



BTD-200
Lightning Works
Software Update Instructions

BTD-200 System

Firmware and Software Update

PROPRIETARY NOTICE

The information contained in this manual (including all illustrations, drawings, schematics and parts lists) is proprietary to BIRAL. It is provided for the sole purpose of aiding the buyer or user in operating and maintaining the software. This information is not to be used for the manufacture or sale of similar items without written permission.

COPYRIGHT NOTICE

This document has been prepared by Bristol Industrial and Research Associates Limited and contains copyright material belonging to the company.

No part of this manual may be reproduced without the express permission of BIRAL.

© 2020 Bristol Industrial and Research Associates Limited (BIRAL).



Biral – P O Box 2, Portishead, Bristol BS20 7JB, UK

Tel: +44 (0)1275 847787

Fax: +44 (0)1275 847303

Email: enquiries@biral.com

www.biral.com

Manual Number: DOC101737

Revision: 00A

CONTENTS

1	INTRODUCTION	3
2	UPDATE INSTRUCTIONS	3
2.1	Download the Required Files	4
2.2	Backing Up Your Archived Data and Settings.....	4
2.2.1	Backing Up Your Data and Server Settings.....	5
2.2.2	Backing Up Your Lightning Works Client Settings.....	6
2.3	Uninstall Lightning Works Server and Client	7
2.4	Updating the BTD-200 Sensor Firmware	8
2.4.1	Installing the Firmware Update software	8
2.4.2	Running the Firmware Update Software	9
2.4.3	Troubleshooting	15
2.5	Installing Lightning Works Server and Client	17
2.5.1	Lightning Works Server	17
2.5.2	Lightning Works Client	17
2.6	Restoring the Archived Data and Server Settings.....	18
2.7	Restoring the Client Settings	19
2.8	Completing the Update	19

1 INTRODUCTION

The addition of the Lightning Works Messenger software to the range of BTD-200 system accessories in March of 2020 required an update to the way in which the BTD-200 sensor communicated with both the Lightning Works Server and the Lightning Works Client. BTD-200 sensors purchased prior to March 2020 must have their firmware updated and the latest versions of the Lightning Works Server and Client installed on the user computer systems before using Lightning Works Messenger. The old versions of BTD-200 sensor firmware are not compatible with the latest versions of Lightning Works Server or Client. Attempting to use incompatible versions will cause the system to stop operating.

In addition to providing compatibility with the Lightning Works Messenger, the latest versions of Lightning Works Server and Client also include a change to the way archive data is exported. The data format has been simplified and headers have been included at the start of each file to assist with data interpretation.

This document describes how to update your BTD-200 sensor to the latest version of firmware and install the latest version of Lightning Works Server and Client. We have tried to make the update process as simple as possible, but if you need assistance please do not hesitate to contact our Service Team by email or telephone, the contact details are shown on the first page.

2 UPDATE INSTRUCTIONS

Please read through the entire document before attempting the update to ensure you are fully familiar with what you need to do. Ensure you have enough time to complete the whole update, remember the system will not function at all unless all components are updated.

The updates should be performed in the order shown. Attempting to perform the update in a different order may cause the system to stop working.

You will need administrator rights for the computers to perform these updates. If you do not have administrator rights, please consult your IT department.

2.1 Download the Required Files

To perform the update, you must download three files from the Biral website. The files can be found on the Software Downloads page in the Support section of the website, at the following link <https://www.biral.com/service-support/downloads/software-downloads/>

The required files are:

- Lightning Works Server Setup
- Lightning Works Client Setup
- BTD-200 Sensor Firmware Update

Download the files and save them to a temporary location on your computer, you may find it easier if you save each one in a separate folder. The downloads are zipped to reduce the file size, they must be extracted before they can be used. To extract the files, right click on the file and select the "Extract all.." option. Follow the Windows instructions to extract the files.

2.2 Backing Up Your Archived Data and Settings

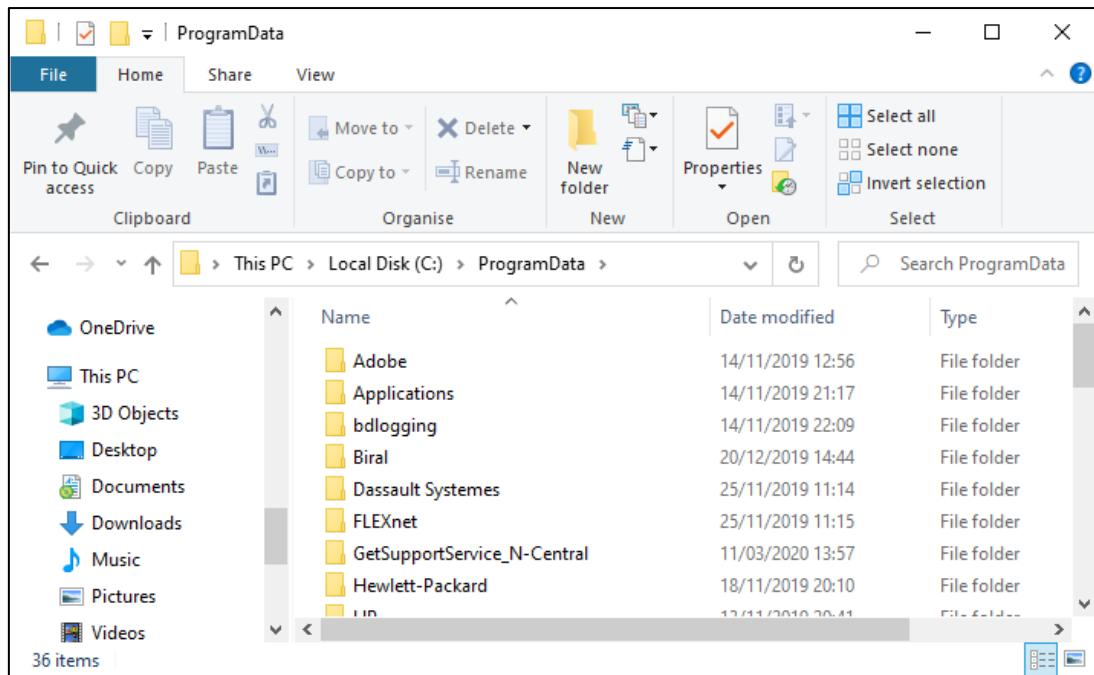
The Lightning Works Server saves data generated by your BTD-200 sensor on the hard drive of the computer on which it is installed. You can export this data using the Lightning Works Client on a day by day basis if you need to review past thunderstorm warnings.

