

Con-X-us

REMOTE MONITORING APP FOR USE WITH
EcoShield
STORAGE TYPE GAS-FIRED WATER HEATERS

FOR USE WITH MODELS:

SHW35-245CE
SHW46-325CE
SHW61-325CE
SHW86-410CE
SHW116-410CE
SHW146-410CE



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1.0 INTRODUCTION

- Con-X-us APP is available for use with EcoShield water heaters and your mobile device and allows the building owner user or maintenance engineer to:
 - Monitor the water heater plant at unlimited locations
 - Re-programme SMART SYSTEM control parameters
 - Set up custom text or email alerts for the building owner
 - Make service notes
- To use Con-X-us the module should be fitted to the water heater, item number LL100281397 is required.

2.0 GENERAL DESCRIPTION OF SAFETY SYMBOLS USED



BANNED

A black symbol inside a red circle with a red diagonal indicates an action that should not be performed



WARNING

A black symbol added to a yellow triangle with black edges indicates danger



ACTION REQUIRED

A white symbol inserted in a blue circle indicates an action that must be taken to avoid risk



INFORMATION

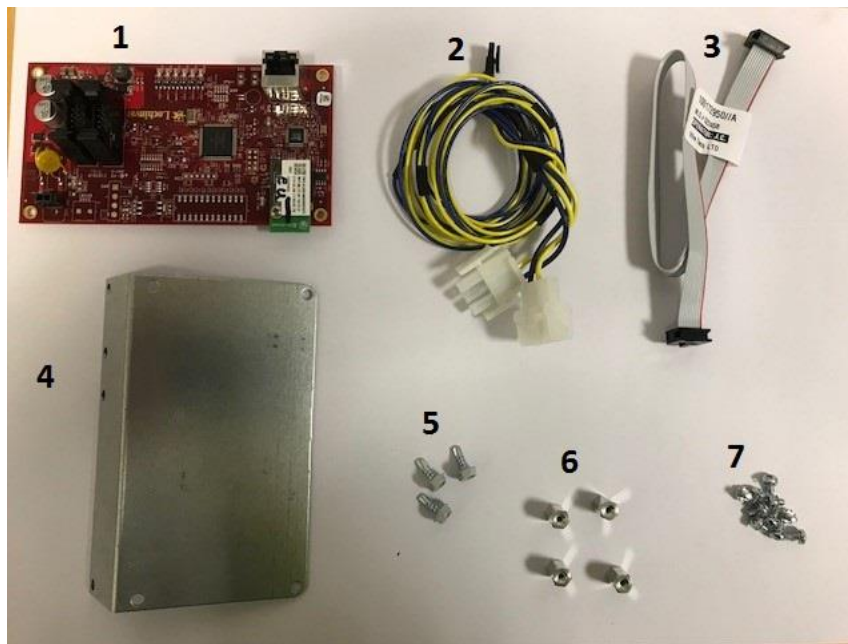
3.0 INSTALLATION



IF THE CON-X-US BOARD HAS BEEN PRE-FITTED TO THE ECOSHIELD WATER HEATER THEN PLEASE START AT SECTION 4.0 OF THE INSTRUCTIONS.

3.1 KIT COMPONENTS

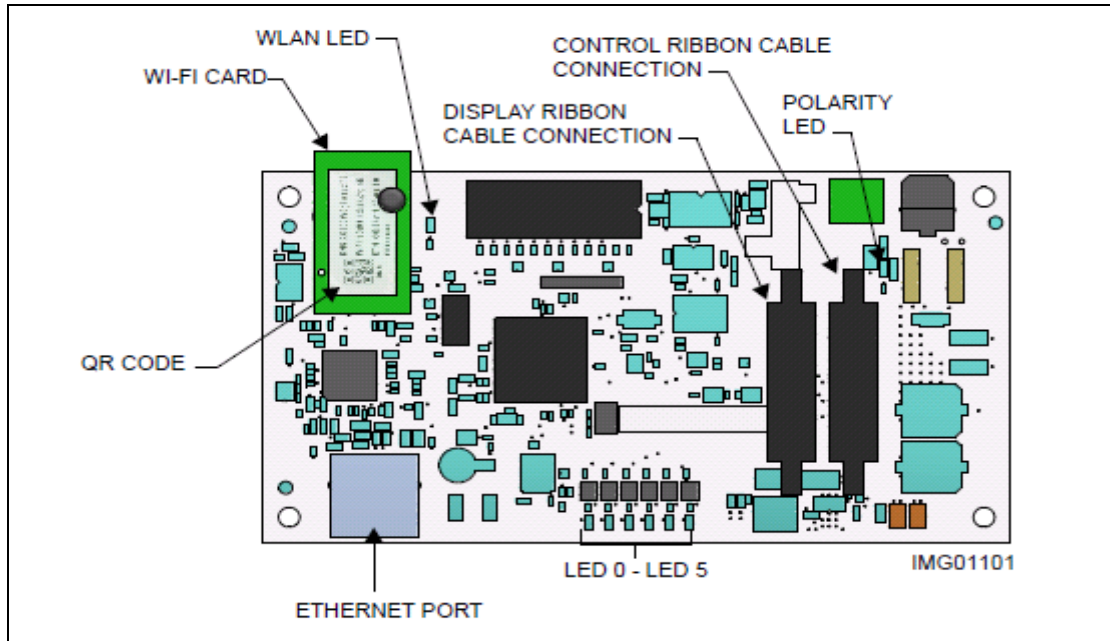
The Con-X-us board is supplied loose for onsite fitting, before starting the installation please check you have all the items required. If any items are missing please contact Lochinvar Limited.



THE KIT IS AVAILABLE FOR VARIOUS WATER HEATER MODELS – WHEN USED WITH THE ECOSHIELD RANGE NOT ALL OF THE COMPONENTS ARE REQUIRED. SEE THE BELOW TABLE FOR ITEMS REQUIRED WITHIN THE KIT.

ITEM No.	Description	Quantity
1	Con-X-us Board	1
2	Remote power harness	1
3	Ribbon cable	1
4	PCB Stand	1
5	Cover Screws	Not Required
6	Stand-off screws	4
7	Screws	10 (Only 8 Required)
Not Shown	Instruction manual	1

