1   Introduction

This guidance document is designed to provide an overview of the reporting functionality available to Local Authority (LA) users of WasteDataFlow (WDF) within the "Reports" and "Data Management" sections of the WDF website. Separate guidance for public users is provided in guidance note GN4.9 Guidance for public users.

Reports can be generated in WasteDataFlow via either:

- "Data authorisation" – found under the "Data" drop-down tab; or
- "Summary reports" – found under the "Reports" drop-down tab.

This guidance note shows you how to generate reports and gives an overview of key aspects of selected reports. You can use the links below to take you directly to the sections within this document.

- Reports available from the Data authorisation page;
    - Performance indicators (section 2.1);
    - Mass Balance Report (section 2.2); and
    - EA Report (section 2.3).
- Reports available from the Summary reports page:
- Types of report available (section 3.1);
- How to run a report (section 3.2); and
- Understanding WasteDataFlow reports (overview of report types) (section 3.3) including:
    - Performance Indicator (PI) and Analytical reports (section 3.3.1);
    - Qu100 Recycling Report (section 3.3.2);
    - Question reports (section 3.3.3); and
    - Raw Data Reports (section 3.3.4).

Other useful guidance notes include:
- GN4.6: Full list of reports;
- GN30a: WDF Guidance – Comparator calculations for NI 191-192 and BVPI 82a/b from Qu100; and
- GN30: WDF Guidance – NI Calculations pre-Qu100.

The report functions of the WDF site allow you and others to view the data held within WDF in a variety of different formats, from raw question answers, to the outputs from complex performance indicator calculations. Reports are provided in Excel .xls or .xlsx format, with some able to be downloaded within .zip files to reduce transferred file size and increase download speed.

The range of reports available to you will depend on your user level (LA Data Entry, LA Data Administrator or Report User). Please see WDF System manual section 6: "Full List of Reports" (available to download from the Guidance page of the website) for further details of the reports available to different users and a summary of their contents and scope.

For English, Scottish and Welsh LAs there was a significant change to the way data is entered into the WDF system with the introduction of Question 100. Qu100 replaced several questions relating to the recycling, reuse, treatment and disposal of wastes. It has a different layout from older WDF questions in that the data is presented in a flow diagram "tree" structure with waste movements shown through progressive "branches" and "sub-branches" to the end destinations rather than data simply being entered into fixed boxes.

The Qu100 interface was first introduced to a trial group of Welsh local authorities for the October to December 2011 reporting period. After a gradual roll-out across Welsh LAs, for whom it became mandatory from April 2013, it was introduced in Scotland in April 2013 and became mandatory for all Scottish LAs from the October to December 2013 reporting period. Question 100 was opened to a selection of English LAs (UAs and "families" of WDAs and their WCAs) on a voluntary basis starting with data for April to June 2014 (2014-15 Quarter 1), with additional groups of LAs volunteering from a starting point of data for October to December 2014 (2014-15 Quarter 3) or January to March 2015 (2014-15 Quarter 4). All English LAs moved to Qu100 for data entry from Qtr1 2015-16 (April – June 2015).

Because the data in Qu100 is stored and processed differently, new reports have had to be developed in order to interrogate this data. Not all the report types support data entered using Qu100. If you wish to run a report covering a time period where a LA used the old data set in some quarters but Qu100 in others you will need to run 2 separate reports, where this is available.

2   Reports available from the Data authorisation page

There are three main reports available in the Data Authorisation section: Performance Indicators, Mass Balance and EA report.

2.1   *Performance indicators (PIs)*

This section focuses on the English performance indicator (PI) report. For details of the PI reports used by other regions please consult local guidance.

The Performance Indicator report provides an overview of current PI performance e.g. National Indicators (NI): NI191, NI192, NI193 and BVPIs[1] (England), WMT (Wales) and KPIs[2] (Northern Ireland). BVPIs ended in March 2008 and National Indicators ended in March 2011. Defra are no longer monitoring individual LAs for their performance against BVPI or National Indicator targets. However, WDF users will still be able to download reports based on the BVPIs and National Indicators from WDF, if they wish to produce consistent local data sets over a period of years. These BVPI and NI datasets[3] will continue to be based on the guidance which was established for the BVPIs (from April 2004 to March 2008) and National Indicators (from April 2008 to March 2011).

Guidance on the new "comparator" calculations can be found in "WDF Guidance – Comparator calculations for NI 191-192 and BVPI 82a/b from Qu100" on the WDF guidance page (England guidance section).

To access the Performance Indicator report click on the "PI" link on the Data Authorisation page. As with the validation report, the PI report generates an Excel workbook containing a number of different tabs as detailed in Table 1 below. The information available to view will depend on whether you are a WCA, WDA or UA.

The PI report for returns where Qu100 has been completed is slightly different from that generated for periods where the old question set was completed. This is to allow for the more complex tree like structure of Qu100 to be accommodated in the calculations.

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[1] Best Value Performance Indicators.
[2] Key Performance Indicators.
[3] NI and BVPI reports for periods where Qu100 has been used provide more information than previously but use "comparator" calculations rather than following exactly the same logic as the older versions. This is indicated in the reports by the designation (Provisional) in the title of each NI or BVPI on the Summary page.

Note: LAs which moved over to Qu100 part-way through 2014/15 will need to download two PI sheets to see data for that year; one for the last of the quarters where they used the non-Qu100 question set and one for when they moved over to Qu100.

Table 1. Worksheets in PI report for periods using old question set and Qu100.

Worksheet	Old question set	New question set (Qu100)
Summary	✓	✓
NI191 Detail	✓	✓
NI192 Detail	✓	✓
NI 193 Detail	✓	✓
BVPI82a Detail	✓	✓
BVPI82b Detail	✓	✓
BVPI 82c Detail	✓	✓
BVPI 82d Detail	✓	✓
BVPI 87 Detail	✓	✓
C-Variables	✓	✓
Qtr1 - Recycling Data Table	✗	✓
Qtr1 - Landfill Data Table	✗	✓
Qtr1 - EfW Data Table	✗	✓
Qtr2 - Recycling Data Table	✗	✓
Qtr2 - Landfill Data Table	✗	✓
Qtr2 - EfW Data Table	✗	✓
Qtr3 - Recycling Data Table	✗	✓
Qtr3 - Landfill Data Table	✗	✓
Qtr3 - EfW Data Table	✗	✓
Qtr4 - Recycling Data Table	✗	✓
Qtr4 - Landfill Data Table	✗	✓
Qtr4 - EfW Data Table	✗	✓
C-Variable Export	✗	✓

Once open the report contains several different tabs which are described in more detail below.

The figures below have all been taken from Jul-Sept 2015 so use data entered into Qu100.

a) Summary Tab

Once the PI report is opened the "Summary" tab will be displayed by default. The tab contains a number of tables, each relating to a different National Indicator or BVPI. A detailed overview of how the NIs and BVPIs are calculated is provided in the "C-Variables"[4] and "C-Variables Export" tabs. Further details on the National Indicator calculations can be found in the NI Guidance section of the Guidance page on the WDF website.

Figure 1 Example PI report summary tab
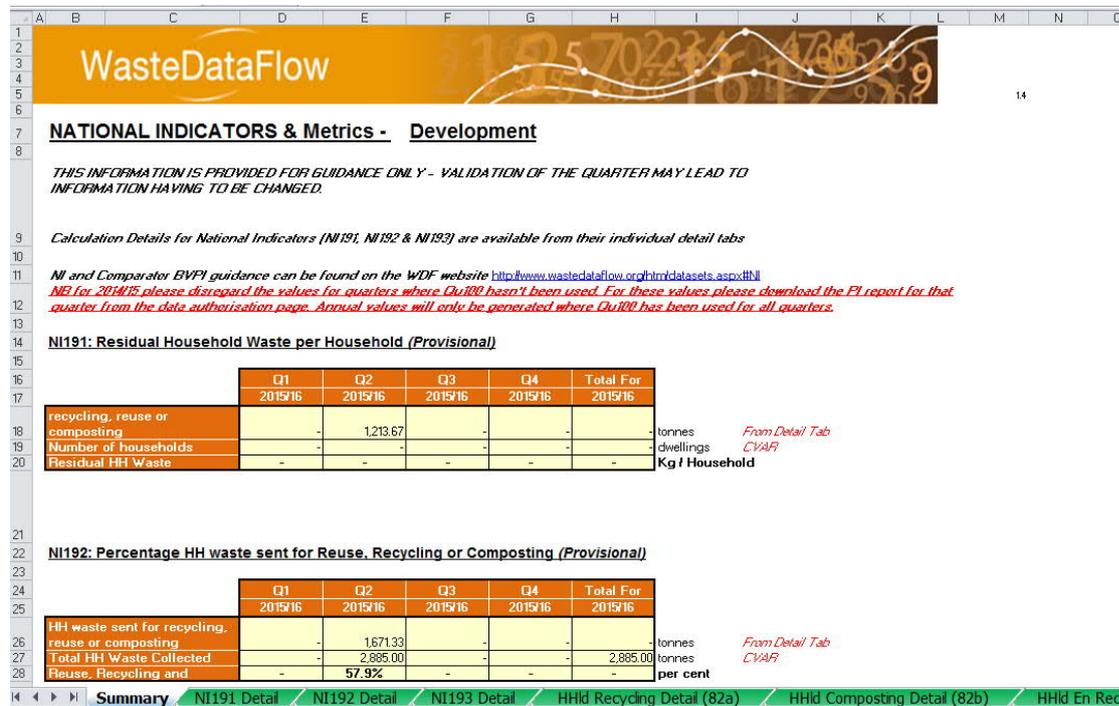
The indicators displayed will depend on the type of authority that the report is being run for. This is highlighted in the table below.

