

A vibrant field of sunflowers under a clear blue sky. The sunflowers are in various stages of bloom, with bright yellow petals and dark brown centers. The background is slightly blurred, creating a sense of depth. Overlaid on the left side of the image are three vertical white bars containing text.

South Cambridgeshire District Council

Air Quality Strategy

2018

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 only 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.

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 scale of growth planned is such that it could deteriorate significantly if we do not take preventative action.

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 most of the proposed developments within the district.

There are specific areas of concern, primarily related to the A14 around the Girton Interchange which have traditionally been the focus of efforts to improve air quality. However, it is important to note that within this Air Quality Management Area (AQMA) no exceedances of national objectives have been recorded over the recent years.

With the A14 improvements now underway, it is therefore necessary to propose a new approach which intends to minimise impacts from all sources of air pollution across the whole district and not just within the AQMA.

This strategy outlines a revised approach on how the Council intends to go about doing that, both now and as part of future planning. Essentially 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.

The 'Local Air Quality Requirements in South Cambridgeshire' is introduced in appendix A, as a key mechanism to deliver this strategy.

1. Local Air Quality Management

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 a number of 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 local Air Quality Strategies.

The aim of this strategy is to deliver and encourage practical actions to prevent local air quality from worsening, and ideally achieve overall improvements, not merely avoiding pollutant levels set in legislation and guidance.

2. Neighbouring Districts & Stakeholders

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

This has been a key point taken forward in this strategy and close working with Cambridge City (which South Cambridgeshire encompasses) is particularly relevant. Measures to engage stakeholders are outlined in Section 6.

3. Air Quality and Public Health

In 2014 the Cambridgeshire Health and Wellbeing Board requested a Transport and Health Joint Strategic Needs Assessment¹ (JSNA) which includes air pollution. The report noted that there are levels of air pollution in Cambridgeshire that impact health, even though most annual averages may not be over air quality thresholds in several areas.

Through the JSNA process, stakeholders identified several options for addressing air pollution in Cambridgeshire which have been taken into account in this strategy and taken forward, as outlined in Section 6.

¹ Transport and Health Joint Strategic Needs Assessment, 2014

Health Impacts from NO_x and PM_{2.5} Pollutants²

POLLUTANTS THAT AFFECT AIR QUALITY

Nitrogen oxides (NO_x)

SOURCES		
Road transport	34%*	Near roadsides 80%
Energy generation	22%*	
Domestic & Industrial combustion	19%*	
Other transport	17%*	

Exacerbates symptoms

of those already suffering from lung or heart conditions shortening lives and reducing quality of life

NO_x REACT with other pollutants → ground level ozone O₃

high levels of NO_x can change soil chemistry and affects biodiversity in sensitive habitats

Short-term exposure to high concentrations of NO₂ can cause inflammation of the airways

INCREASES susceptibility:

- respiratory infections
- allergens

Original design by Defra Digital Comms

POLLUTANTS THAT AFFECT AIR QUALITY

Primary Particulate Matter (PM_{2.5})

SOURCES		
Domestic wood & coal burning	38%*	
Industrial combustion	16%*	
Road transport	12%*	
Use of solvents & industrial processes	13%*	

IMPACTS

These tiny particles from smoke, soot and dust can get into the...

PM can be transported around the body and get embedded in organs

More likely to be affected are:

those already suffering from lung and heart conditions

elderly people pregnant woman and their unborn babies and the very young

LIFESPAN can shorten lifespans

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² DEFRA Clean Air Strategy 2018

4. Existing Legislative Context

The Council's existing policies in relation to air quality have been reviewed to understand the policy gaps in support of the new Strategy.

Existing policies are as follows;

- 5.1. The emerging Local Plan (2013), Policy SC/13.
- 5.2. District Design Guide SPD (2010), Chapter 7 Air Quality (paragraph 10.13).
It refers to the above policy NE/16- Emissions as the key justification policy
- 5.3. Local Development Framework - Development Control Policies (2007), Policy NE/16- Emissions.

The above policies recognise the need for mitigation measures to minimise air quality impacts where an exceedance of national objectives or a significance of impact are recognised as a result of an air quality impact assessment and mainly within or near the AQMA. This represents a conflict with the proposed draft Strategy where implementation of measures to minimise air quality impacts are recommended for all developments regardless of their use, size and location within the whole district.

