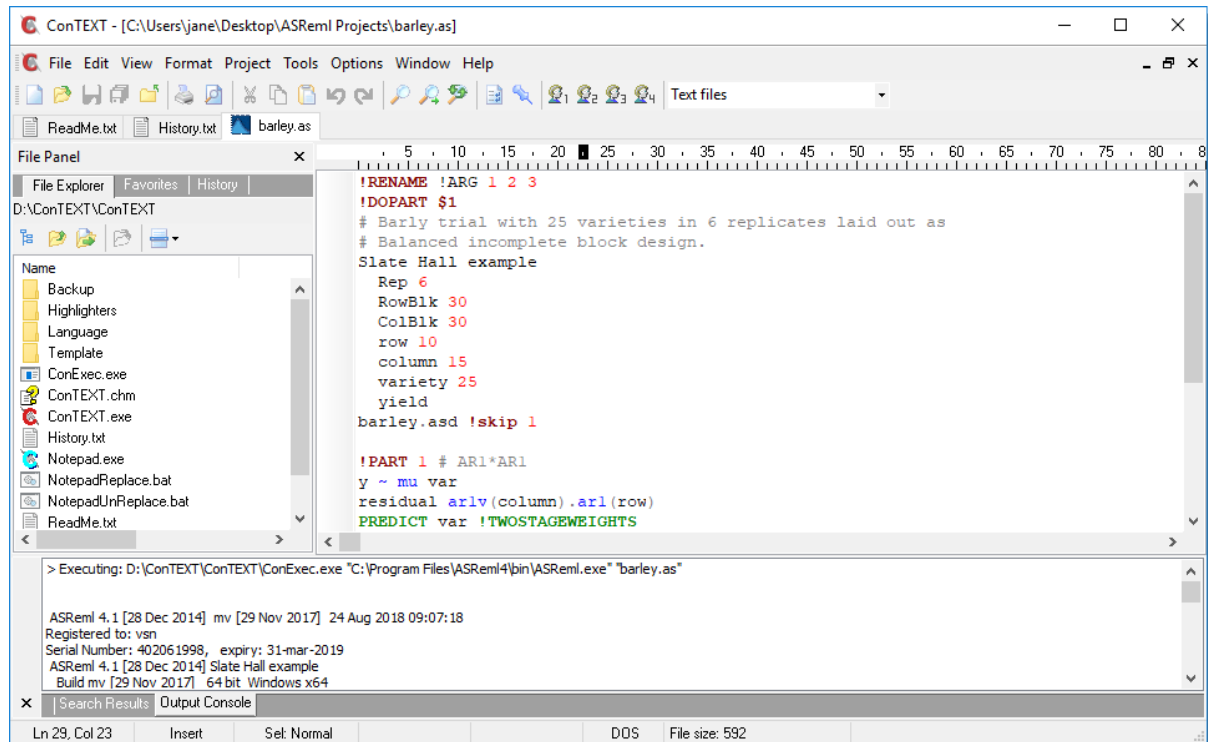# Using ConTEXT with ASReml

ConTEXT is a popular choice among ASReml users on the Windows® platform. It is a freeware text editor that lets you associate file extensions with a program so that you can open a program and run it on a file.

You can use ConTEXT as a file editor to import or write ASReml command files, then run the ASReml program directly within ConTEXT and display the results.

Copying the Example Data Files

As part of the setup process you will need to run an analysis on one of the example data files bundled with ASReml to ensure that your ConTEXT configuration is working correctly.

The folder containing the ASReml example data files is read only, so you will need to copy this folder and paste it to a new location where you have write access, such as your desktop or `D:` drive.

The following instructions assume that you have pre-installed ASReml to the default location, which is `C:\Program Files\ASReml\`.

- Navigate to `C:\Program Files\ASReml\Examples`.

- Right-click the `Functional` folder and select **Copy**.

- Now go to your desktop, right-click and **Paste** the folder there.

- Rename the folder `ASReml Projects`. This is just for convenience

Note: You can copy the `Functional` folder to a location other than `desktop` and name it anything you like. The instructions that follow will use `desktop` as the file location and `ASReml Projects` as the folder name.
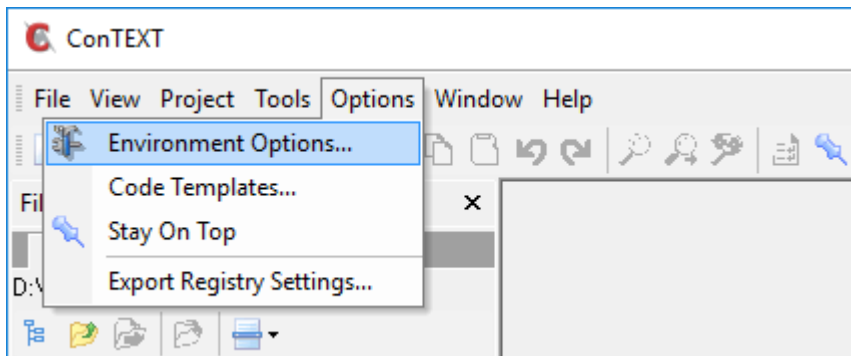

Downloading ConTEXT

- Download ConTEXT from http://www.contexteditor.org/

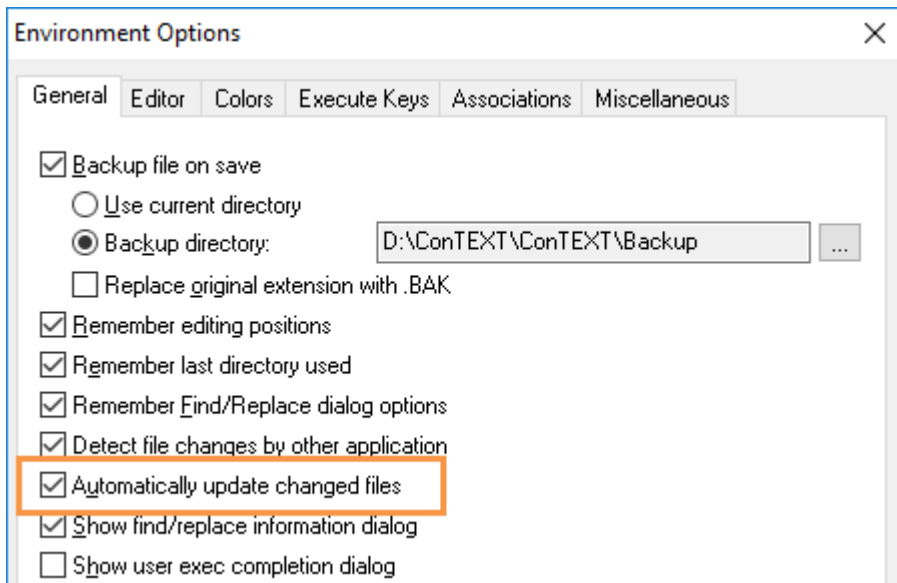- On the *Downloads* page select the newest version (the top option).

