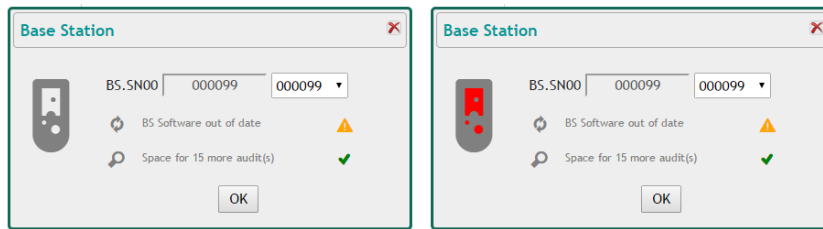
- o
- o Base station internet presence is indicated by a GREEN or RED colour (where GREEN = 'ON LINE' & RED = 'OFF LINE'
- o Base station software status is displayed. If this is out of date, go to the user interface of the Base station and update its software before proceeding!
- o The number of available audit locations at the specified Base station (1 – 25) is displayed. If this is 'full', go to the Base station user interface and delete audit configurations to make space before proceeding!
- o An 'ON LINE' Base station will re-fresh status data every 45 seconds

Once configured, select OK and proceed to configure the physical data loggers you intend to use…
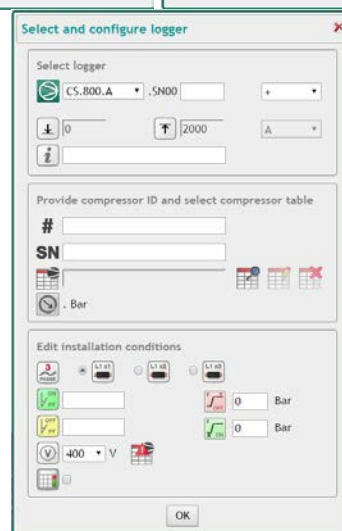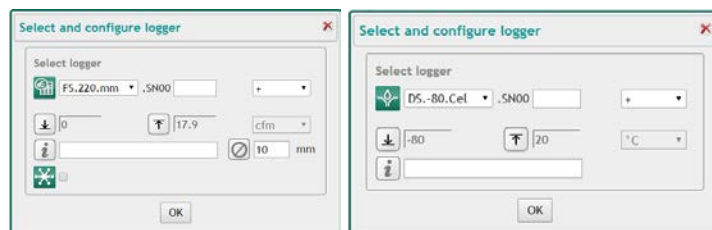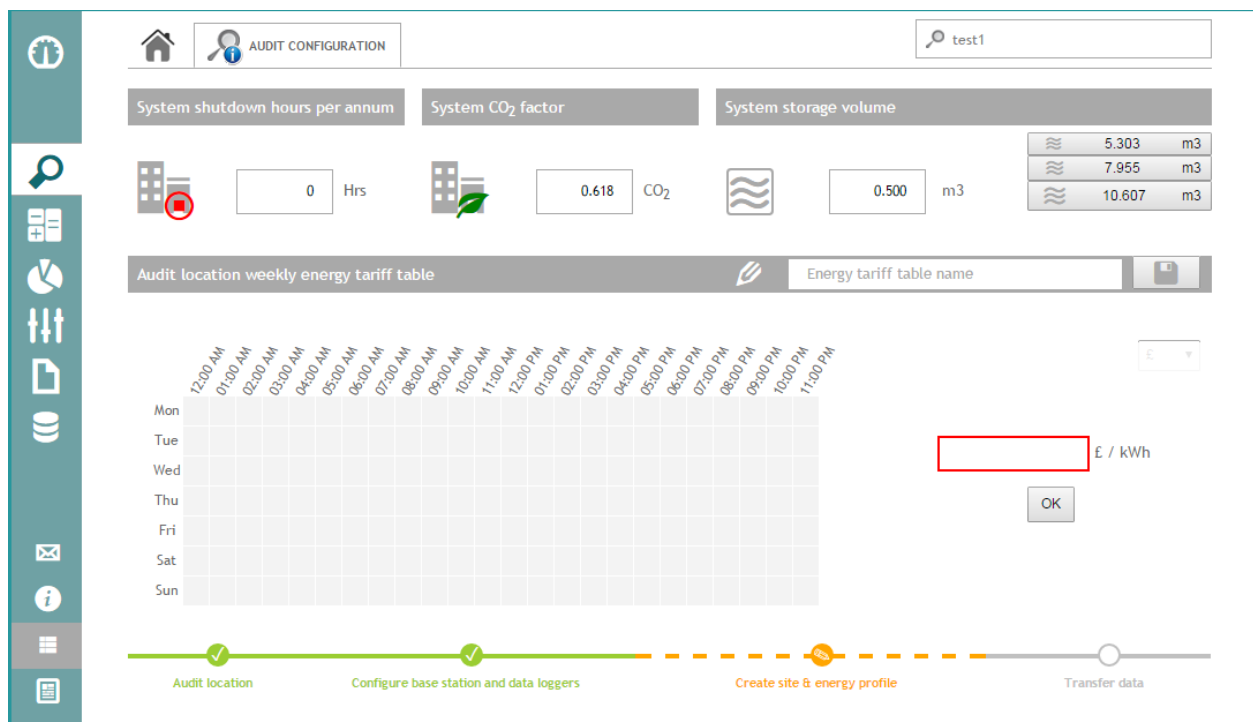

