# 1 Introduction

As an alternative to manually typing figures into WasteDataFlow (WDF), there is also the option to upload data in the form of an XML file to automate the process of taking information from the various sources you may use to populate the WDF question set. There are two XML upload tools or "generators" available to assist in uploading data into the WasteDataFlow website. The following guidance note provides step by step instructions on how to access and complete these generators in order to create an .xml file containing your data which can then be used to populate your WDF data entry screen(s).

1.1 Downloading an XML generator

Once logged in to WDF's Data Manager, navigate to the "Data Upload" page from the Data menu as per Figure 1 below.

Figure 1. Accessing the Data Upload page
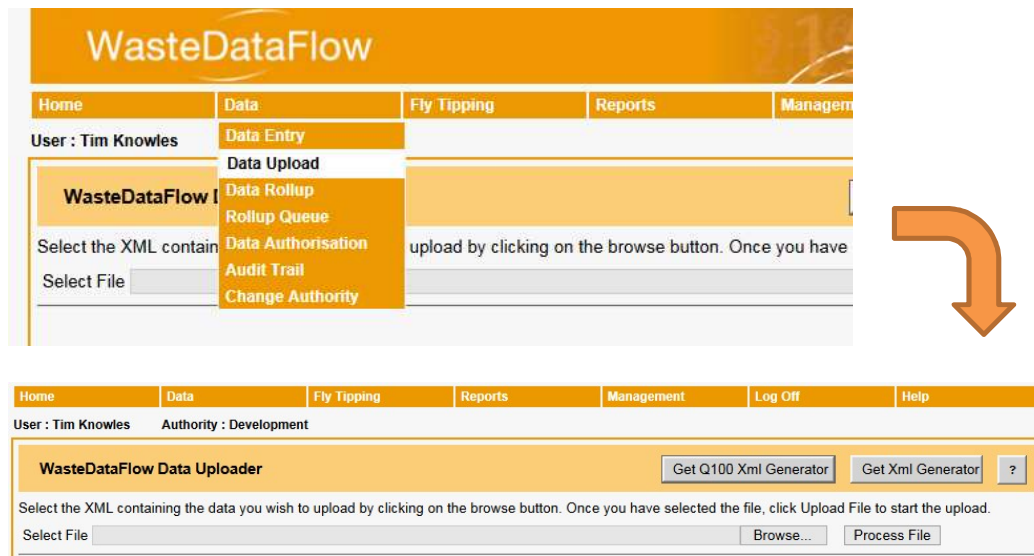
There are two generators available, one for Qu100 and one for all other questions. The two generators differ in order to support the functionality of the flexible format of Qu100 and the fixed format of the other questions.

To download the generator, you wish to use, simply click the corresponding button in the upper right-hand corner of the page as in Figure 2. Both generators are designed for use by any Local Authority (LA) of any UK region. Below we look at what is involved in completing either generator.

Figure 2. Download a generator
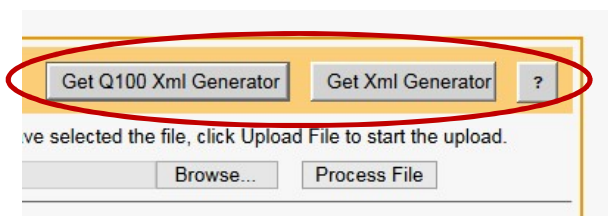
2   Completing the XML Generator for non-Qu100 Questions

