Fenland District Council

Air Quality Action Plan

2018

Online version: This version is not a working document and may not be regularly updated. For updates of Fenland District Council air quality actions please contact the Environmental Health Team on envhealth@fenland.gov.uk or calling 01354 654321.

Version Control			
Editor	**Update**	**Date**	**Status**
Laura Harwood	Updated table of diffusion tubes to include 2018 results	17/06/2019	Complete
Laura Harwood	Updated table of actions to remove officer working notes for web version.	17/06/2019	Complete

Contents

Figures

Foreward

Fenland District Council aim is to focus our services;

"To improve the quality of life for people living in Fenland."

The district of Fenland is made of four market towns surrounded by a mix of villages, agriculture and industry. Industry is a mix, with prominent areas of food production, packaging suppliers, distribution and timber manufacturing. The area is served by; three main roads running through the district the A47, A605 and A141, a rail network through Whittlesey and March running passenger, goods and maintenance services and also by the Port of Wisbech.

Our air quality focus is where local populations are in close proximity to possible pollutants such as transportation or industry. In recent years Fenland has seen positive improvements to air quality, mainly due to changes in local industry practices.

Fenland District Council recognises the impact of poor air quality on the quality of life of people living in Fenland. The Health Profile [1] for Fenland illustrates that there are health inequalities in the region, with disparity between the most and least deprived. Life expectancy is 5.9 years lower for men in the most deprived areas of Fenland than in the least deprived areas.[1] The profile identifies that Fenland's priority is to focus on those with inflammatory diseases such as heart disease and diabetes, conditions that are directly impacted on by poor air quality. Public Health England (PHE) statistics [2] show that 5.3% of deaths are directly linked to poor air quality.

Fenland's mortality rate directly related to air quality is similar to other rates in the East of England. As with the East of England the rate of improvements to air quality has plateaued.

The Council is working towards reducing premature deaths due to poor air quality, improve air quality and achieve Even Better Fenland Air. This action plan sets out the measures we are committed to, to achieve this.

[1] Public Health England Fenland District Health Profile 2017, 2017
[2] Public Health Outcome Framework, 2018

Summary

Fenland predominantly offers good air quality however there are specific locations where road and industry affect the local air quality**.**

To ensure that that we work towards even better Fenland air the key aims of the action plan are:

- Maintaining pollutant levels below national objectives;
- Improving public health by reducing population exposure to air pollutants.

This is a statutory plan, a summary document can be found in Appendix A and on our website.

Current status of Air Quality in Fenland

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, [3,4].

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion [5].

The Local Air Quality Management (LAQM) regime was introduced by The Environment Act 1995, this requires local authorities to review and assess air quality in their areas from time to time. Work since this time has resulted in the declaration of four Air Quality Management Areas (AQMAs) in Fenland for industrial and traffic related pollutants.

AQMA 1 – Particulate Matter (PM_{10}) from an industrial coal-fired boiler at a large Wisbech factory
AQMA 2 – Sulphur dioxide (SO_2) from an industrial coal-fired boiler at a large Wisbech factory
AQMA 3 – Nitrogen Dioxide (NO_2) from traffic emissions in a congested stretch of road in Wisbech town centre.
AQMA 4 – Sulphur dioxide (SO_2) from an industrial chimneys in Whittlesey

The following figures 1-4 show the locations of the Air Quality Management Areas that have been declared in the district.

[3] Environmental equity, air quality, socioeconomic status and respiratory health, 2010
[4] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006
[5] Defra. Abatement cost guidance for valuing changes in air quality, May 2013

