



2017 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management

August 2017

Solihull Metropolitan Borough Council

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Executive Summary: Air Quality in Our Area

Air Quality in Solihull Metropolitan Borough Council

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³.

Solihull MBC recognises that a cleaner, healthier environment benefits people and the economy. Clean air is vital for people's health and the environment, essential for making sure Solihull is a welcoming place for people to live and work now and in the future, and to our prosperity.

There are currently no air quality management areas declared in Solihull but Solihull MBC is committed to improving air quality and has instigated a new air quality monitoring regime which will provide robust baseline data. This will start in June 2017.

A number of NO₂ diffusion tubes will be placed at key locations across the Borough to determine levels to take our air quality monitoring forwards. Solihull MBC is considering monitoring for particulates and will be evaluating appropriate measuring equipment and identification of potential monitoring sites in partnership with Public Health officers.

¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

³ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

Actions to Improve Air Quality

- Three new sections of bus only lanes are now open on Lode Lane near Solihull Town Centre, marking the completion of Solihull Council's Lode Lane Enhancement Scheme and the bus lane will be in operation 24 hours a day.

In the Town Centre, the bus and cycle-only lane now connects Lode Lane with the previously no-through road between Radcliffe House and Brueton Gardens – thereby removing incoming buses from the busy Lode Lane/Warwick Road roundabout.

The project has seen a £6.75 million investment in the route between Solihull town centre, Jaguar Land Rover and North Solihull, contributing to the delivery of the UK Central (UKC) programme which aims to promote and encourage growth in the region and improve transport connectivity

The scheme has also included improvements to pedestrian and cycling facilities – including the introduction of an off-carriageway, shared-use cycle lane between the A45 Coventry Road and Solihull town centre.

Other vehicles permitted to use the lane are hackney carriage vehicles, bicycles and motorcycles.

- From September 2017 a trial will start at 3 local schools for a Solihull Schools Streets Pilot.

Restrictions will come into place that exclude traffic entering, leaving or travelling around certain roads that surround the schools at key times of the day during term time with permits issued to residents.

It is anticipated that benefits of the scheme will result in a reduction in congestion, pollution and traffic speed around the school gates to make a safer environment for the children. It is also expected to result in more people walking or cycling. The scheme will run for 18 months and if successful will be trialled at other schools.

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- Solihull MBC is currently trialling electric vehicles for staff use and there are 6 electric vehicle charging points for public use in Solihull Town Centre with plans to put in more. Developers are encouraged to install electric car charging points where possible and there are more charging points installed in major private shoppers car parks.
- A bike loan scheme is to be set up for Solihull MBC staff to promote cycling either as a commute or for recreation purposes. Bikes are available for short term loan including foldups, along with personal safety equipment.

Conclusions and Priorities

Although Solihull MBC has not declared an air quality management area so far, the Council is committed to improving air quality in general and will start a new regime of monitoring in 2017, initially to measure NO₂ using diffusion tubes for long term monitoring.

Solihull Metropolitan Borough Council does not currently undertake any monitoring of particulates (PM 2.5, PM10) within the Borough but we are investigating the possibility of monitoring in the future and is currently developing its approach to address the possibilities in partnership with public health local authority officers.

Local Engagement and How to get Involved

Road vehicles are a major source of many pollutants in urban areas. They produce over 50 per cent of the emissions of nitrogen oxides in the UK.

Priority areas for action are firstly increasing public awareness and involvement in the solution to air pollution and secondly increasing multi-agency involvement in the air pollution problem.

Solihull MBC is raising awareness of air quality issues in general and our website gives details of the latest air quality report along with a links to Defra air pollution forecast site and the traveline site to help plan trips using public transport.

Members of the public are encouraged to ask themselves the following questions:

Before using your car, ask yourself:

- do I really need to make this journey?
- could I walk or cycle instead of taking the car?
- could I take a bus, tram or train?
- are the levels of air pollution already too high today?

If you must drive:

- drive smoothly. You'll save fuel, and your engine will also pollute less;
- don't rev your engine unnecessarily;
- maintain your car. Keep the engine properly tuned and the tyres at the right pressure; and
 - turn off the engine when your car is stationary.

