AIR QUALITY STRATEGY

(2015-2020)

Version 1: October 2015

List of abbreviations

AQAP- Air Quality Action Plan

BUATMS- Burton Urban Area Transport Management Study

LAQM- Local Air Quality Framework

NO_2- Nitrogen dioxide

NPPF- National Planning Policy Framework

PM- Particulate Matter

USA- Updating and Screening Assessment

Contents

1. Introduction

This document is the Air Quality Strategy for East Staffordshire Borough Council and sets out the overarching framework through which we manage air quality within our borough.

This strategy covers the period 2015-2020, in line with the Council's associated Air Quality Action Plan, but will be amended from time to time as required.

This strategy aims to guide and inform Council policy, ensuring a coordinated, consistent approach for the effective management of air quality. The Council has a diverse role in relation to air quality management, directly influencing through statutory requirements and indirectly through other policy and legislation. We also recognise the relative impact we have through our own emissions to air.

To guide the strategy an overall aim has been defined, along with a series of objectives which have been drawn up to include the main areas of air quality covered by the Council.

This strategy is supplemented by our latest Air Quality Action Plan which contains a revised set of actions from the 2009 plan, originally drawn up to address air quality exceedences within the two Air Quality Management Areas (AQMAs) in the borough. The full revised AQAP for 2015-20 is available separately from this document as Air Quality Strategy-Technical Document 1.

The strategy is also supplemented by the Council's policy and guidance for the assessment of air quality in relation to development control within the borough, in advance of the adoption of the Local Plan at the end of 2015 and the subsequent drafting of a supplementary planning document. This document is available separately from this document as Air Quality Strategy-Technical Document 2.

Indoor air quality issues and occupational exposure are not covered in this document.

The strategy has been developed having regard to current European and UK legislation, in addition to national policy and various other current best practice guidance documents which relate to air quality.

This information and guidance is aimed at various stakeholders ranging from internal Council departments to external stakeholders such as developers, businesses, other local authorities & agencies and the public.

2 Strategy statement

The aim of the Air Quality Strategy is:

> ***"To continue East Staffordshire Borough Council's commitment to the effective management of local air quality, working towards the control and reduction of the detrimental impacts that poor air quality can have on human health and the environment."***

This Strategy supports one of the priorities in the Council's Corporate Plan 2015-19, *"Protecting and Strengthening Communities-love where you live".*

The objectives of this strategy are to:

- Ensure that we meet our statutory responsibilities in relation to the National Air Quality Strategy.
- Continue to work towards improving air quality within our Air Quality Management Areas.
- Protect air quality in areas currently meeting national standards.
- Have a clear consistent process for the assessment of air quality in the context of development control.
- Ensure that all relevant Council policies positively integrate air quality in a consistent manner.
- Maintain an affective air quality monitoring network to measure progress and to help prioritise actions.
- Ensure that air quality measures and mitigation do not have an unacceptable effect on climate change or any other negative environmental impacts.
- Identify opportunities to involve and inform communities in air quality issues and undertake wider information campaigns around the air quality theme.

To meet these Objectives the Council will:

- Define our role within the National Air Quality Strategy and the rationale for having an Air Quality Strategy.
- Implement the Air Quality Action Plan for the Council.
- Have a documented process for the assessment of planning applications for air quality, in the context of the National Planning Policy Framework (NPPF) and the National Air Quality Strategy.
- Use qualified competent officers for the assessment of air quality issues.
- Work with other stakeholders, including neighbouring local authorities where possible to achieve the objectives of this Strategy.

3 Air quality and health

An indicator of mortality associated with air quality is now included in the Public Health Outcomes Framework as air quality is now recognised as a significant public health impact in the UK, with an effect equivalent to 29,000 deaths a year. The economic cost from the impacts of air pollution in the UK is estimated at £9-19 billion every year. This is comparable to the economic cost of obesity (over £10 billion) [(1)].

It is estimated that removing all fine particulate air pollution would have a bigger impact on life expectancy in England & Wales than eliminating passive smoking or road traffic accidents [(1)].

