



Report to Policy Committee –

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Report of: *Kate Martin*

Report to: *Transport, Regeneration & Climate Committee*

Date of Decision: *14th February 2024*

Subject: *Sheffield Clean Air Plan – early-stage review findings*

Has an Equality Impact Assessment (EIA) been undertaken?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
If YES, what EIA reference number has it been given? 803, 1347, 1346				
Has appropriate consultation taken place?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Has a Climate Impact Assessment (CIA) been undertaken?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Does the report contain confidential or exempt information?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
If YES, give details as to whether the exemption applies to the full report / part of the report and/or appendices and complete below:-				
<p><i>“The (report/appendix) is not for publication because it contains exempt information under Paragraph (insert relevant paragraph number) of Schedule 12A of the Local Government Act 1972 (as amended).”</i></p>				

Purpose of Report:

To update the Transport, Regeneration and Climate Committee on the Clean Air Plan, including:

- The latest position in respect to the Department of Transport (DfT) bus retrofit performance issue and the associated requirements to support the transition to zero emission scheduled buses in Sheffield.
- The development of proposal for clean air investment utilising surplus income from the Clean Air Zone and initial recommendations for early investment.

Recommendations:

It is recommended that the Transport, Regeneration and Climate Committee:

- Endorses the continued liaison with HM Government for greater financial support to deliver zero emission bus fleet ambitions in Sheffield to mitigate the impacts resulting from the performance uncertainty and delay relating to the Department of Transport (DfT) bus retrofit programme (see section 3.2) and the predicated effect this will have on achieving legal air quality limits within the shortest possible time (as per our Ministerial Direction),
- Endorse the proposed approach to clean air investment planning, and note that further development will continue,
- Endorse the proposal to commit an initial £1m of CAZ surplus income to accelerate air quality improvement initiatives around schools and improve air quality for children traveling to school, as described in section 3.1, and note that officers will keep members of the committee informed of the development of the initiatives.

Background Papers:

Clean Air Plan Full Business Case and supporting documents - [More information about the Clean Air Zone | Sheffield City Council](#)

WHO global air quality guidelines, September 2021
<https://www.who.int/publications/i/item/9789240034228>

The invisible threat: how we can protect people from air pollution and create a fairer, healthier society; British Lung Foundation and Asthma UK, February 2021
https://cdn.shopify.com/s/files/1/0221/4446/files/Invisible_Threat_FINAL_compressed.pdf?v=1612948799&_ga=2.175216866.1719479710.1633475143-418606468.1624021878

Clean Air Plan Outline Business Case – Acceptance of Further Grant Funding: Leaders Decision, 29 March 2019
<https://democracy.sheffield.gov.uk/mglIssueHistoryHome.aspx?Id=27888>

Air that is safe to breathe for all: Sheffield's Clean Air Zone Proposal, Cabinet report 21 November 2018,

<https://democracy.sheffield.gov.uk/documents/s33102/Clean%20Air%20for%20Sheffield%20-%20Final.pdf>

Sheffield City Council (2017) Clean Air Strategy,
<https://democracy.sheffield.gov.uk/documents/s29124/Clean%20Air%20Strategy%20Dec%20Cabinet%202.pdf>

Sheffield City Council (2018) Transport Strategy
<https://democracy.sheffield.gov.uk/documents/s31437/Transport%20Strategy%202.pdf>

SCC Cooperative Executive decision 26 October 2021 [Decision - Sheffield and Rotherham Clean Air Plan | Sheffield City Council](#)

Lead Officer to complete:-		
1	I have consulted the relevant departments in respect of any relevant implications indicated on the Statutory and Council Policy Checklist, and comments have been incorporated / additional forms completed / EIA completed, where required.	Finance: Philip Gregory
		Legal: Robert Parkin
		Equalities & Consultation: Ed Saxton
		Climate: Tom Finnegan-Smith
<i><u>Legal, financial/commercial and equalities implications must be included within the report and the name of the officer consulted must be included above.</u></i>		
2	<u>SLB member who approved submission:</u>	<i>William Stewart</i>
3	<u>Committee Chair consulted:</u>	<i>Cllr Miskell, Cllr Andrew sangar, Cllr Christine Gilligan-Kubo, Cllr Denise Fox</i>
4	I confirm that all necessary approval has been obtained in respect of the implications indicated on the Statutory and Council Policy Checklist and that the report has been approved for submission to the Committee by the SLB member indicated at 2. In addition, any additional forms have been completed and signed off as required at 1.	
	<u>Lead Officer Name:</u> Tom Finnegan-Smith	<u>Job Title:</u> Assistant Director: Strategic Transport, Sustainability and Infrastructure
	<u>Date:</u>	