At home

- Buy water-based or low-solvent paints, varnishes, glues and wood preservatives.
- Avoid burning solid fuels if possible. If you live in a smoke control area, burn only authorised smokeless fuels (your local authority can advise you).
- Avoid lighting bonfires, but if you must, don't light them when pollution levels are high or while the weather is still and cold. Only burn dry material and never burn household waste, especially plastic, rubber, foam or paint. Levels of pollution can be quite high on bonfire night and other events/festivals with bonfires, and sensitive people, including people with respiratory conditions, may notice some effects. However exposure can be considerably reduced by remaining indoors and keeping windows closed.

Copies of the latest air quality report are available at
www.solihull.gov.uk/Portals/0/.../Air_Quality_Report_SMBC.pdf

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1 Local Air Quality Management

This report provides an overview of air quality in Solihull Metropolitan Borough Council during 2016. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents.

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in pursuit of the objectives.

This Annual Status Report (ASR) is an annual requirement showing the strategies employed by Solihull Metropolitan Borough Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England can be found in Appendix A.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the Authority must prepare an Air Quality Action Plan (AQAP) within 12-18 months setting out measures it intends to put in place in pursuit of compliance with the objectives.

Historically Solihull MBC has shown no exceedance of the Air Quality Objectives, largely due to the rural and suburban nature with few dwellings near to busy roads or junctions, and consequently no AQMAs have been declared. Solihull MBC is starting a new regime of monitoring in 2017 to determine if levels of Nitrogen Dioxide are likely to exceed or not.

2.2 Progress and Impact of Measures to address Air Quality in Solihull Metropolitan Borough Council

Defra's appraisal of last year's ASR concluded that Solihull Metropolitan Borough Council should look towards undertaking a new monitoring regime and we have fully taken this on board. We have selected a number of sites across the Borough to measure NO₂ using diffusion tubes for long term monitoring. This will start in June 2017 and talks are on-going within the Council regarding monitoring other pollutants.

The Council is a partner in the West Midlands Low Emissions Towns and Cities (LET&C) Programme and will support proposals aimed at securing better air quality across the metropolitan area, such as the provision of infrastructure to encourage the use of electric vehicles for freight and public transport journeys within and beyond the Borough. Best Practice Planning Guidance has been produced to provide further guidance for local authorities and developers. Developers should have regard to air quality objectives in considering the location and design of a new development.

The Authority has taken forward a number of measures to improve air quality and has embedded air quality into various local policies including :

- Local Plan 2013, which includes the following policy statements:
 - Encourage better air quality in and around the Borough through the adoption of low emission zone initiatives such as those involving the use of electric vehicles for freight and public transport. Development that would contribute to air pollution, either directly or indirectly will be permitted only if it would not hinder or significantly harm the achievement of air quality objectives or any relevant Air Quality Management Plan and it incorporates appropriate attenuation, mitigation or compensatory measures
 - The Council is a partner in the West Midlands Low Emissions Towns and Cities (LET&C) Programme and will support proposals aimed at securing better air quality across the metropolitan area, such as the provision of infrastructure to encourage the use of electric vehicles for freight and public transport journeys within and beyond the Borough. Best Practice Planning Guidance has been produced to provide further guidance for local authorities and developers. Developers should have

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regard to air quality objectives in considering the location and design of a new development.

- Traffic Management Strategy for Solihull, 2013 – 2018 which includes the following policy statements:
 - The principal aim of the West Midlands Traffic Managers Group is to seek to maximise the traffic management benefits, and to achieve contributions to congestion, accessibility, air quality and safety targets in line with Local Transport Plan objectives as set out in the Traffic Management Act 2004.
 - The traffic management strategy aims to improve air quality through affordable public transport, by supporting active modes such as walking and cycling. Transport policy behaviour-change programmes also aim to encourage people to shift their transport choices towards walking and cycling such as 20 mph speed limits.
- Joint Strategic Needs Assessment – Prevention of ill health through the provision of a clean environment which includes the following policy statements:
 - Priority areas for action are firstly increasing public awareness and involvement in the solution and secondly increasing multi-agency involvement in the air pollution problem. Specific priority actions include the promotion and establishment of Travel Plans, and the improvement of existing Walking and Cycling Schemes across the City. Through influencing the decisions members of the general public make every day with regard to transport mode selection, significant reductions in emissions can be achieved, resulting in health benefits to all Solihull residents. The overarching indicator of success for all Strategy Objectives will be an improvement in air quality across Solihull, thus reducing exposure to pollutants for people; which will in turn improve their health, reduce death rates and also reduce the costs of their healthcare to the NHS. Specific actions to achieve this are in Table 2.1 which sets the current status and challenges in Solihull recommended