If you wish to retain access to this historic data, you must back it up before doing anything further. You may also wish to backup settings such as the Administrator password and map location data. **Installing the latest version of the Lightning Works Server without backing up your data and settings will result in it being permanently deleted.**

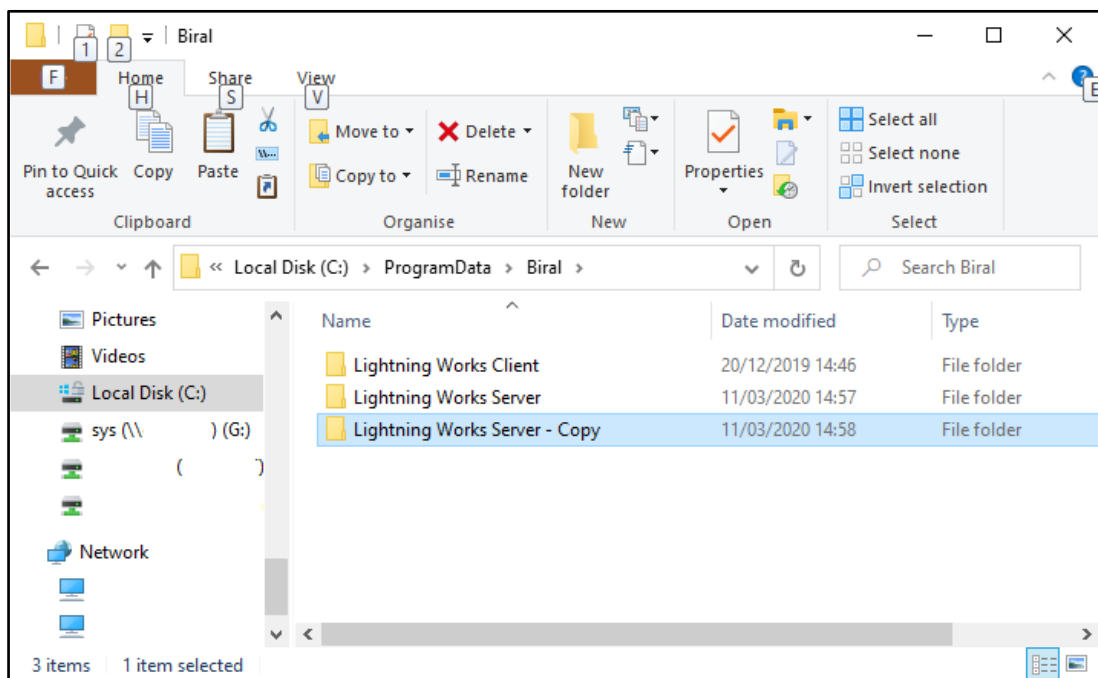
Lightning Works Client allows the user to configure the way the software works on the User Computer. If you wish to retain these settings, please follow the Lightning Works Client settings backup instructions.

2.2.1 Backing Up Your Data and Server Settings

- On the computer running the Lightning Works Server, open File Explorer and type %programdata% into the location box and press enter.



- Open the Biral folder by double clicking on it.
- Select the Lightning Works Server folder and make a copy. You can do this by right clicking on the folder and selecting copy, then place your mouse pointer below the folder, right click and select paste. A new folder called "Lightning Works Server – Copy" will have been created.

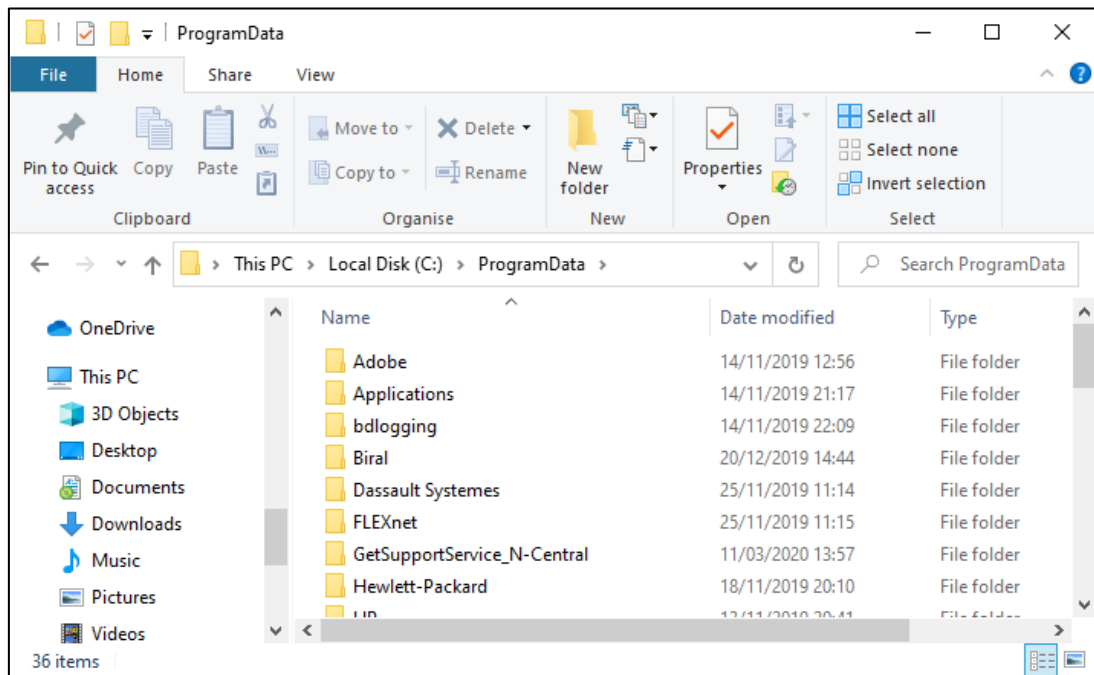


- You may now proceed with the rest of the update process.

2.2.2 Backing Up Your Lightning Works Client Settings

As the settings for each installation of Lightning Works Client can be different the steps described below should be followed for each computer running Lightning Works Client.

- On the computer running the Lightning Works Client, open File Explorer and type %programdata% into the location box and press enter.
- Open the Biral folder by double clicking on it.

