

Towards Better Air Quality

An Air Quality Action Plan for Chichester District

2015 – 2020

Contents:

1.0	Executive summary
2.0	Our priorities for action
3.0	About this action plan
4.0	Background
5.0	The environmental and public health context
6.0	Strategic alignment
7.0	The Chichester specific challenges
8.0	Glossary of terms
Appendix 1	Chichester Air Quality Management Areas (AQMAs)
Appendix 2	Vehicle contributions to pollution in the AQMAs – source apportionment

Foreword by Councillor John Connor:

Chichester District Council is committed to supporting sustainable growth. The District's considerable environmental assets, which attract people to live, work and holiday here are to be cherished and protected for future generations to enjoy.

Whilst our District's air quality is generally good there are some specific areas where vehicle pollution causes us to fail a health based standard for nitrogen dioxide. Some of our roads carry high volumes of traffic through the City and future development poses a challenge from additional vehicle trips.

We see air quality as an important public health issue which needs to be considered in related policy and tackled in conjunction with our partners who include West Sussex County Council and the Sussex Air Quality Partnership. Many of the actions suggested by this action plan have benefits across related areas of policy such as transport, public health and, importantly, the economy also benefits from a high quality environment in a multitude of ways.

I hope you find this action plan for 2015 – 2019, and its aspirations, to be effective in these challenging times. The actions which flow from this plan will help to encourage and drive better environmental quality maintaining our District as a place in which people and businesses can continue to thrive and flourish.

Councillor John Connor
Cabinet Member for Environment

1.0 Executive summary

Chichester District Council (CDC) has produced this revised Action Plan as part of its duty under the Environment Act 1995 subsequent to the declaration of three Air Quality Management Areas (AQMAs). These AQMAs are declared in relation to the air quality in these locations failing to meet the UK air quality objective for nitrogen dioxide¹. The declaration of an AQMA places a statutory obligation on us to produce an Air Quality Action Plan (AQAP).

Since our 2008 AQAP there have been various events that have made the context for an AQAP significantly different to six years ago. The science that quantifies the impact of air pollution continues to become more refined with figures now being available for regional health impacts². Simultaneously the EU is taking legal proceedings against the UK Government for failure to comply with an EU air quality standard. The Government has passed legislation³ whereby any resulting fines can be passed down to local government. The Government is also reviewing the Local Air Quality Management regime within which this work sits. The political and policy balance of these various issues and considerations appear to suggest that air quality policy is likely to strengthen over the coming years.

Also since 2008 the council has had some successes under the auspices of this work. We have won in excess of £290K of grant monies from a variety of sources. We have delivered Chichester's first commercial car club, the first electric vehicle charging points in Chichester, 140 additional bike parking spaces in Chichester City Centre, contributed to the Air-alert service and significantly strengthened our relationships with key partners and the community. Nevertheless vehicle traffic volumes have grown over the period causing a general rise in emissions.

Three AQMAs remain. Better engine technology has not delivered the promises that were predicted and future development in our district and regionally poses further challenges.

This AQAP sets out actions that will positively impact on our local air quality. These actions are both within and beyond the powers of this Council. As such the actions proposed in this document will rely on effective engagement with our partners. In this context our key partners are internal departments in this Council and West Sussex County Council, the local community and the Highways Agency. The pan-authority officer and member Air Quality Working Group continues to be an important vehicle to formalise the process of the Councils' working together.

¹ Stated as an annual mean concentration $40\mu\text{g}\text{m}^{-3}$.

² Public Health England suggesting that 4.9% of deaths in Chichester District are related to particulate pollution ($\text{PM}_{2.5}$).

³ The Localism Act 2011.

CDC have delayed the review of the 2008 AQAP due to the review of the Local Air Quality Management regime.

2.0 Our Priorities for Action

Priority 1: Measure, model, and report on air quality

Priority 2: Strengthen partnerships, seek funds, pool resources and exploit synergies

Priority 3: Encourage low emission technology

Priority 4: Encourage and foster behavioural change/modal shift

Priority 5: Be innovative, capitalise on opportunities and celebrate our successes, reduce emissions by 1%.

These five priorities for action comprise our strategic approach for tackling air pollution across Chichester District. The Priorities are further described in Section 7.0 below.

3.0 About this Action Plan

Chichester needs an AQAP that reflects the changing local environmental and national conditions. New developments will add to the number of cars on the roads and, whilst we are not anti-car, we must seek to encourage and foster and enable growth in alternatives to conventional fossil fuelled vehicles and increase levels of walking and cycling. England is being prosecuted for non-compliance with the EU air quality objective for Nitrogen Dioxide. Likewise DEFRA is mid-review of the Local Air Quality Management regime; both of these facts allude to the possibility of changes to the way that air quality is managed across England. As such we have made the aspirations and actions of this plan broad to allow for possible changes to the regime.

With the above facts in mind we recommend that readers who are interested in the statutory basis for our work read our 'annual reports'⁴ which include an up to date description of the regime which bestows statutory duties on all mid-tier – and unitary - authorities. These annual documents contain our air quality monitoring data and maps indicating the geographic extent of the three Air Quality Management Areas (AQMAs) (see Appendix A for maps of the geographic extent of the AQMAs.) Suffice to say that for Chichester air quality fails a UK air quality health based standard in three areas of the City, a fact which necessitates this plan.