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[4] The term "C-Variables" is short for "calculated variables", as described later. These "building blocks" for reports are also sometimes referred to as "C-Vars".

Table 2. BVPI and NI Reports.

Indicator	Authority Type		
	WCA	WDA	UA
NI191	✓	✓	✓
NI192	✓	✓	✓
NI193	✗	✓	✓
BVPI82a	✓	✓	✓
BVPI82b	✓	✓	✓
BVPI82c	✓	✓	✓
BVPI82d	✓	✓	✓
BVPI 84a	✓	✓	✓
BVPI 84b	✓	✓	✓
BVPI86	✓	✗	✓
BVPI87	✗	✓	✓
BVPI91a	✓	✗	✓
BVPI91b	✓	✗	✓

For the majority of indicators the table shows a quarterly as well as an annual figure. In situations where not all quarters have been completed during the year for which the report was generated, a year-to-date figure (totalling the data currently available) is shown in the annual column. The older version of the PI report (pre-Qu100) also shows annual data for the previous year but this is not available in the Qu100 PI report. The figures shown on this tab are pulled from the "C-Variables" tab or the relevant Detail tab (see below).

Figure 2 BVPI82a example.

Percentage of household waste arisings which have been sent for recycling - (BVPI82a Comparator) *(Provisional)*

	Q1 2015/16	Q2 2015/16	Q3 2015/16	Q4 2015/16	Total For 2015/16		
Household dry recycling	-	1,331.33	-	-	-	tonnes	*From Detail Tab*
Total HH Waste Collected	-	2,885.00	-	-	2,885.00	tonnes	*CVAR*
Dry recycling rate	-	46.15%	-	-	-	per cent	

WDF Tip – These reports should be reviewed in conjunction with the NI and BVPI guidance which is available to download from the WDF website. As the values for the PIs are ultimately based on the data entered into WDF, it can be worth comparing these figures with any in-house PI calculators you may use, as a further validation check to ensure the data entered into WDF is complete. There are guidance notes for the non-Qu100 reports (GN30 for NIs and GN33 for BVPIs) which include references to the old questions which have been replaced by Qu100, as well as a guidance document (GN 30a) to show how the calculations have been updated to account for the data provided by Qu100.

b) NI & BVPI Detail Tabs

These tabs give a detailed breakdown of how each of the relevant NIs and BVPIs are calculated, showing how the numerator and the denominator break down into their component parts, referred to as c-variables. The details of each c-variable are provided in the "C-Variables" tab (see below).

Figure 3 NI193 Detail tab.

NI193 – Percentage of Municipal Waste Sent To Landfill

Numerator : Municipal Waste Landfilled

	Q10,12, 16, 17, 33, 34 Rejects For Recycling and Reuse (All Materials)	Qu100 Direct to Landfill	Qu100 Indirect to Landfill	England NI 193 numerator - Total municipal waste sent to landfill
	C98	C1046	C1047	C405
Q1	-	1,000.00	10.00	1,010.00
Q2	-	12,101.00	13.58	12,114.58
Q3	-	-	-	-
Q4	-	-	-	-
Total	-	13,101.00	23.58	13,124.58
	C-Var Driven	*From Data Table*	*From Data Table*	*Calculated here*

Denominator : Total Municipal Waste Collected

	Q23 HH Residual Waste	Q23 NH Residual Waste	Q10, 11, 12, 16, 17, 18, 33, 34 Tonnage Collected For Recycling or Reuse	193 denominator - Total municipal waste collected
	C17	C18	C42	C406
Q1	-	-	-	-
Q2	1,230.00	10.00	1,655.00	2,895.00
Q3	-	-	-	-
Q4	-	-	-	-
Total	1,230.00	10.00	1,655.00	2,895.00
	C-Var Driven	*C-Var Driven*	*C-Var Driven*	*C-Var Driven*

NI193 numerator = C98 + C1046 + C1047   *This represents C405*

NI193 Denominator = C42 + C17 + C18   *This represents C406*

c) Quarterly Data tables tabs

There are 3 tabs for each quarter showing recycling, Landfill and EfW data and these contain figures based on the Qu100 tree. These show information relating to:

- Facility details – the facility and its root/ parent facility;
- Tonnage details (Recycling tab) or Tonnage (Landfill and EfW tabs) – material tonnage, collection type, route, collection type (e.g. segregated, residual);
- Source – source split applied, route (e.g. direct, from residual waste, via MRF, segregated collection etc.); and
- Tonnages (Recycling tab) or Indicators (Landfill and EfW tabs) – details of tonnages included in relevant indicators.

Figure 4 Recycling Data Table example.

Facility Details						
Root Facility Type	Root Waste Stream Type	Parent Type	Parent Organisation name	Parent Organisation Address	Output process type	Output process type Counts for NI192?
Incineration with energy recovery	Residual waste	Reprocessor - recycling (qu19)	White Recycling Ltd	New Hall Farm, Liverpool Ro	Incinerator fly ash	No
RDF, autoclave, MHT or similar	Residual waste	Reprocessor - recycling (qu19)	Biffa Waste Management Ltd	Nation Wide Works, Viking F	Incinerator bottom as	No
Materials recovery facility	Comingled recyclate	Reprocessor - recycling (qu19)	Other/Exempt	xyz	Dry recyclate	Yes
Materials recovery facility	Comingled recyclate	Reprocessor - recycling (qu19)	Outside UK-EU	Facility Outside The Uk But	Dry recyclate	Yes
Windrow or other composting	Green waste	Windrow or other composting	Biffa Leicester Ltd	Bridge Road C A Site, Bridg	Composting	Yes
Windrow or other composting	Mixed green and food waste	Windrow or other composting	Compost/Exempt		Composting	Yes
Other Method	Residual waste	Reprocessor - recycling (qu19)	Other/Exempt		Dry recyclate	Yes
Other Method	Residual waste	Reprocessor - recycling (qu19)	Other/Exempt		Dry recyclate	Yes
Reprocessor - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Other/Exempt	Test	Dry recyclate	Yes
Reprocessor - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Biffa Waste Services Limited	Curran Embankment, Rivers	Dry recyclate	Yes
Reprocessor - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Biffa Waste Services Limited	Curran Embankment, Rivers	Dry recyclate	Yes
Reprocessor - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Biffa Waste Services Limited	Curran Embankment, Rivers	Dry recyclate	Yes
Reprocessor - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Biffa Waste Services Limited	Curran Embankment, Rivers	Dry recyclate	Yes
Reprocessor - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Biffa Waste Services Limited	Curran Embankment, Rivers	Dry recyclate	Yes
Reprocessor - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Recresco Ltd	Manisty Wharf, North Road,	Dry recyclate	Yes
Reuse (qu35)	Source segregated recyclate	Reprocessor - recycling (qu19)			Dry recyclate	Yes
Exporter - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Outside UK-EU	Facility Outside The Uk But	Dry recyclate	Yes
Exporter - recycling (qu19)	Source segregated recyclate	Reprocessor - recycling (qu19)	Outside UK-EU	Facility Outside The Uk But	Dry recyclate	Yes

d) C-Variables tab

The performance indicators available in the PI download are based on multi-stage calculations, which transform the raw data you enter into WDF into the single values displayed on the "Summary" tab. Each step in these calculations produces a figure which then feeds into the next. These intermediate steps are referred to as "calculated variables", which you will usually see shortened to "c-variables" or "c-vars".

Each c-variable used by WDF is given its own unique identifier in the format C1, C2, C3 etc. There are also different levels of c-variable, depending on where the numbers used to create it came from. The following bullets and examples have been selected to provide a guide to these levels and to highlight how c-variables are used to establish the PI numbers.

- **Base** – Some c-variables are calculated directly from the raw data entered into WDF. For example C17 is the total household residual waste collected in Qu23.
- **Secondary** – Secondary c-variables aren't created directly from raw data but instead are formed from a calculation containing Base c-variables. For example C205 = C17 + C21 (C205 is then used as the denominator for BVPI 82a).
- **Tertiary** – There are also a small number of c-variables which are based on Secondary c-variables. For example C301 = C201 / C205 (in this example C301 is actually the figure for BVPI 82a).