2.1   Setting up the generator

Open the downloaded generator spreadsheet and make sure macros are enabled. The exact method for doing this will differ based on the security settings you have, but as a general rule Excel will display a yellow bar just above the formula bar, with a button to allow the macros to run, (Figure 3).
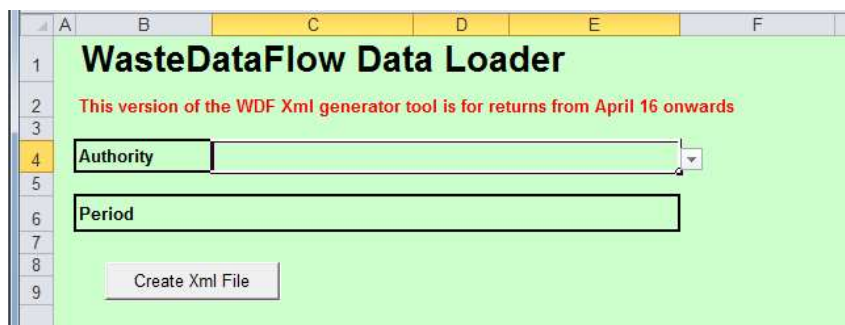
Figure 3. Enable Macros
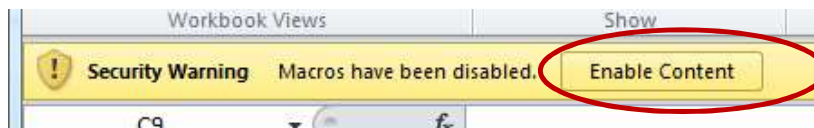
Once opened and with the macros enabled you will be able to interact with the front sheet of the workbook. You will have the following options to complete:

- Select the authority the data is for (the drop down will give you a list of all the LAs you have data entry rights for).

- Pick the period you wish to enter data for. N.B. Unlike the WDF website, the generator has been pre-populated with many future months, reaching a year or two ahead so that you don't need to update the generator every quarter. This does however mean it is important to select the correct year as well as month, (e.g. Jun 16 rather than Jun 17).

Figure 4. Non-Qu100 Generator set-up

With the basic information of authority and period complete, it then becomes a case of working through the workbook, completing each of the questions you wish to upload to the WDF website. You can navigate around the workbook in two ways; either by clicking the question number shown in the table on the 'Home' sheet, or by picking the relevant question sheet from the tabs at the bottom of the excel window, (Figure 5).

Figure 5. Navigating around the generator

The table also provides additional information relating to the following:

- **Status** – This relates to how the question will be treated next time you press the, "Create XML File" button located just above the table:
    - o "Hold" – this is the default status. This question will not be included in the next XML file to be generated. This is the correct status for questions you don't want to upload.
    - o "Ready for Processing" – This indicates that the question has been populated and the data can be uploaded.
    - o "Processed" – This is displayed once an XML file has been created which includes this question.

- **Period** – This shows the frequency that the question is completed, either quarterly or annually, as the generator can be used to populate both questions sets.

- **National Regions** – Each region completes a slightly different set of questions. Some questions are applicable to all regions, some to just one, and some to a sub set of them.

- **Authority types** – Outside England all LAs are unitary authorities (UAs), however within England LAs can be WCAs, UAs or WDAs. The LA type will determine the questions used.

2.2 Completing the questions

Each of the question sheets have been set up to closely represent the way that each question is laid out on the WDF website. Each sheet confirms the title of the question; the question's headings and rows (shown in green); the cells you can enter data in (shown in white); and a set of radio buttons in a blue box that allow you to change the status of the question, see Figure 6.

Figure 6. Example Question layout

Questions can be completed by simply typing the value into each cell, however completing the generator in this way would negate any benefit which could be gained from using it. The real power of the generator is that each question sheet can be set up to contain formulae rather than hard coded numbers. If the formulae are set up to link to your authority's internal spreadsheets and databases where you would otherwise copy the data from then, once set up, there is no need to copy and paste or enter values at all.

Depending on the way your internal data are laid out it would be beneficial to set up your formulae in such a way that they can be easily updated for each period you wish to upload. For example if your data for Question 10 sits in a spreadsheet for which a new version is created each month, it could be that your formula would be something along the lines of *='[Kerbside collections Jan 16.xls]WDF Reports List'!B30* etc. etc. when you are uploading Jan 16. Then for February all you would need to do is to update the links using a find and replace on the whole sheet to change 'Jan' to 'Feb' and all the values would be replaced with the correct values for February in one go. A step further could be to use VBA to update the dates across the workbook based on the date on the home sheet.