1.0 BACKGROUND

1.1 The need to reduce air pollution to improve the health of the city

- According to the World Health Organisation, in 2019, outdoor air pollution is estimated to have caused 4.2million premature deaths worldwide¹.
- Air pollution, defined as a combination of nitrogen dioxide (NO₂) and particulate matter, contributes to between 28,000 to 36,000 deaths in the UK each year² with road transport responsible for 80 per cent of roadside NO₂ pollution alone³. More recent data suggests that the death toll in the UK is now rising closer to 40,000 mark each year in the UK.
- Children and the elderly are particularly vulnerable to the damage caused by air pollution. For children, damage occurs across a lifetime and the effects begin as early as the baby's first weeks in the womb. We know that the heart, brain, hormone systems and immunity can all be harmed by air pollution⁴. Poor health early in life often leads to poor health later in life and affects how well a child does at school.
- Poor health and higher exposure to air pollution are not equally distributed. People in poorer neighbourhoods and communities are at higher risk than others because they often live, learn or work where they are exposed to higher levels of traffic and industrial pollution. This exposure means that they can expect to die younger and live more of their lives in poor health. These vulnerabilities are heightened due to poor housing, the stress of living on a low income and limited access to healthy food and green spaces⁵.
- There is an urgent need to act to improve the air that people in Sheffield breathe.

1.2 Clean Air Plan, Clean Air Zone and legal requirements

- Sheffield City Council (SCC) and Rotherham Metropolitan Borough Council (RMBC) are jointly issued with a Ministerial Direction from His Majesties Government (HMG) to implement a local Clean Air Plan to reach legal limits of 40µg/m³ for nitrogen dioxide (NO₂) in the shortest possible time and within 2023⁶
- Nitrogen dioxide (NO₂) is predominantly generated by the combustion of fossil fuels, and in urban areas the greatest single source of this air pollutant is road traffic. Therefore, an accelerated reduction in the number the most polluting vehicles is expected to reduce the level of nitrogen dioxide in the shortest possible time.
- HM Government's CAZ Framework⁷ is the key Government policy guidance for the development of local Clean Air Plans. The Council was required to follow this guidance to develop the Outline and Full Business Case and supporting technical

¹ Who Health Organisation: [https://www.who.int/news-room/fact-sheets/detail/ambient-\(outdoor\)-air-quality-and-health](https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health)

² Committee on the Medical Effects of Air Pollutants (COMEAP): [Associations of long-term average concentrations of nitrogen dioxide with mortality \(2018\): COMEAP summary - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/674222/Associations_of_long-term_average_concentrations_of_nitrogen_dioxide_with_mortality_(2018)_COMEAP_summary_-_GOV.UK_(www.gov.uk).pdf)

³ Department for Environment, Food and Rural Affairs (2017) UK plan for tackling roadside nitrogen dioxide concentrations: [Air quality plan for nitrogen dioxide \(NO₂\) in UK \(2017\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/674222/Air_quality_plan_for_nitrogen_dioxide_(NO2)_in_UK_(2017)_-GOV.UK_(www.gov.uk).pdf)

⁴ Royal College of Physicians & Royal College of Paediatrics and Child Health. Every breath we take: 2016: <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

⁵ Royal College of Physicians & Royal College of Paediatrics and Child Health. Every breath we take: 2016: <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

⁶[Environment Act 1995 Sheffield City Council and Rotherham Metropolitan Borough Council Air Quality Direction 2022.pdf \(publishing.service.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/674222/Environment_Act_1995_Sheffield_City_Council_and_Rotherham_Metropolitan_Borough_Council_Air_Quality_Direction_2022.pdf)

⁷ [Air quality: clean air zone framework for England - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/674222/Air_quality_clean_air_zone_framework_for_England_-_GOV.UK_(www.gov.uk).pdf)

work. The Full Business Case was approved by HM Government in July 2022, this and the supporting documents can be found on the Council website.⁸

