Electronic Supplementary Material (ESI) for Journal of Environmental Monitoring
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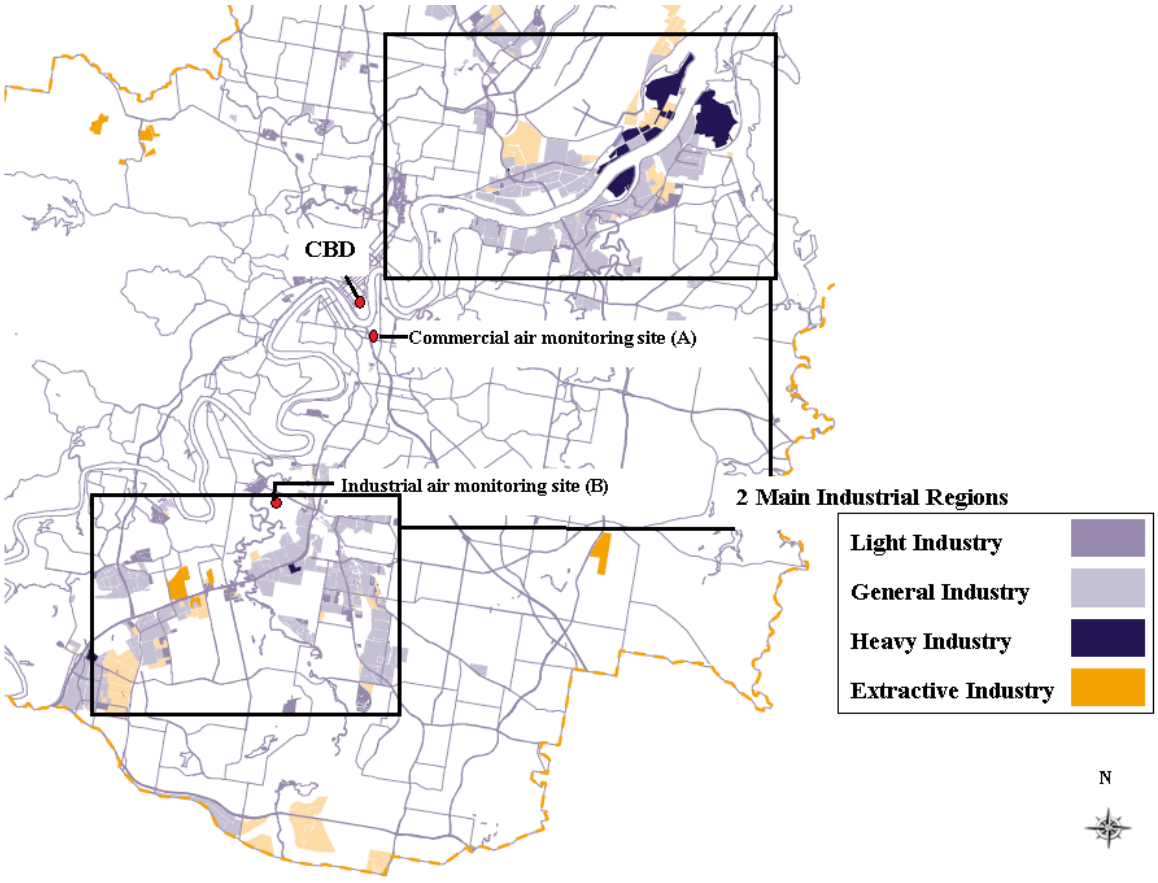
# Supplementary Material (ESI)

## Supplementary Information

**Figure S1** The location of Brisbane's CBD, the two main industrial regions in Brisbane and, nearby air monitoring sites commercial (A) and industrial (B) used in this study.




Graphic was sourced from the Brisbane City Plan 2000 – Volume 1 Amended 15 April 2011. Chapter 3, page 39.