lines of action for achieving objectives, timescale and indicators for success related to air quality.

- West Midlands Low Emission Vehicle Strategy, 2016 which includes the following policy statements:
 - Low Emissions Vehicles (LEVs) strategy focus on vehicles emissions, embracing new, cleaner vehicle technology and specifically promotes the use of low and ultra-low emission vehicles.
 - The emerging Tackling Transport Emissions Framework (TEF) initiative was approved by the West Midlands Integrated Transport Authority in January 2016 and forms part of the West Midlands Strategic Transport Plan. It includes measures that will be developed during 2016/2017 and implemented by the West Midlands Combined Authority. Key measures include the following:
 - Developing and adopting agreed metropolitan wide policies and targets towards the accelerated uptake and adoption of Ultra Low Emission Vehicles and associated infrastructure including hydrogen and gas refuelling opportunities. This could be potentially supported through the Planning System.
 - Developing and adopting agreed West Midlands wide policies and actions for Low Emission Zones or Clean Air Zones – in specific and suitable locations.
 - Accelerated timescales to clean up West Midlands buses, through the Integrated Transport Authority Bus Alliance and the West Midlands Low Emissions Bus Plan.
 - Making traffic management and regulation smarter through a West Midlands Key Route network.
 - Developing and adopting West Midlands specific policies to encourage the wider roll out of Car Clubs and active travel measures.
 - Further development of the Metropolitan Strategic Cycle Network – linked to the Integrated Transport Authority Cycle Charter.

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- Developing targeted policies toward zero emission taxis and private hire fleets.
 - Exploring the development of Low Emission Neighbourhoods and Green Travel Districts and ;
 - Developing an agreed funding, development and delivery framework.
- West Midlands Low Emissions Towns and Cities Good Practice Procurement Guidance which includes the following policy statements:
 - Innovative procurement practices can be adopted by public sector organisations (and others as required) to promote the uptake of cleaner vehicles and fuels. The guidance recognises the potential influence the public sector can have on transforming vehicle emissions including:
 - Local Sourcing initiatives and their ability to reduce road transport movements.
 - Integration of environmental performance criteria within public sector supply contracts.
 - Building on significant low emission vehicle development and demonstration activity within the West Midlands region to inform business cases for accelerated deployment of LEVs.
 - Legislative requirements for clean and fuel efficient procurement, including the consideration of Whole Life Costs and regional and national buying standards for transport.
 - Low emission vehicle and infrastructure cost reduction through joint procurement initiatives /public private partnerships, assisted by economies of scale.
 - Stimulating regional economic development and supporting the activity of the Local Enterprise Partnerships.
 - Solihull Connected-Transport Strategy 2016-2036 includes the following objectives

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- Ensure that major transport investment enables and manages growth to achieve the Council priorities for homes and jobs
 - Support and enable the integrated delivery of sustainable and efficient forms of transport like mass-transit, cycling and walking
 - Contribute to the council priorities to support people's everyday lives and improve health and wellbeing through the promotion of smarter choices programmes linked to major and local infrastructure investment
 - Identify a prioritised short, medium and long-term delivery plan to achieve the overarching vision and objectives whilst recognising the specific needs of the different parts of the Borough
 - Ensure that the objectives of Solihull Connected are embedded in Local Plan and Health and Wellbeing policies to support walking, cycling and public transport use and encourage travel behavioural change
- Solihull Connected links directly with the plans for economic growth set out by the Council Managed Growth priorities and promoted by UK Central and moves forward the vision and ideas set out in the Green Paper, published and consulted on over the summer of 2015
 - It is linked to the West Midlands Strategic Transport Plan 'Movement for Growth' which has been published by the West Midlands Combined Authority (WMCA) and provides strategic direction for transport across the region, whereas Solihull Connected is taking that overall direction and showing how it can be applied within the Borough
 - The big catalyst for the need to plan for this growth is the arrival of the HS2 Interchange in 2026. This national-level infrastructure being located in the Borough presents huge opportunities for Solihull to attract investment, housing and jobs growth. Solihull MBC must plan carefully to ensure that potential negative impacts from added congestion are minimised on our transport and street networks.