Figure 1: Particulate Matter Air Quality Management Area (AQMA 1) in Wisbech

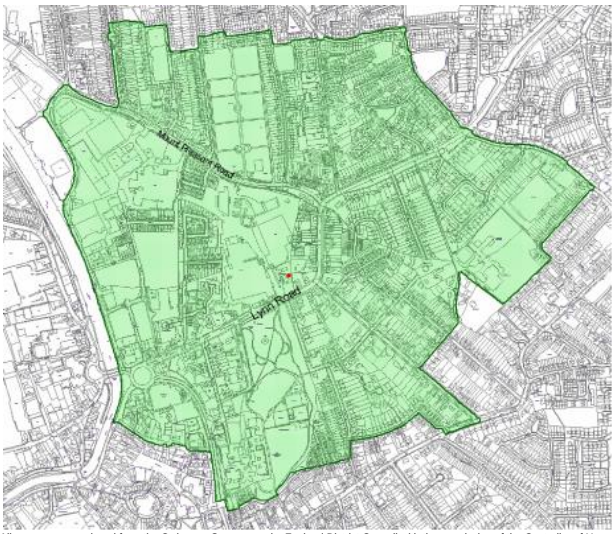

Figure 2: Sulphur dioxide Air Quality Management Area (AQMA 2) in Wisbech

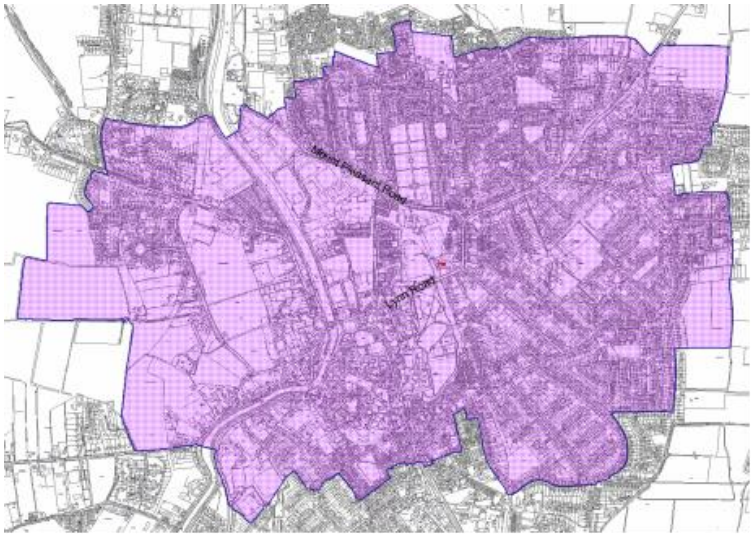

Figure 3: Nitrogen Dioxide Air Quality Management Area (AQMA 3) in Wisbech

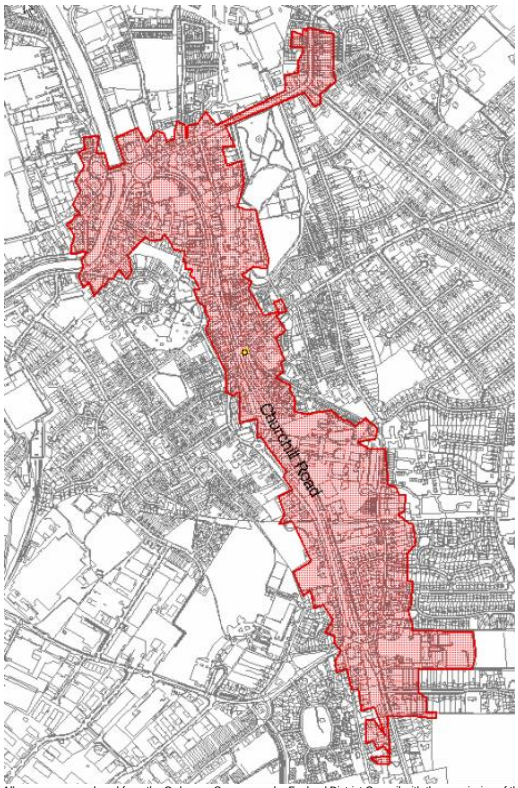

Figure 4: Sulphur dioxide Air Quality Management Area (AQMA 4) in Whittlesey

Monitoring

To assess the air quality levels in Fenland and meet our statutory duty under the Air Quality Management regime a programme of monitoring is undertaken. Monitoring is undertaken by installing nitrogen dioxide diffusion tubes across the district sampling traffic pollution and sulphur dioxide continuous monitoring stations, sampling chimney emissions within the relevant AQMA.

Each year the Council reviews its monitoring data, the data is sent to DEFRA and published on Fenland District Council and Cambridgeshire County Council websites [6, 7]. The review of the monitoring data from 2017 identified the following:

- The objectives for nitrogen dioxide were met at all the monitoring locations (20 passive monitoring sites), both inside and outside the AQMA; with generally good data capture. Whilst all sites were within the objectives there were some sites that did show a slight rise in levels from previous years whilst others showed a slight reduction.

- The objectives for sulphur dioxide were met at the monitoring location (2 continuous monitoring sites) within the Whittlesey AQMA.

Nitrogen Dioxide (NO_2) (Traffic)

There are 25 Nitrogen Dioxide (NO_2) monitoring locations within the Fenland district, using passive diffusion tubes, as shown in figure 6. These are distributed on a 4-5 week cycle in-line with the national programme. The locations were selected following a screening exercise. They were chosen to provide evidence from areas where pollutant levels were likely to be the highest, i.e at road junctions or crossings where cars often idle in close proximity to dwellings. In January 2018 we increased the number of monitoring locations from 20 to 25, due to public concerns.

