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23 January 2020

To: Members of the Climate and Environment Advisory Committee

Dear Sir / Madam

Please find a **SUPPLEMENT** for the next meeting of **CLIMATE AND ENVIRONMENT ADVISORY COMMITTEE**, which will be held in **MONKFIELD ROOM - SOUTH CAMBRIDGESHIRE HALL** at South Cambridgeshire Hall on **TUESDAY, 28 JANUARY 2020** at **2.00 p.m.**

Yours faithfully
Liz Watts
Chief Executive

The Council is committed to improving, for all members of the community, access to its agendas and minutes. We try to take all circumstances into account but, if you have any specific needs, please let us know, and we will do what we can to help you

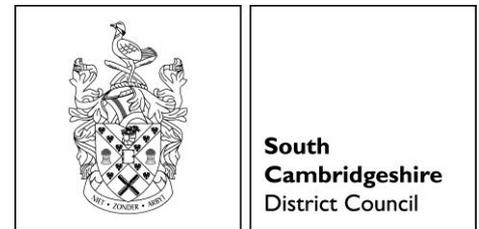
AGENDA

7. **Air Quality Strategy**

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Agenda Item 7



REPORT TO: Climate and Environment
Advisory Committee

28th January 2020

LEAD CABINET MEMBER: Cllr Bill Handley

LEAD OFFICER: Jane Hunt

Air Quality Strategy

Executive Summary

1. Air Quality in South Cambridgeshire is good and we need it to stay that way for the health of our current and future residents. With our forecast levels of growth it is imperative that we take a strategic approach to considering air quality. This draft strategy outlines the current status, the national policy context, why this is important and how we work with our neighbours, our ambition and our 3 areas of focussed actions to ensure our air quality is maintained or improved.

Recommendations

2. It is recommended that the committee provides comment and observations on the draft strategy such that it can be developed for consideration at scrutiny and cabinet.

Reasons for Recommendations

3. This strategy underpins the priorities in the current Business Plan, largely under the 'Being Green to our Core' priority. The draft revised 2020-2024 plan contains actions:

Agree and deliver our strategy and actions needed to protect and improve the air quality of our district	<ul style="list-style-type: none">• Strategy and action plan revised by start of April 2020• Air quality monitor in place to gather data at one new location by April 2020• Complete a review of how and where we monitor air quality by end of September 2020
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Details

4. A previous draft strategy was discussed at CEAC in November 2018. This has been revised and updated to reflect the significant gains made in influencing planning policies and tools (particularly the Supplementary Planning Document). This strategy now also outlines actions we will take which invest the capital allocation of funds to support Air Quality.
5. The full draft strategy is included as Appendix A.

Implications

6. In the writing of this report, taking into account financial, legal, staffing, risk, equality and diversity, climate change, and any other key issues, the following implications have been considered:-

Financial

7. This strategy and its planned actions are funded by existing officer posts, a new officer post agreed in 2018 (currently being recruited) and capital funds previously allocated.

Consultation responses

8. Discussion on the aims and content of this strategy have been held with Cambridge City Council; the Air Quality lead is supportive of SCDC developing its own complementary strategy and we will continue to work together to support air quality improvements across our geographies. As there are differences in the extent and nature of air quality issues across the councils, and the City has recently developed its own strategy and is developing an action plan focussed on its Air Quality Management Area, it is not appropriate to develop a shared strategy.

Alignment with Council Priority Areas

Being green to our core

9. See paragraph 3.

Appendices

Appendix A: SCDC Air Quality Strategy 2020 draft at 23 Jan 2020

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South Cambridgeshire District Council

Air Quality Strategy

2020



The air quality in South Cambridgeshire is good, we want to keep it that way. This strategy outlines how we are going to go about doing that over the next five years.

Executive Summary

Air quality is a big deal – in terms of risks to public health it's really second to smoking, worse than obesity and alcohol. It reduces both the length and quality of people's lives and costs a huge amount to the economy.

