

WasteDataFlow methodology for calculating national waste performance indicators (NI191, 192 and 193)

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Status of this document

This document has been written by Defra's Environment Statistics & Indicators Waste team in conjunction with Defra waste policy and the WasteDataFlow (WDF) team at SKM Enviros. It is based on the national performance indicator guidance document produced by CLG¹ and provides a technical translation of this guidance into WasteDataFlow questions and terminology. This document only pertains to local authorities in England.

The specifications given here form the basis of the Excel reports in WDF for local authorities to monitor their performance and the data outputs for the

Audit Commission and the CLG data interchange hub. The calculations within WDF are pre-programmed and automatic and therefore need to be universally applicable to all local authorities.

Note: All data reported to WasteDataFlow should be consistent with the LATS definitions and associated guidance documents provided by Defra and the Environment Agency².

The National Indicators covered in this guidance document include:

- NI 191 – The amount of residual hhd waste per hhd;
- NI 192 - The percentage of hhd waste that is sent for reuse, recycling or composting; and
- NI 193 – The percentage of municipal waste sent to landfill.

As of 1st April 2011, LA in England will no longer be required to report on the performance against National Indicators. However, for consistency of reporting and benchmarking within Local Authorities, the data in WDF will continue to be used to calculate these indicators. This guidance note provides an overview of how the questions in WDF are used to calculate the National Indicator data sets.

Please note that any changes in definitions re household waste and what can be included as recycling will not be updated in the NI calculations. The reports from WDF will always be based on the information provided below.

¹ <http://www.communities.gov.uk/publications/localgovernment/finalnationalindicators>

² <http://www.defra.gov.uk/environment/waste/localauth/lats/>

NI191: The amount of residual hhd waste per hhd

This is the amount of waste that is not sent for reuse, recycling or composting. It is calculated by deduction, i.e. it is total hhd waste minus hhd waste sent for reuse, recycling or composting, as defined under NI192. Therefore, it is recommended that the definitions given under NI192 are considered first.

The size metric is the number of hhds in the local authority area, as given by the dwelling stock figures. Dwelling stock data is provided by the Valuation Office (VOA) and is uploaded to WasteDataFlow each year with the latest published statistics.

Definition in terms of WDF questions

WCA/WDA/UA

Numerator:

Calculation	Notes
Total household waste	as defined under NI192 denominator
Minus	
Total household waste sent for reuse, recycling or composting	as defined under NI192 numerator

Denominator:

Calculation	Notes
Total hhds in authority area (dwelling stock).	Dwelling stock figures relating to end of financial year (e.g. March 2010 for April 2009 – March 2010 returns) uploaded into WDF for Qtr 4, once received from the Valuation Office.

NI192: the percentage of household waste that is sent for reuse, recycling or composting.

This indicator includes household waste as defined under EPA 1990 and the Controlled Waste Regulations 1992 and described in the CLG guidance.

'Sent for' means delivered to and accepted for re-use, recycling or composting by a company, individual or organisation which will reprocess waste that is an acceptable form for inclusion in the re-use, recycling or composting process. Any material collected for reuse, recycling or composting but rejected to disposal whilst under the possession or control of the local authority is *excluded* from the numerator. Rejects may occur at collection, during sorting (e.g. at a MRF) or at the gate of the reprocessor.

Similarly, included in the re-use/recycling/composting tonnage will be material within the residual waste stream that is subsequently separated out and sent for recycling, composting or reuse. For example, recyclate taken from residual waste sorted at transfer stations or MRFs, recycling outputs from MBT or other residual treatment processes. Outputs to compost (e.g. from MBT) can only be included if they meet the required standards as set out in the CLG Guidance.

In two-tier areas, where recyclate is extracted from the residual waste stream and the WDA agrees that the WCAs should get credit for this in their recycling indicator, the data recording procedure set out in the Guidance Document for 'How to report recycling from the residual waste stream. This is available to download from the WasteDataFlow website.

Key points to note for NI192:

- Incinerator residues such as incineration bottom ash and metals are not included in recycling tonnages. The Government's aim is to encourage a movement up the waste hierarchy with a view to achieving a more sustainable approach to waste management, including encouraging the segregation and collection of the various components of household waste for recovery. The recovery of materials from incinerator residues is not consistent with these aims.
- Char and slag is not included in recycling tonnages.
- Rubble and plasterboard are both classed as non-hhld materials so are excluded from NI 192.
- The classification of waste materials as hhld or non-hhld in Q.23 is very important as it has an impact on what is accounted for in the NI 192 calculation. Details on this are provided below.
- Ensure rejects of materials collected for recycling / reuse are recorded in the correct question in accordance with where they are rejected during the collected / transfer / treatment process.
- If a WDA or UA have completed Q.69, the household ratio from this question will be used in the NI 192 calculation. If Qu69 is not completed, the calculation will automatically revert to using the household ratio generated from the tonnages entered into Q.23. This household ratio is applied to the recycling generated from the residual waste stream.