A simple way to think of c-variables is as ingredients in a recipe. As mentioned the details of how the c-variables have been calculated is provided in the "C-Variables" tab of the PI report. The layout of this tab is provided below, along with a description of what is contained within each row and column.

Figure 5 C-Variables Tab

	A	B	C	D	E	F	G	H
1		*N.B. From Apr 2010 those C Variables which indicate the exclusion of rubble also exclude plasterboard*		Q1	Q2	Q3	Q4	
2	C Variable	Description	2014/15	2015/16	2015/16	2015/16	2015/16	2015/16
3	C2	Q10,12, 16, 17, 33, 34 HH Rejected For Recycling (excl green, other compost, rubble)			0			
4	C4	Q11 NH Collected For Recycling (excl green, other compost, rubble)			0			
5	C8	Q10, 12, 16, 17, 33, 34 Co-mingled Collected			500			
6	C10	Q11 Co-Mingled Collected			0			
7	C17	Q23 HH Residual Waste			1230			
8	C18	Q23 NH Residual Waste			10			
9	C21	Q10, 12, 16, 17, 33, 34 Collected For Recycling (excl rubble) plus Q18 HH			1655			
10	C24	Q10, 12, 16, 17, 33, 34 Green and other Compostable Rejected For Recycling			0			
11	C25	Q11 Green and other Compostable Collected For Recycling			0			
12	C42	Q10, 11, 12, 16, 17, 18, 33, 34 Tonnage Collected For Recycling or Reuse			1655			
13	C86	Q10, 12, 16, 17, 33, 34 Rejected For Reuse (excl. green, other compost and rubble)			0			
14	C88	Q11 Collected For Reuse (excluding green, other compost & rubble)			0			
15	C89	Q10, 11, 12, 16, 17, 33, 34 Green and Other Compostable Rejected For Reuse			0			
16	C92	Q11 Green and Other Compostable Collected For Reuse			0			
17	C98	Q10,12, 16, 17, 33, 34 Rejects For Recycling and Reuse (All Materials)			0			
18	C205	Total Household Waste collected (excl reuse. Sum of C17 and C21)			2885			
19	C206	Population of Authority			1000			
20	C207	Cost of HH and non-HH Waste Collection						
21	C208	Dwelling Stock in Authority Area			0			
22	C209	Cost of HH and non-HH Waste Disposal						
23	C210	Total Municipal Waste			2895			
24	C211	Households receving kerbside collection of 1 recyclable			0			
25	C212	Households receving kerbside collection of 2 recyclables			0			
26	C213	Ratio of C205 current year / previous year						
27	C214	Ratio of C206 current year / previous year						
28	C305	BVPI 84a						
29	C306	BVPI 84b						
30	C307	BVPI 86						
31	C308	BVPI 87						

Qtr3 - Landfill Data Table / Qtr3 - EfW Data Table / Qtr4 - Recycling Data Table / Qtr4 - Landfill Data Table / Qtr4 - EfW Data Table / **C-Variables** / C-Variables

- **Column A** – lists the c-variable identifier e.g. C1, C2, C3.
- **Column B** – provides a description of how the c-variable is generated. In most cases this description gives a breakdown of the questions that the tonnages/data have been taken from.
- **Column C** – where available this provides the annual figure for the previous year's performance in relation to the associated c-variables.
- **Column D – G** – provides the data calculated for each c-variable for that quarter.
- **Column H** – where applicable this provides the annual figure for the current reporting year's performance in relation to the associated c-variables.

The c-variables in themselves can provide interesting indicators, allowing you to drill down into the overall PIs to identify which specific areas may be performing better than others. They also allow for any discrepancies identified in the PI figures to be more easily tracked back to identify where they may have arisen.

e) C-Variables Export

This tab is similar to the C-Variables tab but includes secondary and tertiary c-variables as shown in Figure 6 below. The C-Variables tab includes c-variables which are generated by the WDF database and then imported to the PI sheet to support its calculations. The export tab is used for c-variables which have been calculated on the PI sheet itself and are then exported from the sheet, back into the WDF database ready for use in the Qu100-based PI summary reports.

Figure 6 C-Variables tab

	A	B	C	D	E	F	G	H
1		*N.B. From Apr 2010 those C Variables which indicate the exclusion of rubble*		Q1	Q2	Q3	Q4	
2	C Variable	Description	2014/15	2015/16	2015/16	2015/16	2015/16	2015/16
3	C401	England NI 191 numerator - HH waste not sent for recycling, reuse or composting		0	1213.674	0	0	
4	C403	England NI 192 numerator - hh waste sent for recycling, composting or reuse		0	1671.326	0	0	
5	C405	England NI 193 numerator - Total municipal waste sent to landfill	1010	12114.58	0	0		
6	C1046	Qu100 Direct to Landfill	1000	12101	0	0		
7	C1047	Qu100 Indirect to Landfill	10	13.58	0	0		
8	C1048	Household Waste Sent For Dry Recycling		0	1331.326	0	0	
9	C1049	Household Waste Sent For Composting		0	340	0	0	
10	C1050	Qu100 Household waste Direct to Energy Recovery		0	99.193548	0	0	
11	C1051	Qu100 Household waste rejected to Energy Recovery		0	1019.9279	0	0	
12	C1052	Household Waste Used For Energy Recovery		0	1019.9279	0	0	
13	C1053	Qu100 Household waste Direct to landfill		0	12003.411	0	0	
14	C1054	Qu100 Household waste rejected to landfill		0	13.551129	0	0	
15	C1055	Household Waste Sent To Landfill		0	12016.962	0	0	
16								

2.2 Mass Balance Report

Following the end of LATS for English LAs in the 2012/13 reporting year, no further updates have been made to the English Mass Balance report to support Qu100. As all English LAs moved over to using Qu100 for reporting from April 2015 onwards, the Mass Balance report is only available up to Jan-Mar 2015 for English LAs.

The Mass Balance report is only available to WDAs and UAs and can be accessed from the Data Authorisation page by selecting the MBal link against the period for which you want to run the report. The report provides an indication of the LATS (England)[5] or LAS (Northern Ireland and Wales) mass balance calculation for the quarter selected i.e. the amount of Biodegradable Municipal Waste Landfilled (BMWL).

The report is downloaded as an Excel spreadsheet and for UAs it only contains one tab, the "Summary" tab. WDA reports include a "Summary" tab (total figures), and separate tabs for the WDA and each of their WCAs showing a breakdown of their recycling tonnages, which contribute to the overall total of BMW diverted from landfill.

WDF Tip – Details of how the various aspects of the mass balance calculation are calculated can be found in the WDA and UA Mass Balance Guidance notes, available to download from the WDF website. These notes explain which questions and assumptions are used to generate the different components of the MBal report.

When reviewing the mass balance report, it is important to note that the mass balance calculation is designed to give an indication of an authority's LATS performance. The accuracy of the calculation is dependent on the quality of the quarterly data which has been reported. The calculation is available once entered data has been rolled into a quarter (Level 10) and so can be used on data not validated by WDF. There is a risk associated with using the output figures from mass balance for any purpose other than as an estimate of performance.

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[5] The Landfill Allowances and Trading Scheme finished in England at the end of scheme year 2012-13 but this report can still be used for benchmarking and other monitoring uses up to March 2015.

Figure 7 The Mass Balance Report[6]

As can be seen in the example above, the summary page of the mass balance report contains three key aspects:

a) Materials Summary;
b) Indicative Mass Balance Report; and
c) Data Status.

The key features of these aspects are detailed below.

a) Materials Summary

The Materials Summary is provided at the top of the "Summary" tab (section 1 in Figure 7Figure 8). This presents an overview of the tonnages, by material type, that are diverted from landfill in any given quarter, for both source-separated recycling/ reuse and recycling extracted from the residual waste stream (e.g. recycling extracted from an MBT process).

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[6] NB. The Materials section in Figure 8 has been shortened to enable a screenshot to be taken; all 67 categories will be present on any sheet you produce.