3.1.1 CON-X-us BOARD COMPONENTS



3.1.2 CON-X-us BOARD LAYOUT

3.2 FITTING THE CON-X-US BOARD

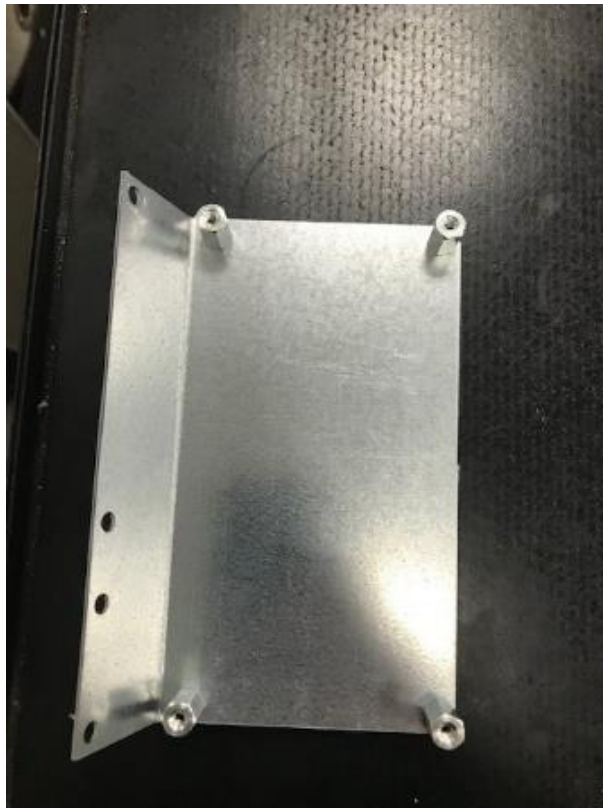


ENSURE THE POWER SUPPLY AND GAS SUPPLY TO THE WATER HEATER HAS BEEN ISOLATED BEFORE STARTING WORK

1. REMOVE THE WATER HEATER FRONT COVER BY REMOVING THE 6 RETAINING SCREWS



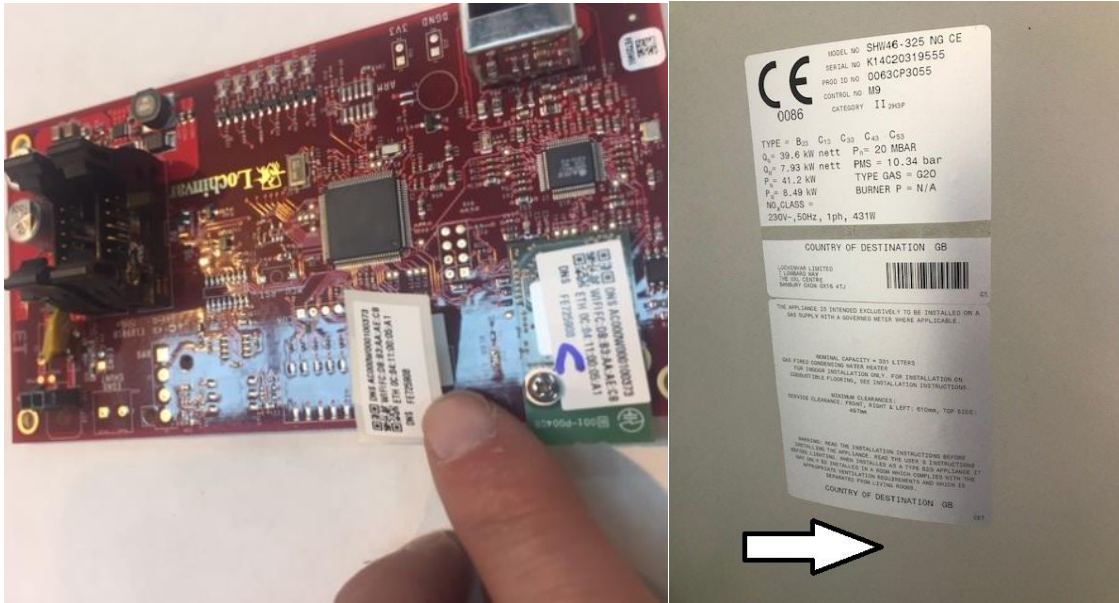
2. FIT THE 4 STAND OFF SCREWS (ITEM 6) USING 4 SCREWS (ITEM 7) TO THE PCB STAND (ITEM 4)



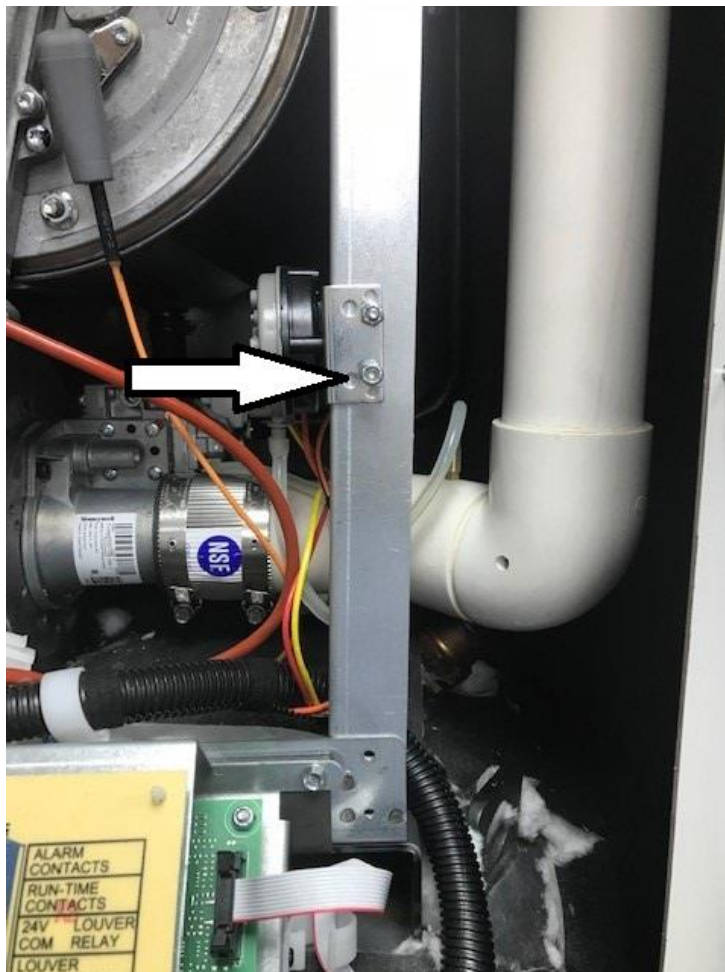
3. FIT THE Con-X-us BOARD (ITEM 1) TO THE STAND OFF SCREWS (ITEM 6) USING 4 SCREWS (ITEM 7) – NOTE POSITION OF Con-X-us BOARD ON THE STAND



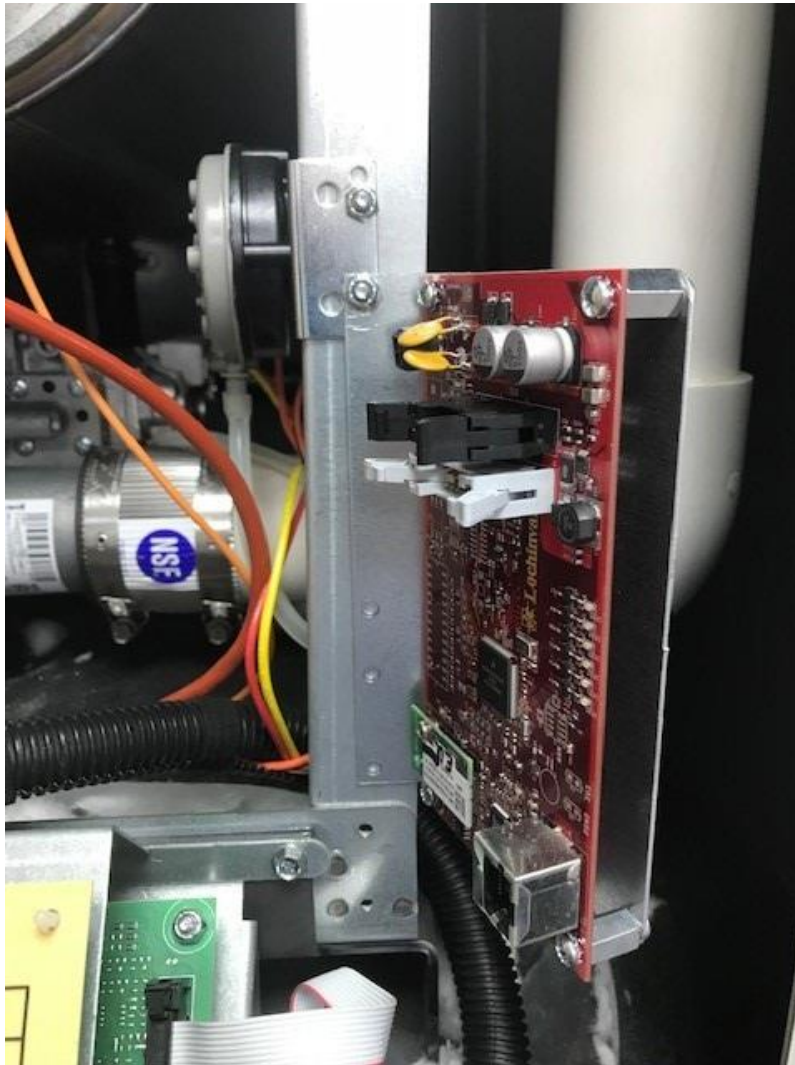
4. REMOVE THE QR CODE FROM THE Con-X-us Board (item 1) AND ATTACH TO THE SIDE OF THE WATER HEATER, JUST BELOW THE SERIAL NUMBER.



