Natural England Commissioned Report NECR172

Waterbird population trend analysis of the Mersey Estuary SPA, Mersey Narrows & North Wirral Foreshore pSPA and Ribble & Alt Estuaries SPA

Annex E - Species density maps (five-year mean of peaks)

First published 27 May 2015

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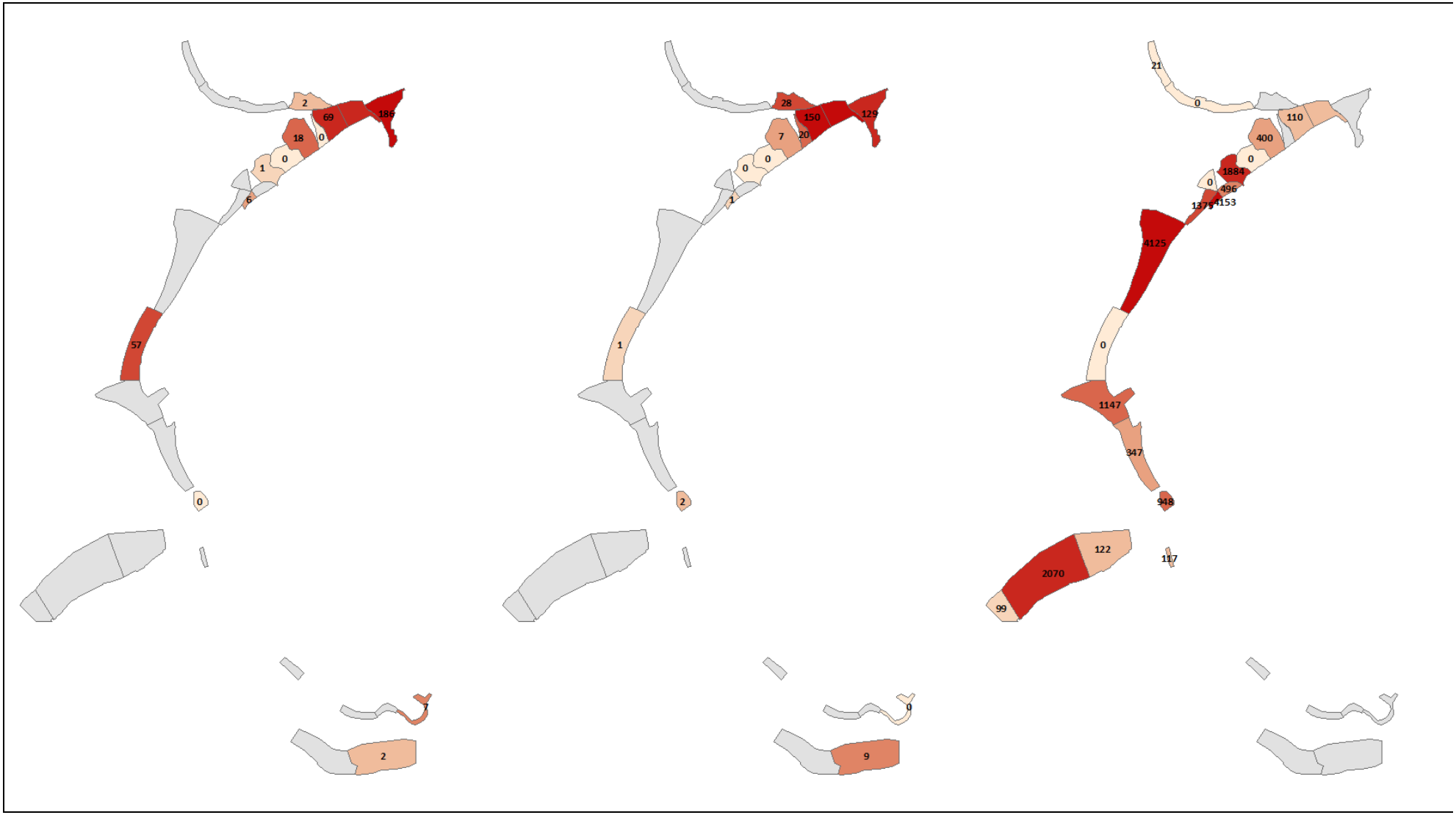

Figure E.1. Five-year mean of peak counts for **Bewick's swan** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

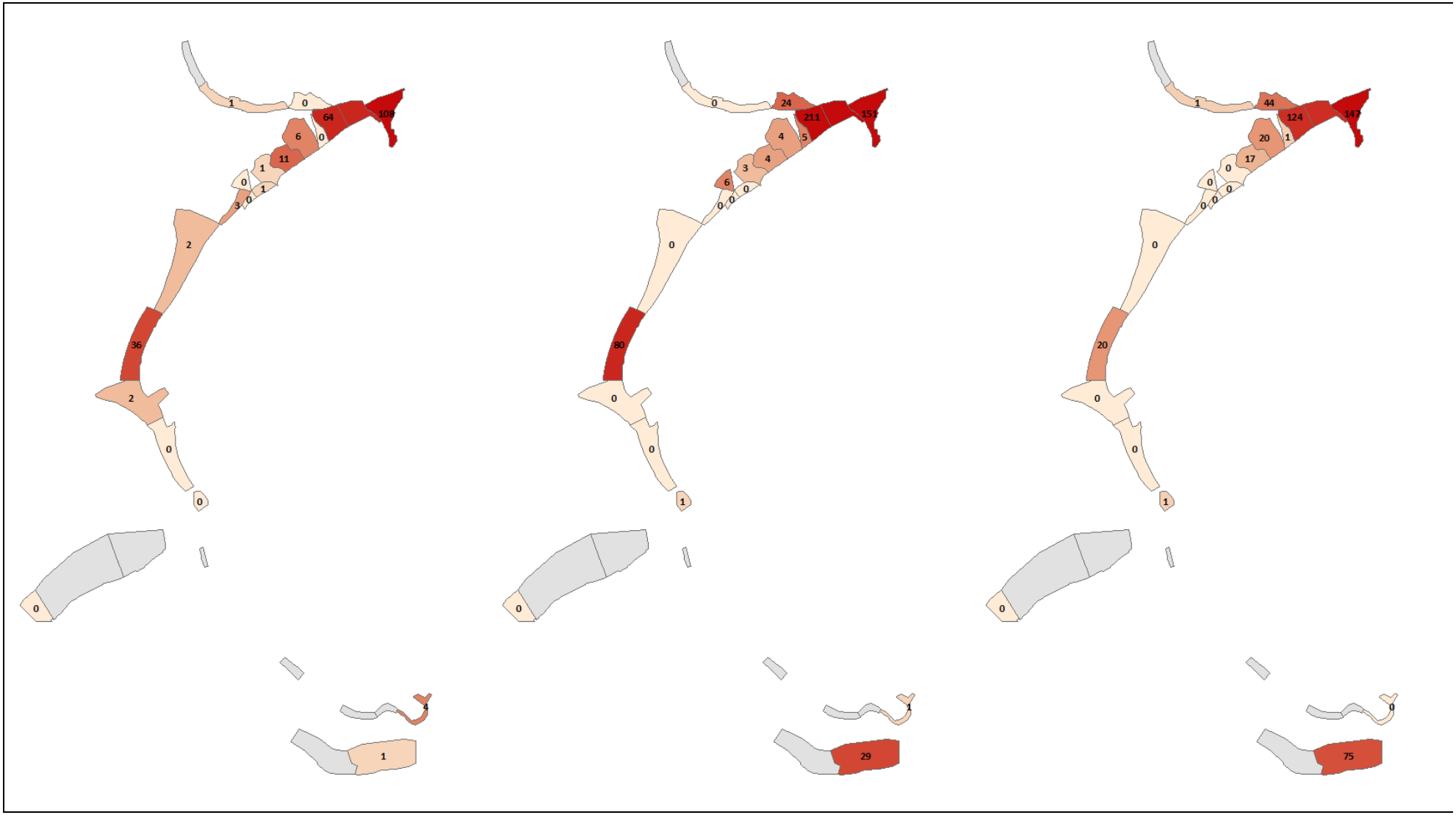

Figure E.2. Five-year mean of peak counts for **whooper swan** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.3. Five-year mean of peak counts for **shelduck** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

