

UNCLASSIFIED

Differences between ONS Ward Population Estimates and TVU Estimates – Mid 2013 Estimates

The purpose of this note is to look at the differences between ONS Population estimates for Wards in **Hartlepool** and **Stockton-on-Tees**, based on ONS' Best Fit methodology, compared with TVU Ward estimates which are based on the more accurate methodology of splitting Output Areas (OAs) where OAs don't fit exactly within Wards.

In Brief

ONS methodology leads to under estimates of 5.7% in Hartlepool (Jesmond Ward). All the other wards in Hartlepool are within +/- 3.0%. This is an improvement over last year.

In Stockton-on-Tees. Parkfield and Oxbridge Ward is over estimated by ONS by 4.6% while two Wards, Hardwick and Stockton Town Centre are under estimated by ONS by 4.5% and 4.6% respectively. The remaining Wards are within +/-3.2% of TVU estimates.

Accurate Ward estimates are important when calculating unemployment, fertility and mortality rates and when looking at health outcomes such as immunisation thresholds and screening coverage, thus TVU Ward estimates should be used for these Authorities.

Background

ONS released Mid 2013 Population Estimates for 2012 Wards in October 2014 ([ONSLink01](#)). These data were released by Single Year of Age which adds to the usability of these data.

However, ONS use only whole OAs as their building blocks (the OA is allocated to a Ward based on the population weighted centroid of the OA) while TVU took the decision to continue to split OA boundaries using residential addresses to determine the proportions allocated to each Ward. Differences of up to 5% can result due to the way OAs split across new Wards, some with multiple splits. TVU published a detailed note on the impact of this in December 2011 ([TVULink01](#)) and updated this based on Mid 2012 data in December 2013 ([TVULink02](#)). This note provides a further update for the Mid 2013 position.

This affects only Wards in Hartlepool (latest boundary change was in May 2012) and Stockton-on-Tees (latest boundary change May 2005). Wards in Darlington, Middlesbrough and Redcar & Cleveland are not affected as their boundaries remain the same as when 2001 Census data was released in 2003 and so TVU figures for Wards in these Local Authorities match those of ONS.

LSOA figures are not affected but any boundary built up from OAs will be affected. For example Parishes, National Park Boundaries, Towns and Villages, new Wards and for these geographies, TVU estimates should be used.

Total population figures at Local Authority level for Mid 2013 are not affected and control to ONS Mid Year Estimates [ONSLink02](#).

Impact of different Methodology

The following tables compare the ONS estimates with TVU estimates by Ward. Only figures for Hartlepool and Stockton-on-Tees are included.

Hartlepool

Local Authority	WardCode	WardName	ONS Estimate	TVU estimate	Difference	% Difference
Hartlepool	E05008942	Burn Valley	8,598	8,619	21	0%
Hartlepool	E05008943	De Bruce	8,067	8,069	2	0%
Hartlepool	E05008944	Fens and Rossmere	8,716	8,607	-109	-1%
Hartlepool	E05008945	Foggy Furze	8,481	8,291	-190	-2%
Hartlepool	E05008946	Hart	8,630	8,604	-26	0%
Hartlepool	E05008947	Headland and Harbour	7,354	7,565	211	3%
Hartlepool	E05008948	Jesmond	8,035	8,493	458	6%
Hartlepool	E05008949	Manor House	10,123	10,167	44	0%
Hartlepool	E05008950	Rural West	7,109	7,080	-29	0%
Hartlepool	E05008951	Seaton	8,692	8,510	-182	-2%
Hartlepool	E05008952	Victoria	8,860	8,660	-200	-2%
Hartlepool		Total	92,665	92,665		

Source : ONS Ward Estimates (SAPE) and TVU Ward Estimates - Mid 2013

For Hartlepool, Jesmond Ward is worst affected with the ONS estimate some 6% below the TVU estimate. This is in line with the position from 2011 and results from Jesmond Ward being split by 9 OAs, but with the majority being excluded by ONS and being allocated to Victoria Ward, which in turn is 2% higher than TVU estimates.