Results from the diffusion tubes show an average level for each location over a 12 month period (an annual mean). The results since 2013 are shown in the graph below (Figure 5). All the NO_2 diffusion tubes have shown compliance with the annual mean objective level for NO_2. The objective level has been set at 40 µg/m^3 since 2013, the graph below shows that this level has not been exceeded at any location.

Individual sites will experience higher and lower levels throughout the day, i.e. during rush hours or the effect of weather conditions. If any annual means are recorded that are greater than 60µg/m^3 then this may indicate that an exceedance of the 1-hour mean objective is also likely. No such exceedances have been recorded at any monitoring site.

Results from the additional five monitoring locations areas will be available in early 2019 after a 12 month sampling period.

[6] http://www.fenland.gov.uk/airpollution
[7] https://cambridgeshireinsight.org.uk/environment/airquality/

Figure 5: Trends in Annual Mean NO2 Concentrations

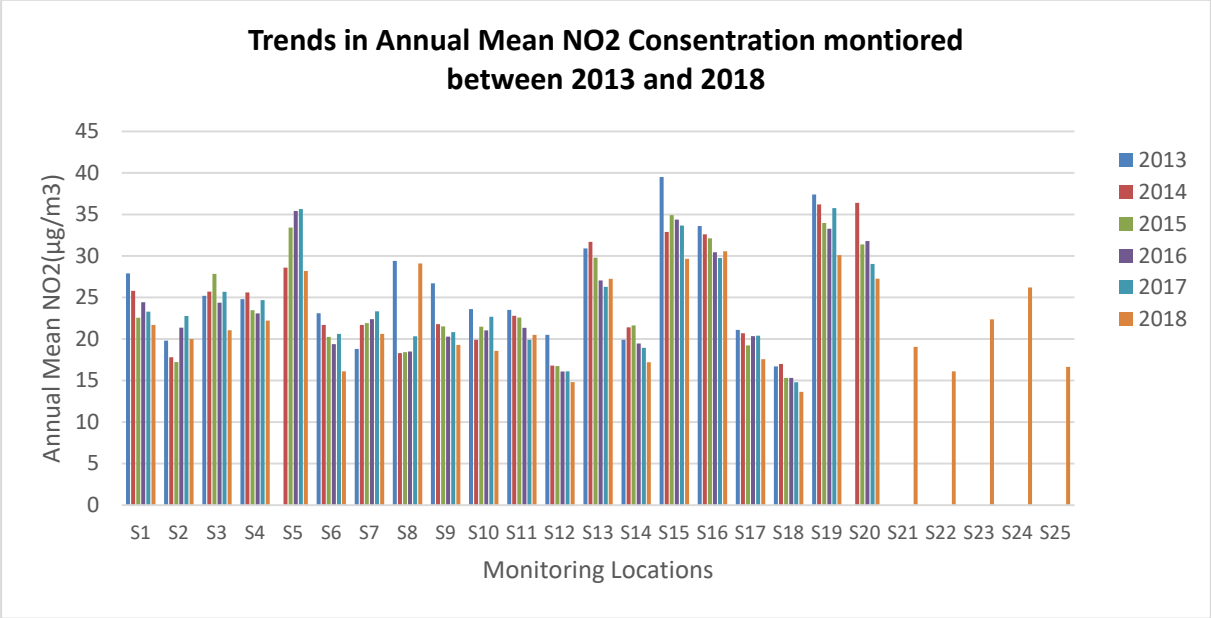

Figure 6: Monitoring locations

Monitoring Location	Site Details	
S1	Syers Lane traffic lights	Whittlesey
S2	Station Road level crossing	March
S3	Ramnoth Road/Churchill Road junction	Wisbech
S4	Orchard Road roundabout	Whittlesey
S5	Bowthorpe Centre	Wisbech
S6	Kings Dyke level crossing	Whittlesey
S7	Cemetery Road roundabout	Whittlesey
S8	Westmead Avenue	Wisbech
S9	A47	Thorney Toll
S10	A605 (North Green)	Coates
S11	High Street	March
S12	Lynn Road (canning factory)	Wisbech
S13	Lynn Road / Mount Pleasant junction	Wisbech
S14	A141 / Clare Street Junction	Chatteris
S15	Weasenham Lane / Churchill Road junction	Wisbech
S16	Lynn Road roundabout	Wisbech
S17	Weasenham Lane / Cromwell Road junction	Wisbech
S18	A141 / New Road junction	Wisbech
S19	Broad Street bus stop	March
S20	Napier Court	Wisbech
S21	Norfolk Court	March
S22	Wildboar / Station Road	Whittlesey
S23	West End	Whittlesey
S24	Jim Hocking Court	March
S25	Gildenburgh Crescent	Whittlesey