Observe…

- There are 8 types of data loggers

- o PS.16.Bar = 0 - 16 Bar pressure logger
- o PS.60.Bar = 0 - 60 Bar pressure logger
    - The additional check box in the pressure logger configuration screen is used to identify logger(s) used to measure 'system pressure'.
    - Consider that additional data loggers can be logging point of use pressure etc!
- o CS.800.A = Large current & volt logger
- o CS.50.A = Small current & volt logger
    - There are three defined steps to configuring a CS logger. The CS logger configuration box layout follows this order…
        1. Selecting the logger
        2. Associating the logger with a compressor
            - o Use the # text box to identify compressors. Common place when multiple identical compressors are present (Compressor No 1, No 2 etc)
            - o Use the SN text box to record the actual serial number of the compressor being logged
            - o Use the Select, Edit or Remove action buttons to associate the logger with a compressor table (creating and editing compressor tables is not discussed here!)
        3. Edit the audit location installation conditions
            - o Use the L1x1,2,3 check box as necessary (not discussed here)

            - o If you know the power factor of the actual compressor in the on load and off load state enter this data (this data would over-rule any compressor table power factor data)
            - o Similarly, if you know the on load and the off load pressure of the actual compressor enter this (this data will influence and improve the accuracy of compressor performance data)
            - o Select the audit location voltage
            - o Check or Uncheck the 'calculate my kW' box as necessary
                - Default = unchecked
                - Only used when voltage data is either not measured or missing (e.g. data logger volt probes removed during audit)
                - When voltage data is missing or lost 'check' this box to use logged current and audit configuration data to calculate compressor kW!
- o TS.200.Cel = Temperature logger
- o FS.220.mm = Flow logger
    - Use the numeric field box to indicate the internal diameter of the pipe where the flow logger is installed
    - The additional check box in the flow logger configuration screen is used to

identify logger(s) used to measure 'system flow'.

- Consider that additional data loggers can be logging point of use flow etc!
- DS.-80.Cel = Moisture dew point logger
- GP.4-20.mA = 4-20mA 'general purpose' logger
  - General purpose loggers are supplied without sensors allowing users to make use of alternative sensor products (not discussed here)
- The information text box which is common to all is used to identify the intended use of a logger. So for example of you were using a temperature logger to log compressor room temperature, enter such information. AIR-INSITE.COM makes use of the information text box field so we encourage its use!
- <u>Not</u> all fields are mandatory, follow on screen colour and text prompts
- Editing of configuration data can be done later. Besides fundamentals, if data is missing or wrong, it can be changed later!

Once you have configured a Base station and at least one data logger, the progress and navigation bar colour will change to green. This means that you can now progress to the next step. Obviously, configure all loggers before proceeding. Then use the progress and

navigation bar to select 'Create site & energy profile'...

This step is broken into 4 elements…

1. System shutdown hours per annum
   - Use this numeric box to indicate hours when the compressed air system would be

shutdown that will not be picked up by an audit. So for example…

- If the system is shutdown every weekend and the logging spanned this period, do not reflect this here because the data logging will already gather this data
- If the system is shutdown every year for 2 weeks in summer and 1 week in winter, reflect this here because the data logging will not gather this data!