The emerging Local Plan however promotes 'Site based Low Emission Strategies' to help minimise emissions from developments, by integrating design and low emissions transport related measures. This Strategy aims to build on that aspect and presents an opportunity for partnership between different Stakeholders to achieve more than reducing transport related emissions.

Different solutions, future plans and necessary actions to enable the Council to implement the new approach are proposed in section 6 to achieve more than reducing transport related emissions and go beyond the boundaries of the current AQMA.

The proposed 'Local Air Quality Requirements in South Cambridgeshire' in appendix A, shall form part of the planning validation to assist all developers to deliver more sustainable, greener and marketable developments within South Cambridgeshire where improving air quality will be one of the main design aspects. It will provide developers who wish to build in the district with clear and detailed guidance of what the Council will expect them to deliver in terms of preventing or mitigating impacts on local air quality resulting from any new developments.

5. South Cambridgeshire Ambitions

This strategy outlines the key ambitions and measures that will need to be taken to maintain or improve good air quality across the district, which are described further in the following section.

The Ambitions of South Cambridgeshire's Air Quality Strategy



6. Engagement and Key Actions to Implement the Strategy

To assist in delivering the ambitions, key actions for South Cambridgeshire District Council are outlined as follows. Environmental Services will present and update these key tasks and seek encouragement for furthering the Strategy.

6.1. Recommended Key Actions for South Cambridgeshire District Council

SCDC wish to move away from only acting to address a worsening of air quality when certain thresholds are breached, to pursuing continual improvements and minimising impacts where unavoidable. Ideally more prescriptive policy context for this approach is required e.g.;

- Adopting the 'Local Air Quality Requirements in South Cambridgeshire' as a Supplementary Planning Document.
- Review the current monitoring network and identify new hot spots where the air quality monitoring network should be extended to cover.
- Review the need for monitoring PM₁₀ and PM_{2.5} across the district where sensitive receptors are presented near major developments or where a hotspot in terms on air pollution is suspected
- Ideally, the Local Air Quality Requirements should form part of planning validation checklist. Each application needs to achieve this standard (although for smaller developments it is voluntary) and it is outlined further in Appendix edit.
- Appoint an Air Quality Champion to promote local air quality at the right stage of the decision making process.
- Engage with developers at the earliest opportunity. No development is too small to worsen air quality.
- SCDC's approach applies a minimum standard and a market incentive program which covers every new build.
- If a development fully complies with the standard, there will be zero extra cost and all properties will be more sustainable, greener and marketable. This creates a fair and a level playing field for all.
- Explore Building Control Commitment/NHBC validation/endorsement for the 'Local Air Quality Requirements'.

- Introduce more comprehensive measures for dust management for both construction and operation stage of major developments and for site-specific based approach
- Review the existing volume of wood burning stoves across the district and investigate the potential introduction of control measures such as smoke free zones in densely populated areas
- Work closely with local businesses and assisting in practical measures and information to reduce emissions
- Engage with schools to improve knowledge on air quality issues
- Engage with and support other neighbouring local authorities and their initiatives e.g. OLEV in improving air quality including Cambridge City Council, Greater Cambridgeshire Partnership, Cambridgeshire County Council

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7. Local Air Quality Requirements in South Cambridgeshire

The challenge of maintaining good air quality in the wider district is focussed on minimising impacts from (or to) the new major developments. Most of the new developments, when subject to detailed modelling, do not identify any significant exceedances of national air quality objectives because they are being built in rural background areas where current pollution levels are low.

However, the cumulative effect of multiple large concurrent developments is likely to pose a long term risk to air quality in the district even though that may not be immediately apparent when looking at modelled forecasts for individual sites, particularly as many of the developments are at outline or pre-application stage.

This was a key challenge for the Council to overcome in ensuring due consideration is given to air quality through the planning process despite a clear and urgent need for new housing. It was recognised by the Council that implementing measures which will actually deliver improvements or mitigate impacts in relation to air quality are often not tangible and difficult to achieve, particularly on major new developments where local planning policies do not categorically state what measures will be required unless national objectives are threatened.

As such, efforts have been made since 2016 to achieve improvements through the use of planning conditions which has led to the development of the Local Air Quality Requirements, a points-based incentive intended to encourage the inclusion of low emission measures in all developments. This is outlined in detail in Appendix A and summarised below.

