Appendix A

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Cambridge City Council & South Cambridgeshire District Council

Greater Cambridge Air Quality Strategy

2024-2028

Executive Summary

Still to write

1. Background

Local Authorities have a statutory requirement under Local Air Quality Management (LAQM) to monitor air quality within their districts against national objective levels for key pollutants (Nitrogen Dioxide, Particulate Matter (PM_{10}) and Sulphur Dioxide). Air Quality within both the Cambridge City Council (CCC) and South Cambridgeshire District Council (SCDC) areas; referred to moving forward as Greater Cambridge has continued to improve in recent years with objective levels for all key pollutants being achieved in recent years. This is because of active measures implemented by both councils to improve air quality and the modernisation of the transport fleet in accordance with stricter emission standards.

New national legally binding $PM_{2.5}$ targets have been set under the Environmental Target Regulations in 2023. The National Air Quality Strategy (2023)[1] sets out how local authorities are expected to contribute to delivering these targets. Whilst it is acknowledged within the strategy that not all sources of $PM_{2.5}$ originate from within a local authority district the strategy expects local authorities to consider those that are. Levels in Cambridge are around the target annual mean.

For areas where pollutant levels are below objective levels local authorities are expected to have an Air Quality Strategy. This document demonstrates the effective use of powers to support improvements in air quality taking preventative action to ensure air quality continues to improve across their district. Further details on the Legislative and Policy requirements can be found in Appendix B.

It is widely accepted that there is no safe level of air pollution[2]. It is important that focus now shifts away from LAQM objective levels towards exposure reduction and how we can maintain and continue to improve air quality across Greater Cambridge, whilst sustaining the scale of development coming forward in the next 20 years through the emerging Greater Cambridge Local Plan (2020-2041)[3] including measures in place to meet 58,500 new jobs across all employment sections and 44,400 new homes.

[1] www.gov.uk/government/publications/the-air-quality-strategy-for-england/air-quality-strategy-framework-for-local-authority-delivery#summary-of-powers-available-to-local-authorities
[2] www.gov.uk/government/collections/comeap-reports
[3] Greater Cambridge Local Plan (greatercambridgeplanning.org)

This strategy outlines measures for continuing to deliver improved air quality and the health benefits this offers to both residents and visitors of Greater Cambridge; working towards World Health Organisation (WHO) target levels (2021) which are lower than LAQM objective levels and $PM_{2.5}$ targets. Where the Air Quality Management Area (AQMA) and associated Air quality Action Plan (AQAP) is still in place in the case of Cambridge city the two documents can run alongside one another as the strategy outlines the approach for the whole area where as an AQAP is targeted on s specific area and pollutant of interest.

A Greater Cambridge Air Quality Strategy aligns with delivery under the Greater Cambridge Local Plan and joint planning service and given the transboundary nature of air pollution enables a joined up approach to improving air quality.

This strategy fulfils the requirements under the LAQM Framework and ensures compliance with the Environment Act 1995 as amended under Environment Act 2021; taking into account responsibilities of local authorities under the National Air Quality Strategy (2023). It details why and how improvements to air quality should be achieved across Greater Cambridge in response to continued growth in the area.

2. Sources of Pollutants in Greater Cambridge

The National Emissions Inventory (NAEI), provided by Defra sets out the emission sources for each local authority and how these contribute to the different pollutants.

2.1 Cambridge City

Nitrogen Dioxide (NO_2)

Data from the NAEI shows that traffic is the main contributor to NO_2 emissions, with 1-25 tonnes of NO_2 mainly from road transport, with minor roads and cold starts contributing the most in the City. Other sources of NO_2 in the City come from non-industrial combustion plants, combustion in manufacturing, and other mobile machinery (rail and other off road).

A source apportionment study undertaken by Cambridge City Council in 2019 supports these finding with traffic the main contributor to NO_2 emissions in the City. The study found the primary vehicle type contributing to NO_2 emissions varied based on location and road type with buses the main contributor in the centre of Cambridge; cars on the outer ring roads And on the outskirts of Cambridge on the major roads such as the A14 & M11 HGVs.