Definition in terms of WDF questions for WCA returnNumerator:

Calculation	Notes
Total of all materials in Q.19 sent for recycling excluding rubble and plasterboard.	Rubble /plasterboard are a non-hhld waste therefore excluded.
Plus	
Total of all materials in Q.35 sent for reuse excluding rubble and plasterboard.	Rubble /plasterboard are a non-hhld waste therefore excluded.
Minus	
Total of all materials except rubble/plasterboard collected for recycling or reuse in Q.11	Deducts recycling from non-hhld sources. Rubble/plasterboard is not included as it would be subtracted from the calculation twice.
Minus	
Total of non-hhld waste reported in Q.18 from all rows.	Deducts recycling from non-hhld sources. Note that no rubble/plasterboard should be recorded in Q.18 as this would lead to double-deduction of these materials from the numerator.
Minus	
Recycling rejects: A proportion of the rejects in Q.19 attributable to hhld sources	$Q.19 \text{ rejects} * [(sum \text{ of collected for recycling in Q.10, 12, 16, 17, 18 (hhld only), 33, 34, for all materials excluding rubble/plasterboard) / (sum of collected for recycling in Q.10, 11, 12, 16, 17, 18, 33, 34, for all materials excluding rubble/plasterboard)}]$.
Minus	
Re-use rejects: A proportion of the rejects in Q.35 attributable to hhld sources	$Q.35 \text{ rejects} * [(sum \text{ of collected for reuse in Q.10, 12, 16, 17, 33, 34, for all materials excluding rubble/plasterboard}) / (sum of collected for reuse in Q.10, 11, 12, 16, 17, 33, 34, for all materials excluding rubble/plasterboard)}]$
Plus	
Proportion of MRF rejects due to non-hhld sources	$MRF \text{ rejects} * [Q.11 \text{ co-mingled recycling} / \text{all co-mingled recycling tonnages from Q.10, 11, 12, 16, 17, 33, 34}]$. All MRF rejects will have already been deducted from the tonnages entered into Q.19/35. As some of these will be due to waste from non hhld sources, a proportion of the rejects need to be added back on.

Denominator:

Calculation	Notes
Total tonnage of hhld waste collected for recycling or reuse from Q10, Q12, Q16, Q17, Q18 (hhld waste column), Q33 and Q34; all materials excluding rubble/plasterboard.	<p>Rubble/plasterboard are non-hhld waste and therefore are not included in NI 192 calculation.</p> <p>Material rejected is not deducted as this is part of the total hhld waste arisings.</p>
Plus	
Collected residual hhld waste from Q.23.	<p>This includes all collected hhld waste (regular collection, street cleaning, bulky waste & collected household other), CA site hhld, gully sweepings, asbestos and separately collected healthcare waste.</p> <p>It does NOT include CA Site non-hh, Collected non-hh waste (Highways, C&D, Grounds, C&I, non household other), beach cleansing, fly-tipped materials and Other Collected Waste.</p> <p>In line with the indicator guidance, waste arising from sweeping of gullies should be counted as hhld waste. Waste from emptying drainage pots under the Highways Act should be reported as "Highways Waste" and will therefore not be counted as hhld waste</p> <p>Asbestos waste arising from domestic properties or any of the premises itemised in Schedules 1 or 2 of the Controlled Waste Regulations 1992 is hhld waste. If asbestos arises from other sources, it should be reported under a non-hhld row in Q.23, such as construction & demolition wastes, CA site non-hhld, or in the case of fly tipped asbestos in the waste arising from fly tipped category.</p> <p>Hhld waste includes clearance of any waste put out in contravention to section 46 of the EPA 1990 (e.g. 'side waste') but does not include clearance of waste deposited in contravention to Section 33 of the EPA 1990 (fly-tipped waste). Therefore any fly-tipped waste (Section 33) should be entered under "Waste arising from clearance of fly-tipped materials" and 'side waste' (Section 46) should be entered under a collected hhld waste category.</p>

Definition in terms of WDF questions for WDA return

Numerator:

Calculation	Notes
Total of all materials in Q.19 sent for recycling excluding rubble and plasterboard.	Rubble /plasterboard are a non-hhld waste therefore excluded.
Plus	
Total of all materials in Q.35 sent for reuse excluding rubble and plasterboard.	Rubble /plasterboard are a non-hhld waste therefore excluded.
Minus	
Recycling rejects: A proportion of the rejects in Q.19 attributable to hhld sources.	Q.19 rejects * [(sum of collected for recycling in Q.14 for all materials excluding rubble/plasterboard)/(sum of collected for recycling in Q.11, 14, for all materials excluding rubble/plasterboard)]
Minus	
Re-use rejects: A proportion of the rejects in Q.35 attributable to hhld sources.	Q.35 rejects * [(sum of collected for reuse in Q.14 for all materials excluding rubble/plasterboard)/(sum of collected for reuse in Q.11, 14, for all materials excluding rubble/plasterboard)]
Plus	
Total amount of WCA hh waste sent for recycling, reuse or composting, as defined above.	
Minus	
Total of all materials except rubble/plasterboard collected for recycling or reuse in Q.11.	This ensures deduction of any recycling or reuse from non-hhld sources. Rubble/plasterboard are not included as this would cause it to be deducted twice.
Plus	
Amount of recycling output from residual waste sorted and treatment attributable to hhld sources.	Tonnages diverted for recycling from Q56, Q57 (not char/slag), Q59, Q60, Q64 and Q65 * (total hhld waste in Q.69 (per treatment type)/total waste per treatment type in Q.69 OR if Q69=0 then Q.23 residual hhld waste/total Q.23). See Guidance Note on how to enter data into Q.69 for further details.

Denominator:

Calculation	Notes
Total tonnage of hhld waste collected for recycling or reuse from Q14; all materials excluding rubble/plasterboard.	Rubble/plasterboard are non-hhld waste. Material rejected is not deducted as this is part of the total household waste arisings.
Plus	
Total tonnage of collected hhld waste for recycling, composting or reuse by WCAs	As defined above in NI 192 for WCAs
Plus	
Collected residual hhld waste, Q.23.	As defined above for WCA NI192.

Definition in terms of WDF questions for UA return

Numerator:

Calculation	Notes
Total of all materials in Q.19 sent for recycling excluding rubble and plasterboard.	Rubble and plasterboard are non-hhld waste therefore excluded from NI 192.
Plus	
Total of all materials in Q.35 sent for reuse excluding rubble and plasterboard.	Rubble and plasterboard are non-hhld waste therefore excluded from NI 192.
Minus	
Recycling rejects: A proportion of the rejects in Q.19 attributable to hhld sources.	Q.19 rejects * [(sum of collected for recycling in Q.10, 12, 16, 17, 18 (hhld only), 33, 34, for all materials excluding rubble/plasterboard) / (sum of collected for recycling in Q.10, 11, 12, 16, 17, 18, 33, 34, for all materials excluding rubble/plasterboard)]
Minus	
Re-use rejects: A proportion of the rejects in Q.35 attributable to hhld sources	Q.35 rejects * [(sum of collected for reuse in Q.10, 12, 16, 17, 18 (hhld only), 33, 34, for all materials excluding rubble/plasterboard) / (sum of collected for reuse in Q.10, 11, 12, 16, 17, 18, 33, 34, for all materials excluding rubble/plasterboard)]
Minus	
Total of all materials except rubble/plasterboard collected for recycling or reuse in Q.11.	This ensures that any recycling from non-hhld sources is deducted from the calculation. Excludes rubble and plasterboard so that they are not deducted twice from the calculation.
Minus	
Total of non-hhld waste reported in Q.18, all rows.	This ensures that recycling from non-hhld sources is deducted. Note that no rubble/plasterboard should be recorded in Q.18 non-hhld as this would lead to the deduction of these materials twice from the numerator.
Plus	
Amount of recycling output from residual waste sorted and treatment attributable to hhld sources	Tonnages diverted for recycling from Q56, Q57 (not char/slag), Q59, Q60, Q64 and Q65 * (total hhld waste in Q.69 (per treatment type)/total waste per treatment type in Q.69 OR if Q69=0 then Q.23 residual hhld waste/total Q.23). See Guidance Note on how to enter data into Q.69 for further details.