Air pollution can have both acute short-term and chronic long-term effects on health, particularly for those with pre-existing medical conditions.

The main air quality pollutants of concern in the UK are:

Particulates (PM) - a mixture of solids and liquid droplets suspended in the air which affect more people than any other pollutant. It is the smaller particles (≤10 microns), known at PM_{10} which can get breathed deeper into the lungs causing health effects such as cardiovascular and respiratory diseases and even cancer. $PM_{2.5}$ is an even smaller fraction of particulates (≤2.5 microns) for which even low concentrations can cause health effects and as a result the World Health Organisation (WHO) recommends guidance limits aimed at achieving the lowest possible concentrations [(2)].

Although some particulates are naturally occurring, a large majority are from human activity such as combustion processes associated with industrial and commercial sources, including the energy generating sector, and in particular from vehicle emissions. Towns and cities are often subject to higher concentrations of particulates, but large isolated sources can also be a problem, such as quarries and large industrial installations [(2)].

Nitrogen dioxide (NO_2) - is another pollutant that can commonly affect health, predominately through respiratory problems. The sources for this pollutant include combustion from vehicles engines and industrial activity, including the energy generating sector. Although particulate pollution is considered the most significant in terms of health effects, nitrogen dioxide limit exceedences are the probably the most widespread.

Ozone- low level ozone is a constituent of photochemical smog where sunlight reacts with oxides of nitrogen or volatile organic compounds (VOCs), which is why this pollutant commonly occurs in the summer. Ozone at higher levels can cause a

number of respiratory problems and also cardiovascular issues [2]. Sources of ozone tend to be both industrial and from vehicle emissions