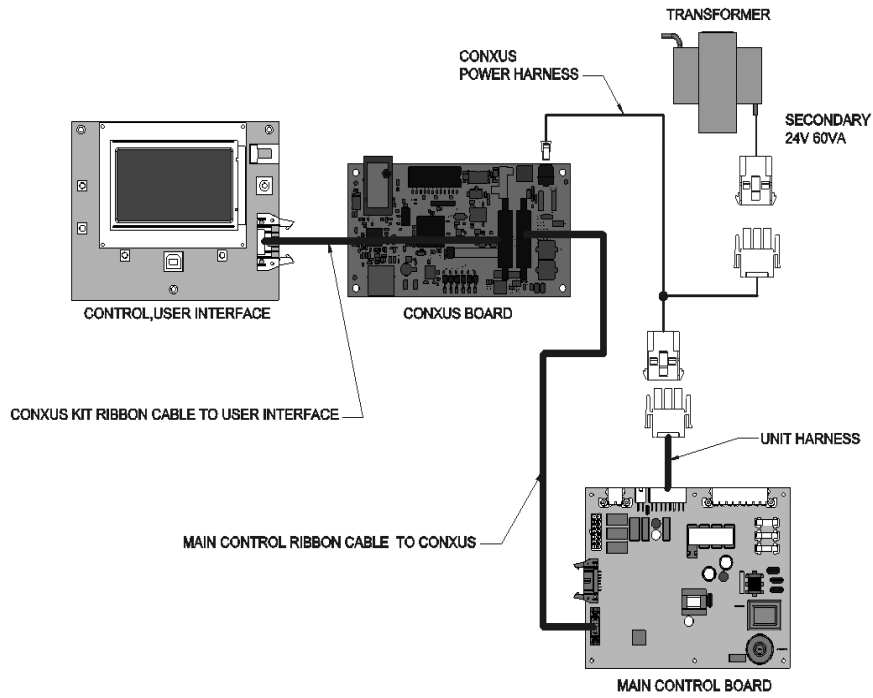
5. REMOVE NUT FROM CHASSIS



6. FIT PCB STAND WITH FITTED Con-X-us BOARD TO THE CHASSIS AND SECURE WITH PREVIOUSLY REMOVED NUT IN STEP 5

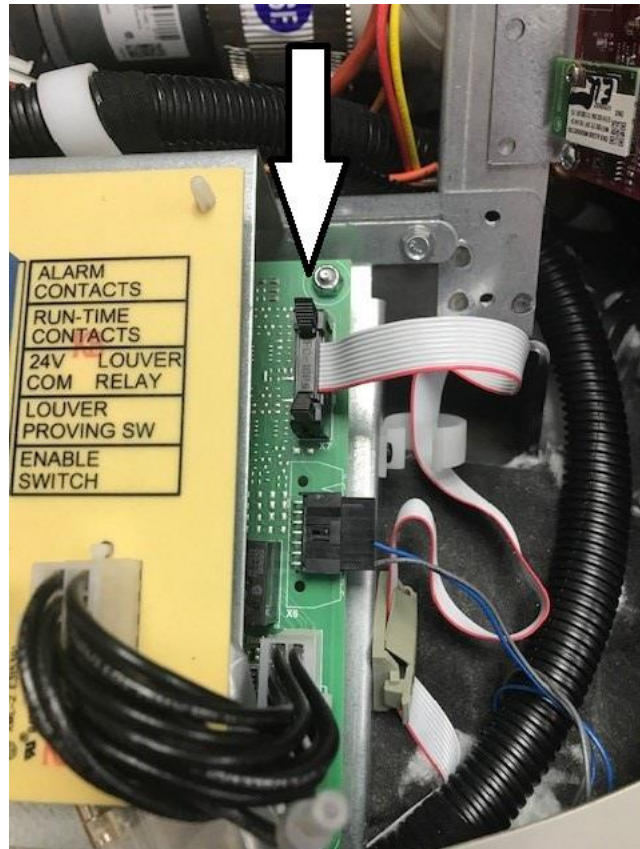


3.3 FITTING THE WIRING HARNESES

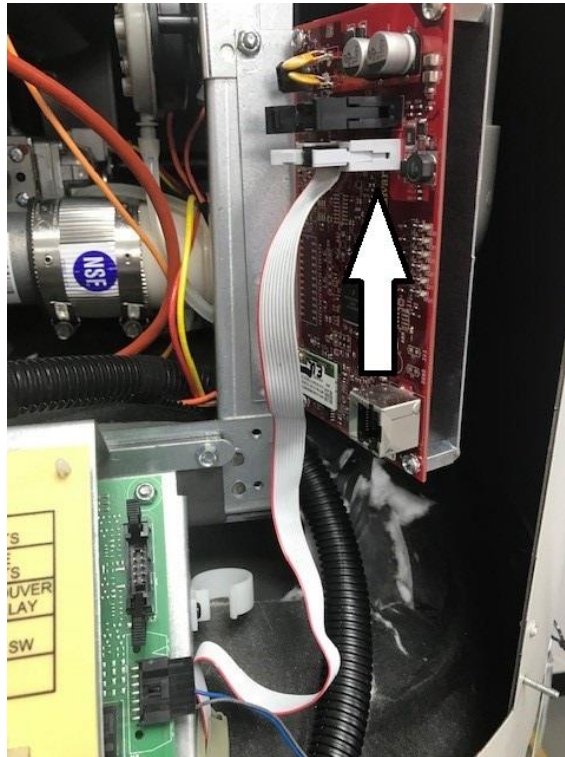


3.3.1 INSTALLATION OF WIRING HARNESES

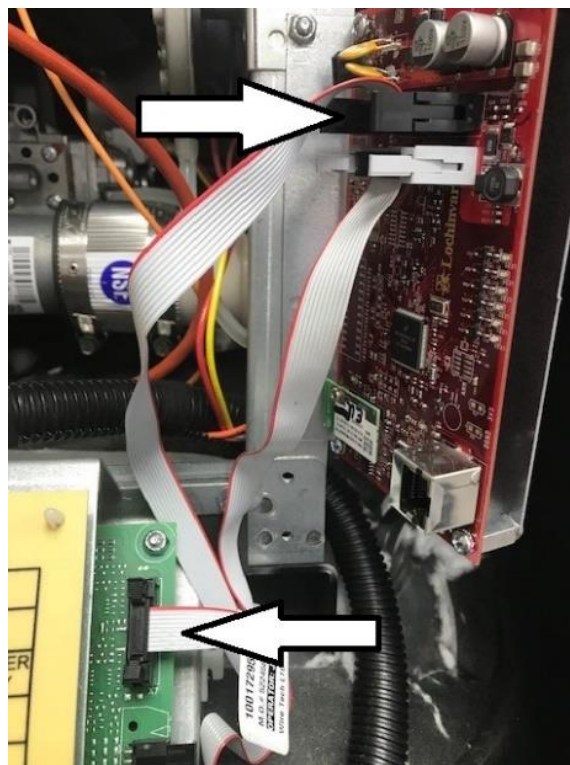
7. REMOVE DISPLAY RIBBON CABLE AS SHOWN BELOW.



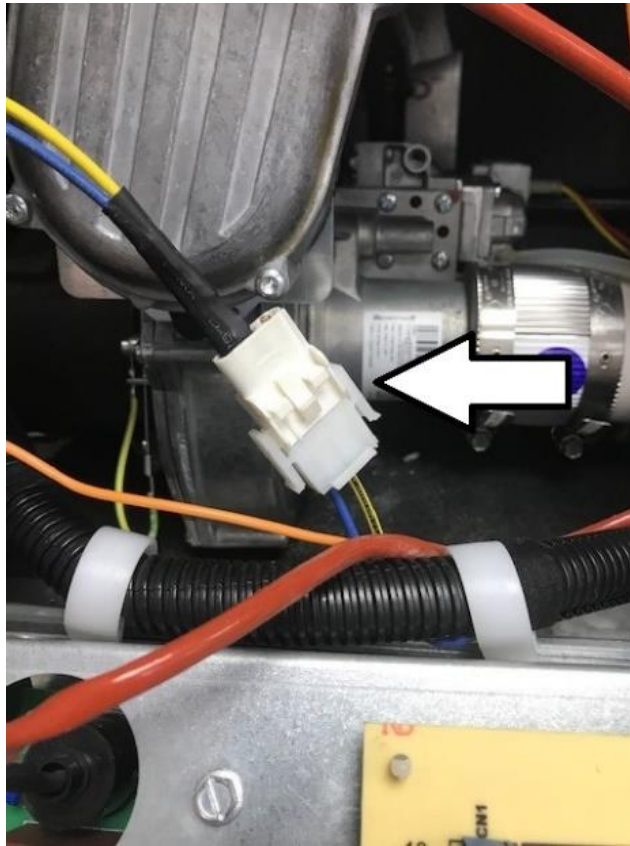
8. FIT THE RIBBON CABLE REMOVED IN STEP 7 TO THE Con-X-us BOARD AS SHOWN BELOW.