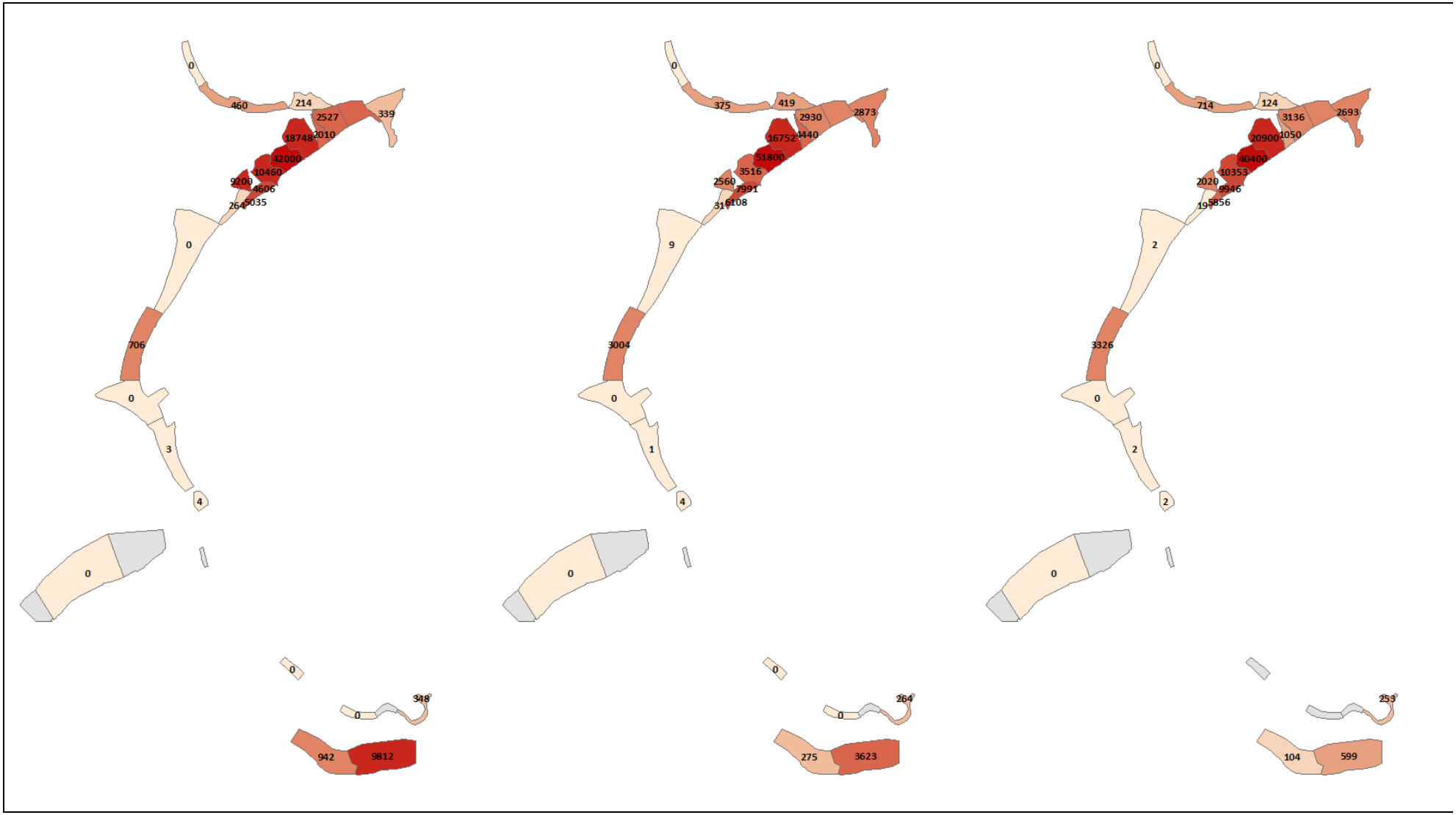

Figure E.4. Five-year mean of peak counts for **wigeon** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.5. Five-year mean of peak counts for **teal** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

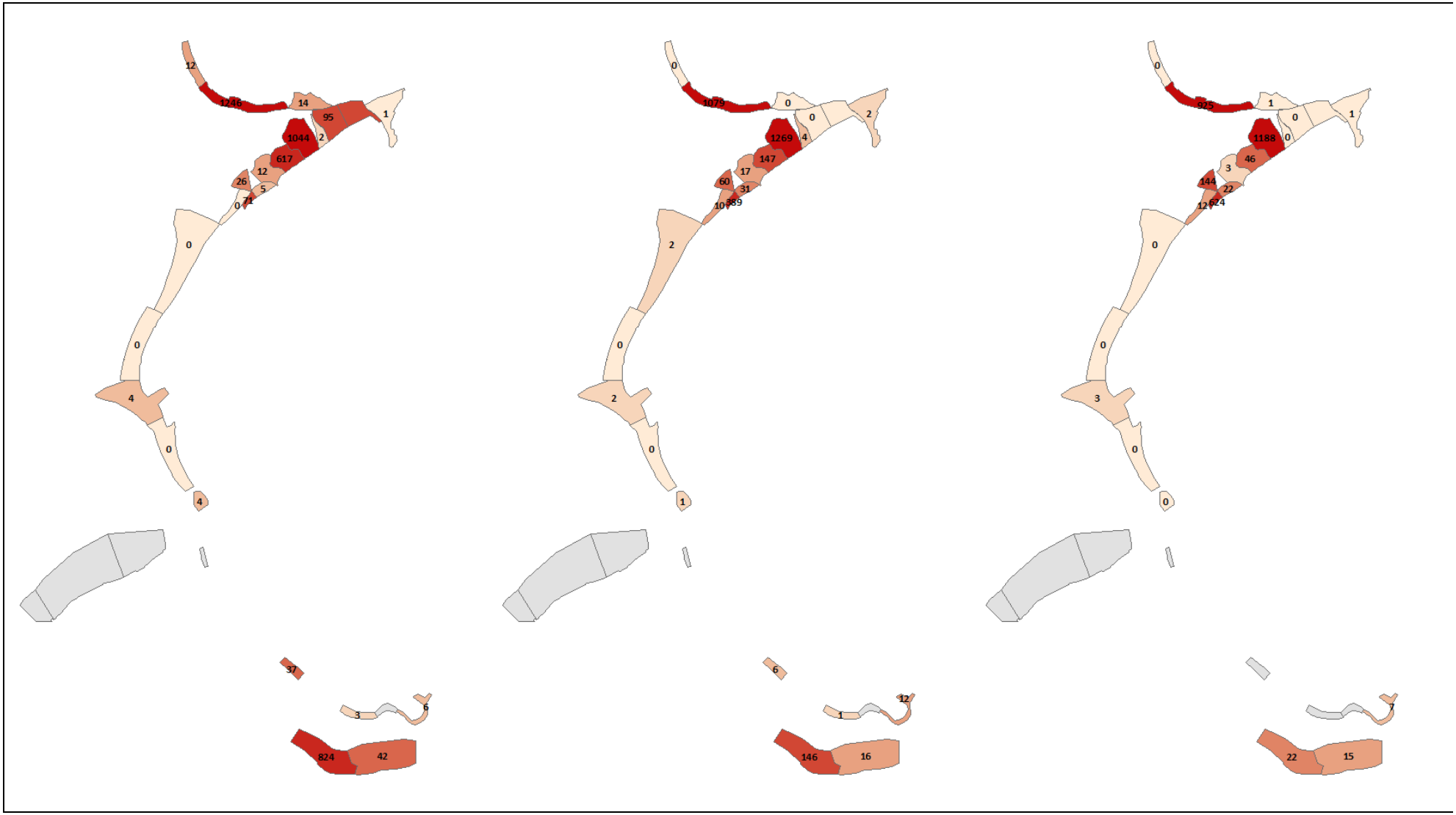

Figure E.6. Five-year mean of peak counts for **pintail** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