South Cambridgeshire District Council (SCDC) is a rural district undergoing a significant growth with new or expanded towns/villages around Cambridge City which the district of South Cambridgeshire encompasses. The area has good road and rail links with London and the South-East. The M11/A11 and A14 corridors pass through the District to the west, south and north of Cambridge respectively.

Since South Cambridgeshire is a rural district, the background pollution levels are lower than in urban areas. Therefore, the chance of exceeding national objectives is unlikely for individual developments within the district. However, it is likely that the cumulative impacts of multiple developments will pose a long-term risk to air quality if no mitigation measures are implemented to maintain our air quality district wide.

It's very difficult to improve local air quality after it's already become poor, so in urban centres various schemes have been introduced to improve the situation such as low emission zones, but for our district the challenge is slightly different as the air quality is currently good but the scale of growth planned is such that it could deteriorate significantly if we do not take preventative action.

This strategy outlines a new approach on how the Council intends to go about doing that now and as part of future planning. Essentially by maintaining and wherever possible improving air quality, preventing or at least minimising the problem occurring in the first place, as opposed to trying to fix it later which is much more difficult.

Set of 'Local Air Quality Requirements' are introduced in this strategy and outlined in appendix A as a key mechanism to deliver this strategy for future developments.

Any specific areas of concern, where national objectives are expected to be exceeded are known as Air Quality Management Area (AQMA). The measures to improve air quality are therefore detailed in an independent Air Quality Action Plan (AQAP) specific to those areas. The primary AQMA in South Cambridgeshire, at the time of publishing this document, is along A14 between Bar Hill (to the North-West of Cambridge) and Milton (to the North-East) interchange.

Two main pollutants, Nitrogen Dioxide (NO₂) and Particulate Matter (PM₁₀) have been monitored within this AQMA since 2008. However, no exceedances of national objectives have been recorded over the past five years and Defra (Department for Environment, Food and Rural Affairs) has recommended to revoke its designation.

With the A14 improvements now underway, it is therefore necessary to continue to monitor the future air pollution levels within this area and also propose a new approach to minimise impacts from all sources of air pollution across the whole district and not just within a particular AQMA.

How to get Involved with your Air Quality

Annual reports and details of Air Quality monitoring are available on our website¹ for our residents. You could share your views and concerns via email address

¹ <https://www.scambs.gov.uk/environment/pollution/air-pollution/local-air-quality-management/>

air.quality@scambs.gov.uk and follow our Facebook page² for general updates and news.

Do your share to improve air quality in South Cambs;

- Avoid using your car for short trips (under 2 miles) - short trips are very polluting as modern engines need to reach a very high temperature to work efficiently; on short trips it won't reach that temperature.
- Try using public transport, cycling or walking more often.
- Walking and cycling help you to stay healthy plus save you money in fuel costs.
- Switch it off - turn off your engine if you are caught in a traffic jam or have to wait at level crossings; not only will this reduce your emission but you will save fuel too.
- When driving, use techniques that help you use less fuel, like driving more slowly and smoothly.
- You could use 10% less fuel and save money by following the tips on the AA website http://www.theaa.com/motoring_advice/fuels-and-environment/drive-smart.html.
- Consider using an alternative fuel vehicle - There is a growing market for electric vehicles.
- Consider living car free.
- Join a car club.
- Use journey-planning apps such as MyBusTrip or MotionMap for travel by bus, train, walking and cycling.
- Consider working at home occasionally or car sharing.
- Use less energy at home – wood, coal, oil and gas burning all contribute to air pollution.
- Make your children aware of the impact that day to day activities have on air quality.
- The Kidz 4 Clean Air website has puzzles, games and information about air quality for children (<http://www.clean-air-kids.org.uk/>).