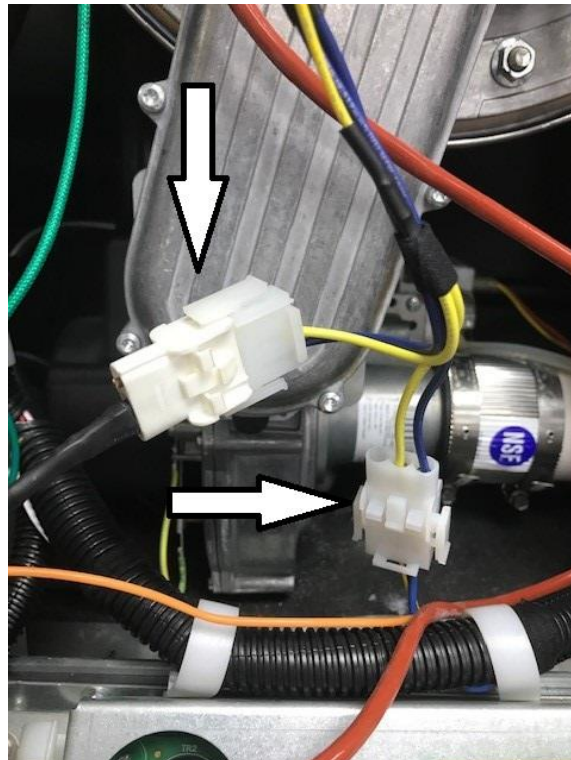
9. FIT THE SUPPLIED RIBBON CABLE (ITEM 3) TO THE Con-X-us BOARD AND ONTO THE DISPLAY CONNECTION AS SHOWN BELOW



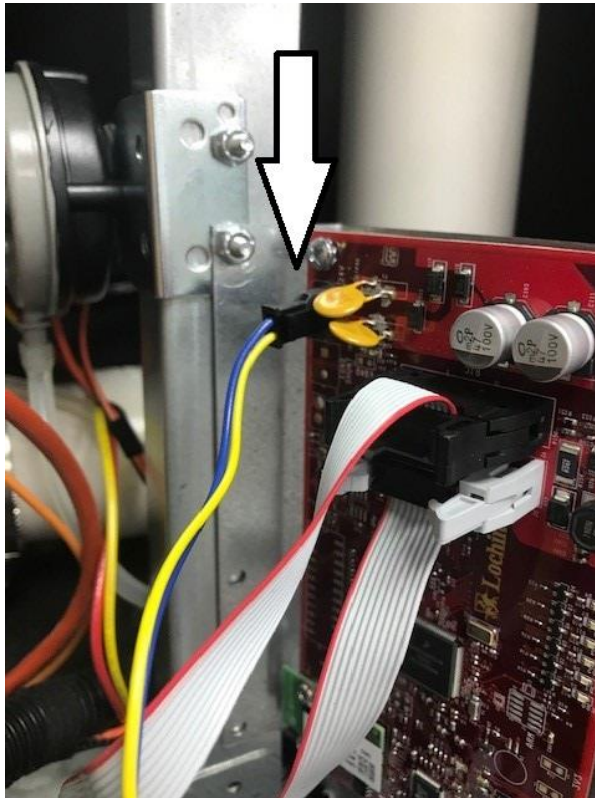
10. DISCONNECT THE TRANSFORMER POWER HARNESS



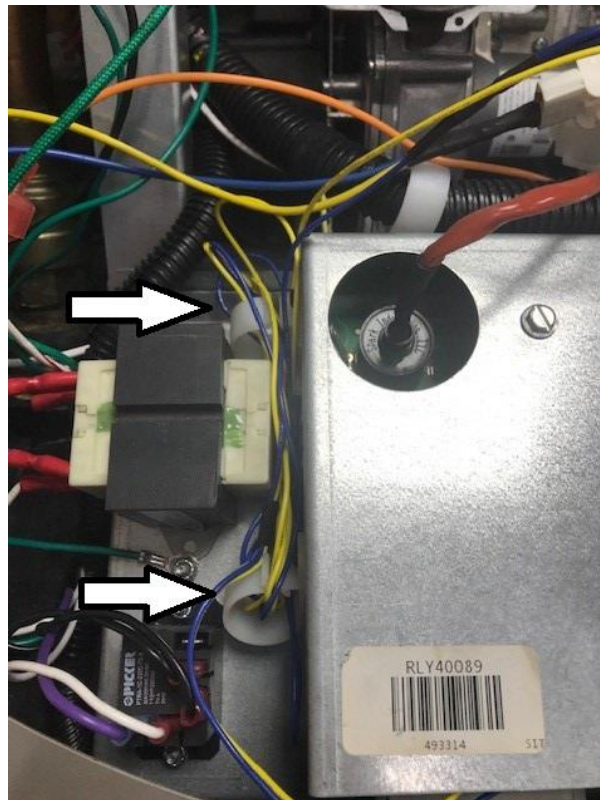
11. FIT THE REMOTE POWER HARNESS (ITEM 2) TO THE DISCONNECTED TRANSFORMER POWER HARNESS SHOWN IN STEP 10