- Based on technical studies CAP interventions and in particular the Clean Air Zone were determined by the Council as the most effective option to accelerating the upgrade of older more polluting vehicles to cleaner ones. The Outline and Full Business Case and technical supporting documents were assessed and approved by HM Government. The aim of the Clean Air Zone is to accelerate the replacement rate of older, non-compliant vehicles to reduce nitrogen dioxide both across the CAZ and the wider city area.
- The Ministerial Direction required Sheffield City Council to implement the following to achieve compliance with the Air Quality Regulation Standards 2010, within the shortest possible time and within 2023:
 - A Class C charging Clean Air Zone in central Sheffield
 - Bus gate on Arundel Gate with bus anti-idling measures
 - Financial Assistance Schemes to support the most impacted vehicle owners to upgrade / replace vehicles to meet the Clean Air Zone (CAZ) emission standards
- The Ministerial Direction also imposed requirements upon RMBC, these are included within the scope of this report.
- Sheffield's Class C charging Clean Air Zone (CAZ) commenced on Monday 27 February 2023. A temporary exemption for local non-compliant Hackney Carriage Taxis and local non-compliant LGVs was in place until midnight on the 4th June, charging for these vehicles commenced on the 5th June 2023. The rules for the Sheffield CAZ scheme are set out in the [Charging Scheme Order \(CSO\)](#) which is published on the Council website.
- The Financial Assistance Schemes (FAS) were launched on the 12th December 2022, with grants and loans available to assist individuals and businesses that meet qualifying criteria to upgrade up to 3 non-compliant vehicles. A further grant scheme was launched on the 12th May 2023 for people to apply for retrospective funds if they have already replaced their vehicle in response to the CAZ.
- The bus-gate scheme on Arundel Gate came into operation on the 14th March 2023, this is in advance of the permanent scheme that is proposed on Arundel Gate as part of the Connecting Sheffield City Centre scheme. No decision has been made yet in respect of that permanent scheme; the proposal will follow the statutory procedure and be subject to the Council's decision-making process in due course.

2.0 SUMMARY OF INITIAL MONITORING FINDINGS

⁸ [More information about the Clean Air Zone | Sheffield City Council](#)

2.1 Scope and limitations:

- In December 2023 a report was taken to the [Transport, Regeneration and Climate Policy Committee, 11/12/2023](#) with early-stage monitoring review findings.
- The review aimed to provide an update and indicative view on how the Clean Air Plan (CAP) interventions including the Clean Air Zone (CAZ) had performed during the early months of operation.
- It focused on the CAP interventions implemented in Sheffield to improve air quality and achieve legal nitrogen dioxide limits in the shortest possible time, the review looked at discernible impacts on vehicle upgrade and compliance levels, traffic volumes and traffic flow / behaviour.

When considering monitoring information, the following need to be taken into account:

- It should be noted that as a result of the local exemptions to certain Hackney Carriage Taxis and LGVs the full CAZ C charging scheme did not commence until the 5th June 2023. Most of the data available within the review is for the period up to October 2023, and whilst there is limited data available at this stage the review is based on the best information available at this point.
- Due to in-year seasonal and other variations it is considered that 12 months minimum data is required to identify longer-term behaviour trends in response to the CAZ e.g. traffic volumes, number of compliant / non-compliant vehicles entering the CAZ, number people paying the CAZ charge, number of contraventions / PCNs.
- The Council collects data on average Nitrogen Dioxide (NO₂) concentrations over a 12 month period (Jan - Dec) in accordance with its statutory duties. Processed and HM Government ratified annual average data won't be available until Summer 2024 - see section 2.5.
- As noted above, at this stage the most tangible indicator of the impact of the CAZ is the relative improvement in vehicle emissions by vehicle type. In order to assess this surveys have been undertaken of the vehicle fleet in October 2023 which are compared to a baseline survey undertaken in November 2022.

The review looked at:

- Vehicle compliance levels – improvement observed in vehicle emission standards
- Traffic volumes and traffic flow / behaviour
- Air quality monitoring requirements and HM Government's compliance assessment process
- The primary early-stage indicator is the relative improvement in vehicle emissions by vehicle type observed in October 2023 when compared to the baseline survey undertaken in November 2022. This provides an indication of how quickly the fleet in Sheffield is upgrading to newer, cleaner vehicles and whether the CAZ is accelerating the speed of change within the time period.