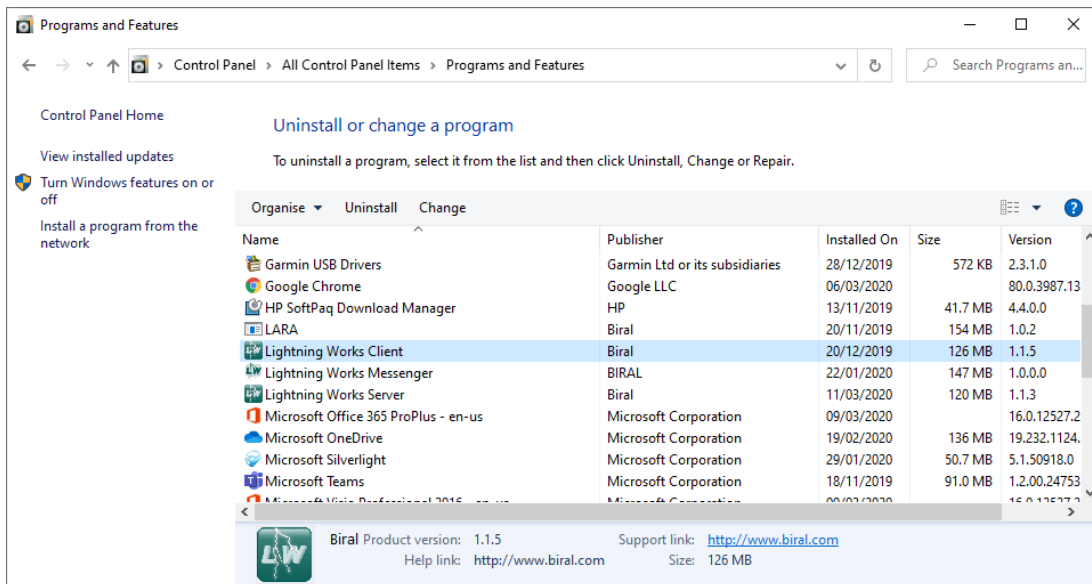


- Select the Lightning Works Client folder and make a copy. You can do this by right clicking on the folder and selecting copy, then place your mouse pointer below the folder, right click and select paste. A new folder called "Lightning Works Client – Copy" will have been created
- You may now proceed with the rest of the update process.

2.3 Uninstall Lightning Works Server and Client

If you have Lightning Works Client installed on multiple computers, you must uninstall it on each computer in turn.

- From the computer's Control Panel select "Programs and Features".



- Click on Lightning Works Client and then on the Uninstall button at the top of the list. Follow the instructions given in the popup boxes to confirm the uninstall.
- Click on Lightning Works Server and then on the Uninstall button at the top of the list. Follow the instructions given in the popup boxes to confirm the uninstall.
- In Windows 10 you can also use the "Add or Remove Programs" process by typing "Add or Remove Programs" in the search box of the Task Bar.

2.4 Updating the BTD-200 Sensor Firmware

Ensure that you read these instructions carefully before carrying out the update.

The BTD-200 Sensor firmware update should only be performed using a wired connection between the sensor's primary communications port and the User Computer. This is the normal method of connection for the BTD-200 sensor. **DO NOT** attempt to update the BTD-200 Sensor Firmware if a modem or wireless link of any form has been used in the connection between the BTD-200 sensor and the User Computer. If such a connection has been used, consult Biral before attempting the update.

2.4.1 Installing the Firmware Update software

Before you can update the BTD-200 firmware you must install the BTD200 firmware update application on the computer that has the connection to the BTD-200 sensor. This will be the computer that had the Lightning Works Server installed on it. To install the software, follow the instructions given below.

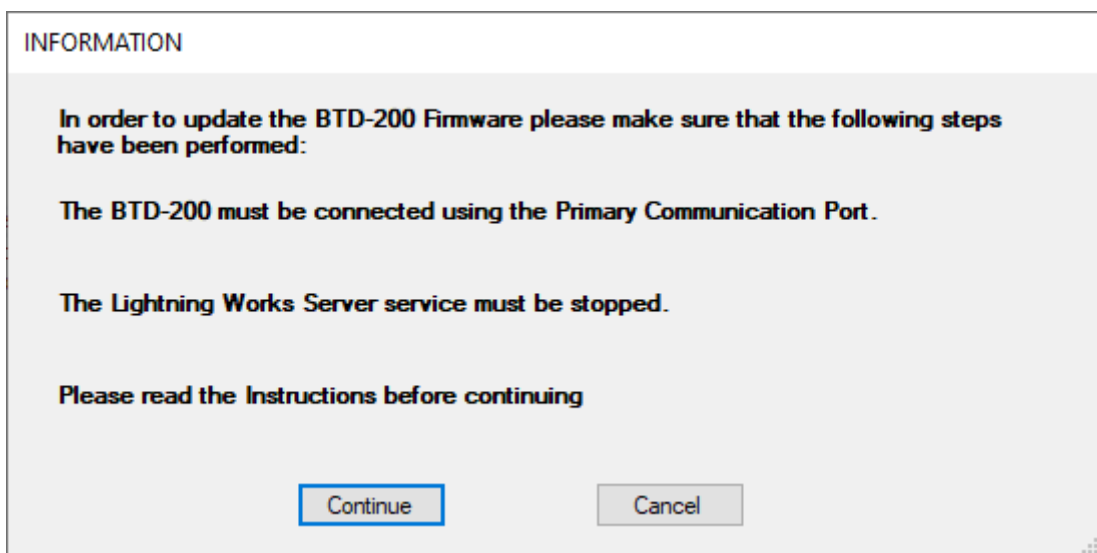
- Locate the folder where the BTD-200 Sensor Firmware Update was extracted to.
- Run the program BTD200UpdateSetup.exe by double clicking on the file name, this will install the software onto the computer.
- Follow the instructions to install the software and accept the licence agreement.
- You will be asked to confirm allowing the application to make changes to your device, answer Yes
- After installation, the shortcut icon shown below will appear on the desktop.