Sulphur Dioxide (SO_2) (Industrial)

We propose to revoke the Sulphur Dioxide (SO_2) and Particulate (PM_{10}) AQMAs within Wisbech, as the source of the pollution has been removed. The boiler that emitted sulphur dioxide and particulate matter from its chimneys has changed fuel source from coal to gas removing the source of the pollution. The site does require an Environmental Permit issued by the Environment Agency, setting limits for NO_2 to be met. The results of monitoring of NO_2 levels in the vicinity are below the action level.

Whittlesey also has an AQMA for Sulphur Dioxide attributable to the brickworks. This dates back to work undertaken in 2005/06 that modelled possible pollution levels could reach levels above the 15-Minute Mean objective; this modelling included the now closed Saxon Works. As part of their Environmental Permit from the Environment Agency, Forterra (who operate the brickworks) monitor at two locations in Whittlesey. They operate continuous ambient monitoring stations (CAMS) to the east-southeast of the former Saxon Works (Park Lane CAMS) and to the north of the Kings Dyke Works (Bradley Fen CAMS). These results confirm that the site does not exceed the sulphur dioxide objectives levels at sensitive locations within the current AQMA.

Air Quality Action Areas

In response to air quality issues and to strive towards better Fenland air, five action areas have been identified. The action areas are:

1. Monitoring and Reporting
2. Health, Wellbeing and Communities
3. Planning
4. Transport
5. Industry

Each area has a number of actions against them to undertake investigatory, responsive and proactive steps to improve air quality.

1. Monitoring and Reporting

Monitoring and reporting is part of the council's statutory requirement. This involves a network of 25 sampling locations for traffic related pollution. Sampling is undertaken using diffusion tubes to monitor Nitrogen Dioxide levels and show trends in pollution across the district. The diffusion tubes are changed on a monthly basis over the year and contribute to part of a national sampling programme. Results of monitoring, pollution incidents and changes to pollution sources in the district are reported to Defra and published on the council's website [6,7] .

Any exceedances of levels set in European Regulations are investigated and declared as Air Quality Management Areas (AQMAs). These areas are monitored and action plans for change are put into place. Where it can be verified that areas have improved or that the source of pollution has been removed the air quality management area can be revoked. Due to changes to industrial processes the revocation of at least two of the air quality management areas can be considered.

Very fine particles in the air, ($PM_{2.5}$) are not monitored in the district. Current monitoring of industry, traffic levels or traffic related pollution has not justified monitoring $PM_{2.5}$, however this is an issue of interest and possible options for monitoring will be explored.

2. Health, Wellbeing and Communities

The impacts of air quality need to be addressed in the community as well as with transport and industry. Defra estimate 39% of particulate matter is produced by domestic burning and 20% comes from other sources such as naturally occurring dust and use of aerosols. [8] Improvements and prevention of health impacts due to poor air quality can be addressed using a number of community interventions and awareness raising.

Fenland District Council are partners in county wide public health initiatives such as securing funding to assist residents on solid fuels to install first time gas central heating systems to working with businesses regarding workplace health and wellbeing, including active travel.

Awareness raising can also help communities make small lifestyle changes to protect themselves and community from localised air quality problems. Areas of awareness raising include promotion of air quality forecasts such as Defra's Air Information Resource, [9] which can help those vulnerable to poor air quality. Due to no real time monitoring in the district this does not provide alerts of local pollution incidents.

[8] https://www.gov.uk/government/consultations/air-quality-using-cleaner-fuels-for-domestic-burning
[9] https://uk-air.defra.gov.uk/

The council's objectives under recycling promotion and environmental protection legislation works towards reducing burning of waste causing local pollution incidents, contributing to a national problem.

We will explore the promotion through school and community groups to adopt anti idling campaigns and alternative transport schemes to promote air quality decision making.

3. Planning

The use of the national planning framework is a proactive way to reduce and prevent air quality issues occurring. The National Planning Policy framework guides local authorities to ensure that developments are of; high quality design, provide a good standard of amenity, conserve and enhance the environment and reduce pollution.