CDC cannot significantly affect air quality at a macro level. Nevertheless its actions, priorities and leadership can make a difference to local residents and businesses and thereby air quality. It can develop strong partnerships to access funds, lobby for investment and influence others to work towards cost-effective outcomes; use its own land and estate in ways that encourage 'green' and healthier behaviour and signal to the local community about the sort of activity that it wants to encourage through investment, leadership and publicity.

⁴ <http://www.chichester.gov.uk/article/25142/Air-quality-review-and-assessment> see Progress Reports and Update and Screening Assessments.

The previous AQAP⁵ set out a number of actions for the improvement of air quality. Since that time various sources of grant funding have enabled the delivery of a number of actions including the Co-Wheels car club, the Workplace Cycle Challenge, additional bike racks in the City Centre and various behavioural change initiatives aimed at fostering growth in cycling. We were also instrumental in the setting up of a cycling forum for Chichester and District and have forged strong working partnerships and relationships with our colleagues at WSCC and the wider community.

This AQAP builds on what has been achieved through the previous document and includes some ambitious actions for tackling local air quality issues. It sets out the basis for our understanding of air quality and its impacts through monitoring and reporting, encourages the use of fiscal measures to tackle vehicle related pollution and recommends a partnership approach to bring more resource to bear in continuing times of austerity.

CDC cannot take the credit for the District's future success in tackling air pollution neither can it take the blame for its failures. Its impact will be judged in the way it leads, acts and co-ordinates activity in the areas where it can make the most significant difference. This strategy and Action Plan will help to achieve these aims.

4.0 Background

The human lung has the internal surface-area of a tennis court and the air that we breathe is in intimate contact with that surface-area of our body. Many different pollutants, both solid and gaseous, transfer from our lungs into our bloodstream whereby they are carried round our bodies. There is a growing body of evidence for the impact of air pollution on our health with Public Health England suggesting that 4.9% of deaths in Chichester District are related to particulate pollution⁶⁷.

The UK Government has provided a statutory basis for monitoring, reporting and tackling air pollution issues (which is known as Local Air Quality Management LAQM). The basis for this system is for the protection of public health⁸. As such CDC has been monitoring air quality in the district since 2000. This has led to the declaration of three Air Quality Management Areas (AQMAs) where air quality fails a UK health based Objective for Nitrogen Dioxide (NO₂).

Locally the process of tackling air pollution issues is described in the AQAP as a series of intended actions. This document is a refresh of the AQAP that was adopted by CDC in 2008. Whilst the emphasis here is on Nitrogen Dioxide pollution most of

⁵ Adopted in 2008.

⁶ PM_{2.5} particles less than 2.5µm in diameter.

⁷ Estimating Local Mortality Burdens associated with Particulate Air Pollution, Public Health England, April 2014.

⁸ All of the UK's LAQM air quality standards and objectives are health based standards.

the actions will in any case help to tackle PM_{2.5} which is also a pollutant of significant importance regarding public health.

In Chichester the dominant local component of air pollution is emissions from road traffic. The management and development of the Highways is the responsibility of the highways authorities – West Sussex County Council (WSCC) and the Highways Agency (HA) for major trunk roads (the A27 in this district), whereas the duties to monitor and tackle air quality are a statutory duty on CDC. As such the delivery of the AQAP is overseen by the Air Quality Working Group (AQWG) which is attended by officers and elected members of both WSCC and CDC. Governance through the AQWG facilitates actions that are relevant to both authorities and their agenda and allows for political buy-in from both authorities.

5.0 The environmental and public health context

The policy area of air quality has changed significantly since the adoption of the first AQAP in 2008. It is important that the wider context for writing local policy is understood such that local policy is congruent with the bigger picture and in harmony with national policy both existing and emerging. At the time of writing the situation is fluid with the Government reviewing the air quality regime and the Government having an EU judgement against it with regard to failure to deliver the National Air Quality Objective for NO₂.

Although the rewritten guidance is not yet available it appears that the main effect of the revisions will be to slim down local authorities' reporting requirements under the regime. As such, despite there being a risk that a more radical overhaul of the regime remains possible, it seems unlikely that there will be any significant changes.

The EU court has recently passed judgement with regard to the UK's non-compliance with the NO₂ objective. This matter relates to regions within the UK being non-compliant with the EU air quality directive standard for Nitrogen Dioxide. As such the matter is now for consideration by the UK's national court which is required to pass judgement on the timescale for national measures to achieve the air quality standard, such that compliance is achieved within as short a timescale as possible. CDC is cognisant of this fact and, through the actions laid out in this document, seeks to do all that it can to support the SE region in being compliant at the earliest time.

The draft Local Plan is currently under inspection and, if found sound by the inspector and subsequently adopted by CDC, implies the building of a minimum of four hundred and thirty five houses per year from 2015 to 2029⁹. The addition of houses and related infrastructure such as schools, doctors' surgeries, retail and recreational facilities will result in additional traffic movements (or 'trips'). As such,

⁹ This number excludes any additional housing target that will be delivered through the South Downs National Park Local Plan which is yet to be written.

despite the fact that engine emission standards are improving over time the increase in traffic volume has potential to impact on air quality. In relation to public health and the NPPF (delivering sustainable development), air quality is an important consideration to be weighed through the development management process.

