

St Helens Borough Council

Air Quality Action Plan 2024 - 2029

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

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1. Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of the Council's statutory duties as required by the Local Air Quality Management Framework. It outlines the proposed actions that will be taken to improve air quality in St Helens Metropolitan Borough Council (otherwise referred to as "St Helens Council" or "the Council") for the period 2024–2029, replacing the previous Action Plan of 2013-2020.

The Council has previously declared four Air Quality Management Areas (AQMAs), two in 2009 that include a section of the M6 Motorway running through the Borough and with the other encompassing a section of the A49 High Street in Newton-le-Willows. A further two sites were declared in 2011, one on the A58 St Helens Linkway in St Helens town centre and the other on the A58 Borough Road where widespread exceedance of the National Air Quality Objective for nitrogen dioxide annual mean were identified. Projects delivered through the previous Action Plan include:

- A580 Pewfall junction improvement scheme, which reduced levels of queuing traffic in addition to the provision of dedicated cycle and pedestrian crossing facilities.
- A570 Sherdley Roundabout improvement scheme, which provided toucan crossing facilities to encourage cycling and walking, together with widened footways and widened lane widths to improve traffic flows.
- A57 Warrington Road corridor safety improvement scheme to smooth flow and provide improved pedestrian and cycling facilities.
- Sustainable Transport Enhancement Package (STEP) was a six-year programme that completed in March 2021 and delivered new routes to increase cycling and walking.
- Sustainable Urban Development Scheme, which completed in December 2021 and involved the construction of new cycle paths.
- Emergency Active Travel Fund Tranche 1 & 2 to create cycling improvements, increase the number of cycling and walking trips and to deliver school streets at three schools in the borough.

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 Smart driving technology project and in cab heating to reduce idling and encourage more efficient driving, which was completed in 2021.

Air pollution is associated with a number of adverse health impacts, and it is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society, including 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^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³. St Helens Council is committed to reducing the exposure of people in the borough of St Helens to poor air quality in order to improve health. The Council has developed a series of actions that can be considered under 11 broad topics:

- · Alternatives to private vehicle use
- Environmental permits / licensing
- Policy guidance and development control
- Promoting low emission transport
- Promoting travel alternatives
- Parking demand management
- Public information
- Strategic transport planning and infrastructure
- Highways (traffic management)

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¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

² Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

³ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

- Fleet management (efficiency)
- Public health

The Council's priorities are to reduce traffic volume and improve traffic flows, improve public transport and active travel infrastructure to encourage sustainable travel, ensure that future development proposals will not have negative impacts on air quality, and explore mitigation measures to improve local air quality where possible.

This AQAP outlines how the Council plan to effectively tackle air quality issues within its control; however, it is recognised that there are several air quality policy areas that are outside of the Council's influence but for which there is useful evidence (such as vehicle emissions standards) and so the Council will continue to work with regional and central government on policies and issues beyond its direct influence.

Responsibilities and Commitment

This AQAP has been prepared by the Place Services Directorate of St Helens Council with the support and agreement of the following officers and departments:

- Becky Pomeroy Head of Regulatory Services
- Mike Petersen Principal Environmental Health Officer
- David Saville Programme Lead, Infrastructure (Strategic Growth Department)
- Kevin Toye Transport Strategy Consultant (Strategic Growth Department)
- Christopher Davies Engineer, Urban Traffic Control & Network Management (Operations Department)
- Michael Wolffe Climate Change Officer (Operations Department)
- Kieran Birch Head of Planning (Strategic Growth Department)
- Joe Nanson Development Control Manager (Strategic Growth Department)
- Gila Middleton Principal Planning Officer (West) (Strategic Growth Department)
- Jill Nixon Interim Planning Support Officer (Strategic Growth Department)
- John Murdock Building Control Team Manager (Strategic Growth Department)
- Peter Smith Procurement Business Partner (Finance Department)
- Jennifer Kaye Marketing Communications & Engagement Officer (Policy & Transformation Department)
- Diane Bolton-Maggs Public Health Consultant (Public Health Department)

This AQAP has been approved by:

Tanya Wilcock (Director of Communities) and Becky Pomeroy (Head of Regulatory Services) approving the AQAP together with Ruth Du Plessis (Director of Public Health), with endorsement from the Licensing and Environmental Protection Committee at its meeting on 16 July 2024.

This AQAP will be subject to an annual review, appraisal of progress and reporting to the Council's Licencing and Environmental Protection Committee. Progress each year will be reported in the Annual Status Reports (ASRs) produced by St Helens Council, as part of its statutory Local Air Quality Management duties.

If you have any comments on this AQAP, please contact the Environmental Health Team of St Helens Council at:

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2. Introduction

This report outlines the proposed actions that St Helens Council will seek to deliver between 2024-2029 to reduce concentrations of air pollutants and exposure to air pollution within the borough's four declared Air Quality Management Areas (AQMAs), thereby positively impacting on the health and quality of life of residents and visitors to the St Helens Borough. Publication of this Action Plan was due in Spring 2020 but was delayed due to the impact of Covid-19 on resources and the potential associated longer-term impact on traffic and air quality within the borough's AQMAs.

It has been developed in recognition of the legal requirement on the Council to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part, and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

Implementation of this Action Plan will be subject to annual review, with progress on measures set out within it reported annually within St Helens Council's air quality Annual Status Report (ASR). It will also be reviewed every five years at the latest.

In the 2013 – 2020 Air Quality Action Plan, a total of 12 objectives were initially set out. Additional measures and updates were set out in each annual ASR report. The key successful measures included:

- Sustainable Transport Enhancement Package (STEP) was a six-year programme that completed in March 2021 and delivered new active travel routes to increase cycling and walking.
- Sustainable Urban Development Scheme, which completed in December 2021 and delivered new paths to increase cycling journeys.
- Smart driving technology project and in cab heating to reduce idling and encourage more efficient driving, which was completed in 2021.
- SCOOT (Split cycle offset optimisation technique) Use of SCOOT to monitor traffic flow and adjust signal timings to reduce unnecessary delays and improve traffic flow.
- Rasing awareness of Air Quality matters (ongoing).

More specific details and annual updates on the progress of AQAP measures can be found on the Council's air quality website, link below:

https://www.sthelens.gov.uk/article/5188/Air-quality-monitoring

The majority of the implemented AQAP measures had borough-wide air quality benefits, which in turn it can be reasonably assumed to have had positive impacts on the four AQMAs.

3. Summary of Current Air Quality in St Helens Borough

The majority of the borough of St Helens has good air quality and prior to the COVID-19 pandemic there had been a slow downward trend of nitrogen dioxide (NO₂) levels; however, the United Kingdom (UK) and England legal travel restrictions in place between March 2020 and March 2022 led to traffic reductions in response to the pandemic. With the UK and England gradually reducing, and then removing the lockdown travel restrictions, the level of nitrogen dioxide (NO₂) gradually rose through increased travel. Although the air quality data shows an overall decrease in traffic levels since the 2021 results, in some areas it appears that the traffic levels have not reverted to pre-Covid levels. This aligns with road traffic data published by the Department for Transport for all motor vehicles across the UK, stating a 4.4% (2022 figures) reduction in overall traffic levels compared to 2019 COVID-19) pandemic.⁴

The Council has declared four AQMAs within the borough of St Helens as shown in Table 3.1 below and the map at Appendix C. Two in 2009, which included a section of the M6 Motorway running through the Borough and the other encompassed a section of the A49 High Street in Newton-le-Willows. A further two sites were declared in 2011, one on the A58 St Helens Linkway in St Helens town centre and the other on the A58 Borough Road where widespread exceedances of the annual mean nitrogen dioxide (NO₂) objective of 40 micrograms per cubic metre (µg/m³).

Table 3.1: AQMAs within St Helens Borough

No.	AQMA Name	AQMA Status	Date	Pollutants
1	M6	Declared	30/04/2009	Nitrogen dioxide NO ₂

⁴ Road traffic statistics - Summary statistics (dft.gov.uk)

No.	AQMA Name	AQMA Status	Date	Pollutants
2	Newton High Street	Declared	30/04/2009	Nitrogen dioxide NO ₂
3	Borough Rd	Declared	30/11/2011	Nitrogen dioxide NO ₂
4	Reflection Court	Declared	30/11/2011	Nitrogen dioxide NO ₂

In AQMA 1 all results are now below 40µg/m³. All concentrations at properties in this AQMA are below the national objective for annual mean NO₂. Using the 2021 Census data, 340 people are estimated to live within the AQMA buffer zone. Due to the small area, the exact number cannot be determined.

In AQMA 2, annual mean concentrations of NO₂ have slowly reduced and have all been below the annual objective concentrations for many years. There are no measured exceedances within AQMA 2 at any location. Using the 2021 Census data, 335 people are estimated to live within the AQMA buffer zone. Due to the small area, the exact number cannot be determined.

For AQMA 3, the monitored results show fluctuations and not a downward trend, which is probably due to the local conditions (large incline and street canyon) as the exceedances are only seen where terraced houses line either side of the street at diffusion tube locations 19 and 24. The fluctuations over the past 5 years are considered likely to be due to the impact of the weather and not interventions. More local targeted interventions are being planned in this area to secure improvements in air quality. Using the 2021 Census data, 314 people are estimated to live within the AQMA buffer zone. Due to the small area, the exact number cannot be determined.

For AQMA 4, the general trend is downwards, and all monitored data is below the national objective for annual mean NO₂. The monitored levels in this location have been below the national objective for well over five years; however, due to planning applications being granted, in which traffic flow through the AQMA could be affected, it is proposed to maintain AQMA 4. Using the 2021 Census data, 163 people are estimated to live within the AQMA buffer zone.

At AQMA 4, PM₁₀ is also monitored. For the past five years, the annual mean concentration of PM₁₀ has been at less than half the concentration of the 40 μ g/m³ objective at the Linkway automatic monitor. There have been no exceedances in the 24-hour mean objective for PM₁₀ either in which 50 μ g/m³ has not been measured more than 35 times in a year. PM₁₀ annual data has been used to estimate a PM_{2.5} annual mean by using the national factors provided by Defra. For PM_{2.5}, there were no exceedances in 2022, and the estimated annual mean in 2022 is slightly higher than in 2021. No data is available prior to 2021 as the data provided by Defra to allow a PM_{2.5} value to be derived from the PM₁₀ value only starts from 2021.

Monitoring data of the automatic monitors shows air quality has still not fully returned to pre-covid levels. Taking this into consideration, and the fact the Borough Road AQMA is heavily impacted by weather conditions due to the street canyon effect, estimated year of compliance at this stage is impossible to determine.

The latest ASR provides more detail on monitoring data and can be found at https://sthelens.gov.uk/article/5188/Air-quality-monitoring.

4. St Helens Borough Air Quality Priorities

4.1 Public Health Context

Air pollution is associated with several adverse health impacts, and it is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society, including children, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equality issues because areas with poor air quality are also often less affluent areas⁵ ⁶.

The 2021 Census reveals that the population of St. Helens is 183,200, an increase of 4.5% from the 2001 Census. St. Helens comprises of 18 wards. The health of people in St. Helens is varied compared with the England average and St. Helens is one of the 20% most deprived local authority areas in England (ranked 26th most deprived in the IMD 2019) and 14.1% of children under 16 in St. Helens live in absolute low-income families (15.3% in England).