The Environmental Health Team are consulted on planning applications where air quality is considered as an issue and guidance is provided to the planning officer for decision making.

We will explore the planning policy options that can be adopted to promote sustainable infrastructure, encourage the uptake of active travel choices (i.e. walking /cycling) and the shift to low emission / electric vehicle charging points.

To ensure emissions from construction are minimised we will require developers to comply with legislation and planning conditions to control on-site emissions utilising construction method statements.

4. Transport

Vehicles, both private and commercial, provide significant contribution to air pollution in the district. Measures to reduce their impacts remain our highest priority for action, and a reduction in vehicle use in favour of active travel will be promoted.

The council will encourage residents to consider alternatives to car use, particularly encouraging the use of sustainable travel such as walking and cycling and promoting the additional positive health benefits of increased physical activity. To facilitate this we will support the Transport Champions project, to date 36 Transport Champions, formed of members of the community and local organisations have been provided with transport training to enable them to assist others.

The council will also encourage the use of public transport to cut the number of vehicles on the roads and reduce congestion by supporting the Travel Choices project.

We provide information for transport access studies across the district, these studies aim to help relieve congestion which will go towards maintaining air quality levels below the objective limits. We will comment on the updated Local Travel Plan when this is produced.

5. Industry

30 Industrial processes are permitted and inspected by the Council, across the Fenland district. These processes all have the potential to emit air pollution to atmosphere, from dust to fumes. The aim of the inspections are to ensure these businesses are meeting industry standards, legal emission limits and are proactive in monitoring. We will also liaise with our partners in the Environment Agency to ensure compliance at industrial sites they are responsible for regulating.

Actions

The following table details the actions, associated timescales, and measures of output. This document will continue to develop as a progressive report, showing achievements and reacting to local and legislative changes.

Figure 7: Air Quality Management Actions

Action ID	Action	Detail
1.1	Nitrogen Dioxide	Maintain the diffusion tube network, which is used to identify areas of air quality objective exceedances and determine trends in air quality across the district.
1.2	PM 2.5	Explore options to monitor PM2.5 in partnership with others.
1.3	Report and Publish	Meet legal requirements to review and assess the air quality within the district. Publish reports and monitoring data.
1.4	Revocation	Work towards the revocation of the Wisbech AQMAs. Including a consultation process and Defra application.
2.1	Domestic Fuel Burning	Provide information about impacts of wood burning, what type of wood to burn and how to burn it efficiently.
2.2	First time central heating systems	Engage with the Action on Energy Working Group. The aim of the group is to install alternatives to solid fuel heating systems.
2.3	Promotion of air pollution forecasting information	Promote the use of DEFRAs UK AIR - Air Information Resource to provide information on the levels of pollution expected.
2.4	School Travel Plans	To work on anti-idling campaigns with schools to promote air quality. To influence the network of school contract drivers to consider vehicle choices and idling issues.
2.5	Reduce emissions to air from the burning of waste	Working with waste services and recycling officer to provide information encouraging residents and businesses to dispose of waste in an environmentally responsible way. Investigate complaints of waste burning in accordance with regulatory requirements.
2.6	Workplace health and wellbeing (CCC) (i.e. alternative travel choice).	To work with CCC workplace health scheme to promote travel choices within workplaces and benefits to health of employees.
3.1	Use the planning system to ensure new development does not negatively impact on air quality.	Where applicable ensure that developers undertake air quality assessments to assess the potential impacts of new development. Review new planning applications for potential air quality impacts and require controls to limit / mitigate impacts.
3.2	Promoting sustainable infrastructure, travel, charging, walk/cycle.	Explore the installation of EV charge points on lampposts, for residents and non-residents. Work with planning Team to update local Plan to promoting low emission transport.
3.3	Ensure emissions from construction are minimised.	We will require developers to comply with legislation and planning conditions to control on site emissions utilising construction method statements.
4.1	Travel Choices / Active Travel.	Explore further funding opportunities to enable the roll out of this project across the district.

4.2	Local Transport Plan	Provide information for transport access studies, to help relieve congestion and maintain air quality levels below the objective limits.
4.3	Travel champions	Support the Transport Champions project. Funding is in place to deliver further training sessions this year.
4.4	Licensing of taxi	Consideration of Licensing conditions to encourage low emission taxis.
5.1	Environmental Permitting	Ensure all installations regulated under the Environmental Permitting Regulations comply with pollution emission controls.