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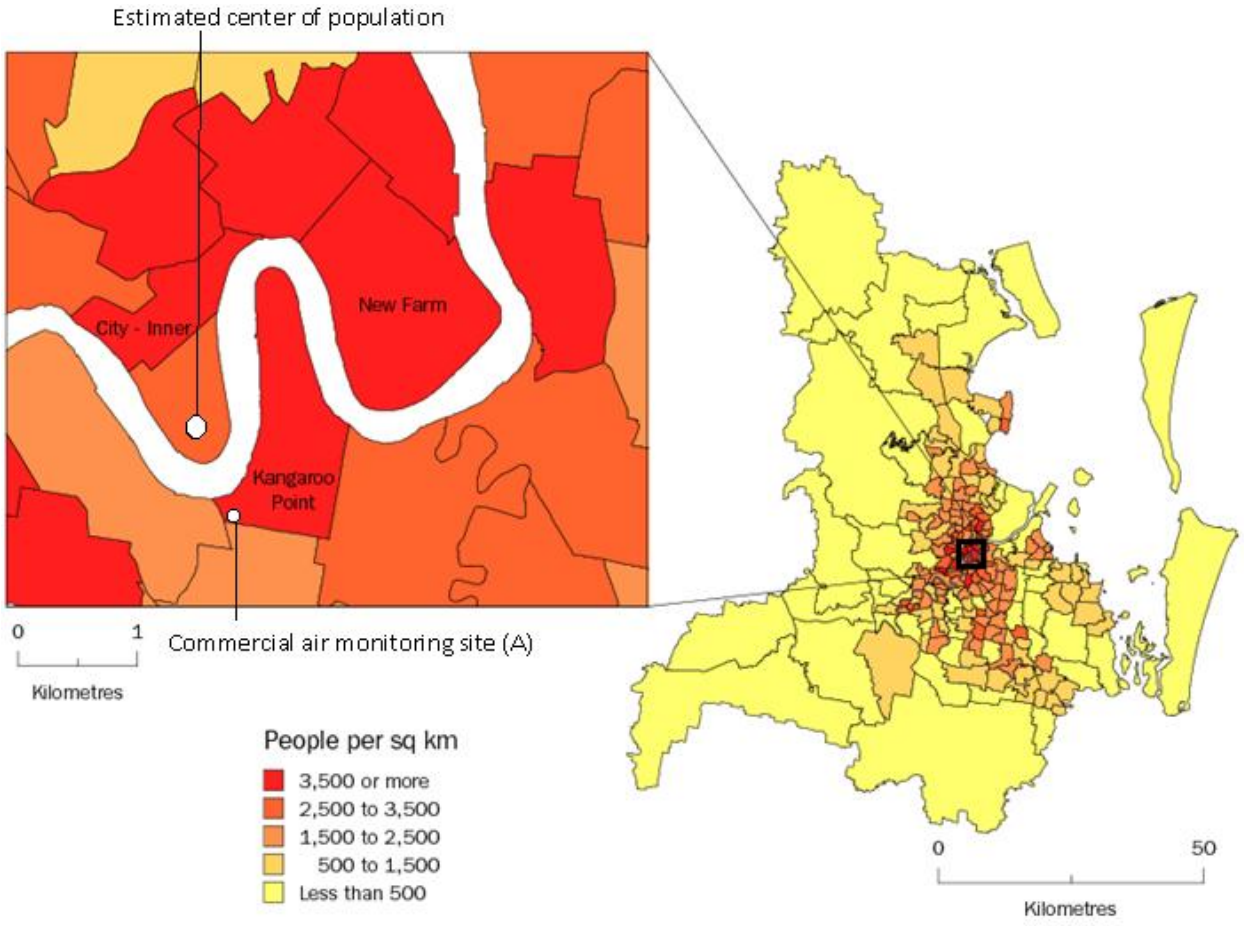
**Figure S2** Population spatial distribution map for Brisbane and the calculated center of population for the Brisbane at June 2009. The commercial air monitoring site (A) used in this study is located ~ 1 km from the CBD or estimated center of population.




Graphic accessed at the Australian Bureau of Statistics (ABS) website (13/04/2010) http://www.abs.gov.au/AUSSTATS

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**Table S1** Annual average climate statistics for Brisbane. Data was accessed from the federal Bureau of Meteorology (BOM) website (18/02/2011). http://www.bom.gov.au