Life expectancy for both men and women is lower than the England average and on average in 2021 females in St. Helens lived 4.7 years longer than males. There is also large variation in life expectancy at ward level, with the difference between the highest and lowest wards being 12.3 years for males and 8.5 years for female.⁷

In 2022/23 there were 15,502 registered patients aged 6+ on the Quality Outcomes Register (QOF) Asthma registered, giving a prevalence of 8.2% which is higher than

⁵ Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

⁶ Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

⁷ https://sthelens.gov.uk/media/7165/St-Helens-Joint-Strategic-Needs-Assessment-2023-Mortality/pdf/St_Helens_Joint_Strategic_Needs_Assessment_2023_-_Mortality.pdf?m=1696609967317

the England average of 6.5% and the Northwest average of 7.1%.⁸ There were 5,649 patients on the QOF COPD register in 2022/23, giving a prevalence of 2.8% compared to 1.8% in England.⁹

St. Helens has a higher rate of premature mortality from respiratory disease compared to England and early deaths from respiratory diseases is one of the main contributors to the gap in female life expectancy between St. Helens and England. Furthermore, there is a statically significant association between premature respiratory mortality and deprivation in the borough.¹⁰

In 2021, the estimate of the fraction of mortality attributable to long-term exposure of anthropogenic (human made) particulate air pollution in St. Helens is 5.6% which is similar to the England average of 5.5%.¹¹

4.2 Planning and Policy Context

The Development Plan is at the heart of the planning system with a legislative requirement that planning decisions must be made in line with the Development Plan unless material considerations indicate otherwise.

In St Helens Borough, the Development Plan is comprised of the Joint Merseyside and Halton Waste Local Plan (2013), the Bold Forest Park Area Action Plan (2017) and the St Helens Borough Local Plan to 2037.

⁸ Public health profiles - OHID (phe.org.uk)

⁹ Respiratory disease - Data - OHID (phe.org.uk)

https://sthelens.gov.uk/media/7165/St-Helens-Joint-Strategic-Needs-Assessment-2023-Mortality/pdf/St Helens Joint Strategic Needs Assessment 2023 - Mortality.pdf?m=1696609967317

¹¹ Public health profiles - OHID (phe.org.uk)

The St Helens Borough Local Plan to 2037 was adopted in July 2022, following a robust Examination process, and sets out the Council's vision, objectives and planning policies to shape the growth and development of the Borough up to 2037 (and beyond). This includes setting out the scale of development needs (including housing and jobs), the overall spatial strategy for the Borough, and site allocations to meet these needs.

In addition to this, the Local Plan sets out a number of environmentally focussed policies, to complement the social and economic ambitions, to ensure sustainable development is delivered. One of these is Policy LPD09: Air Quality, which amongst other matters, states that development proposals must demonstrate that they will not:

- a) impede the achievement of any objective(s) or measure(s) set out in an Air Quality Management Area (AQMA) Action Plan; or
- b) introduce a significant new source of any air pollutant, or new development whose users or occupiers would be particularly susceptible to air pollution, within an AQMA; or
- lead to a significant deterioration in local air quality resulting in unacceptable effects on human health, local amenity, or the natural environment, that would require a new AQMA to be created; or
- d) having regard to established local and national standards, lead to an unacceptable decline in air quality in any area.

Following adoption of the Local Plan, the Council has commenced work on updating some of the existing Supplementary Planning Documents (SPDs), and the preparation of some new ones identified as necessary. Some of these new SPDs will likely have a degree of influence on air quality, such as an Open Space Provision and Enhancement SPD and a Transport and Travel SPD.

4.3 Source Apportionment

The AQAP measures presented in this Action Plan are intended to be targeted towards the predominant sources of emissions within St Helens Borough Council's area.

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A source apportionment exercise was carried out by Peter Brett in 2009. The council does not have the appropriate modelling software to carry out a detailed source apportionment exercise.

It is acknowledged that a detailed source apportionment exercise is overdue but following consultation with DEFRA, they accepted that a more simple source apportionment exercise in line with TG.22 would be acceptable for this report. The simple source apportionment exercise was undertaken using the Emission Factor Toolkit spreadsheet approach. 2022 data was utilised as this is the most up to date monitoring data available.

Once the EFT spreadsheets were utilised, the source apportionment calculations details in Box 7-5 of TG.22 were used to give the source apportionment data reported on below.

It should be noted that even though this method is acceptable, the data available and the accuracy is limited in comparison to a detailed modelling exercise. A break down of the source apportionment calculations can be found in Appendix D of this report.

M6 AQMA No.1

The M6 is a Highways Agency motorway with an AQMA status. No monitoring is carried out directly on the motorway due to safety concerns. Monitoring occurs on nearby roads instead. An automatic monitor is located on Southworth Road which runs directly underneath the motorway and has captured the worst-case air quality data. The source apportionment exercise was carried out for both Southworth Road and the M6 motorway using the Southworth Road data from the automatic monitor.

For Southworth Road the worst-case monitored NO₂ 37µg/m³ is thus:

- Regional background = 14.65µ/m³ (39.6%)
- Local background = 22.35µg/m³ (60.4%)

A NOx to NO₂ calculator was used giving the final source apportionment of a worse case NO₂ value of 45.13 $\mu g/m^3$.

Local traffic:

 \circ HDVs = 19.56µg/m³ (43.33%)

- o Petrol Cars = $2.51 \mu g/m^3$ (5.57%)
- o Diesel Cars = $14.78 \mu g/m^3$ (32.76%)

For Southworth Road, it should also be noted that:

• HDVs contribute approximately 14.97% of the Annual Average Daily Traffic Flow (AADTF) but represent 43.33% of the total emissions.

For Southworth Road the worst-case monitored NO₂ 37µg/m³ is thus:

- Regional background = 14.65µ/m³ (39.6%)
- Local background = 22.35µg/m³ (60.4%)

A NOx to NO₂ calculator was used giving the final source apportionment of a worse case NO₂ value of $45.13 \,\mu\text{g/m}^3$.

- Local traffic:
 - \circ HDVs = 29.04µg/m³ (33.34%)
 - o Petrol Cars = $1.27\mu g/m^3$ (2.8%)
 - \circ Diesel Cars = 15.90µg/m³ (35.23%)

For the M6 motorway itself, it should also be noted that:

 HDVs contribute approximately 33.34% of the Annual Average Daily Traffic Flow (AADTF) but represent 35.65% of the total emissions.

Newton High Street AQMA No.2

This AQMA has not had any exceedances in the past 5 years. Even though this AQMA could be revoked, the Council has decided to keep its AQMA status due to planned new developments within the local area.

For High Street, the worst-case monitored NO₂ 27µg/m³ is thus:

- Regional background = 12.49µg/m³ (46.46%)
- Local background = 14.5µg/m³ (53.74%)

A NOx to NO₂ calculator was used giving the final source apportionment of a worse case NO₂ value of 27.99μg/m³.

Local traffic:

- \circ HDVs = 14.19µg/m³ (50.69%)
- o Petrol Cars = $1.37\mu g/m^3$ (4.9%)
- o Diesel Cars = $7.85\mu g/m^3$ (28.06%)

The percentage source contribution were as follows:

 HDVs contribute approximately 18.2% of the Annual Average Daily Traffic Flow (AADTF) but represent 50.68% of the total emissions.

Borough Road AQMA No.3

This AQMA has exceedances towards to bottom of the road where the road is narrow and either side of the road, there are houses. This AQMA does not show a general down-ward trend like the other AQMAs due to a street Canyon effect. Weather conditions, wind in impact annual levels.

For Borough Road, the worst-case monitored NO₂ 40.1µg/m³ is thus:

- Regional background = 15.67µg/m³ (39.08%)
- Local background = $24.43 \mu g/m^3$ (60.92%)

A NOx to NO₂ calculator was used giving the final source apportionment of a worse case NO₂ value of 50.04µg/m³.

- Local traffic:
 - \circ HDVs = 23.95µg/m³ (47.9%)
 - o Petrol Cars = $2.57\mu g/m^3$ (5.1%)
 - o Diesel Cars = $15.08\mu g/m^3$ (30.1%)

The following should also be noted:

 HDVs contribute approximately 12.67% of the Annual Average Daily Traffic Flow (AADTF) but represent 47.9% of the total emissions.

Reflection Court AQMA No.4

As with AQMA No.2, this AQMA has not had any exceedances in the past 5 years. Even though this AQMA could be revoked, the Council has decided to keep its AQMA status due to planned new developments within the local area.

For Linkway, the worst-case monitored NO₂ 28µg/m³ is thus:

- Regional background = 15.67µg/m³ (55.96%)
- Local background = $12.33 \mu g/m^3$ (44.04%)

A NOx to NO₂ calculator was used giving the final source apportionment of a worse case NO₂ value of 23.75µg/m³.

- Local traffic:
 - \circ HDVs = 10.17 μ g/m³ (42.83%)
 - \circ Petrol Cars = 1.34µg/m³ (5.6%)
 - o Diesel Cars = $7.85\mu g/m^3$ (33.05%)

The following should also be:

 HDVs contribute approximately 14% of the Annual Average Daily Traffic Flow (AADTF) but represent 42.8% of the total emissions.

Conclusion

From this it can be determined that small reductions in the percentage of HDVs would bring big improvements in NO₂ concentrations. In particular for AQMAs no. 1 and no. 3 where exceedances have been predicted within the last five years.

4.4 Required Reduction in Emissions

M6 AQMA No.1

AQMA has had no exceedances in the last 5 years, however in the source apportionment exercise, using the NOx to NO_2 calculator, an NO_2 value of 45.13 $\mu g/m^3$ was calculated. This worst-case value was used for the purpose of these calculations as opposed to the actual worst-case monitored value.

Using Box TG.22, Box 7-6 to calculate a reduction in emissions, a 12.07 $\mu g/m^3$ road emission reduction is required which equates to a 18.86% reduction in traffic.

Newton High Street AQMA No.2

This exercise has not been carried out for this AQMA as the emissions are below the air quality objective.

Borough Road AQMA No.3

AQMA has had no exceedances in the last 5 years, however in the source apportionment exercise, using the NOx to NO_2 calculator, an NO_2 value of $50.04\mu g/m^3$ was calculated. This worst-case value was used for the purpose of these calculations as opposed to the actual worst-case monitored value.

Using Box TG.22, Box 7-6 to calculate a reduction in emissions, a 24.04 μ g/m³ road emission reduction is required which equates to a 32.57% reduction in traffic. These calculations however do not take into consideration there is a street canyon effect on this road.

Reflection Court AQMA No.4

This exercise has not been carried out for this AQMA as the emissions are below the air quality objective.

4.5 Key Priorities

The key priorities of this plan for St Helens Borough Council are as follows:

- Priority 1 Improve traffic flows.
- Priority 2 Improve public transport and active travel.
- Priority 3 Ensure that future proposed developments will not have negative impacts on air quality and explore mitigation measures to improve local air quality where possible.
- Priority 4 Reducing unnecessary journeys.

5. Development and Implementation of St Helens AQAP

5.1 Consultation and Stakeholder Engagement

In developing/updating this AQAP, engagement has been undertaken with other local authorities, agencies, businesses, and the local community to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 5.1

Table 5.1 – Consultation Undertaken

Consultee	Consultation Undertaken
The Secretary of State	Yes
The Environment Agency	Yes
The Highways Authority	Yes
Highways England	Yes
All neighbouring local authorities	Yes
Other public authorities as appropriate, such as Public Health officials	Yes
Bodies representing local business interests and other organisations as appropriate	Yes

The response to stakeholder consultation engagement is provided at Appendix A. In addition, a full consultation on the AQAP was being conducted that includes the following stakeholder engagement:

- Website;
- Articles in local media; and

Questionnaires distributed directly to public places such as libraries.

Engagement was focussed on the four AQMA areas and included the canvassing of members of the public, posting copies of consultation material (where appropriate) through doors and affixing to any public noticeboards in those areas. Further details about the results from the public consultation can be found in Appendix A.

5.2 Steering Group

A Steering Group was initially set up in 2020, comprising officers from a variety of different teams within the Council, but due to the impacts of Covid-19 this was put on hold for a period of time.