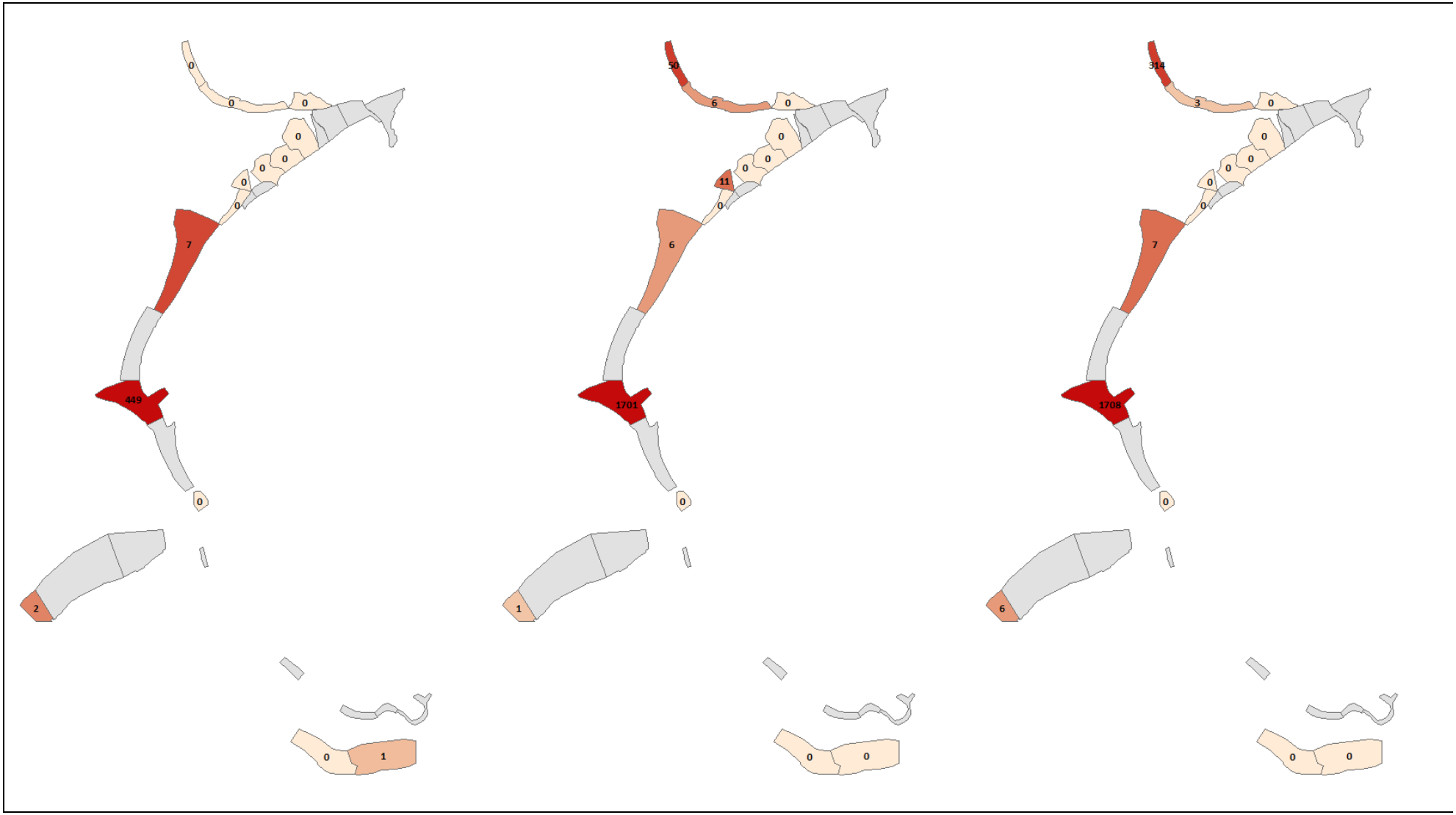

Figure E.7. Five-year mean of peak counts for **common scoter** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

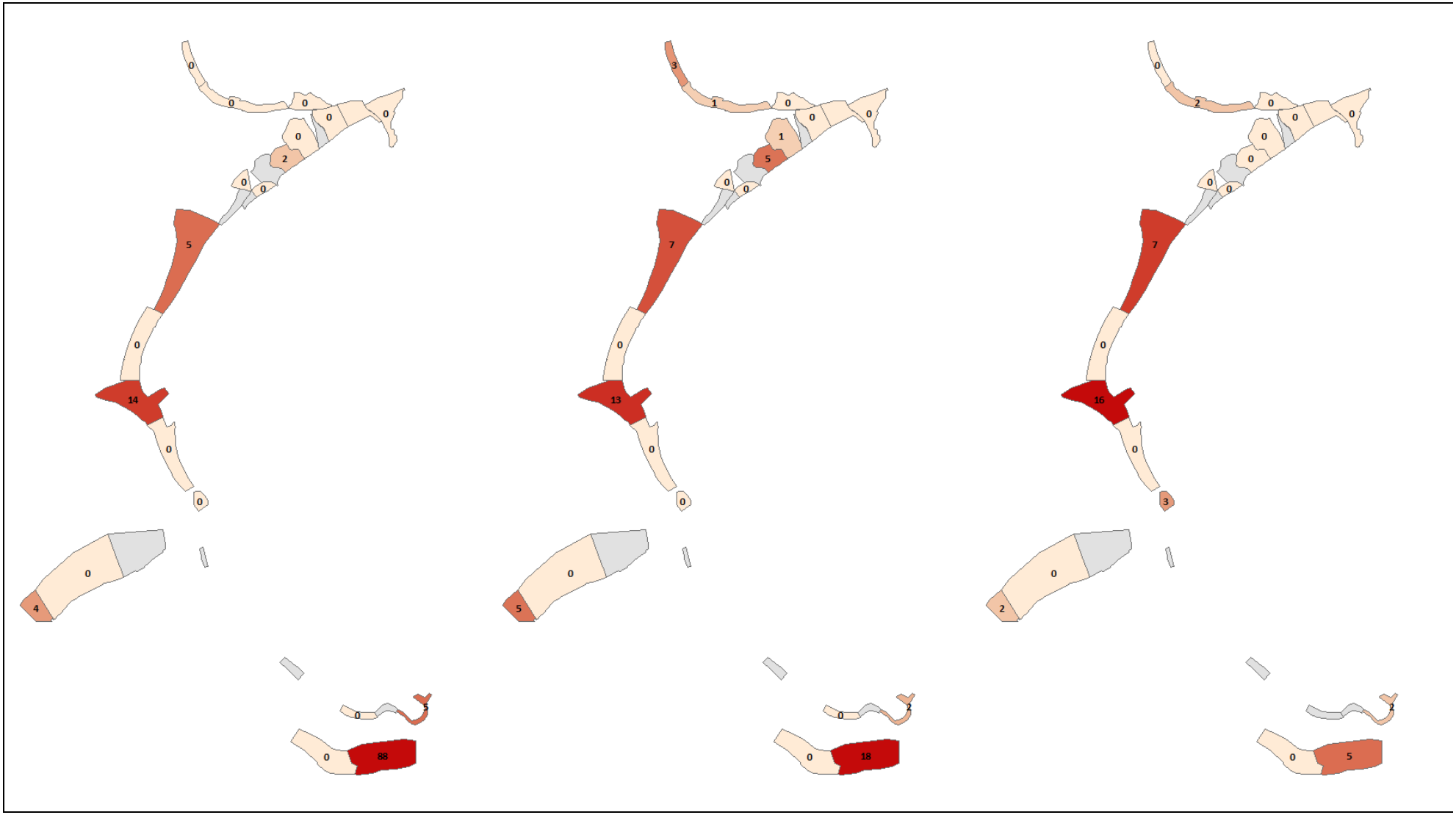

Figure E.8. Five-year mean of peak counts for **great crested grebe** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.9. Five-year mean of peak counts for **cormorant** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.10. Five-year mean of peak counts for **oystercatcher** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.11. Five-year mean of peak counts for **ringed plover** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.12. Five-year mean of peak counts for **golden plover** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.13. Five-year mean of peak counts for **grey plover** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

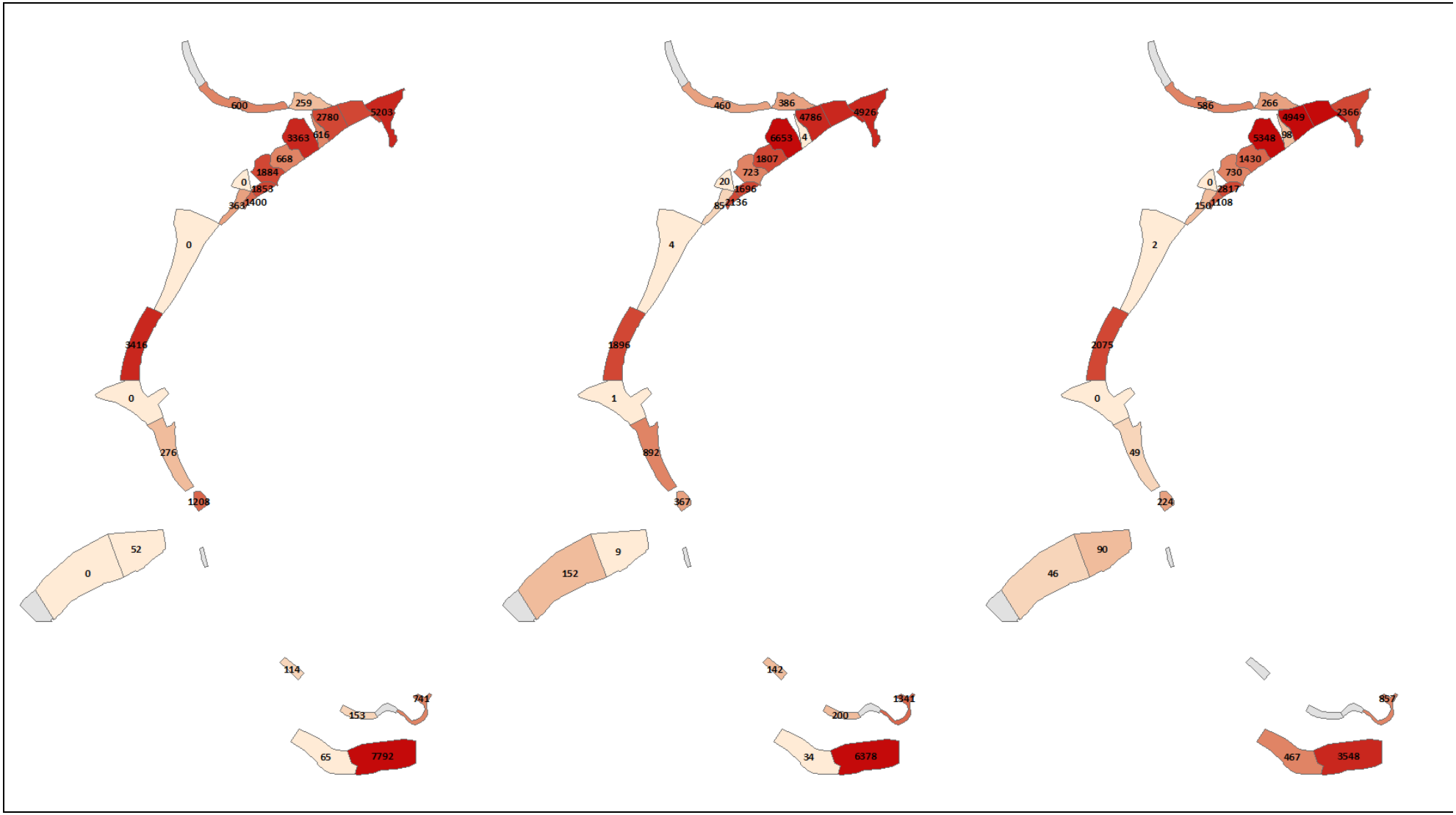

Figure E.14. Five-year mean of peak counts for **lapwing** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.15. Five-year mean of peak counts for **knot** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