| Climate Statistics | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual | Years (1981-2000) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Temperature** | | | | | | | | | | | | | | |
| **Mean maximum temperature (°C)** | 29.2 | 28.9 | 27.9 | 25.9 | 23.5 | 20.9 | 20.5 | 21.6 | 23.9 | 25.5 | 26.9 | 28.4 | 25.3 | 19 |
| **Mean minimum temperature (°C)** | 21.1 | 20.9 | 19.3 | 16.8 | 14.3 | 10.7 | 9.6 | 9.9 | 12.4 | 15.4 | 17.8 | 19.7 | 15.7 | 19 |
| **Mean temp (°C)** | 25.2 | 24.9 | 23.6 | 21.4 | 18.9 | 15.8 | 15.1 | 15.8 | 18.2 | 20.5 | 22.4 | 24.1 | 20.5 | 19 |
| **Rainfall** | | | | | | | | | | | | | | |
| **Mean rainfall (mm)** | 121.1 | 159.8 | 122.3 | 130.5 | 129.4 | 60.4 | 57.8 | 40.1 | 35.3 | 79.2 | 97.3 | 123.8 | 1158.3 | 19 |
| **Other daily elements** | | | | | | | | | | | | | | |
| **Mean daily sunshine (hours)** | 8.5 | 7.6 | 7.8 | 7.2 | 6.4 | 7.2 | 7.3 | 8.4 | 8.9 | 8.5 | 8.5 | 8.8 | 7.9 | 19 |
| **Mean number of clear days** | 5 | 4.8 | 9.5 | 9.9 | 8.7 | 14.1 | 15.1 | 16.8 | 17.4 | 10.7 | 6.9 | 7.4 | 126.3 | 19 |
| **Mean number of cloudy days** | 10.7 | 11.3 | 9.8 | 9.7 | 10.7 | 7.3 | 7.4 | 5.1 | 4.5 | 7.8 | 10.2 | 9.8 | 104.3 | 19 |
| **Mean 9am relative humidity (%)** | 66 | 69 | 70 | 70 | 74 | 70 | 68 | 63 | 59 | 60 | 61 | 64 | 66 | 19 |
| **Mean 3pm relative humidity (%)** | 60 | 62 | 59 | 59 | 59 | 51 | 50 | 47 | 50 | 56 | 58 | 60 | 56 | 19 |
| **Mean 3pm wind speed (km/h)** | 21.6 | 20.9 | 20 | 17.8 | 14.9 | 15.2 | 16.2 | 18.3 | 21.7 | 22.5 | 22.9 | 22.2 | 19.5 | 19 |

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**Table S2** Calculated %RSD values for replicate PUF disks and between air monitoring sites during the winter (2008) sampling period. The $\sum_5$-209 concentrations (ng $PUF^{-1}$) have been used to calculate the %RSD.

| **Air monitoring site** | **%RSD for replicate PUF disks** |
|---|---|
| Rural F | 47.1 |
| Rural E | 47.1 |
| Residential D | 51.4 |
| Residential C | 35.4 |
| Industrial B | 31.0 |
| Commercial A | 14.9 |
| **%RSD between monitoring sites** | **90.0** |

**Table S3** Linear regression statistics of replicate PUF disks deployed during the winter (2008) sampling period. The $\sum_5$-209 concentrations (ng $PUF^{-1}$) have been used for regression analysis.

| | | |
|---|---|---|
| **Multiple R** | 0.91 | |
| **R Square** | 0.84 | |
| **Adjusted R Square** | 0.80 | |
| **Standard Error** | 1.03 | |
| **Observations** | 6.00 | |
| ***Observation*** | ***Predicted Y*** | ***Residuals*** |
| 1 | 0.72 | 0.48 |
| 2 | 0.72 | 0.48 |
| 3 | 1.75 | -1.05 |
| 4 | 2.09 | 0.91 |
| 5 | 2.89 | -1.29 |
| 6 | 6.33 | 0.47 |

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**Table S4** Summary of $\sum_5$ and $\sum_5$-209 amounts (ng $PUF^{-1}$) accumulated in the PUF disks for all 3 sampling periods at all sites together with mean data (highlighted) for all sites.