Particulates (PM_{10} and $PM_{2.5}$)

The NAEI has found that there is a change in sources of particulate emissions over the past 10 years, with a decrease in particulates from industry and energy generation as the switch to gas has occurred[4]. This has been offset by an increase in domestic burning.

The NAEI estimates that on average across Cambridge 1-4 tonnes of PM_{10} are from non-industrial combustion plant (such as domestic burning) with, 0.2-1 tonnes from road transport (brake and tyre wear).

This is again supported by the findings of the Cambridge City Council source apportionment study which found that the majority of the sources of particulates was from background sources rather than road traffic sources.

The NAEI attributes 75% of the source of $PM_{2.5}$ in Cambridge to background sources. The majority of which are classed as non-industrial combustion plant (domestic wood / domestic other). The remaining 25% of the source of $PM_{2.5}$ is attributable to non- exhaust emissions of tyre and brake wear associated with road transport.

It should be remembered that $PM_{2.5}$ is also not just generated as a primary particle but is also generated as a secondary particle due to chemical interactions of other pollutants.

2.2 South Cambridgeshire

Nitrogen Dioxide (NO_2)

The main contributor to NO_2 emissions in South Cambridgeshire is from road transport, with major roads adding up to 25 tonnes per $1km^2$. There are 10 point sources within South Cambridgeshire which emit NO_2 emissions.

Particulates (PM_{10} & $PM_{2.5}$)

The main contributor to PM_{10} emissions in South Cambridgeshire is from non industrial plant (up to 4 tonnes per $1km^2$), this includes domestic burning and is distributed within centres of population in the District. Roads contribute a smaller amount to emissions with most of the emissions coming from road abrasion and brake and tyre wear (up to 2 tonnes per km^2).

For $PM_{2.5}$ the picture is similar to that of PM_{10} with the major source of emissions being non-industrial plant, with the majority coming from domestic other and wood

[4] NAEI Report 2022 – Data for 2005-2020

burning. For roads in the district the majority of emissions are associated with brake and tyre wear.

3. Improving Air quality in Greater Cambridge

3.1 Objectives

It is widely accepted that there is no safe level of air pollution;[5] and whilst the LAQM objective levels and$PM_{2.5}$ targets are either achieved or close to annual mean across Greater Cambridge it is important that focus shifts away from these target levels towards exposure reduction. The challenge is how pollutant levels can be maintained and further reduced whilst sustaining the scale of development and population increase coming forward in the next 10 – 20 years; supporting economic growth whilst continuing to improve air quality and deliver the health benefits that improved air quality brings. The primary objectives of the strategy are:

- Continue to meet and deliver all legislative and policy requirements associated with Air Quality
- Continue to improve air quality across Cambridge enhancing the health of those living, working and visiting Greater Cambridge
- Work towards World Health Organisation Air Quality Guideline annual averages. as longer term targets.

The World Health Organisation (WHO) produced updated Air Quality Guidelines (AQG) in 2021. These targets are based on the evidence linking concentrations of pollutants in ambient air with adverse effects on health and are targets that protects public health. COMEAP considers these WHO 2021 guidelines as suitable long-term targets[6]. It is worth noting that they are set without reference to achievability. The World Health Organisation (WHO) target levels (2021) are lower than LAQM objective levels and $PM_{2.5}$ targets. Cambridge exceeds the WHO levels.

Table 1 compares the LAQM objective levels and national targets for key pollutants against the WHO Air Quality Guidelines 2021.

Pollutant	**Averaging Period**	**Concentration**	
		Current UK Limit	**WHO 2021**
AQ (England) Regulations 2000 (Apply to LAQM)			
PM_{10} µg/m^3	Annual Mean	40 µg/m^3	15 µg/m^3
	24 Hour Mean	50 µg/m^3	45 µg/m^3

[5] www.gov.uk/government/collections/comeap-reports
[6] COMEAP statement: response to publication of the World Health Organization Air quality guidelines 2021 - GOV.UK (www.gov.uk)

NO_2 µg/m^3	Annual Mean	40 µg/m^3	10 µg/m^3
	24 Hour Mean	200 µg/m^3	
Environmental Targets (PM) Regulations 2023 (apply to national government)			
$PM_{2.5}$	Annual Mean	10 µg/m^3	5 µg/m^3
	Exposure Targets	35% Reduction	

Table 1: Air quality Objective Levels and Pollutant Targets

Working towards WHO AQG annual averages enables continued improvements to air quality enhancing the health of those living, working and visiting the Greater Cambridge Area.

