

Appendix C – Boundary Commission Review GIS Processes 2024

New housing developments will be a major factor in determining elector numbers and distribution up to 2030.

Due to the spatial component of housing data, the GIS Team in Data and Intelligence, used GIS mapping software to undertake analysis and assess the impact of housing development on future electors.

Electoral Register Geocoding

Data was extracted from the Electoral Database, Civica Xpress System, on 10/04/2024 and 'geocoded' by matching the Unique Property Reference Numbers (UPRN) held in the register to our corporate address gazetteer or Local Land and Property Gazetteer (LLPG), which holds the accurate location of properties. Data matching between the Electoral data export and the LLPG resulted in a match rate of 99.86% and allowed the creation of a dataset representing a point on the map indicating the number of electorates per property and the property address details. There is ongoing work to resolve the unmatched records – see Appendix B for a summary of matching.

Using 'point-in-polygon' spatial query of the geocoded elector data, we were able to determine the current number of electors for each political extent. This information was used to populate the Boundary Commission spreadsheet providing the 2024 Elector figures.

The Electors Point Data will be provided to the Boundary Commission as a shapefile.

Housing Development Data

Planning Services provided data on Housing Allocations from relevant local plans and planning applications and other known sources of housing from Housing Monitoring systems and processes.

There is no single source of this information currently, so data was sourced from the former district's Local Plans and various Housing Monitoring Systems. Planning officers provided the Housing totals from the planning policy housing forecast data for 2023-24 and the data included information on the site names and number of properties forecast between 2024-2030.

See [Annex 1](#) for details of each data source per locality (former district area).

GIS Analysis of Housing Development

The housing GIS data was received as both polygons (housing allocations) and points (planning permissions, etc).

Working with the GIS Team, Planning Policy Officers checked all sites for accuracy and all changes were recorded in an Audit Spreadsheet indicating the date and initials of the Planning Officer involved. Where necessary the planning application points were moved to the appropriate location as agreed with the Planning Officer.

All sites with less than 10 houses on the planning permission were removed from the calculations, along with any commenced permissions that fell below the 10 house threshold when the forecast number was adjusted – either by removing the 2023-24 builds from the total assuming these would have been complete, or for sites due for completion in 2023-24 but were still under construction the totals were adjusted based on a % complete estimate from elector data. Any Housing allocations with less than 10 properties have also been removed.

A similar GIS process of point in polygon spatial query enabled us to count the number of houses expected to be built by 2030 for each political area. The Housing numbers were then added to the Boundary Commission spreadsheet and by applying our average elector occupancy rate per Polling district to the estimated total of residential properties, we were able to calculate a predicted number of electors. The mapped data will be provided to the Boundary Commission as a shapefile.

GIS Data Checks

As confirmed by the Boundary Commission documentation only housing sites with 10 or more properties were included in the analysis.

Where available Site Name and Planning Application References were added to the data including Housing Allocations with Planning Permission.

The data indicated a site may be due from completion in 2024 but it is clear from the information we have that there are still homes to build these were included if more than 10 homes remaining. In some instances, as a consequence of recent development a site may have less than 10 houses remaining. These sites were excluded as they no longer met the criteria of 10 or more properties.

We can see the development has started in several ways:

- Local knowledge – Planning tell us the site is complete or they know it has started through their checks.
- The Planning Application may indicate how many houses are anticipated in the current and future years up to 2030 – indicating potentially more to come beyond 2024.
- Checking against the OS Base Map may show some housing development within the Housing Allocation Site – where there was none before.
- The LLPG Data may show houses as 'Provisional' which means the properties have been Street Named and Numbered but are not yet occupied.
- The Electoral Data may show electors within the Housing Allocation Site. Some houses have a number of Electors against them, e.g. '2 electors' indicated the house is occupied. Some just indicate Electorates as '0' (zero electorate) – indicating the Electors have not yet moved in but the Electoral system know there are houses on site – therefore indicating more houses to come.

Throughout the GIS analysis an internal web map was provided to members so they could review the data. The figures showed a higher than anticipated elector forecast and as a consequence and in agreement with the Boundary Commission it was agreed to reduce the Housing Estimates by 30% across each Polling district.

GIS Data (Shapefiles) sent to Boundary Commission:

- Ward Boundary 1024 BFC Region
- Polling Districts
- Parish Boundary 2023 BFC Region
- Housing Development – Point Data (a combination of the Housing Allocations and Planning Applications data) Fields: Application/Allocation Name, Application Number (where available), Houses Numbers 2024-2030, Number of Housing reduced by 30%
- Electorate Data – point data showing the number of electors per property – sourced from the Electoral Registration System on 10/04/2024. Fields: Electoral System Reference, UPRN Reference from Local Land and Property Gazetteer, Address, Number of Elector at Address.

Annex 1

LLPG Matching Summary

	Addresses (UPRNs)	Electors
Electoral Register Total	310353	483761
LLPG Match Total	309917	483576
Difference*	436	185

* This includes potential unmatched, duplicates and queries that need to be resolved. The matching was interrupted by other work commitments of the Elections Team due to the General Election on 4 July 2024.