| **PBDE congener** | **BDE-28** | **BDE-47** | **BDE-100** | **BDE-99** | **BDE-209** | **∑5** | **∑5-209** |
|---|---|---|---|---|---|---|---|
| ***Winter, 2008 – 26 June to 5 August (40 days)*** | | | | | | | |
| [a]Commercial A | 0.3 | 3 | 0.6 | 2.4 | na | na | 6.3 |
| [a]Industrial B | 0.2 | 0.9 | 0.3 | 0.7 | na | na | 2.1 |
| [a]Residential C | nd | 1.1 | 0.3 | 1.1 | na | na | 2.5 |
| [a]Residential D | nd | 0.5 | 0.1 | 0.6 | na | na | 1.2 |
| [a]Rural E | nd | 0.4 | 0.2 | 0.4 | na | na | 1 |
| [a]Rural F | nd | 0.4 | 0.3 | 0.3 | na | na | 1 |
| ***Winter, 2009 – 16 June to 15 October (121 days)*** | | | | | | | |
| Commercial A | 0.2 | 2.9 | 0.4 | 2.5 | 10.4 | 16.4 | 6 |
| Industrial B | 0.1 | 1.4 | 0.2 | 1.9 | 12.7 | 16.3 | 3.6 |
| Residential C | nd | 0.4 | 0.1 | 0.6 | <LOD | 1.1 | 1.1 |
| Residential D | 0.1 | 0.6 | 0.1 | 0.6 | <LOD | 1.4 | 1.4 |
| Rural E | nd | 0.3 | 0.1 | 0.4 | <LOD | 0.8 | 0.8 |
| Rural F | nd | 0.4 | 0.1 | 0.4 | <LOD | 0.9 | 0.9 |
| ***Summer, 2009-2010 – 8 December to 4 March (86 days)*** | | | | | | | |
| Commercial A | 0.2 | 2.6 | 0.2 | 0.9 | 1.4 | 5.3 | 3.9 |
| Industrial B | 0.2 | 1.8 | 0.1 | 0.7 | 10.1 | 12.9 | 2.8 |
| Residential C | 0.1 | 0.3 | nd | <MDL | <LOD | 0.4 | 0.4 |
| Residential D | 0.1 | 0.7 | 0.1 | 0.2 | 4.9 | 6.1 | 1.1 |
| Rural E | 0.1 | 0.6 | 0.1 | 0.2 | <LOD | 1 | 1 |
| Rural F | nd | 0.5 | nd | 0.2 | <LOD | 0.7 | 0.7 |
| ***Mean (n=3) PBDE levels – 3 seasons combined*** | | | | | | | |
| **Commercial A** | **0.2 ±0.1** | **2.8±0.2** | **0.4±0.2** | **1.9±0.9** | **[b]5.9±6.4** | **11.2±7.8** | **5.4±1.3** |
| **Industrial B** | **0.2± 0.1** | **1.4±0.5** | **0.2±0.1** | **1.1±0.7** | **[b]11.4±1.8** | **14.2±2.4** | **2.8±0.8** |
| **Residential C** | **0.1** | **0.6±0.4** | **0.1±0.2** | **0.6±0.6** | **na** | **1.3±0.5** | **1.3±1.1** |
| **Residential D** | **0.1±0.1** | **0.6±0.1** | **0.1±0.0** | **0.5±0.2** | **[b]2.5±3.5** | **3.7±3.4** | **1.2±0.2** |
| **Rural E** | **0.1±0.01** | **0.4±0.2** | **0.1±0.1** | **0.3±0.1** | **na** | **0.9±0.1** | **0.9±0.1** |
| **Rural F** | **nd** | **0.4±0.1** | **0.1±0.2** | **0.3±0.1** | **na** | **0.9±0.1** | **0.9±0.2** |
| | | | | | | | |
| Mean blank (ng $PUF^{-1}$, n=7) | nd | 0.1 | nd | 0.1 | 0.3 | na | na |
| LOD | na | 0.2 | na | 0.1 | 0.5 | na | na |
| Mean recovery(%)-$^{13}C_{12}$ PBDEs PUF | 70.5 | 80.1 | na | 70.2 | 50.1 | na | na |
| IDL (pg/µl) | 5 | 5 | 5 | 5 | 25 | na | na |

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na-not applicable
nd-non detect
<LOD-average level in blanks + 3 × standard deviation
<MDL - less than method detection limit, defined as analyte peak with s/n ratio < 3:1
[a] replicate PUFs deployed at each monitoring site (winter, 2008) mean value has been used
[b] The mean BDE-209 level is calculated from winter (2009) and summer (2009 – 2010) sampling periods only.

**Table S5** One phase decay model for $\sum_5$-209 data.

| Best-fit values | |
|---|---|
| Y0 | 5.977 |
| Plateau | 0.9959 |
| K | 0.1251 |
| Half Life | 5.542 |
| Tau | 7.996 |
| Span | 4.981 |
| Y0 | 0.2485 |
| Plateau | 0.1109 |
| K | 0.01758 |
| Span | 0.2475 |
| 95% Confidence Intervals | |
| Y0 | 5.186 to 6.768 |
| Plateau | 0.6430 to 1.349 |
| K | 0.06912 to 0.1810 |
| Half Life | 3.829 to 10.03 |
| Tau | 5.524 to 14.47 |
| Span | 4.194 to 5.769 |
| Degrees of Freedom | 3 |
| R square | 0.9936 |
| Absolute Sum of Squares | 0.1006 |
| Sy.x | 0.1832 |
| K | K > 0.0 |
| Number of points | 6 |