3.2 Delivering Air Quality Improvements across Greater Cambridge – Key Priorities

Continued improvements in air quality to meet the objectives of the strategy across Greater Cambridge will be delivered under four key priority areas. Appendix A details measures to be implemented to deliver these prioroities

Key Priority 1: Policy & Development Control

Emissions from development may be associated with both the construction phase and from transport or combustion processes providing heat and power during the operational phase.

At the strategic level, spatial planning can provide for more sustainable transport links between the home, workplace, educational, retail and leisure facilities, and identify appropriate locations for potentially polluting industrial development[7]. As such, land-use planning can play a critical role in improving local air quality. Local policy should be regularly updated in response to evolving national policy and updated evidence from public health.

- Ensure policies seek to improve air quality and respond to evolving national policy and health based evidence
- Ensure developments of all sizes and type design out air quality impacts during both construction and operation phases working towards air quality neutral development[8]
- Ensure developments and policies are helping to meet AQS, ASQ Targets and WHO guidance levels by reducing emissions.

[7] IAQM &UKEP Land-Use Planning & Development Control: Planning For Air Quality (Jan 2017)
[8] www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance/air-quality-neutral-aqn-guidance#:~:text=The%20Air%20Quality%20Neutral%20LPG,worsen%20air%20quality%20in%20London.

- align with other policies aimed at increasing sustainability and reducing greenhouse gas emissions

Policy xx of the Greater Cambridge Local Plan considers air quality within the lifetime of the plan (2020 – 2041). This is further underpinned by the Air Quality Action Plan (within CCC), Greater Cambridge Air Quality Strategy and the Greater Cambridge Sustainable Design and Construction Supplementary Planning Documents (SPD). These documents provide detail on measures that developers should consider at the design stage to minimise impact of development on air quality across Greater Cambridge.

It is important that planning policies should drive air quality improvements across Greater Cambridge and not operate in isolation from other relevant policies e,g Climate change Strategy, Health Impact Assessments, Parking Strategy.

Key Priority 2: Infrastructure Improvements

To enable the shift to more sustainable transport solutions, infrastructure improvements are required. Working with partners CCC and SCDC will ensure infrastructure improvements are planned and implemented to facilitate the increased uptake of public transport and active travel options. This will work alongside Key Priority 1, where planning and development control can have a major impact on infrastructure provision in Greater Cambridge.

Some of the actions which can be taken include:

- Support public transport options available to the public and publicise these
- Freight consolidation / last mile deliveries
- Road hierarchy
- Off road cycle / walking paths
- Improvements to cycling and walking infrastructure
- Facilitate infrastructure improvements to electric vehicle charging

Key Priority 3: Community Engagement & Promotion

Our communities should be considered in all opportunities to benefit from 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 protected and improved air quality. In parallel to measures to reduce resident and visitor exposure to pollutants we need to actively promote and engage with residents and visitors of Greater

Cambridge enabling access to alternatives to the more polluting activities. The following are some examples to consider for public engagement (but are not exhaustive):

- Improved public engagement through accessibility of air quality data and promoting awareness on air quality
- Working closely with Public Health England to deliver clear messages on the link between air quality and health
- National and regional campaigns such as Clean Air Day
- Work closely with partners to disseminate information county wide to maximise potential benefits within the city
- Promotion of a non-idling policy during collection and drop off near schools
- Promotion to reduce the use of solid fuel stoves and open fires
- Close partnership with local businesses to reduce emissions
- Smart technologies – Help reduce the barriers to adopting more sustainable transport methods and active travel by enabling faster and more efficient journeys through smart technologies.