South Cambridgeshire District Council and EPS Ltd



LOW EMISSION STANDARD MARKET INCENTIVE

Local Air Quality Management in South Cambridgeshire

MARKET INCENTIVE

The scheme is about adopting measures within a development to reduce impacts on air quality. The Council provide some examples of such measures and the architect/ design manager chooses which suit their scheme and prepare a brief specification which is agreed by the Council and can then be built. No expensive/ ineffective reports, no risk of delays.



MINIMISE IMPACTS

The fundamental objective of this standard is to minimise potential impacts by incorporating measures into the development, such as energy efficiency, bike storage or electric vehicle charging points - regardless of past use and not constrained by meeting specific forecasted pollutant limits.



NO EXTRA COST

Compliance with the standard will not incur any extra cost for developments that are already designed to be as sustainable as they realistically can be; just demonstrate compliance through planning and that's it. Where the standard is not currently met, the costs of achieving it will not be onerous, speak to the Council early on and we will help. If compliance with the standard is then still not achieved, a conventional Air Quality Impact Assessment will be required. Only in very sensitive areas will such an assessment be mandatory.



FOUR INVENTORY CATEGORIES

The standard is split into four aspects of the development:

- Low Emission Private Transport and Travel Planning
- Energy Efficiency of Built Environment
- Optimised Development
- Construction Phase



If you have any queries on air quality in the development control process, please contact the Air Quality Team of the Council. Contact prior to any planning application being submitted would be welcomed.

Appendix A

Local Air Quality Requirements in South Cambridgeshire

The intention of the Local Air Quality Requirements is to inform all developers who wish to build in the district of what the Council will expect them to deliver in terms of preventing or mitigating impacts on local air quality resulting from any new developments.

- It is designed to be simple and could be prepared by professionals such as architects and design managers. It is not envisaged that an air quality professional is required to prepare the specification with perhaps the exception of the larger more complex sites.
- All developers are required to present a brief design specification outlining the necessary measures to achieve the standard, usually undertaken at the pre-application stage of the planning process.
- Any scheme needs to achieve a 'pass' or 'borderline pass' at each stage.
- Any measure where this is not achieved needs a comment to justify why it is not appropriate or reasonably achievable on a specific development. If there are several 'pass' standards achieved it is likely sporadic failures will be tolerated.
- If the development continues to fail in several areas after this process, the development will not be deemed compliant with this standard and the requirements of the planning process will not be deemed satisfied unless an Air Quality Impact Assessment is prepared and any recommendations adhered to.
- For larger developments, a financial contribution to the Council may also be required to support ongoing and future efforts to manage air quality under a Section 106 agreement or the planning application may be refused. The Council would rather encourage applicants to voluntarily pursue more sustainable standards but these aspects are necessary to deliver an effective and enforceable framework.

The Local Air Quality Requirements is split into the following categories in table 1-4;

- 1) Low Emission Private Transport & Travel Planning
- 2) Energy Efficiency of Built Environment
- 3) Optimised Development
- 4) Construction Phase

1) Low Emission Private Transport & Travel Planning

Low Emission Measure	Comment	Merit			Key Local Policy Justification
<p>Low Emission Vehicle Support</p>	<p>SCDC are seeking to encourage the adoption of low emission forms of transport, including private vehicles such as hybrid, electric (EV) and hydrogen powered cars.</p> <p>The aim being that charging points or at a minimum the installation of electrical infrastructure to facilitate the future installation of charging points will be widespread to assist in this uptake.</p> <p>For developments OR car parks with more than 20 car parking spaces, it is expected that a minimum of 5% car park spaces will have EV charge points.</p>	<p>Dedicated Charging Point</p>	<p>Superfast (120KW+)</p>	<p>Pass</p>	<p>LDF Policy NE/1-3 & TR/1-4</p>
			<p>Rapid (43/50KW)</p>		
<p>Travel Plans & Car Share Schemes</p>	<p>To encourage model shift and behavioural trends away from private individual transport. Range of measures typically to include:</p> <ul style="list-style-type: none"> - Car clubs, share schemes and any associated infrastructure which supports this objective will be supported. - Proposals to prioritise EV parking would also be welcomed and encouragement of casual cycling, including electric cycles (EC) 	<p>Measures to discourage car usage, such as preferable walkways, cycle routes or separate parking lots. Parking enforcement for non-allocated spaces.</p>	<p>Pass</p>	<p>NE/16, TR/1, TR/2, TR/3 & TR/4</p>	
					<p>Dedicated cycle ways/walkways on site, connecting to existing infrastructure where possible</p>
					<p>Minimal car parking provision where appropriate (i.e. lower emission travel available)</p>
					<p>Travel planning aids/ relevant way finding signage</p>
		<p>EV dedicated parking spaces supporting by charging point</p>	<p>Pass</p>		
		<p>Provision of low emission pool car/Zip Car or car sharing club.</p>			
		<p>Measures to encourage casual cyclists, such as arranged discounts in local shops, servicing arrangements or repairs.</p>			
		<p>Secure cycle racks (with power for EC charging)</p>			
<p>Infrastructure to support public transport uptake</p>	<p>Measures ranging from minor infrastructure such as bus stops to substantial civil infrastructure enhancement, such as new guided busways, train stations, long-term funded shuttles to public transport hubs.</p>	<p>To be discussed on a site-specific basis and such measures are likely to be welcomed.</p>	<p>Pass</p>	<p>NE/16, TR/1, TR/2, TR/3 & TR/4</p>	