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**Table S6** One phase decay model for $\sum_5$PBDE data.

| One phase decay | |
|---|---|
| Best-fit values | |
| Y0 | 13.98 |
| Plateau | -8.717 |
| K | 0.02107 |
| Half Life | 32.90 |
| Tau | 47.47 |
| Span | 22.70 |
| Std. Error | |
| Y0 | 3.037 |
| Plateau | 31.00 |
| K | 0.04535 |
| Span | 29.67 |
| 95% Confidence Intervals | |
| Y0 | 4.317 to 23.64 |
| Plateau | -107.4 to 89.92 |
| K | 0.0 to 0.1654 |
| Half Life | 4.191 to +infinity |
| Tau | 6.047 to +infinity |
| Span | -71.73 to 117.1 |
| Degrees of Freedom | 3 |
| R square | 0.8350 |
| Absolute Sum of Squares | 28.46 |
| Sy.x | 3.080 |
| Constraints | |
| K | K > 0.0 |
| Number of points | |
| Analyzed | 6 |

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$$Y = (Y0 - Plateau)*\exp(-K*X) + Plateau$$

where Y0 is the Y value when X (distance) is zero. It is expressed in the same units as Y,

Plateau is the Y value at infinite times, expressed in the same units as Y.

K is the rate constant, expressed in reciprocal of the X axis time units. If X is in kilometres, then K is expressed in inverse kilometres.

Tau is the time constant, expressed in the same units as the X axis. It is computed as the reciprocal of K.

Half-life is in the time units of the X axis. It is computed as ln(2)/K.

Span is the difference between Y0 and Plateau, expressed in the same units as your Y values

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**Table S7** Estimated Resident Population, Statistical Local Areas, Brisbane

| Statistical Local Area | | km$^2$ | persons/km$^2$ |
|---|---|---|---|
| Distance from CBD | Inner Brisbane | | |
| 2.5 | Bowen Hills | 1.7 | 1048.5 |
| 1.0 | City - Inner | 0.7 | 5040.4 |
| 1.5 | City - Remainder | 1.5 | 3370.7 |
| 3.0 | Dutton Park | 0.9 | 1656.5 |
| 1.5 | Fortitude Valley | 1.4 | 4493.8 |
| 2.0 | Herston | 1.7 | 1186.3 |
| 1.5 | Highgate Hill | 1.2 | 4999.2 |
| 1.0 | Kangaroo Point | 1.3 | 5622.1 |
| 2.5 | Kelvin Grove | 1.7 | 3083.9 |
| 2.5 | Milton | 1.2 | 1665.4 |
| 1.2 | New Farm | 2.0 | 5870.5 |
| 2.0 | Newstead | 1.3 | 4407.3 |
| 2.2 | Paddington | 2.4 | 3569.2 |
| 2.5 | Red Hill | 1.7 | 3409.1 |
| 0.8 | South Brisbane | 2.0 | 2486.0 |
| 1.0 | Spring Hill | 1.2 | 4805.0 |
| 1.5 | West End | 1.9 | 4105.8 |
| 2.2 | Woolloongabba | 2.4 | 1819.1 |
| 1.8 | Total Inner Brisbane | 28.2 | 3393.4 |
| | Northwest Inner Brisbane | | |
| 2.2 | Albion | 1.5 | 1812.0 |
| 5.0 | Alderley | 2.4 | 2288.2 |
| 4.5 | Ascot | 2.5 | 2163.1 |
| 4.0 | Ashgrove | 5.6 | 2314.0 |
| 4.0 | Bardon | 5.6 | 1760.6 |
| 6.0 | Chelmer | 1.4 | 2060.9 |
| 5.5 | Clayfield | 2.9 | 3564.7 |
| 7.0 | Corinda | 2.9 | 1712.4 |
| 5.0 | Enoggera | 9.2 | 791.5 |
| 7.0 | Graceville | 1.9 | 2468.8 |
| 5.0 | Grange | 1.9 | 2360.0 |
| 5.0 | Hamilton | 1.7 | 2943.2 |
| 6.0 | Hendra | 2.7 | 1671.1 |
| 6.0 | Indooroopilly | 7.5 | 1582.0 |
| 6.5 | Kedron | 5.2 | 2433.4 |
| 5.0 | Lutwyche | 0.9 | 3223.5 |
| 5.0 | Newmarket | 1.7 | 2734.3 |