- After downloading ConTEXT, double-click the downloaded file and follow the instructions to install it.

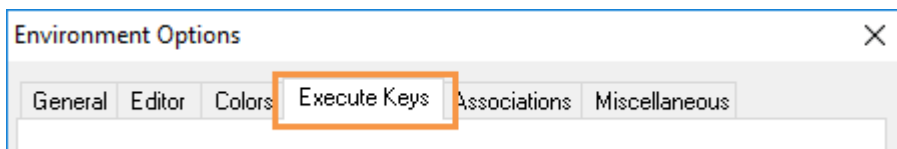# Configuring ConTEXT to run ASReml

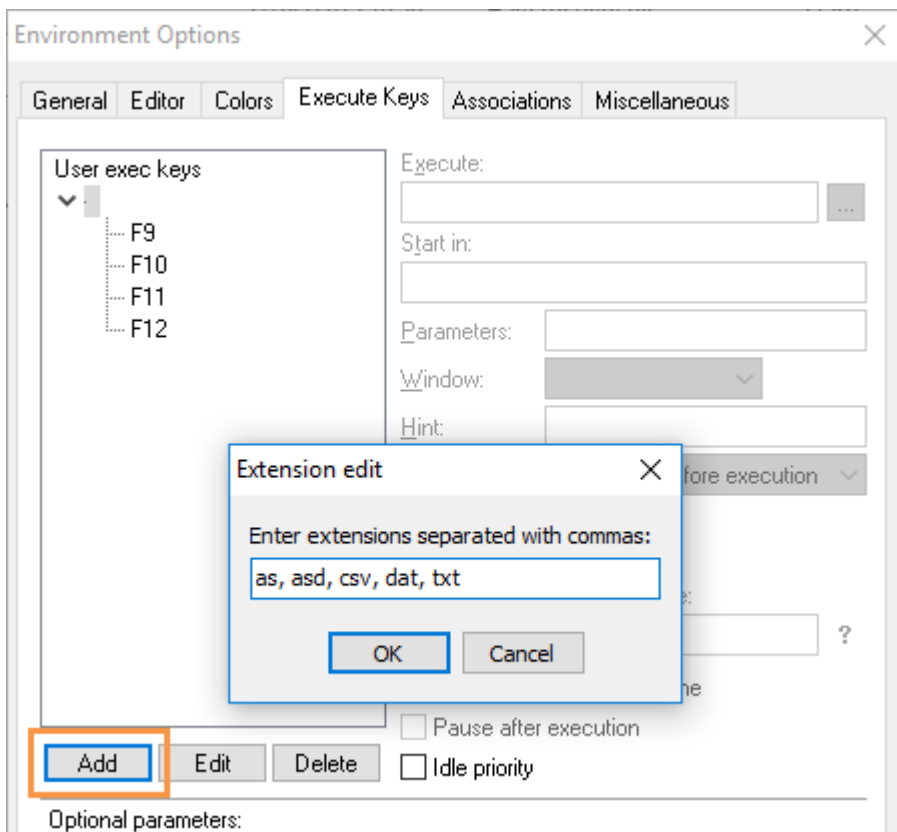- Start ConTEXT then from the menu select **Options>Environment Options**.

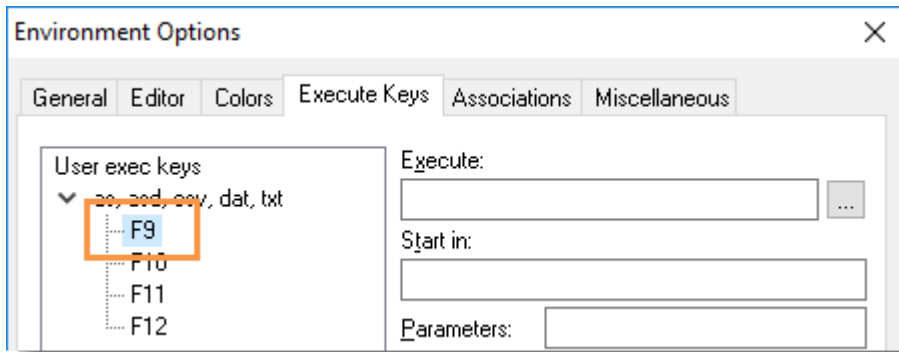- On the *General* tab select **Automatically update changed files**.
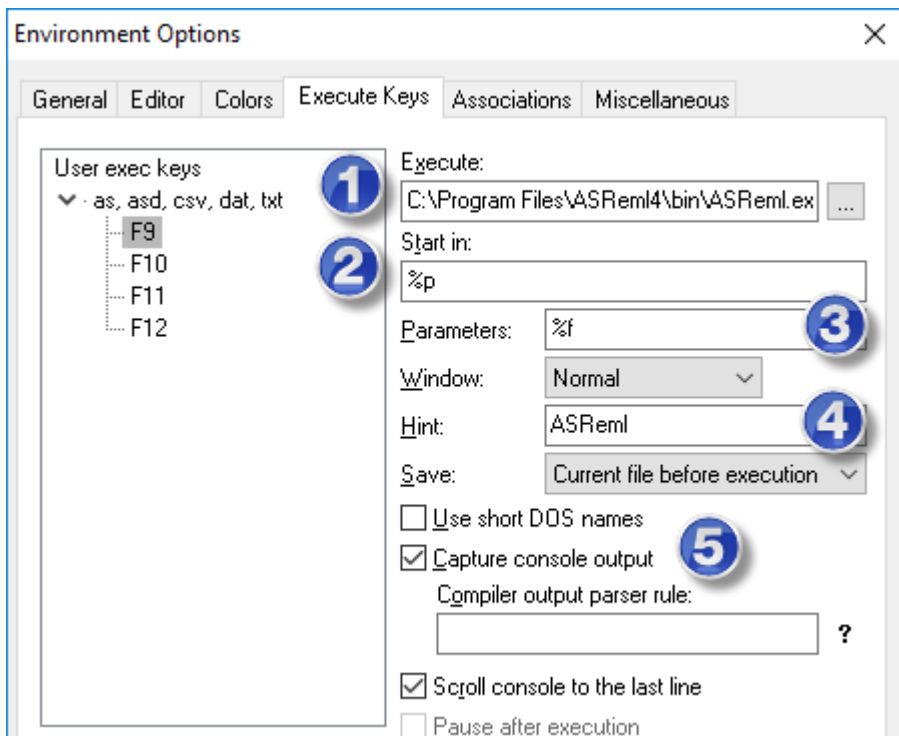

- Select the *Execute Keys* tab.