Figure 8 Material Summary Section

B	C	D	E	F	G	H	I	J
				Recycling				
	Collected (all routes)			Sent to Destinations		Sent from Residual		
Material	Collected	Rejected	Total	Sent for	Rejected	Sent for	Rejected	Total
Green glass	86.9	-	86.9	86.9	-	-	-	86.9
Brown glass	52.2	-	52.2	52.2	-	-	-	52.2
Clear glass	263.9	-	263.9	263.9	-	-	-	263.9
Mixed glass	1,963.5	-	1,963.5	3,749.0	-	-	-	3,749.0
Paper	2,191.6	-	2,191.6	6,745.3	-	-	-	6,745.3
Card	648.3	-	648.3	1,181.9	-	-	-	1,181.9
Books	22.9	-	22.9	22.9	-	-	-	22.9
Mixed paper & card	-	-	-	-	-	-	-	-
Steel cans	-	-	-	-	-	-	-	-
Aluminium cans	-	-	-	-	-	-	-	-
Mixed cans	1,432.0	-	1,432.0	1,854.3	-	-	-	1,854.3
Plastics	239.4	-	239.4	948.0	-	-	-	948.0
Mixed Plastic Bottles	-	-	-	220.9	-	-	-	220.9
PET [1]	-	-	-	33.4	-	-	-	33.4
HDPE [2]	-	-	-	-	-	-	-	-
PVC [3]	-	-	-	-	-	-	-	-
LDPE [4]	-	-	-	-	-	-	-	-
PP [5]	-	-	-	-	-	-	-	-
PS [6]	-	-	-	-	-	-	-	-
OTHER PLASTICS [7]	-	-	-	-	-	-	-	-
Green garden waste only	45.2	-	45.2	12.7	-	-	-	12.7
Waste food only	-	-	-	-	-	-	-	-
Mixed garden and food waste	22,033.3	-	22,033.3	22,065.9	-	-	-	22,065.9
Wood for composting	-	-	-	-	-	-	-	-
Other compostable waste	-	-	-	-	-	-	-	-
Wood	1,670.6	-	1,670.6	1,670.6	-	-	-	1,670.6
Chipboard and mdf	-	-	-	-	-	-	-	-
Composite wood materials	-	-	-	-	-	-	-	-
WEEE - Large Domestic App	261.8	-	261.8	261.8	-	-	-	261.8
WEEE - Small Domestic App	524.6	-	524.6	524.6	-	-	-	524.6
WEEE - Cathode Ray Tubes	-	-	-	-	-	-	-	-
WEEE - Flourescent tubes and other light bulbs	3.3	-	3.3	3.3	-	-	-	3.3

Summary / Cambridgeshire County Council / Cambridge City Council / East Cambridgeshire District Co / Fenland District Council

- **Column B** – lists the various material types.
- **Column C, D and E** – detail the tonnages of source-separated materials and commingled materials collected for recycling and subsequently rejected at the point of collection.
- **Column F and G** – provides the tonnages which are sent for recycling from the source-separated materials and commingled materials collected (i.e. net of total collected minus rejected at point of collection) and subsequently rejected at the gate of or by the reprocessor.
- **Column H and I** – provides the tonnages of materials which are extracted from the residual waste stream and subsequently recycled or rejected at the gate of or by the reprocessor.
- **Column J** – this is the sum of columns F – G + H – I, i.e. the total waste diverted from landfill through recycling.

The reuse section of the material summary section is similar to the above. However, it does not include a section for materials extracted from the residual waste stream.

Each material type has an associated biodegradability factor, and the total of each material which has been diverted from landfill is multiplied by the biodegradability factor to give the total biodegradable content of the diverted waste for that period. This is totalled in cell S75 as the net biodegradable diversion.

b) Indicative Mass Balance Calculation

The mass balance calculation is used to generate the amount of Biodegradable Municipal Waste Landfilled (BMW_L) based on the following calculation:

Figure 9 The Mass Balance formula (Shorthand)

$$BMW_L = (L_D \times RB\%) + (L_{TH} \times 0) + (L_{MBT} \times (RB\% \times MBT_{AF}))$$
$$+ (L_{OT} \times RB\%) + (Div_R \times RB\%)$$

This can be expanded to:

Figure 10 The Mass Balance formula (Expanded)

BMW_L = (Directly Landfilled MSW x RB%)

+ (Landfill after Thermal Treatment x 0)

+ (Landfilled after MBT x (RB% x MBT Reduction factor))

+ (Landfilled after Other Treatment x RB%)

+ (Rejected diverted x RB%)

As highlighted in section 2 of Figure 7, the Mass Balance report provides a step-by-step breakdown of this calculation for your LA for the period selected.

Figure 11 Indicative Mass Balance Calculation

Indicative Mass Balance Calculation For Cambridgeshire County Council For Oct 09 - Dec 09

	Residual Municipal Waste	36,218		
MSW_T	Total Collected Municipal Waste	70,956	Recycling and reuse tonnages from Q10, 11, 12, 16, 17, 18, 33, 34 (WCA) & Q11 & 14 (WDA) (including collection rejects) plus residual waste from Q23 (WDA).
	BMW %	68	National figure under LATS. Deemed percentage of biodegradable component of municipal waste in England.
BMW_T	Total Biodegradable Municipal Waste	48250	BMW% x MSW_T
Div_T	Total Collected Municipal Waste Diverted	34385	Recycling & Reuse tonnages sent to final destination Q19 & 35 (WCA & WDA) minus any tonnage rejected at the gate of the reprocessor.
Div_B	Biodegradable Content of Diverted Waste	25306	Nominal biodegradable content of each material (see Material Summary) multiplied against the Net total collected municipal waste diverted in Q19 & 35 (Div_T).
Res_T	Total Residual Waste	36571	MSW_T - Div_T
Res_B	Biodegradable Content of Residual Waste	22944	BMW_T - Div_B
RB%	Residual Biodegradable Percentage	62.7%	(Res_B / Res_T) x 100
L_D	Directly Landfilled Municipal Waste	36199.9	Tonnage of waste sent directly to landfill Q51-53 (WDA).
L_{Th}	Landfilled after Thermal Treatment	2	Tonnage of Incinerator Bottom Ash sent to landfill Q54 & 55 (WDA) and tonnage of char/slag sent to landfill Q57 (WDA).
L_{MBT}	Landfilled after MBT	0	Tonnage sent to landfill Q59 (WDA).
MBT_{AF}	MBT Adjustment Factor	1.000	Site-specific factor calculated by Environment Agency by which MBT adjusts RB%
L_{OT}	Landfilled after Other Treatment	0	Output tonnage of waste sent to landfill from Q56, 60, 64 , 65. Residue to landfill Q61, 62 & 63 (WDA).
Div_R	Rejected Diverted	159	Recycling and reuse reject tonnages from Q10,11,12,16,17,33,34 (WCA) & Q11 & 14 (WDA). Rejects at gate of reprocessor Q19 & 35 (WCA&WDA). Plus MRF rejects Q58 (WCA&WDA).
BMW_L	Biodegradable Municipal Waste Landfilled	22810.6	(L_D x RB%) + (L_{Th} x 0) + (L_{MBT} x (RB% x MBT_{AF})) + (L_{OT} x RB%) + (Div_R x RB%)

You should always refer to the UA and WDA Mass Balance Guidance notes (available to download from the WDF website) to understand the questions and assumptions that are used to generate the different components of the MBal report.

c) Data Status

Section 3 of Figure 7 highlights the status of the data, which is used to generate the mass balance report.

Figure 12 Data Status

99	Authority	Data Level
100	Cambridgeshire County Council	40
101	Cambridge City Council	40
102	East Cambridgeshire District Council	40
103	Fenland District Council	40
104	Huntingdonshire District Council	40
105	South Cambridgeshire District Council	40

When producing a report for a UA there will only be that authority shown here and it is likely that you will be familiar with the status of the data that you are viewing. However, if you are producing a report for a WDA it will also source data from the constituent WCAs. It may be that you as the WDA have authorised your return to Level 30, but one or more of your WCAs has yet to reach that point. Incomplete WCA data will obviously impact on the calculation and so it is always worth checking this section of the report to ensure the data for all WCAs is complete and validated.

2.3 EA Report

Following the move by all English LAs to Qu100 from April-June 2015 reporting period, the EA Report is no longer supported.

The EA validation report was used by the Environment Agency to perform a number of data checks on an authority's return prior to it being rolled up to level 40. The report reviews the tonnages, rejections and final destinations from the following key questions:

- Qu23 only (once all authorities had moved over to Qu100)
- Qu19, Qu23, Qu56 -65, Qu58 and Qu61 to 63 (pre-Qu100)

If you are reviewing a WDA EA report, the data in Qu23 (and Qu19 pre-Qu100) will be broken down by WDA and its constitute WCAs.

The EA report isn't primarily designed as a validation tool in the same way as the others mentioned in this guide, but the data held within it can provide you with useful data summaries and so has been made available to you.

WDF Tip – As with the MBal report as covered in section 2.2, a WDA's report will include data from its constituent WCAs and it is therefore important to be aware of the status of the WCA data (e.g. some may only be at Level 10 or not yet present at all). No status indicator is provided within the EA report and so the MBal status indicator should be consulted.