The level of automation is only limited by the structure of your internal data and your Excel knowledge but even with a basic level of Excel knowledge after the initial set-up time savings should be possible using the XML upload process.

2.3   Creating the XML file

As you complete each question sheet on the generator, mark it as 'Ready for Processing', using the radio button in the blue box shown in Figure 6. Once you have completed all the questions you wish to upload, return to the home sheet and review the list of questions to check that the status of each is showing as 'Ready for Processing'. If you need to make any amendments simply return to that question sheet and update the status.

Once you are happy that the status list is correct, press the 'Create XML File' at the top of the table on the 'Home' sheet, Figure 7.

Figure 7. Creating an XML file
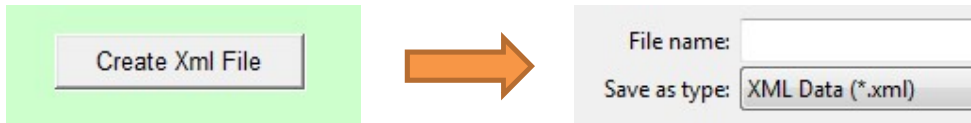
After pressing the button you will be requires to name the XML file and chose a location to save it to as you would with any other file you were creating.

Once saved, your XML file is ready to upload. As this process is the same for both non-Qu100 and Qu100 data, uploading the files is covered in section 4 below.

3 Completing the XML Generator for Qu100

3.1 Setting up the generator

The Qu100 generator has been set up so that it will open on to an Instructions tab which will guide you through the initial set-up process. Rather than replicate those instructions here, please download a generator for Qu100 and follow the instructions to select your LA and period and set the material categories and transfer stations (Figure 8).

Figure 8. Qu100 set-up instructions
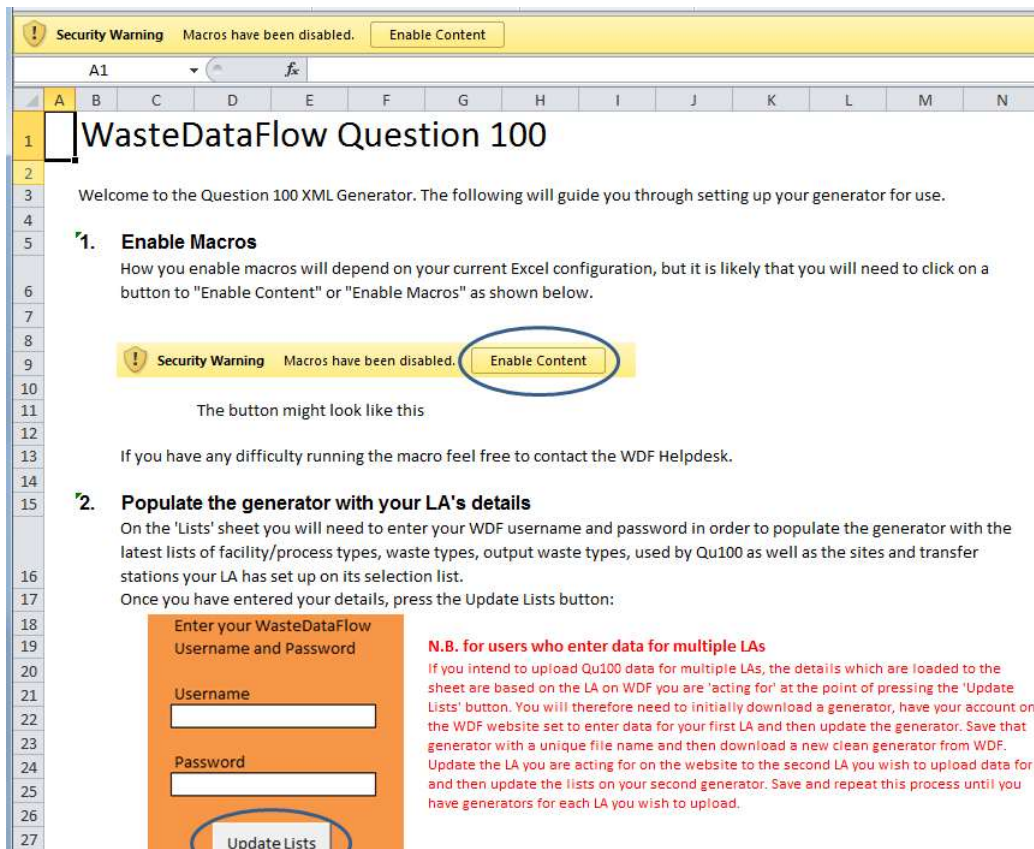
3.2 Completing the question