2) Energy Efficiency of Built Environment

Low Emission Measure	Comment	Merit		Key Local Policy Justification	
Sustainability	The council are seeking to maximise the sustainability of the built environment to achieve the mutually beneficial air quality objectives. Utilising the BREEAM rating for the Code for a Sustainable Built Environment or BRE's Home Quality Mark is one approach, others may be suggested.	BREEAM Rating	Outstanding Excellent Pass-Very Good	Pass	LDF Policy NE/1-3 & TR/1-4
		Home Quality Mark	Other demonstrable energy efficiency measures such as insulation, cavity wall insulation, double glazing, high energy performance certification etc.	Borderline Pass	
Renewables	At least 10% of the buildings' total predicted energy requirement will be from on-site renewable energy sources.	Higher scores to be awarded where greater renewable contributions are available.		Pass	LDF Policy NE/2
Biomass Boilers	A standalone checklist should be obtained from Health & Environmental Services for biomass boilers.	Compliance with existing SCDC standard.		Pass	NE/2 & NE/3
Combined Heat & Power (CHP) / Boiler Efficiency	Developments shall utilise low NOx boilers/CHP to minimise emissions from the development that may impact on air quality.	Boiler Efficiency Achieved		Borderline Pass	NE/1, NE/2, NE/3 & NE/16
	Typically, a low NOx boiler would meet a dry NOx emission rating of 40mg/kWh. Any gas-fired CHP shall meet an emissions standard of: - Spark ignition engine: less than 150mgNOx/Nm ³ - Compression ignition engine: less than 400 mgNOx/Nm ³ - Gas turbine: less than 50mgNOx/Nm ³	CHP Efficiency Achieved		Pass	

3) Optimised Development

Low Emission Measure	Comment	Merit		Key Local Policy Justification
Site layouts & proximity of housing to roads	Although not a specific requirement of air quality policy, design layouts which reduce exposure of receptors to pollutants are preferable, particularly in terms of proximity of housing to busy roads.	Development specific Allocation	Pass	NA
Sealed fascia's/active (artificial) ventilation or active air filtration (NOx filters etc)	Only to be used in cases where few other options are available. I.e. Only in very sensitive areas and around AQMA, or for other reasons such as noisy areas.	Used only if absolutely necessary, not encouraged.	Borderline Pass	NE/16
Building Design	Favourable designs measure includes designs to avoid the creation of tight/tall streets (canyons) & Increasing sustainable/well-insulated building design.	To discuss on site-specific basis	Pass	TR/3, NE/2

4) Construction Phase

Low Emission Measure	Comment	Merit	Key Local Policy Justification
Construction Vehicles	<p>All commercial road vehicles used on the construction project must meet the European Emission Standards (commonly known as Euro standards) of Euro 5 during any works that take place.</p> <p>All non-road mobile vehicles with compression ignition engines used within the site must comply with emission standards set in EC directive 97/68/EC. Vehicles must meet Stage IIIa and b emission limits.</p> <p>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.</p>	<p style="text-align: center;">Borderline Pass</p> <p style="text-align: center;">(it is recognised that for most sites this is aspirational and difficult to enforce, so has not been prioritised)</p>	TR/3
Construction Road Layout	Favourable design measure including speed restrictions & traffic management.	Borderline Pass	TR/3
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 – switch-off policy, plant maintenance & alternative fuel use.</p>	<p style="text-align: center;">Pass</p>	NE/16

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

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South Cambridgeshire District Council

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