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| | | | |
|---|---|---|---|
| 8.0 | Nundah | 3.6 | 2762.4 |
| 7.0 | St Lucia | 3.4 | 3395.7 |
| 7.5 | Sherwood | 2.3 | 2457.7 |
| 6.0 | Stafford | 3.4 | 1771.9 |
| 4.5 | Stafford Heights | 2.9 | 2385.6 |
| 5.0 | Taringa | 2.1 | 3912.7 |
| 3.5 | Toowong | 5.2 | 3188.0 |
| 3.5 | Wilston | 1.4 | 2909.9 |
| 4.0 | Windsor | 2.9 | 2241.5 |
| 6.0 | Wooloowin | 2.2 | 2707.2 |
| | Total Northwest Inner Brisbane | 86.8 | 2232.8 |
| | | | |
| | Northwest Outer Brisbane | | |
| | Anstead | 12.5 | 96.6 |
| | Aspley | 6.3 | 2067.2 |
| | Bald Hills | 14.0 | 614.2 |
| | Banyo | 5.1 | 1082.4 |
| | Bellbowrie | 7.3 | 843.6 |
| | Boondall | 10.9 | 832.7 |
| | Bracken Ridge | 8.4 | 1998.7 |
| | Bridgeman Downs | 8.8 | 854.7 |
| | Brighton | 6.5 | 1427.1 |
| | Brookfield (incl. Brisbane Forest Park) | 106.1 | 45.8 |
| | Carseldine | 4.6 | 1673.1 |
| | Chapel Hill | 5.4 | 1970.1 |
| | Chermside | 3.4 | 2228.4 |
| | Chermside West | 3.4 | 1848.9 |
| | Darra-Sumner | 8.0 | 576.2 |
| | Deagon | 2.7 | 1284.7 |
| | Doolandella-Forest Lake | 10.0 | 1961.7 |
| | Durack | 4.5 | 1490.7 |
| | Ellen Grove | 5.1 | 1235.9 |
| | Everton Park | 4.2 | 2021.9 |
| | Ferny Grove | 3.8 | 1537.5 |
| | Fig Tree Pocket | 4.2 | 932.8 |
| | Geebung | 4.0 | 1088.7 |
| | Inala | 5.9 | 2387.6 |
| | Jamboree Heights | 1.3 | 2760.2 |
| | Jindalee | 2.6 | 2044.4 |
| | Karana Downs-Lake Manchester | 184.8 | 34.6 |
| | Kenmore | 5.2 | 1659.0 |

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| | | | |
|---|---|---|---|
| | Kenmore Hills | 4.3 | 626.0 |
| | Keperra | 5.5 | 1339.8 |
| | McDowall | 4.4 | 1790.9 |
| | Middle Park | 1.5 | 2817.9 |
| | Mitchelton | 4.4 | 1816.2 |
| | Moggill | 10.3 | 329.2 |
| | Mount Ommaney | 2.1 | 1158.2 |
| | Northgate | 3.0 | 1415.6 |
| | Nudgee | 7.8 | 385.6 |
| | Oxley | 6.9 | 1021.9 |
| | Pinjarra Hills | 5.5 | 76.5 |
| | Pinkenba-Eagle Farm | 53.2 | 6.4 |
| | Pullenvale | 24.3 | 148.0 |
| | Richlands | 5.0 | 260.2 |
| | Riverhills | 2.2 | 1955.1 |
| | Sandgate | 4.3 | 1567.2 |
| | Seventeen Mile Rocks | 5.4 | 1850.2 |
| | Taigum-Fitzgibbon | 6.3 | 1398.8 |
| | The Gap | 12.2 | 1372.9 |
| | Upper Kedron | 9.4 | 344.2 |
| | Virginia | 3.2 | 627.8 |
| | Wacol | 18.5 | 274.2 |
| | Wavell Heights | 3.6 | 2626.6 |
| | Westlake | 1.9 | 2575.1 |
| | Zillmere | 3.7 | 2198.7 |
| | Total Northwest Outer Brisbane | 657.9 | 533.1 |
| | | | |
| | Southeast Inner Brisbane | | |
| 4.0 | Annerley | 2.8 | 3698.1 |
| 3.0 | Balmoral | 1.3 | 3269.9 |
| 3.5 | Bulimba | 2.1 | 2967.0 |
| 5.0 | Camp Hill | 4.6 | 2300.7 |
| 7.0 | Cannon Hill | 4.6 | 1336.7 |
| 7.0 | Carindale | 9.5 | 1549.8 |
| 6.5 | Carina | 5.0 | 2103.0 |
| 6.7 | Carina Heights | 3.4 | 1853.3 |
| 3.5 | Coorparoo | 5.3 | 2856.1 |
| 1.5 | East Brisbane | 2.0 | 2994.7 |
| 3.5 | Fairfield | 1.2 | 2400.7 |
| 5.0 | Greenslopes | 2.9 | 3019.8 |
| 3.0 | Hawthorne | 1.4 | 3537.0 |