Key Priority 4: Monitoring

Future growth across Greater Cambridge is largely residential and whilst planning policy is increasingly working towards reducing reliance on road based transport; in the short to medium term this is likely to remain a primary source of pollution across Greater Cambridge with commuting to Cambridge, London and the surrounding area. It is important to continue to monitor against LAQM objective levels focussing on historical areas with high levels of pollutants (AQMA areas) and focussing on major growth areas e.g. growth sites on the edge of Cambridge (West Cambridge, Eddington, Darwin Green, North East Cambridge, Marleigh, Land North of Cherry Hinton, etc), and also the new town growth in SCDC (Waterbeach, Northstowe, Bourne and Cambourne).

Given the scale of the future developments and the potential to introduce new hotspots where air quality could be at risk, the need for a robust and up to date monitoring network across the district is a priority. Therefore, the monitoring network should:

- Be subject to regular review and update to reflect the growth across the district

- Be compliant with the requirements under the LAQM framework
- Enable Local authorities to monitor trends across their districts and identify 'hotspots' but also improvements in response to policy measures or interventions introduced.
- Consider and include new technologies and alternatives to traditional monitors enabling the Council to conduct short term monitoring in the areas of concern

4. Co-Benefits Delivered by Air Quality Improvements

4.1 Air Quality & Health

Research undertaken by the Committee on Medical Effects of Air pollution (COMEAP) concluded in 2019 that there is no safe level of particulates. Further work undertaken by COMEAP in 2022 concluded that, even low concentrations of pollutants are likely to be associated with adverse effects on health. Therefore, continued reductions, even where concentrations are below the AQGs, are also likely to be beneficial to health.[9] The public Health Outcomes Framework includes an indicator on mortality attributed to particulate matter.

The mortality burden of air pollution within the UK is equivalent to 29,000 to 343,000 deaths at typical ages[10], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[11].

Public Health data indicates that in 2020, 48 deaths in Cambridge and 66 in South Cambridgeshire could be attributed to Particulate Air Pollution. This figure is calculated based on the number of deaths in Cambridge in 2020 and the Public Health Outcomes Framework Fraction mortality due to particulate air pollution. At this time that $PM_{2.5}$ is considered the most suitable metric for evaluating health impacts.

Air quality is a public health issue[12]; 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 a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas.[13,14] There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, cognitive decline, allergic reactions, and cardiovascular diseases.

[9] Committee on the Medical Effects of Air Pollutants (COMEAP): 2022 Annual Report (publishing.service.gov.uk)
[10] Defra. Air quality appraisal: damage cost guidance, January 2023
[11] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018
[12] www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution
[13] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017
[14] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

The WHO labelled air pollution as a risk factor for non-communicable diseases such as ischaemic heart disease, stroke, chronic destructive pulmonary disease, asthma, cancer and the economic toll these diseases take. Air Pollution affects different aspects of health even at low concentrations[15]. COMEAP provided a statement in response to the WHO 2021 guidelines which regards them as suitable long-term targets[16] and that more recent evidence indicated that $PM_{2.5}$ had harmful effects on people's health at lower concentrations than had been studied previously.

3.2 Air Quality & Economic Growth

Poor air quality harms productivity by making people less healthy increasing costs to society through medical and social care.

Reducing poor air quality has direct, proven economic benefits, in many cases even when the up-front cost over intervention is high. It is estimated that reducing $PM_{2.5}$ concentrations by 1µg/m^3 increases GDP by 0.8% on average in Europe[17]

Greater Cambridge is a major growth area and it is key that this is managed to minimise impact on the environment.

3.3 Air Quality & Net Zero

In 2019, the UK became the first major economy in the world to legislate to end our domestic contribution to man-made climate change. Both Cambridge City council and South Cambridgeshire District Council declared a Climate Change Emergency in 2019 and are working towards being carbon zero.

Cambridge City shared a vision for Cambridge to be net zero carbon by 2030 through the Cambridge City Council Climate Change Strategy[18] and set to reduce own emission to net zero by 2030[19]. South Cambridgeshire District Council Zero Carbon Strategy outlines how SCDC are supporting the district to halve carbon emissions by 2030 and reduce them to zero by 2050, including delivering a reduction in their own carbon footprint of at least 45% by 2025, (on a 2019 baseline), and at least 75% by 2030[20].