4 The air quality management delivery hierarchy

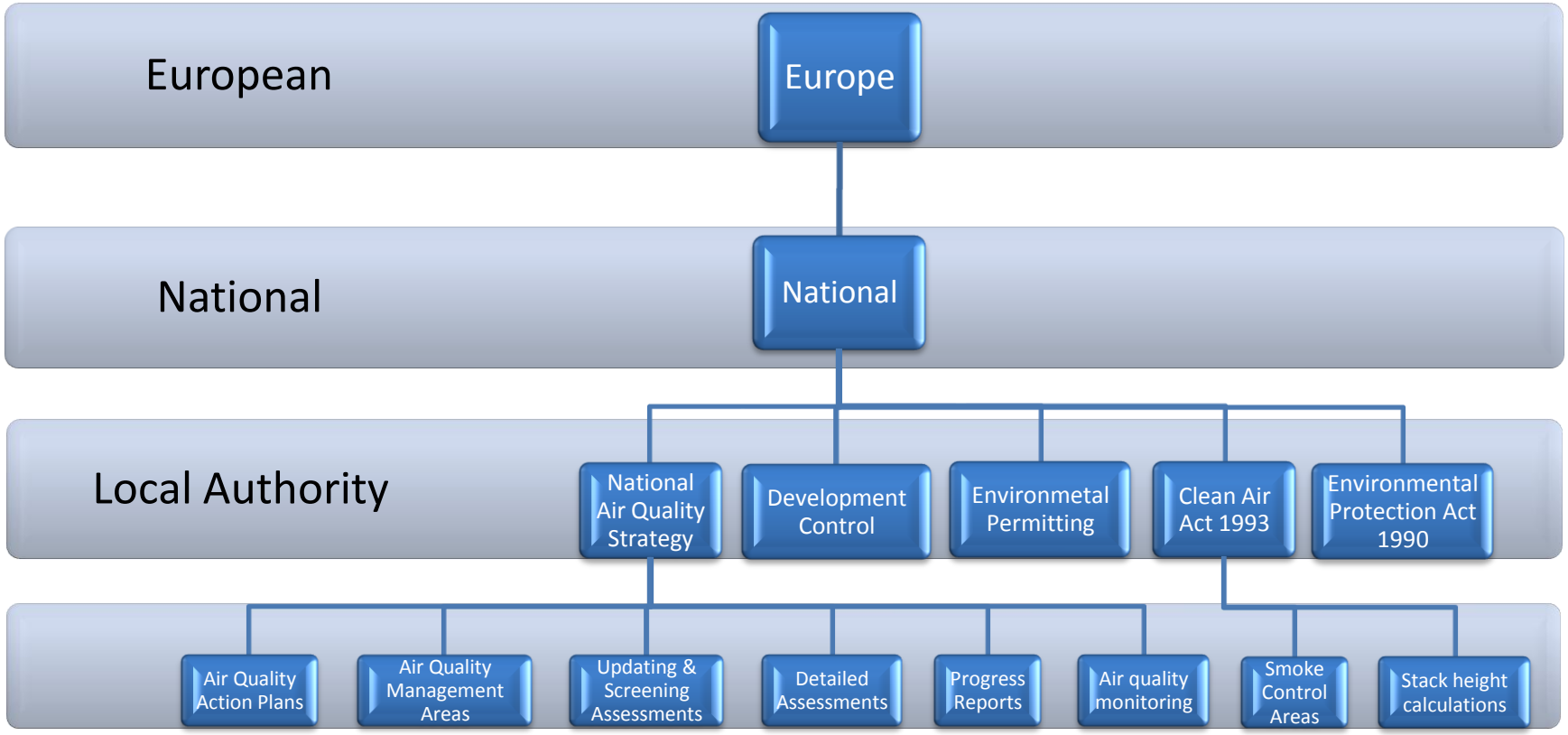


Figure 1 Air Quality Hierarchy

The figure above gives a simple overview of the delivery of air quality activity. Whilst some air quality management activity gets implemented at a European or national level, other activity is undertaken at a local authority level. As a borough council, we are a 2nd tier local authority responsible for five areas of air quality control:-

- The National Air Quality Strategy
- Development Control
- Environmental Permitting
- The Clean Air Act 1993
- The Environmental Protection Act 1990

Under some of the five areas of activities are further sub-sections of activity.

These five main areas of activity will be described in subsequent chapters below, but fall under the remit of the Pollution Team, within the Environmental Health Service at the Council.

In addition to the five areas of direct air quality management, there are a number of additional areas or activities that can influence air quality indirectly. These include:-

- The Climate Change Strategy & Climate Change Adaptation Plan
- The Environmental Management Policy
- The Travel Plan
- The Procurement Strategy
- The Home Energy Conservation Act Plan (HECA)

5 The National Air Quality Strategy Framework

5.1 The National Air Quality Strategy

In the UK, control of air quality is predominantly driven by European legislation, namely the 2008 *Ambient Air Quality and Cleaner Air for Europe Directive* which replaces earlier European legislation. The directive is aimed at protecting human health and the environment by avoiding, reducing or preventing harmful concentrations of air pollutants. Legally binding limit values for certain air quality pollutants are retained from earlier directives and included in UK legislation.

The European Commission has recently initiated formal proceedings against the UK as part of an infraction process for failing to meet legal air quality limits for the pollutant nitrogen dioxide (NO_2). The UK is currently failing limits in 16 of 43 zones across the Country, including the West Midlands. It is exceedences of the annual NO_2 limit that is the focus of air quality control in this borough and which contribute to the above West Midlands Zone European exceedence.

On a domestic level, Section 80 of the Environment Act 1995 established the National Air Quality Strategy which details current air quality and sets out the policy of how England, Scotland and Wales will meet European pollutant limits. Objectives for a number of pollutants are set which prescribe a maximum ambient concentration that must not be exceeded, by a certain timescale. It is these limits that local authorities assess air quality against. Long and short-term objectives are set for each pollutant and are assessed in relation to a representative exposure location i.e. long-term exposure tends to be considered in relation to residential receptors. Short term objective concentrations are higher than longer term objectives.

The full list of objectives can be found in Appendix 1.1.