In early 2023, a meeting of the Steering Group was convened to establish different schemes that could be included as part of this AQAP, which was supplemented by several one-to-one meetings.

Dialogue will continue through the consultation period on this AQAP, with any outcomes included in the final AQAP. In January 2024 during the public consultation period, another steering group meeting was set up to discuss the plan and the objectives put forward. No major comments came from this particular steering group as an in-depth meeting was held before the AQAP was prepared and the relevant points were included as part of this AQAP.

Going forward, an annual meeting of the steering group will be set up to comment on the progress of existing objectives and if any other objectives can be included as part of the AQAP.

6. AQAP Measures

The St Helens Council AQAP measures are shown in Table 6.1, which contains:

- a list of the actions that form part of the AQAP;
- the responsible individual and departments/organisations who will deliver this action;
- estimated cost of implementing each action (overall cost and cost to the Local Authority);
- expected benefit in terms of pollutant emission and/or concentration reduction;
- the timescale for implementation; and
- how progress will be monitored.

Future ASRs will provide for regular annual updates on implementation of these measures, which can be found here: https://www.sthelens.gov.uk/article/5188/Air-quality-monitoring

A summary of the measures outlined in Table 6.1 is provided below:

For the past 5 years, only two of the four AQMAs have had exceedances. Due to proposed developments on going within the Borough, the council has decided to keep all four AQMAs. Whilst much of the focus of this Action Plan is improving air quality within the designated AQMA's, it is recognised that it is equally as important to protect and improve air quality more generally to prevent the need for further AQMA's to be declared, thus some actions are designed to deliver wider air quality benefits across the Borough.

1. Carr Mill Rail Station Redevelopment

This project focuses on the proposed construction of a new rail station at Carr Mill along with new residential units, new commercial/retail space, car parking and a new access road. The project is currently at feasibility stage with several designs being considered. This scheme would promote the use of public transport as an alternative to private car travel. It cannot be determined for certain if this will be delivered during

the lifespan of this particular AQAP, as no funding route has been identified or agreed at present. but regular updates will be provided in ASRs.

St Helens will be working with various organisations on this project including the Liverpool City Region Combined Authority, Merseytravel, Network Rail and third-party landowners.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

Quantification of emission reductions is not possible at this stage due to the project still being at design phase.

2. By Ours Cowley Hill Liveable Neighbourhood

By Ours is a partnership project with St Helens Borough Council, the Liverpool City Region Combined Authority and Sustrans, funded by the Freshfield Foundation. By Ours Cowley Hill is a community project helping residents, businesses and schools design our local streets. The project is designing a safer, more vibrant neighbourhood where more people walk to the shops and services, stop and chat to each other and children can play out. This will encourage people to take more journeys on foot, bike, or other active transport modes, reducing carbon footprint. It is currently estimated that the project will be completed in March 2024.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

3. St Helens Multi Modal Interchange SHMMI / Connected Places

This project forms part of transformational regeneration in St Helens town centre, which includes for a new bus station and active travel provisions to encourage public and sustainable transport use. The project is currently at the design and operational appraisal stage and will be delivered by Summer 2026.

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority, Merseytravel, Bus Operators, Department for Transport, the English Cities Fund and St Helens Town Deal Board.

It should also be noted the Liverpool City Region Combined Authority (LCRCA) has an authority wide strategy which focus on the whole of Merseyside <u>Spatial Development</u> <u>Strategy</u>.

As commented on by the LCRCA "This facility will be the hub for the franchised St Helens network. This is seen as important for improving the attractiveness of bus services by providing a better waiting environment leading to greater satisfaction levels and thus contributes to the "excellent passenger experience" pillar of the Liverpool City Region Bus Service Improvement Plan."

The project focuses on general air quality improvements but is likely to have positive impacts for the AQMAs 3 and 4.

As part of the regeneration, detailed air quality modelling will be carried out. These findings and the impacts they will have on air quality will be reported in the upcoming Air Quality ASRs.

4. Green Bus Routes (Hydrogen Buses)

St Helens Council is working with the Liverpool City Region Combined Authority and Merseytravel as part of their project to improve the local bus network. The 10A service buses within the borough of St Helens has been identified as one of the busiest routes in the City Region. Key features of the project include the introduction of hydrogen buses, smart traffic lights that go green for buses, junction upgrades to get buses past traffic, bus priority lanes and bus stop and shelter upgrades. The outcome is to create more efficient and attractive bus services that in turn will result in more bus journeys, with a modal shift from private car travel. The first phase of hydrogen buses commenced operation in June 2023 with the wider suite of bus priority measures due to be rolled out across the Liverpool City Region by 2027.

This project will improve congestion and air quality along the bus route, which includes AQMA 3.

The 10A Bus travels along the Borough Road AQMA approximately 15 times per day. According to the Road Traffic Statistics, Department for Transport, 188 bus trips are expected per day. Using the Emissions Factor toolkit, conventional buses are predicted to contribute 15.2% to NO₂ emissions or 7.62µg/m³. Having 15 less conventional bus

trips per day equates to an 8% reduction in bus journeys per day. In theory this would result in an NO₂ reduction of 0.61µg.m³ in the Borough Road AQMA.

5. St Helens Central to St Helens Junction Disused Railway Line

A feasibility study is currently being undertaken to explore reuse of the St Helens Central to St Helens Junction disused rail line. In addition to considering reintroduction of rail services, the project will explore alternative sustainable travel usage such as walking, cycling, bus, autonomous travel pods, etc. The study will conclude by early Summer 2024. It may be that repurposing the line may be the most realistic way forward and could be addressed through the options assessment process.

St Helens Council are working with various organisations on this project including Network Rail, Northern Rail, Merseytravel and the Liverpool City Region Combined Authority.

The project focuses on general air quality improvements but is likely to have positive impacts for AQMAs 3 and 4.

Viability of the scheme is being carried out currently. Quantification of emission reductions is not possible at this stage due to their being no firm plans in place.

6. Omega West Transport Strategy

The aim of this project is to improve transport from areas in St Helens to ensure local residents within some of our most deprived areas (in particular Parr, Clock Face and Bold) are able to easily access the Omega West strategic employment site and its multiple opportunities. This will promote sustainable transport and have positive impacts on air quality, in reducing car dependency.

St Helens Council will be working with various organisations on this project including Miller Developments, Merseytravel, the Liverpool City Region Combined Authority and Warrington Borough Council.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

As this scheme aims to encourage public transport, a quantification study of the emissions is not feasible at this stage.

7. A580 East Lancashire Road (ATR1)

This project is a proposed walking and cycling investment along the A580 East Lancashire Road adjacent to the westbound carriageway infrastructure, between Carr Mill and the Wigan Borough Boundary, adjacent to Haydock Industrial Estate. Public consultation commenced in Autumn 2023 and following completion of detailed designs the Council will pursue funding opportunities for the scheme's delivery.

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

8. Jubits Lane to Widnes (ATR2)

This project is a proposed walking and cycling investment designed to run from King George V Playing fields to the south of Bell Lane in Sutton Manor. Detailed design activity is to be commissioned, which would further extend the project to the boundary with Halton Borough Council. Following completion of detailed designs the Council will pursue funding opportunities for the scheme's delivery.

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority, Merseytravel and Forestry England.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

9. Lea Green to Whiston Hospital (ATR3)

The Council has since successfully secured £1.390m from Active Travel Tranche 4 funding from Active Travel England to commence a phased delivery of construction along the Lea Green Station to Whiston Hospital Active Travel Route (ATR3), pursuant to the provision of a continuous well-connected sustainable network back to the St Helens Southern Gateway Cyclops scheme. Construction is scheduled to commence in Spring 2024.

St Helens Council will be working with various organisations on this project including the Liverpool City Region Combined Authority, Merseytravel and Knowsley Borough Council.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

10. St Helens Southern Gateway

This £14.8m overall project includes £4.8m of funding awarded directly to St Helens Council from the Liverpool City Region Transforming Cities Fund. The project includes 6 cycle routes and a 'CYCLOPS' junction, being the first in the Liverpool City Region. Wider elements of this project include significant upgrades to facilities at Lea Green Rail Station, including better provision for sustainable modes, electric vehicle charging infrastructure, and an improved Park & Ride facility. The CYCLOPS and highway improvement elements of the project were completed in September 2023 and the main Lea Green Rail Station component is ongoing but near to completion.

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority, Merseytravel, Northern Rail and Network Rail.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

11. Digital Infrastructure Project

The strategic vision of this St Helens Town Deal project is to "Improve digital connectivity across the town centre, by investing in the necessary digital infrastructure to enable the St Helens Borough Council to deliver its wider economic, social, and environmental strategic priorities."

The project will reduce the need for travel as it allows people to access a digital economy. It promotes working from home and allows businesses in the town centre to operate in a digital way. The scheme is due to be delivered by the end of 2025.

St Helens Council are working with various organisations on this project, including the Liverpool City Region Combined Authority and St Helens Town Deal Board.

The project focuses on general air quality improvements but there are potential positive direct impacts for the AQMAs 3 and 4.

As this scheme encourages it home working it is not feasible at this stage to quantify emission reductions.

12. Glass Futures

Glass Futures is a new development of global significance located within St Helens. The site is a research and development site that connects the glass industry with academia in order to develop ways of making glass more sustainably. Along with this, by becoming more resilient on making glass (an infinitely recyclable product), this in turn will reduce the need for manufacturing by non-recyclable products and importing. Glass Futures will also undertake research and development activity into production using low carbon fuels.

Glass making produces various pollutants such as Nitrogen Dioxide and thus, given the volume of glass produced in St Helens, Glass Futures will have positive impacts for reduced emissions. It should be noted that hydrogen burning still produces high volumes of NOx which will be monitored through the conditions of the permit. While St Helens is directly involved in the planning and permitting processes of the Glass Futures development, any improvements would be delivered by Glass Futures.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

13. Parkside Link Road

As part of the multi-phased Parkside development project, Parkside Link Road is currently under construction and is scheduled for completion in 2024. This new link road (supported by a dedicated freight signage strategy) will result in the redistribution of traffic away from the local traffic network and onto the new strategic route, securing a more efficient and effect flow of vehicles, particularly Heavy Goods Vehicles (HGVs).

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority, National Highways and Warrington Borough Council.

The project focuses on general air quality improvements but there are potential positive direct impacts for the AQMAs 1 and 2.

St Helens will assess the need to carry out air quality monitoring along the new link road on a regular basis.

14. Parkside Strategic Rail Freight Interchange

The St Helens Local Plan Core Strategy (2012) identified Parkside as a strategic location for a Strategic Rail Freight Interchange (SRFI), and the St Helens Borough Local Plan to 2037 has allocated of land for a SRFI with an operational area of approximately 64.55ha to the east of the M6, and 5.58ha to the west of the M6. The site comprises two elements: Parkside East is the proposed location of the SRFI (together with other industrial and logistics uses) and Parkside West is a separate, though linked, employment land allocation that will be served by road only, although it will accommodate a reception siding for incoming freight trains that could in turn be linked to Parkside East.

Parkside East will strongly support the aims of building a robust northern economy, promoting the use of the national rail infrastructure, and reducing congestion and carbon emissions by shifting freight movement from road.

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority, National Highways, Network Rail, the Liverpool City Region Freeport, and site developers.

The project focuses on general air quality improvements but there are potential positive direct impacts for the AQMAs 1 and 2.

In the event of a formal planning application, a detailed air quality would be submitted detailing an accurate prediction of changes in air quality levels. If and when this is received, it will be reported within the relevant ASR.

15. Vehicle Replacement/ Retrofit Project

This project was awarded £0.650m by the Department of Environment, Farming and Rural Affairs (DEFRA) Air Quality Grant to support taking some of the worst polluting vehicles off the road and replacing them with newer, more efficient vehicles while also supporting local businesses, thereby quickly delivering quantifiable reductions in NO₂ emissions.