2. System CO_2 factor
   o Use this numeric box to indicate a factor for CO_2
3. System storage volume
   o Use the small, medium or large selection buttons to accept the 'calculated' system storage volume displayed (i.e. if you do not know the system storage volume). The 'calculated' system storage volume is established by taking data from the compressor tables (configured earlier) alongside industry standards

     to indicate a smaller than average, average or greater than average system volume. If system storage volume is not known, use common sense when making your selection
   o Alternatively, if you know the system storage volume then use the numeric box to enter a value
4. Audit location weekly energy tariff table
   o Up to 10 enery tarriffs are supported
   o Use a pointing device and the week grid to select a time span for a given tariff
   o Enter a numeric value in box provided
   o Select a currency from the drop down list
   o
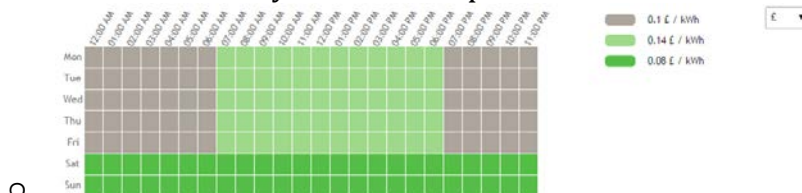
Observe the 'Energy tariff table name' save feature. This feature saves the Energy tariff as an image for use elsewhere (not discussed here).