2.4.2 Running the Firmware Update Software

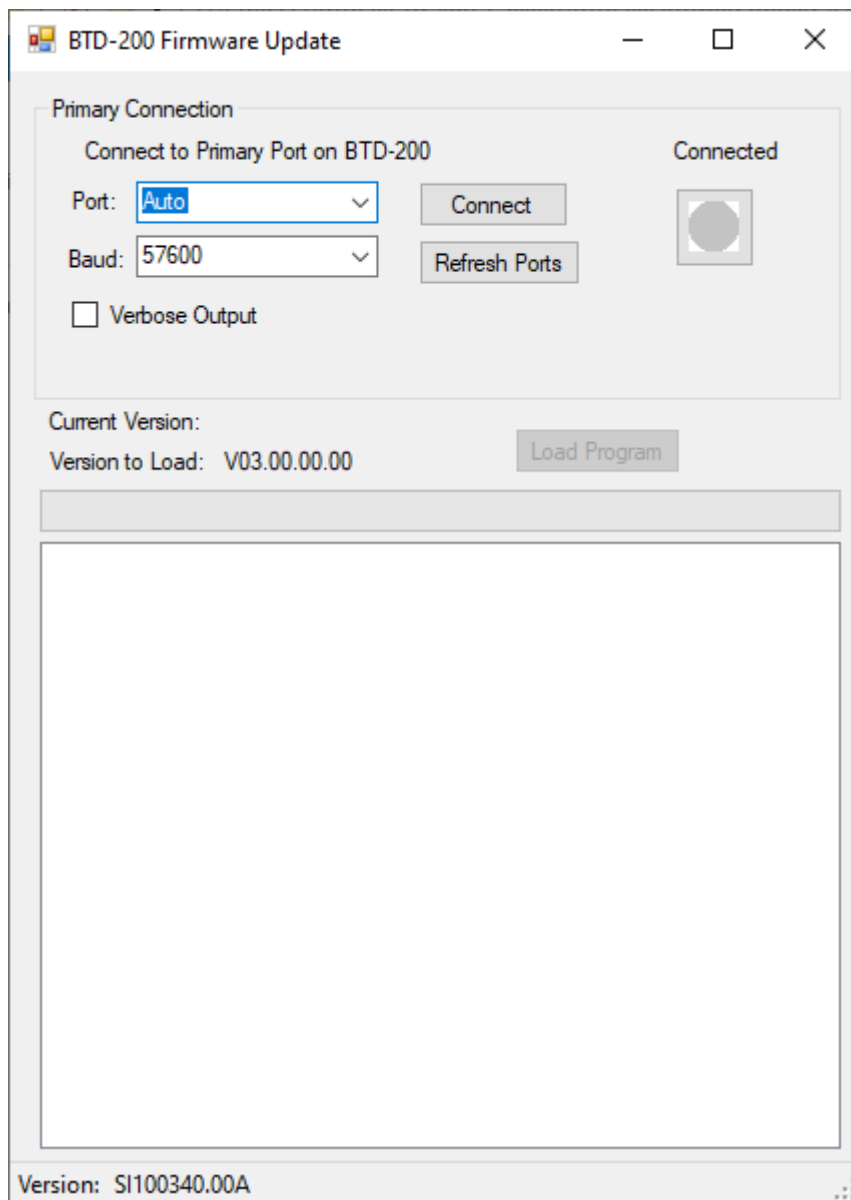
To update the BTD-200 sensor, follow the instructions given below.

- Connect the BTD-200 sensor primary data port to the computer and turn on the power to the sensor. If you are updating an existing installation the primary data connection should already be in place. If you are performing the update using another computer, refer to the BTD-200 User Manual for details of how to connect the primary data cable.
- Run the BTD-200 Firmware Update software by double clicking on the desk top icon. You will be asked to confirm running the application as an administrator, answer Yes. The display will be:



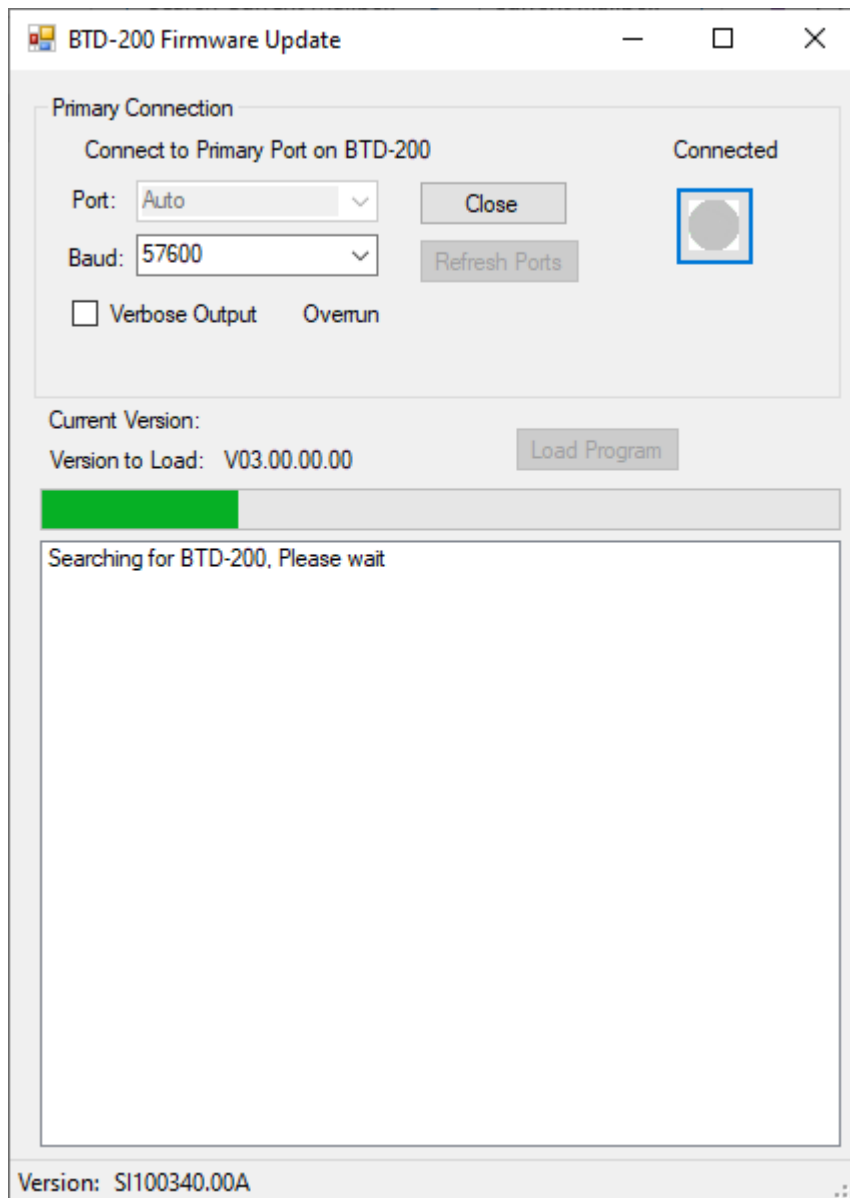
- If the Lightning Works Server has been uninstalled in accordance with the earlier instructions, then press the Continue button. If not, then press the Cancel button and the update process will stop and the program will close. Uninstall the Lightning Works Server before continuing.