Once the generator is set up, you will spend most of your time on the 'Data' sheet. Here you are able to create a tree structure for upload in to the WDF website.

Columns A-C:

First select the level on the tree you wish your facility to sit. The options available to you will depend
on the facilities you have created in the rows above, for example, the first row will only allow you to
create a level 1 (primary/root) facility. When creating a facility at level 2 or lower, you will then have
the option to pick the appropriate output waste/process type in column B. Column C is where you
would pick the facility type for that row of data.

Figure 9 provides an example of a basic three step branch of a MRF to a reprocessor, with the
reprocessor confirmed as the final destination.

Figure 9. Example facility level and type selection

*Note: after making each selection you may notice a slight delay whilst the sheet processes the option you have
chosen. This is required so that subsequent available options are updated to relate to the choice you just made.
E.g. the facility type of 'Final Destination' is not available if level 1 has been selected.*

Columns D-H:

- **D, Waste Stream** – This is only completed for level 1 facilities and the options available would
  relate to the facility type picked in column C.

- **E, Facility Name** – This is a drop down which contains all the facilities in your selection list that
  were downloaded to the lists sheet during your set-up of the sheet, (section 2.1 above). If you
  need another facility to appear on this list, update your selection list on the WDF website, (see
  WDF system manual section 2 "System management" for details on how to update your
  selection list) and then re-enter your login details on the lists page again to download the
  updated site list to the generator. When you go back to the data sheet the new facility(s) will
  then be ready to select.

- **F, Facility Description** – This is an optional field for any 'nickname' you wish to assign to your site to make it easier to identify on the tree. For example, in Figure 9 above, the MRF has been given the facility description of 'Clean MRF'. These descriptions appear on your tree in Data Entry but are not visible once your return has been rolled up to Level10.

- **G, Facility Address** – This field will appear blank and un-editable for all facilities other than when "Other/exempt" is selected as the facility in column E. When a known site is selected, e.g. the Biffa site as shown in the first row of data in Figure 10; the facility address will be populated upon upload into Qu100 based on the details stored for the site you have picked. However, as Other/Exempt does not contain any address details by default, these can be entered along with the facility name in to column G. The second row of data in Figure 10, provides an example of this. Please ensure you include the facility name and full address in this field.

- **H, Facility Code** – Similarly to Facility Address in column G, data can only be entered here when using "Other/Exempt". This field should be used to record the site's reference/exemption number.

Note: the points above for columns G and H also apply to the less widely used "compost/Exempt" and "Charity/Exempt" as well as "Other/Exempt".

Figure 10. Waste stream and facility details

D	E	F	G	H
WasteStream (Level 1 only)	Facility Name	Facility Description	Facility Address	FacilityCode
Comingled recyclate	1156 - Biffa Waste Management Ltd [30190] - CF10 4TS	Facility Description text here		
	7932 - Other/Exempt [N/A]	Joe's recycling	Joe Bloggs Recycling, 1 The High Street, London, AB1	AB1234CD

Columns I Onwards:

Column I, "Tonnes Input", contains the total tonnage associated with that facility. If the facility type selected for this row requires a single total tonnage be entered then this cell will need to be populated by the user. For facilities which rely solely on a material breakdown for their tonnage, then this cell will be automatically populated with the sum of the material tonnages entered in later columns, totalled in column J.