Many of the actions delivered by local authorities to help improve local air quality have impact in other important policy areas. Modal-shift work promotes active-travel and so is relevant to Highways and Economic Development in relation to reducing congestion and freeing up road capacity. Likewise modal-shift to active travel modes is important in relation to public health priorities such as tackling obesity and related morbidity¹⁰.

6.0 Strategic alignment

The actions in this plan are aligned with the following strategies and plans:

- CDC Corporate Plan (Protect and maintain our natural and built environments).
- CDC draft Local Plan (Policy 8).
- Chichester District Car Park Strategy 2010-2020 (p14).
- West Sussex Transport Plan 2011 – 2026.
- West Sussex Public Health Plan 2012 – 2017.

¹⁰ For instance diabetes and asthma.

7.0 The Chichester specific challenges

Priority 1: Measure, model, and report on air quality.

This priority forms the foundation for all of our air quality work in the District. The measurement of air quality, set in the context of national health based air quality standards and objectives (AQO's), helps to drive our need for action and informs how and where we target our actions.

Local air quality data informs modelling and impact assessments for local planning applications and is utilised in public health services to help persons vulnerable to the impact of poor air quality episodes self-manage their condition.

Table 1: Priority 1 supporting actions.

Action	CDC role and key partners	Impact measure
Continue to run real-time air quality monitoring stations the data from which is ratified by King's Environmental Research Group (ERG).	Leading: CDC. Partners: Sussex-air and King's ERG.	Annual reporting of air quality trends to Inform priority health areas and built and natural environment Corporate objectives. Data to support bids of grants and help deliver successful bids. Success measure: two monitoring stations operational across the plan period.
Publish real-time data on the internet.	Leading: Sussex-air with King's ERG who also provides the web-site.	Increased awareness in the general public as to the impact of air pollution. Success measure: a 5% increase in visits to the web-pages across the plan period.
Continue to monitor using passive diffusion tubes.	Leading: CDC.	To provide a cost-effective wider geographic understanding of air quality trends. Success measure: ten monitoring locations across the plan period.
Annual air quality report.	Leading: CDC (as a statutory obligation).	Success measure: annual report reports data and action plan progress (report produced to DEFRA statutory deadline).

Model the effect of air quality actions to justify action choices.	Leading: CDC. Supporting: Sussex-air.	Develop an emission reduction hierarchy enabling resources to be more effectively directed. Success measure: Modelling to be complete by 2016, hierarchy by mid 2016.
--	--	---

Priority 2: Strengthen partnerships, seek funds, pool resources and exploit synergies.

This priority builds on the work that we have previously delivered, the majority through partnership working. This approach is in part recognition that the air quality impacts in our district and across the region are predominantly associated with vehicle emissions. Transport Policy is the responsibility of both West Sussex County Council and The Highways Agency and is beyond the direct influence of CDC. Our approach is to continue to join forces with relevant agencies to bring greater resources to projects and to tackle issues.

Poor air quality has an impact on many types of receptor including ecosystems, crops and human health. Local Air Quality Management (LAQM) relates to the protection of human health and as such strengthening relationships with West Sussex Public Health is an important aspect of future work. Given the wide range of factors contributing to local air pollution we interpret our duty to tackle the issue in the widest possible context as actions offer benefits which cross-cut many policy areas.

Given the regional nature of the current infringement proceedings against the UK then CDC will, where possible and relevant, work with its neighbouring authorities to deliver initiatives that tackle air pollution more regionally.

Table 2: Priority 2 supporting actions.

Action	CDC role and key partners	Impact measure
Continuation of the CDC/WSCC Air Quality Working Group.	Leading: CDC. Partner: WSCC.	Political engagement in action planning. Success measure: Air Quality Working Group to meet twice per annum.

Continued input and support of Sussex-air.	Leading: CDC. Partners: WSCC and all other West Sussex District and Borough Councils.	Knowledge and resource sharing for more effective working pan-Sussex. Success measure: CDC officer to attend 5 meetings per year.
Seek to better relationship with the Highways Agency (HA.)	Leading: CDC/WSCC	Discussions with the HA regarding the air quality impact of the proposed A27 amendments both on the A27 and to related roads. Success measure: HA provides modelling to predict and quantify the air quality impact of any changes.
Annual bid to DEFRA air quality grant monies.	Leading: CDC.	Successful bids leading to capital and revenue grant awards to enable the action plan delivery. Success measure: CDC annual bid to DEFRA air quality grant.
Hosting temporary behavioural change posts	Leading/partner: CDC/WSCC.	Knowledge and resource sharing for more effective working pan-Sussex. Success measure: CDC hosts behaviour change posts.
Seek to develop a closer relationship with West Sussex Public Health	Leading: CDC.	Access to funding from Public Health. Success measure: WSPH funds behavioural change interventions within the plan period.

Priority 3: Encourage low emission technology.

The majority of Chichester's local air quality issues relate to emissions from motorised transport. Despite this the car remains an essential part of everyday life and is likely to do so for the foreseeable future. The take-up of modern Ultra Low Emission Vehicles (ULEVs) and Zero Emission Vehicles (ZEVs) into the vehicle fleet is an important trend which can contribute an increasingly positive influence on local air quality. Whilst the numbers of such cars on the roads is yet modest the sales trends suggest that they will rapidly become a significant proportion of the UK's vehicle fleet. Local infrastructure can help to foster this technology and there

remains the possibility of incentivising the take-up of such technology through related policy areas such as Parking Services and Transport Planning.