² <https://www.facebook.com/SouthCambridgeshireDistrictCouncil/>

1 National Policies and National Clean Air Strategy

Local authorities have a duty under the Environment Act 1995 to review and assess local air quality within their areas, against a set of health-based objectives for specific air pollutants. In addition to these formal obligations for Local Air Quality Management (LAQM), local authorities are encouraged by Defra (Department for Environment, Food and Rural Affairs) to draft and implement a local Air Quality Strategy³.

South Cambridgeshire District Council operates a monitoring network including three Automatic Monitoring Stations (AMS) and 27 NO₂ diffusion tubes (passive monitoring) within the District. The monitoring results are reported annually to Defra as Annual Status Report and is available online on the website⁴.

Defra (Department for Environment, Food and Rural Affairs) has published a new national strategy in 2019⁵. The strategy covers a broad range of issues to improve air quality, ranging from farming, shipping, transport and even household emissions such as those associated with cleaning products. The national strategy emphasises the link with public health and engaging with other stakeholders to strategically drive improvements. It also refers to good practise in relation to Low Emissions Strategies which highlights what can be achieved when local government shows commitment and leadership to tackle air pollution.

This SCDC Strategy aligns with the national strategy and recommends actions to consider and improve air quality district wide for both existing and future communities.

³ Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995) and the relevant Policy and Technical Guidance documents

⁴ <https://www.scambs.gov.uk/environment/pollution/air-pollution/local-air-quality-management/>

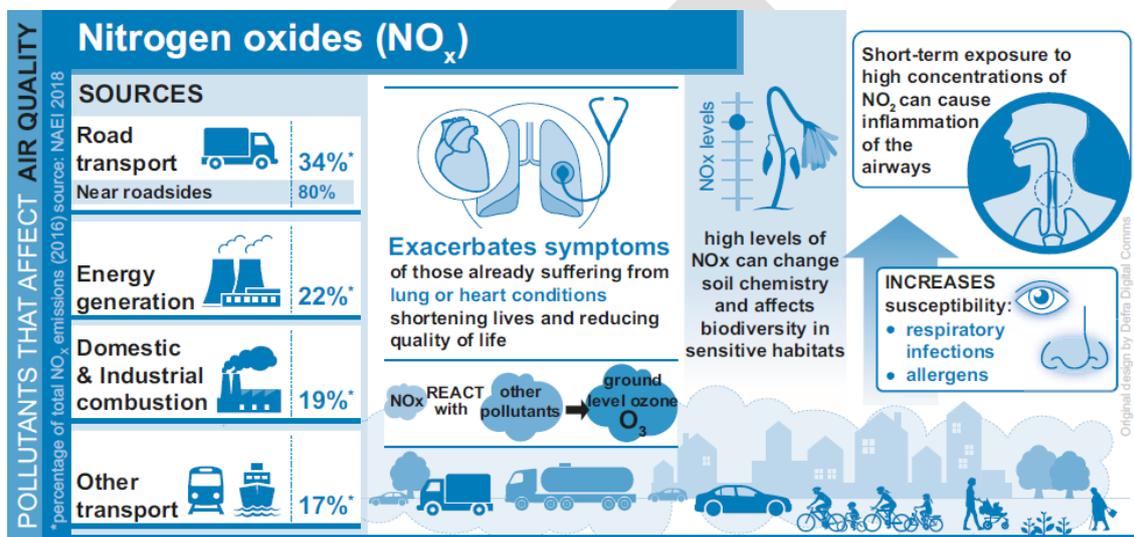
⁵ <https://www.gov.uk/government/publications/clean-air-strategy-2019>