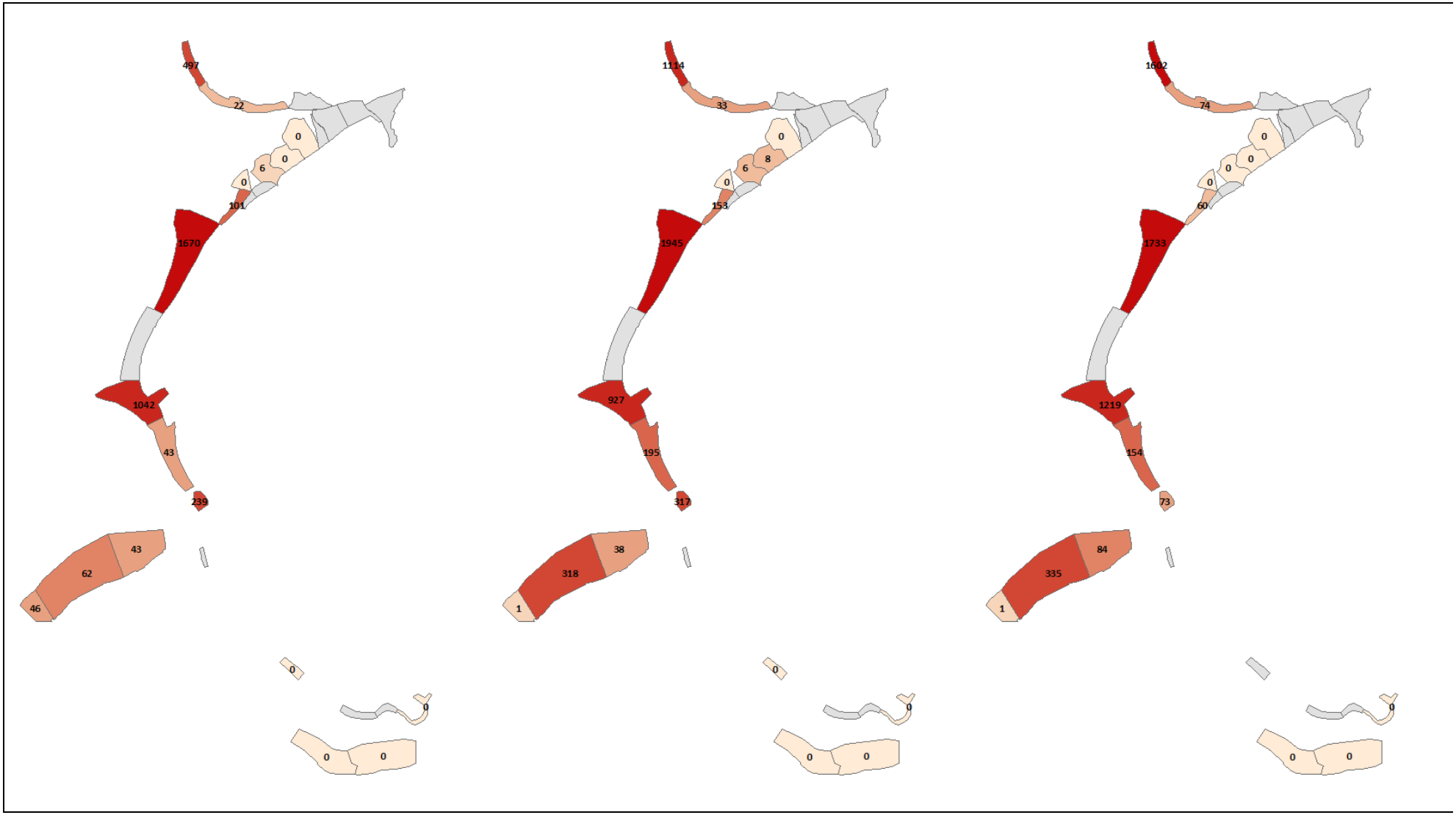

Figure E.16. Five-year mean of peak counts for **sanderling** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.17. Five-year mean of peak counts for **dunlin** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

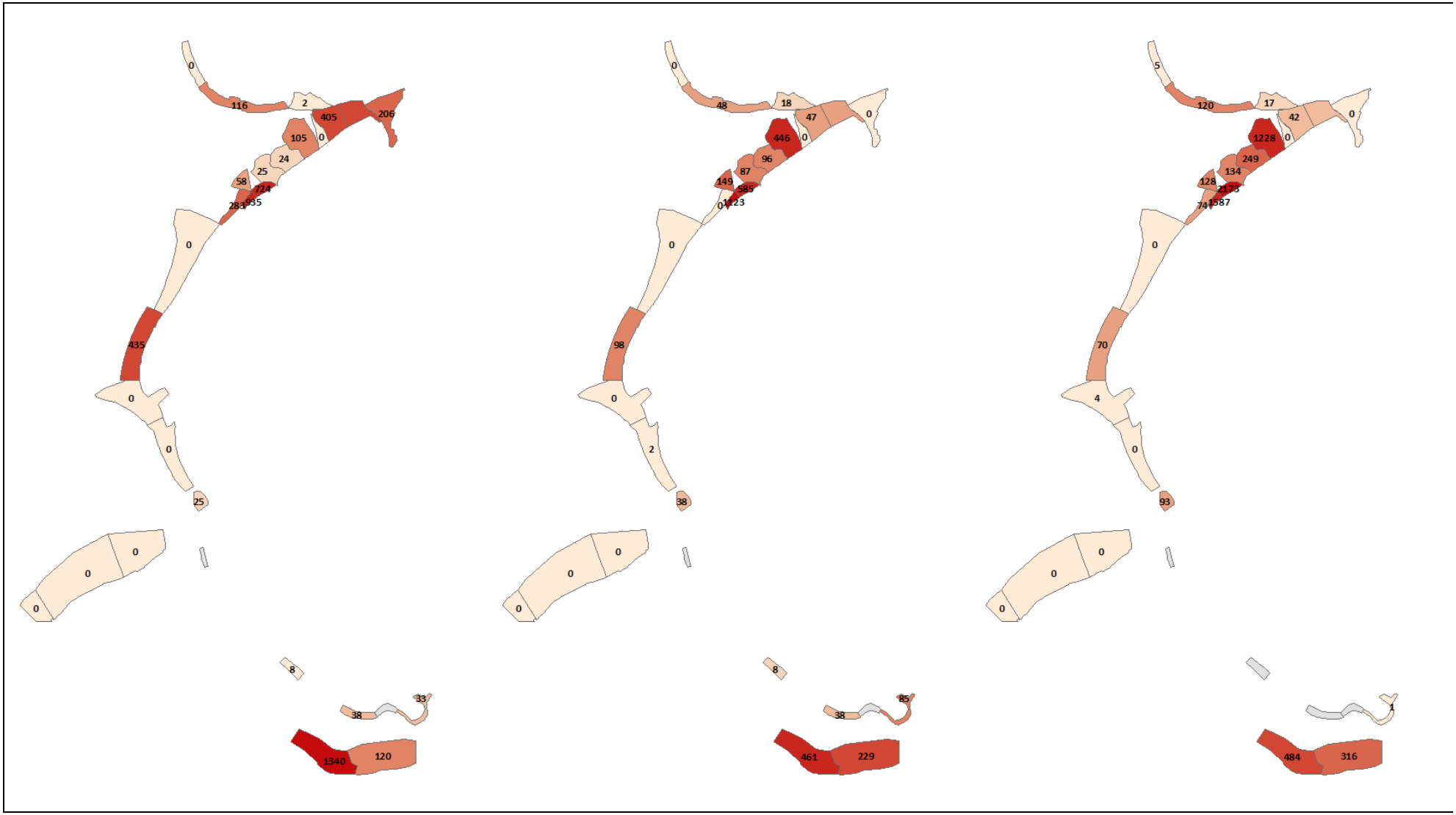

Figure E.18. Five-year mean of peak counts for **black-tailed godwit** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