It is recognised that despite national measures, some areas of poor air quality are better addressed at a local level, with the role of local authorities being important. As part of the National Air Quality Strategy, the Environment Act 1995 also established Local Air Quality Management (LAQM) through which local authorities are required to periodically review and assess their areas to determine exceedences in the air quality objectives. The objectives applicable to the LAQM process are set in the Air Quality Standards Regulations 2010 and are closely linked with national objectives. Where local objective exceedences are identified the local authority must declare AQMAs and draft Air Quality Action Plans (AQAPs) in pursuit of meeting the objectives in question.

As part of the review and assessment process local authorities annually produce Updating and Screening Assessment (USA) to revisit previous air quality assessments and check that previous conclusions are still valid and that no new or amended

AQMAs are required. This stage is typically a desk top exercise and often involves screening modelling.

If the USA process highlights any potential new air quality exceedences and any issues need closer examination a Detailed Assessment is undertaken, which uses more detailed dispersion modelling.

USAs are normally completed every other year, and if a detailed assessment is not required, then a simple Progress Report is produced which provides an update of air quality in our area, and if applicable an update of progress with any AQAPs.

To aid the review and assessment process, DEFRA has produced various supporting documents, in particular a Technical Guidance Note TG09[3], which provides an assessment methodology for the process. Separate policy guidance exists to compliment the technical guidance, which explains the rationale for the review and assessment process in more detail.

5.2 Air Quality Management Areas

In 2007 the Council declared two areas within our borough as Air Quality Management Areas (AQMAs) after the annual objective for NO_2 was exceeded or expected to exceed at a number of locations. Both AQMAs are located in the town of Burton upon Trent and are detailed in maps in Appendix 2.

A source apportionment exercise highlighted that these exceedences are almost entirely due to traffic emissions, either due to high levels of traffic or congestion. This type of exeedence for NO_2 is a common situation for many local authorities.

In respect to the larger of the AQMAs, not all of the roads within the declared area fail due to exceedences in the air quality objectives. Due to the arterial layout of the road network and how they are all linked, it was considered a more practical approach to declare the road network in one large AQMA rather than a number of smaller ‘isolated’ streets or roads. This makes it strategically easier to manage actions to improve air quality and also avoids potentially ‘shifting’ areas of poor air quality to other roads as measures focus on the whole AQMA.

The declaration of AQMAs provides a focus for air quality management actions within the local area and local authority are statutorily required to work towards reducing air quality levels to below objective levels. AQAP are drawn up to improve air quality in these areas, along with protecting air quality outside of designated areas.

AQMAs are formally recognised and are material considerations in planning and can influence the type or extent of development in affected areas.

Monitoring by this Council shows a general gradual downward trend in nitrogen dioxide levels at sites within the AQMA's over the past six years, although there are still exceedences at some locations within the larger AQMA.

AQMAs can be 'undeclared', but only after a number of years of no exceedence to demonstrate any temporal trends, which is why the smaller of the AQMAs still remains.

5.3 The Air Quality Action Plan

The Council drafted its first Air Quality Action Plan (AQAP) in 2009 which set out how we would maintain and improve air quality within the AQMAs and their surrounding areas. Given the local impact of traffic on air quality, the main focus of the AQAP related to traffic control and management with a large proportion of measures coming from the Burton Urban Area Transport Study (BUATMS), which related to Staffordshire County Council's second Local Transport Plan.

This original AQAP has now been reviewed with new and revised actions which can be found in a separate Technical Document 1.

One of the biggest drivers for maintaining and improving air quality within the borough is through road transport. Road transport measures in East Staffordshire are governed by the Local Transport Plan, which is in its third phase and is delivered by Staffordshire County Council. Under the Local Transport Plan, a wider Strategy Plan for the whole of Staffordshire was published in 2011, which outlines the objectives and policies for managing transport, infrastructure and highways in the County. Feeding into this is the Integrated Transport Strategy that was finalised in 2014, which sets out a number of measures specifically for East Staffordshire.

Within the Integrated Transport Strategy is a Burton upon Trent Local Transport Package, with short to medium term measures over the next three years and longer term measures up to 2031. The Burton upon Trent Local Transport Package focuses mainly on mitigating the potential impacts of traffic generated from housing and employment growth earmarked as part of this Council's Local Plan. It aims to address existing traffic issues on Burton's road network as well as encouraging sustainable travel in pursuit of maintaining and where possible improve air quality.