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| | | | |
|---|---|---|---|
| 5.0 | Holland Park | 3.3 | 2477.6 |
| 5.5 | Holland Park West | 2.6 | 2379.3 |
| 6.0 | Moorooka | 4.1 | 2451.7 |
| 5.0 | Morningside | 5.4 | 1839.5 |
| 4.0 | Norman Park | 3.0 | 2569.8 |
| 5.0 | Tarragindi | 4.5 | 2248.8 |
| 5.0 | Yeerongpilly | 2.7 | 1074.1 |
| 2.5 | Yeronga | 3.0 | 1948.8 |
| | Total Southeast Inner Brisbane | 74.5 | 2245.0 |
| | | | |
| | Southeast Outer Brisbane | | |
| | Acacia Ridge | 9.1 | 802.9 |
| | Algester | 3.9 | 2255.0 |
| | Archerfield | 4.7 | 127.0 |
| | Belmont-Mackenzie | 12.4 | 435.9 |
| | Burbank | 30.0 | 40.4 |
| | Calamvale | 6.5 | 2054.2 |
| | Chandler-Capalaba West | 13.6 | 113.6 |
| | Coopers Plains | 3.9 | 1121.6 |
| | Eight Mile Plains | 7.7 | 1795.0 |
| | Gumdale-Ransome | 9.8 | 186.9 |
| | Hemmant-Lytton | 39.7 | 72.0 |
| | Kuraby | 4.7 | 1670.9 |
| | Lota | 2.0 | 1591.3 |
| | MacGregor | 2.7 | 2056.0 |
| | Manly | 2.0 | 2162.3 |
| | Manly West | 5.0 | 2198.2 |
| | Mansfield | 6.1 | 1800.8 |
| | Moreton Island | 173.9 | 1.7 |
| | Mount Gravatt | 2.7 | 1204.4 |
| | Mount Gravatt East | 4.6 | 2380.7 |
| | Murarrie | 7.6 | 323.1 |
| | Nathan | 5.3 | 278.6 |
| | Pallara-Heathwood-Larapinta | 18.6 | 168.6 |
| | Parkinson-Drewvale | 12.7 | 1175.7 |
| | Robertson | 1.9 | 2675.7 |
| | Rochedale | 14.3 | 81.9 |
| | Rocklea | 9.1 | 178.4 |
| | Runcorn | 6.6 | 2014.0 |
| | Salisbury | 4.7 | 1250.2 |
| | Stretton-Karawatha | 13.1 | 355.6 |

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| | | | |
|---|---|---|---|
| | Sunnybank | 4.5 | 1881.7 |
| | Sunnybank Hills | 6.5 | 2681.8 |
| | Tingalpa | 9.4 | 1053.9 |
| | Upper Mount Gravatt | 4.2 | 2060.8 |
| | Wakerley | 4.9 | 1462.8 |
| | Willawong | 8.1 | 35.1 |
| | Wishart | 4.8 | 2297.3 |
| | Wynnum | 6.1 | 2082.8 |
| | Wynnum West | 5.4 | 2171.5 |
| | Total Southeast Outer Brisbane | 492.8 | 526.6 |
| | | | |
| | Caboolture | | |
| | Bribie Island | 106.0 | 165.8 |
| | Burpengary-Narangba | 38.1 | 730.1 |
| | Caboolture Central | 57.4 | 401.1 |
| | Caboolture East | 151.4 | 122.1 |
| | Caboolture Hinterland | 495.6 | 13.9 |
| | Caboolture Midwest | 305.8 | 53.1 |
| | Deception Bay | 31.3 | 713.9 |
| | Morayfield | 38.4 | 621.7 |
| | Total Caboolture | 1224.0 | 127.6 |
| | Ipswich City | | |
| | Ipswich (C) - Central | 206.2 | 387.4 |
| | Ipswich (C) - East | 119.7 | 560.9 |
| | Ipswich (C) - North | 74.8 | 121.4 |
| | Ipswich (C) - South-West | 471.1 | 7.3 |
| | Ipswich (C) - West | 218.4 | 39.3 |
| | Total Ipswich City | 1090.2 | 154.2 |
| | | | |
| | Logan City | | |
| | Beenleigh | 7.7 | 1112.3 |
| | Bethania-Waterford | 12.6 | 646.6 |
| | Browns Plains | 28.0 | 1116.2 |
| | Carbrook-Cornubia | 34.6 | 115.7 |
| | Daisy Hill-Priestdale | 14.9 | 317.3 |
| | Eagleby | 13.8 | 822.2 |
| | Edens Landing-Holmview | 6.6 | 1017.1 |
| | Greenbank-Boronia Heights | 52.5 | 172.8 |
| | Jimboomba-Logan Village | 635.2 | 71.0 |
| | Kingston | 8.0 | 1690.5 |
| | Loganholme | 14.6 | 1009.3 |