St Helens Council was working with St Helens Chamber and grant applicants on this project.

The project focuses on general air quality improvements and will not have direct impact on any particular designated St Helens AQMA.

The project was due to be completed in March 2024 and a report will be prepared and issued to Defra October 2024. In this report, details about the reduction in emissions will be conducted. It should be noted, there are now delays to this project due to the St Helens Chamber going into administration in March 2024 before project completion.

16. Indoor Air Quality Project

St Helens Council and Warrington Borough Council aim to make air quality improvements across their local areas by delivering a range of activities that focus on indoor air quality through monitoring air pollutants in households with underlying respiratory illness (i.e., asthma) and offering targeted education/awareness to help meet our Councils' statutory duties under the Environment Act 1995.

The project is about to go live and will deliver 500 health education interventions in households (250 of which will also receive an indoor air quality monitor) for people who suffer from asthma in areas of poor air quality and in areas of high deprivation. It is proposed to achieve this by:

- Monitoring indoor air quality in households where people are at increased risk of exacerbation of respiratory disease and adverse effects from air pollutants (such as CO₂, relative humidity, temperature, PM₁, PM_{2.5}, and volatile organic compounds - VOC).
- 2. Raising awareness of how to improve indoor air quality through targeted education and campaigns that have been co-designed with our residents.
- 3. Raising awareness of the impact of domestic burning on indoor air quality and respiratory conditions. In addition to this we will engage with residents to understand how the cost-of-living crisis affects the decisions they make and where appropriate refer them for any financial support that may be available.

The scheme will end towards around July 2025.

St Helens Council is working with the Warrington Borough Council on this project.

The project will deliver general, wider air quality improvements but will focus on areas of deprivation and poorer air quality (including AQMAs) within the boroughs of Warrington and St Helens.

Due to the nature of the scheme, the quantification of emission reductions cannot be calculated.

17. Electric Vehicle Charging Infrastructure Strategy

A draft St Helens Electric Vehicle Charging Infrastructure (EVCI) Strategy and Delivery Plan has been consulted upon and is pending formal adoption by the Council. St Helens is also assisting the Liverpool City Region Combined Authority with the submission of their initial Local Electric Vehicle Infrastructure (LEVI) funding application. An Electric Vehicle (EV) Co-ordinator role will be created at the Combined Authority who will lead on creating a regional strategy with regional procurement to secure a supplier or suppliers to roll out a charging network across the region. St Helens has identified an initial tranche of sites within its draft EV Strategy and will continue to develop a package of sites for potential delivery once a supplier is on-boarded.

St Helens Council will be working with various organisations on this project including the Liverpool City Region Combined Authority, Department for Transport, other government departments, and external EVCI market.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

18. Local Cycling and Walking Infrastructure Plan (LCWIP)

The Local Cycling and Walking Improvement Plan was adopted by the Council in Spring 2023 and sets out several key routes that would benefit from upgraded infrastructure to encourage active travel journeys. There are two plans in place; firstly, a strategic plan that encompasses the Liverpool City Region and the second is St Helens Borough focussed.

Through facilitating a shift of local journeys from private cars to walking and cycling, improved active travel infrastructure has a range of beneficial impacts, including contributing to a net zero borough, improved air quality, better health and wellbeing, and improved connectivity, particularly for deprived communities. Increased walking and cycling rates, better physical activity levels, reduced transport poverty and transport related air pollution. This is a 10-year strategy, due to end in Spring 2033.

St Helens Council will be working with various organisations on this project including the Liverpool City Region Combined Authority, Active Travel England and Sustrans.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

As this project focuses on behaviour changes, quantification if benefits is not feasible.

19. Transport and Travel Supplementary Planning Document (SPD)

A new Transport and Travel SPD has been drafted and echoes national guidance, policy and local commitments to climate change by refocusing on active and inclusive travel (walking, wheeling and cycling), public transport and zero emission vehicles. It will be consulted on in Winter 2023 pursuant to formal adoption in Spring 2024.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

20. Emerging Local Transport Plan 4 (LTP4)

The emerging LTP4 will:

"Set out plans, policies and ambitions for transport services and transport investment in the city region until 2040. The current LTP3 was published in 2011 is two separate documents (covering Merseyside and Halton) and needs to be updated with input from the public.

With a clear vision and goals, the plan provides a blueprint for making the public transport network more integrated, sustainable and accessible to all – which are the key pillars of Liverpool City Region Mayor Steve Rotheram' vision for a London style transport system.

It sets out what transport needs to do in order to continue to support communities, our economy and the Combined Authority's wider objectives as a city region, looking at our overarching ambitions for rail, bus, active travel and more. It also recognises that we live in uncertain times, and where new technology is also changing how we work, live and travel."

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority, Merseytravel and Department for Transport.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

21. Climate Action Plan

As well as the global Climate Change Emergency and the Council's own commitment to achieving a net zero carbon position by 2040, the challenge to reduce energy consumption and drive budget savings at this time of crisis is acute. The rising cost of energy creates an added imperative to improve the energy efficiency of buildings and to rationalise the estate where possible to drive efficiencies and reduce budget pressures.

St Helens Council have adopted a <u>Climate Action Plan</u> and the LCRCA have adopted a <u>Five Year Action Plan</u> to help address these issues and is working with a range of organisations and stakeholders on this project. The Climate Action Plan will have general, wider air quality benefits as opposed to being focused on the existing designated AQMAs.

22. Raise Awareness of Air Quality (AQ)

St Helens Borough Council aims to ensure that the general public within St Helens are aware of the impacts of poor air quality on health. This will be carried out through applying for Defra funding to create project opportunities and to provide air quality information on the council websites and through events. Examples of how this can be achieved include:

• The St Helens Road Safety Strategy 2023-27: Working towards vision zero 2040 (2023) has recently been published to help secure a reduction in collisions. This may indirectly also have positive impacts to air quality as safer driving may increase vehicle efficiency, which in turn will improve air quality. The Road Safety Strategy encompasses a comprehensive approach that addresses not only motor vehicles but also pedestrian and cycling infrastructure. The enhancement and implementation of safe pedestrian and cycling facilities are expected to yield favourable outcomes in terms of road safety and air quality. This is predicated on the notion that an increased public preference for alternative (environmentally friendly) modes of transportation will have a direct correlation with the initiatives previously outlined. Furthermore, the Road Safety Strategy Action Plan includes

references to the Bikeability and School Streets projects, both of which share the common objective of diminishing the volume of vehicular traffic during the school commute. This concerted effort is anticipated to return a beneficial effect on air quality.

- The Clean Air for Schools Project 2,000 schools (including some located within St Helens Borough) are taking part of the <u>Clean Air For Schools project</u>. The aim of the project is to reduce traffic volumes outside schools, improve indoor air quality (i.e. through ventilation), create low pollution habits which will be carried over into children's adulthood and use the younger generations voice in encouraging local and national air quality improvements.
- Clean Air Crew The Liverpool City Region Combined Authority (including St Helens) has been using funding to grant children free air quality education through the interactive website of the Clean Air Crew.

Along with NO₂ emissions, we aim to become more knowledgeable in our local particulate matter emissions through improved air quality monitoring. Once a better idea of what the local particulate matter emissions are, this can inform what future actions we take.

A big focus over the next 5 years is to bid for government funding for projects which will have direct positive impacts on air quality within the AQMAs.

23. Procuring Low Emission Vehicles for Council-Owned Fleets

The Council has developed an ongoing strategy to replace ageing council vehicles with modern and electric alternatives, which will have long term air quality and economic benefits for the Borough.

St Helens Council are working with TPPL (The Procurement Partnership) a specialist public sector procurement services provider in supporting our compliant framework agreements in delivering this project.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

24. Flexible Working and Home Working

The Council has led by example in supporting staff well-being through the introduction and implemented of an agile, hybrid blended working model called Ways of Working (WoW) together programme. Whilst initially rolled out across the organisation in response to the Covid 19 pandemic, the programme has been retained and continues to be further developed to modernise our working practices. The next phase is to determine how best we can promote it. This doesn't just cover working hours, locations, and workstyles; it is about being responsive and adaptive to service needs, embracing innovation and utilising technology.

Through the use of new agile hubs which are designed to allow people to work in an agile way, offering different types of spaces that facilitate service needs, providing less space for desk-based work, as this can be done at home, but introduces breakout, touchdown and collaboration spaces making the office more about working with others and not working alone, improving individuals' mental health.

The successful agile programme has enabled greater flexibility and empowers employees to work smarter whilst maintaining a healthy work-life balance. Thus less commuting by private car within the borough will have positive implications to local air quality.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

25. Parking and Movement Strategy

The parking and movement strategies aim to support the delivery of the wider St Helens Town Centre Regeneration programme while aligning with strategic policy objectives within the adopted Local Transport Plan, Borough Strategy, and associated strategies. In seeking to support the local economy through the provision of parking that is affordable and suitable, encourage the right parking behaviours and support the Council's environmental direction towards carbon neutrality by 2040, while promoting sustainable active travel and public transport modes.

The parking strategy will include improving the standard and quality of parking facilities and consider opportunities for consolidation to improve efficiency and accessibility of the existing parking assets within St Helens to improve the characteristics of place and distinguish between long and short stay as part of a

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demand management strategy. Its ambition is to keep people connected, and to create a net zero transport system by 2040, improving health and wellbeing, tackling the climate emergency, reducing private vehicle use and prioritising walking, cycling and the use of public transport.

The project focuses on general air quality improvements but there are potential positive direct impacts for the AQMAs 3 and 4.

26. Bikeability Programme

This project involves the ongoing delivery of national standard on-road cycle training to young people and children in Merseyside through the national cycle training programme. Organised through schools, Year 5 to Year 7 pupils are offered Level 2 training that equips children with important skills to help them cycle on quiet roads. Years 7 to 8 and Year 9 (in high schools) are offered Level 3 training, which builds on Level 2 and is more advanced giving skills in dealing with busier roads and roundabouts. Training is free and offered to every school in Merseyside.

St Helens Council are working with various organisations on this project including the Liverpool City Region Combined Authority and Bikeright the projects delivery partner.

The project focuses on general air quality improvements and will not have direct impacts on the existing designated St Helens AQMAs.