- Click **Add** then type your required extensions and click **OK**.
  (The most common file extensions are `as, asd, csv, dat, txt`.)

- Under *User exec keys* click **F9**. This will enable you to run ASReml command files using the keyboard **F9** key

- Fill in the fields as follows:

1. In the **Execute** field click ⬚ and navigate to the ASReml program.
   By default this will be `C:\Program Files\ASReml\bin`. Select the file called `asreml.exe`.

2. In the **Start in** field type %p.

3. In the **Parameters** field type %f.

4. In the **Hint** field type `ASReml`.

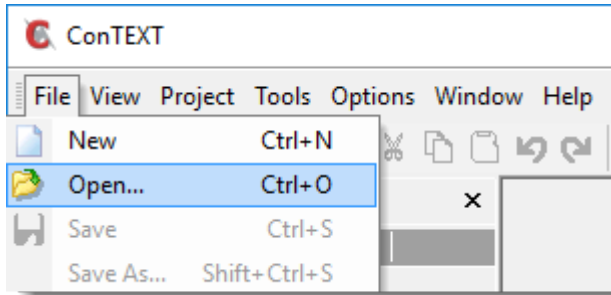5. (Optional) Select the checkboxes **Capture console output** and **Scroll console to the last line**.
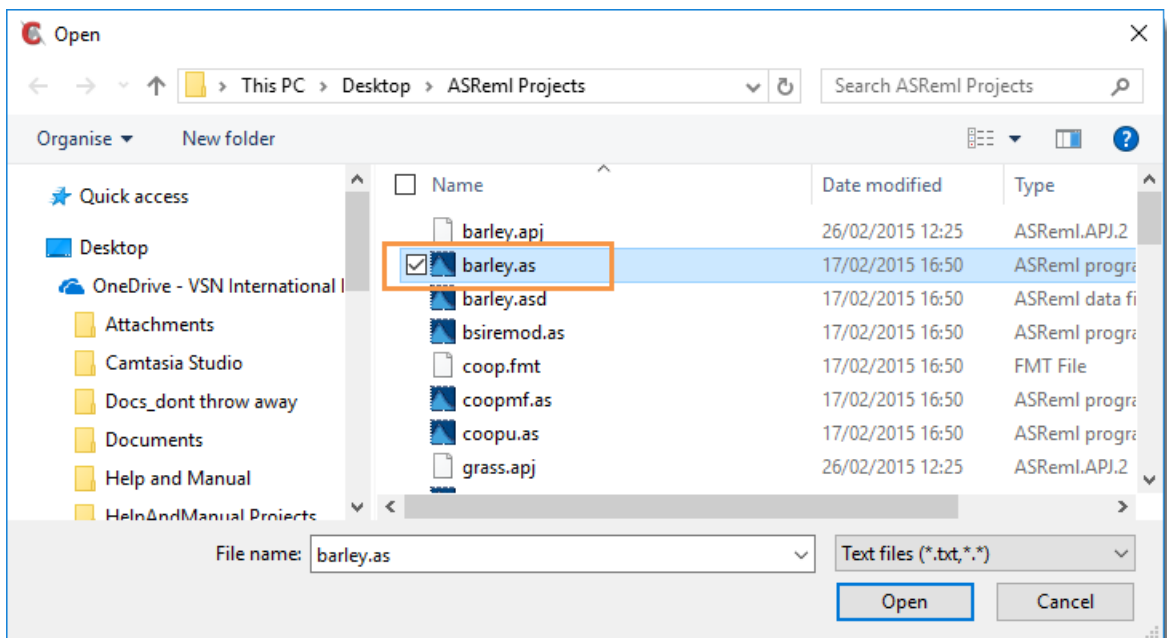

- At the bottom of the window click **OK**.

Testing your Configuration

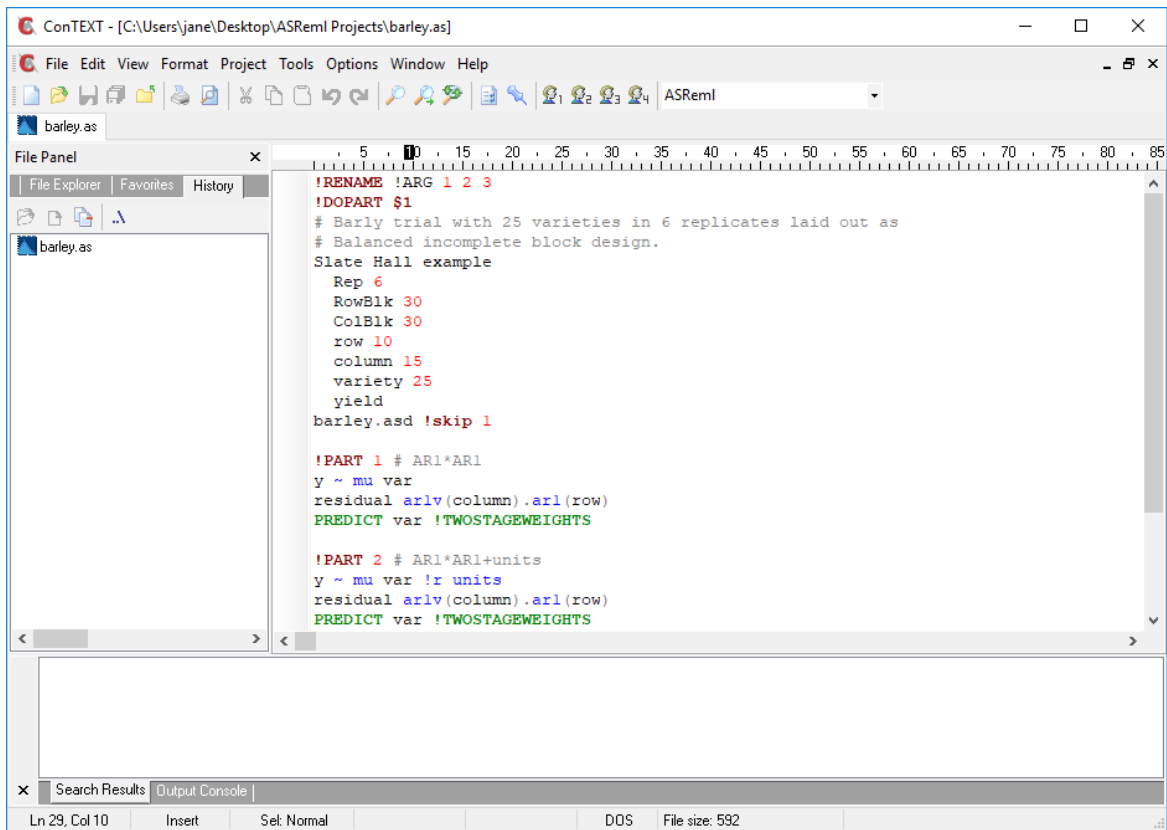You should now test your configuration by running an analysis on one of the ASReml example data sets.