[15] WHO AQG 2021
[16] COMEAP statement: response to publication of the World Health Organization Air quality guidelines 2021 - GOV.UK (www.gov.uk)
[17] The economic cost of air pollution: Evidence from Europe, Organisation for Economic Co-operation and Development (OECD
[18] Climate Change Strategy - Cambridge City Council
[19] Carbon management plan - Cambridge City Council
[20] Zero carbon strategy - South Cambs District Council (scambs.gov.uk)

Many sources of greenhouse gases, like transport and combustion emissions, also contribute to poor air quality. However, some measures to reduce greenhouse gas emissions are in tension with improving air quality, and these interactions must be carefully considered; for example burning of wood.

5 Conclusion

This document sets out the approach for the Greater Cambridge Air Quality Strategy for maintaining and improving air quality across Greater Cambridge. It has three key objectives delivered through four key priority areas: Policy & Development Control, Infrastructure Improvements, Community Engagement & Promotion and Monitoring. Measures for delivering the individual priorities is included in Appendix A. Reporting on the delivery of these key priorities will be within the individual Council's Air Quality Annual Status Report each year, which is available on council websites.

Appendix A: Measures for delivering key priorities

PLEASE NOTE – Measures listed below are identified activities where either district council or key partners could play a role in reducing emissions. New measures are still to be discussed and agreed and SCDC would populate with measures specific to their district. Emerging Local Plan will consider Urban and Rural and may be appropriate to differentiate two within final draft.

Broad Measure	Actual Measure	Detail/areas for consideration	Complete / Ongoing / New
Key Priority: Policy & Development Control			
Alternatives to private car ownership/use	**Inclusion of Car Clubs**	• Car Clubs in new major developments • Should be electric unless reason why not viable. • linkages with joint local plan policy? • does this align with SPD requirements – 1 car club vehicle per 500 residential car parking spaces/ 1 car club space 10,000m2 commercial/major sites site wide car club strategy • is this still appropriate?	
		• Delivery of car clubs across city CCC has already set up a car club which is going electric • Car Clubs delivered through council contract as need identified	
	Low Emission Taxis	• Taxi Policy to encourage low emission vehicles • CCC policy implementation – timeline for delivery • SCDC policy implementation – timeline for delivery	
	Cycle Parking	• Provision in all new developments in line with Greater Cambridge Local Plan policy • What policy number in joint local plan?	
	Active Travel	• Provision of safe walking and cycling routes on development	

		site to access wider cycling and walking network, transport links (bus stops / rail stations), community areas (parks. Shops schools, etc), employment areas. • What joint local plan policy does this relate to?	
	Schools Project	• Potential to work with County - further investigation required	
Electric Vehicle Charge Points (EVCP) Infrastructure	**EVCP - provision in temporary car parks**	• This should also include compound car parks for all major development sites	
	EVCP – Residential underground carparks	• Where building regs fall short ensure policy in place to deliver suitable infrastructure – 50% active slow (7kW) provision and 50% passive	
	EVCP - Commercial	• Where building regs fall short ensure policy in place to deliver suitable infrastructure – 50% active (mix of slow/fast and rapid depending on end use and 50% passive	
	EVCP – Commercial – extension/refurbishment	• Encourage provision of active EVCP and / or passive provision during refurbishment	
	EVCP – New car parks or expansion of existing car park	• Minimum provision of 25% active provision (including mx of slow fast and rapid depending on end use and passive provision in remaining spaces • Provision of EVCP increased where existing car park increases conducive with change	
	EVCP – Any other New development with onsite car parking provision which falls outside building regulations	• Depending on end use 50% active provision of mix of slow, rapid and fact and 50% passive provision	
Guidance and Policy	**Greater Cambridge Local Plan – Air Quality Policy**	• Specific requirement for air quality to be considered as part of the Local Plan and new developments referring to SPD and Strategy requirements for CCC and SCDC	