The exact letter references of the columns following column J will depend on the options you have set up on the "Main" sheet. For example, if you have left every material type selected, these will run from column K – BZ on the data sheet. The material columns are used to record the individual material tonnage for facilities which require them.

If you have selected at least one transfer station option on the "Main" sheet, following the material columns you will be presented with one or more sets of columns to record details of any transfer stations relating to that row's data. As per Figure 11 the first column of the group will allow you to select the facility details for the transfer station, based on the WDF selection list you have downloaded to the "lists" sheet. The following three columns allow you to record the tonnage which has passed through the transfer station, based on the method of transport that was used.

Figure 11. Transfer stations

3.3 Creating the XML File

Once you have completed the details you wish to add to the "Data" sheet, return to the "Main" sheet create your XML file by clicking the "Generate XML" button.

As part of the XML generation process a number of integrity checks are run by the sheet to test that the data is suitable for upload. This doesn't replace the checks run by the website at the point of upload, not does it represent a validation of the data in terms of the usual checks and balances that would be run once the data is submitted; but it can provide some helpful pointers in situations where more basic errors exist.

If any errors are identified at this point a warning message will be displayed, (Figure 12).

Figure 12. Errors identified when creating the XML file
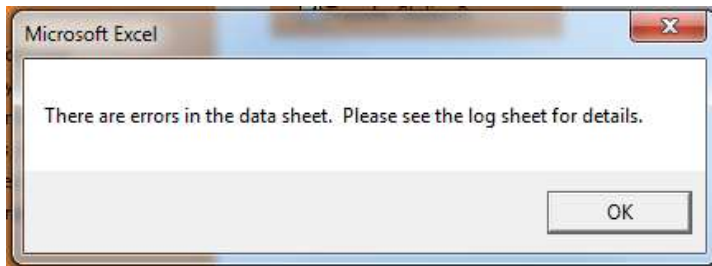
As the wording of the error message suggests, the "Log" sheet of the generator provides a list of the errors which have been identified, as well as their position on the "Data" sheet. Figure 13 provides an example of the sort of error messages you can expect to see.

Figure 13. Example error messages

Once the errors on the log sheet have been resolved you will be able to generate the XML file again and save it to your system with a name and location of your choosing ready for upload.

4 Uploading an XML file

Once you have the completed XML file(s) saved and ready for upload, return to the Data Upload page of the website as per Figure 1. Click on the 'Browse' button to find the file you wish to upload then click the 'Process File' button. A progress message will be displayed whilst the upload is in progress. If the data is suitable for import the lower section of the page will update to show that the

data is ready to be processed into the relevant question(s). N.B. At this stage no data will have been loaded into the question(s). This only happens once the question is processed. Figure 14 shows an example of uploaded Qu100 data ready for processing.

Figure 14. Data ready for uploading message

If you have a number of questions uploaded from your XML file and ready for processing, then rather than clicking the individual 'Process Question' links, you can use the 'Process All Questions' option instead.

Once the question(s) are processed, you will be able to go to the relevant data entry page for each question to confirm that the upload has been successful. Please note that comments aren't included as part of the XML upload and for questions other than Qu100 you will also need to mark each one as complete (via the checkbox at the bottom of each question's data entry page on the WDF website) before the data can be rolled up.

5 Alternatives to using the generators

The XML generators are provided as a means of creating an XML file, from a starting point of an easily accessible Excel-based tool. The generators don't have to be the means by which the XML files are created. There are a number of authorities which use the XML upload function to upload files created by their own in-house generation methods. To support the development of such tools, WDF provides the schema required for the XML file amongst the "developer kit" available here. The same page also provides a page for developers to validate their XML files for errors, outside of the WDF Data Manager.

Note: Beyond providing the XML schema and upload test page, WDF do not provide any additional support for third party XML uploads, such as testing and troubleshooting. This would need to be handled by your own developer.