Stockton-on-Tees

Local Authority	WardCode	WardName	ONS Estimate	TVU estimate	Difference	% Difference
Stockton-on-Tees	E05001527	Billingham Central	7,373	7,416	43	1%
Stockton-on-Tees	E05001528	Billingham East	7,499	7,260	-239	-3%
Stockton-on-Tees	E05001529	Billingham North	8,887	8,937	50	1%
Stockton-on-Tees	E05001530	Billingham South	6,806	6,806	0	0%
Stockton-on-Tees	E05001531	Billingham West	5,417	5,563	146	3%
Stockton-on-Tees	E05001532	Bishopsgarth and Elm Tree	6,593	6,424	-169	-3%
Stockton-on-Tees	E05001533	Eaglescliffe	10,448	10,515	67	1%
Stockton-on-Tees	E05001534	Fairfield	5,633	5,735	102	2%
Stockton-on-Tees	E05001535	Grangefield	6,701	6,679	-22	0%
Stockton-on-Tees	E05001536	Hardwick	7,081	7,400	319	5%
Stockton-on-Tees	E05001537	Hartburn	6,482	6,446	-36	-1%
Stockton-on-Tees	E05001538	Ingleby Barwick East	10,421	10,401	-20	0%
Stockton-on-Tees	E05001539	Ingleby Barwick West	11,364	11,384	20	0%
Stockton-on-Tees	E05001540	Mandale and Victoria	11,703	11,712	9	0%
Stockton-on-Tees	E05001541	Newtown	7,330	7,371	41	1%
Stockton-on-Tees	E05001542	Northern Parishes	3,432	3,432	0	0%
Stockton-on-Tees	E05001543	Norton North	6,686	6,886	200	3%
Stockton-on-Tees	E05001544	Norton South	7,771	7,571	-200	-3%
Stockton-on-Tees	E05001545	Norton West	6,245	6,245	0	0%
Stockton-on-Tees	E05001546	Parkfield and Oxbridge	8,183	7,808	-375	-5%
Stockton-on-Tees	E05001547	Roseworth	7,528	7,284	-244	-3%
Stockton-on-Tees	E05001548	Stainsby Hill	6,473	6,483	10	0%
Stockton-on-Tees	E05001549	Stockton Town Centre	6,847	7,164	317	5%
Stockton-on-Tees	E05001550	Village	7,102	7,083	-19	0%
Stockton-on-Tees	E05001551	Western Parishes	3,349	3,349	0	0%
Stockton-on-Tees	E05001552	Yarm	9,842	9,842	0	0%
Stockton-on-Tees		Total	193,196	193,196		

Source : ONS Ward Estimates (SAPE) and TVU Ward Estimates Mid 2013

For Stockton-on-Tees, ONS estimates for Stockton Town Centre are 5% lower - this will have implications for Unemployment rates which will appear artificially high if ONS figures are used, deaths rates will appear higher while immunisation rates will appear more successful than they actually are. The opposite is true of Parkfield and Oxbridge Ward and Hardwick Ward where ONS' figures are estimated to be 5% higher than TVU estimates.

Implications

These sorts of differences are relevant when looking at Ward rates, be it unemployment, fertility and mortality rates, and particularly important when looking at Health outcomes such as immunisation thresholds and screening coverage – differences of 5% in the denominator is too large to ignore and so TVU will continue to produce its own estimates and advise that when using population figures at Ward level, the TVU estimates should be used.

Ward level figures for broad age bands (0-15, 16-64, 65+) for Mid 2011, Mid 2012 and Mid 2013 are available on our web-site [TVULink03](#) while figures for any age groups are available on request from piers.elias@teesvalleyunlimited.gov.uk.

See *Appendix 1* below for details on all the links included in the note.

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December, 2014

APPENDIX 1 - Links

Page 1 : ONSLink01 – 2013 Ward Population Estimates for Mid 2013
<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-367629>

Page 1 : TVULink01 – TVU Note on impact of ONS methodology Mid 2011
https://www.teesvalleyunlimited.gov.uk/media/139547/tvu_census_based_estimates_for_sub-borough_areas_update_dec_12.pdf

Page 1 TVLink02 – TVU Note on impact of ONS methodology Mid 2012
https://www.teesvalleyunlimited.gov.uk/media/226438/tvu_ward_population_ons_comparison_mid_2012.pdf

Page 2 : ONSLink02 – Mid 2013 Population Estimates for Local Authorities
<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-322718>

Page 3 : TVULink03 – TVU Web-site Mapping Tool
https://www.teesvalleyunlimited.gov.uk/InstantAtlas/area_profile/atlas.html