**TOWN CENTRE AND HIGH STREET EMPLOYEE AND WORKPLACE ESTIMATES 2011-2020**

Nick Jacob, August 2021

**Aim/purpose**

The aim of this work is to estimate the number of employee jobs in selected town centres and high streets. These estimates are being produced for Gerard Burgess in the planning team and will be used to inform an update of the London Town Centre Health Check.

**Data sources**

Town centre (TC) and high streets (HS) estimates are derived from Workplace Zone (WZ) data provided by the Office for National Statistics (ONS). A WZ is a geography developed by the ONS (see [here](https://www.ons.gov.uk/methodology/geography/geographicalproducts/areaclassifications/2011workplacebasedareaclassification/classificationofworkplacezonesfortheukabouttheareaclassifications)) which divides London into 8,154 areas.[[1]](#footnote-2)

* ONS has provided time-series data based on the Inter-departmental Business Register (see [ONS publication](https://www.ons.gov.uk/businessindustryandtrade/business/activitysizeandlocation/adhocs/13538numberofworkplacesandemployeesinworkplacezonesandmsoasinlondon2011to2020)) for employees and workplaces by WZ for 2011-2020.
* GLA planning colleagues have provided boundaries for 250 TC and 626 HS areas of interest (using the latest boundaries).
* CIU GIS colleagues have provided information on the overlap between TC and HS boundaries and workplace zones (see email [here](https://greaterlondonauthority.sharepoint.com/sites/CI_ECO_EconomicsMicroTeam/Shared%20Documents/London%20Plan/Town%20Centre%20and%20High%20Street%20jobs%20estimates/2021_update/RE%20Overlaps%20from%20Yiran.msg)).

These boundaries do not map precisely to WZs. A TC or HS can contain all or part of one or (usually) more WZs; some WZs cover more than one TC or HS; and due to imperfect borders some WZs incorrectly appear to have very small overlaps with some TCs/HCs.[[2]](#footnote-3) We discuss the issue of roughly-drawn borders further, below.

**Estimation approach**

In this update we use only one approach[[3]](#footnote-4) to estimate the numbers of town centre employees:

1. Base estimates take the proportion of the land area of each WZ which overlaps with a TC/HS and applies this to the estimate of WZ employees, before taking the sum across WZ. Formally, employment, in TC/HS is given by:

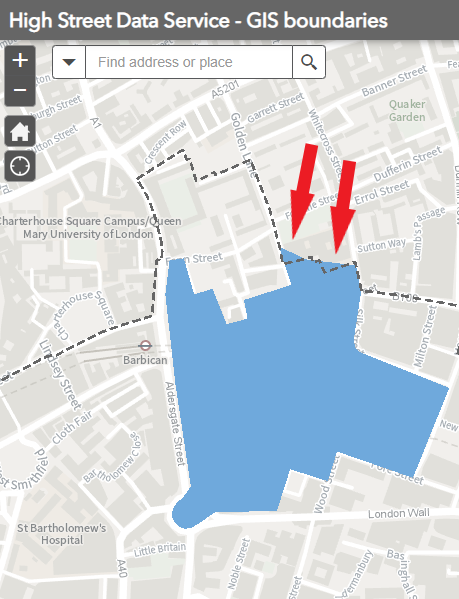
where is employment in WZ and is the (land area) share of WZ lying within TC .

The approach, which is consistent with analysis previously carried out by GLAE, seeks to use the lowest geographic level published data as to approximate as closely as possible the non-standard geographies for this analysis.[[4]](#footnote-5)

We additionally show results that split out the employment in the parts of town centres and high streets that lie across borough borders, such as the West End (Westminster/Camden) and Cricklewood (Barnet/Brent/Camden). In order to distinguish the TC/HS that genuinely lie across borders from those that do not (due to the imprecision discussed above), we apply a simple rule that we recognise has scope for challenge. We consider a part of a TC/HS to be in a particular borough if, and only if, more than 3% land area of a WZ (which is uniquely associated to a borough) overlaps with that TC/HS.

We chose the value of 3% through inspection of the data. One example is shown in , below, where a TC in light blue (in the City of London and the town centre of Barbican), overlaps with the border of Islington (the dotted black line). In this case, we would disregard any employment in the Islington WZ that corresponds to the light blue TC areas (shown by the red arrows).

Figure 1: Example of town centre and borough overlap



Using the 3% threshold leaves some TCs/Boroughs with less than 100% of the TC, according to the boundaries we have been given, in our estimates. A lower threshold, however, would leave some TCs erroneously attributed in part to the wrong borough.

We are in the process of exploring other options for dealing with the issue. For instance, it would be helpful if we had data linking high streets to boroughs, and welcome feedback on this point.

**Methodological uncertainty**

The results of our modelling are only indicative. It is not possible to produce a definitive estimate of TC/HS employment and workplaces as there is no public information on where within a WZ employees work.

For the purpose of this work, jobs and workplaces are assumed to be distributed evenly across WZs. In practice, the jobs within a WZ could, for example, be concentrated on a high street while the land area might be covered by residential buildings not on the high street.