In the three Chichester AQMA's the dominant emitter of NOx is diesel cars though other vehicle classes contribute greater emissions per vehicle. If that part of the fleet was ZEV's then the AQMA's would not exist. One of the key barriers to the take-up of electric cars is the lack of supporting infrastructure. In Chichester District there are currently six electric vehicle charging points and there is frequently excess demand for use of the two EVCPs at East Pallant House car-park. 98% of vehicle trips are less than 50 miles¹¹ in length, making such technology a potentially practicable choice for many people.

Table 3: Priority 3 supporting actions.

Action	CDC role and key partners	Impact measure
Seek to embed air quality considerations and actions into related policy.	Leading: Environmental Health (CDC) Supporting: Parking Services and Development Management.	Review all CDC policies to ensure air quality is included where relevant by mid-2015. Air quality related policies in the revised Chichester District Car-Park Strategy by 2016 and seek to integrate air quality considerations better into the development management process.
Seek grants to support the implementation of low emission vehicle relevant infrastructure.	Leading: CDC. Supporting: WSCC.	Before and after surveys to provide insight into the effect of the provision.
Work with public service vehicle operators to seek lower emission vehicles that travel through AQMAs.	Leading: WSCC/CDC	Reduces emissions from buses. Success measure: Bid made to available grant within the plan period.

¹¹ OLEV website 2014.

Priority 4: Encourage and foster behavioural change/modal shift.

For most people the convenience of the private car is a necessary aspect of modern life. Nevertheless some local journeys can be made by modes other than the private car. Stimulating and growing the number of journeys made by non-car mode 'smarter choices' or modal-shift is an important aspect of tackling vehicle related pollution. For instance expanding the number and location of bike¹² racks signals to people that they can travel conveniently by bike to the City Centre. In addition, growing the car club demonstrably helps to shift culture away from car ownership and simultaneously increases walking and cycling rates. Likewise encouraging children to cycle to school means that they are more likely to carry the habit through their lives.

The emerging Local Plan makes provision for additional homes in the district. In turn the residents of these new properties will generate additional vehicle movements. It is an important part of the planning process to incentivise and encourage new residents to adopt new habits through a mixture of high quality infrastructure and behavioural change measures.

Behavioural change and/or smarter choices require social marketing based techniques to engage with the community to foster behavioural change towards greener modes of transport. Such an approach is most effective where it is supported by infrastructure to help facilitate change. Offers such as new bike racks positioned so as to suggest change (for example at the entrance to a retail area or at the railway station) are known as 'change architecture' and help to suggest the possibility of behaviour change. Electric vehicle charging points and car club vehicles in prominent locations help new technologies and ideas to become behavioural norms, where the public generally like to conform.

Table 4: Priority 4 supporting actions.

Action	CDC role and key partners	Impact measure
Seek grants and match funding for the implementation of behaviour change interventions.	Leading: CDC. Supporting: WSCC.	Success measure: One annual behavioural change intervention.

¹² Where possible the provision should be visible, secure and weather proof.

Seek grants and match funding for the implementation of infrastructure that supports modal shift.	Leading: CDC. Supporting: WSCC.	Additional electric vehicle charging points in CDC long-stay car-parks and additional designated and protected cycle paths. Success measure: 30 electric vehicle charging points in long-stay car-parks and 200m of inner city additional bike path across the plan period.
Enable and partner the community in behavioural change interventions.	Leading: CDC. Supporting: WSCC/Chichester and District Cycle Forum/ Transition Chichester.	Community led behavioural change interventions. Success measure: Two community led initiatives per annum.

Priority 5: Be innovative, capitalise on opportunities and build on success.

Our action planning work has, to date, been funded by grant monies from a variety of sources. These include DEFRA, NHS SE, Active Sussex, with match-funding contributions from WSCC. Given that it is not possible to predict what grant streams will become available then we have generally been opportunistic in our approach.

Moving forwards we intend, where possible, a more cost-benefit driven approach. This will involve utilising existing modelling to better understand the potential effect of action measures. Such an approach might for instance be appropriate with regards to tackling cumulative incremental environmental impacts felt through the planning system.

Despite the above suggested more strategically driven approach we are still dependent upon monies to support the implementation of any such measures. Meanwhile we will continue to be live to opportunities offered by other grant pots and where such monies support the implementation of this plan submit grant bids. Likewise we will continue to use monies awarded to seek further match-contributions so as to garner the greatest resource possible to a project.

Table 5: Priority 5 supporting actions.

Action	CDC role and key partners	Impact measure
Bid for relevant grant monies (DEFRA, DfT, OLEV etc).	Leading: CDC. Supporting: WSCC.	Annual capital and/or revenue grant monies to enable AQAP actions. Success measure: One bid submitted per annum.

8.0 Reviewing Progress

Chichester District Council cannot tackle air pollution alone but in leading on the delivery of this action plan with its key partners can help support the District towards better awareness and better air quality.

The action plan sits with other related strategies both of this council our partners and relevant bodies such as the LEP. An annual action plan will be formulated and approved through the Air Quality Working Group which will be aligned with the council's Corporate Priorities and relevant policies and strategies.