Figure 13 Example EA Report

National FacilityId	Facility	License	North Yorkshire County Council Sent	Rej	Craven District Council Sent	Rej	Hambleton District Council Sent	Rej	Harrogate Borough Co Sent	R
58	Glass Recycling (UK) Ltd	ER10199843	190				73		566	
72	Reuse Collections Ltd t/a Berryman	ER102000306								
92	F D Todd & Sons Ltd	60158	149							
282	Severnside Recycling								1,318	
535	Yorwaste Ltd		686							
2055	C & J Blackburn	61026	397							
2229	F D Todd & Sons Ltd	68712	449						319	
3182	G & P Batteries Ltd	42701	7							
3242	Velloo Ltd	65100	19							
3974	Farrow P	60163	16							
4360	Yorwaste Ltd	60179	1,046							
4963	Crossley Evans Ltd	60679	30		1					
5643	Yorwaste Ltd	60008	107		746					
7932	Other/Exempt		667		940		306		705	
8311	OSS Group Ltd	PPC/A/1016835	0							
8442	Salvation Army Trading Co Ltd	No number	4							
12744	Timberpak Ltd	65268	10							
12754	Silver Lining Industries Ltd	65279			3					
12848	Environmental Waste Recycling Ltd	65427	70							
12909	Yorwaste Ltd	66077	974				222			
12924	Yorwaste Ltd	66108								

EA Checks Qu19 / EA Checks Qu23 / EA Checks Qu56-65 / EA Checks Qu58 / EA Checks Qu61-63 / Comments

3   Reports available from the Summary reports page

To access the report functions, navigate to the Data Manager page and log in. Select "Reports" from the top toolbar and Summary Reports from the drop-down.

WDF Tip - Please bear in mind that the Reports section is a tool for <u>viewing</u> data in various ways. It in no way edits the data and so feel free to experiment with the different tools, safe in the knowledge that you're not going to inadvertently change your data. There are several reporting options available to you through the Summary Reports page. Reports can be produced for specific regions, local authorities, periods of time and different data sets relating to:

- Performance Indicators;
  - o England – Best Value Performance Indicators (BVPIs), National Indicators (NIs) and the Landfill Allowance Trading Scheme (LATS). *(These performance monitoring schemes have all now ended but it is still possible to run reports for comparison with historical data).*
  - o Wales – WMT indicators and LAS reports.
  - o Northern Ireland – KPI and LAS reports.
- Destinations of waste; and
- Specific question answers.

The next section of this guidance note (section 3.1) will help you to understand the types of reports available and section 3.2 shows you how to run a report.

Figure 14 Summary reports page

Reporting output selections (become the period and question selection areas for Question reports and Raw Data reports).

3.1 Types of report available

A full list of the reports available and who can access them is available in section 6 of the WDF System manual, guidance note GN4.6: "Full List of Reports".

The choice of National Region here does not limit the local authorities you can benchmark against, e.g. you can select England as the region and still run the reports against Welsh authorities. Selecting the National Region will set the list of available reports to those common to all National Regions and those specific to the chosen National Region. N.B. whilst it is possible to run reports from one region against LAs from another, due to subtle differences between regions in the way questions are used or completed, the results generated from running reports in this way may not be comparable to those for the LAs of the region the report is designed for.

Some English reports are specific to LA type so please ensure you are selecting the correct report for the authority type you are reporting against otherwise the report may return blank. E.g. There are different versions of the NI192 report depending on whether you reporting against a WCA/UA or a WDA.

Figure 15 Report selection area

The Summary Reports page allows you to view the following reports for England, Wales, Northern Ireland and Scotland:

- **Performance Indicators (PI/ KPI)** – available for Quarterly Periods only. The only exception to this is BVPIs for England which can be obtained for an Annual Period (where the local authority has completed the optional annual question set). As these questions are optional, many LAs no longer complete them and where this is the case no data will be returned on the annual report). Reports can be run against multiple authorities, and for multiple quarters.

Helpful tip – to produce an annual performance indicator value in situations where only quarterly reports are available, e.g. NI192, select the quarterly report type and when selecting the periods later in the process, pick all four quarters from the year you wish an annual figure to be generated for. When the report is created it will contain details for each of the quarters as well as a summary for the year. (Note – England, Wales and NI work to financial year reporting periods, whereas Scotland uses calendar years.)

- England: this includes Best Value Performance Indicators (BVPIs) and National Indicators (NIs). (See the BVPI section of the Guidance web page detailing how these are calculated.) Separate Qu100-based comparator reports have been created for each LA type for NI191, NI192, NI193 and BVPIs 82a-d and 84a as applicable to the LA type.
- Northern Ireland: known as Key Performance Indicators (KPIs). More information is provided in the Northern Ireland section of the Guidance web page.
- Wales: these include Welsh Performance Indicators (WMTs). More information is provided in the Wales Guidance section of the Guidance web page.
- Scotland: Not applicable. SEPA provide data relating to Scottish waste indicators on their website here: http://www.sepa.org.uk/environment/waste/waste-data/.

- **Analytical Reports** – available for Quarterly Periods only (apart from Wales Financial Report and the Primary Reprocessor report for Scottish LAs) and provide the outputs of various data analysis methods. These aim to build on the analysis provided by the PI reports by giving additional details such as materials collected by various routes and breakdowns of final destinations. Reports can be run against multiple authorities and for multiple quarters. LAS reports for Wales and Northern Ireland can also be run by using this selection. Below is a list of the analytical reports available to local authority users for each region.

  All:

  - Destination Report (available for Unitary Authorities (UA) and Waste Disposal Authorities (WDA): this does not cover recycling or reuse; and
  - Primary Reprocessor Report (for all LA types): this presents details of reprocessors receiving local authorities' materials for recycling and reuse.

  All excluding Scotland:

  - APSE report: APSE (Association for Public Service Excellence) is a not-for-profit local government body working with over 300 councils throughout the UK. This is a summary of recycling, composting and energy recovery tonnages by local authority (note: All Welsh LAs have been completing Qu100 since April 2013 while English LAs moved to Qu100 in phases over 2014-15 with all completing it for data from April to June 2015-16, but the APSE report pre-dates Qu100 and therefore should not be run for periods containing Qu100 data.).

  England:

  - Local Authority Collected Waste (LACW) by management method (available for UA and WDA);
  - Total collected residual waste;
  - Total waste sent for recycling, composting and reuse (UA and Waste Collection Authority (WCA);
  - Total waste sent for recycling, composting and reuse (WDA);
  - Local Authority Collected Waste (LACW) by final disposal route (WDA);
  - Local Authority Collected Waste (LACW) by final disposal route (UA); and

- "Material collected" report.

Northern Ireland:

- CA site segregation efficiency: provides details of each CA site used by the selected LAs in terms of total material collected and that segregated for recycling and reuse;
- WfH Report: provides the percentage of Waste from Households Arisings sent for Recycling, Composting or prepared for Reuse (note: the definition of Waste from Households is not the same as Household waste. See the "Waste from Households" calculation guidance for further details); and
- Capture Rate: this gives the capture rate for collection schemes by material:
- NILAS Summary; and
- NILAS Detail.

Wales:

- Qu100 Final destination report; final destinations of all waste types by LA shown by material, FD type and waste stream type, along with the original source facility the material was first processed by after collection;
- Qu100 Reprocessor report: A list of all reprocessor types used by a council in each selected quarter. Combined input and output tonnages are provided as totals of all the sites used of the corresponding type during that period. *For example, if 10t of material was to move through a reuse facility and then on to a second reuse facility, 20t would be recorded whereas only the 10t going into the primary facility would be reported in the Qu100 Primary reprocessor report below);*
- Qu100 Reprocessor and Qu100 Primary Reprocessor reports;
- Material Arising Detail and Summary reports;
- MRF reject rates: this shows total input, reject rate and rejects' destination facility types by MRF;
- Qu100 Compliant Destinations;
- LA Municipal Waste Management;
- Qu100 Compliant Destinations; and
- LAS Detail and Summary reports.

- **Question Reports** – can be run against a number of questions for a single authority and for a single reporting period. This report generates a spreadsheet replicating the layout of each selected question, populated with the data entered for that period. Each question is displayed on a separate tab of the workbook.
- **Raw Data** – produces an Excel worksheet (.xlsx file) and can be run against multiple authorities for multiple periods. These files can look complicated at first but ultimately provide the greatest degree of flexibility for filtering and using as the base for running any formulae and macros you may create to query and process the data.

Helpful tip: When running a Raw Data report the documents are limited to around 4,000 rows if it is not zipped. If the data requested exceeds this the following message will display at the bottom of the data set: NOTE: The size of this download has been limited and some data not returned. Tick the "Download the data in a compressed ZIP format" and "Exclude blank data from the report" boxes in the Report Selection area. Selecting to exclude blank data will produce a file where only the rows containing reported data are included in the download. This has the benefit of greatly reducing the file size and in situations where large amounts of data are requested (e.g. the download of an entire region in one go). Whilst zipping a raw data download increases the maximum number of rows which can be contained

within the file to that of the maximum permissible in an .xlsx file of just over 1 million rows, the length of time taken to generate and download raw data will depend on the amount of data requested.

3.2 How to run a report

The following step-by-step guidelines show you how to run a report.
WDF Tip - As you navigate around this page as described below a red "please wait...." message will appear as selections are made. It is important to allow this message to disappear before making your next selection otherwise errors can occur.

3.2.1 Defining your parameters

In the Report Selection area select the:

- National Region: England, Wales, NI or Scotland;
- Period Type: Quarterly or Annual (see the "Types of Report" section to determine which reports are available on an annual and quarterly basis);
- Report Type: either PI, Analytical or Raw Data (only the available report types will be visible depending on the region and period type selected) ; and
- Report: select from the drop-down box the specific report you would like to run.