- If Continue has been pressed, the display will be:



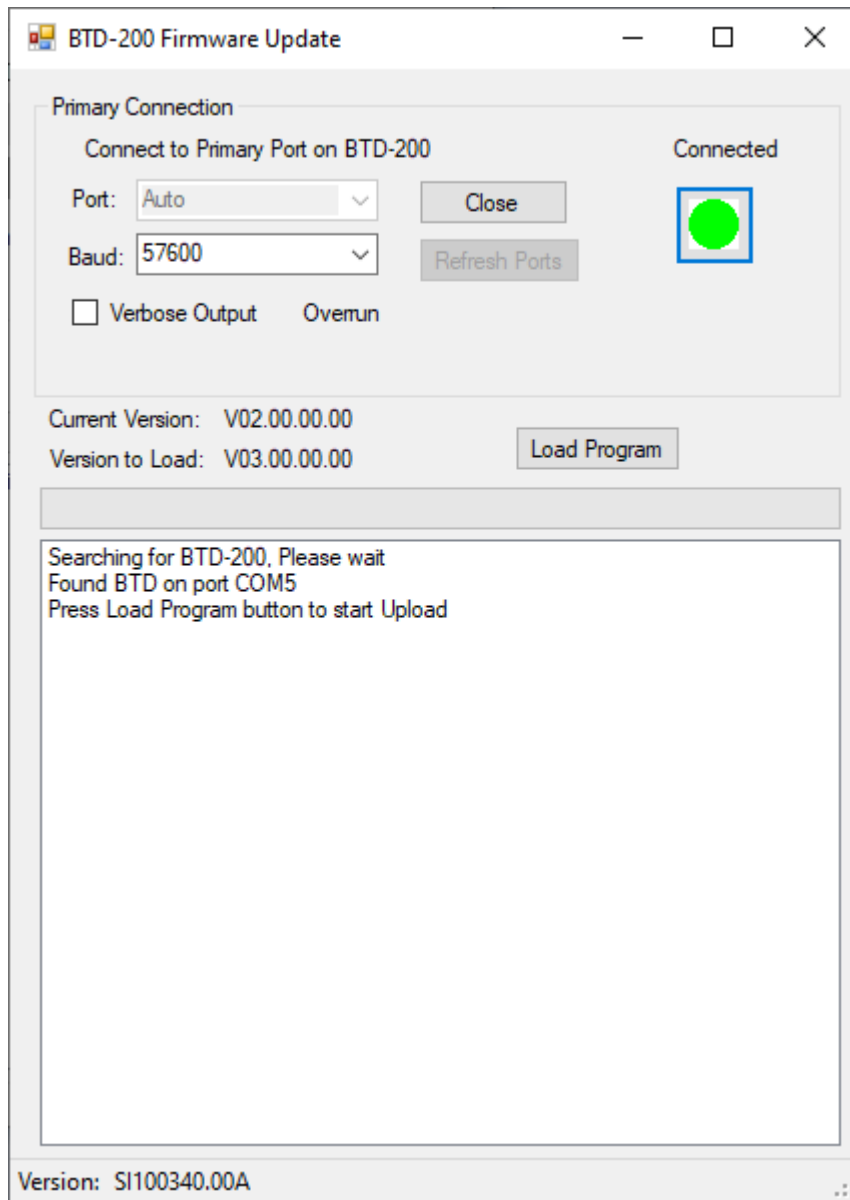
- The COM Port box will show "AUTO". And contain a list of available ports on the system. Selecting AUTO will attempt to access the BTD-200 via each available port in turn until the BTD-200 is found. If the port number is already known, it can be selected from the list.
- Select the port you require using the drop down arrow, or use AUTO.
- The Baud Rate box will show the 57600 Baud Rate.
- Version to Load: shows the version number of the firmware that will be installed on the sensor.
- Click on the connect button.

- The display will change to:

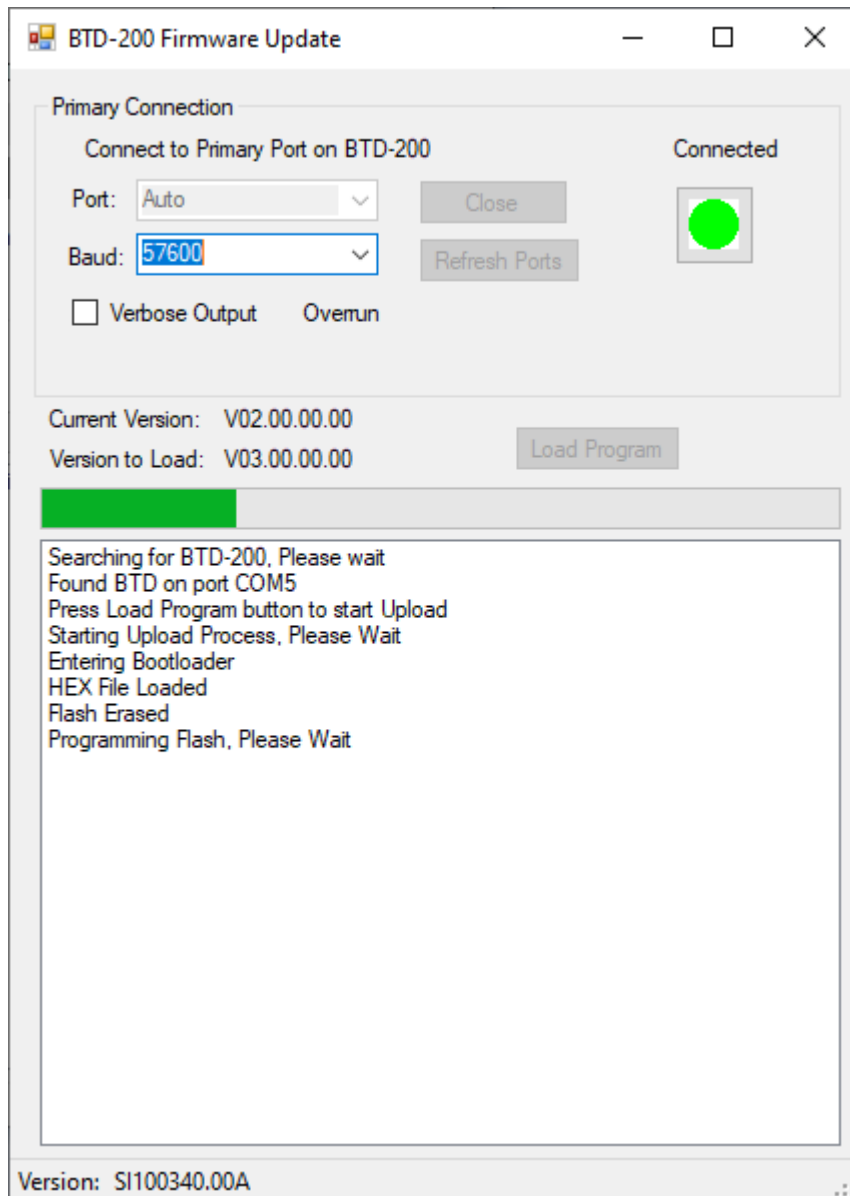


- While attempting to connect to the BTD in AUTO mode the progress bar will update with each port tried until either the connection is made, or no connections are found. The length of time this will take will depend on the number of assigned COM ports on the PC.