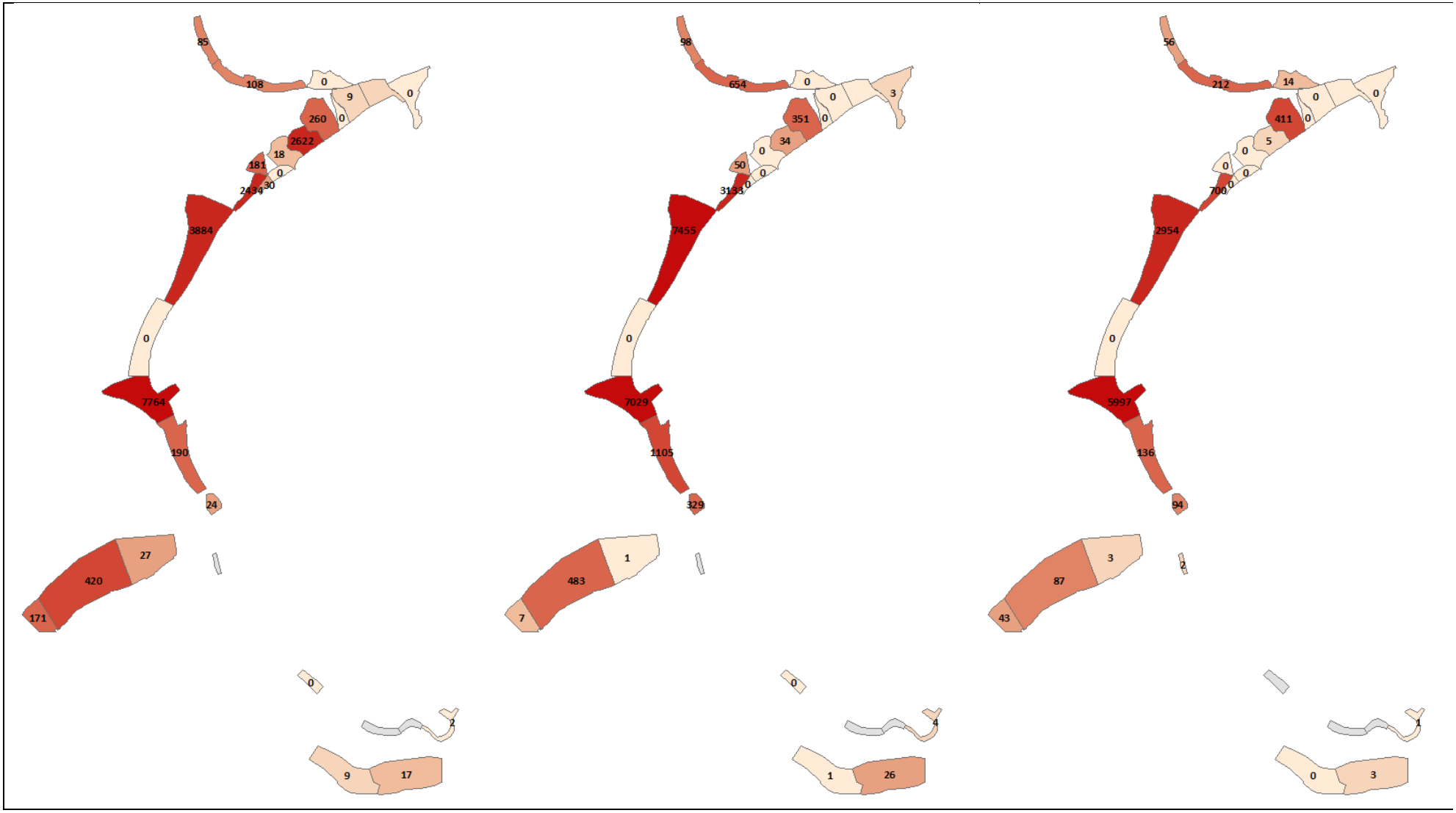

Figure E.19. Five-year mean of peak counts for **bar-tailed godwit** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.20. Five-year mean of peak counts for **curlew** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

Figure E.21. Five-year mean of peak counts for **redshank** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

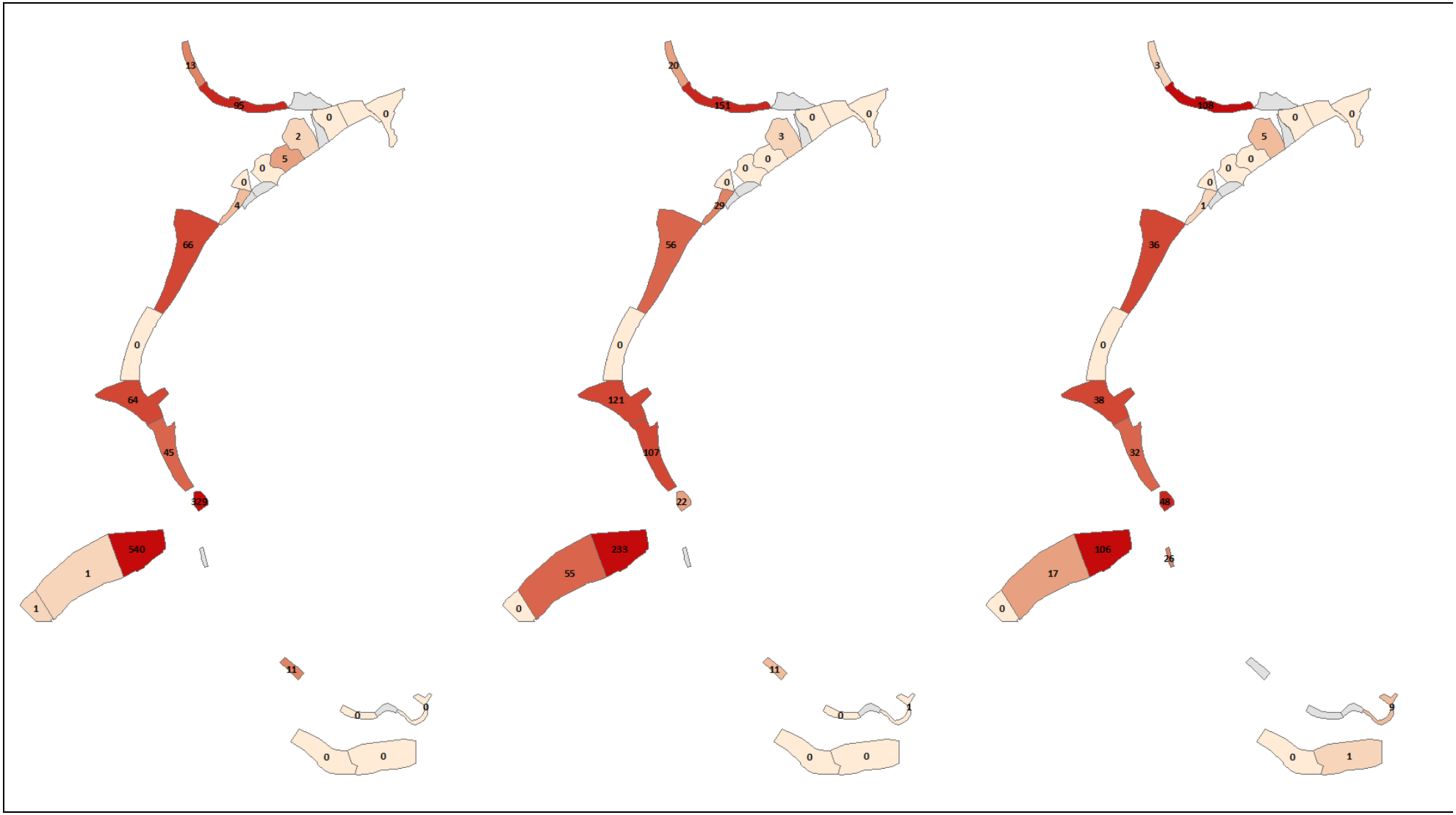

Figure E.22. Five-year mean of peak counts for **turnstone** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