	Sustainable Design & Construction SPD updated	• Air Quality sections need to be updated to align with joined approach and Emerging Local plan Air quality policy	
	Greater Cambridge Air Quality Strategy	• Develop Greater Cambridge Air Quality Strategy to align with emerging local plan and ensure in place before AQMA/AQAP revoked	
	Sustainable Procurement Guidance	• Does SCDC have a policy for this • What stage is city at with this policy?	
	Cambridgeshire County Council – Alternative Vehicles Strategy	• Part of the Connectivity and Transport Plan – what stage is this at and what will be incorporated	
	Health Impact Assessment	• Requirement for major developments or developments within AQMA / specific types to undertake a Health Impact Assessment • links with emerging Local plan policy. What is the policy number?	
	Non Road Mobile Machinery (NRMM)	• Minimise emissions during the construction phase - requirement for all developments to consider emissions from NRMM and take steps to minimise. • Develop guidance looking to existing examples such as that implemented in London, • focus on major developments, long term developments in close proximity to sensitive receptors and within the Air Quality Monitoring Area • Can be built into CEMP standard condition for major developments	
	Dust Management Plan	• Minimise emissions of Particulates during the construction phase for all developments above household	
	Anti Idling	• Review current approach to idling	
Processes	**Environmental Permits**	• Review environmental Permits to ensure emissions improving	

		Inspection regime based on BAT • Links with action within National Air quality Strategy (Section 4.2) • SCDC has more permitted processes than city so likely to want to populate this section more	
	Commercial Processes	• All new commercial processes to fulfil licencing requirements and consider emissions	
Promoting Low Emission Plant	**Smoke Control Area (SCA) - Review**	• Review boundaries of SCA in line with National air quality strategy (Section 4.1) • Update Guidance and policy in response to changes to legislation • Opportunity to improve emissions from domestic fuel burning in the City • Consultation on whether to include boats within either existing and/or new SCA	
	Boiler emissions – Ultra Low NOx	• ultra low NOx and only where other forms of heating are not viable • links with sustainability policy. • What is relevant policy number?	
	Back up /emergency generators	• Alternatives to diesel should be considered • where in proximity to existing residential assessment of impact should be modelled against LAQM hourly objective levels • not considered appropriate in AQMA and adjacent to residential • This is in response to increasing number of laboratory/science developments within the city centre coming forward and the need for back up generators which are typically operated on diesel	
	Air and ground Source Heat Pumps	• should be considered as alternative to gas boilers (fits with sustainability and net zero agenda)	

	Company vehicle procurement – waste vehicles		
Council Emissions	**Cowley Road Depot Improvements**	• Improvements allow for all EV fleet	
Key Priority: Infrastructure Improvements			
Bus Based P&R	**Babraham P&R**	• Expansion of P&R at existing Babraham Site	Ongoing
	Newmarket Road / East Cambridge P&R	• New P&R site to replace existing site, includes improvements to Newmarket Road	Ongoing
	Cambridge South East Transport Route	• New P&R and dedicated bus route, cycle route and walkway from South East Cambridge to Addenbrookes site and central Cambridge	Ongoing
	Cambourne to Cambridge Transport Route	• New P&R and dedicated bus route, cycle route and walkway from Cambourne to central Cambridge	Ongoing
	Harston P&R and improved bus route	• New P&R with improvements to bus infrastructure from Harston to Cambridge	Ongoing
	Waterbeach P&R and dedicated bus route	• New P&R and dedicated bus route, cycle route and walkway from Waterbeach new Town to Central Cambridge	Ongoing
Rail based P&R	**Foxton P&R for Foxton Rail Station**	• New P&R to allow greater access to Foxton Rail station to allow onward travel by train.	Ongoing
New Rail Station	**Cambridge South Station**	• New destination Station to facilitate travel to Cambridge biomedical campus. Link to bus route (CSET).	Ongoing
Deliveries	**Pilot Freight Partnerships for City Centre deliveries**	• GCP looking at a pilot study for City Centre Freight deliveries	New
Route Management / Strategic routing HGVs	**Road Hierarchy Scheme**	• GCP looking at Road hierarchy scheme for Cambridge to allow for dedicated bus routes	New
City Access	**Sustainable Travel Zone**	• Plan to charge for entering the City for motorised vehicles / Funds used to provide a better bus service	Ongoing
	Milton Road Improvements	• Improvements to bus lanes / cycle lanes / walkways	Ongoing

