

South Cambridgeshire District Council

Air Quality Strategy

2021



Executive Summary

South Cambridgeshire District Council (SCDC) is a rural district where the background pollution levels are generally lower than that in urban areas. SCDC encompasses Cambridge City and has a good road and rail links with London and the South-East with M11, A11 and A14 corridors passing through the district and attracting a high volume of traffic on daily basis.

Whilst undergoing a significant growth, from multiple small developments to actual new towns in different parts of the district, South Cambs faces a potential risk to its local air quality from the cumulative impact of these developments. Therefore, a need for a robust air quality strategy to set out a new approach to monitor and improve the air quality was acknowledged.

Section 82 of the Environment Act 1995 provides that every local authority shall review the air quality within its area, both at the present time and the likely future air quality. Section 83 requires local authorities to designate an Air Quality Management Area (AQMA) where air quality objectives are not being achieved, or are not likely to be achieved, as set out in the Air Quality (England) Regulations 2000. Once the area has been designated, Section 84 requires the local authority to develop an Action Plan detailing remedial measures to tackle the problem within the AQMA¹.

SCDC has revoked its only AQMA along the A14 between Bar Hill (to the North-West of Cambridge) and Milton (to the North-East) interchange, in 2021². Whilst we continue to monitor air quality along the A14, our focus and resources will shift towards identifying new hotspots and begin to actively monitor and improve air quality across the district where both existing and future communities will benefit.

Furthermore, we consider a close partnership with our neighbouring Local Authorities essential to go beyond our boundaries and improve air quality on a bigger scale. The ongoing partnership between SCDC and Cambridge City will ensure a better alliance in future policies to improve air quality.

Air Quality in SCDC is generally 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 strategy outlines our three areas of focussed actions to ensure our air quality is maintained or improved as summarised here;

- Focus Area A: future growth and development
 - a) Influencing the planning policies such as Local Plans and Supplementary Planning Document to consider air quality requirement in line with the most up to date guidance and best practices
 - b) Work in close partnership with other authorities to deliver aligned requirements in improving air quality
- Focus Area B: the monitoring network
 - a) Regularly review and update the monitoring network to reflect the ongoing growth across the district
- Focus Area C: existing communities
 - a) Consider existing sensitive areas to air pollution for monitoring i.e. schools
 - b) Actively engage with the public in improving air quality
 - c) Assisting the choices they make for sustainable travel, lower polluting vehicles, environmental friendly ways of heating their homes, etc

¹ LAQM PG (16)

² The decision to revoke the AQMA was supported by the Department for Environment, Food and Rural Affairs (Defra) following a long term evidence of monitoring data consistently below the national objective since 2014. Details available in Annual Status Reports on South Cambs website.

1 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.

SCDC operates a monitoring network including Automatic Monitoring Stations (AMS) and NO₂ diffusion tubes (passive monitoring) within the District. The monitoring results are available in our annual status reports to Defra and are available on our 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.

The 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/>

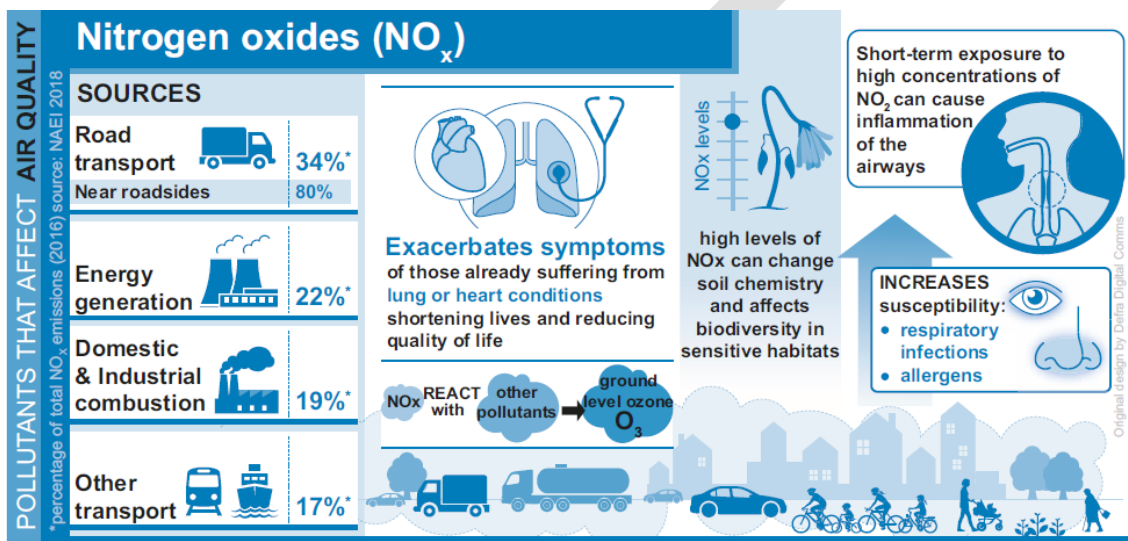
⁵ <https://www.gov.uk/government/publications/clean-air-strategy-2019>