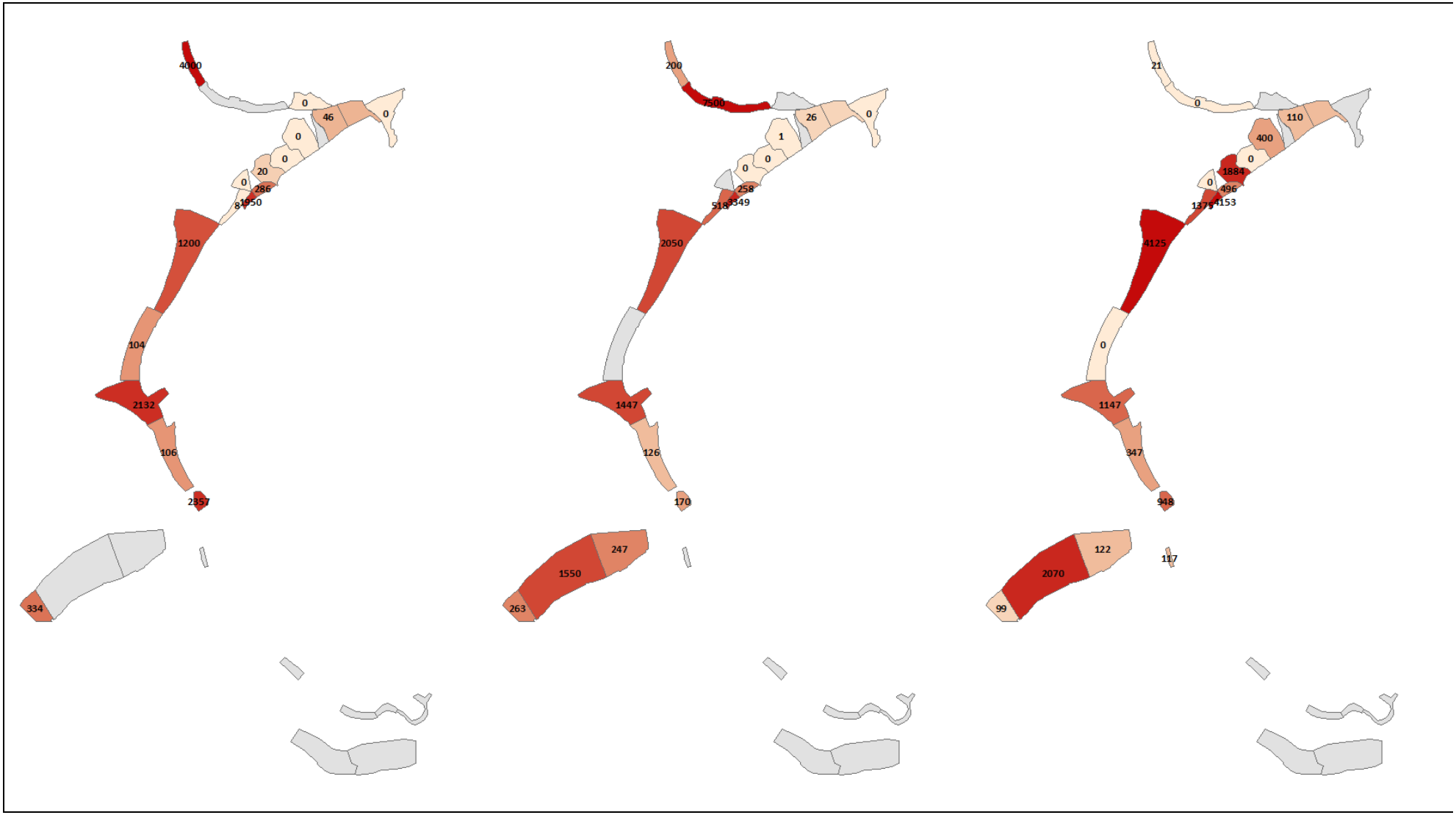

Figure E.23. Five-year mean of peak counts for **black-headed gull** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

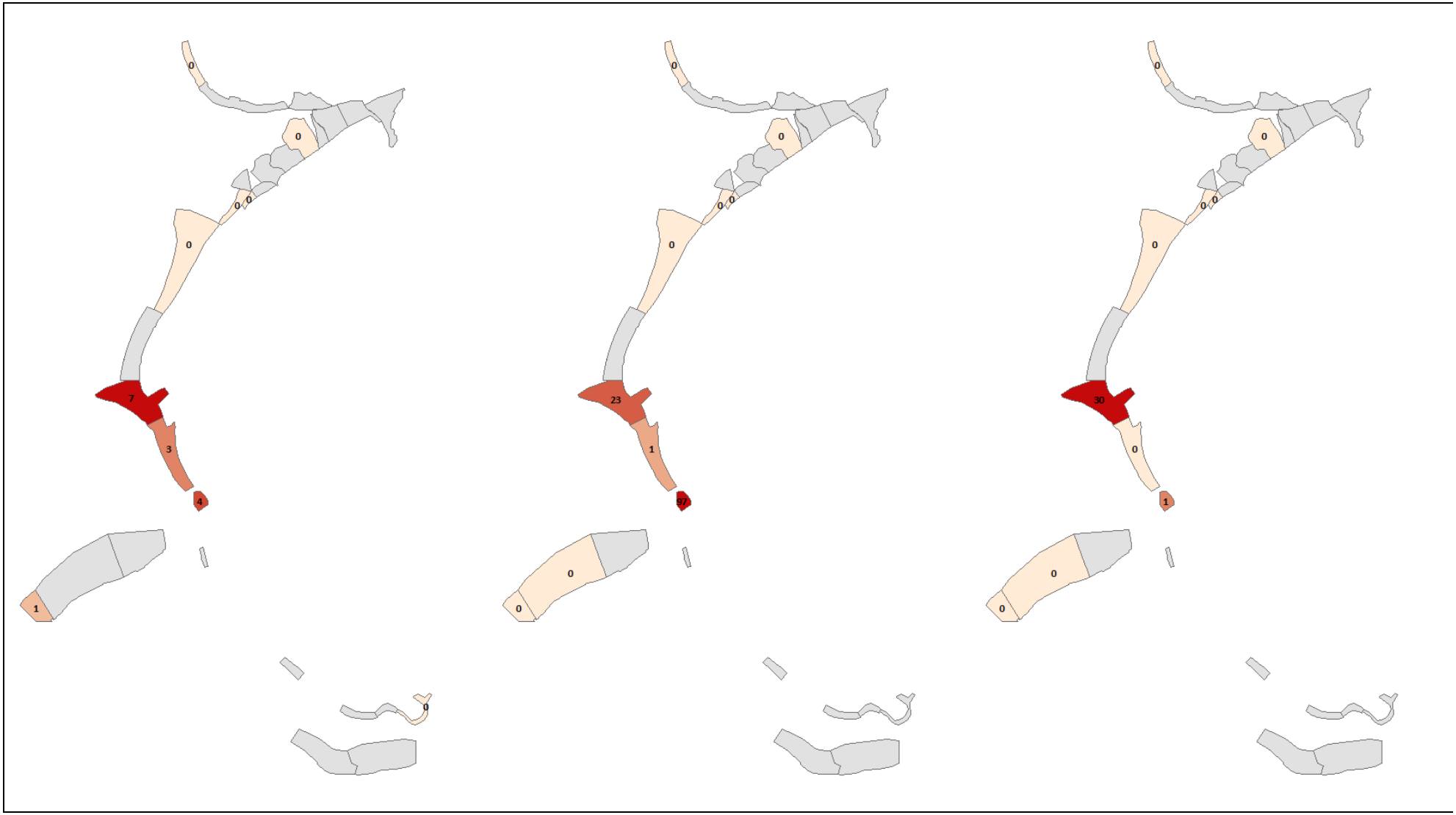

Figure E.24. Five-year mean of peak counts for **little gull** on the Liverpool City Region SPAs. For summer periods (left to right) 1995 to 2000, 2001 to 2005 and 2006 to 2010. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