Once you have configured the site & energy profile the progress and navigation bar colour will change to green. This means that you can now progress to the last step 'transfer data'.
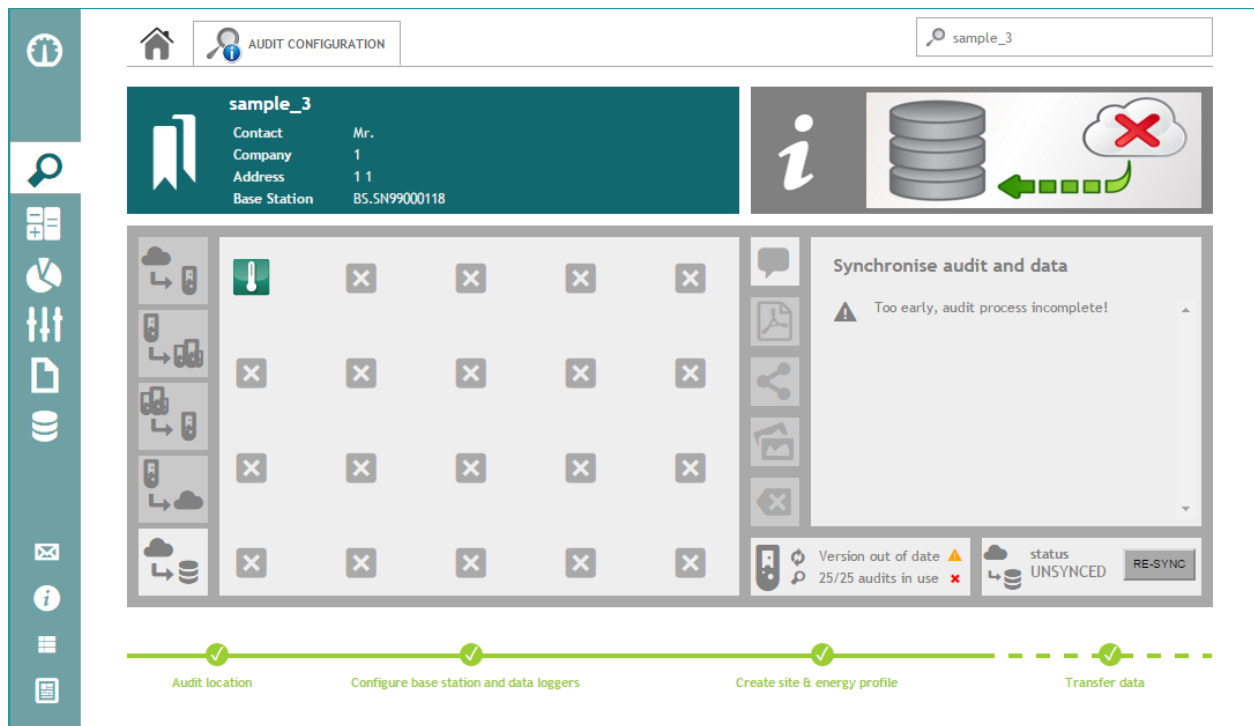
The transfer data step is less of a configuration step and more to do with post configuration data transfer, handling, post data harvesting review and editing etc...
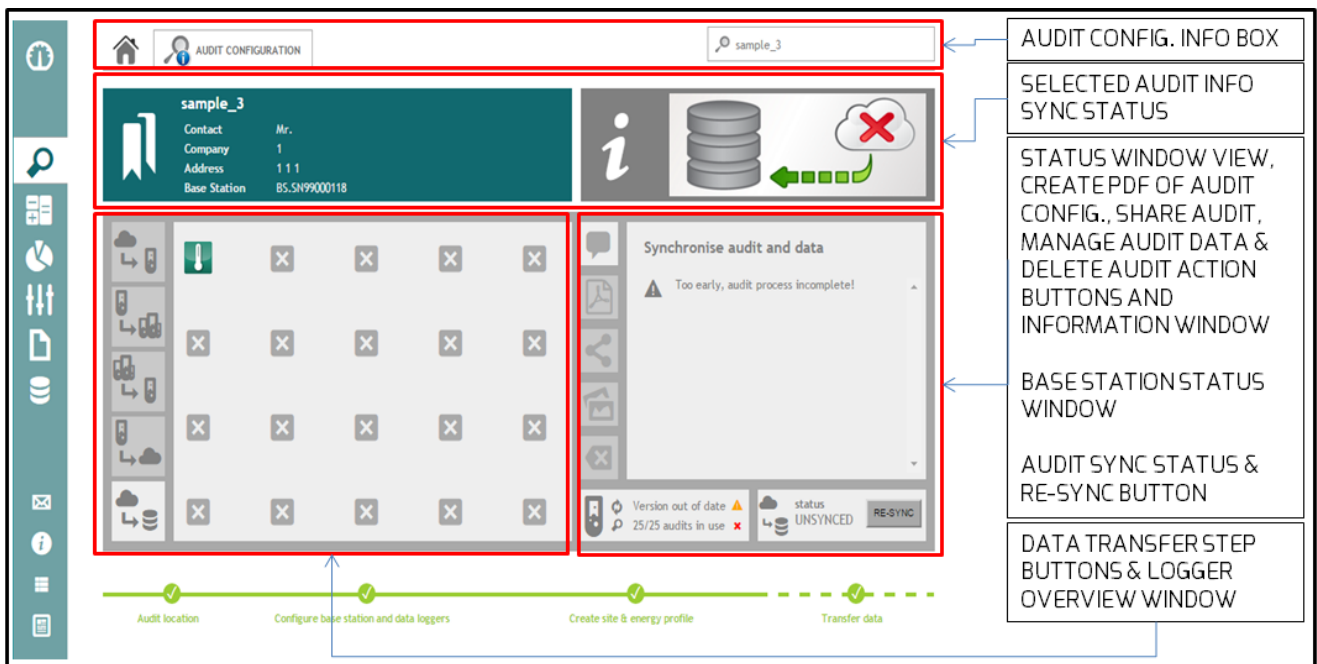
Observe...

- The Transfer data page is divided into 4 principle areas...

1. The Audit configuration information box
2. The selected audit information (left) and an icon indicating whether or not audit data has been synchronised with the audit configuration
3. A status window with action button options for various functions
4. The data transfer buttons as well as a logger view window
   - Data transfer steps can be summarised as follows…
   - Cloud to Base (C2B) when the audit configuration is transferred from AIR-INSITE.COM to the configured Base station
   - Base to Loggers (B2L) when the audit configuration is transferred from the Base station to the configured data loggers
   - Logger to Base (L2B) when the logged data is transferred from the data loggers to the Base station
   - Base to Cloud (B2C) when the logged data is transferred from the Base station to AIR-INSITE.COM
   - SYNC when the logged data returned to AIR-INSITE.COM is synchronised with the audit configuration

Let's begin by simply transferring our newly created audit to the Base station…

Using the physical Base station configured for use with the audit, use its C2B feature to download the audit from AIR-INSITE.COM to the Base station. Observe when complete that the C2B tile at AIR-INSITE.COM will change colour from GREY to GREEN.