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Table 6.1 – Air Quality Action Plan Measures

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
1.	Carr Mill Rail Station Redevelopment	Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services	2030+ (Subject to securing funding & planning permissions)	2030+ (Subject to securing funding & planning permissions)	SHBC, LCRCA, Merseytravel, Network Rail, third-party landowners.	Not secured: Developer Contributions , LCRA, DfT Highway Infrastructure Funding, DfT Control Period	No	Funding for SHBC activity only	>£10 million	In Progress	Reduced vehicle emissions	Reduction in traffic volumes	At design phase. Strategic Outlined Business Case (SOBC)	Lengthy Timescale in securing funding and land acquisitions
2.	By Ours Cowley Hill Liveable Neighbourhood	Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services & Cycle network	2024	2024	SHBC, LCRCA, Sustrans	DfT, LCRCA, Active Travel Tranche 3 Funding, Sustrans, UKSPF	No	Partially funded (phased delivery)	£1 million - £10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	Concept design stage and public consultation complete in July 2023.	Acceptability of proposed interventions against Council Policy, securing full funding
3.	St Helens Multi Modal Interchange SHMMI/ Connected Places	Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services & Cycle network	2026-27	2026-27	SHBC, Merseytravel, LCRCA, DfT, English Cities Fund, Town Deal Board	Town Deal Fund, SHBC Capital, City Region Sustainable Transport Settlement (CRSTS)	No	Partially funded (phased delivery)	>£10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	RIBA Stage 3 design complete. Contractor appointed.	Land Acquisition Financial impacts of inflation. Force Majeure events
4.	Green Bus Routes (Hydrogen buses)	Transport Planning and Infrastructure	Bus route improvements	2027	2027	LCRCA, Merseytravel, SHBC, Neighbouring Authorities, Bus Operators	City Region Sustainable Transport Settlement (CRSTS)	No	Funded	>£10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	Design Stage	Lengthy timescale in delivering cross-border authority scheme

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
5.	St Helens Central to St Helens Junction disused railway line	Transport Planning and Infrastructure	Public transport improvements- interchanges stations and services	2030+	2030+	Network Rail, Northern Rail, Merseytravel, LCRCA, SHBC	Not secured: Developer Contribution, DfT Control Period, LCRCA	No	Funding for Feasibility Study Only	>£10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	Feasibility study currently being undertaken.	Financial viability (cost benefit analysis) Land Acquisitions
6.	Omega West Transport Strategy	Transport Planning and Infrastructure	Bus route improvements, cycle network	2024	2024	SHBC, Miller Developments, Merseytravel, LCRCA, Warrington Borough Council	Section 106 Funding Agreement	No	Funding for bus service only	£1 million - £10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	Development stages for potential bus routes. Options appraisal for cycle network links.	Securing funding to progress cycle network improvements
7.	A580 East Lancashire Road (ATR1)	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2030+	2030+	SHBC, LCRCA, Merseytravel, National Highways	DfT, LCRCA Active Travel Funding, Developer Contributions	No	Funding for detailed design only	£1 million - £10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	Concept design complete, consultation underway.	Securing funding to progress scheme to construction
8.	Jubits Lane to Widnes (ATR2)	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2027+	2027+	SHBC, LCRCA, Merseytravel, Forestry England, Halton Borough Council	DfT, LCRCA Active Travel Funding, Developer Contributions	No	Funding for detailed design only	£1 million - £10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	Detailed design complete, tending for construction partner.	Securing funding to progress scheme to construction
9.	Lea Green to Whiston Hospital (ATR3)	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	2024	2024	SHBC, LCRCA, Merseytravel, Knowsley Borough Council	DfT, LCRCA Active Travel Tranche 4 Funding, Neighbouring Authority local contribution, Developer Contributions	No	Partially Funded (phased delivery)	£1 million - £10 million	In Progress	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	Detailed design with general arrangement drawings to be complete	Securing funding to construct remaining scheme phases.

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
10.	St Helens Southern Gateway	Traffic Management	Strategic highway improvements	2023-24	2023-24	SHBC, LCRCA, Merseytravel, Northern Rail, Network Rail	Liverpool City Region's Transforming Cities Fund	No	Funded	>£10 million	Completed	Reduced vehicle emissions (modal shift)	Reduction in traffic volumes (modal shift)	CYCLOPS completed in 2023, with remaining connecting cycle routes and Lea Green Railway Improvements due to be complete in 2024.	Force Majeure events
11.	Digital infrastructure programme	Promoting Travel Alternatives	Encourage / Facilitate home- working	2025-26	2025-26	SHBC, LCRCA, Town Deal Board	Town Deal Funding	No	Funded	£1 million - £10 million	In Progress	To be confirmed	Indirect benefit	Concept design stage, progressing to early contractor involvement.	Funding limitations Financial impacts of inflation
12.	Glass Futures	Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	2023	2023	Glass Futures, SHBC	Glass Futures	No	n/a	n/a	Ongoing	To be confirmed	Indirect benefit	Site open and due to operate in 2024.	None
13.	Parkside Link Road	Transport Planning and Infrastructure	Other	2024	2024	SHBC, Langtree, Balfour Beatty, LCRCA, National Highways, Warrington Borough Council	LCRCA, Freeport, Strategic Investment Fund, SHBC	No	Funded	>£10 million	In Progress	Reduced vehicle emissions on local road network	Reduction in traffic volumes on local road network	Under construction and scheduled for completion in 2024	None
14.	Parkside Strategic Rail Freight Interchange	Freight and Delivery Management	Other	2027+	2027+	SHBC, LCRCA, National Highways, Liverpool City Region Freeport, Network Rail, Site Developers, SRFI Operator	LCRCA Freeport, Strategic Investment Fund, SHBC, Developer contributions.	No	TBC	>£10 million	In Progress	Reduced vehicle emissions	Reduction in traffic volumes	At design stage	Securing funding Development Consent Order DfT signing-off proposed rail freight timetable
15.	Vehicle Replacement/ Retrofit Project	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2024	2024	SHBC, St Helens Chamber, Defra	Defra	Yes	Partially Funded	£500k - £1m	In Progress	TBC	Number of vehicles replaced, and the efficiency increase between the	In progress	N/A

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
													old and new vehicles.		
16.	Indoor Air Quality Project	Public Information	Other	2025	2025	SHBC, Warrington BC	Defra	Yes	Partially Funded	£100k - £500k	In Progress	TBC	Pollutant improvements in individual homes.	In progress	N/A
17.	EV Strategy	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2023-24	2023-24	SHBC, LCRCA, DfT, External EVCI market	DfT Local Electric Vehicle Infrastructure (LEVI), Developer Contributions	No	Partially Funded via LEVI	£1 million - £10 million	In Progress	Reduced vehicle emissions	Number of vehicles changing from fossil fuels to electric charging only.	Public consultation completed in Autumn 2023, final report due back to Cabinet in Winter 2023.	Securing funding Appointment of EVCI delivery partner(s) DNO Connections
18.	Local Cycling and Walking Infrastructure Plan (LCWIP)	Promoting Travel Alternatives	Promotion of cycling & promotion of walking	2023	2023	SHBC, LCRCA, Sustrans	DfT, LCRCA Active Travel Funding, Capability and Ambition Fund, Developer Contributions	No	Partially funded for scheme developm ent	>£10 million	In Progress	Modal shift to active travel modes	Modal shift to active travel modes	SHBC LCWIP adopted at Cabinet in April 2023.	Securing funding to progress scheme development
19.	Transport and Travel SPD	Policy Guidance and Development Control	Other	2023-24	2023-24	SHBC	SHBC, Capability and Ambition Fund, Developer contributions	No	Funded	£10k - £50k	In Progress	Modal shift to sustainable travel modes	Modal shift to sustainable travel modes (walking, cycling, public transport)	Preparing for public consultation in Winter 2023.	None
20.	Emerging LTP4	Policy Guidance and Development Control	Other	2024	2024	LCRCA, SHBC, Merseytravel, DfT	LCRCA, DfT, Government devolved	No	N/A	>£10 million	In Progress	Modal shift to sustainable travel modes	Modal shift to sustainable travel modes	Draft LTP4 in progress	Securing funding from central government

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Potential Barriers to Implementation
							grant allocations						(walking, cycling, public transport)		
21.	Climate Action Plan	Policy Guidance and Development Control	Other	2022	2022	Various (see plan)	Various (see plan)	No	N/A	N/A	Ongoing	Net Zero Carbon by 2040	CO ₂ emissions	Ongoing	N/A
22.	Raise Awareness of AQ	Public Information	Via all means possible	Ongoing	Ongoing	SHBC	N/A	No	N/A	N/A	Ongoing	N/A	N/A	Ongoing	N/A
23.	Procuring Low Emission Vehicles for Council-Owned Fleets	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	Ongoing	Ongoing	SHBC, TPPL	SHBC, Government Grants	No	Funded	£1 million - £10 million	Ongoing	Net Zero Carbon by 2040	CO ₂ emissions Reduction	Ongoing procurement of electric and hydrogen vehicle fleet	N/A
24.	Flexible working and home working encouraged	Promoting Travel Alternatives	Encourage / Facilitate home-working	Ongoing	Ongoing	SHBC	SHBC	No	Funded	TBC	Ongoing	Number of people working from home	CO ₂ emissions Reduction	Modern workforce programme fully implemented 2020	The Council has led by example and introduced home working. The next phase is to determine how to refine the initiative to maximise benefits.
25.	Parking Strategy	Promoting Low Emission Transport	Other	Ongoing	Ongoing	SHBC	SHBC	No	Unfunded	TBC	Ongoing	TBC.	NO ₂ emission reduction in AQMAs	In progress	Existing contracts with service providers. Funding. Political Support.
26.	Bikeability Programme	Promoting Travel Alternatives	Promotion of cycling	Ongoing	Ongoing	SHBC, LCRCA, Bikeright	DfT	No	Funded Annually	£500k - £1m	Ongoing	Increase in cycle usage	Number of cycle trips	Ongoing	School uptake

7. Appendix A: Response to Consultation

Public and Statutory bodies were consulted on the updated Air Quality Action Plan (AQAP). A six week consultation was carried out between 22 December 2023 to 2nd February 2024, in accordance with statutory guidance.

The relevant government bodies such as Defra, EA, the Highways Agency etc were emailed with a copy of the draft AQAP and the questionnaire on the first day of the consultation.

No public face to face events were held but canvassing within the four AQMAs was carried out for two and a half days. This included posting questionnaires through doors, speaking to local businesses and asking them to promote the consultation and speaking to members of the public on the street.

The consultation was formally advertised on the Council website, in the local press and on social media. A total of 49 responses were received and have been considered for the revised Plan.

The questionnaire was split up into three sections. Details of each section can be found below.

Section 1: Location and Means of Travel

Section 1 of the public consultation focused on where members of the public live, main transport types and main fuel type their main transport type uses.

Figure A.1 Which of the following means of transport do you use?

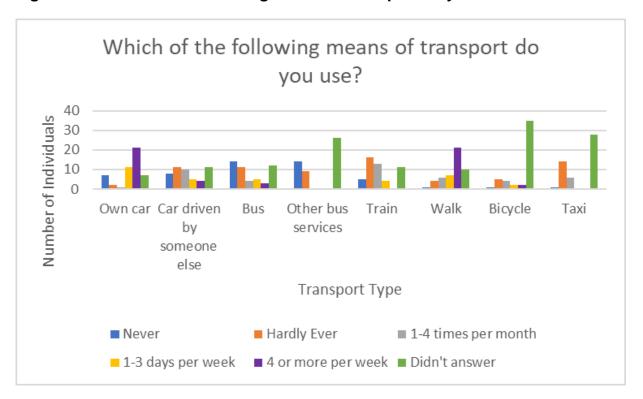
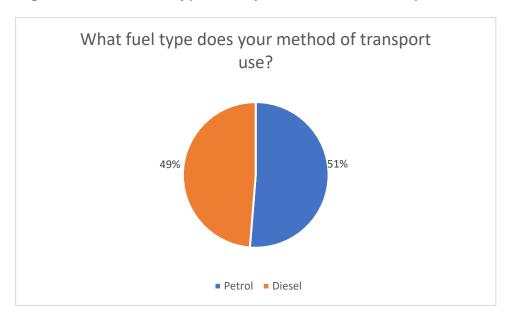


Figure A.1 shows how often members of the public use different forms of transport.

Using own cars and walking appear to be the most frequently used methods of transport with over 20 respondents using these methods 4 or more per week. One of the biggest contributors to air pollution is emissions from vehicles. This response supports the benefits of some of the public transport and EV charging actions outlined in this AQAP.

Figure A.2 What fuel type does your method of transport use?



For the members of the public who completed the questionnaire and where the fuel type question was applicable, the survey shows there is almost a 50:50 split between petrol and diesel fuel types. These two types of fuels are known contributors to air pollution. The EV strategy (objective 17) will be particularly beneficial in improving air quality by encouraging the use of electric vehicles.

Section 2: Consultation on Actions

As part of the public consultation, a description of all the proposed actions was provided to members of the public. They then had the ability to rate on a scale of 1-5 on how important they thought each action was to reduce air quality (1, being not very important and 5, being extremely important). There was also a blank box under each action where members of the public could provide any additional comments for each of the actions. At the end of section 2, there was a blank box provided in which members of the public could suggest any other actions which had not been considered yet (please see Table A.1).