12. CONNECT THE OTHER END OF THE REMOTE POWER CABLE (ITEM 2) TO THE Con-X-us BOARD AS SHOWN BELOW



13. TIDY CABLES INTO THE CABLE CLAMPS – RE-CHECK ALL CONNECTIONS AND MOVE ONTO COMMISSIONING STAGE



4.0 COMMISSIONING

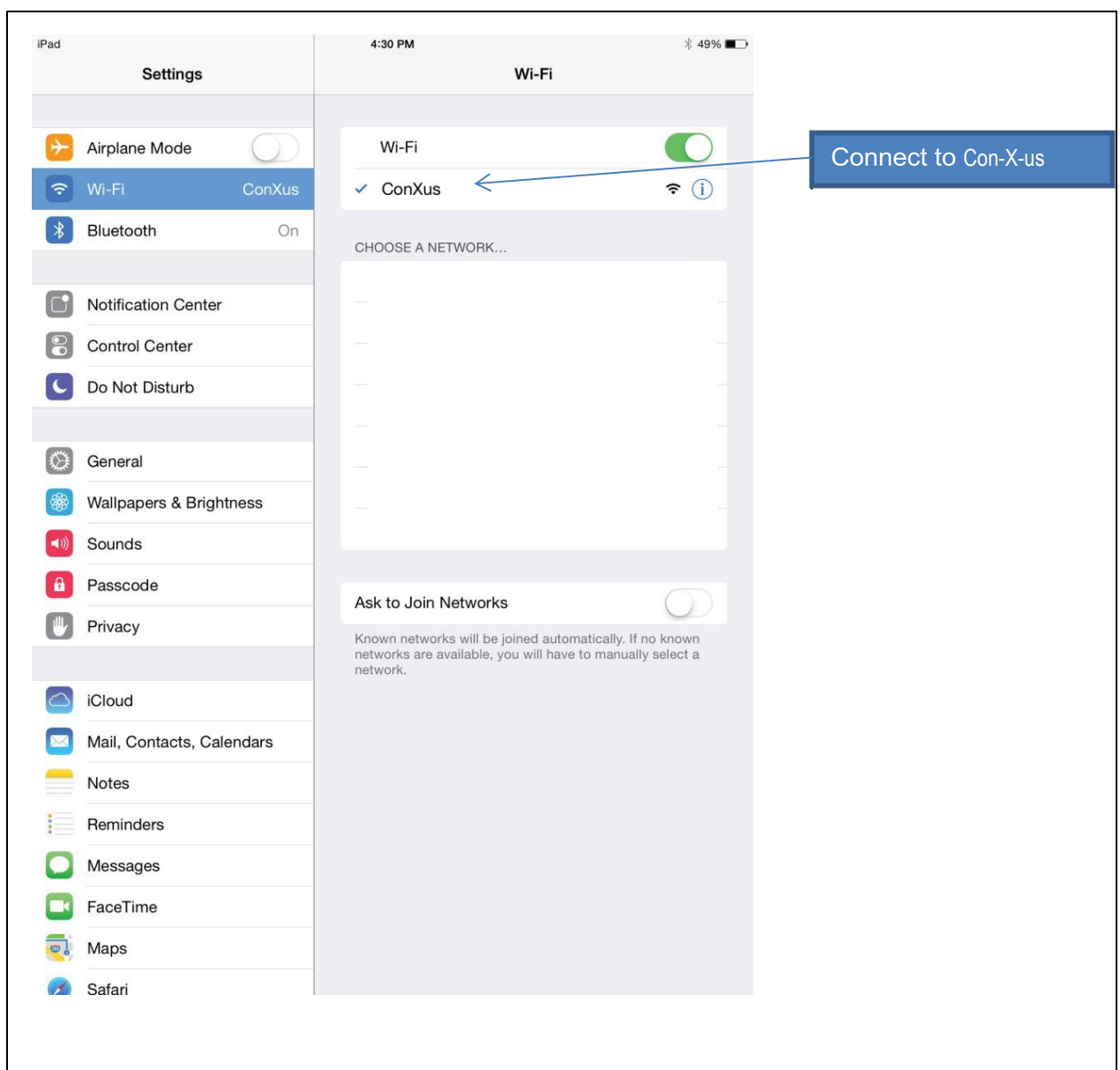
4.1 REGISTRATION



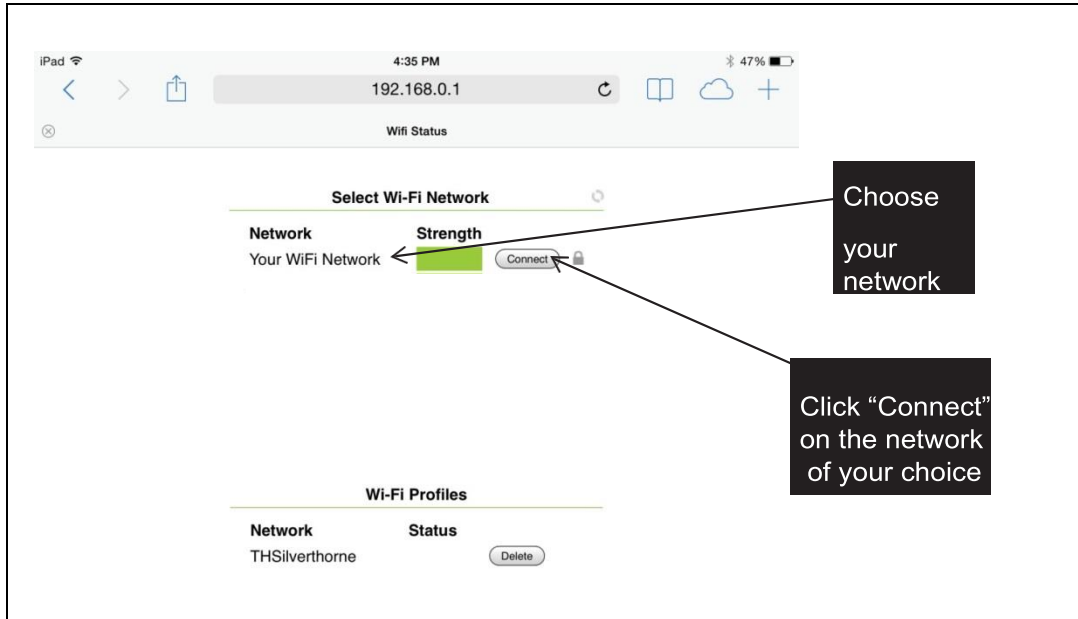
NOTE ALL SCREEN SHOTS USED IN THIS SECTION ARE FOR ILLUSTRATION PURPOSES ONLY.

4.1.1 DEVICE SET UP

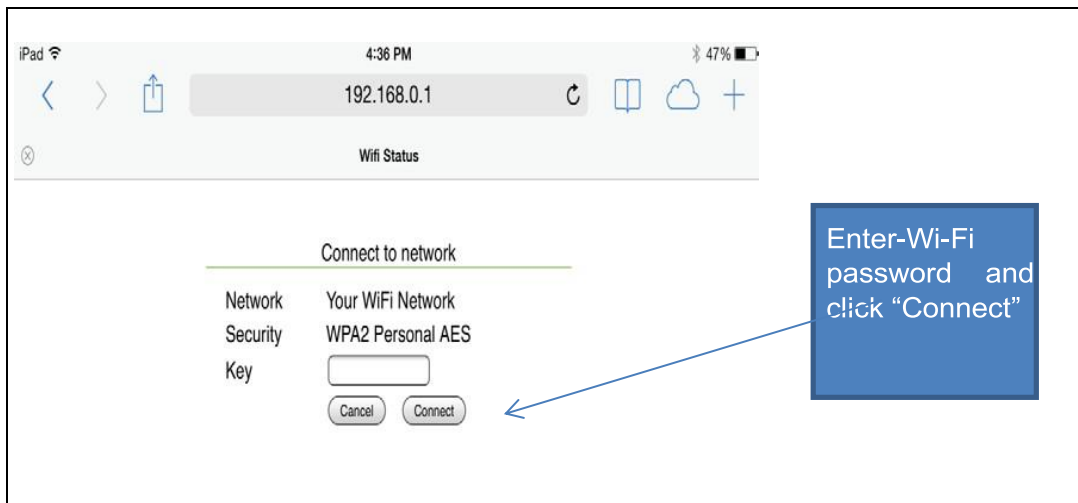
1. Switch on your WI-FI button on your smart device and search for the Con-X-us board as you would a WI-FI network. Ensure the green LED 5 light is on the Con-X-us board and that the WLAN light is off see **SECTION 3.1.2**
2. Connect to the device named Con-X-us as shown below



- Once connected to the Con-X-us board you should be directed to a login page. At this point you are choosing the network you would like CON-X-US to be linked with. If this is a secure network you will need to enter the network password.



- Enter the security password for your network and click CONNECT



- Your screen should tell you when the WI-FI connection is complete. You will also notice the WLAN LED light on the upper left hand side of the Con-X-us board is light once the board is connected to your WI-FI network. **See 3.1.2**



6. Download the Android App on Goggle Play or the Apple App from the App Store



TO RUN THE Con-X-us APP ON YOUR DEVICE YOU MUST HAVE A VERSION OF IOS 7.0 OR ABOVE OR ANDROID 4.0 OR ABOVE.

7. Once installation is complete, click on the Con-X-us App on your Tablet/Phone.



8. If you are a new user you will have to create a new account, if you have an existing account move on the step 10.
9. To create a new account, open the Con-X-us App and click CREATE NEW ACCOUNT. You will receive an email asking you to confirm your new account. You will also be directed to a webpage. This webpage signifies you have completed the process. Exit the web page and move to step 10.



PLEASE CHECK YOUR JUNK OR SPAM FOLDERS AS YOUR NEW ACCOUNT EMAIL MAY DEFAULT TO ONE OF THESE FOLDERS.