Progress in delivering the action plan will be reported in our statutory annual reports shared by the council with its existing partners who include; WSCC, SDNP, Sussex-air, Coast to Capital Local Enterprise Partnership.

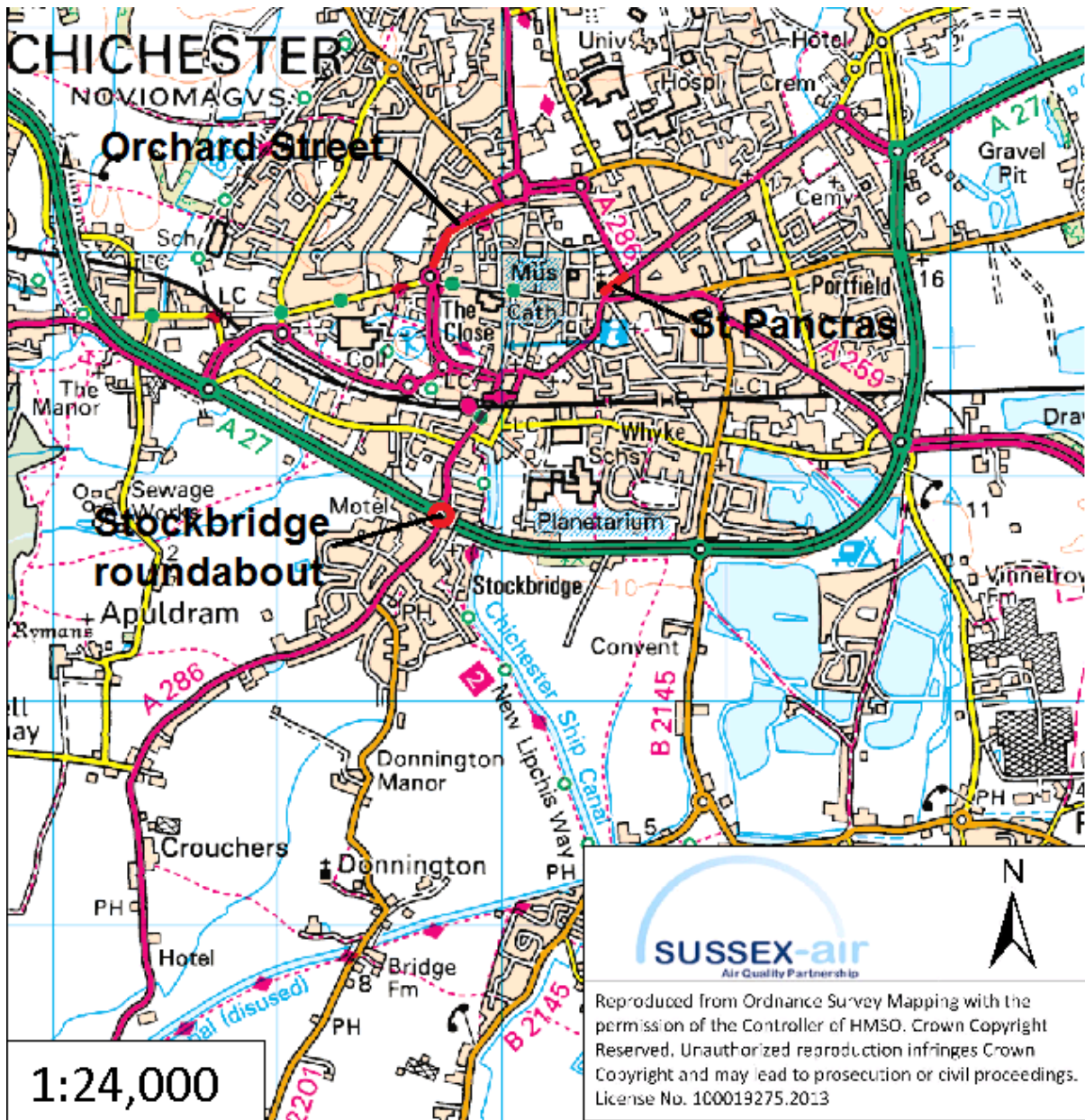
This action plan aims to influence the betterment of air quality for Chichester District, its residents and visitors and to ensure that CDC contributes to tackling air pollution regionally. Its success will be judged on the better integration of air quality to related policy areas and the delivery of projects that foster a change in behaviour towards lower emissions and modal shift.

Glossary of terms:

Abbreviation:	Meaning:
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Standards and Objectives contained in the UK Air Quality Regulations
CDC	Chichester District Council
DEFRA	Department of Environment, Food and Rural Affairs
DfT	Department for Transport
ERG	Environmental Research Group (part of King's College London)
EU	European Union
HDV	Heavy Duty Vehicles, ie, all vehicles more than 3.5 tonnes including Heavy Goods Vehicles and buses
HGV	Heavy Goods Vehicles greater than 7.5 tonnes in weight
King's	King's College London
LAQM	The Local Air Quality Management regime
LDV	Light Duty Vehicles (includes passenger cars and other vehicles < 3.5 gross vehicle weight).
LEP	Local Enterprise Partnership
LGV	Light Goods Vehicles
NO ₂	The pollutant Nitrogen dioxide
NO _x	The pollutant 'family' Oxides of Nitrogen
OLEV	Office for Low Emission Vehicles (part of DfT)
PM _{2.5}	Particulate matter smaller than 2.5µm in diameter
WSCC	West Sussex County Council

Appendix 1: Chichester Air Quality Management Areas (AQMAs)

Plan 1: Locations where AQMAs have been declared:



The geographical areas where the three AQMAs are declared in Chichester District are described by Plan 2, 3 and 4 as below. They are areas where annual mean NO₂ concentrations are likely to exceed 40µg^m-³.