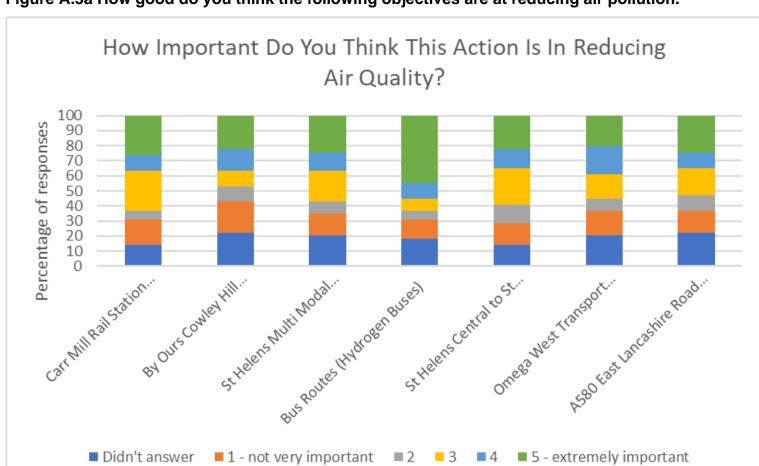


Figure A.3a How good do you think the following objectives are at reducing air pollution.

Figure A.3a details how important members of the public think air quality objectives 1 through to 7 are in reducing air pollution. 1 being the least important and 5 being extremely important.

In the additional comments section, for all seven objectives highlighted in the graph above there was a mixture of comments. Some members of the public reiterated that they thought the actions were a good idea. Some members of the public however commented that they are unsure if these actions would stop them from using their cars. They were also concerned about the hygiene of public transport. Many of the comments of the schemes, even though these will be noted, are not relevant to air quality. As there was a mix of views from members of the public, the decision was made to keep these actions the same with the view to revisit them during the AQAP lifespan.

Figure A.3b How good do you think the following objectives are at reducing air pollution.

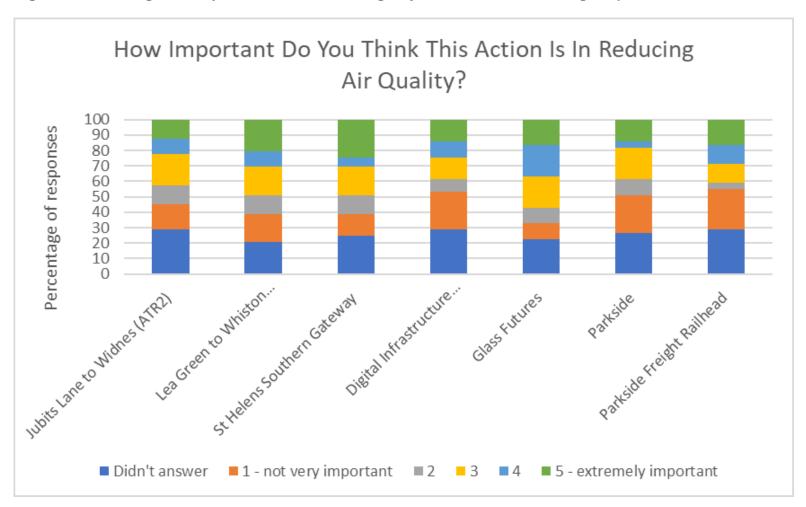


Figure A.3b details how important members of the public think air quality objectives 8 through to 14 are in reducing air pollution. 1 being the least important and 5 being extremely important.

There was a mixture of feedback from the general public on all 7 objectives. Some agreed that they could be of use. There were comments about carbon emissions from the electricity of the EV charging points. Many points raised are valid again but are not linked to air quality so cannot be considered further in this report. For Parkside, concerns were expressed that air pollution will worsen due to the redistribution of HGVs. As there was a mix of views from members of the public, the decision was made to keep these actions the same with the view to revisit them during the AQAP lifespan.

Figure A.3c How good do you think the following objectives are at reducing air pollution.

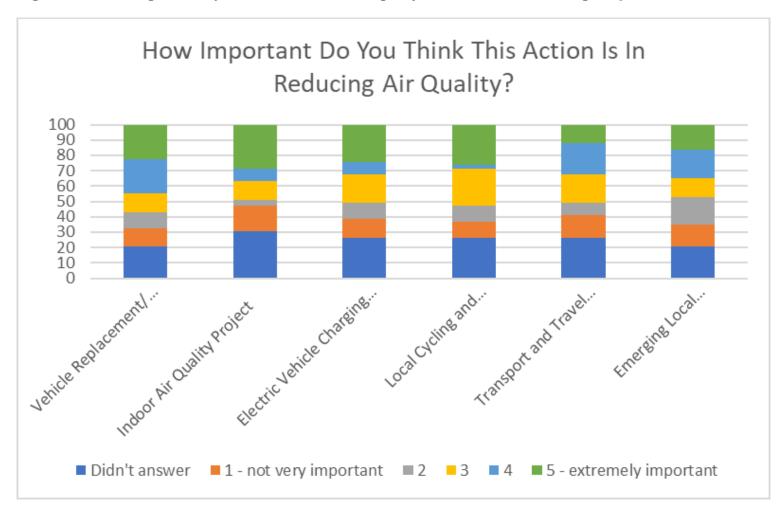


Figure A.3c details how important members of the public think air quality objectives 15 through to 20 are in reducing air pollution. 1 being the least important and 5 being extremely important.

In the additional comments section, for all six objectives highlighted in the graph above there was a mixture of comments. Some members of the public reiterated that they thought the actions were a good idea. Some members of the public however commented that they are unsure if the actions surrounding public transport would modify human behaviour and reduce car use. The indoor Air Quality project received the most positive feedback with nearly 30% of people answering they thought the scheme was extremely important. As there was a mix of views from members of the public, the decision was made to keep these actions the same with the view to revisit them during the AQAP lifespan.

Figure A.3d How good do you think the following objectives are at reducing air pollution.

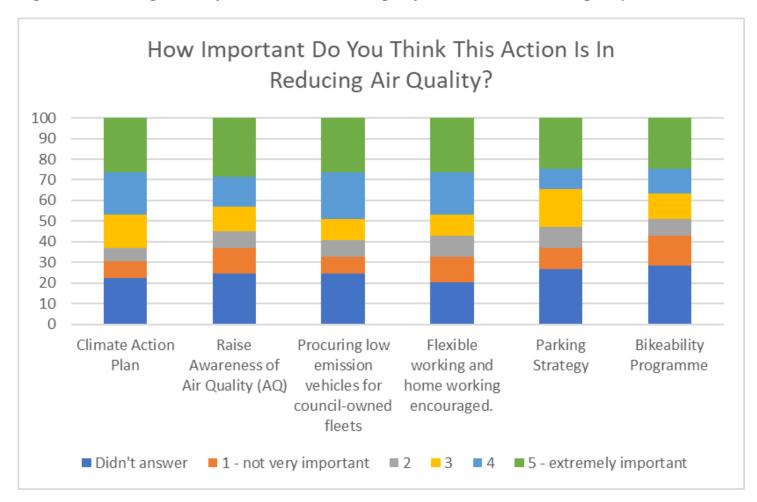


Figure A.3d details how important members of the public think air quality objectives 21 through to 26 are in reducing air pollution. 1 being the least important and 5 being extremely important.

In the additional comments section, for all six objectives highlighted in the graph above there was a mixture of comments. Some members of the public, again reiterated that they thought the actions were a good idea. Some members of the public however commented that they thought the schemes are a waste of money and nonspecific to if they'll have positive or negative air quality impact. Raising general awareness of air quality received the most positive feedback with nearly 30% of people answering they thought the scheme was extremely important. As there was a mix of views from members of the public, the decision was made to keep these actions the same with the view to revisit them during the AQAP lifespan.

The LCRCA has taken the decision to franchise the bus network which will being buses back under public sector control and make the Mayor of the LCR accountable to the electorate for bus services. St Helens will be the first area to be franchised - from September 2026 - and whilst franchising alone won't deliver all the change required, it will be a critical step on the path to a fully integrated, comprehensive public transport system with air quality benefits. This could address some of the concerns about public transport, and particular buses raised by the public.

Section 3: About You

In the final section of the consultation, an about you section was included as part of The Equality Act 2010. These questions were included to ensure the council services are accessible to everyone in St Helens, to ensure everyone is treated fairly and appropriately when using our services and to ensure the feedback contains views from everybody who lives and works in St Helens. Members of the public were asked about their age, gender, which Borough they live in, sexual orientation, disabilities which are set out in the Equality Act 2010, religion, and ethnic background. This data has not been included in this report due to confidentiality.

Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
Defra	Update the source apportionment	Completed using TG.22 guidance where modelling is not available.
Defra	Quantify predicted AQ emissions from the objective.	Carried out where possible. It is noted more detailed guidance will be released later in the year to provide information on how exactly it is recommended to be carried out.

Consultee	Category	Response
LCRCA	Inclusion of particulate	Included as part of action 22 and more reference to data included within the
LCROA	matter in objectives	report.
	The draft plan's	
	references the emerging	
	LCRCA Local Transport	
	Plan 4 is welcomed.	
	However, the plan does	
	not reference the	
	LCRCA's adopted Five	
LCRCA	Year Climate Action Plan,	Incorporated into section 6 of the report.
LONOA	or the consultation draft	incorporated into section of the report.
	Spatial Development	
	Strategy. These two	
	latter frameworks have	
	direct links to, and	
	significant benefits from	
	an air quality point of	
	view. It is recommended	

Consultee	Category	Response
	that they be included as context within the plan.	
Public – online form	Park and ride from St Helens central railway station to the retail parks	This is something that can be considered for the future when funding sources become available.
Public – online form	Reopen the room at the side of the town hall for bikes.	St Helens will explore this option.
Public – online form	Home installation grants	Not relevant to the protection of public health and air quality.
Public – online form	Home solar panel grants	Not relevant to the protection of public health and air quality.
Public – online form	Think about bike hire scheme	This is something that can be considered for the future when funding sources become available.
Public – online form	Electric scooter trail	This is something that can be considered for the future when funding sources become available.
Public – online form	Dedicated electric/clean car vehicle lanes	This is something that can be considered for the future when funding sources become available.

Consultee	Category	Response
Public – online form	Anti-idling campaign.	St Helens has carried these out in the past. Unfortunately, idling vehicles is not illegal and something we are currently unable to enforce.
Public – online form	Just to reiterate the dangers of PM _{2.5} released from wood burners in urban areas.	This will be covered in the Indoor Air Quality Project.
Public – online form	You won't discourage people from using their cars. Public transport can be unsafe, unclean, overpriced, and indirect. Encouraging car sharing would be a better than investing in digging up roads and planning routes when people still won't use the bus service.	We cannot discourage people from using their vehicles but many of the action plan measures we have in place (including measure 17 the EV strategy and measure 18, the LCWIP) will help to encourage sustainable transport.

Consultee	Category	Response
Public – online form	Plant trees, stop destroying every bit of green space.	St Helens Council plants trees annually and report on this in the Annual Status report.
Public – online form	Improvement of and expansion of the public footpath/right of way network across the borough to encourage walking without needing to "go the long way round," and would also improve access to the countryside for leisure. Work with landowners to provide new public right of way access to the countryside, that would	This is something that can be considered for the future when funding sources become available.

