Aggregating Data Zones to produce statistics for the new Parliamentary Constituencies

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Contents

1.   Introduction

Data Zones and Super Data Zones are new statistical output geographies created by NISRA to support the release of local-level statistics from Census 2021. The publication of the Data Zone and Super Data Zone geographies in February 2023 was accompanied by two information papers; one detailed their development and key features, while the other described how Data Zones could be used to approximate particular administrative geographies via aggregation (for example, Health and Social Care Trusts, 1992 Local Government Districts and 2008 Parliamentary Constituencies).

Since then, a 2023 Review of Parliamentary Constituencies in Northern Ireland has been completed. In accordance with the Parliamentary Constituencies Act 2020, the Boundary Commission for Northern Ireland reviewed the 2008 Parliamentary Constituency boundaries, and submitted its final recommendations report on 27 June 2023. The new Parliamentary Constituencies (which NISRA have assigned a reference year of 2024) will take effect at the time of the next UK general election.

The aforementioned February 2023 publication included a lookup table (Excel, 458 KB) from Data Zone to the relevant administrative geographies. As with the 2008 Parliamentary Constituencies, Data Zones do not nest within the boundaries of the 2024 Parliamentary Constituencies. NISRA has assessed the approximation of the 2024 Parliamentary Constituencies using aggregated Data Zones and it is sufficiently accurate based on the policy stated in section 3 of Aggregating Data Zones to produce statistics for higher-level geographies (PDF, 763 KB). Accordingly, the lookup table has been updated to include the 2024 Parliamentary Constituencies. This paper summarises the aggregation method and details its accuracy in producing approximated statistics for each of the new constituencies.

2.   New Parliamentary Constituencies

Figure 1 in the Annex provides a map of the 2024 Parliamentary Constituencies recommended by the boundary review alongside the 2008 Parliamentary Constituencies that they will replace. In the final recommendations, 17 of the 18 constituencies retain their name, with the only change being 'Belfast South' renamed

as 'Belfast South and Mid Down'. No changes were recommended for the constituency designations; Belfast East, Belfast North, Belfast West and Belfast South and Mid Down are designated as borough constituencies, with the remaining designated as county constituencies.

NISRA has assigned new codes to the 2024 Parliamentary Constituencies (see Table 1) to distinguish them from the 2008 Parliamentary Constituencies. The new entity code (the first three characters of the nine-character code) is 'N05'.

3. Data Zone lookup

3.1. Method

For the lookup, Data Zones are directly assigned to 2024 Parliamentary Constituencies that they are wholly located in. Where Data Zones are intersected by a constituency boundary, they are assigned to the overlapping constituency with the largest proportion of their Census 2021 usual resident population. Further detail on the method is available in section 2 of Aggregating Data Zones to produce statistics for higher-level geographies (PDF, 763 KB).

3.2. Accuracy

The Census 2021 usual resident population and household counts were aggregated by Data Zone according to the lookup, producing approximated counts for the 2024 Parliamentary Constituencies. These were compared to the exact population and household counts for the constituencies, generated via the GIS point-in-polygon method, to assess and quantify the accuracy of the lookups. The approximated counts are within one per cent of the exact counts for all 18 constituencies (Table 1), which is within the accuracy threshold of 5 per cent as per the NISRA policy referred to in section 1.

Table 1. Absolute percentage difference between exact and approximated Census 2021 usual resident population and household counts (relative to exact) for the 2024 Parliamentary Constituencies, based on Data Zone aggregation.

2024 Parliamentary Constituency		Absolute percentage difference between exact and approximated count (relative to exact)	
Name	**Code**	**Population**	**Households**
Belfast East	N05000001	0.89	0.93
Belfast North	N05000002	0.08	0.10
Belfast South and Mid Down	N05000003	0.71	0.82
Belfast West	N05000004	0.20	0.34
East Antrim	N05000005	0.32	0.28
East Londonderry	N05000006	0.55	0.52
Fermanagh and South Tyrone	N05000007	0.61	0.65
Foyle	N05000008	0.08	0.09
Lagan Valley	N05000009	0.64	0.76
Mid Ulster	N05000010	0.26	0.29
Newry and Armagh	N05000011	0.00	0.01
North Antrim	N05000012	0.22	0.18
North Down	N05000013	0.26	0.24
South Antrim	N05000014	0.07	0.06
South Down	N05000015	0.65	0.63
Strangford	N05000016	0.39	0.29
Upper Bann	N05000017	0.24	0.19
West Tyrone	N05000018	0.61	0.61
Mean		**0.38**	**0.39**
Minimum		**0.00**	**0.01**
Maximum		**0.89**	**0.93**