Figure 16 Report selection options

Click in the circle next to the Region, Report Type and Period Type that you would like to run the report for

Report Selection Area

Select specific report from the drop-down menu

3.2.2 Selecting local authorities

There are four ways of selecting the local authorities that you wish to run your report against:

- using the pre-defined drop-down lists;
- creating a new list;
- carrying out an ad-hoc search; or
- family groups.

Method 1: Pre-defined lists

The pre-defined lists which appear by default in the drop-down box in the Select Authority section consist of 15 regional groups[7] along with three local authority specific groups:

- Authority Authorisation: This is a group of those local authorities you have the rights to authorise;
- Own Authority: This would simply add your own authority; and
- Data Entry: This is a group of those local authorities you have the rights to enter data for.

In the Select Authority area click on the drop-down arrow and select the grouping that you would like to run the report for. Press the "Select" button to populate the Authority Selection area with the list of local authorities in your selection. (In the example below 50 North West local authorities have been selected). Choosing and selecting more than one group adds the second group to the first in the report list; it does not replace it, so you can create longer lists from multiple groups. If you select a group then change your mind, remove it by clicking on the Clear button to the right of the list before selecting another group.

Figure 17 Example of local authorities selected via UK Region (method 1)

Method 2: Creating a new authority list

It may be that the pre-defined lists don't adequately cover your specific needs. If you are reporting against a group which you are likely to use frequently you can set up your own lists. Once created, these bespoke lists will be available to select from the drop-down box.

To set up a new list simply navigate to the management tab of the data manager navigation bar and select "My Authorities". In the "Description of new list" box give your new list a title and press "Create new list". The page will refresh and you will be able to select the list you have just named from the "Please choose the selection list you wish to manage" drop-down.

Figure 18 Creating a new Authority list

A brown box containing various column headings, but no details will now appear. To start populating the list click on, "Add Authority to List". You will be redirected to a screen where you will be able to

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[7] Note Arc21 (pre-April 2015), NWRWMG (pre-April 2015) and SWaMP2008 (pre-April 2015) are the three groupings for the Northern Ireland Authorities prior to April 2015, with Arc21, NWRWMG and NIOther being the three groupings for the Northern Ireland Authorities since April 2015.

search for the authorities you require, either by name, region, authority type, or any combination of these.

Figure 19 Selecting an authority for your list

Once you have located an authority you wish to add to the list, tick the "Add to List" box and press "Add authority to list". After the page refreshes repeat the process to add all the required authorities to your list. When finished you can navigate back to the summary reports page and your newly created list will be included in the "Select authority" drop-down.

Method 3: Ad hoc searches

There are likely to be times when you will just want to run a one-off search which doesn't justify creating a new list for the drop-down. In these situations you can use the search facility located to the right-hand edge of the "Select authority" section to individually select the local authorities you want to run the report for.

Press the "Search" button in the Select Authority area. This opens a new screen which allows you to search for authorities using the following criteria: Authority name, National Region, Region, Population size, Index of Deprivation, Land Area, Dwelling Stock and Local Authority Type.

WDF Tip - The text searches are on a "contains" basis, i.e. if an authority name contains that word it will be returned as a result. For numeric searches the range can be left open, so population between: blank and 90000, would return all authorities with a population of 90000 or less. Up to 12 results can be displayed on this page, with any subsequent ones appearing on additional pages which can be accessed via the links visible at the bottom left of the list when required. Results can be ordered by any of the column headings in either ascending or descending order, by clicking on the relevant column heading.

Figure 20 Selecting local authorities using search criteria

Local authorities matching your search criteria

When completed, press "Go" to perform the search. The lower part of the page will then display the search results. Once you have ticked the box next to the authority you searched for, you now have the option to press the "Save and Exit" button to confirm your selection and return to the summary reports page. If you want to continue searching for more authorities to report against, simply enter the search criteria for the next authority. You'll notice that previously ticked authorities will remain on your results after each search. To wipe your results and begin a completely new search press "Reset Search". You can press the "Select All" button to select all local authorities in the list.

Once you click "save and exit" the authorities that you selected in the ad hoc search now appear in your authority selection area.

WDF Tip – The Population, IoD, Area and Dwelling Stock search criteria can become useful tools when searching for similar authorities for benchmarking purposes. Two of the fields shown are of limited use, but have been included. JPPorder is a numeric ordering system that groups WDAs and their WCAs together. LA Code is the internal WasteDataFlow number for the local authority.

Method 4: Family Groups

This function is designed to allow a local authority to benchmark against similar authorities. Naturally you can build your own lists, but with this functionality we are including "official" groupings.

The only grouping available is the "Nearest Neighbour Method (2007)"[8] that covers English authorities. This has been developed by the Chartered Institute of Public Finance and Accountancy and gives the statistically similar authorities based on a range of demographic information.

To report on an authority and its nearest neighbours, first add the authority to the selection (as described above for ad-hoc searching). Then highlight the authority by clicking on it and press the "Add" button in the family grouping section at the bottom of the Select Authority area. After a small delay a "plus" will

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[8] The CIPFA Nearest Neighbour model is updated periodically and some comparator groups change from the lists used in WDF. More information and the latest version can be found at www.cipfastats.net. If your Nearest Neighbour councils have changed you can build a bespoke list based on the updated information.

appear next to the authority. If you click on the "plus" it will expand to show the full list. When you run the report it will be produced with data for all the authorities in the authority selection area.

Figure 21 Expanded family group
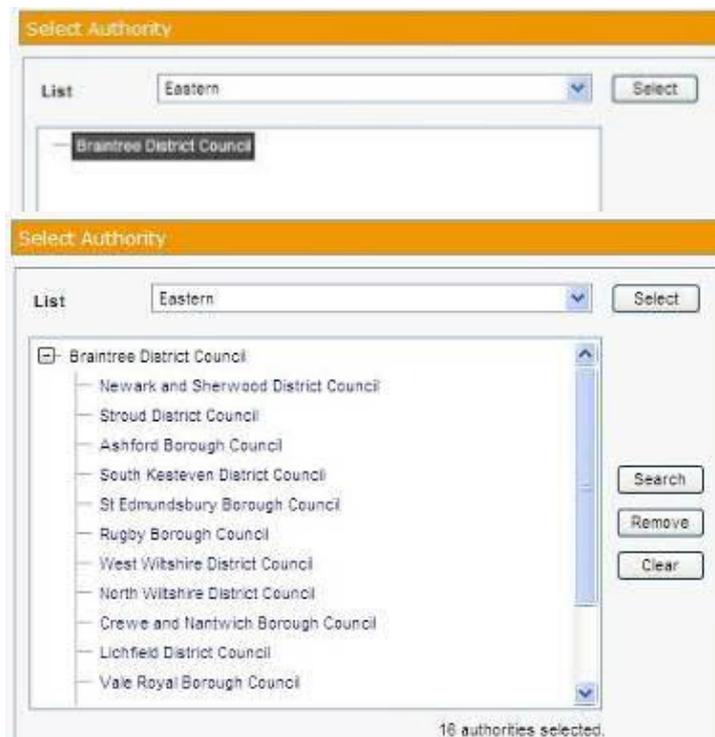
WDF Tip - The data we have for nearest neighbour currently does not have matches for the following <u>active English</u> authorities:

Table 3. Active English LAs without Nearest Neighbour matches

Authority Name		
Bedford	Council of the Isles of Scilly	North London Waste Authority
Brent LB	County Durham	Northumberland
Central Bedfordshire	East London Waste Authority	Shropshire
Cheshire East	Gloucester City Council	Warwick District Council
Cheshire West and Chester	Greater Manchester WDA (MBC)	West London Waste Authority
City of London	Leicester City Council	Western Riverside Waste Authority
Cornwall	Merseyside WDA (MBC)	Wiltshire
Dorset Waste Partnership		

3.2.3   Removing authorities

You can refine the selection by clicking on local authorities you do not need data for (so a black box appears around them) and then pressing the Remove button. To select more than one local authority to remove, hold down the Ctrl key on your keyboard whilst selecting the local authorities. All the local authorities can be removed without having to highlight them by using the "Clear" button on the right.

Figure 22 Removing authorities from the list

1. **Click on local authorities to highlight ones to remove from the list**

2. **Click the Remove button to delete highlighted local authorities from the list**

WDF Tip – Removing an authority from the selection like this only removes its selection. It does not amend the list in the drop-down (either pre-defined or user created), nor does it stop you from searching for it again and adding it back in during this session.

a) **Selecting Periods** – Now that you have selected the report you wish to run and populated which authority or list of authorities you will run the report against, the next step is to define the time period for which results will be returned. Depending on the type of report you are trying to run a list of available periods to select from will be shown in the Select Periods area. Selecting the periods in this way give you the flexibility to compare the same quarter in different years or view the performance over a series of periods.