- Solihull Metropolitan Borough Council refuse vehicle fleet meet Euro 6 standards and the Highways department operate 1 x 7.5 Ton vehicle and 3 x 18 Ton vehicles which are Euro 6

- The Road Safety Strategy for Solihull forms an integral part of wider reaching transport plans and its aim is to minimise the number of people in Solihull who are injured in road traffic collisions, set out our expectations on performance and show how road safety will be developed established in Solihull Council's 'Solihull Connected' transport strategy. The report includes the following:
 - A trial was carried out on some roads in Solihull to reduce the speed limit from 30 mph to 20 mph following successful pilots elsewhere in the UK. The aim is to make drivers aware of their speed in residential areas to make them safer without the need to install additional road humps. A 20mph speed limit has already been introduced in the North Arran Way area of Smiths Wood and in part of the Shirley South area. The intention is to complete the trial by providing a 20mph speed limit in one more area, evaluate their effectiveness and ascertain local residents' views to help us judge how successful they are in our environment. The assessment will also take account of the findings of the on-going Department for Transport research into the effectiveness of 20mph speed limits as opposed to 20mph zones. The outcomes from the evaluation will be used as a basis for developing a 20mph policy and assessing the possible roll-out of further 20mph schemes.

 - Cycling infrastructure development needs to be addressed and further improved if we are to encourage more sustainable travel and keep everyone moving in line with Solihull Connected. The strategic radial cycle routes linking the UKC Hub with East Birmingham and the Town Centre have been identified as some of the initial priorities in the Solihull Connected Delivery Plan.

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The intention is to reduce our cyclist casualty rate by providing better quality on road segregated cycle facilities that encourage more cycling, training cyclists, and making other road users more aware of cyclists.

There will be more detail about how we will deliver cycling improvements in the Solihull Cycling and Walking Strategy that will be re published.

More detail on these measures can be found in their respective Action Plans :

Solihull Connected Transport Strategy 2016

Road Safety Strategy for Solihull for 2017-2030

Solihull Town Centre Advanced Quality Bus Partnership Scheme

West Midlands Low Emission Vehicle Strategy, 2016

Solihull Local Plan

West Midlands Strategic Transport Plan 'Movement for Growth'

Health and well-being strategy 2016-2019

Solihull Green Prospectus

The principal challenges and barriers to implementation that Solihull Metropolitan Borough Council anticipates facing are as follows:

- Clarification is needed from the West Midlands Combined Authority to outline how the WMCA and Constituent Members will exercise functions concurrently for the purpose of improving air quality.

- All though the arrival of the HS2 interchange in the Borough is still some years away careful planning is required for the construction phase and the associated works and transport movements . Solihull must ensure that negative impacts are reduced and plan for the potential growth that HS2 will bring. Solihull MBC will work closely with HS2 Ltd and associated partnerships.

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- Resourcing the purchase, installation and maintenance of monitoring equipment