2 Public Health

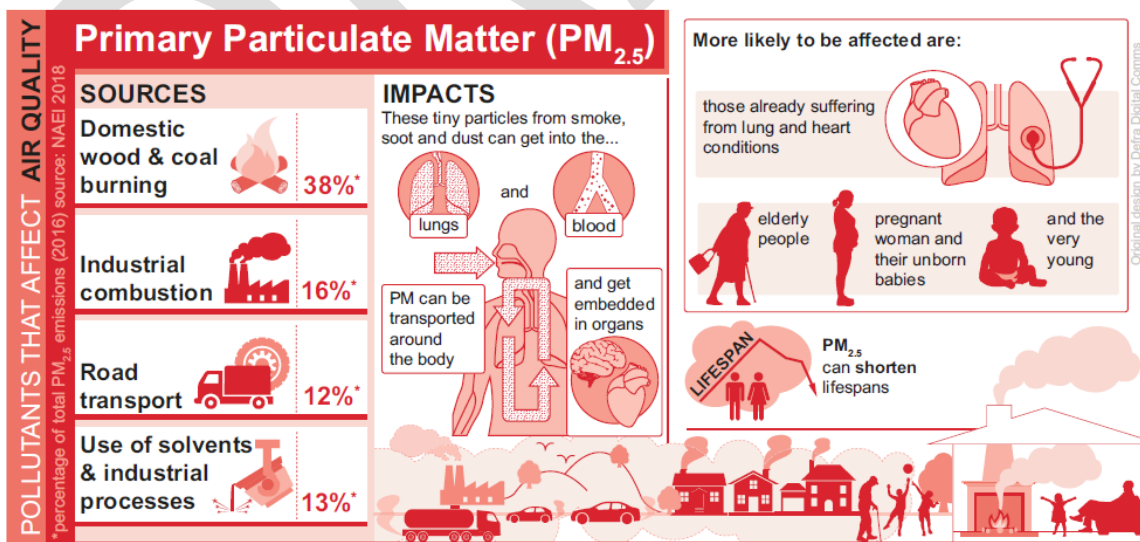
Air pollution is associated with several adverse health impacts and is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions.

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}.

Health Impacts from NO_x⁹



Health Impacts from PM_{2.5}



Local authorities are expected to work towards reducing emissions and/or concentrations of 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