WDF Tip – If you want to produce an annual performance indicator value, e.g. NI192, then select the quarterly report type and when selecting the periods, pick all four quarters from the year you wish an annual figure to be generated for. When the report is created it will contain details for each of the quarters as well as a summary for the selected periods, which in the case of four consecutive quarters will, in effect, be the annual figures.

- Click on the Periods you want to run the report for. Multiple Periods can be selected by holding down the Ctrl key on your keyboard whilst selecting the Periods. The selected Periods are highlighted in blue. The shift key will also select a range if you click one extreme of your range and then the other end whilst holding down shift.
- Press the single arrow to move the highlighted Periods into the "Selected Periods" box.
- Once at least one period is selected the leftward pointing chevrons will become available, allowing you to remove periods from the selected list in the same way as above.
- If you want to run a report for all available Periods press the double arrow key to move all Periods into the Selected Periods box.

Figure 23 Selecting periods
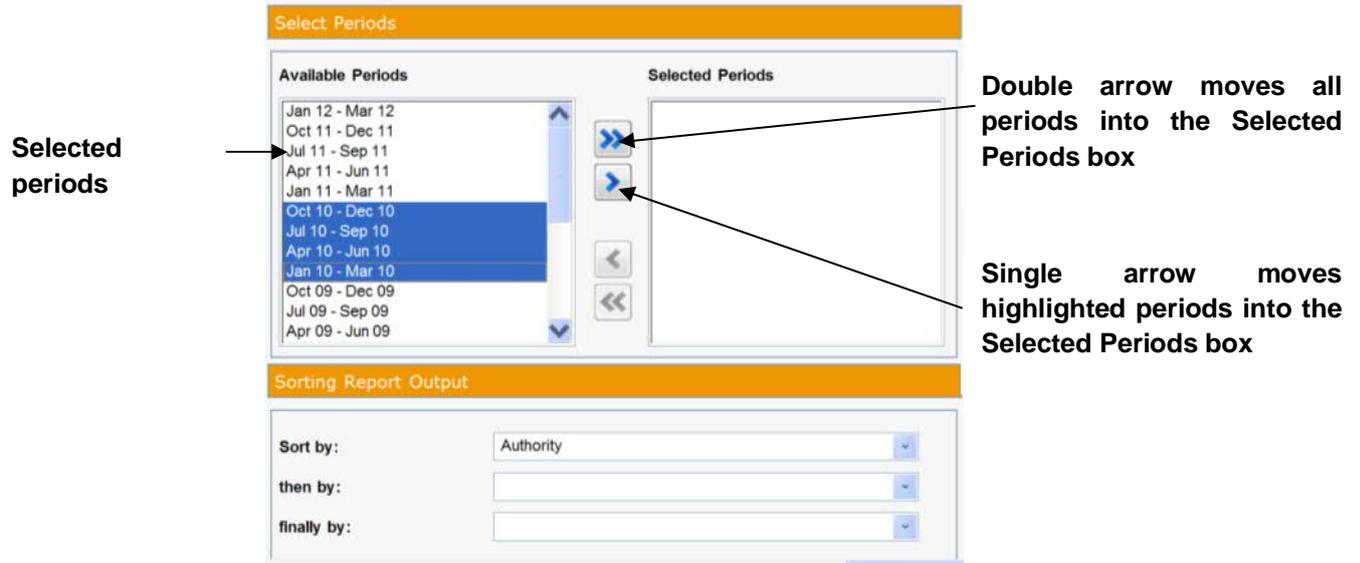
b) Sorting the report output (PI and Analytical reports only)

By this point you will have your report type, authority(s) and period(s) selected and so can either choose to produce the report by selecting "Run Report", or make further selections to alter the order in which the report displays the data.

The "Sorting Report Output" section allows you to sort by up to three criteria:

- Authority Name
- Authority Type
- Authority Group (JPP number)

This is an optional function but may prove useful when creating larger reports.

3.2.4 Selecting Questions – (Questions and Raw Data reports only)

If you have chosen to run a Question or Raw data report there is one final step to complete after selecting the authority(s) and period(s). This is to select the WasteDataFlow questions you want to include in the report.

WDF Tip – A Question report can only be run against a single authority and single period at a time. When selecting a list of authorities so that more than one is selected in this section you will need to click on the authority you wish to report against. Once highlighted in grey the available periods box will populate.

The question selection process works in an identical way to the period selection described above, by highlighting the questions you wish to use and using the single chevron to move them to the selected questions area.

3.2.5 Selecting Facilities

If you are running a **Primary reprocessor** report you will see a **Select Facility** area rather than **Select Question.** Select the facility(ies) of interest as for Authority selection in b) (Method 1 or 2).

3.2.6 Run Report

Once you have selected all your report criteria you then need to press one of the "Run Report" buttons to generate your report.

Once you have selected "Run Report" a standard dialogue box will pop up allowing you to open or save the report. The report will generate an .xls file for each report type. Choosing to open the file doesn't remove your ability to save it. You will still be able to do this from within Excel or other compatible spreadsheet software once the file has opened.

3.3 Understanding WasteDataFlow reports

3.3.1 Performance Indicator (PI) and Analytical reports

This section provides an overview of the PI and Analytical reports. The new report introduced in early 2019; the Qu100 Recycling Report, is covered in more detail in section 3.3.2.

WDF Notice – several questions and indicators refer to the "reuse" of material. It should be noted that this is a short form of "preparing for reuse", as per the revised Waste Framework Directive (rWFD); where further guidance relating to this term can be found.

Figure 24 Example PI/ Analytical report

The data displayed in the report will differ depending on the criteria used to generate it, but PI and Analytical reports will always output with the same three-tab format of: Report, Data, and C-Variables.

- The Report tab – contains the report with titles laid out in an easy-to-follow form. This is the tab where you would copy the formulae if you have more than 60 LAs and/or 4 periods. As the data is in Excel format you can easily create graphs or add extra formulae as you wish.

WDF Tip: The Excel template is set up to process 60 local authorities (rows of data) to the Report tab, as a way of limiting the download size. If more than 60 LAs are selected data will come through to the Data tab of the report. You will have to fill the rows below the bottom LA on the Report tab with formulae, in order for it to be pulled across from the Data tab.

- The Data tab – contains the raw information from WasteDataFlow. This is in the form of the c-variables that are used throughout the system. The term "c-variable" is short for "calculated variable". We use c-variables to show the interim stages of calculations such as those done to work out performance indicators. C-variables themselves can provide useful pieces of information.

WDF Tip – As Data Entry or Authority Administrator users, data from other authorities becomes available to you once it has first reached level 20 for each period. At this point the data is still very much subject to change and so should be treated as such. You have the ability to check the level of the data for each authority and period on the Data tab, under the heading of "Authorised Status".

Figure 25 Authorised status check

Authority Type	Authorised Status	C4
Collection	30	25.1
Collection	20	0
Collection	30	0
Collection	10	20.9
Collection	30	0

- **The C-Variables tab** – includes a definition of the c-variable code numbers used in the report and displayed on the Data tab. See section 2.1 (Performance Indicator reports) part d) for more information about c-variables.

3.3.2   Qu100 Recycling Report

This report can be run for multiple local authorities and multiple periods. The report allows for easy viewing of the tonnages which feed into recycling totals, by material type, for published "Household" and "Waste from households" (published at national level only) recycling measures. Rows of data contain a regional identifier for comparison with neighbouring authorities or aggregation at regional level. Notes describing data fields and how to use them are contained within the file. Data will not be returned for periods where the selected local authorities were not using Qu100.

The report consists of the following tabs:

- **Report**: presents the data entered into Qu100 in table form along with a number of identifiers for different elements of the data. The columns can be filtered to extract specific information. The report's five final columns contain formulae which draw on earlier columns to provide tonnages according to the definitions of "household" and "waste from households" (WfH)

- **WfH CVars**: Contains C-Vars corresponding to the "waste from households" (WfH) and "waste not from households" (WfnH) definitions (which are used for reporting UK waste data to the European Union). The final four columns on this sheet contain formulae which draw on earlier columns to construct the WfH factors used. Information about which questions in WDF and the waste types included is provided.

- **HH CVars**: provides the Household Waste factors for residual waste, MRF, recycling and reuse (as required for Defra's statistical reporting of local authority level waste and recycling statistics in the UK). The C-Variables which are used to calculate the factors, along with an explanation of what they cover, are provided.

- **Data Dictionary**: gives information about data in each column of the report. This can help you to identify which columns will help you to interrogate the data for a particular purpose and which can be hidden in order to focus on the relevant columns.

3.3.3 Question reports

The question reports are generated with a separate tab for each question you have selected to run it against. The report displays the data in a way which is designed to mimic the layout of the data entry pages.