Table 2.2 – Progress on Measures to Improve Air Quality

| No. | Measure | EU Category | EU Classification | Key Performance Indicator | Reduction in Pollutant / Emission from Measure | Progress to Date | Estimated / Actual Completion Date | Comments / Barriers to implementation |
|-----|---|---|---|---|---|--|------------------------------------|--|
| 1 | Solihull Connected Transport Strategy 2016-2036 | Transport Planning and Infrastructure | Strategic highway improvements/ public transport improvements | Ensure proposed public transport improvements go ahead as planned and that momentum to improve service provision is maintained | Reduction of No2 but amount unknown | Started implementation | On going | Securing sufficient funding to complete the project |
| 2 | Improve standard of bus services in partnership with Solihull Town Centre Advanced Quality Bus Partnership Scheme | Promoting travel alternatives | Other | A key output of the scheme will be that bus operators within the scheme area will take any layover at the rail station bus stands to ensure that traffic in the town Centre keeps moving on Station Road and Poplar Road. | Initially all buses in the scheme will be Euro 3 compliant raising to Euro 4 by mid 2018 raising to Euro 6 from 2020 and Euro 6 from 2021 | To be implemented by November 2017 | 2021 | Financial implications for operating companies |
| 3 | Raising awareness of air quality and sharing information | Public information | Via internet | | Reduction of pollutants | Awareness of air quality is now higher than previously. Will ensure web pages are up to date | On going | We need to raise people's awareness of actions they can implement themselves |
| 4 | Trial of electric vehicles for staff use | Infrastructure to support the use of hybrid/electric vehicles | Traffic Management | Trial of 3 electric vehicles. Installation of Electric Vehicle charging points | Reduction of NO2 | on-going | On going | Infrastructure needs to incorporate EV charging points |
| 5 | Solihull Walking and Cycling strategy | Promoting Travel Alternatives | Promotion of cycling/walking | schemes established in each year | Reduction unknown | A new strategy is due to be published June 2018 | 2018 | Changing viewpoints on alternative travel. |

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| No. | Measure | EU Category | EU Classification | Key Performance Indicator | Reduction in Pollutant / Emission from Measure | Progress to Date | Estimated / Actual Completion Date | Comments / Barriers to implementation |
|-----|---|-------------------------------------|---|---|--|---|------------------------------------|---|
| 6 | New and/or improved cycle lane . A new cycle route to be implemented. One from Solihull Town Centre to A45, the other is around the UKC Hub | Transport Planning & Infrastructure | Cycle Network | Restrain or reduce traffic volumes | Uptake of cycling | on-going | 2019/20 | It is expected that the TC to A45 will be implemented 2019-20 |
| 7 | Mode Shift Stars is a national schools awards scheme established to recognise schools that have demonstrated excellence in supporting cycling, walking and other forms of sustainable travel. | Promoting travel alternatives | School travel plans/promotion of cycling/ | To raise number of schools currently registered | Reduction of NO2 | 37 schools have registered. 16 have achieved bronze awards, 5 silver and 2 gold. Schools have seen a decrease of car use, an increase in numbers cycling and walking to school and a number now park and stride | On going | Initial funding for this project was gained via Local Sustainability Travel fund but this has now ceased and administration of the scheme is at present with SMBC |
| 8 | Restriction on road use around schools/school travel plans | Promoting travel alternatives | School travel plans | Restrain or reduce traffic volumes | Trial period for 3 schools to limit traffic on certain roads for an hour in morning and afternoon during term time. Permits will be issued to residents and other vehicles will not be allowed | Sept 2017 | April 2019 | Residents have agreed to restrictions. Barriers around enforcement of areas. |
| 9 | All refuse vehicles are now Euro 6.Working towards all other fleet vehicles | Vehicle fleet efficiency | Fleet efficiency | | Reduction in particulates, sulphur dioxide and nitrogen dioxide | Implemented for refuse vehicles. | On going | New cleaner emission vehicles are now successfully in operation .Other fleet vehicles now been implemented |
| 10 | Bikeability/cycle workshops | Promoting Travel Alternatives | School travel plans/promotion of cycling/ | Changing perception of alternative methods of travel from a young age and ensuring bikes are safe | Uptake of cycling | On going | On going | Bikeability / cycle training and maintenance continues to be offered to schools across the Borough |