THE NEW USER ACCOUNT HAS CELLS NOT NORMALLY USED IN THE UK – PLEASE COMPLETE ALL “REQUIRED FIELDS” AND COMPLETE THE FOLLOWING FIELDS AS DESCRIBED BELOW;

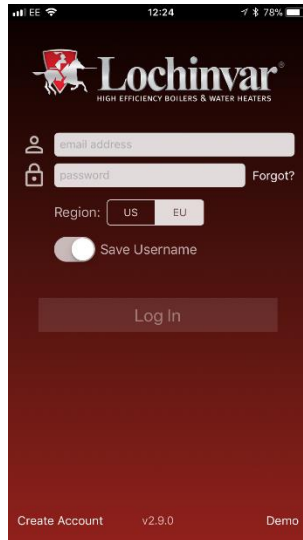
- STATE – LEAVE BLANK
- ZIP – USE POSTCODE
- PHONE – IF MOBILE NUMBER CLICK CELL BUTTON, IF LANDLINE LEAVE CELL BUTTON UNCHECKED

New User Account

First Name: <small>Required</small>	Phone: <input type="text"/> <input type="radio"/> Cell
Last Name: <small>Required</small>	E-Mail: <input type="text"/> <small>Required</small>
Company: <input type="text"/>	Confirm E-Mail: <input type="text"/> <small>Required</small>
Address: <input type="text"/>	Password: <input type="text"/> <small>Required</small>
City: <input type="text"/>	Confirm Password: <input type="text"/> <small>Required</small>
State: <input type="text"/> Zip: <input type="text"/>	
Country: <input type="text"/> <small>Required</small>	<input type="button" value="Create"/> <input type="button" value="Cancel"/>



SELECT EU AS THE REGION.

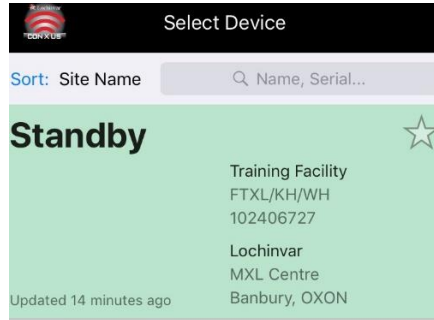


10. After creating your account login to register a Con-X-us board
11. Once you are logged in you will be directed to the DEVICE SELECTION SCREEN. You can now register the water heater unit by clicking on the REGISTER NEW DEVICE button.



THE UNIT AT SOME POINT MUST HAVE BEEN CONNECTED TO THE INTERNET BEFORE REGISTRATION CAN OCCUR.

4.1.2 DEVICE REGISTRATION



12. There are fields that are **REQUIRED** on the device registration screen, ensure all these fields are completed.

Enter the device information below and then press Register.

ConXus QR Code (DSN)
Required Scan

Unit Serial No. (Barcode)
Required Scan

Unit Name

Site Name Required

Building

Address

City Required

State/Region Required

ZIP/Postal

Cancel Register

13. The SCAN buttons can be used to fill in the QR code on the Con-X-us board and the serial number on the EcoShield water heater, or they can be entered manually.

- Con-X-us QR code for Con-X-us Board
- Unit Serial Number - Barcode

14. The water heater serial number barcode is located on the left hand side of the outer casing, the Con-X-us QR code should have been fitted just below the serial number during step 4 in section 3.2 or as shown below.



15. Once you have finished filling in the fields click on the REGISTER button.

Site Name Required

Building

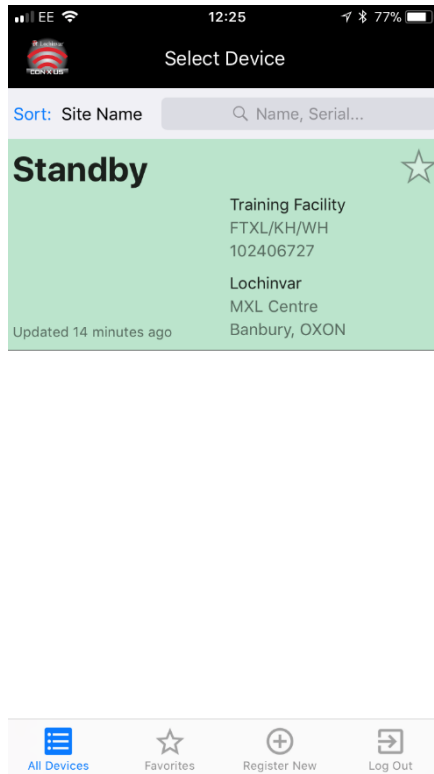
Address

City Required

State/Region Required

ZIP/Postal

16. Once registration has been completed, you will be re-directed to the device selection screen. You are now able to select the unit to monitor and change parameters with the App.



4.2 PERMISSIONS

Whoever first registers the Con-X-us device will be assigned the role of SITE MANAGER. As you register a Con-X-us device your user information will be automatically populated into the SITE MANAGER Field. The SITE MANAGER is responsible for assigning access to other users for each site. As the SITE MANAGER your contact information will be displayed in the SITE MANAGER Field in the service notification page of the setup tab.



We would recommend setting up Lochinvar Limited as a user (view only access would be sufficient – with **NO NOTIFICATIONS**). If Lochinvar has access to the boiler via the Con-X-us app it may assist with any future fault diagnosis on the water heater.

If setting up Lochinvar as a view only user then please use the email address – **conxus@lochinvar.ltd.uk**



4.2.1 NEW USER

To add a new user to a Con-X-us enabled water heater the user will first need to create an account **see Section 9**. The SITE MANAGER must enter the email address into the SERVICE PERSONNEL CONTACT INFO section of the service notification menu and click the LINK BUTTON. This will grant access to the Con-X-us enabled water heater and will be populated on the user's available devices list.



THE UNLINK BUTTON CAN BE USED TO REMOVE A USER. IF THE SITE MANAGER UNLINKS THEMSELVES THE CON-X-US WILL NEED TO BE RE-REGISTERED BY ANOTHER USER.

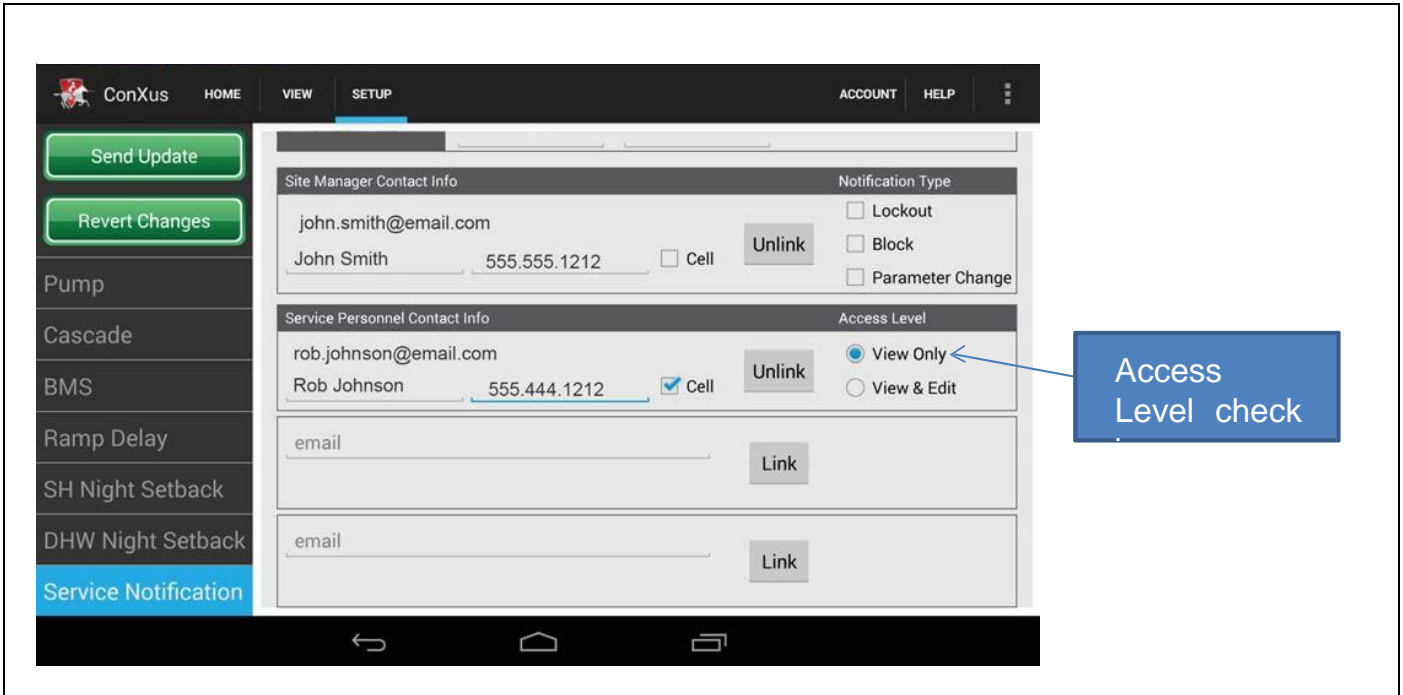
Enter contact information to add user access