Plan 2: Orchard Street AQMA, Chichester



Plan 3: St Pancras AQMA, Chichester



Plan 4: Stockbridge AQMA, Chichester



Appendix 2: Vehicle contributions to pollution in the AQMAs – source apportionment

Air quality in the location of the AQMAs relates to background concentrations of pollution and pollution contributed from local sources which at roadside are dominated by road traffic. CDC can do little to influence the background pollution but can target actions that seek to influence the local traffic contribution.

The local traffics' contribution to pollution depends on many variables which include the fuel type (diesel, petrol, electricity), the size/class of engine, age of engine (Eurostandard), meteorology and local topography (building height vs road width and road slope.) As an example the data below shows that buses are a modest part of vehicle movements but are more significant in relation their proportion of total estimated emissions.

In line with its aspiration to develop an emissions reduction hierarchy (as per page 8, Priority 1 above) CDC is working on determining which parts of the vehicle fleet contribute most significantly to the failure to achieve the NO₂ standard. It will then be possible to target interventions to where they might have most effect. This is of course subject to the appropriate funding being available to fund a specific intervention.

The following pie charts for each of the three AQMA locations are necessarily technical in nature but help to develop a narrative about where our best efforts should be placed. They are referred to a 'source apportionment' and it is CDC's intention to expand this work such that it may be of use to related organisations and agencies in developing related strategies and policies (for instance West Sussex County Council and the Highways Agency):

Source apportionment for Orchard Street, Chichester

All data are for the year 2012.

Figure 1: Percentage of vehicle types at Orchard Street AQMA in Chichester (DfT, 2012)

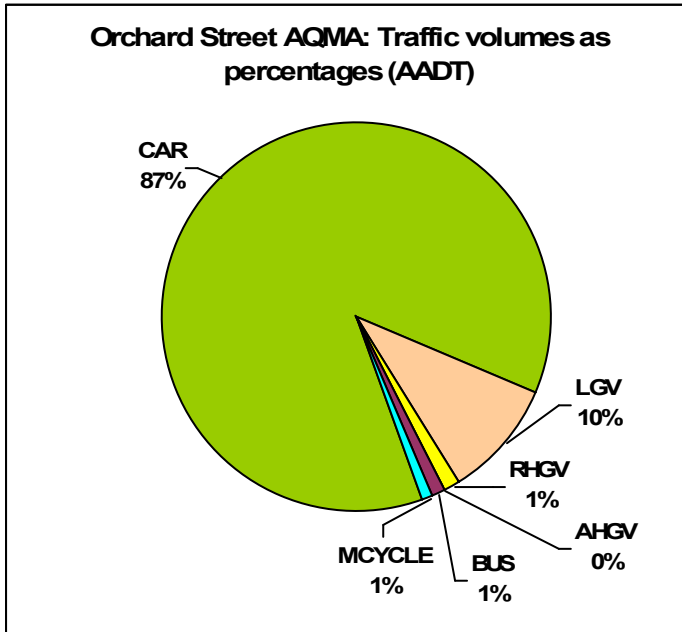


Figure 2: Road Traffic NOx Emissions by Vehicle Class in 2012, at Orchard Street AQMA

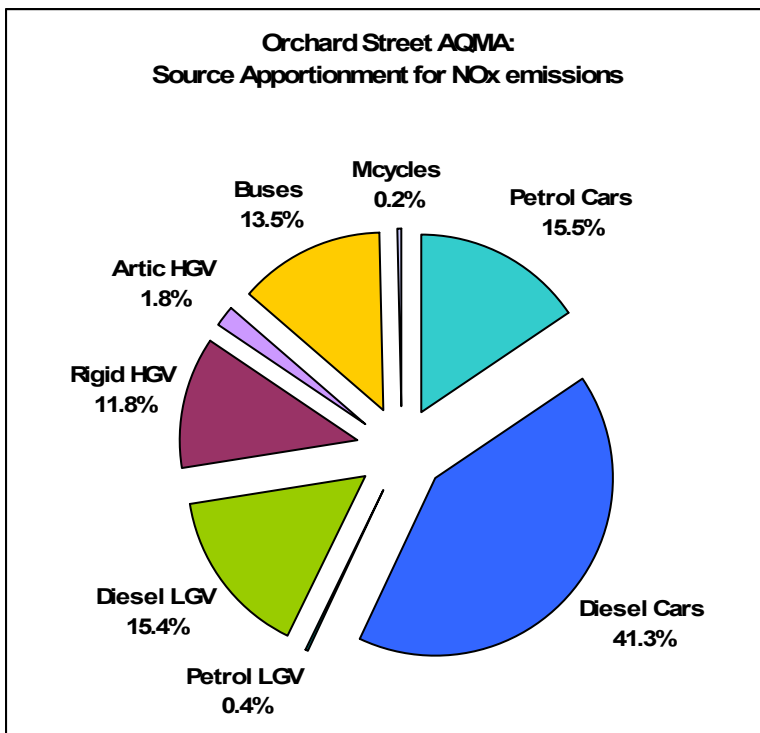
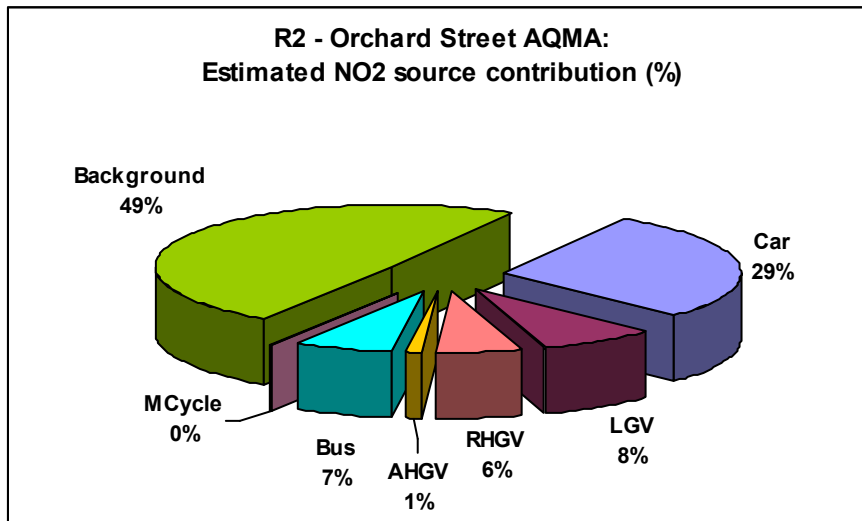