Newer Base stations benefit from a USB download / upload feature. To establish whether or not your Base station has this feature, look at the Base station decal on the rear of the Base station. If a 'V2' mark is present then **you can** use this feature. If there is 'NO MARK' present your Base station is 'V1' and **you cannot** use this feature.

This feature is very useful when you want to perform a C2B or B2C step and your Base station does not have access to the internet!

To use this feature to perform the C2B step, begin by pressing the C2B button (1 of 5 buttons on the left side of the page below. Indicated in RED!) on the transfer data screen of AIR-INSITE.COM…
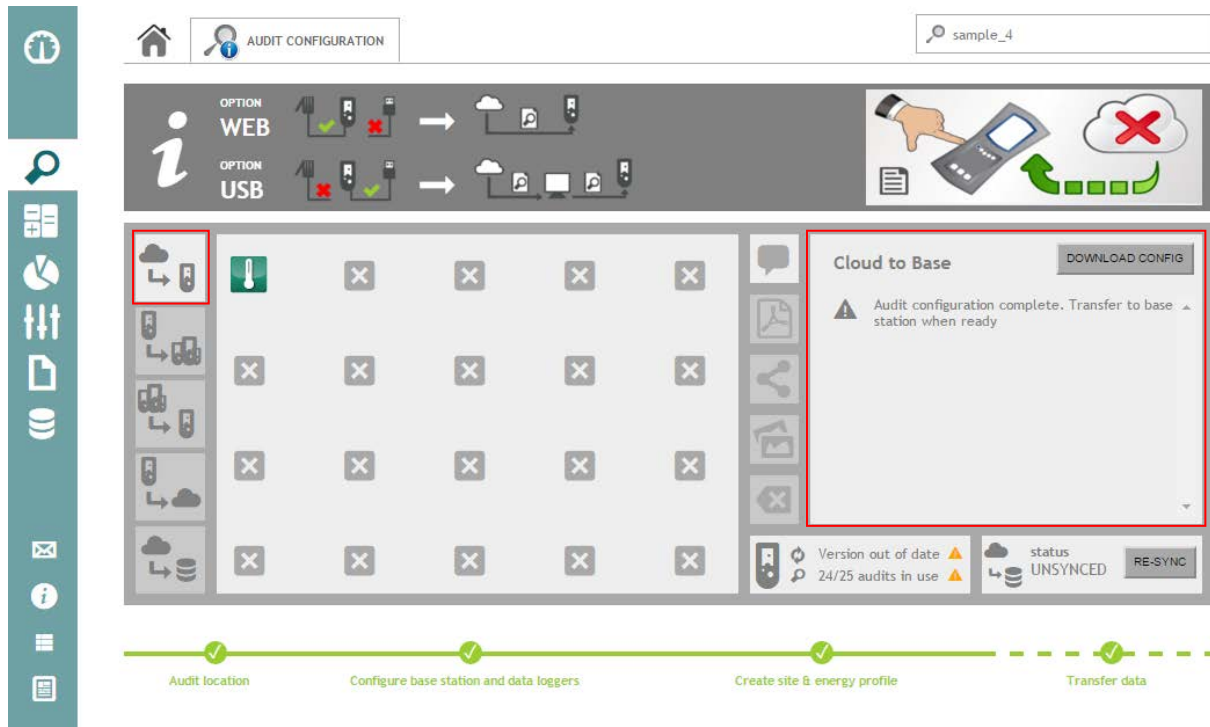
Observe the C2B information window (indicated above in RED) and the prompt / option to download a 'CONFIG' file. Proceed to press the DOWNLOAD CONFIG button. A config.bin file will download to the download folder of the device being used to access AIR-INSITE.COM.