- From the menu select **File>Open** then navigate to the `ASReml Projects` folder on your desktop.

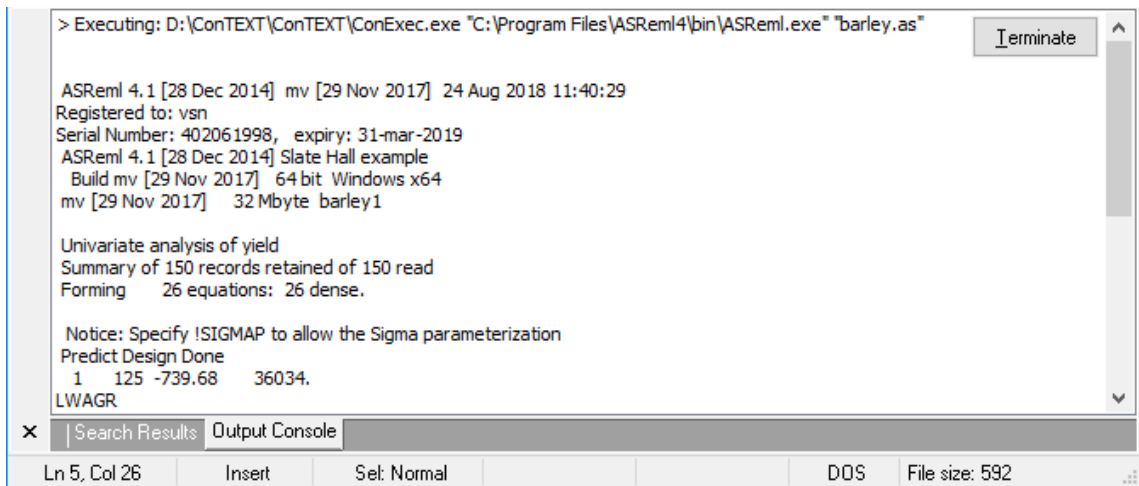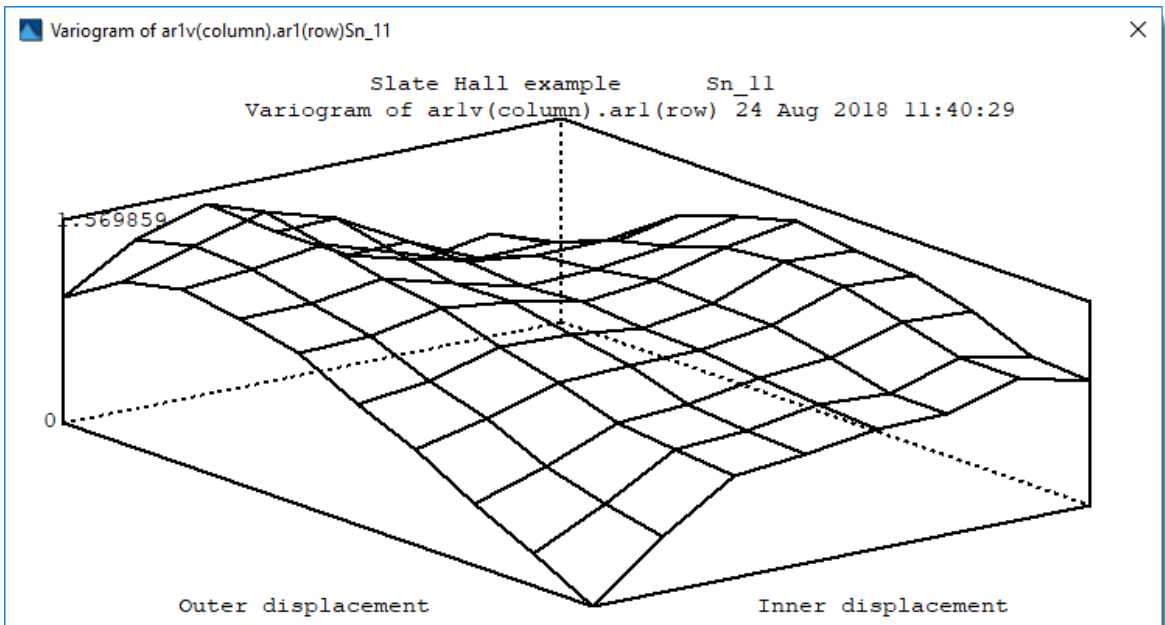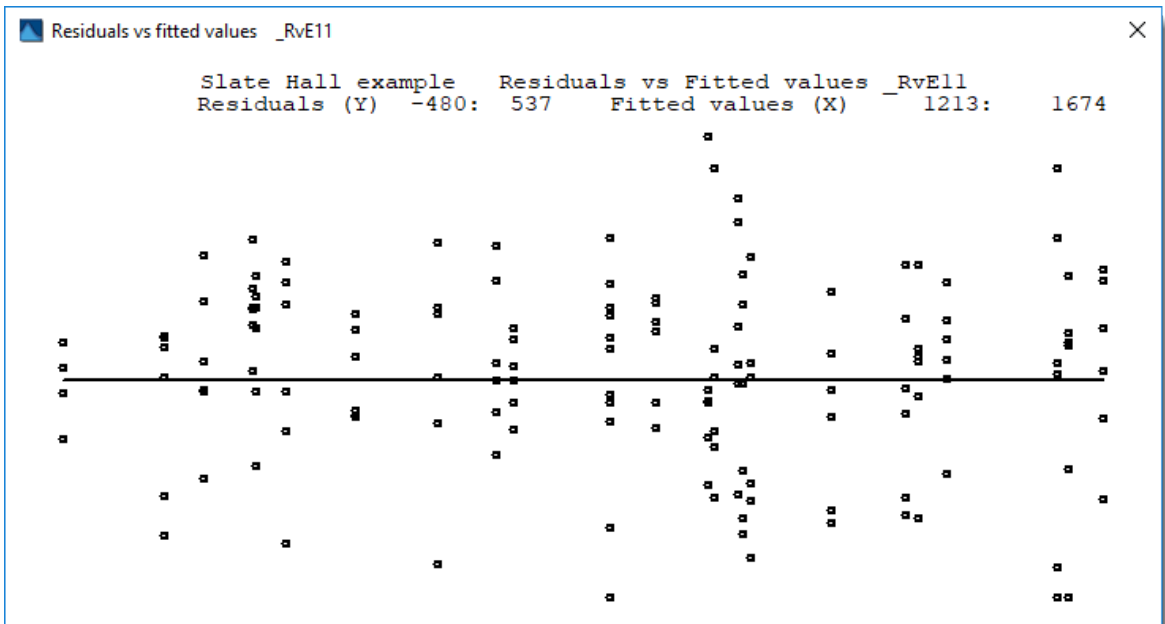- Select `barley.as` then click **Open**.