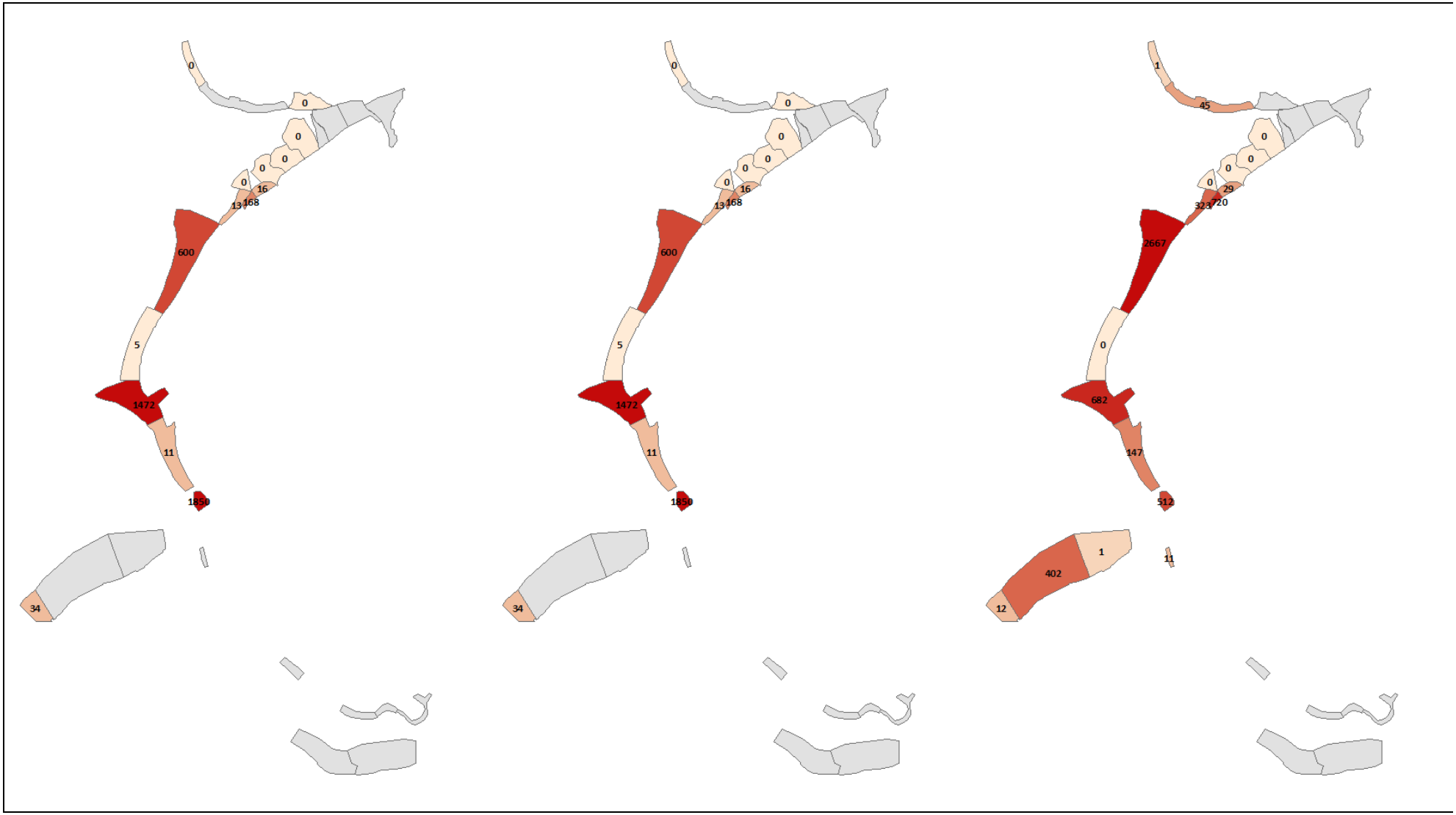

Figure E.25. Five-year mean of peak counts for **common gull** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

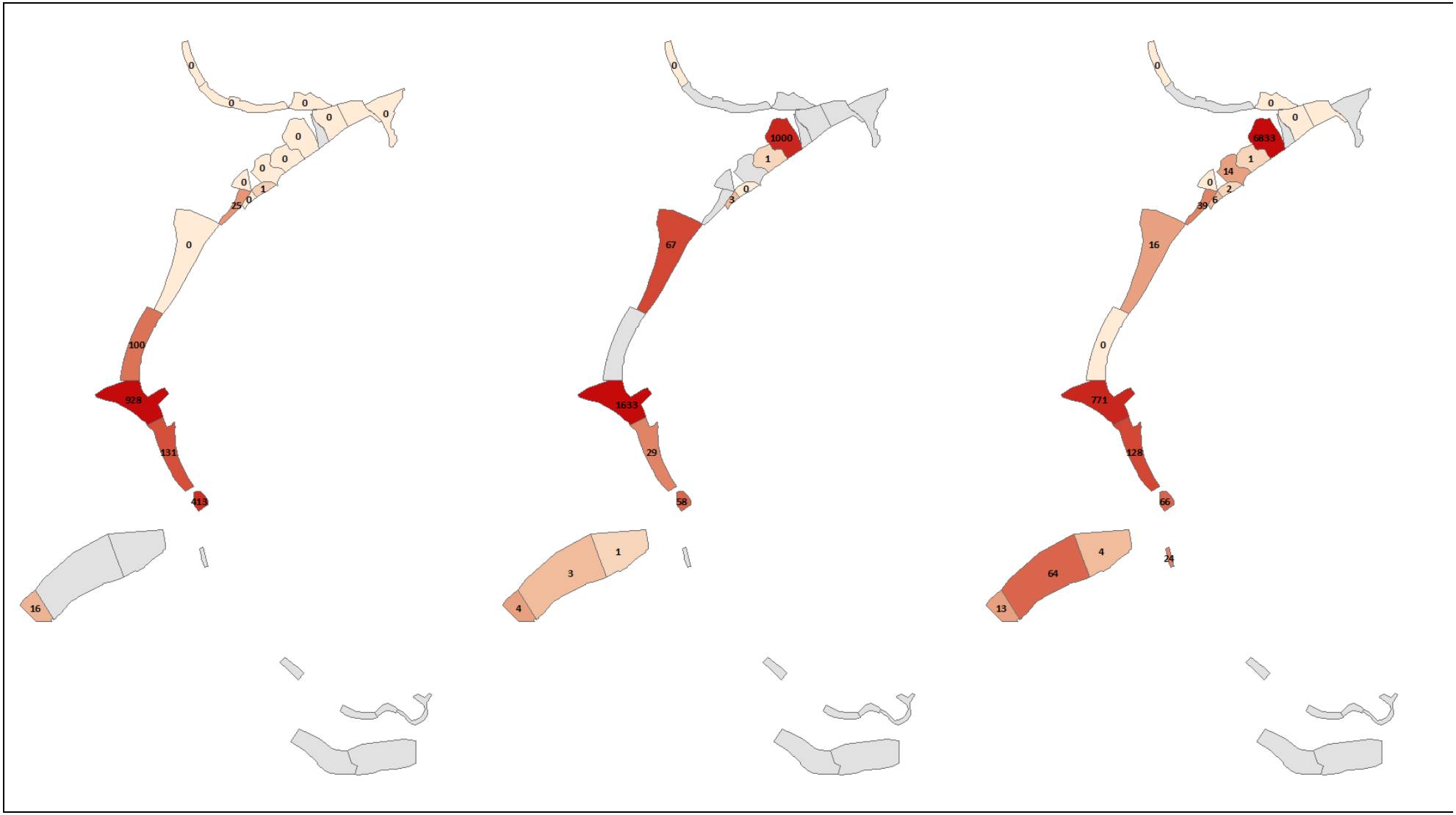

Figure E.26. Five-year mean of peak counts for **lesser black-backed gull** on the Liverpool City Region SPAs. For summer periods (left to right) 1995 to 2000, 2001 to 2005 and 2006 to 2010. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

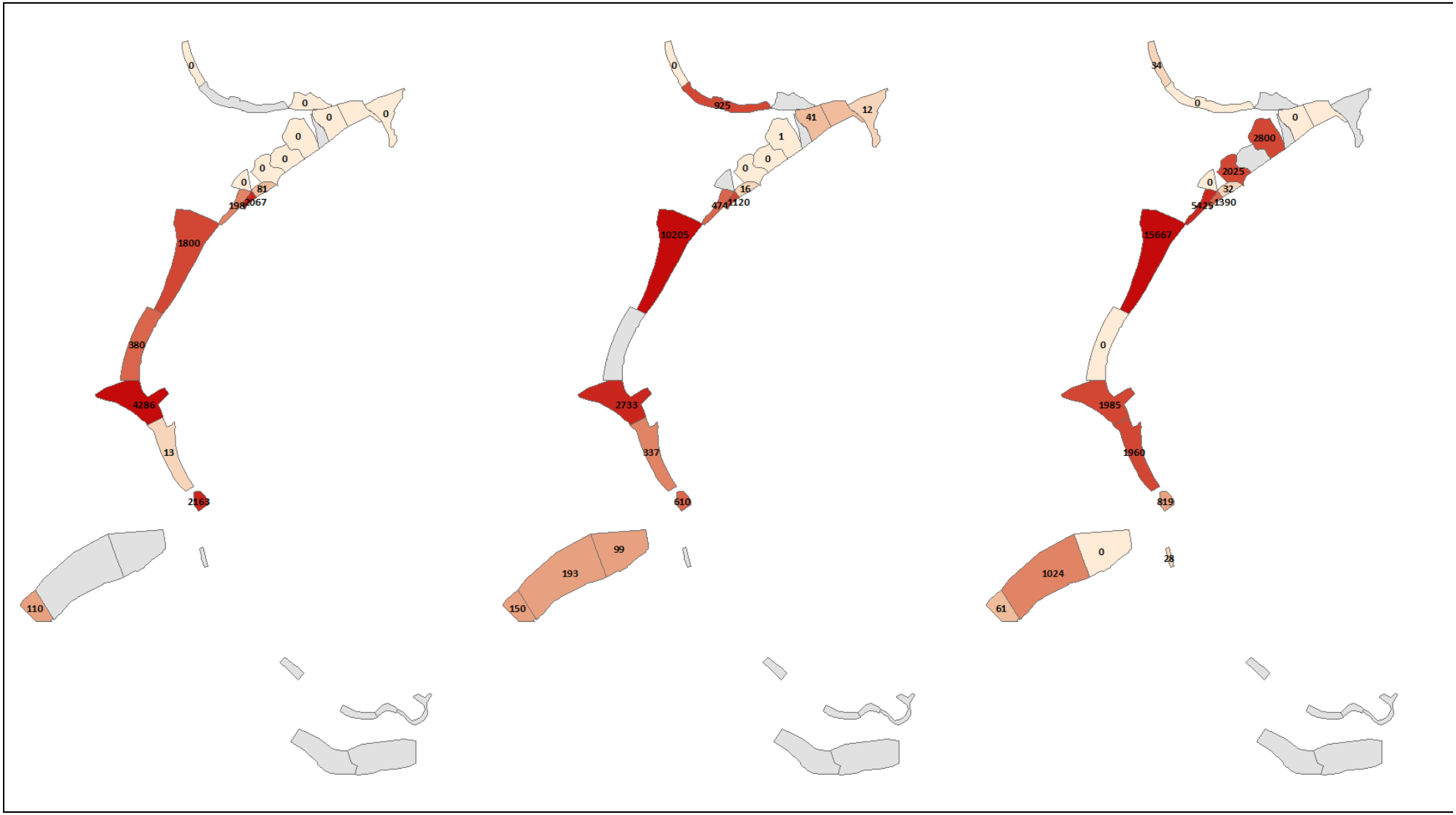

Figure E.27. Five-year mean of peak counts for **herring gull** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