The screenshot shows the ConXus mobile application interface. The top navigation bar includes 'ConXus', 'HOME', 'VIEW', 'SETUP', 'ACCOUNT', and 'HELP'. The 'SETUP' menu is open, showing options like 'Send Update', 'Revert Changes', 'Pump', 'Cascade', 'BMS', 'Ramp Delay', 'SH Night Setback', 'DHW Night Setback', and 'Service Notification'. The 'Service Notification' option is highlighted. The main content area displays 'Site Manager Contact Info' for John Smith and 'Service Personnel Contact Info' for Rob Johnson. The 'Service Personnel Contact Info' section includes fields for email, phone number, and a 'Cell' checkbox, along with an 'Unlink' button. A blue callout box with the text 'Enter contact information to add user access' points to the 'BMS' option in the menu.

4.2.2 ACCESS RIGHTS

For each service provider the SITE MANAGER can grant either VIEW ONLY access or full VIEW and EDIT access by clicking one of the buttons to the right of the service provider's name. VIEW ONLY access will allow the user to view all information without the ability to make changes. If the SITE MANAGER would like the user to be able to receive TEXT and email alerts then the SITE MANAGER must provide the user with full VIEW and EDIT access so they can set up the alerts. Once these are set up the SITE MANAGER can then change the user's access level back to VIEW ONLY.

VIEW and EDIT access allows the user to view all information and make programming changes.

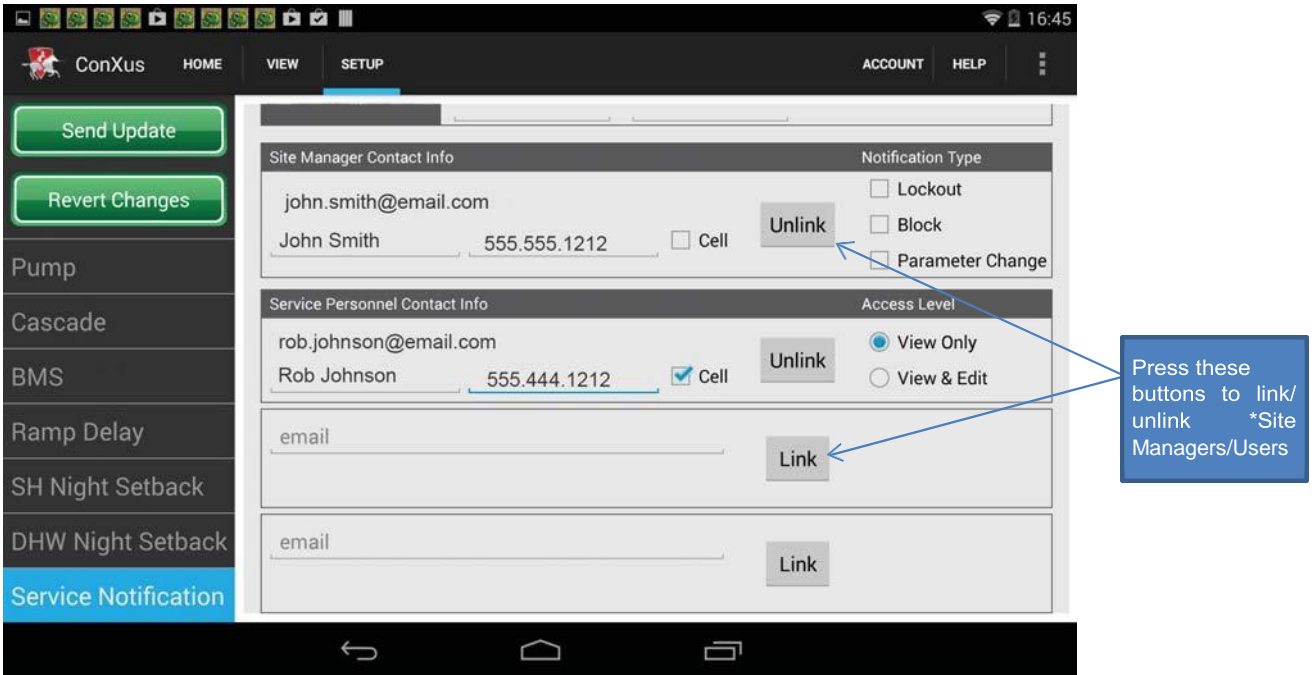


The SITE MANAGER and any user with VIEW and Edit privileges can select the type of alerts they wish to receive. One, all or none can be selected see highlighted below in green. By selecting LOCKOUT the SITE MANAGER or user will receive a text alert or email about the lockout condition. Likewise selecting BLOCK will result in a text or email being received about the blocking condition. Blocking conditions are not lockouts, but are conditions such as high outlet temperature, high flue temperature, or high delta T that result in the water heater limiting itself. Blocking conditions can occur because of operating conditions but can also provide early indications of problems. Anti-cycling blocking conditions are not relayed. Selecting PARAMETER CHANGE will result in a notification whenever a parameter is changed either via Con-X-us or through the user interface on the water heater.

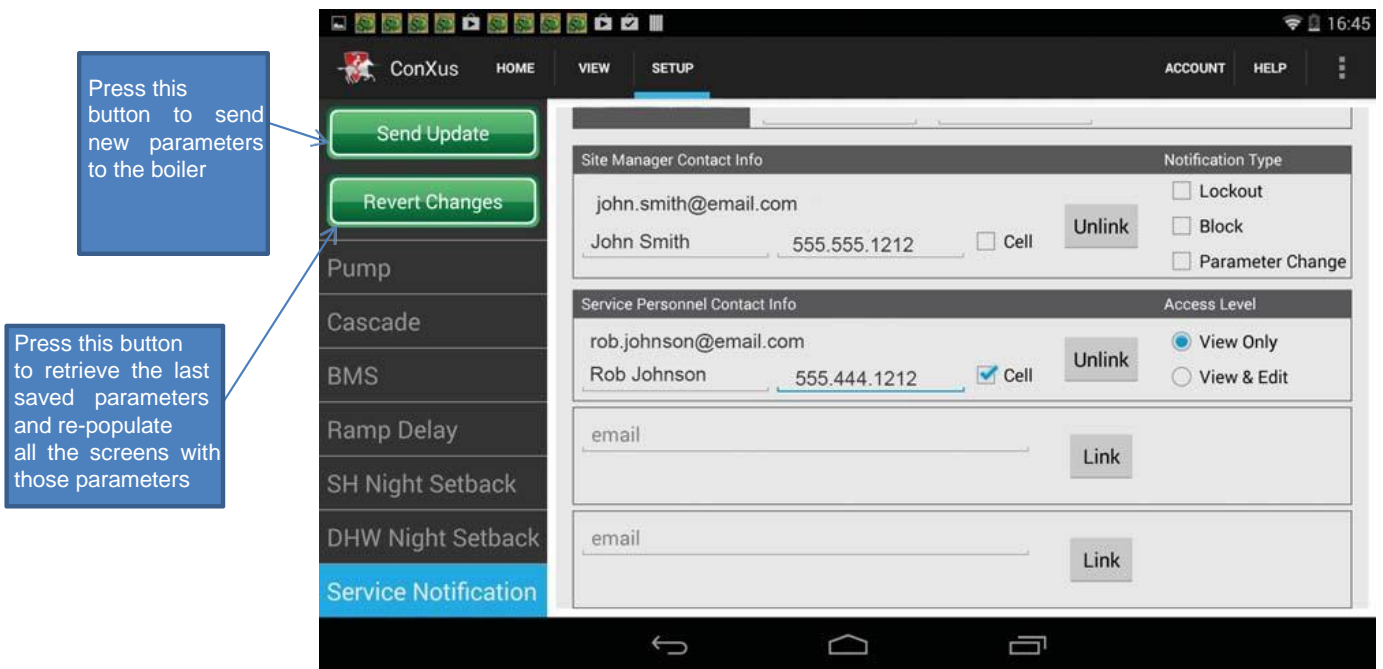
When a water heater with Con-X-us goes into a fault condition an alert will be sent via email or text message. A text message will be sent if a mobile phone number has been entered and the CELL box checked see highlighted below in red. Otherwise the user will receive an email.