This loads the file into the ConTEXT console.

- Press the keyboard **F9** key to run the command file.

This will display your job progress in the lower Output Console and also produce a number of graphs.
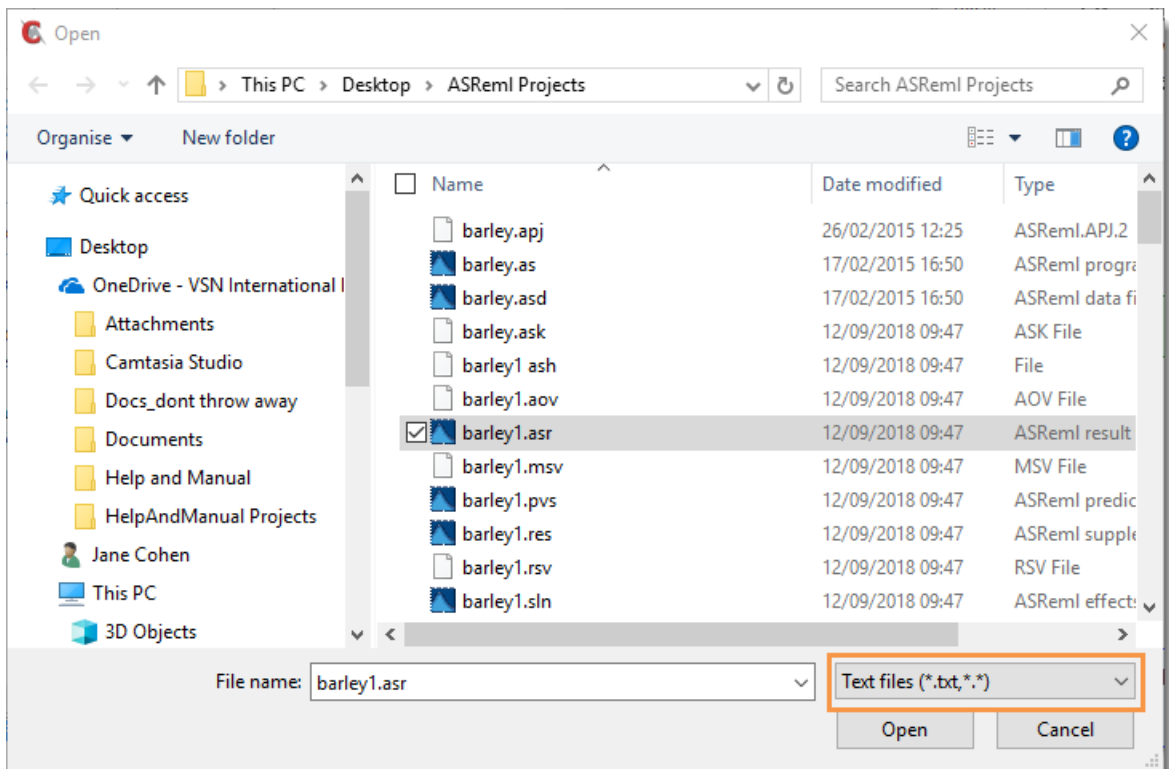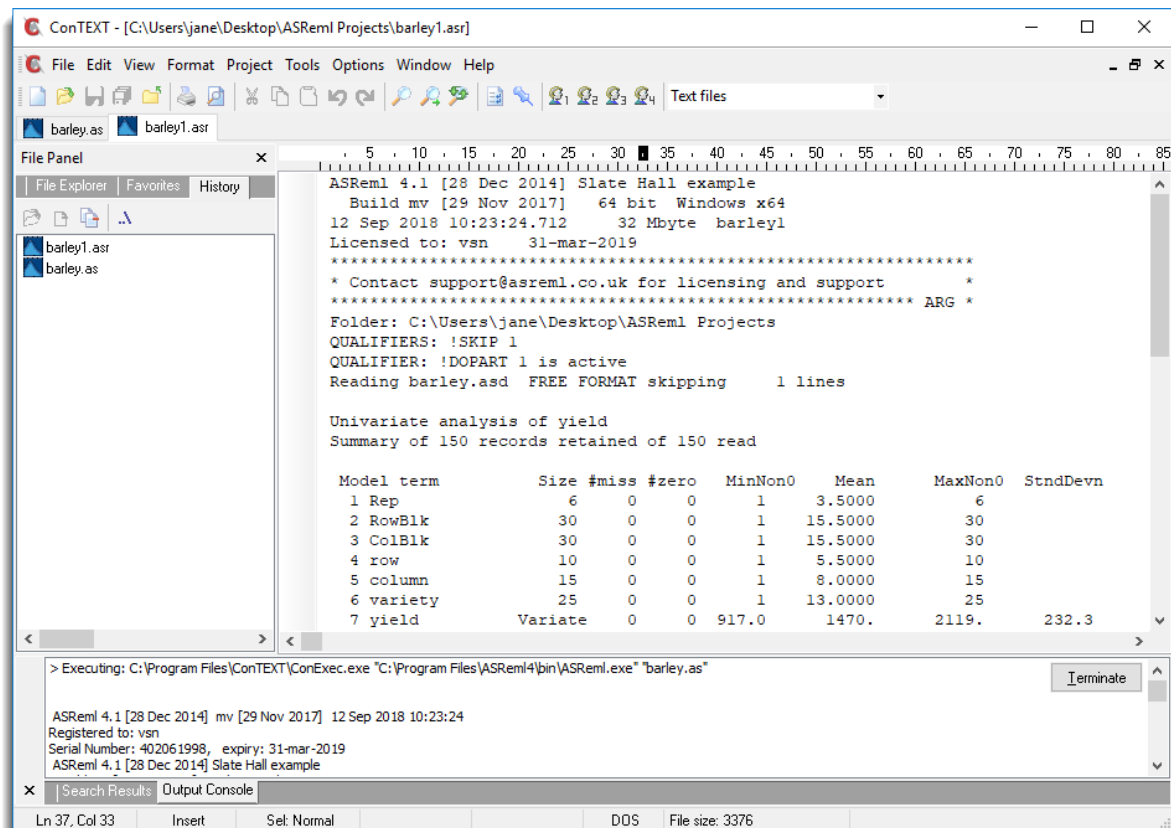
Residuals vs fitted values _RvE11

Slate Hall example   Residuals vs Fitted values _RvE11
Residuals (Y) -480:   537   Fitted values (X)   1213:   1674

Variogram of ar1v(column).ar1(row)Sn_11

Slate Hall example   Sn_11
Variogram of arlv(column).arl(row) 24 Aug 2018 11:40:29

1.569859

0

Outer displacement   Inner displacement

ASReml produces a number of output files resulting from the analysis including the following:

✓ Results summary file (`.asr`)

✓ Solutions to the mixed model equations effects (`.sln`)

✓ If requested, predictions for some factors in the model (`.pvs`)

- To view the output files, from the menu select **File>Open** then navigate to the `ASReml Projects` folder on your desktop.
  If you cannot see the full list of files click the dropdown list on the bottom right of the window and select *Text files*.