2.2. Vehicle Compliance levels

Metrics used:

- Automatic Number Plate Recognition (ANPR) surveys undertaken specifically for monitoring purposes
- SCC licensed taxi fleet vehicle compliance levels
- Financial assistance scheme uptake statistics

A number of scenarios for monitoring purposes are referred to in the analysis, in summary these are:

- Table 1 below shows the reduction in non-compliant vehicles by type observed inside and outside the charging zone between November 2022 and early October 2023. The monitoring data to date shows the number of non-compliant vehicles has reduced significantly since the introduction of the CAZ.
- To date there has been a reduction of **64%** in the proportion of non-compliant vehicles in the CAZ area. There has also been a **18%** reduction in the non-compliant proportion of vehicles across the wider CAP area. Within the time period, this is a greater reduction both in the CAZ and wider city area in the proportion of the non-complaint vehicles than would have been expected without the CAZ.

Table 1 - Proportion of non-compliant fleet by vehicle type

<i>Non-Compliant (Observed)</i>	<i>Nov 2022</i>	<i>Oct 2023</i>	<i>% Reduction in Proportion of Non-Compliant Vehicles</i>
Light Goods Vehicles			
Inside Charging Zone	41%	16%	62%
Outside Charging Zone	43%	37%	14%
Private Hire Vehicles			
Inside Charging Zone	23%	4%	81%
Outside Charging Zone	28%	12%	57%
Licenced	25%	6%	76%
Hackney Cabs			
Licenced	85%	37%	56%
Articulated HGV			
Inside Charging Zone	4%	1%	72%
Outside Charging Zone	8%	5%	38%
Rigid HGV			
Inside Charging Zone	22%	8%	63%
Outside Charging Zone	24%	19%	19%
Buses and Coaches			
Inside Charging Zone	24%	12%	52%
Outside Charging Zone	47%	36%	23%
Total (Chargeable Vehicles)			
Inside Charging Zone	37%	13%	64%
Outside Charging Zone	39%	32%	18%

The following is a summary of the reduction in non-compliance levels by chargeable vehicle types observed between November 2022 and October 2023:

- LGV fleet non-compliance levels have **reduced by 62%** in the CAZ area and 14% across the wider CAP area;
- PHV (all observed not just SCC licensed taxis) fleet non-compliance levels have **reduced by 81%** in the CAZ area and 57% across the wider CAP area. The licensed fleet has reduced the non-compliant fleet by 76% and overall SCC licensed PHVs are 94% compliant;
- Hackney Cabs (based on SCC licensed taxis) fleet non-compliance levels have **reduced by 56%**;
- Articulated HGV fleet non-compliance levels have **reduced by 72%** in the CAZ area and 38% across the wider CAP area, and are now 99% compliant inside the CAZ;
- Rigid HGV fleet non-compliance levels have **reduced by 63%** in the CAZ area and 19% across the wider CAP area
- Coach and bus (combined in the ANPR data) fleet non-compliance levels have **reduced by 52%** in the CAZ area and 23% across the wider CAP area.

2.3 Traffic volumes and travel behaviour

- As part of the early stage review we have looked at a range of national and local traffic flow and volume data both to determine and evaluate the longer term trends and any discernible effects of the Clean Air Zone. Findings are summarised below:
- Traffic volumes reduced significantly during the COVID 19 pandemic, and travel behaviour changed. Post the pandemic, changes in traffic flow and travel behaviour patterns are still being observed and these may become longer term changes in response to hybrid working / working from home, reduced bus patronage and increased home delivery options.
- Nationally between June 2022 and July 2023 overall road traffic volumes have increased and are close to pre-covid usage levels, recovery across public transport is slower.
- Nationally LGV usage has increased by 4.5% nationally and car usage has increased 3.2% nationally, this could be a reflection of increased home deliveries combined with the reduction in bus and train patronage and other post-COVID travel behaviour changes.
- The levels of non-compliant vehicles entering the CAZ that are liable to pay the daily charge has been reducing month on month. Most recent data from October indicates that this is 1.11% of traffic entering the CAZ – the lowest proportion of the fleet since the scheme went live.
- There is a significant reduction in northbound traffic using Arundel Gate post implementation of the bus-gate. Between April to September a 42% reduction in traffic has been observed in 2023 as compared to the same period in 2022. This will contribute towards reduced NO₂ emissions on Arundel Gate.