	Histon Road Improvements	• Improvements to bus lanes / cycle lanes / walkways	Complete
	Huntingdon Road Improvements	• Improvements to bus lanes / cycle lanes / walkways	New
	Addenbrookes roundabout Improvements	• Improvements to bus lanes / cycle lanes / walkways	New
	Hills Road Improvements	• Improvements to bus lanes / cycle lanes / walkways	New
	Madingley Road Improvements	• Improvements to bus lanes / cycle lanes / walkways	New
Active Travel	**Greenways**	• Off road walking / equestrian and cycling routes from villages around the City into the City	Ongoing
	Chisholm Trail	• Route across the City for cyclists and walkers	Ongoing
	Public Cycle hire schemes	• Trial of cycle hire scheme sponsored by DfT	Ongoing
	Public scooter hire schemes	• Trial of scooter hire scheme sponsored by DfT	Ongoing
Electric vehicle charging	**CCC Parking for EV's**	• CCC agreed contract to allow for EV charging in multistorey and surface car parks and on the CCC estate	Ongoing
	SCDC Parking for EV's	• Funding available for community charging schemes	Ongoing
	On- road EV Charging	• Continue to work with partners to investigate options for enabling electric vehicle ownership for residential with no off street parking – e.g. lamp column chargers, pavement	New
Public Transport Improvements	**Electric buses**	• Working with partners to provide electric buses across Cambridgeshire	Ongoing
Key Priority: Community Engagement and Promotion			
Promoting Travel Alternatives	**Encourage/Facilitate home working**	• Hybrid / flexible working policy CCC	Ongoing
		• 4 day working week SCDC	Ongoing
	Promotion of Cycling	• Cycle to work scheme	Ongoing
		• Pool bikes CCC	Ongoing
		• Hire of larger bikes CCC / County scheme	Ongoing
		• Provision of bike parking at CCC and SCDC offices	New

		• Update website to show cycle routes / use of google maps / work with county active travel team	New
	Promotion of Walking	• Update website to show walking routes / use of google maps / work with County active travel team	New
	School Travel Plans	• County modal stars team / work with these	Ongoing
	Workplace travel plan	• CCC has one in place	Ongoing
	Promote use of rail		Ongoing
	Personalised travel plans	• business? / CCC has done this for new depot	New
	Intensive Active Travel Campaign	• County has new Active Travel Team - work with them on this?	New
Public Information	**Leaflets**	• ad hoc	Ongoing
	Radio	• ad hoc	Ongoing
	Television	• ad hoc	Ongoing
	Local Newspaper / national newspaper	• ad hoc	Ongoing
	Internet	• Website used for presenting data and policies	Ongoing
		• Social media	Ongoing
	Other	• SCDC and CCC have the quarterly magazine sent to every household	Ongoing
		• answering queries	Ongoing
		• stall at CCC / SCDC events	New
	Working with Public Health	• Populate this section further following consultation with Public Health	
	County Wide Dissemination	• Working county wide through existing groups e.g. CPPG to promote air quality agenda to maximise benefits felt across Greater Cambridge •	
Partnership Working	**Identifying opportunities and sharing of information and best practice**	• Seek to find opportunities for partnership working and sharing of best practice • Engagement in consultations and plans	

		• Continue to include AQAP steering group	
	Indoor Air Quality	• Awareness raising and dissemination of information. • Links with Section 4.5 of National Air Quality Strategy	
Key Priority: Monitoring			
Maintain monitoring network	**Monitors in place**	• Need to ensure monitors are maintained in compliance with LAQM guidelines to ensure that data is robust	Ongoing
Review monitoring network	**Review monitoring**	• Need to ensure that monitors are placed to capture the changes in air pollution as area is developed and changes made to infrastructure	Ongoing
New Monitoring techniques	**New monitors**	• Continue to keep up to date with new technologies for monitoring air pollutants / working with partners	New
	Agriculture	• Consideration of ammonia emissions from farming; referenced in National Air Quality Strategy (Section 4.4). Not relevant to city but may be relevant to SCDC. Further consideration required	New

Appendix B - Legislative and Policy Background

Statutory Requirements under Local Air Quality Management (LAQM)

Local Authorities have a statutory duty under the requirements of the Local Air Quality Management (LAQM) Framework as set out in Part IV of the Environment Act (1995) and as amended by the Environment Act 2021, to review and assess local air quality within their areas, against a set of air quality objectives and to determine whether or not these are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the remedial measures it intends to put in place in pursuit of these objectives. Table 1 below details the statutory air quality objectives applicable to LAQM in England.