- Select the results summary file `barley1.asr` then click **Open**.
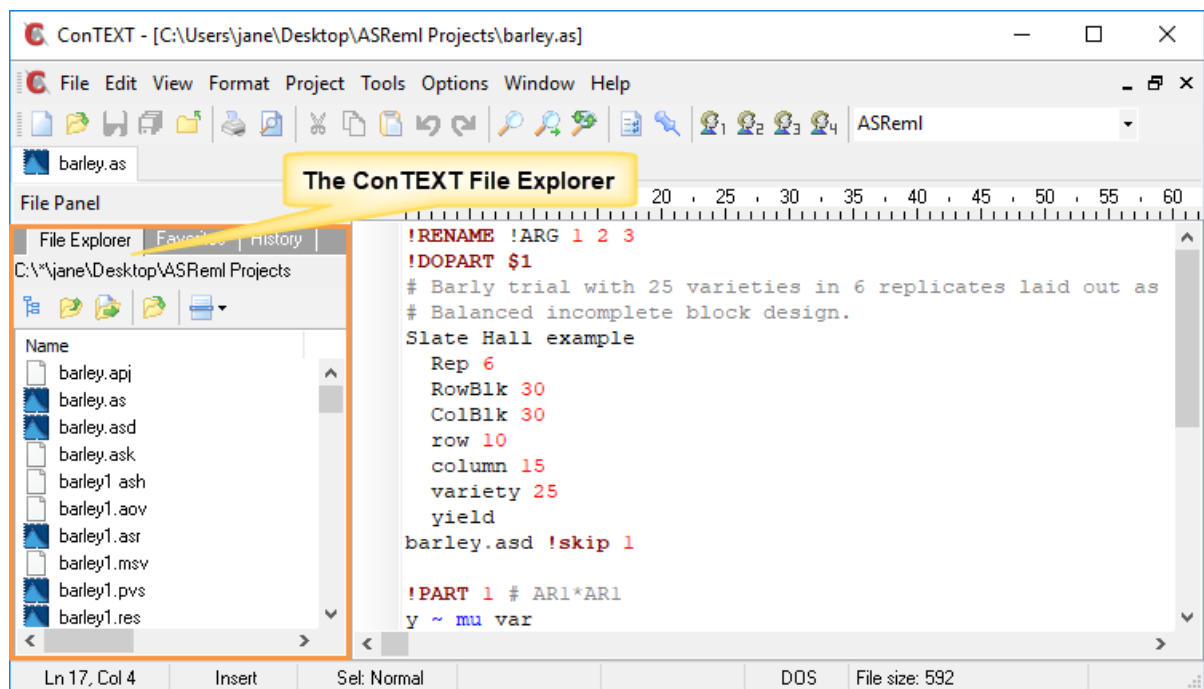 Open and view other files in the same manner.

Running ASReml

The following are the basic steps for creating and running your own ASReml files.

1. Create a command file (`.as`) to run in ConTEXT.
   You can do this by opening a data file in ConTEXT (`.csv, .txt, .dat, .tab` and so on) and pressing the **F9** key to generate a template command file (`.as`).

2. From the menu select **File>Open** then open the command file you created.
   The created file is only a template, and you will need to edit it to ensure it reads the data correctly and fits the model you want fitted.

3. After you've edited the command file, press the keyboard **F9** key to run it. This will produce a graph of the residuals and any other graphs you requested.

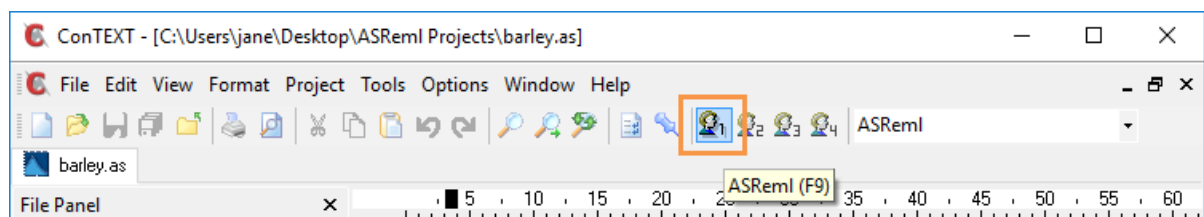4. View the resulting output files by navigating to the same folder that holds the command file.

Notes

In step **2**, instead of using **File>Open**, you can use the ConTEXT File Explorer panel to open files.

With a command file (or any other file) open, clicking the third button takes you to your working folder where you can immediately select any other files. (Note that you cannot view graphics or binary files in ConTEXT; some graphics files can be viewed in Windows Explorer, or by inserting into a Word document).

