



# **Air quality results from the 2019 Indices of Deprivation**

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# 1 Air quality in Lancashire results from the 2019 English indices of deprivation

## 1.1 Introduction

This article considers air quality and emission results for the Lancashire 14-authority area. This encompasses the 12-districts that are within the Lancashire County Council area, and the two unitary authorities of Blackburn with Darwen and Blackpool.

A combined indicator of air quality for small local areas was developed as part of the [English Indices of Deprivation](#) and the results are available for the 941 lower super output area level (LSOAs) in the Lancashire-14 area. The air quality indicator is one of the sub-indicators that forms part of the living environment deprivation domain.

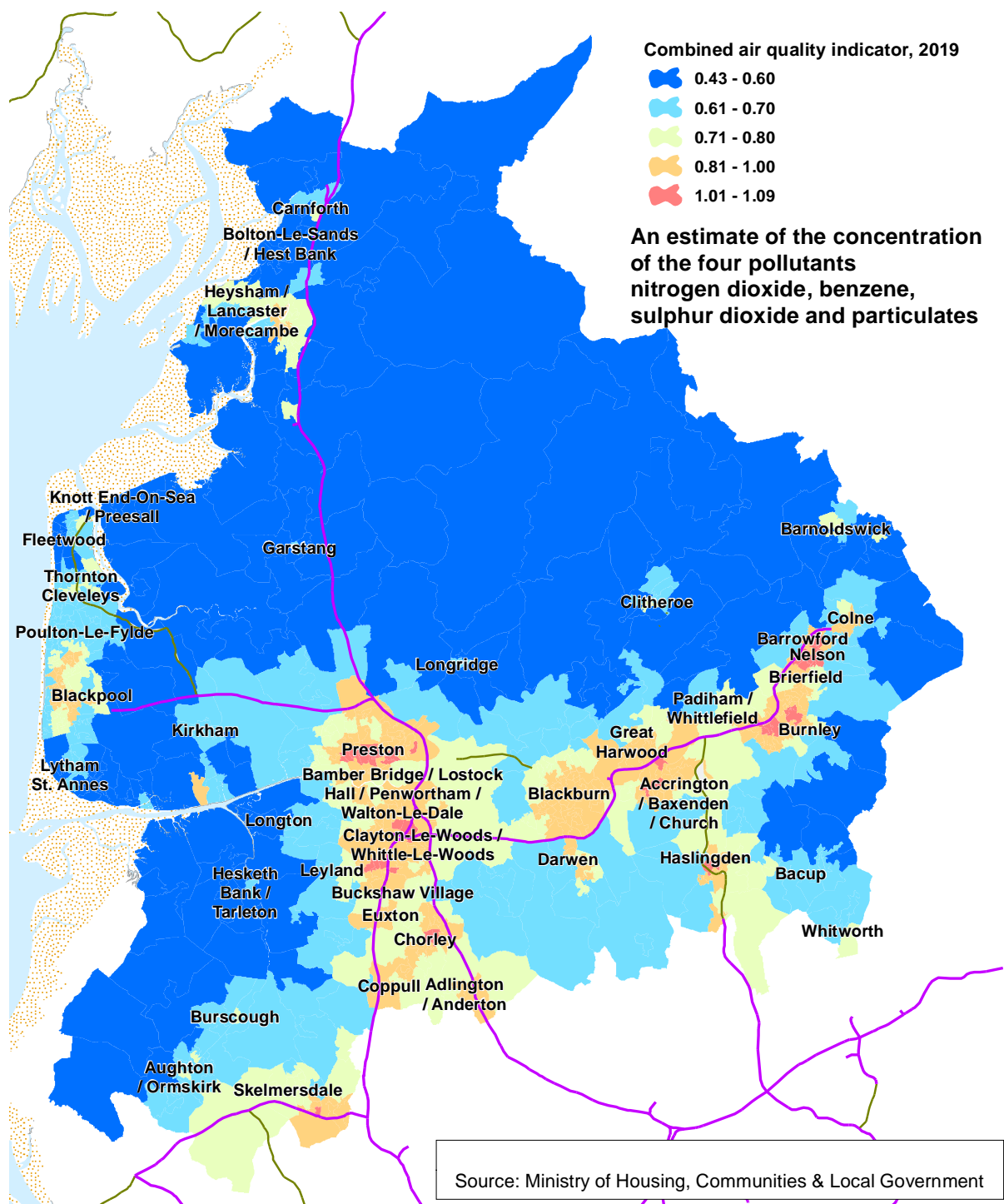
The air quality indicator is a modelled estimate of the concentration of the four pollutants: nitrogen dioxide, benzene, sulphur dioxide and particulates. Air quality data for 2016 on a 1km grid were obtained from the [UK Air Information Resource](#). For each pollutant, the atmospheric concentration is related to a guideline or standard value. Please see the national atmospheric emissions inventory website for details of [various air pollutants](#).