2 Air Quality, Public Health and Neighbouring Districts

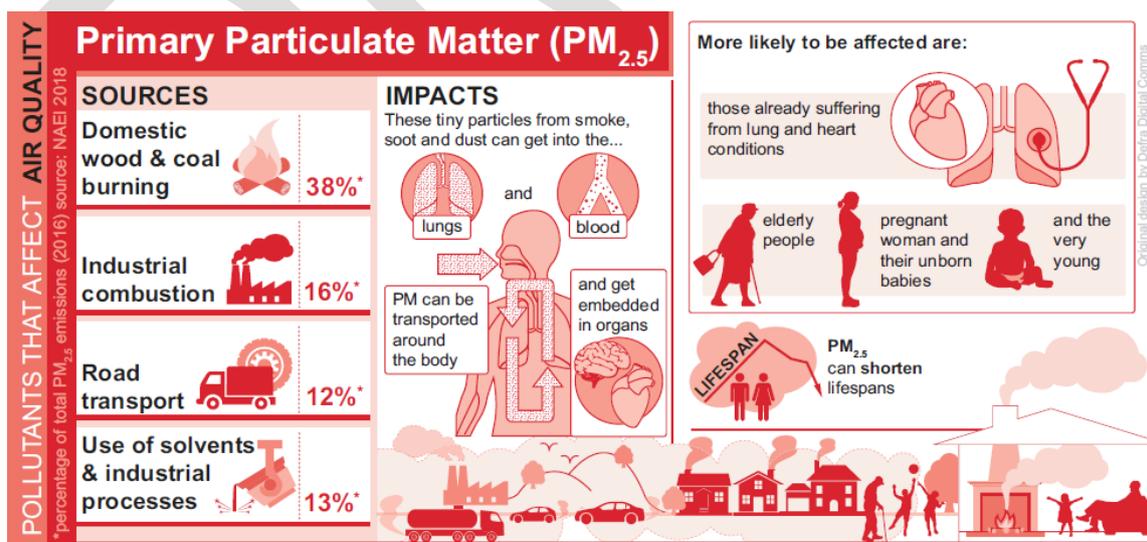
Air pollution is associated with several adverse health impacts and is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions.

There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas. There is clear evidence that PM_{2.5} (particulate matter with an aerodynamic diameter of 2.5µm or less) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases^{6,7,8}. Local authorities are expected to work towards reducing emissions and/or concentrations of PM_{2.5}.

Health Impacts from NO_x⁹



Health Impacts from PM_{2.5}



⁶ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

⁷ Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

⁸ The Cambridgeshire Transport and Health JSNA - Air Pollution, 2015

⁹ Defra Clean Air Strategy 2018

The importance of air quality has been recognised by Public Health England (PHE) and a specific health indicator relating to fine particulate matter has been included within the Public Health Outcomes Framework (PHOF). It is called the fraction of all-cause mortality attributable to anthropogenic particulate air pollution (measured as fine particulate matter, PM_{2.5})¹⁰. This was reported as 5.3% for Cambridgeshire in 2016.

The Council is aware that it cannot achieve the objective of this strategy working in isolation. Working with other stakeholders, including Cambridge City and other neighbouring authorities, public health professionals, developers and transport planners is recognised as a key requirement to facilitate the effective implementation of any measures to improve air quality.

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¹⁰ [Public Health Outcomes Framework](#)

3 The Ambitions and Focus of Air Quality Strategy

South Cambridgeshire District Council wish to improve the air quality for all its residents whilst supporting the growth across the district. To achieve such vision, three focus areas are identified to undertake appropriate actions and benefit air quality. They are presented below as focus area;

- A. Growth and new developments district wide
- B. The Council's Monitoring network
- C. Existing communities

The aim of this strategy is to deliver and encourage practical actions to prevent local air quality from worsening, and ideally achieve overall improvements. The key actions to maintain or improve good air quality across the district are described further in the following section.

The ambitions

Go beyond national objectives and drive SCDC to achieve nationally leading position on making sure air quality is considered and acted upon in all services at the right stage in the decision-making process

Introduce the Local Air Quality Requirements as a new minimum standards for sustainable homes and buildings, which encourages low emission transport

Improve existing communities' support schemes to retroactively achieve these objectives, including schemes to increase renewables uptake and energy efficiency of existing stock

Support Local and regional initiatives, including City Deal and sustainable public transport to encourage modal shift to cleaner, healthier forms of transport

Directly engage stakeholders to outline what they need to do to successfully implement strategy

4 Actions to Deliver the Air Quality Strategy

Proposed actions for each focus area are presented below to assist with delivering this strategy. These actions will be kept under review and updated for furthering the strategy.