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| | | | |
|---|---|---|---|
| | Loganlea | 11.3 | 835.0 |
| | Marsden | 15.5 | 1448.8 |
| | Mt Warren Park | 4.3 | 1496.3 |
| | Park Ridge-Logan Reserve | 21.9 | 132.4 |
| | Rochedale South | 6.1 | 2590.4 |
| | Shailer Park | 8.0 | 1538.1 |
| | Slacks Creek | 9.6 | 1221.8 |
| | Springwood | 4.7 | 1355.1 |
| | Tanah Merah | 1.7 | 589.1 |
| | Underwood | 4.1 | 1300.3 |
| | Waterford West | 5.3 | 1193.4 |
| | Wolffdene-Bahrs Scrub | 28.0 | 199.4 |
| | Woodridge | 10.7 | 1865.7 |
| | Total Logan City | 959.6 | 294.6 |
| | | | |
| | Pine Rivers | | |
| | Albany Creek | 9.9 | 1728.9 |
| | Bray Park | 4.5 | 2261.2 |
| | Central Pine West | 54.4 | 429.7 |
| | Dakabin-Kallangur-M. Downs | 23.1 | 1275.5 |
| | Griffin-Mango Hill | 43.2 | 424.6 |
| | Hills District | 17.3 | 1269.1 |
| | Lawnton | 9.3 | 634.3 |
| | Petrie | 6.7 | 1360.8 |
| | Strathpine-Brendale | 17.9 | 676.0 |
| | Moreton Bay (R) Bal | 588.3 | 36.0 |
| | Total Pine Rivers | 774.6 | 217.7 |
| | | | |
| | Redcliffe | | |
| | Clontarf | 6.3 | 1328.5 |
| | Margate-Woody Point | 4.2 | 2698.4 |
| | Redcliffe-Scarborough | 9.3 | 2234.5 |
| | Rothwell-Kippa-Ring | 18.4 | 928.5 |
| | Total Redcliffe | 38.1 | 1506.1 |
| | | | |
| | Redland City | | |
| | Alexandra Hills | 13.6 | 1305.7 |
| | Birkdale | 11.5 | 1310.7 |
| | Capalaba | 18.9 | 945.7 |
| | Cleveland | 11.8 | 1265.7 |
| | Ormiston | 4.5 | 1341.5 |

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| | | | |
|---|---|---|---|
| | Redland Bay | 46.9 | 293.1 |
| | Sheldon-Mt Cotton | 65.4 | 90.9 |
| | Thorneside | 2.5 | 1427.2 |
| | Thornlands | 21.7 | 597.4 |
| | Victoria Point | 13.4 | 1148.7 |
| | Wellington Point | 7.6 | 1498.1 |
| | Redland (C) Bal | 319.2 | 24.8 |
| | Total Redland City | 537.1 | 265.9 |
| | **Total Brisbane** | **5964** | **343** |

In summary the method used to calculate centers of population by the Australian Bureau of Statistics (ABS) is based on the centroid and population of each Census Collection Districts (CD). To calculate the center of population for an area, the latitude and longitude coordinates of the centroid of each CD in that area are multiplied by the CD's estimated resident population to obtain weighted latitudes and longitudes for each CD. These are summed to obtain a weighted latitude and longitude coordinate for the area, and then divided by the total population of the area to obtain a single latitude and longitude coordinate. At June, 2009 the center of population in Brisbane was just south of the central business district (CBD)