Consultee	Category	Response
	also supply convenient routes for walking commuters.	
Public – online form	How about monitoring the industries for the pollution being emitted from their chimneys especially around Ravenshead (Veolia and Knauff)	These developments are permitted and are monitored by the EA or St Helens Council depending on the type of permit.
Public – online form	Change all the busses to Hydrogen combustion engines from JCB and source your Hydrogen from on-site creation via excess renewables and such.	More buses using this fuel can be looked at in the future after the completion of AQAP measure 4, Green Bus Routes

Consultee	Category	Response
Public – online form	Install a micro hydro installation at the Carr Mill Dam to feed into the Grid.	This would not have an impact on the protection of public health and air quality and would be something which would need to be considered in the climate change plan.
Cllr – online form	Measures could be included to reduce the heavy traffic in Haresfinch going to and from the East Lancashire Road.	This is something that can be considered for the future when funding sources become available.
Public – online form	Congestion charge like in London (CAZ).	This would have air quality benefits in St Helens but it would also have major negative economic implications.
Public – online form	Move industrial areas out of town centres.	St Helens Council does not have the power to do this.
Public – online form	Cable car from high points.	St Helens Council does not have the power to do this.

Consultee	Category	Response
Public – online form	Monitor air quality on some smaller roads. Especially those near school and hospitals.	St Helens Council monitors air quality across the whole Borough including smaller roads. Monitoring does focus more on roads with high traffic though as they are the biggest source of air pollution for the Borough.

A number of suggestions on how to improve air quality from members of the public and Councillors are detailed in the table above. Some suggestions were similar in nature thus have been merged to form one category.

8. Appendix B: Reasons for Not Pursuing Action Plan Measures

Table B.1 – Action Plan Measures Not Pursued and the Reasons for that Decision

Action category	Action description	Reason action is not being pursued (including Stakeholder views)			

9. Appendix C:

Figure 1: AQMA Map (AQMAs 1&2)

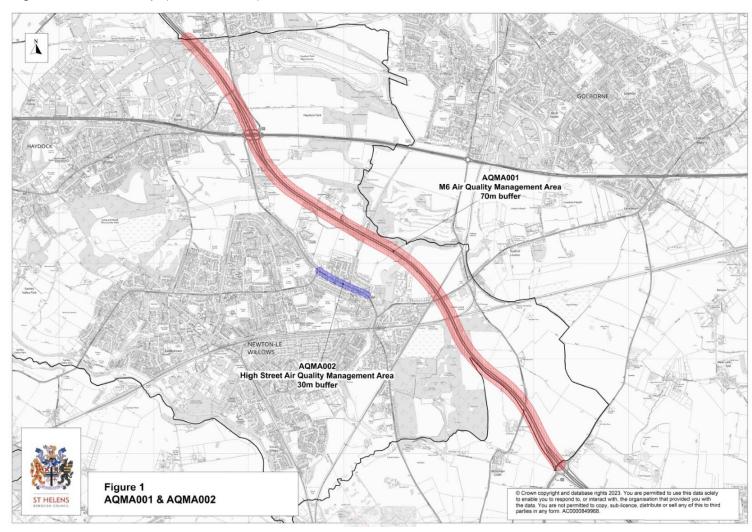


Figure 2: AQMA Map (AQMAs 3&4)

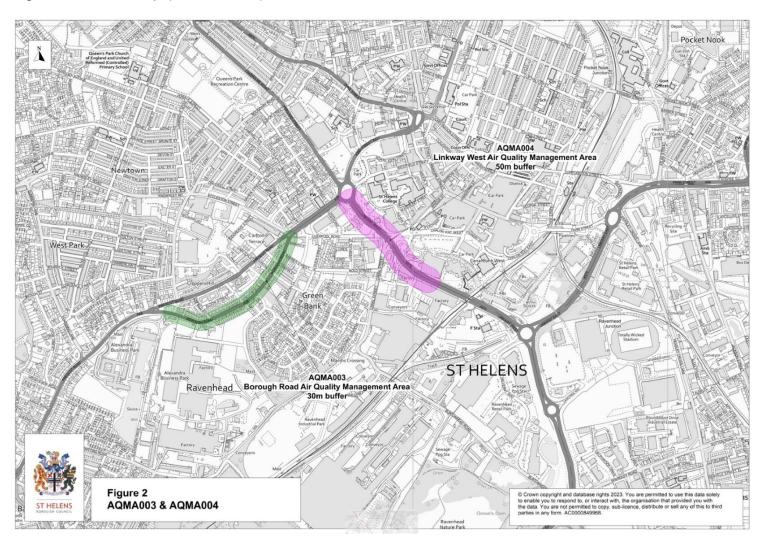
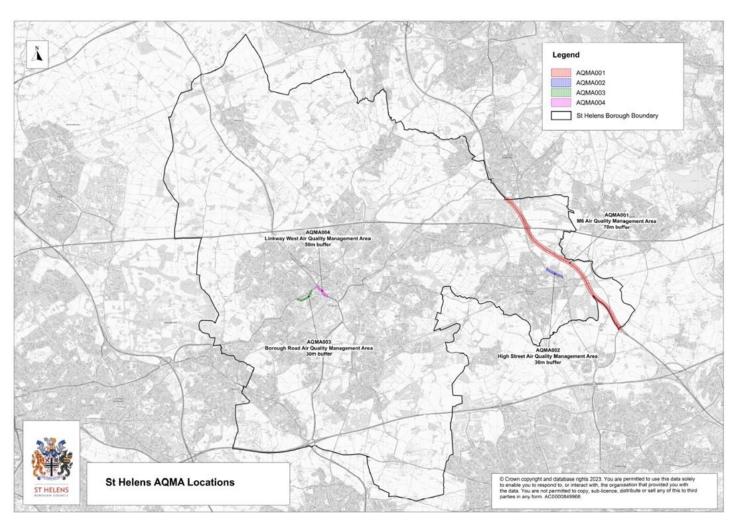


Figure 3: AQMA Overview Map



10. Appendix D: Source Apportionment Calculations

Table D1: Southworth Road Calculations

Code	Value	Description	Notes	Х	Υ
TNO2	37	Highest Monitored NO2		360500	395500
TBNO2	14.64546	Total background	2022 Defra background maps total NO2		
RBNOx	3.970887	regional background	2022 Defra background maps Rural		
TBNOx	19.87674	Total background	2022 Defra background maps total Nox		

LBNOx	15.90585	local background	difference between total and regional	
RBNO2	2.925805	TB - NO2 x (RB - NOX/TB-NOx)		
LBNO2	11.71965	TB - NO2 x (LB - NOX/TB-NOx)		
LNO2	22.35454	TNO2 - TNO2		
Nox to NO2	45.13	all other urban uk traffic		

From E									
Sour ce Nam e	Polluta nt Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
SR	NOx	2,364.40	1,339.80	1024.6 01	131.738 7	1.209429	0.112914	774.52	0.758257
			All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Petrol Hybrid Cars (%)	Petrol Plugin Hybrid Cars (%)	Diesel Cars (%)	Diesel Hybrid Cars (%)
			0.566654738	0.4333 45	0.05571 8	0.000512	4.78E-05	0.32757 5	0.000321

Apportion ment is	45.13	multiplied by percentage vehicle type						
		All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Petrol Hybrid Cars (%)	Petrol Plugin Hybrid Cars (%)	Diesel Cars (%)	Diesel Hybrid Cars (%)
		25.57312831	19.5568 7	2.51453 8	0.023085	0.002155	14.7834 5	0.014473

From E									
Sour ce Nam e	Polluta nt Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
M6	NOx	48,914.16	31,476.77	17437. 39	1374.84 2	23.34545	10.82631	17,230. 09	16.20804
			All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Petrol Hybrid Cars (%)	Petrol Plugin Hybrid Cars (%)	Diesel Cars (%)	Diesel Hybrid Cars (%)
			0.6435104	0.3564 9	0.02810 7	0.000477	0.000221	0.35225	0.000331

Apporti ment is	45.13	multiplied by percentage vehicle type						
		All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Petrol Hybrid Cars (%)	Petrol Plugin Hybrid Cars (%)	Diesel Cars (%)	Diesel Hybrid Cars (%)
		29.04162437	16.08 838	1.2684 8	0.021539	0.009989	15.897 11	0.014954

Table D2: Borough Road Calculations

Code	Value	Description	Notes	Х	Υ
TNO2	40.1	Highest Monitored NO2		350500	395500
TBNO2	15.67388	Total background	2022 Defra background maps total NO2		
RBNOx	3.79567	regional background	2022 Defra background maps Rural		
TBNOx	21.73385	Total background	2022 Defra background maps total Nox		
LBNOx	17.93818	local background	difference between total and regiona;		
RBNO2	2.737337	TB - NO2 x (RB - NOX/T	B-NOx)		
LBNO2	12.93654	TB - NO2 x (LB - NOX/TB-NOx)			
LNO2	24.42612	TNO2 - TNO2			

Nox to	50.04	all other urban uk traffic		
NO2				

From E									
Sourc e Nam e	Polluta nt Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
BR	NOx	4,270.03	2,226.61	2043.4	218.937 1	2.009954	0.187653	1,287.1 7	1.260149
			All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Petrol Hybrid Cars (%)	Petrol Plugin Hybrid Cars (%)	Diesel Cars (%)	Diesel Hybrid Cars (%)
			52.1%	47.9%	5.1%	0.0%	0.0%	30.1%	0.0%

Apport nt is	ionme	50.04	multiplied by percentage vehicle type						
			All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
			26.09341348	23.946 59	2.56569 6	0.023554	0.002199	15.0842 2	0.014768

Table D3: Linkway Calculations

Code	Value	Description	Notes	Х	Υ
TNO2	28	Highest Monitored NO2		350500	395500
TBNO2	15.67388	Total background	2022 Defra background maps total NO2		
RBNOx	3.79567	regional background	2022 Defra background maps Rural		
TBNOx	21.73385	Total background	2022 Defra background maps total Nox		
LBNOx	17.93818	local background	difference between total and regiona;		
RBNO2	2.737337	TB - NO2 x (RB - NO	OX/TB-NOx)		
LBNO2	12.93654	TB - NO2 x (LB - NO	X/TB-NOx)		
LNO2	12.32612	TNO2 - TNO2			

Nox to	23.75	all other urban uk		
NO2		traffic		

From E									
Sourc e Name	Polluta nt Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
LW	NOx	11,772.42	6,730.75	5041.6 73	661.816 8	6.075816	0.567248	3,890.9 5	3.809259
			All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Petrol Hybrid Cars (%)	Petrol Plugin Hybrid Cars (%)	Diesel Cars (%)	Diesel Hybrid Cars (%)
			0.571738751	0.4282 61	0.05621 8	0.000516	4.82E-05	0.33051 4	0.000324

Apport ent is	ionm	23.75	multiplied by percentage vehicle type						
			All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
			13.57879533	10.171	1.33516 7	0.012258	0.001144	7.84970 4	0.007685

Table D4: High Street Calculations

Code	Value	Description	Notes	X	Y
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TNO2	27	Highest Monitored NO2		358500	395500
TBNO2	12.49325	Total background	2022 Defra background maps total NO2		
RBNOx	3.868847	regional background	2022 Defra background maps Rural		
TBNOx	16.74125	Total background	2022 Defra background maps total Nox		
LBNOx	12.8724	local background	difference between total and regiona;		
RBNO2	2.887148				
LBNO2	9.606102				
LNO2	14.50675				

Nox to NO2	27.99	all other urban uk		
		traffic		

From E									
Sourc e Name	Polluta nt Name	All Vehicles (g/km)	All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
BR	NOx	5,488.47	2,706.40	2782.0 69	269.456 5	5.354604	0.995118	1,539.9 4	8.331501
			All LDVs (%)	All HDVs (%)	Petrol Cars (%)	Petrol Hybrid Cars (%)	Petrol Plugin Hybrid Cars (%)	Diesel Cars (%)	Diesel Hybrid Cars (%)
			0.493106888	0.5068 93	0.04909 5	0.000976	0.000181	0.28057 7	0.001518