Once you have completed the download, the 'transfer data' page of AIR-INSITE.COM will look like this…
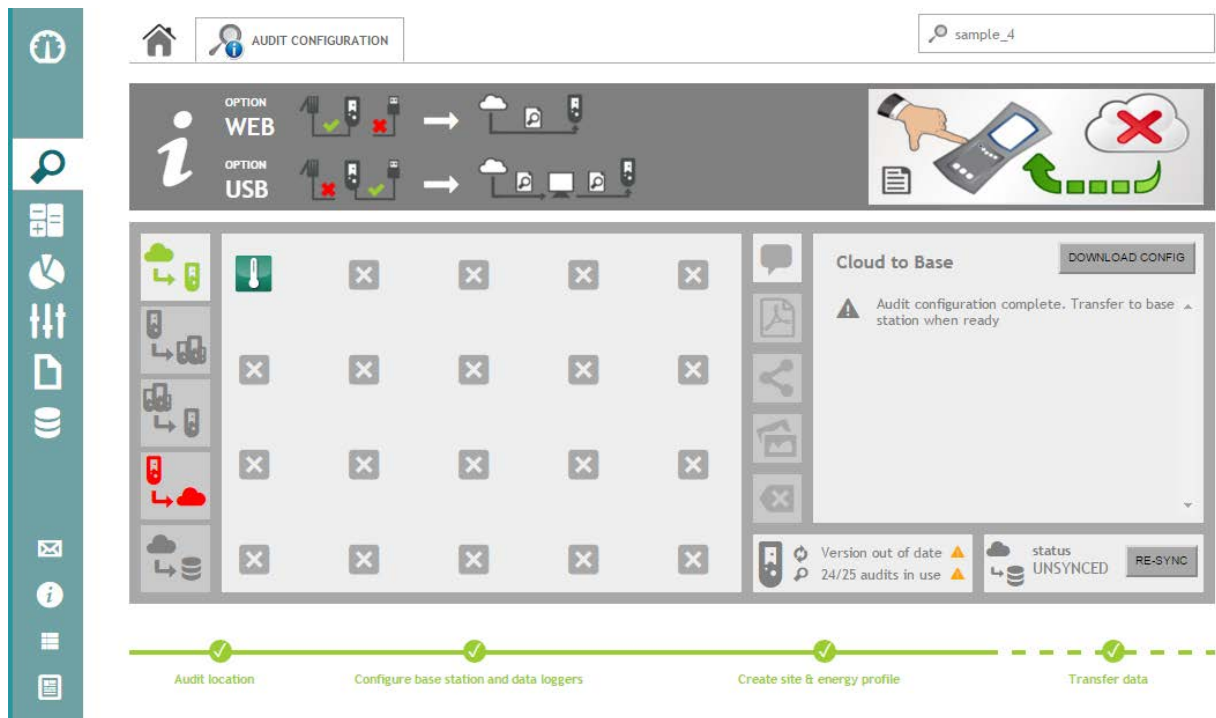
Following a refresh of the browser page, the C2B information window will indicate that the transfer was performed successfully.

Next you want to transfer the 'config.bin' file from your device to the Base station.

Observe…

- Your device can change the name of the config.bin file downloaded to your download folder (e.g. if you have more than 1 config.bin file, during download your device may add (1), (2) etc to the file name. The file must be called config.bin or the Base station will NOT accept it! **Correct as necessary before proceeding**
- Pay attention to the graphical information at the top of the 'transfer data' page of AIR-INSITE.COM…
  1. Your Base station should not be connected to the internet
  2. Your Base station should be connected to the device where the config.bin file is located
  3. When the Base station is connected to your device it can be found just like a Mass storage device can be found. The Base station ID is 'BS_DRIVE'

  4. The USB feature is intended to handle **ONE** config.bin file at a time! Never attempt to copy more than one config.bin file to the BS_DRIVE folder at any time. This is emphasised by the unique name that must be used!
  5. Never tamper with the config.bin file!
  6. Never rename an alien file 'config.bin' or otherwise attempt to transfer an inappropriate file to the BS_DRIVE folder

Simply copy the config.bin file from your device to the BS_DRIVE. Then, remove the USB cable from the Base station (this is to release the BS_DRIVE folder control from your device which in turn will permit the Base station to use the BS_DRIVE folder once more!).

Next, perform a typical C2B step at the Graphical user interface of the Base station (i.e. as if it was connected to the internet). This action will import the config.bin file from the BS_DRIVE location of the Base station to the Base stations regular software environment.   That's it! Using the Base station, find the Audit Manager menu where you can now select the Audit configuration downloaded via USB. Proceed to use the Audit configuration to perform the audit as usual (not discussed here).