4.1 Focus Area A. Growth and new developments

The challenge of maintaining good air quality in the wider district is minimising impacts from new major developments. Most of the new developments, when subject to air quality modelling and assessment, do not identify any significant exceedances of national air quality objectives. Therefore, it is often difficult to deliver improvements or mitigate impacts to air quality where local planning policies do not categorically state what measures will be required unless national objectives are exceeded.

As such, efforts have been made to increase the support of planning policies and to improve the use of planning process to ensure the impact of new developments on air quality is minimised.

To achieve the above and support the developers with clear information, set of Local Air Quality Requirements are introduced in this strategy which sets out the Council's preferred sustainable measures for new developments. These are summarised in four main categories as listed below.

1. Low Emission Transport & Behavioural Change
2. Energy Efficiency of Built Environment
3. Optimised Development
4. Construction Phase

The details of Local Air Quality Requirements are outlined in table A.1 Appendix A. To ensure that these requirements are implemented and its likely benefits of are reviewed the following actions are recommended;

- 1) Close partnership with developers and planning department is necessary at early stage of the design of each planning application.
- 2) The listed measures in this strategy are not exhaustive and should be kept updated with policies current at the time of any Local Plan.

Moreover, several key actions undertaken to strengthen the policy support for air quality are also summarised below;

- 1) More comprehensive policy for air quality is included within the South Cambridgeshire Local Plan (2018). The link between transport and air pollution is recognised and a new condition, Low Emission Strategy (LES), is introduced for major developments with significant transport implications. LES seeks implementation of low emission measures and sustainable transport to minimise the impact on local air quality.
- 2) To further support the Local Plan and assist the developers for future developments, a Greater Cambridgeshire Sustainable Design and Construction Supplementary Planning Document (SPD) was drafted in 2019. In which the Local Air Quality Requirements are

included in detail and additional measures which could benefit air quality as well as meeting other policy requirements set out in the Local Plan (2018) are provided.

4.2 Focus Area B. The Council's Monitoring network

Future developments in South Cambridgeshire are to be largely residential and reliant on road-based transport for travel and commuting to the city, London and the surrounding area. The majority of the growth is associated with significant developments such as Northstowe to the North West of Cambridge, Waterbeach New Town to the North East of Cambridge, Bourn Airfield and Cambourne West to the West of Cambridge.

Given the scale of the future developments and their potential to introduce new hotspots where air quality could be an issue, the need for a more robust and up to date monitoring network across the district has been acknowledged. Therefore, to ensure that the air quality monitoring programme run by the Council reflects the ongoing growth across the district following action is proposed;

- 1) Undertake a review and assessment by detailed modelling exercise for several scenarios for future developments. This will help identify current and future hotspots of concern to reflect the growth impact on air quality.

4.3 Focus Area C. Existing communities

To ensure existing communities are not suffering from worsening of air quality and benefit from opportunities to improve air quality following actions are proposed;

- 1) Engage with schools to promote none idling policy during collection and drop off hours – to reduce local exposure to high levels of pollution
- 2) Review and assess the potential need for Smoke Free Areas in densely populated locations of the district
- 3) Request and implement more comprehensive measures for dust management during construction phase of major developments
- 4) Close partnership with local businesses to reduce their emissions
- 5) Adopt an Air Quality Champion approach to promote air quality in different communities

Appendix A

Local Air Quality Requirements in South Cambridgeshire

The challenge of maintaining good air quality in the wider district is minimising impacts from new major developments. Most of the new developments, when subject to detailed modelling, do not identify any significant exceedances of national air quality objectives. Therefore, it is often difficult to deliver improvements or mitigate impacts to air quality where local planning policies do not categorically state what measures will be required unless national objectives are exceeded.