- The number of vehicles that are driving through the bus gate without authorisation has been reducing from July 2024 where unauthorised trips were c.14% of total traffic. Most recent data indicates that unauthorised vehicle trips are making up c.5% of trips. We will continue to review the traffic volumes and level of abuse of the bus gate as part of the review of the ETRO for this aspect of the Clean Air Plan.
- Aside from the planned traffic reduction associated with the Arundel Gate bus-gate, at this early stage the traffic data indicates that there haven't been any significant changes in observed traffic volumes as a result of the CAZ. We will continue to monitor traffic flows across the city.

More information is included in Appendix 1 of the December 2023 Committee report – [Transport, Regeneration and Climate Policy Committee, 11/12/2023](#).

2.4 Vehicle compliance improvement supported by financial assistance schemes

- The CAZ financial assistance schemes were launched on the 12th December 2022, making funds available to help people upgrade or replace an existing non-compliant vehicle to become compliant with the CAZ standards.
- As of 2nd February 2024 a total of 1232 applications have received financial assistance to upgrade or replace a vehicle, see the breakdown by vehicle type below. Note this figure does not include applicants who have a 'live' grant application, or those who have had financial assistance approved and are either in the process of ordering a vehicle or have a vehicle on order and are awaiting delivery. – see bullet point below.

Financial support Type	Hackney Taxi	Private Hire taxi	LGV type	HGV	Coach	Bus*	
Grant Only	39	96	271	25	2	0	
Finance Deal	20	21	225	19	1	0	
Retrofit Grant	30	0	3	0	3	0	
De-licensing Grant	225	0	0	0	0	0	
Already Replaced Grant	29	132	81	7	2	1	TOTAL
	343	249	580	51	8	1	1232

**NB: Note HM Government have paused bus retrofit funding nationally, Local Authorities are awaiting confirmation of DfT's position relating to outcomes of research they undertook in 2023.*

- Financial analysis undertaken in December 2023 showed expenditure as reaching £4.25m with 'committed' forecast as £8.86m.
- We are currently reviewing our existing Financial Assistance Scheme (FAS) and considering the potential to provide further flexibilities for certain fleet. Any changes to our FAS, which are supported through the Clean Air Fund from Government, would require approval by JAQU / DEFRA.

2.5. Air quality monitoring and HM Government's compliance assessment requirements

Process and timescale for HM Governments assessment of air quality compliance

- Under the UK Air Quality Regulations (2010) compliance for Clean Air Plans (CAP) is determined by annual average nitrogen dioxide concentrations at valid monitoring locations in accordance with [The Air Quality Standards Regulations 2010 \(legislation.gov.uk\)](https://www.legislation.gov.uk). The primary success factor is to achieve legal nitrogen dioxide to within legal limits within the 'shortest possible time'. Sheffield is currently under a Ministerial Direction to achieve legal compliance within 2023.
- The Joint Air Quality Unit (JAQU) is the HM Government Department that is responsible for evaluating and assessing local Clean Air Plans to determine whether compliance has been achieved. JAQU define this as achieving 'success' i.e. the CAP interventions are having the desired effect and future nitrogen dioxide levels will not exceed the annual average legal limit.

Why air quality impact assessment needs to be based on 12 months annual average data:

- UK legislation dictates that air quality concentrations are based on annual average data across a full 12 month period within a calendar year. This is because air quality levels vary greatly day-day due to external factors such as weather and seasonal travel patterns. Assessing data over a longer period provides a more accurate picture. Data for that 12 month period is then processed between January – April of the following year and that is submitted to Defra for ratification.
- Air Quality and specifically nitrogen dioxide levels vary dependant on traffic volumes and travel patterns. Traffic volumes in Sheffield vary greatly dependant on seasonal factors and school / university term times.
- Traffic volumes reduced significantly during the COVID 19 pandemic, therefore air quality data from years 2020 and 2021 is not comparable and can't be used for baseline monitoring meaning that there is not a recent data set that can be used to look at comparable trends over time.
- We are required to follow the Government defined state assessment process to determine the success of the nitrogen dioxide air quality improvement as described above.
- In addition, the Council will assess actual, annual average air quality data for 2023 when this is available and share information in relation to the air quality improvement as result of the Celan Air zone and other CAP measures. It takes time to process annual average data, diffusion tubes must be analysed in a laboratory and data needs to have technical adjustments applied before submitting for checks and ratification by HM Government. Ratified data is usually available in early summer of the following year.