In terms of the two main trunk roads of the A38 and A50, any improvement measures will come under the responsibility of Highways England (formerly Highways Agency) through the Road Investment Strategy up to 2040. There are measures that are in the very early stages of development, but will be subject to feasibility work and funding, so at this stage they are more of a long term aspiration beyond the lifetime of this revised AQAP.

The Council has also included a number of policy measures in pursuit of achieving further air quality benefits. One of the most effective ways this can be achieved is through the development control system. The Council has therefore put forward an AQAP measure for a Development Control Policy for Air Quality Management, which can also be found as a full document in Technical Document 2, which is also available separately.

6 Development Control and air quality

Strategically, one of the most effective areas our Council can influence air quality is through development control.

The Pollution Team at the Council is a consultee for air quality and for the last financial year of 2014-15 was consulted on over 400 planning applications for environmental issues ranging including noise, contaminated land and importantly, air quality.

The borough is earmarked for a significant amount of future growth as set out in the Council's Local Plan, which is due for adoption at the end of 2015 and it is important that this development is sustainable.

The full 'Air Quality Guidance for Development Control' document exists separately as Technical Document 2 and is designed to support the planning process until such time this Council adopts a formal environmental sustainability supplementary planning policy.

The Council currently assesses new development in the context of the National Planning Policy Framework (NPPF) to ensure that the AQMAs are not adversely affected and to ensure developments are suitable and not introducing new exposure to areas of poor air quality. The NPPF highlights that local planning policies should sustain compliance with and contribute towards EU limit values or national Objectives for pollutants, taking into account the presence of AQMAs. Planning policies should also be consistent with local Air Quality Action Plans and as such air quality is often a material consideration.

7 The Environmental Permitting Regulations 2010 (as amended)

The Environmental Permitting Regulations 2010 (as amended) cover England and Wales and apply to over 80 different industrial sectors and are designed to control impact on the environment and human health.

The Environmental Permitting Regulations require that certain industrial installations obtain a Permit or in some cases an exemption in order to deliver national legislation and policy in order to meet European environmental targets through best practice.

The Environmental Permitting Regulations are the interpretation of the Integrated Emissions Directive which consolidates a number of previously separate directives.

From a local authority perspective, depending on certain thresholds, industrial facilities are either permitted as Part B installations, which predominately cover emissions to air or A2 installations which includes emissions not only to air but water and land and have further requirements related to waste and environmental management requirements.

Permits are based on Process Guidance Notes for each sector and for both Part B and A2 installations, which are based on ‘best available technique’ and set emission limits for the various types of processes.

For new installations, permit applications often go hand in hand with planning applications, and the air quality assessment process.

8 The Clean Air Act 1993

The Council enforces dark smoke emissions from chimneys in the Smoke Control Area in Burton upon Trent. The Clean Air Act 1993 also prohibits dark smoke emissions from commercial bonfires. Without Smoke Control Areas, if significant solid fuel be burned in chimneys in an area then there may be localised air quality issues for particulates, which increase general background air pollution levels.

Whilst activities under the Clean Air Act are separate from the National Air Quality Strategy and do not relate to development control, they are still important in the context of air quality, albeit normally on a very local level.

A map of the Smoke Control Area can be found in Appendix 3.

9 Environmental Protection Act 1990

The Council also enforces section 80 of the Environmental Protection Act, in relation to emissions to air causing a statutory nuisance, including bonfires. As with the Clean Air Act, this issue is not included in the context of the overall aims of this policy, although still important on a local level.

Although in terms of health effects, isolated bonfires are not significant, they can however be very obvious and cause discomfort and annoyance to neighbours and can generate a significant number of complaints.

10 Indirect Council roles which can affect air quality

East Staffordshire Borough Council has an Environment Policy for the Council, which has the potential to influence our own emissions to air through the reduction of fleet/staff mileage and energy usage. The Environment Policy also commits the Council to supporting associated policies such as this strategy, to reduce pollution.