As such, efforts have been made to increase the support of planning policies and to improve the use of planning process to ensure the impact of new developments on air quality is minimised.

To achieve the above and support the developers with clear information, set of Local Air Quality Requirements are introduced in this strategy which sets out the Council's preferred sustainable measures for new developments. These are summarised in four main categories and are outlined in table A.1.

1. Low Emission Transport & Behavioural Change
2. Energy Efficiency of Built Environment
3. Optimised Development
4. Construction Phase

Table A.1: Local Air Quality Requirements and Sustainable Transport Measures

CATEGORY	MEASURES
Electric and Low Emission Vehicles Uptake	
Residential developments	<ol style="list-style-type: none"> 1. Charging Point (standard or fast where possible) for all private and allocated parking spaces 2. Charging Point (Fast or Rapid where possible) for every 10 communal parking spaces
Commercial Developments	<ol style="list-style-type: none"> 1. 1 Rapid Charging Point/station Per 1000m² of floorspace or per 20 parking spaces or 2. Allocated fast Charging Point for 50% of proposed parking spaces
Supporting Infrastructure	<ol style="list-style-type: none"> 1. Provision of infrastructure to facilitate additional charging points 2. Support for other Low Emission technologies is welcome and considered on site-by-site basis
Behavioural Change and Travel Plan	
Modal Shift Facilities and Incentives	<ol style="list-style-type: none"> 1. Phasing of the cycling/pedestrian infrastructure 2. Membership for Car Share and Car Hire schemes 3. Subsidised Bus and Rail Pass 4. Discount Vouchers/arrangements for shops (local) to assist with cycling uptake i.e. purchase, servicing, repairs and training 5. Promoting non-idling 6. Electric Shuttles, or other low emission alternative, to local facilities i.e. schools & public transport hubs (funded long-term) 7. Sheltered bus stops 8. Provision of Car Share Scheme 9. Provision of a Car Club Scheme 10. Provision of Bike-sharing schemes 11. Secure bike storage facilities (site wide) 12. Sufficient bike storage within housing and apartment blocks 13. Parking enforcement for non-allocated spaces 14. Personalised Active Travel Plans
Parking Provision (In line with cycle parking requirements set out in policy TI/3)	
Parking Allocation and Facilities	<ol style="list-style-type: none"> 1. Non-idling policy 2. Priority Parking Bays for Low Emission Vehicles (with provision of Charging Points)

CATEGORY	MEASURES
	<ol style="list-style-type: none"> 3. Priority Parking Bays for Car Share Schemes 4. Secure and sheltered parking area for cycles 5. Provision of charging points for electric bikes and provision for off-gauge bikes
<p>Public Transport</p> <p>Support for Sustainable and Low Emission Public Transport</p>	<ol style="list-style-type: none"> 1. Participation in district wide public transport schemes 2. Contributions for sustainable transport infrastructure enhancement, such as new guided busways, cycle routes, train stations etc. 3. Contributions for Low Emission Buses or Retrofitting the existing fleet (serving the area of the development) 4. Participation in Greater Cambridgeshire Partnerships projects near the development 5. Sheltered bus stops 6. Local Shuttles to public transport hubs
<p>Offsetting Emissions</p> <p>Financial contributions</p>	<p>Appropriate mitigation contributions can be calculated using Defra’s damage cost approach (Guidance). Offsetting should be a last resort and will be considered on site-by-site basis.</p>