For this reason, our TS/HS employee and workplace estimates, if anything, are likely to be underestimates. However, no adjustment has been made for this factor as there is no information on which to base a judgement.

We also note that the 2020 estimates may have been impacted by Covid-19 and are checking the implications with ONS colleagues.

**Margin of error**

Employment and workplace numbers provided by ONS are also not exact because they are subject to rounding in order to maintain the confidentiality of businesses on the underlying Inter-Departmental Business Register (IDBR) from which the data is built. Details of this rounding are given here: <https://www.nomisweb.co.uk/articles/1103.aspx>

**Check against MSOA estimates**

Numbers are also available for a higher-level geography – Middle-layer Super Output Areas (MSOAs), of which there are 983 in London – providing us with a way to check if we are consistently over- or under-estimating employees using WZ data.

Since, by construction, a WZ lies wholly within a single MSOA, we build WZ-based employment for each MSOA in London and compare that with the actual reported MSOA employment. Our analysis shows that across the 2011-20 period, in a typical year:

* the two estimates for around three-quarters of MSOAs have employment estimates that are within 5% of each other;
* that the median difference in estimates is approximately 0% in every year; and
* that the mean difference in estimates is approximately 0.5% larger for our WZ-based MSOA estimate than the reported MSOA estimate.

There are outliers, however. The largest differences between the WZ-based method and reported MSOA employment are of the order of 12-20% in any given year. Year-to-year estimates should thus be used with caution and attention paid to trends over longer periods.

Our previous work to produce estimates in 2017 relied on ONS WZ data that was provided using different, more stringent rules for suppressing and rounding employee numbers (which included more suppressed cells). The estimates we produced based on that data therefore required adjustments to be made for suppressed WZ within TC/HS.

As discussed above, we can be more confident that the new rounding method used by ONS in this release is not producing large discrepancies at the MSOA level.

**Comparability with previous estimates**

The [data appendix](https://data.london.gov.uk/dataset/london-town-centre-health-check-analysis-report) to the 2017 TCHC provides employee estimates for town centres for the reference year 2015, allowing us to compare our new estimates with those published under the previous methodology.

There is scope for challenge here as some of our results are not the same as previous estimates.

Although some boundaries have changed considerably, this analysis generally provides comparable results. However, our analysis highlights 16 town centres for which the differences in estimates are more than 10% apart and in which the absolute difference is 1,000 or more employees. Examples of these are Harrow, Highams Park, Uxbridge, Croydon and Victoria Street.

*We believe that these results occur because planning colleagues have adopted new TC/HS boundaries since the last set of estimates was produced but would welcome additional feedback on this point*. We also provide lists of the TCs in the 2021 data but not in 2015, and those for which results were suppressed for data confidentiality reasons in 2015.

**Check against borough totals**

We also provide a breakdown of TC/HS employees and workplaces by London borough. Since a WZ lies wholly within an MSOA, and an MSOA within a Local Authority, we apportion employees and workplaces to the part of a TC/HS which lies in a borough.

This provides an additional check on the reasonableness of our estimates and useful contextual information and we note that there is not any systematic under- or over-estimation when compared to reference year (2019) data from BRES.

Our estimate of employees within a TC/HS as a percentage of total borough employment uses, as the denominator, the number of employees estimated by summing WZs within a borough. The borough totals used are therefore also estimates but constructed in a manner consistent with the numerator of the calculation.

**Risk of error and robustness of the analysis**

The calculations have been revised and audited by the author (Nick Jacob) and GLAE colleague (Christopher Rocks).

The workbook is structured with separate tabs for input sheets, calculation sheets, and a summary sheet to reduce the risk of error.

There is also a tab which describes the method and data, as above, and it is apparent from the structure of the calculations how they follow the method.

The estimates have also been sense checked against previous published estimates and borough employee totals (see above).

1. Produced for the first time from 2011 Census data, they were developed as a suitable geography for publishing workplace-based statistics and outputs. Workplace zones provide greater consistency in the number of workers or businesses contained within an area. In England and Wales they are designed to align with Middle Layer Super Output Areas (MSOAs) providing continuity with the residential-based geographies. [↑](#footnote-ref-2)
2. High street and town centre boundaries are indicative rather than precisely drawn. See email [here](https://greaterlondonauthority.sharepoint.com/sites/CI_ECO_EconomicsMicroTeam/Shared%20Documents/London%20Plan/Town%20Centre%20and%20High%20Street%20jobs%20estimates/2021_update/RE%20Treatment%20of%20small%20overlaps.msg). [↑](#footnote-ref-3)
3. Previous updates also provided numbers that simply added all WZs that had some level of overlap. These results showed estimates that were generally 50%-70% higher than our base and while could be considered an upper bound, were unrealistic. [↑](#footnote-ref-4)
4. An alternative is to map onto individual postcodes of BRES data in the ONS Secure Research Service. This has been tried in the past and did not work, as the ONS introduced ‘phantom’ postcodes – that is postcodes which did not exist – for data processing purposes. [↑](#footnote-ref-5)