Familiarise yourself with data transfer buttons as well as a logger view window…

- These buttons change colour to indicate progress using the 'traffic light' system discussed earlier
- By selecting a specific step (C2B, B2L etc), you can review progress
- An online Base station will update AIR-INSITE.COM frequently. This includes events such as B2L or L2B data transfer events. When these buttons on the transfer data page change from GREY to GREEN, it's indicating that an event has been performed successfully. Refresh rates are up to 45 seconds.
- Use the C2B and B2C buttons to access the USB method discussed elsewhere in this document (applicable to V2 Base stations only!)

Similarly, familiarise yourself with the logger overview window…

- The layout of this window is intended to mirror the Base station graphical user interface display
- Configured data loggers are shown as configured
- Selecting a logger will display additional information about the logger on the right status window…
    - Logger software status is displayed
    - Logger battery status is displayed

    - You can also delete a logger from an audit configuration here (observe the 'x' beside the logger data within the view window). This can be useful if for example a logger was not used during an audit and thus it contains 'no data'. Think carefully before deleting loggers from an audit configuration!

If you want to use the USB download / upload feature to return a completed logging to AIR-INSITE.COM you can do so as follows… (Note: USB download and upload features are independent of each other… you can use the Internet for download and USB for upload etc)

Do not connect your device to the USB socket of the Base station until the following steps have been taken! Complete the B2C step using the Base station as if it were on-line.   Off-line the action will create a 'PACKAGE.BIN' file which will be written to the BS_DRIVE folder. The PACKAGE.BIN file contains both the audit configuration and the log files created by data loggers during the audit.
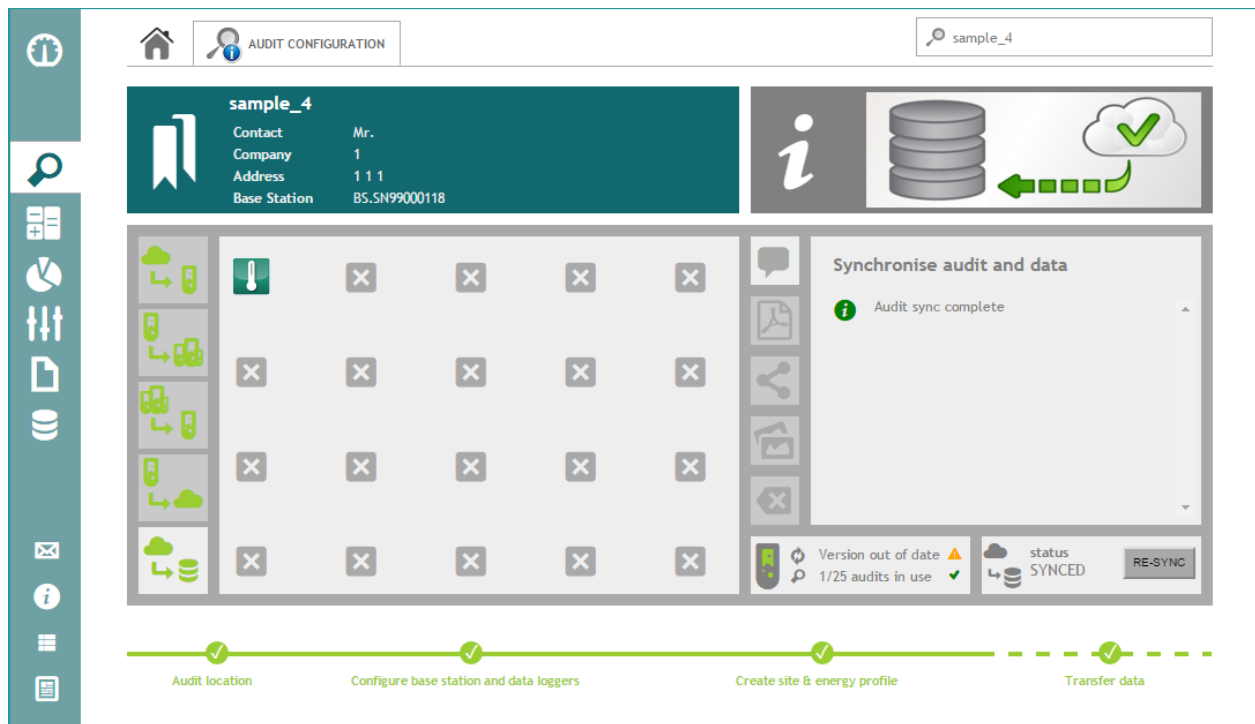
Next, connect the Base station to your device and locate the PACKAGE.BIN file. DO not tamper with the file in any way!