Table A.2: Additional measures in improving air quality

CATEGORY	MEASURES
Renewable and low carbon energy	At least 10% of the buildings carbon emissions through the use of on-site renewable and/or low carbon energy
Combined Heat and Power (CHP) – emissions standards	Any gas fired CHP should meet an emissions standard of: <ul style="list-style-type: none"> • Spark ignition engine: less than less than 150 mgNO_x/Nm³ • Compression ignition engine: less than 400 mgNO_x/Nm³
Gas boiler efficiency	<ul style="list-style-type: none"> • Gas turbine: less than 50 mgNO_x/Nm³ <p>A low NO_x boiler would meet a dry NO_x emission rating of 40mg NO_x /kWh</p>
Biomass boilers	A standalone checklist should be obtained from Environmental Services for all biomass boilers
Optimised design	<p>New development should be designed to minimise public exposure to pollution sources by</p> <ul style="list-style-type: none"> • Locating habitable rooms away from busy roads • Avoiding building configuration along busy roads that inhibits effective pollution dispersion (street canyons), • Considering the proximity of sensitive receptors such as schools to busy roads. <p>Introducing green infrastructures and barriers to reduce pollutants</p>
Construction standards	Many measures to enhance the sustainability and energy efficiency of the built environment also have the additional benefit of delivering mutually beneficial air quality objectives. Construction standards such as BREEAM and Home Quality Mark (HQM) include consideration of air quality. While not specifically required by policy in the South Cambridgeshire Local Plan (2018), use of these construction standards is fully supported.
Building ventilation	<p>The preference should be for buildings to be naturally ventilated wherever possible.</p> <p>Sealed fascia’s with active ventilation or active air filtration should only be used in cases where other options are not available, for example in areas around AQMA’s or areas that could suffer from excessive noise. Care must be taken in designing such systems that the thermal comfort of building users can be guaranteed, with consideration given to future climate scenarios. Note that this should not preclude mechanical extract systems in bathrooms and kitchens, and the Council would be supportive of the use of Mechanical Ventilation with Heat Recovery (MVHR) to supplement natural ventilation, where systems are correctly specified, installed and maintained.</p>
Construction Phase	
Construction dust	Monitoring will be requested on a site by site basis. In line

CATEGORY	MEASURES
monitoring	with best practice guidance (see further guidance below).
Construction vehicles	Any diesel-powered machines used on, or otherwise serving the site, must be run on ultra-low sulphur diesel (also known as ULSD ‘cleaner diesel’ or ‘green diesel’). "Ultra-low sulphur diesel" means fuel meeting the specification within BS EN 590 .
Construction road layout	Using design measures including speed restrictions and traffic management.
Construction Environmental Management Plan (CEMP)	<p>A CEMP will cover impacts to air quality mainly associated with dust and odour. The CEMP will also cover more general environmental health issues such as noise and light pollution.</p> <p>Site activities include plant emissions – measures could include switch-off policy, plant maintenance and alternative fuel use.</p>

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Glossary of Terms

Abbreviation	Description
LAQM	Local Air Quality Management
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
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'
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
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
SO ₂	Sulphur Dioxide

References

1. Air Quality Expert's Group, Fine Particulate Matter (PM_{2.5}) in the United Kingdom (2012)
2. Air Quality Regulations 2000 and (Amendment) regulations (2002)
3. Air Quality Action Plan for the Cambridgeshire Growth Areas (2010) South Cambridgeshire District Council, Huntingdonshire District Council, Cambridge City Council
4. Deriving NO₂ from NO_x for Air Quality Assessments of Roads – Updated to 2006 Air Quality Consultants
5. Local Air Quality Management, Policy Guidance LAQM. PG (16) (2016) Department for Environment, Food and Rural Affairs (Defra)
6. Local Air Quality Management, Technical Guidance LAQM. TG (16) (2016) Department for Environment, Food and Rural Affairs (Defra)
7. Local transport Plan (LTP) 3: 2011 – 2026, Cambridgeshire County Council (2011)
8. The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2000) Department for Environment, Food and Rural Affairs (DEFRA)
9. The Detailed Assessment of Nitrogen Dioxide along the A14 Corridor (2006) South Cambridgeshire District Council
10. The Detailed Assessment of PM₁₀ along the A14 Corridor (2007), South Cambridgeshire District Council
11. The Further Assessment of Nitrogen Dioxide and PM₁₀ along the A14 Corridor (2008) South Cambridgeshire District Council