The Council's Travel Plan also supports reductions of fuel use which whilst only having a small air quality impact does demonstrate leadership whilst encouraging others to do the same.

The Council also has both a Climate Change Strategy and Adaptation Plan, alongside a Home Energy Conservation Act (HECA) Plan. These documents primarily aim to reduce greenhouse gas emissions, and many of the actions which support this aim also have a beneficial impact on air quality. This is not always the case however, as in the case of biomass boilers, which can cause localised air quality issues.

Finally, the Councils Procurement policy can help influence our suppliers to reduce their impact on air quality.

This strategy aims to support and help promote measures that support air quality improvement. In some instances the same departments may be responsible for the above policies but is important to embed air quality considerations across the organisation.

11 Air Quality Monitoring

A key element for assessing and managing local air quality is the monitoring process.

The Council has an extensive network of air quality monitoring in Burton upon Trent, composed of both automatic and passive methods.

Our monitoring is used to identify areas of air quality Objective exceedences and helps to determine trends in air quality, and importantly whether air quality is improving or deteriorating. Our automatic monitoring information also feeds into the National Monitoring Network as it is fully quality controlled and assured.

References

1. Air Pollution: Action in a Changing Climate. Defra 2010.

2. Ambient (outdoor) air quality and health. WHO March 2014.

3. Technical Guidance Note (09) LAQM.TG09 View here

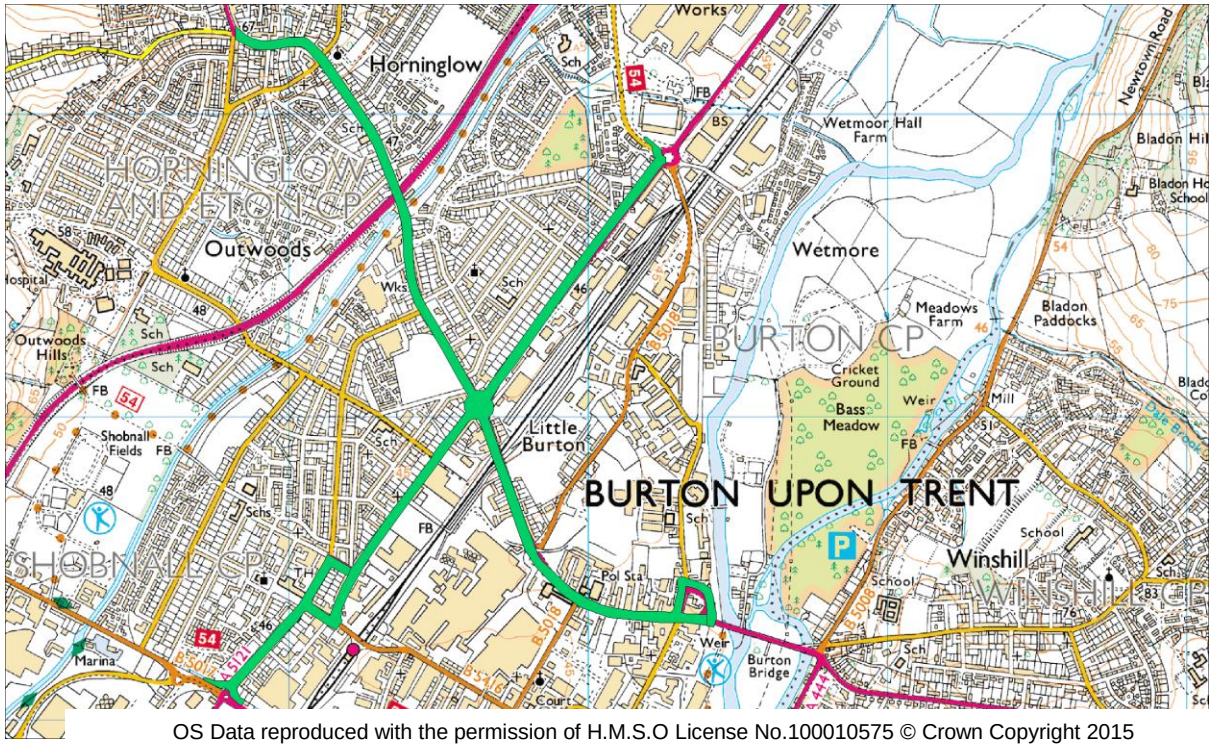
Appendix 1

Air Quality Objectives

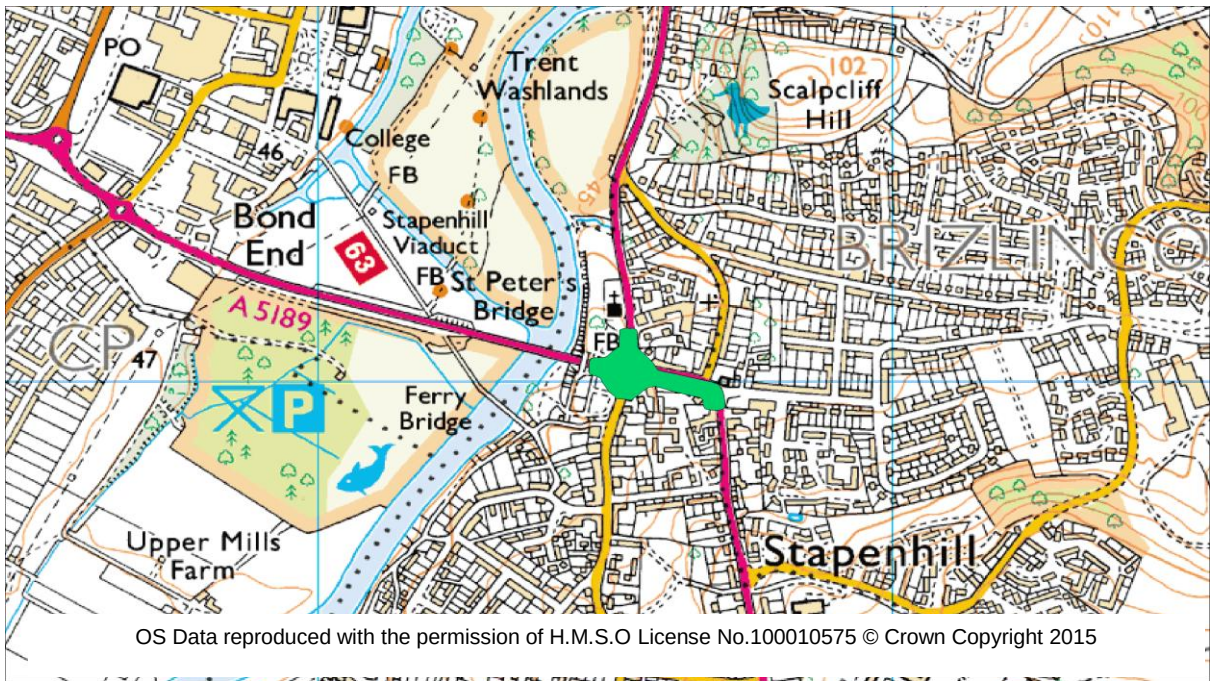
Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m^3	Running annual mean	31.12.2003
	5.00 µg/m^3	Annual mean	31.12.2010
1,3-Butadiene	2.25 µg/m^3	Running annual mean	31.12.2003
Carbon monoxide	10 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.50 µg/m^3	Annual mean	31.12.2004
	0.25 µg/m^3	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m^3 not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m^3	Annual mean	31.12.2005
Particulate Matter (PM_{10}) (gravimetric)	50 µg/m^3, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m^3	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