4.   Further information

The 2024 Parliamentary Constituencies will be added to the Census 2021 Flexible Table Builder in autumn 2023, allowing users to produce Census statistics for this geography. Furthermore, the new constituencies will be included in the January 2024 Central Postcode Directory, scheduled for release in February 2024.
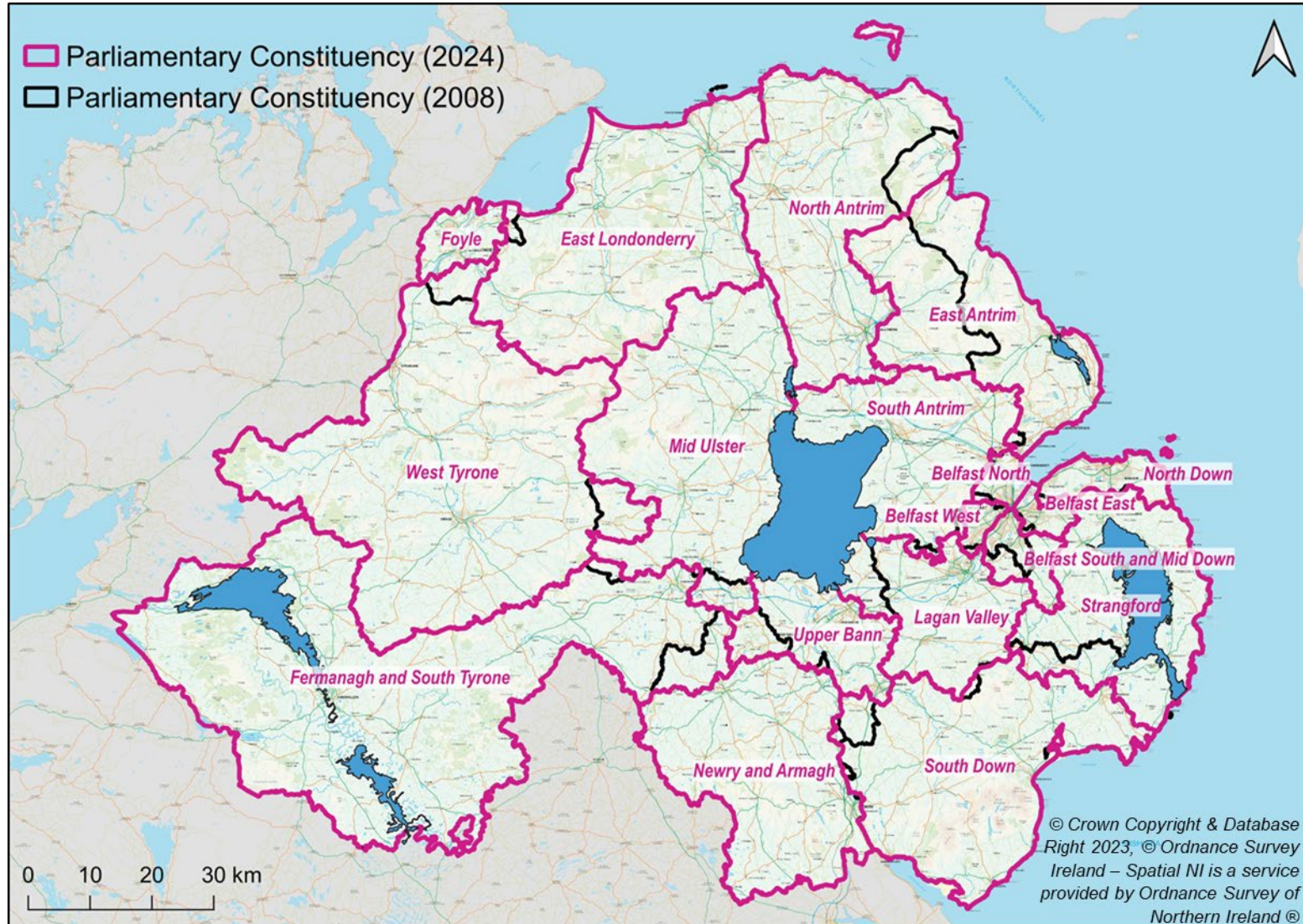
Annex

Figure 1. Boundaries of the 2024 Parliamentary Constituencies, based on the final recommendations from the 2023 Review of Parliamentary Constituencies in Northern Ireland, alongside the 2008 Parliamentary Constituency boundaries.