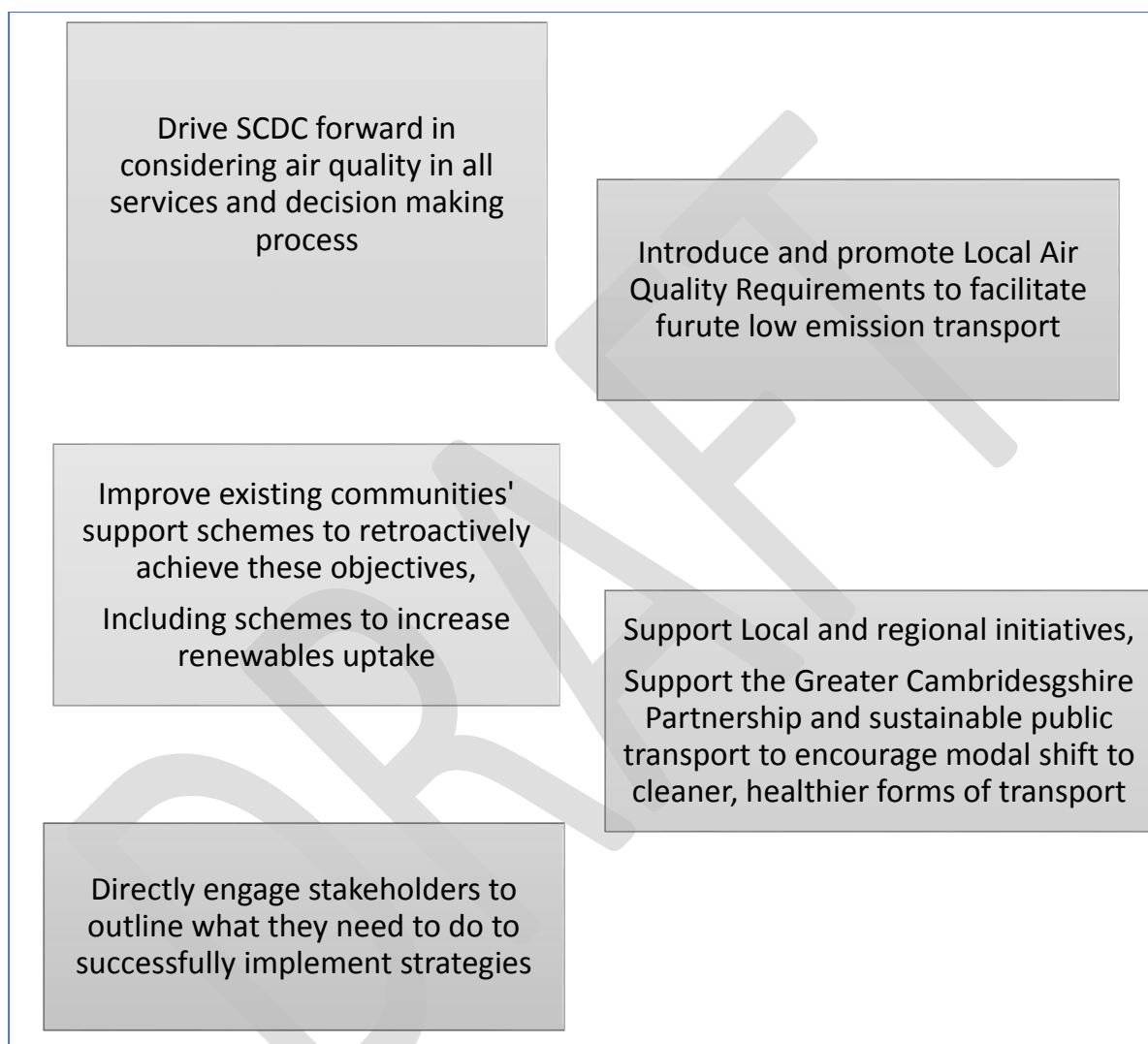
⁸ The Cambridgeshire Transport and Health - Air Pollution, 2015

⁹ Defra Clean Air Strategy 2018

3 The Ambitions

South Cambridgeshire District Council wish to improve the air quality for all its residents whilst supporting the growth across the district. Our ambition is to consider air quality in all aspects of our services and in line with our 'Being Green to our Core' priorities.

The ambitions



The Council is aware that it cannot achieve the objective of this strategy working in isolation. Working with other stakeholders, including Cambridge City Council 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

The key actions to maintain or improve good air quality across the district are described further in the following section.

4 Focus Areas and Actions

Air Quality in SCDC 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 strategy outlines our three areas of focussed actions to ensure our air quality is maintained or improved.

These actions will be kept under review and will be updated for furthering the strategy in the future.

4.1 Focus Area A. Growth and future developments

The challenge of maintaining good air quality in the wider district is to minimise the cumulative impacts from all new 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 if no significant impact is anticipated.

As such, efforts have been made to ensure that the impacts from new developments are considered and minimised at outset as much as possible.

- SCDC Local Plan (2018) includes a comprehensive policy on air quality CS/12 and recognises the link between air pollution and transport. This has been reflected in transport policy TI/2 which subjects the major developments with significant transport implications to a site based Low Emission Strategy (LES) seeking implementation of low emission measures and facilitating sustainable transport to minimise the impact on local air quality.
- This strategy introduces a list of Local Air quality Requirements for future developments through the planning system. The requirements range from improving sustainable and low emission transport to facilitating schemes and infrastructure for behavioural change. These are mainly achieved through site based Low Emission Strategies for major developments and aim to support the developers with clear information in the future. These requirements are outlined in Append A. The listed requirements are not exhaustive and should be subject to update with policies current to any future Local Plan.
- Detailed Local Air Quality Requirements were also included in the Sustainable Design and Construction Supplementary Planning Document (SPD) adopted in January 2020.