Next, from the transfer data page of AIR-INSITE.COM select the C2B step/button. You will see the following screen…
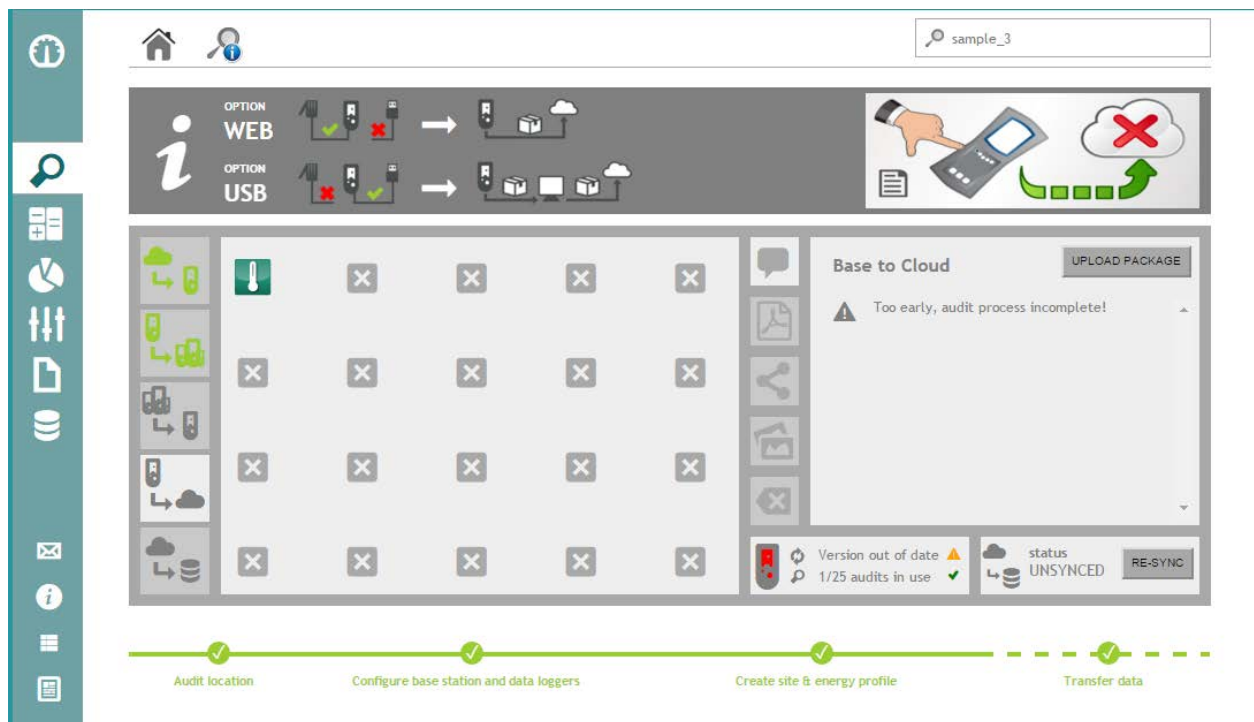
Use the UPLOAD PACKAGE button to locate and select the PACKAGE.BIN file for upload on your device (you should be able to locate the BS_DRIVE folder directly). The time taken to transfer the PACKAGE.BIN file will be relative to the size of the file (variable relative to the size of the audit) and the

Once complete your 'transfer data' page will refresh to look like this…

Proceed to use the 'SYNCED' audit in the usual way (not discussed here).

A SYNCED audit is where an audit configuration is combined with logged data to create a series of data streams. These data streams are accessed using the various Wizards at AIR-INSITE.COM (Graph Wizard, Chart Wizard etc).

From the Audit Wizard home page you can open an existing audit configuration using the 'file' icon within the row of the selected audit or using the file icon at the foot of the detail view box.

Observe the presence and status of both C2B & B2C 'cloud & arrow' information icons which use the now familiar traffic light system to indicate C2B & B2C status. These information icons are used elsewhere on AIR-INSITE.COM....

You can add and make significant changes to many aspects of an audit configuration. To do so navigate forward and back using the progress / navigation bar making changes as necessary (not discussed here).

Observe that changes to an audit configuration may necessitate a RE-SYNC of the audit!