An index value of 1 is equivalent to the national standard for that pollutant. The index values for the four pollutants were then summed to create an overall air quality index score for the LSOA. Values of less than 1.0 indicate that the pollutant is below the objective set and thus "safe". The combined air quality figure which represents the overall quality score or ratio for each LSOA is derived simply by the addition of the scores for each of the four pollutants. A higher value implies a poorer overall air quality though there is no stated value above which the Combined Air Quality Indicator itself is said to indicate an unsafe concentration of pollutants.

## 1.2 The Lancashire Results

Many urban areas in Lancashire suffer to some degree from poorer air quality than other parts of the county though it is clearly much less of an issue in the coastal towns of Lancaster/Morecambe, Fleetwood, Lytham St Annes and Blackpool, presumably due in part to the direction of the prevailing winds.

**Figure 1. Combined Air Quality Indicator (2019 Index of Deprivation)**



Most Lancashire areas recorded good overall air quality results. A total of 51, just 5.4%, of the 941 LSOAs in the Lancashire-14 area recorded a combined air quality result of 1.00 or more while a further 25 scored exactly 1.00, which compares very favourably to the 192 (20%) from the previous (2015) indices with a score exceeding 1. It is tricky making exact comparisons as the 2015 figures were published to three decimal places, with no Lancashire LSOAs having the exact score of 1.000, whereas the 2019 figures are published to two decimal places, and we could round six of the 192 mentioned for 2015 down to 1.00 as well as ten additional LSOAs scoring just below 1, which could be rounded up to 1.00. The highest recorded score in Lancashire

(1.09), which occurs in four adjoining LSOAs in Preston and a single one in Hyndburn (002C), is significantly below the worst level recorded in the country (1.9). No areas of Lancashire experience air pollution levels anything like those recorded in the centres of London and other larger cities. Of the 100 LSOAs with the highest indicator scores all are in London, of which 9 LSOAs in Camden occupy places in the top 12 including the top 5 ranks. The other three in the top dozen are located in Westminster. Westminster comes out very unfavourably, as a third of the highest ranked 100 are in the London borough. Only beginning at rank 122 do we see LSOAs in other parts of the country, in this case three LSOAs in the West Midlands metropolitan borough of Sandwell.

There are some parts of the county where the figures are not encouraging but the combined air quality Indicator reveals that out of 32,845 LSOAs in England, the worst performing Lancashire LSOAs were in 8,641<sup>st</sup> position, much better than the 4,838<sup>th</sup> position one held in 2015, which was actually the same LSOA in Hyndburn that features again in 2019.

The LSOA in Hyndburn mentioned above (002C) is located at the southern end of Altham ward between Church and Clayton-le Moors. It straddles the M65 motorway, being just east of Junction 7. It is close to, or actually covers part of, the Whinney Hill Quarry, which is responsible for major emissions of NO<sub>x</sub>. This LSOA no longer adjoins others scoring over 1, although there are a couple more in the Accrington area. The equally ranked Preston LSOAs cluster around an area in Ashton on Ribble and Tulketh where the West Coast Main Line and the Blackpool railway line diverge, and which is bounded on the north side by the A5085 Blackpool Road. The cluster adjoins a further swathe of LSOAs that score over 1, which extends east past Moor Park. Although not actually adjoining, there is another cluster just further east around Ribblesdale where the LSOAs have a combined air quality score exceeding 1. Other areas with an indicator score over 1 lie within the built up areas of Bamber Bridge, Leyland, Chorley, Burnley, Pendle and Haslingden. In Pendle the whole of Whitefield and Walverden wards in Nelson score over 1, and this contributes towards Whitefield being ranked the most deprived ward in England for the living environment sub-domain, of which air quality forms a significant part.

It is interesting that no parts of Blackburn, Lancaster, Blackpool and only one LSOA in Skelmersdale have an indicator score exceeding 1. There are however just three LSOAs in Blackburn with Darwen with a score of exactly 1.00. Much of Lytham St. Annes, Bolton-le-Sands, Hest Bank, Garstang and Preesall are in the lowest scoring band while much of St Annes, Burscough, Bacup, Kirkham, Poulton-le-Fylde, Longridge and Clitheroe are in the second.