Figure 3: Estimated NO₂ concentrations as source contributions



Source apportionment for Stockbridge roundabout, Chichester

All data are for the year 2012.

Figure 4: Percentage of vehicle types at Stockbridge AQMA in Chichester

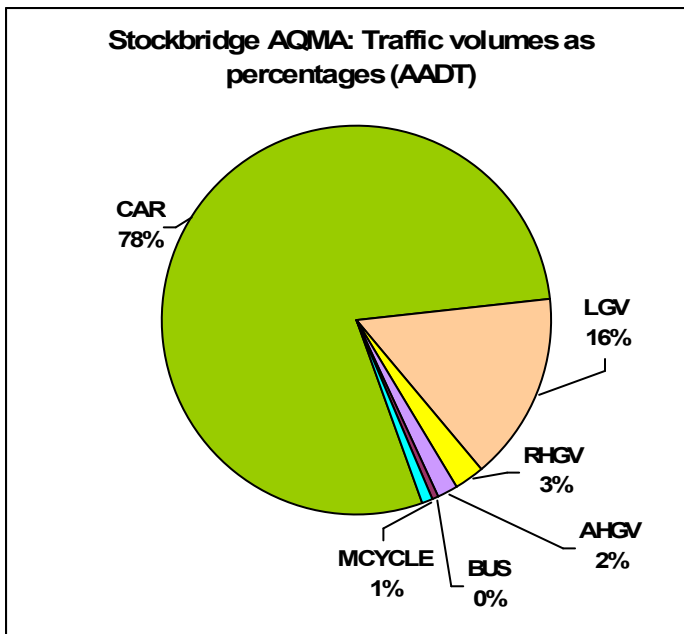


Figure 5: Road Traffic NOx Emissions by Vehicle Class at Orchard Street AQMA

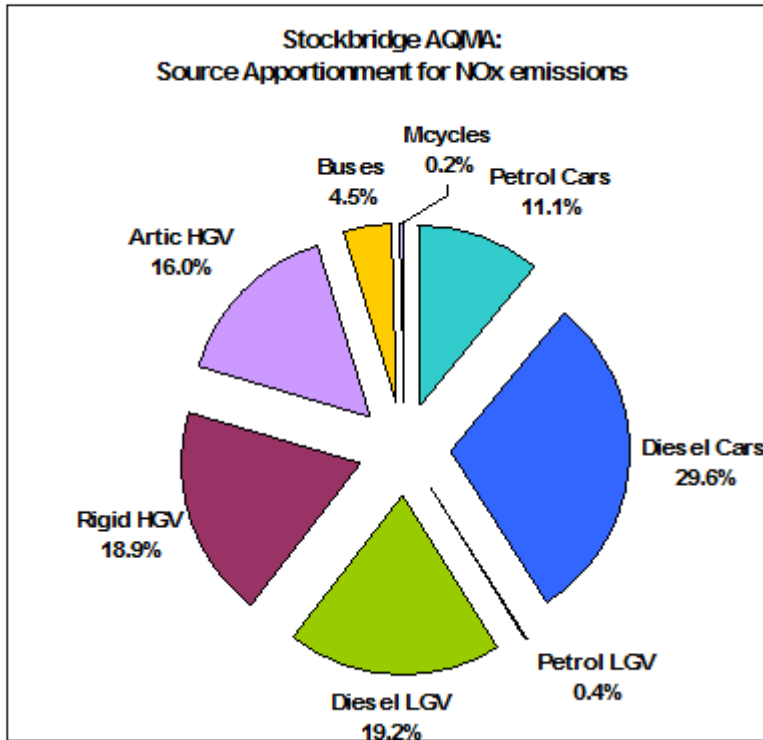
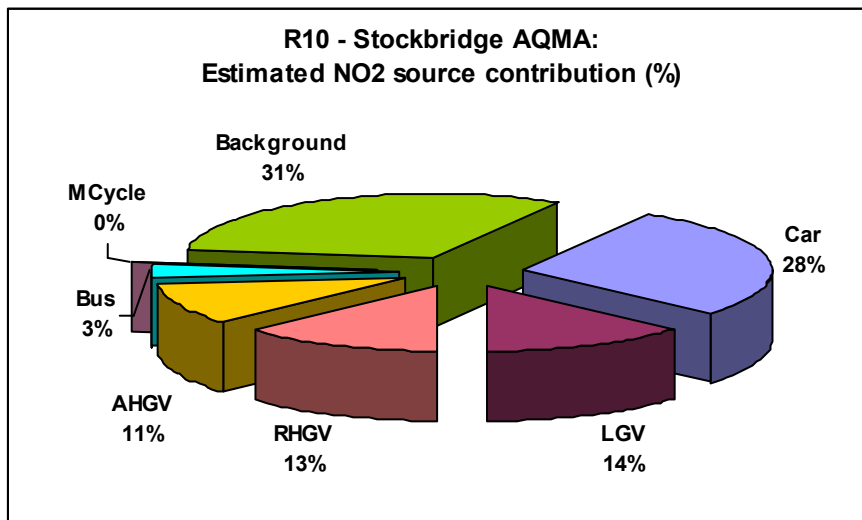