Figure 26 Example Question report.

| Q010 : Tonnes of material collected through kerbside schemes from household sources by LA or its contractors
Data for Durham City Council for Oct 08 - Dec 08 | | | | | | |
Material	Tonnage collected for recycling	Tonnage collected for recycling but actually rejected/disposed	No. of households receiving a collection	Tonnage Collected for Reuse	Tonnage Collected for reuse but actually rejected / disposed	Collected Co-mingled?
Green glass	-	-	-	-	-	-
Brown glass	-	-	-	-	-	-
Clear glass	-	-	-	-	-	-
Mixed glass	618.58	-	39160	-	-	Yes
Paper	-	-	-	-	-	-
Card	-	-	-	-	-	-
Books	-	-	-	-	-	-
Mixed paper and card	989.04	-	39160	-	-	Yes
Steel cans	-	-	-	-	-	-
Aluminium cans	-	-	-	-	-	-
Mixed cans	163.00	-	39160	-	-	Yes
Plastics	266.23	-	39160	-	-	Yes
Textiles and footwear	-	-	-	-	-	-
Co mingled materials	-	-	-	-	-	-
Green waste only	160.88	-	6000	-	-	No
Other compostable waste	-	-	-	-	-	-
Wood	-	-	-	-	-	-

3.3.4 Raw Data Reports

The Raw Data report has superseded the CSV download which was available from the Reports section until September 2013. The Raw Data report offers a number of benefits over the CSV download including the ability to exclude rows which don't contain any data, a higher number of rows of data available in the report as well as support for Qu100 data.

The Raw Data download produces an Excel file (.xls) and can be run against multiple authorities for multiple periods. The file does not provide any formatting such as column widths, or different font settings and the data is arranged in its rawest form. These files can look complicated at first but ultimately provide the greatest degree of flexibility for filtering and using as the base for running any formulae and macros you may create to query and process the data.

The Raw Data report generated from within the summary reports creates an Excel worksheet (.xls file) with either two, three or four tabs dependent on the data requested:

- **NotQ100** (present dependent on the questions selected for reporting) – will contain information for all questions (currently excludes Qu100).
- **Q100** (present if Qu100 data has been requested) – contains any Qu100 data if present.
- Service (present if downloading data from Welsh LAs) – contains data from Qu170-Qu176 if present.
- **Comments** – contains comments present for any of the questions contained within Tab 1, listed by Authority, Question number and date.

Figure 27 NotQ100 tab of a Raw data report.

Key points about the NotQ100 tab:

- **Columns A to D** contain data relating to the authority, period and question number and can be filtered to display the data you require.
- **Column E** contains collated data from the responses to certain questions, e.g. destinations for material.
- **Column H** contains all the data entered under each question. It is important to note that depending on the questions downloaded this therefore means it could contain not only tonnage data, but also bin numbers, collection frequency, household numbers etc.
- **Columns F to G** contain a description of the data held in column H. Therefore, it is possible to apply filters to these columns to reduce the amount of data displayed to only that which is of interest to you, for example only data relating to the tonnage of glass.
- **Columns I to N** contain various id tags which relate to where the data resides within the system. They can prove useful if you plan on building more advanced formulae and macros to process the data but in most cases they do not provide any benefit when simply viewing the file. In these cases you may wish to consider hiding or deleting these columns to avoid confusion. Once these columns are removed from view you will also have more space to expand the remaining columns.
- **Column O** contains the material descriptor, where appropriate, for that data line. Some of these map directly to the 60+ materials available for local authorities to record data under (e.g. Furniture), others group two or more of these together. For example, all organic materials (Green garden waste only, Mixed garden and food waste, Other compostable waste and Waste food only) are grouped under "Organic".

Figure 28 Q100 tab of a Raw data report.

Key points about the Q100 tab:

- The Q100 tab contains more information about the movement of waste streams between facilities used and the processes undergone by the waste than the NotQ100 tab. It has more columns, all of which can be filtered to display the data you require. Care should be taken when filtering as some rows will be blank in one column but may contain relevant information in another. It may be advisable to save an unaltered version of the spreadsheet before applying multiple filters.

- **Columns A and B** contain a pair of ID numbers. These are unique to this instance of the data and will be overwritten each time data is rolled through level 10. You will notice that the numbers in columns A and B will differ, but pairing will remain constant. For example where 123456 appears in column A and 987654 appears on the same row in column B, this association will be constant and so they will only ever appear together. A new pairing is created for each primary node recorded in Qu100 and will also be applied to every node which can be traced back to it. Therefore in circumstances where you see pairings repeat over a number of rows you can conclude that those rows are all part of the same Qu100 branch (they have a common starting point). For example, the first one may be a MRF and then the subsequent ones of the same AB pairing will be its various outputs, and where required the outputs of its outputs and so on.

- **Column C** This column will either contain a 0 or a multi digit number (6 or more) and denotes the ID given to the waste output instance which has created it. As a primary level node will not be the output of anything else, there is no number to give to it and therefore a 0 will be provided. This means that where ever you see a 0 in column C, you can be sure it is a primary facility. Where a number is given it will be a secondary or lower level facility or process. Numbers in Column C can occur multiple times in situations where more than one material type is recorded at a facility.

- **Column D** This column contains the WasteProcessorOutputID (column C) of its parent facility. Therefore will return 0 in instances where the site is a primary level facility (as it doesn't have a parent) or a secondary level facility (as primary level facilities are recorded with a 0 in column C). Where a multi digit number (6 or more) is present in column D, you will be able to find it in a preceding row in column C, this preceding row will be the parent of the row(s) with the same value in column D. Numbers in Column D can occur multiple times in situations where more than one material type is recorded at a facility.

Therefore columns A to D can be used in combination to reconstruct the links between the individual rows of data in the raw data.

- Pairings of values in columns A-B represent a branch of Qu100 data

- Pairings will only ever have one instance of a 0 in column C AND a 0 in column D. This identifies this row as representing the primary facility of the branch.
- Pairings with a multi digit value in column C and a 0 in column D are the direct outputs of the primary facility, (secondary level facilities or processes)
- Pairings with a multi digit value in both columns C and D represent a facility or process at the tertiary level of a branch or below.
- The repetition of a number between column C and D can be used to identify the parent and therefore level of a facility or process with multi digit values in both columns C and D.
- The table below provides an example using real data taken from one of the English LAs trailing Qu100They can be identified as all relating to a common branch of Qu100 data at they all have the same number pairing in columns A and B.
- Row 1 contains the primary facility of the branch as shown by the presence of 0s in both columns C and D
- Rows 2, 3, 4, 7, 11, and 15 are the secondary level facilities or processes as identified by the presence of a 0 in column D and a number in column C.
- Row 3 can be identified as the parent of five other rows, (row 3 contains 994018 in column C whilst 994018 then appears five times in column D.
- Row 7 and 11 have the same values in columns A-D as they represent different materials recorded at the same facility (later columns can be queried to identify this).
- Rows 8 and 12 can be identified as the outputs related to rows 7 and 11 by the presence of 994015 in column D of row 8 & 12, being the same as the values in column C of rows 7 & 11.

	Column A	Column B	Column C	Column D
Row 1	417573	417649	0	0
Row 2	417573	417649	994016	0
Row 3	417573	417649	994018	0
Row 4	417573	417649	994019	0
Row 5	417573	417649	994052	994018
Row 6	417573	417649	994053	994018
Row 7	417573	417649	994015	0
Row 8	417573	417649	994048	994015
Row 9	417573	417649	994050	994018
Row 10	417573	417649	994061	994050
Row 11	417573	417649	994015	0
Row 12	417573	417649	994048	994015
Row 13	417573	417649	994050	994018
Row 14	417573	417649	994061	994050
Row 15	417573	417649	994017	0
Row 16	417573	417649	994049	994017
Row 17	417573	417649	994051	994018
Row 18	417573	417649	994062	994051

- **Columns E – H** contain data relating to the authority and period.
- **Columns I – J** contain data relating to the waste stream type.
- **Columns K – S** contain data relating to the facility (type, National ID, name, address, license number, output process). It may be better to identify the facility of interest then use the relevant WasteProcessorID in column A to filter as not all rows in columns K-S contain data and there will often be information regarding a particular facility on multiple rows, (e.g. where multiple materials are recorded).
- **Columns T – U** contain data relating to the output process and tonnage.
- **Columns V – X** contain data relating to the input material.
- **Columns Y – AD** contain data relating to source (household, commercial or industrial in Scotland and household, non-household, WfH and WnfH in England where completed. These columns are unused for raw data from Welsh LAs).

- **Columns AE – AF** contain data relating to the usage of the output material, where applicable.
- **Columns AG – AH** contain monthly and quarterly comments entered by the local authority in Qu100, where applicable. Comments for all other questions are displayed on the Comments tab.
- **Column AI** contains the material group descriptor, where appropriate, for that data line. Some of these map directly to the 60+ materials available for local authorities to record data under (e.g. Furniture), others group two or more of these together. For example, all organic materials (Green garden waste only, Mixed garden and food waste, Other compostable waste and Waste food only) are grouped under "Organic" and Metal applies to Aluminium cans, Steel cans and Other scrap metal.

If you have any further questions in relation to WasteDataFlow reports please contact the WasteDataFlow helpdesk on 0845 6000 890 or email helpdesk@wastedataflow.org.