Appendix 2

Air Quality Management Areas

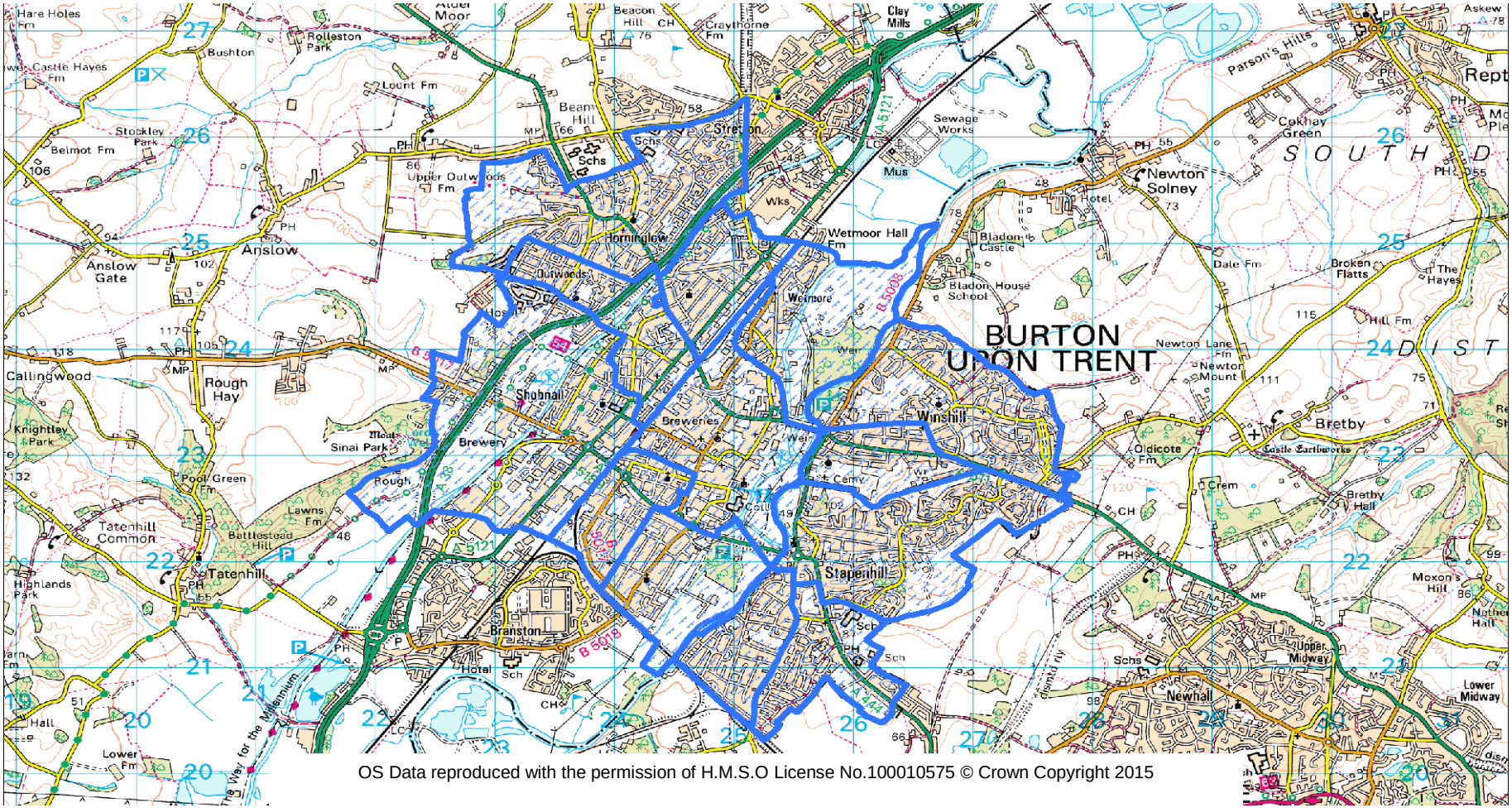


AQMA 1. Burton-upon-Trent- Derby Rd, Derby St, part of Princess Way roundabout, Horninglow St, Horninglow Rd, Bridge St, Wellington St, part of Borough Road, part of Wellington St roundabout, part of Waterloo St and part of Byrkley St.



AQMA 2 – St Peters Bridge roundabout, Stapenhill, Burton-upon-Trent – St Peters Bridge roundabout and part of St Peters Street

Appendix 3 Map of Smoke Control Area- Burton upon Trent



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