Figure 6: Estimated NO₂ concentrations as source contributions



Source apportionment for St Pancras AQMA, Chichester

All data are for the year 2012.

Figure 7: Percentage of vehicle types at St Pancras AQMA in Chichester (DfT, 2012)

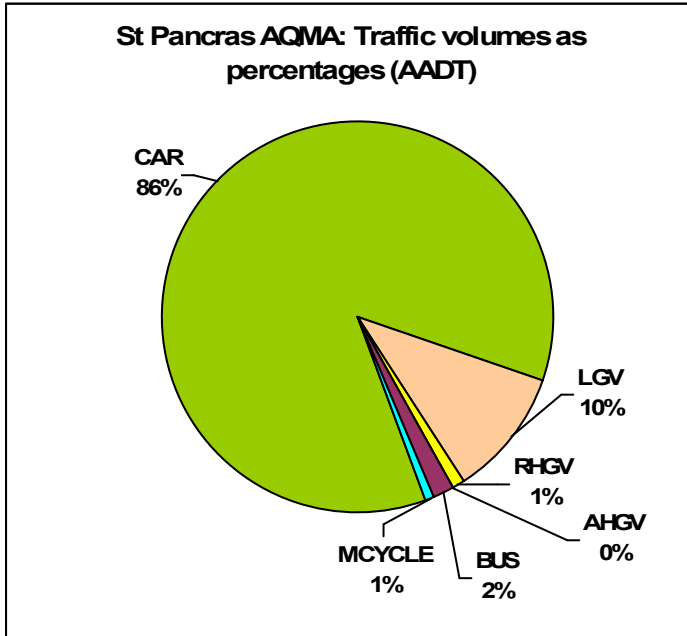


Figure 8: Road Traffic NOx Emissions by Vehicle Class in 2012, at St Pancras AQMA

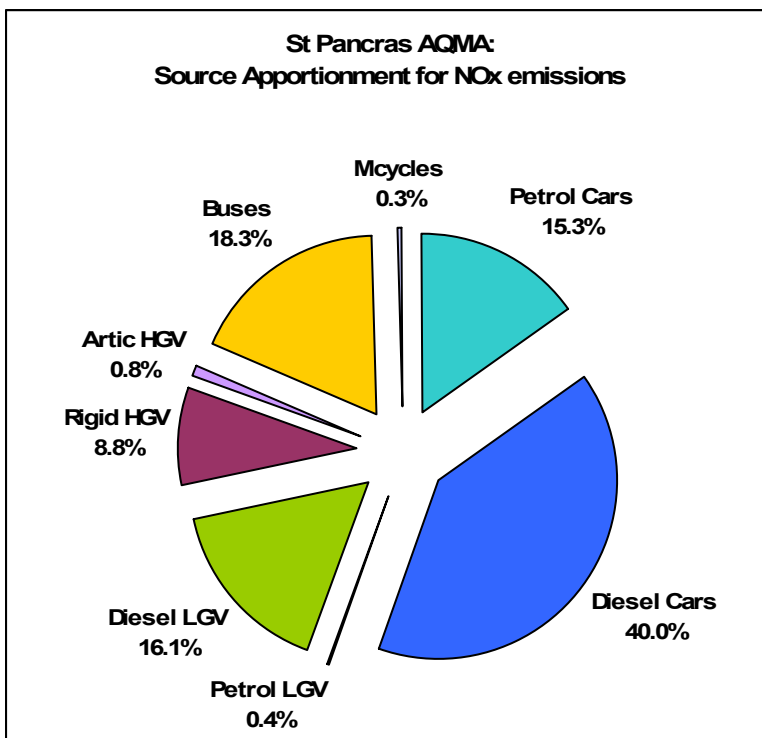


Figure 9: Estimated NO₂ concentrations as source contributions