Plus	
Proportion of MRF rejects due to non-hhld sources.	<p>MRF rejects* [Q.11 co-mingled recycling/all co-mingled recycling tonnages from Q.10, 11, 12, 16, 17, 33,34].</p> <p>All MRF rejects will have been deducted from the tonnages entered into Q.19 / 35 earlier in the calculation. However, as some of these rejects will be due to waste from non-hhld sources, a proportion of these rejects will need to be added back on.</p>

Denominator:

Calculation	Notes
Total tonnage of hhld waste collected for recycling or reuse from Q10, Q12, Q16, Q17, Q18 (hhld waste column), Q33 and Q34; all materials excluding rubble and plasterboard.	<p>Rubble/plasterboard are non-hhld wastes so excluded.</p> <p>Material rejected is not deducted as this is part of the total hhld waste arisings.</p>
Plus	
Collected residual hhld waste, Q.23.	As defined above for NI 192 for WCAs.

NI193: The percentage of municipal waste sent to landfill

Description

The definition of municipal waste is as for the Landfill Allowance Trading scheme. 'Sent to landfill' includes both collected residual waste sent directly to landfill, waste collected for recycling but subsequently rejected to landfill and residual waste sent to landfill after an intermediate treatment (e.g. MBT). This indicator is only calculated for WDAs and UAs.

Important note for NI 193

The recycling/reuse rejects at the point of collection (i.e. recorded in Q.11 or 14 or by UAWCAs in Q.s 10, 11, 12, 16, 17, 33, 34) are included in this calculation. As these questions do not offer an option for the destination of these rejects, they are assumed to be sent to landfill. Usually the amount of collection rejects reported is very small and therefore makes a negligible impact on the landfill indicator. Local authorities are advised that where more significant tonnages are involved which are not sent to landfill, these amounts should be reported in Q.19 with the appropriate destination of residual selected.

Definition in terms of WDF questions - WDA

Numerator:

Calculation	Notes
Total waste directly to landfill, input to Q. 51, 52, 53.	
Plus	
Recycling rejects from MRF sent to landfill (output from Q.58)	
Plus	
Recycling rejects from MRF sent to landfill (output from Q.58) by its WCAs	
Plus	
Recycling rejects to landfill from Q.19	Where the destination is specified as landfill or left blank.
Plus	
Recycling rejects to landfill from Q.19 reported by its WCAs	Where the destination is specified as landfill or left blank.
Plus	
Reuse rejects to landfill from Q.35	Where the destination is specified as landfill or left blank.

Plus	
Reuse rejects to landfill from Q.35 by its WCAs	Where the destination is specified as landfill or left blank.
Plus	
Recycling or reuse rejects at point of collection (Q.11, 14)	The destination is non-specified and assumed to be landfill.
Plus	
Recycling or reuse rejects at collection by its WCAs (Q.10, 11, 12, 16, 17, 33, 34)	The destination is non-specified and assumed to be landfill.
Plus	
Output to landfill after other treatment routes (Q56, 59, 60, 61, 62, 63, 64, and 65)	These tonnages should not have been included in Q.51/52/53 as this would mean that they would be double counted in this NI 193.

Denominator:

Calculation	Notes
Total tonnage of waste collected for recycling or reuse from Q11 and 14; all materials.	Material rejected is not deducted as this is part of the total waste arisings.
Plus	
Total tonnage of collected waste for recycling or reuse by WCAs (sum of Q.10, 11, 12, 16, 17, 18, 33, 34)	
Plus	
Collected residual waste, Q.23.	Total of Q.23, all rows.

Definition in terms of WDF questions - UANumerator:

Calculation	Notes
Total waste directly to landfill, input to Q. 51, 52, 53	
Plus	
Recycling rejects from MRF sent to landfill (output from Q.58)	
Plus	
Recycling rejects to landfill from Q.19	Where the destination is specified as landfill or left blank.
Plus	
Reuse rejects to landfill from Q.35	Where the destination is specified as landfill or left blank.
Plus	
Recycling or reuse rejects at collection (Q.10, 11, 12, 16, 17, 33, 34)	The destination is non-specified and assumed to be landfill.
Plus	
Output to landfill after other treatment routes (Q56, 59, 60, 61, 62, 63, 64, and 65)	These tonnages should not have been included in Q.51/52/53 as this would mean that they would be double counted in this NI 193.

Denominator:

Calculation	Notes
Total tonnage of waste collected for recycling or reuse from Q10, 11, 12, 16, 17, 18, 33, 34; all materials.	Material rejected is not deducted as this is part of the total waste arisings.
Plus	
Collected residual waste, Q.23.	Total of Q.23, all rows.