Appendix A – Health and Wellbeing update – a summary of the Council's air quality action plan

Health and Wellbeing update – a summary of the Council's air quality action plan

Air Quality Action Planning

The health and wellbeing strategy has air quality management as an action. Air quality management is a statutory function for the Council and links to many service areas such as planning, transport strategy and permitting of industrial processes which is undertaken both by the Council and the Environment Agency.

The air quality action plan sets out the areas of focus for the Council in relation to air quality. There are five key areas:

1. Monitoring and Reporting
2. Health, Wellbeing and Communities
3. Planning
4. Transport
5. Industry

1. Monitoring and Reporting

The Council has duty to review air quality each year and to report findings and next steps to department of environment, food and rural affairs (Defra).

In 2018 Defra approved the Council's proposals for future monitoring and changes to certain areas known as air quality management areas (AQMA) which have been declared as part of the Council's statutory duty to manage air quality.

There are four AQMA's in Fenland, these are:

1. Particulate matter (PM10) in the area of Lynn Road and Mount Pleasant Road, Wisbech.
2. Sulphur Dioxide (SO2) in the area of Lynn Road and Mount Pleasant Road, Wisbech.
3. Nitrogen Dioxide (NO2) along Churchill Road, Wisbech.
4. Sulphur Dioxide (SO2) in 2 locations within Whittlesey, Park Lane and Kings Dyke which are associated with

the Forterra Brickworks.

The Council's monitoring has identified three of the four AQMA's (1-3) are no longer areas of concern and proposals to revoke these areas have been approved by Defra. The process for revocation requires public and partner consultation, which will take place from November to January 2019. The fourth AQMA in Whittlesey will remain in place and is monitored by Forterra.

Consultation will include local authority partners, public health colleagues and community groups. The intention is to increase the level of information available to the community regarding air quality, monitoring and awareness.

Central Government policy is for AQMA's to be actively managed and therefore revocation is the best option as monitoring data shows no concerns.

2. Health, Wellbeing and Communities

The plans sets out actions in relation to other non-commercial factors which affect air quality, such as domestic wood burning, weather and engine idling. Proposals include working with partners to make mains fuel more available in Fenland and campaigns to reduce engine idling in residential areas such as outside schools or road junctions.

3. Planning

Working more closely within the local planning regime is a priority are in the health and wellbeing strategy delivery plan. Air quality is a factor under consideration when environmental health return comments to planning colleagues, particularly in relation to larger developments and where air quality is known to be a local concern.

4. Transport

Working closely with colleagues across the County we can help inform transport access studies with monitoring data and support projects such as the transport champions and sustainable travel choices.

5. Industry

Our work with potentially polluting industry and environment agency colleagues provides an understanding of local issues, where pollution incidents may occur. The 30 permitted processes within Fenland are visited each year where advice and support can be offered to ensure conditions relating to emissions are being well managed.

Next steps

The action plan sets out future actions in line with the health and wellbeing strategy and will be reported against in the same performance management processes.

Glossary of Terms

Figure 8: Glossary of Terms

Abbreviation	Description
15 Minute Mean Objective	Average concentration of a pollutant measured over 15 minute periods
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
CCC	Cambridgeshire County Council
Continuous ambient monitoring station	Equipment to continuously measure the background levels of pollutants.
Diffusion Tube	A small tube, that absorbs Nitrogen Dioxide (NO_2)
Defra	Department for Environment, Food and Rural Affairs
Environmental Permit	A permit issued under the Pollution Prevention Control Act 1999 for processes and industries that emit fumes, gases and dust to the atmosphere.
EU	European Union
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PHE	Public Health England
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 (micrometres or microns) or less
SO_2	Sulphur Dioxide

References

1. Public Health England Fenland District Health Profile 2017, 2017 https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data

2. Public Health Outcome Framework, 2018 https://www.gov.uk/government/collections/public-health-outcomes-framework

3. Environmental equity, air quality, socioeconomic status and respiratory health, 2010

4. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006 https://uk-air.defra.gov.uk/assets/documents/reports/cat09/... · PDF file

5. Defra. Abatement cost guidance for valuing changes in air quality, May 2013 https://www.gov.uk › Environment › Pollution and environmental quality

6. Air Pollution – Fenland http://www.fenland.gov.uk/airpollution

7. Cambridgeshire Insight – Environment – Air Quality https://cambridgeshireinsight.org.uk/environment/airquality/

8. https://www.gov.uk/government/consultations/air-quality-using-cleaner-fuels-for-domestic-burning

9. https://uk-air.defra.gov.uk/