Apportionment is	27.99	multiplied by percentage vehicle type						
		All LDVs (g/km)	All HDVs (g/km)	Petrol Cars (g/km)	Petrol Hybrid Cars (g/km)	Petrol Plugin Hybrid Cars (g/km)	Diesel Cars (g/km)	Diesel Hybrid Cars (g/km)
		13.8020618	14.187 94	1.37416 9	0.027307	0.005075	7.85335 8	0.042489

11. Glossary of Terms

Abbreviation	Description			
%	A percent is a unit of measurement out of 100			
μg/m³	micrograms per cubic metre			
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 ar objectives			
AADTF	Annual Average Daily Traffic Flow			
AQ	Air Quality			
AQAP	Air Quality Action Plan			
AQMA 1	Air Quality Management Area 1: The M6 motorway is part of the Strategic Road Network managed by National Highways.			
AQMA 2	Air Quality Management Area 2: Newton High Street (A49) is classed as an A-Road that forms part of the local principal road network managed by St Helens Borough Council.			
AQMA 3	Air Quality Management Area 3: Borough Rd (A58) is classed is classed as an A-Road that forms part of the local principal road network managed by St Helens Borough Council.			
AQMA 4	Air Quality Management Area 4: Reflection Court (A58) is classed is classed as an A-Road that forms part of the local principal road network managed by St Helens Borough Council.			
AQS	Air Quality Strategy			
ASR	Air quality Annual Status Report			
CRSTS	City Region Sustainable Transport Settlement			
DEFRA	Department of Environment, Farming and Rural Affairs			
DfT	Department for Transport			
EU	European Union			
EV	Electric Vehicle			
EVCI	Electric Vehicle Charging Infrastructure			
ha	A hectare is a unit of measurement for an area, specifically representing 10,000 square metres.			
HDVs	Heavy-Duty Vehicles			
HGVs	Heavy Goods Vehicles			
LAQM	Local Air Quality Management			
LAQM	Local Air Quality Management			
LCRCA	Liverpool City Region Combined Authority			
LCWIP	Local Cycling and Walking Infrastructure Plan			
m	A metre is the base unit of length			
NHS	National Health Service			
NO ₂	Nitrogen Dioxide			

Abbreviation	Description			
NOx	Nitrogen Oxides			
PM ₁	Airborne particulate matter with an aerodynamic diameter of 1µm (micrometres or microns) or less			
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			
SCOOT	Split Cycle Offset Optimisation Technique (SCOOT) is a real time adaptive traffic control system for the coordination and control of traffic signals across an urban road network.			
SHBC	St Helens Borough Council			
SPD	Supplementary Planning Document			
SRFI	Strategic Rail Freight Interchange			
STEP	Sustainable Transport Enhancement Package			
TPPL	The Procurement Partnership			
UK	United Kingdom			
VOC	Volatile Organic Compounds are organic compounds that have a high vapor pressure at room temperature.			
WoW	Ways of Working			

12. References

- BMJ international peer reviewed medical journal. Environmental equity, air quality, socioeconomic status and respiratory health: a linkage analysis of routine data from the Health Survey for England (2010) [online weblink]: https://jech.bmj.com/content/jech/59/11/948.full.pdf
- Department for Environment, Food & Rural Affairs (DEFRA). Abatement cost guidance for valuing changes in air quality (May 2013) [online weblink]:
 https://assets.publishing.service.gov.uk/media/5e7b648d86650c7440889fc5/pb13912-airquality-abatement-cost-guide.pdf
- Department for Environment, Food & Rural Affairs (DEFRA). Air quality and social deprivation in the UK: an environmental inequalities analysis (2006) [online weblink]: https://uk-air.defra.gov.uk/assets/documents/reports/cat09/0701110944 AQinequalities FNL AEAT 0506.pdf
- Department for Environment, Food & Rural Affairs (DEFRA). Air quality appraisal: damage cost guidance (January 2023) [online weblink]:
 https://www.gov.uk/government/publications/assess-the-impact-of-air-quality/air-quality-appraisal-damage-cost-quidance
- Department for Environment, Food & Rural Affairs (DEFRA). England (exc. London) Policy Guidance (2023) [online weblink]: https://laqm.defra.gov.uk/air-quality/featured/england-exc-london-policy-quidance/
- Department for Environment, Food & Rural Affairs (DEFRA). Local Air Quality Management Support Website (2023) [online weblink]: https://lagm.defra.gov.uk/
- Department for Environment, Food & Rural Affairs (DEFRA). Policy Guidance LAQM.TG16 (2023) [online weblink]: https://laqm.defra.gov.uk/guidance/
- Department for Environment, Food & Rural Affairs (DEFRA). UK Regions (exc. London) Technical Guidance (2023)
 [online weblink]: https://laqm.defra.gov.uk/air-quality/featured/uk-regions-exc-london-technical-guidance/
- Fingertips Public Health Data (2023) [online weblink]:
 Public health profiles OHID (phe.org.uk)
 Respiratory disease Data OHID (phe.org.uk)
 Public health profiles OHID (phe.org.uk)
- Glass Futures. An innovative research and development technology centre (2023) [online weblink]: https://www.glass-futures.org/

- Globe Action Plan: Environmental Charity, Clean Air for Schools Framework (2023) [online weblink]: https://www.actionforcleanair.org.uk/schools#:~:text=The%20Clean%20Air%20for%20Schools%20Framework%20is%20a%20free%2C%20online,in%20and%20around%20the%20school.
- St Helens Join Strategic Needs Assessment, Mortality (2023) [online weblink]: https://sthelens.gov.uk/media/7165/St-Helens-Joint-Strategic-Needs-Assessment-2023-Mortality/pdf/St Helens Joint Strategic Needs Assessment 2023 -Mortality.pdf?m=1696609967317
- Liverpool City Region Combined Authority sponsored. Clean Air Crew is a unique primary education learning resource, focussing on air quality issues for teachers and students. (June 2023) [online weblink]: https://www.cleanaircrew.co.uk/
- Liverpool City Region Combined Authority Five Year Climate Plan [online weblink]: https://api.liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA-Five-Year-Climate-Action-Plan-2023-2028-Digital.pdf
- Liverpool City Region Combined Authority. Emerging Local Transport Plan 4
 (May 2022) [online weblink]: https://www.liverpoolcityregion-ca.gov.uk/news/public-views-sought-on-new-local-transport-plan-for-liverpoolcity-region
- Liverpool City Region Combined Authority. Green Bus Routes: New Hydrogen Buses and Bus Priority Measures (2023) [online weblink]: https://www.liverpoolcityregion-ca.gov.uk/green-bus-routes
- Liverpool City Region Combined Authority. Local Transport Plan 3 (2011) [online weblink]: https://www.liverpoolcityregion-ca.gov.uk/transport
- Liverpool City Region Combined Authority. News Article: Air-Quality Education funded by Metro Mayor's Community Environment Fund (September 2021) [online weblink]: https://www.liverpoolcityregion-ca.gov.uk/news/schools-and-parents-breathe-easy-with-free-air-quality-education
- Liverpool City Region Combined Authority. Website: Merseytravel | Liverpool City Region Travel Information (2023) [online weblink]: https://www.merseytravel.gov.uk/
- Liverpool City Region Combined Authority: Spatial Development Plan [online weblink]: https://www.liverpoolcityregion-ca.gov.uk/sds
- Office for National Statistics (ONS). Census Data (2021) [online weblink]: https://www.ons.gov.uk/census

- Ordnance Survey Limited. All mapping materials or illustrations have been produced in accordance with Ordnance Survey licencing agreements (2023) [online weblink]: https://www.ordnancesurvey.co.uk/
- Parkside Regeneration LLP. This is Parkside website scheme updates (2023) [online weblink]: http://thisisparkside.co.uk/
- Public Health England. Air Quality: A Briefing for Directors of Public Health (2017) [online weblink]: https://www.local.gov.uk/publications/air-quality-briefing-directors-public-health
- Public Health England. Estimation of costs to the Nation Health Service and social care due to the health impacts of air pollution: summary report (May 2018) [online weblink]:
 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment data/file/836720/Estimation of costs to the NHS and social cared up to the health impacts of air pollution.pdf
- St Helens Borough Council, Air Quality Action Plan (March 2013) [online weblink]: https://www.sthelens.gov.uk/media/3169/Air-Quality-Action-Plan/pdf/action_plan.pdf?m=637835504057270000
- St Helens Borough Council, Air Quality Monitoring (2023) [online weblink]: https://www.sthelens.gov.uk/article/5188/Air-quality-monitoring
- St Helens Borough Council, St Helens Borough Local Plan up to 2037 (July 2022) [online weblink]: https://sthelens.gov.uk/media/4315/St-Helens-Borough-Local-Plan-up-to-2037/pdf/Local_Plan_Written_Statement FINAL_adoption_version.pdf?m=637940059004200000
- St Helens Borough Council, St Helens Road Safety Strategy 2023-27: Working towards vision zero 2040 (2023) [online weblink]: https://sthelens.moderngov.co.uk/documents/s145299/Appendix%201.pdf
- St Helens Borough Council. 2023 Air Quality Annual Status Report (June 2023) [online weblink]: https://sthelens.gov.uk/media/3160/Air-Quality-Annual-Status-Report-2023/pdf/ASR_Template_England_2023_v1.0_Issue_290623.docx_.pdf?m=638283828987300000
- St Helens Borough Council. Census Data and Statistics, Local Insight Tool (2023) [online weblink]: https://sthelens.gov.uk/article/3002/Data-and-statistics
- St Helens Borough Council. Climate Change Action Plan (May 2023) [online weblink]: https://netzero.sthelens.gov.uk/media/wy1ascsj/appendix-a.pdf
- St Helens Borough Council. Draft Electric Vehicle Charging Infrastructure Strategy 2023-2027 (June 2023) [online weblink]:

https://sthelens.gov.uk/media/6349/Draft-EVCI-Strategy-Summary/pdf/3 AppendixB ConsultationSummary DraftEVCIStrat.pdf?m=63 8219224126370000

- St Helens Borough Council. Local Cycle and Walking Infrastructure Plan (April 2023) [online weblink]:
 https://sthelens.moderngov.co.uk/documents/s144169/Appendix%20B%20St_820Helens%20Borough%20Local%20Cycling%20and%20Walking%20Infrast_ructure%20Plan.pdf
- St Helens Borough Council. Local Plan up to 2037, Policy LPD09: Air Quality (July 2022) [online weblink]: https://sthelens.gov.uk/media/4315/St-Helens-Borough-Local-Plan-up-to-2037/pdf/Local-Plan-Written_Statement-FINAL_adoption_version.pdf?m=637940059004200000
- St Helens Borough Council. Local Plan: Infrastructure Delivery Plan A
 Balanced Plan For A Better Future (December 2018) [online weblink]:
 https://new.sthelens.gov.uk/media/331749/cd-2221-2018-infrastructure-delivery-plan.pdf
- St Helens Borough Council. Sustainable Urban Development Scheme (October 2023) [online weblink]:
 https://www.sthelens.gov.uk/article/9706/Active-travel-infrastructure-moves-up-a-gear-after-2-2m-investment
- St Helens Borough Council. Town Deal Board Approvals for St Helens Town Centre Regeneration Project (July 2022) [online weblink]: https://www.sthelens.gov.uk/article/6389/First-six-projects-submitted-for-final-St-Helens-Towns-Fund-approval
- Sustrans. By Ours Cowley Hill: Liveable Neighbourhoods (July 2023) [online weblink]: https://www.by-ours-cowleyhill.org.uk/
- Transform Our World: A community of educators empowering students to take climate action. Clean Air for Schools [online weblink]: <u>Clean Air for Schools</u> Framework (transform-our-world.org)