- Once connected the Load Program button will be activated and the message “Press Load Program to start Upload” will be displayed:

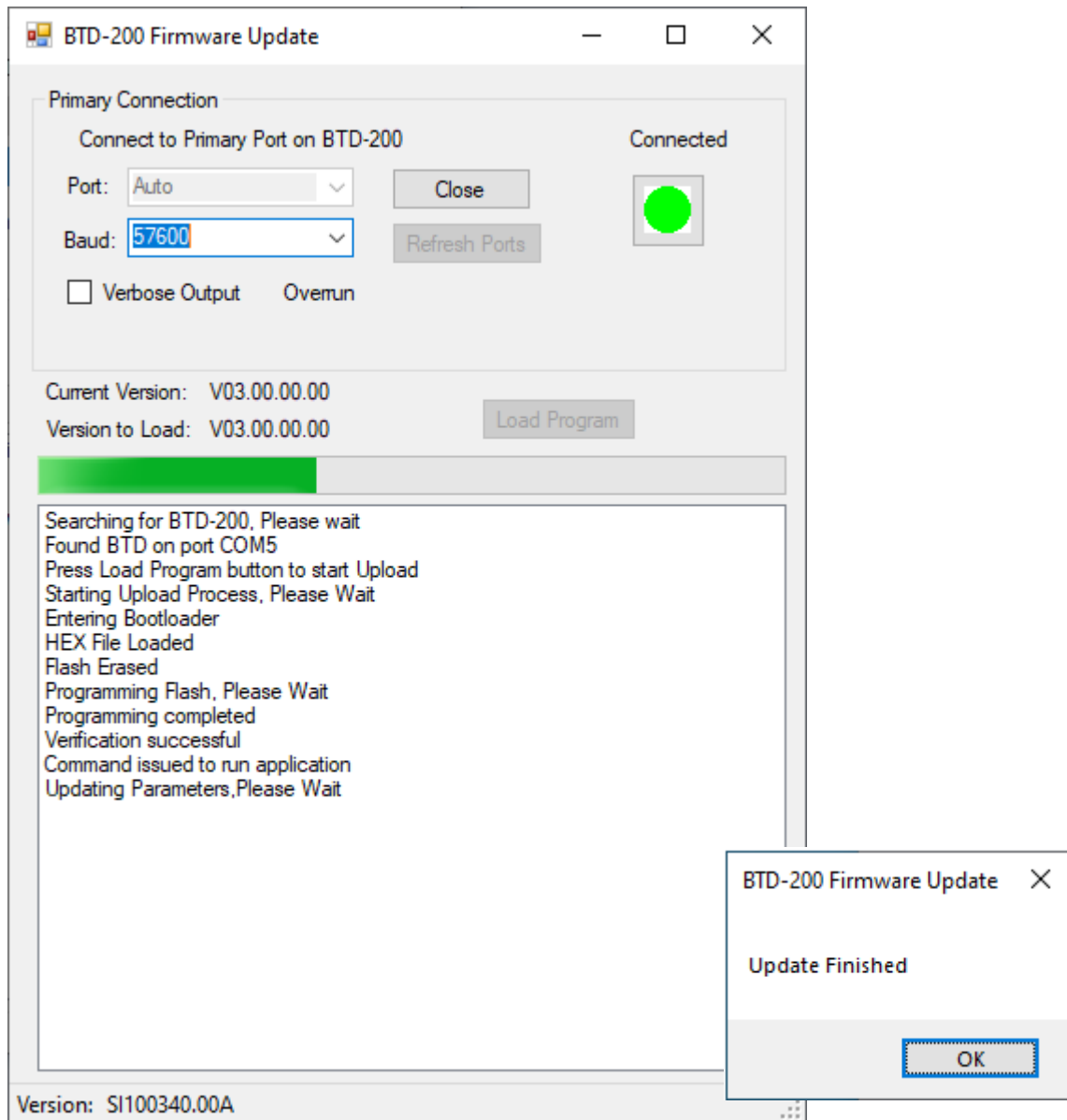


- Click on the Load Program button. The programming process will begin. The Close and Load Program buttons will be disabled, and the progress bar will update during programming.



- This takes approximately 5 minutes. If for any reason the program is interrupted, or the sensor loses power during the programming process the sensor will become stuck in the bootloader. If this happens see the troubleshooting section below.

- On Completion the progress bar will be full, and the program will check the version and update some internal parameters, the display will be:

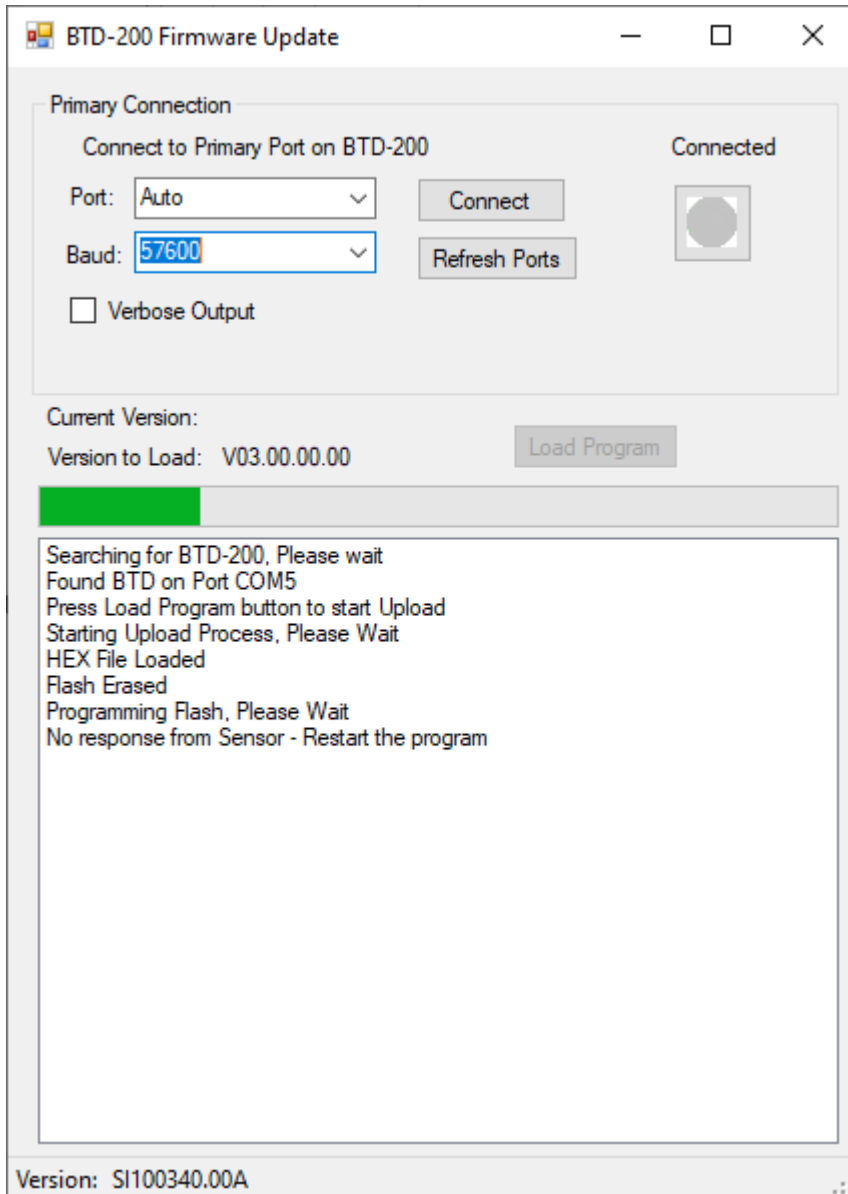


- A Message Box will be displayed confirming that the firmware update has completed.
- Press OK, which will close the program.
- The BTD-200 sensor firmware has now been updated and you can continue with the rest of the system update as described in section 2.5.
- If you have encountered any problems, please see section 2.4.3 below.

2.4.3 Troubleshooting

2.4.3.1 Loss of Power or Communications

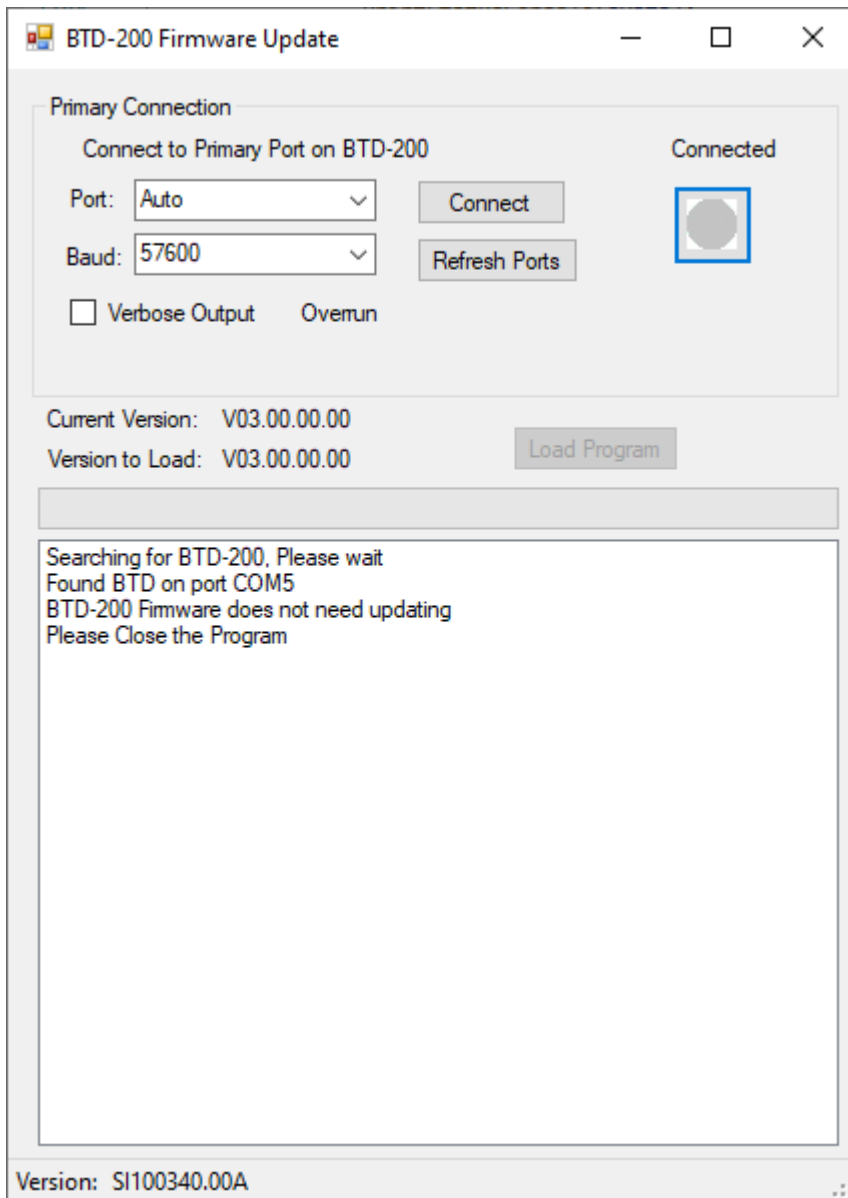
If for any reason the program is interrupted, or the BTD-200 sensor loses power during the programming process the sensor will remain in the bootloader. If this happens, the display will have the message "No response from Sensor- Restart the program". Please run the program again.



Once the program has restarted, the BTD-200 firmware update process can be repeated from the beginning.

2.4.3.2 Firmware Already Updated

If the BTD has already been updated the program will display:



The program can be closed, and you can continue with the rest of the system update as described in section 2.5.

If there are any problems or you are uncertain at any time, please contact Biral using the contact details given on page 1.

2.5 Installing Lightning Works Server and Client

2.5.1 Lightning Works Server

Install the Lightning Works Server on the same computer as it was previously installed. This is the computer that has the physical connection to the BTD-200 Sensor.

- Install the latest version of Lightning Works Server using the installation file downloaded in section 2.1.
- Open the folder and double click the "Lightning Works Server Setup" application.
- Detailed instructions for installing the Lightning Works Server software are provided in the BTD-200 manual.