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| 11 | <p>Scotability - developed to train young pupils how to scoot safely and sensibly to and from school. This programme encourages safe and active travel from an early age whilst providing children with fundamental skills to aid their balance and awareness which will help further in their lives, like when they come to riding a bike.</p> | Promoting travel alternatives | School travel plans/promotion of cycling/ | Changing perception of alternative methods of travel from a young age | | On going | On going | This has been very well received to date |
| 12 | <p>Agile working- many staff now have the ability to work from home or other locations</p> | Promoting Travel Alternatives | Encourage / Facilitate home-working | | Reduced vehicle emissions And reduction of vehicles in use at busy times of the day | Increase in number of staff working agile | on-going | Many staff now have the ability to work from home or other locations so reducing traffic to a small degree at peak times |
| 13 | <p>Staff travel plan and sale of transport travel passes</p> | Promoting travel alternatives | Workplace travel planning | More staff using alternative form of transport | Reduction of no2 | Salary sacrifice scheme in operation through cycle to work scheme., annual travel passes available | On going | |
| 14 | <p>Restriction of noisy street working for sensitive streets Under the Traffic Management Act 2004 and the Street Works (Registers, Notices, Directions and Designations) (England) Regulations 2007, the Council has declared some roads as being "Traffic Sensitive Streets", thereby limiting the times at which road and street works can</p> | Other | Quiet and out of hours work | Number of roads designated as sensitive | Reduce traffic congestion at peak times and reduction of NO2 | On going | On going | |

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| | be carried out in the interest of keeping traffic moving during peak periods. | | | | | | | |
| 15 | Independent travel training – personalised 121 sessions based around an individual's specific for young people to learn to travel independently | Promoting travel alternatives/promotion of cycling | personalised travel planning | To allow young people with special needs to travel independently | Enables youngsters to use public transport instead of private taxi service | Good uptake so far with 32 people now able to travel independently | On going | |
| 16 | Staff Bike loan | Alternatives to private vehicle use | Short term Bike Loan for SMBC staff | Increase in number of staff cycling | Reduction of No2 | implemented | On going | Changing viewpoints on possible barriers to cycling |
| 17 | Multi agency vehicle exercises- approx. 4 times a year, Aimed mainly at road safety. In partnership with Trading Standards, Licensing, west midland police, west midlands fire service, DVSA, DVLA, DWP and customs and excise. DVSA inspect roadworthiness of vehicles and a number have been impounded as dangerous | Other | Other | Reduction in number of unroadworthy cars taken off streets | Negligible reduction | 3 have taken place this year with a number of vehicles issued with prohibition notices for unroadworthiness and a large number of traffic/driving and licensing offences issued | On going | Needs co-ordination and co-operation of all agencies |

2.3 PM_{2.5} – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG16 (Chapter 7), local authorities are expected to work towards reducing emissions and/or concentrations of PM_{2.5} (particulate matter with an aerodynamic diameter of 2.5µm or less) as practicable. There is clear evidence that PM_{2.5} has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

PM_{2.5} has the highest epidemiological link to health outcomes and is used for the Public Health Outcomes Framework indicator. These particles can be inhaled deep into the lungs

There is no regulatory standard applied to the PM_{2.5} role (for local authorities in England) with respect to action to reduce emissions or concentrations of fine particulate air pollution, although action to tackle PM₁₀/NO_x would usually contribute to this.

Solihull Metropolitan Borough Council does not currently undertake any monitoring of PM_{2.5}, concentrations within the Borough but we are investigating the possibility of monitoring in the future and is currently developing its approach to address particulate monitoring in general in partnership with public health local authority officers.

An estimated 1 in 20 deaths in Solihull are attributable to particulate air pollution (Public Health Outcomes Framework). *NB: air pollution is a contributory factor to deaths from respiratory and cardiovascular diseases and is unlikely to be the sole cause of death.*

Work carried out by Public Health England as part of the Public Health Outcomes Framework (PHOF) shows the mortality associated with particulate air pollution. The table below shows the results for 2015 for Solihull compared to other areas in the West Midlands region.