ONLY THE SITE MANAGER CAN SEE ALL LINKED USERS. ALL USERS WILL JUST SEE THE SITE MANAGER.



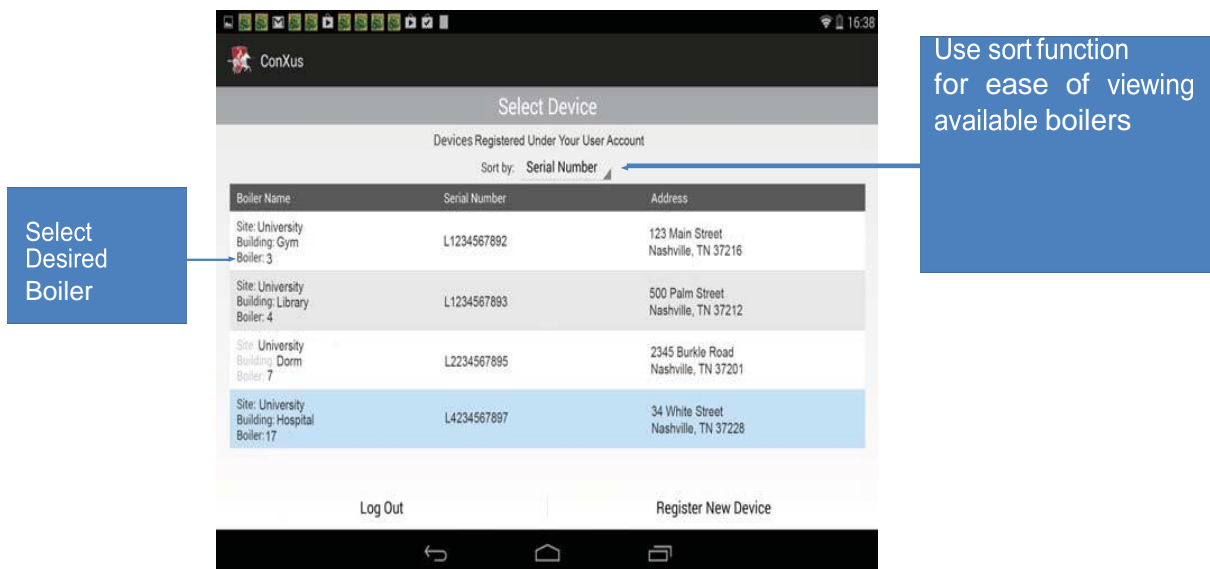
By accessing the SETUP tab the SITE MANAGER and any USERS with VIEW and Edit privileges will be able to make changes to all accessible parameters and send the parameters to the water heater. To send parameters simply click on the SEND UPDATE button. The REVERT CHANGES will retrieve the last saved parameters and re-populate all screens with these parameters.



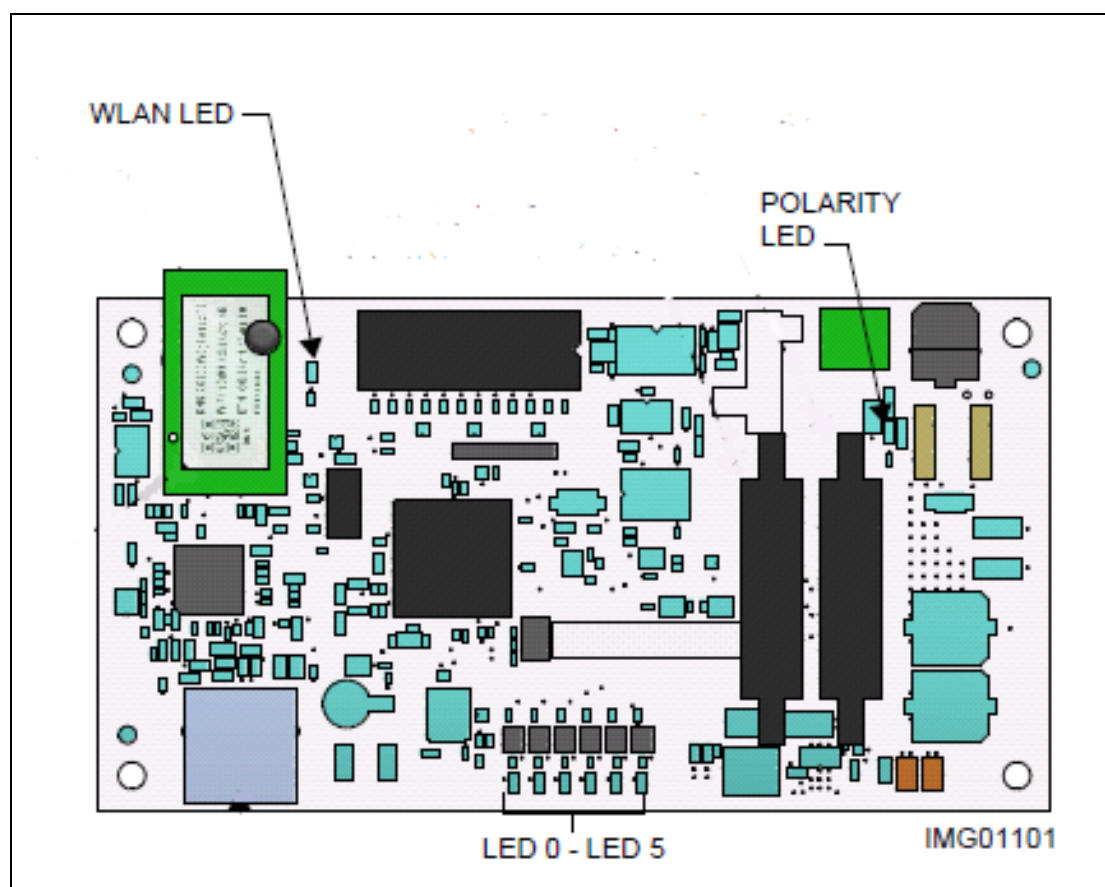
By clicking on the ACCOUNT button you will be taken to a list of all the water heaters registered to the account manager or user. You can access any water heater on the list by selecting the water heater required. The sort function can be used to sort the list of water heaters by

- Site name
- Serial number
- City location

If a water heater is shown as grey this means it is not communicating with the internet. This could be because the water heater is powered off or the Con-X-us module is not connected to the internet.



5.0 FAULT FINDING



LED	DESCRIPTION	ERROR	CORRECTIVE ACTION
LED 0	N/A		-----
LED 1	Control to display communication error	RED	Check ribbon cable connection and display
LED 2	Con-X-us Communication	BLANK	If blank during known transfer through Con-X-us review install and registration
LED 3	N/A		-----
LED 4	Control to display communication	BLANK	No display signal received, check ribbon cable connections
LED 5	Power Confirmation	BLANK	Confirm power on 24v AC supply from transformer
WLAN	Internet Connectivity Confirmation	BLANK	If after registration, repeat section of set-up
POLARITY	Inverse Polarity Alert	RED	Swap 24v AC and ground



IMPORTANT INFORMATION

These instructions must be read and understood before installing, commissioning, operating or maintaining the equipment.