In step **3**, instead of using **F9**, you can also run ASReml by clicking the first 'head' icon on the ConTEXT toolbar. You will have set this association up when you configured the settings in **Options>Environment Options**. Hovering the cursor over this icon will display the 'hint' **ASReml (F9)**.
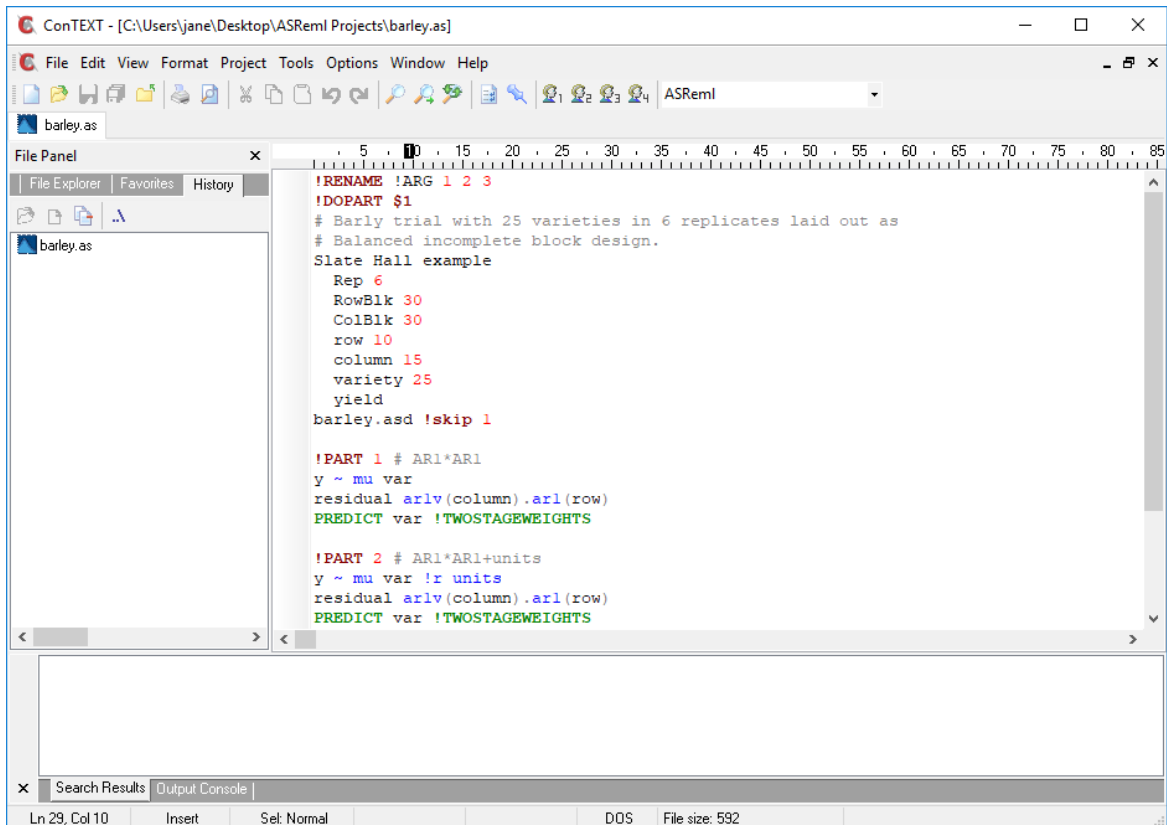
Setting up the Keyword Highlighter File

ASReml comes with a highlighter file (`ASReml.chl`) that ConText uses to highlight ASReml keywords when editing an ASReml command file.
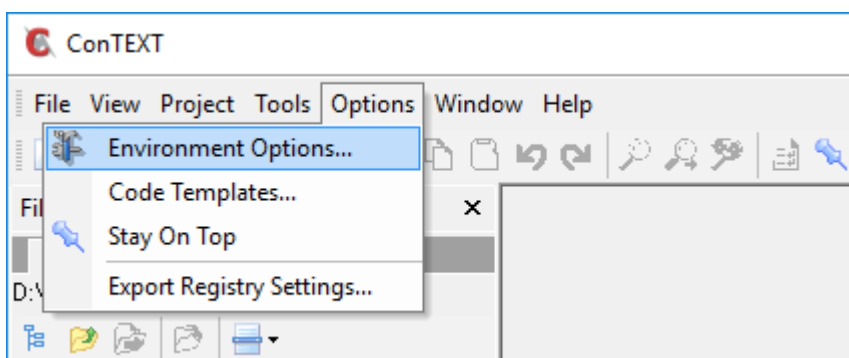
- If you want to make use of this feature, copy the file
  `C:\Program Files\ASReml\Context\ASReml.chl`
  to
  `C:\Program Files\Context\Highlighters`.

When you open a command file (`.as`) the keywords will be highlighted in an assortment of colours, which you can change to suit your requirements.
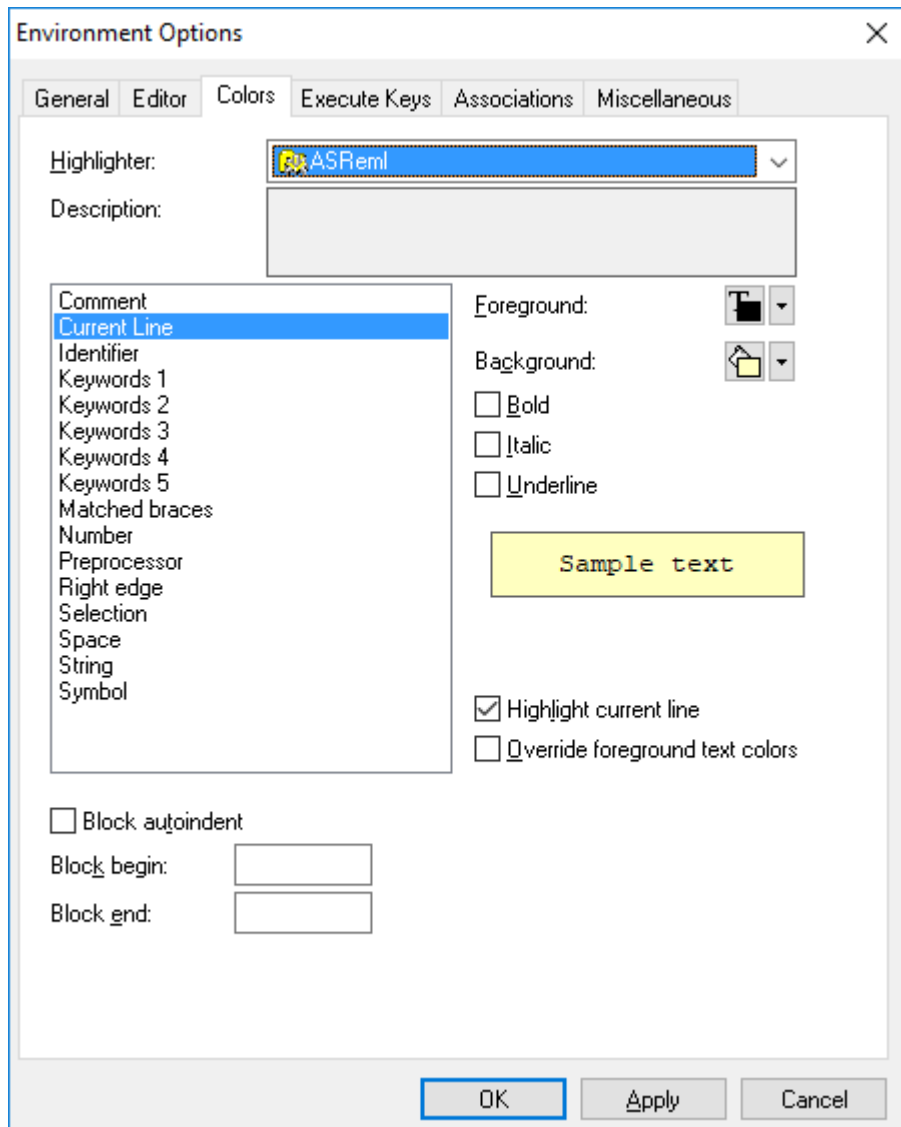

Changing the Highlighter Colours

- If you want to change the default colours, start ConTEXT then navigate to the `ASReml Projects` folder on your desktop and open one of the example `.as` files so you can preview your changes.