4.2 Focus Area B. The monitoring network

Future developments in SCDC are to be largely residential and reliant on road-based transport for travel and commuting to the city, London and the surrounding area. 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.

To ensure that the ongoing growth across the district is reflected and covered by our monitoring network at any time, the monitoring network will:

- 1) Be subject to regular review and update
- 2) Include new technologies and alternatives to traditional monitors enabling the Council to conduct short term and hotspot monitoring

4.3 Focus Area C. Existing communities

Our communities should be considered in all opportunities to benefit from an improved air quality. This could be achieved through a range of actions big or small such as provision of significant infrastructure to facilitate the uptake of low emission vehicles to daily practical measures which in turn lead to improved air quality.

Future focused actions to consider for communities are:

- 1) Engagement with the schools to promote policies and helpful information through
 - a. National and regional campaigns such as Clean Air Day
 - b. Promotion of none idling policy during collection and drop off
- 2) Reduce the use of solid fuel stoves and open fires – domestic burning is now the single biggest source of particulate matter pollution in the UK (greater than traffic and industry)
- 3) Reduce domestic burning i.e. use of solid fuel stoves and open fires
- 4) Dust control during construction of major developments
- 5) Close partnership with local businesses to reduce emissions
- 6) Support local initiatives to promote awareness on air quality

Some of the daily measures you can take to help improve air quality in SCDC include:

- If you are burning wood or coal ensure any fuel used meets the new standards of moisture content and emissions – more information is available at <https://woodsure.co.uk/are-you-ready-to-burn/>
- Switch it off – don't leave your car engine idling if you are stationary e.g. waiting to pick someone up, in a traffic jam or waiting at level crossings.
- When driving, use techniques that help you use less fuel, like driving more slowly and smoothly
 - You could use 10% less fuel by following the tips on the AA website http://www.theaa.com/motoring_advice/fuels-and-environment/drive-smart.html.
 - a. Switching your engine off when stationary, this will not only reduce your emissions of air pollution but will save fuel and therefore money too!
- Minimise car use wherever possible:
 - 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.
 - a. For short journeys try cycling or walking more often – this helps you stay healthy and saves you money in fuel costs.
 - b. For longer journeys consider public transport options.
 - c. Use journey-planning apps such as MyBusTrip or MotionMap for travel by bus, train, walking and cycling.
- Consider making your next vehicle an electric vehicle.

- Join a car club or car-share regularly.
- Consider working at home where possible – the first Covid-19 lockdown showed widespread improvements in the air quality as the amount people travelled reduced.
- Use less energy at home – consider a smart meter to monitor usage and be aware of boiler standards.
- Opt for ‘green energy’ tariffs where available or switch to renewable sources of heating or power.
- Improve indoor air quality by ensuring adequate ventilation through opening windows, especially when cooking or cleaning, as these activities produce pollutants.
- Make your children aware of the impact that day to day activities have on air quality.

Further information about air quality in SCDC are included in our annual status reports and the details of our monitoring network are available to public on our website¹⁰. You could share your views and concerns via email address air.quality@scambs.gov.uk and follow our Facebook page¹¹ for general updates and news.

¹⁰ <https://www.scambs.gov.uk/environment/pollution/air-pollution/local-air-quality-management/>

¹¹ <https://www.facebook.com/SouthCambridgeshireDistrictCouncil/>

Appendix A

Local Air Quality Requirements in SCDC

This strategy introduces a list of Local Air quality Requirements for future developments through the planning system.

The requirements range from improving sustainable and low emission transport to facilitating schemes and infrastructure for behavioural change.

These are mainly achieved through site based Low Emission Strategies for major developments and aim to support the developers with clear information in the future. These requirements are outlined in table A.1 and A.2

The requirements are not exhaustive and should be subject to update with policies current to any future Local Plans.

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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
Public Transport	
Support for Sustainable and Low Emission Public Transport	<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
Offsetting Emissions	
Financial contributions	<p>Appropriate mitigation contributions can be calculated using Defra’s damage cost approach guide. 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	

CATEGORY	MEASURES
Construction dust monitoring	Monitoring will be requested on a site by site basis. In line 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)
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10. The Detailed Assessment of PM₁₀ along the A14 Corridor (2007), South Cambridgeshire District Council
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