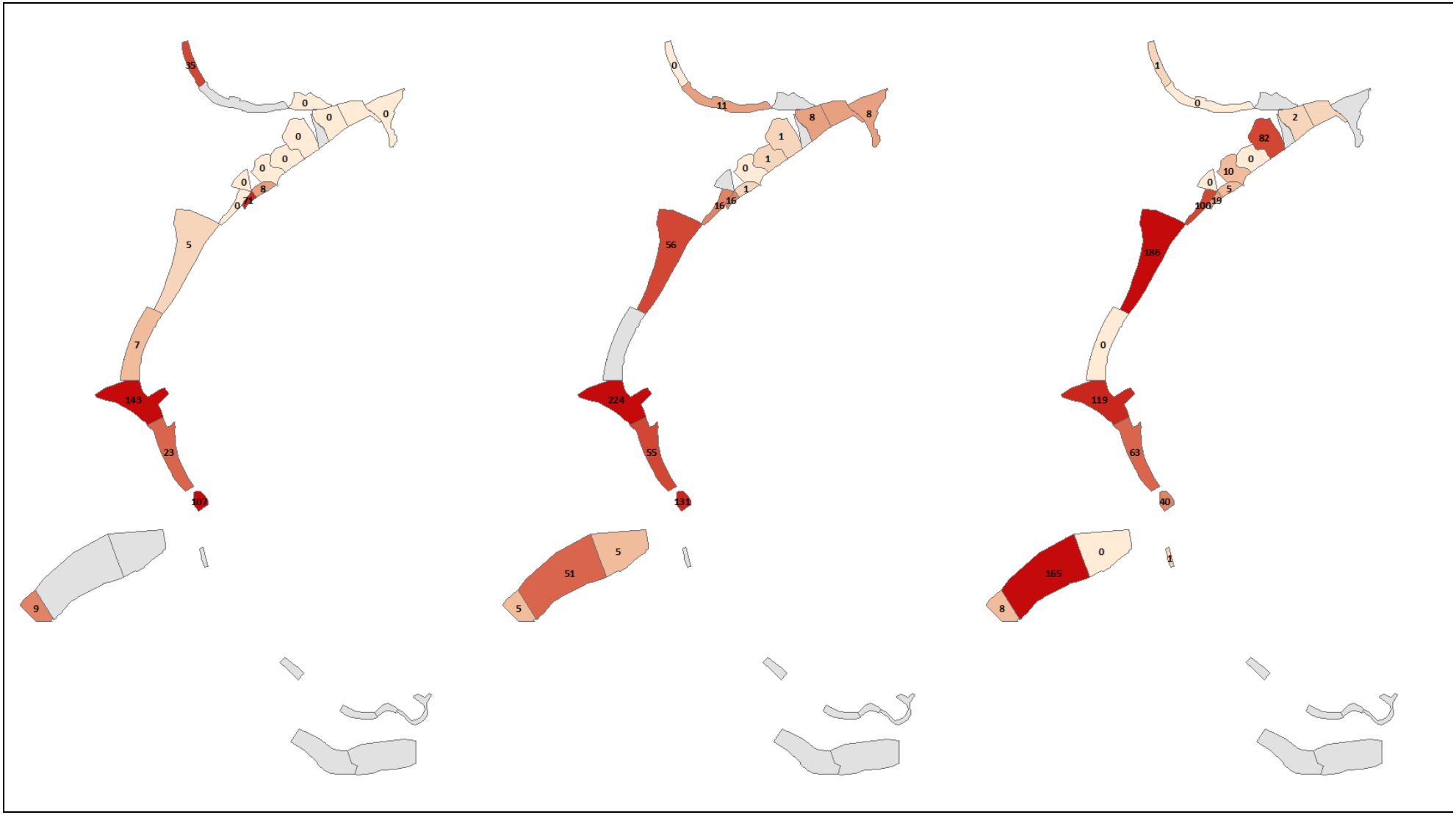

Figure E.28. Five-year mean of peak counts for **great black-backed gull** on the Liverpool City Region SPAs. For winter periods (left to right) 1995/96 to 2000/01, 2001/02 to 2005/06 and 2006/07 to 2010/11. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.

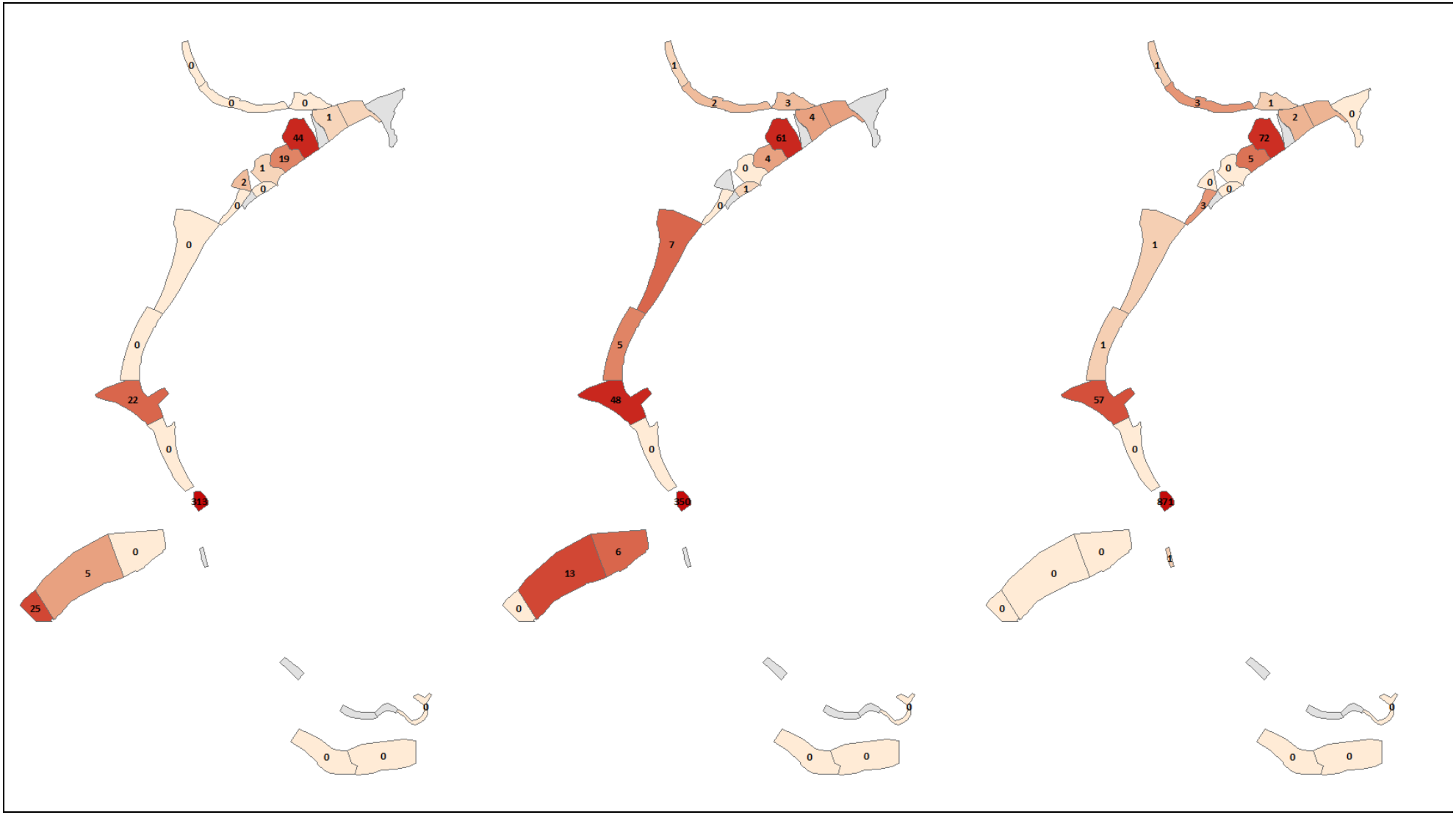

Figure E.29. Five-year mean of peak counts for **common tern** on the Liverpool City Region SPAs. For summer periods (left to right) 1995 to 2000, 2001 to 2005 and 2006 to 2010. The colour ramps used divide each map according to "natural breaks" in the values plotted rather than on a linear or geometric scale (the latter options would tend to hide detail as most sectors would fall into very few classes). Grey indicates none of this species recorded on the sector in question during the relevant five-year period. Zero would imply a mean <0.5 birds. The data underlying these maps are also available in the GIS shapefiles that accompany this report.