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3.01 - Fraction of mortality attributable to particulate air pollution 2015

Proportion - %

| Area | Recent Trend | Count | Value | Lower CI | Upper CI |
|----------------------|--------------|-------|-------|----------|----------|
| England | - | - | 4.7 | - | - |
| West Midlands region | - | - | 4.8 | - | - |
| Birmingham | - | - | 5.1 | - | - |
| Coventry | - | - | 5.0 | - | - |
| Dudley | - | - | 4.8 | - | - |
| Herefordshire | - | - | 4.3 | - | - |
| Sandwell | - | - | 5.9 | - | - |
| Shropshire | - | - | 3.9 | - | - |
| Solihull | - | - | 4.8 | - | - |
| Staffordshire | - | - | 4.5 | - | - |
| Stoke-on-Trent | - | - | 4.4 | - | - |
| Telford and Wrekin | - | - | 4.0 | - | - |
| Walsall | - | - | 5.4 | - | - |
| Warwickshire | - | - | 4.7 | - | - |
| Wolverhampton | - | - | 5.0 | - | - |
| Worcestershire | - | - | 4.6 | - | - |

Source: Background annual average PM_{2.5} concentrations for the year of interest are modelled on a 1km x 1km grid using an air dispersion model, and calibrated using measured concentrations taken from background sites in Defra's Automatic Urban and Rural Network (<http://uk-air.defra.gov.uk/interactive-map>). Data on primary emissions from different sources and a combination of measurement data for secondary inorganic aerosol and models for sources not included in the emission inventory (including re-suspension of dusts) are used to estimate the anthropogenic (human-made) component of these concentrations. By approximating LA boundaries to the 1km by 1km grid, and using census population data, population weighted background PM_{2.5} concentrations for each lower tier LA are calculated. This work is completed under contract to Defra, as a small extension of its obligations under the Ambient Air Quality Directive (2008/50/EC). Concentrations of anthropogenic, rather than total, PM_{2.5} are used as the basis for this indicator, as burden estimates based on total PM_{2.5} might give a misleading impression of the scale of the potential influence of policy interventions (COMEAP, 2012).

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Solihull MBC does not currently have any automatic monitoring sites.

3.1.2 Non-Automatic Monitoring Sites

Solihull MBC stopped monitoring in 2012 as sites were generally under the exceedance limits. However Solihull MBC intends to start a new regime of monitoring levels of No₂ using diffusion tubes . This will start in June 2017 with approximately 24 locations identified across the Borough in key areas to determine base line levels.

The results will be included in the next report

Appendix A: Summary of Air Quality Objectives in England

Table A.1 – Air Quality Objectives in England

| Pollutant | Air Quality Objective ⁴ | |
|--|--|----------------|
| | Concentration | Measured as |
| Nitrogen Dioxide (NO ₂) | 200 µg/m ³ not to be exceeded more than 18 times a year | 1-hour mean |
| | 40 µg/m ³ | Annual mean |
| Particulate Matter (PM ₁₀) | 50 µg/m ³ , not to be exceeded more than 35 times a year | 24-hour mean |
| | 40 µg/m ³ | Annual mean |
| Sulphur Dioxide (SO ₂) | 350 µg/m ³ , not to be exceeded more than 24 times a year | 1-hour mean |
| | 125 µg/m ³ , not to be exceeded more than 3 times a year | 24-hour mean |
| | 266 µg/m ³ , not to be exceeded more than 35 times a year | 15-minute mean |

⁴ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

Glossary of Terms

| Abbreviation | Description |
|-------------------|---|
| AQAP | Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values' |
| AQMA | Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives |
| ASR | Air quality Annual Status Report |
| Defra | Department for Environment, Food and Rural Affairs |
| DMRB | Design Manual for Roads and Bridges – Air quality screening tool produced by Highways England |
| EU | European Union |
| FDMS | Filter Dynamics Measurement System |
| LAQM | Local Air Quality Management |
| LET&c | Low Emissions Towns and Cities Programme |
| NO ₂ | Nitrogen Dioxide |
| NO _x | Nitrogen Oxides |
| PM ₁₀ | Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less |
| PM _{2.5} | Airborne particulate matter with an aerodynamic diameter of 2.5µm or less |
| QA/QC | Quality Assurance and Quality Control |
| SO ₂ | Sulphur Dioxide |
| SMBC | Solihull Metropolitan Borough Council |
| WMCA | West Midlands Combined Authority |

References

TG(16) Local Air Quality Management Technical Guidance (TG16), April 2016

<http://laqm.defra.gov.uk/documents/LAQM-TG16-16-v1.pdf>