2.5.2 Lightning Works Client

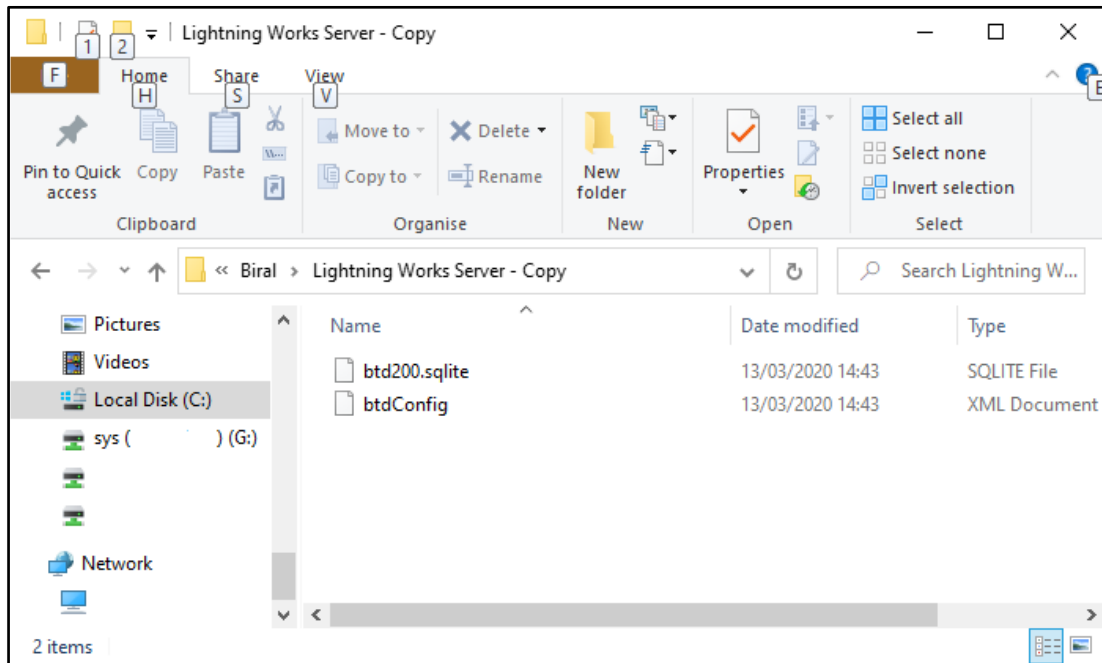
Install the Lightning Works Client on each computer on the local network that requires access to the BTD-200 Lightning Works software.

- Install the latest version of Lightning Works Client using the installation file downloaded in section 2.1.
- Open the folder and double click the "Lightning Works Client Setup" application.
- Detailed instructions for installing the Lightning Works Client software are provided in the BTD-200 manual.

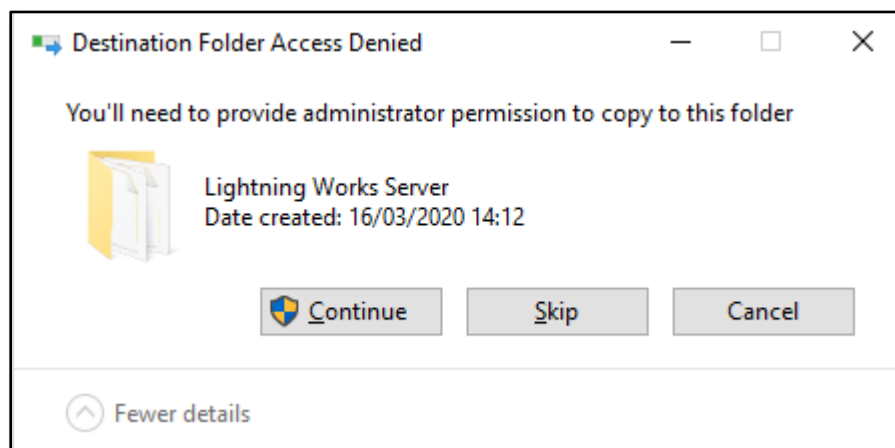
2.6 Restoring the Archived Data and Server Settings

The following steps are performed on the computer running the Lightning Works Server, this is the computer connected to the BTD-200 sensor.

- Locate the backup folder created in the %programdata%\Biral folder as described in section 2.2.1. Open the folder by double clicking on it.



- To restore the archived data, copy the file named "btd200.sqlite" to the Lightning Works Server folder. If the file exists, you will need to confirm the file replacement by clicking in Continue, as shown below.

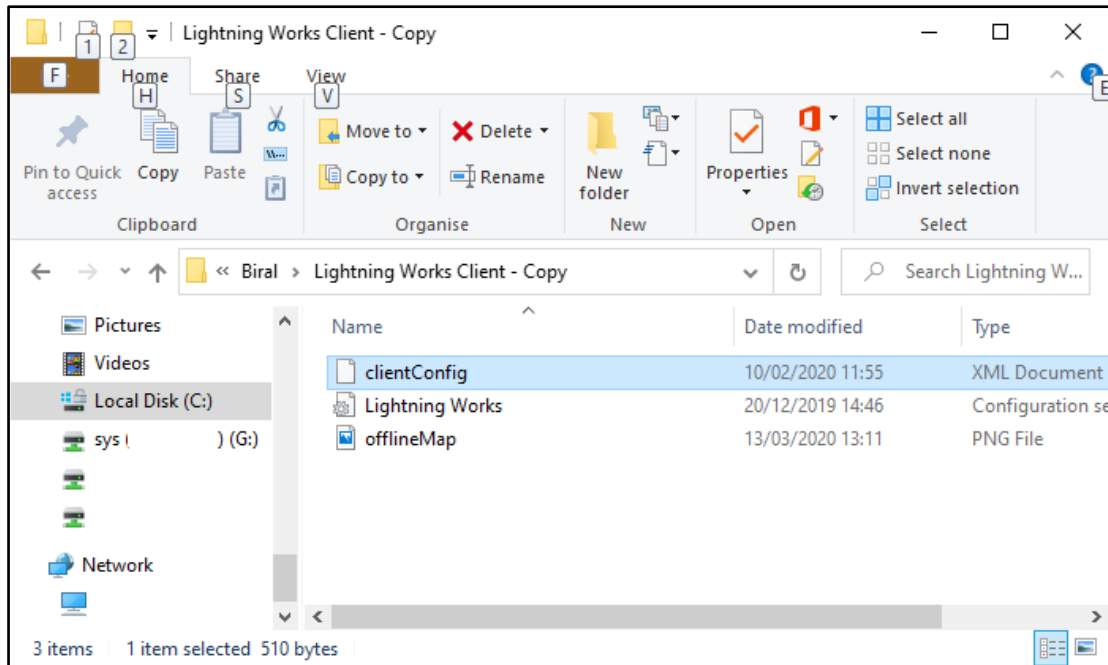


- To restore the settings, copy the file named "btdConfig.XML" to the Lightning Works Server folder. You will be asked to confirm the replacement of the file.
- Restart the computer.

2.7 Restoring the Client Settings

The following steps are performed on each computer running the Lightning Works Client.

- Locate the backup folder created in the %programdata%\Biral folder as described in section 2.2.2. Open the folder by double clicking on it.



- To restore the Client settings, copy the file named "clientConfig.XML" to the Lightning Works Client folder. If the file exists, you will be asked to confirm the file replacement.
- The restored settings will take effect when the Client software is next opened.

2.8 Completing the Update

The update process is now complete, and the Lightning Works software should now operate as before.