Nitrogen Dioxide (NO_2)	200µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO_2)	40µg/m^3	Annual mean
Particulate Matter (PM_{10})	50µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM_{10})	40µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO_2)	125µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO_2)	266µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

Table 1: Air Quality Objectives in England[22]

[21] The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).
[22] PG22 LAQM page xxxx

CCC established an AQMA around the central core of the city in 2004 and SCDC along the A14 between Bar Hill (to the north-west of Cambridge) and Milton interchange (to the north-east) in 2008, both due to exceedances in NO_2. SCDC has recently revoked its AQMA as objective levels of NO_2 have been achieved. Within the CCC AQMA pollutant levels have remained below objective levels since the COVID pandemic. Whilst there are no imminent plans to revoke the AQMA; this will be considered once there is confidence pollutant levels are not likely to return to pre COVID levels.

Local Authorities are required to submit an Annual Status Report (ASR). This details the results of any monitoring undertaken across the district, conclusions derived from the results, amendments made to the network in response to changing pollutant trends and actions being undertaken to improve air quality and any progress that has been made on these.

Amendments to the LAQM framework under the Environment Act 2021 require local authorities to have an Air Quality Strategy where objective levels of key pollutants are achieved. The Strategy should set out steps the local authority will take to continue to improve local air quality. The purpose of the Air Quality Strategy is to take preventative action to improve local air quality and reduce the long term health impacts and should be developed in consultation with the director of Public Health. In addition given the transboundary nature of air pollution local authorities are required to work collaboratively with neighbouring authorities to tackle pollution sources outside the local authorities area.

Air Quality Strategy: Framework for Local Authority Delivery (2023) – Local Action to reduce PM2.5

The revised National Air Quality Strategy (2023) sets out a framework to enable local authorities to deliver long term air quality improvements and meet long term air quality goals. This includes two new legally-binding long-term targets to reduce

concentrations of fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) as set out in the Environmental Targets Regulations 2023.

- 10 µg/m^3 annual mean concentration $PM_{2.5}$ nationwide by 2040, with an interim target of 12 µg/m^3 by January 2028
- 35% reduction in average population exposure by 2040, with an interim target of a 22% reduction by January 2028, both compared to a 2018 baseline

These targets will help drive reductions in the worst $PM_{2.5}$ hotspots across the country, whilst ensuring nationwide action to improve air quality for everyone. Whilst not currently included as part of the LAQM framework all local authorities are expected to effectively use their powers to reduce $PM_{2.5}$ emissions from sources which are within their control. Whilst it is acknowledged many sources of $PM_{2.5}$ originate from outside the local authority boundary there are some sources of $PM_{2.5}$ over which local authorities do have control.

World Health Organisation (WHO) Air Quality Guidelines (2021)

In September 2021 WHO published updated Air Quality Guidelines (AQG) for common pollutants including interim targets to promote a gradual shift from high to lower concentrations to help countries achieve air quality that protects public health.

The WHO Air Quality Guidelines are based on the evidence linking concentrations of pollutants in ambient air with adverse effects on health. They are set without reference to achievability.

Pollutant	Averaging Time	Interim Target	AQG Level
PM2.5 µg/m^3	Annual	10	5

	24 Hour	25	15
PM10 µg/m^3	Annual	20	15
	24 Hour	50	45
NO_2 µg/m^3	Annual	40	10
	24 Hour	-	25
SO_2 µg/m^3	24 Hour		40

Table 2: Recommended WHO 2021 AQG levels and interim targets

Appendix C: References

To be completed