- From the menu select **Options>Environment Options**.

- Click the *Colors* tab to see which options you can change.

- Click an item in the list to see a preview in the `Sample text` panel.

- Make changes as required then click **Apply** to to see how the colours look in the `.as` file you opened.
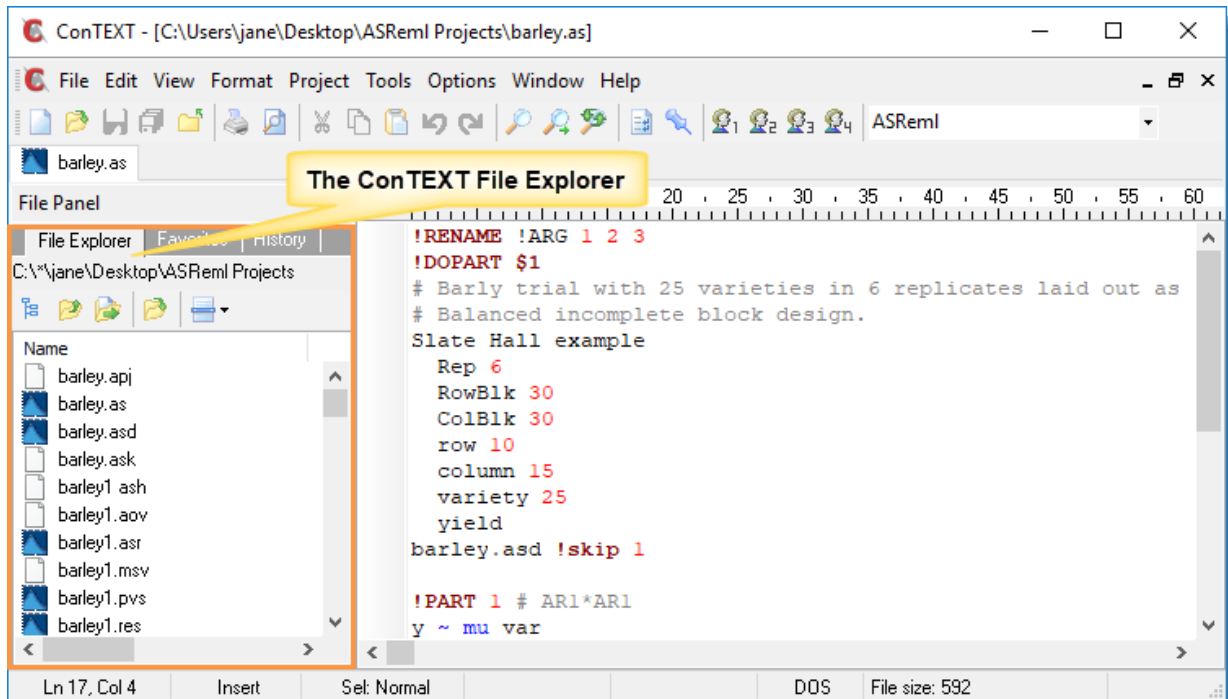
Troubleshooting Known Issues

Backspace key does not work when editing a file

This problem appeared in Windows 10. When ConTEXT is open, BACKSPACE is focused on the ConTEXT File Explorer panel rather than the text panel.
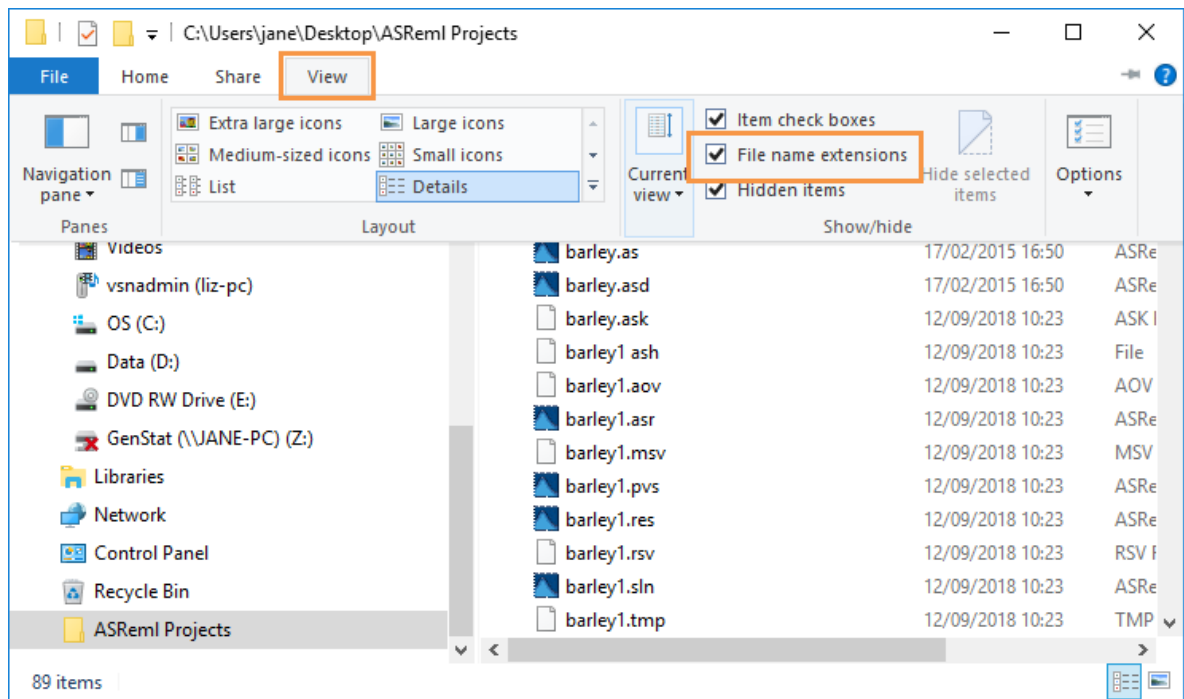
- Click in the File Explorer panel then click the third button to reset the working folder.

- Now go back to the text window. BACKSPACE should now work as expected.

File extensions are not visible in the File Explorer panel

This is a Windows® Explorer setting that affects ConTEXT.

- Open Windows Explorer and select the *View* tab.

- Select the **File name extensions** option.

- If ConTEXT is already open, close it then open again.
  You should now be able to see all file extensions as expected.