3.0 THE PROPOSAL - CLEAN AIR INVESTMENT PLAN

3.1 Clean Air Investment – Approach for use of CAZ surplus income and other complimentary funds

- As set out in the December 2023 Committee report [Transport, Regeneration and Climate Policy Committee Dec 2023](#), it is proposed that any surplus CAZ income will be spent in line with the approved governance principles and guidelines. Sufficient funds must be retained to cover operational, contractual, and fixed costs.
- As described in section 6.3 of this report, use of CAZ income will align with the five and ten year plans as set out in Annex 5 of the Sheffield Clean Air Zone Charging Scheme Order (CSO) 2023 - [Clean Air Zone Charging Scheme Order | Sheffield City Council](#). The CSO states that:

In the event that net proceeds are generated from the Scheme over the opening ten year period, these proceeds would be applied, in such proportions as may be decided by the Council, to directly or indirectly facilitate the achievement of relevant local transport policies in Sheffield's Transport Strategy and the Sheffield City Region Transport Strategy in accordance with the following high level spending objectives:

- *supporting the delivery of the ambitions of the Scheme and promoting cleaner air;*
 - *supporting active travel and public transport use;*
 - *supporting zero emission and sustainable infrastructure and actions in and around the city to improve air quality*
- There is the opportunity to investment surplus CAZ income to facilitate the achievement of Sheffield City Councils transport strategies, policies and ambitions in particular those schemes to reduce traffic pollution and meet the decarbonisation objectives set-out in the 'Way We Travel' routemap which was endorsed by the TRC Committee in July 2023 - [Decarbonisation Routemaps](#) .
 - Officers commit to exploring and developing strategic interventions for investment including transport and green infrastructure, for example green walls. The priority for investment will be on interventions that meet the primary objective of reducing nitrogen dioxide levels to within legal limits.
 - In addition to CAZ surplus income, further investment will continue to be sought from HM Government sources and via the South Yorkshire Mayoral Combined Authority (SYMCA) to provide complimentary funds to improve transport and achieve air quality and net zero ambitions.
 - The plan for the use of CAZ surplus income is still in development. The availability of complimentary funding will be key to the delivery of schemes that realise the greatest positive impact on improving local transport and air quality, and this position will be regularly reviewed as part of the plan development and decision process.
 - Considerations for identifying eligible schemes / initiatives for CAZ surplus income investment include initiatives that:
 - Meet the CSO Transport Act 2000 legislative requirements.
 - Can be deliverable within a relatively short timeframe to achieve benefits in the shortest time
 - Will target reduction in nitrogen dioxide levels at key locations

- Will lead to improved air quality
- Key themes for the use of surplus CAZ income are:
 - Achieve legal nitrogen dioxide limits across Sheffield
 - Reduce pollution from scheduled buses
 - Reduce pollution around schools and for children travelling to school
 - Facilitate delivery of Sheffield City Council transport strategies and policies with the emphasis on contributing towards improved air quality.

Initial investment recommendations:

- It is recognised that to continue to improve air quality in Sheffield as quickly as possible, further investment is required. Therefore, it is recommended that initial investment of up to £1m CAZ surplus income is prioritised towards reducing children’s exposure to harmful road pollution around schools and when travelling to school.
- To make efficient use of the funds available it is recommended that existing schemes are expanded to increase the benefits they offer and to utilise existing resources. Schemes that will benefit from this initial funding include:
 - School Streets - expand delivery of the school streets programme
 - Mode Shift Stars – expand the Mode Shift Stars to work to reach more schools
 - 20mph part-time zones outside schools – deliver the remaining un-funded schemes at priority locations.
 - Neighbourhood cycle parking and storage
- Officers will develop the programme, and confirm those schools that will be included each of the initiatives. Decisions will be made in accordance with the scheme of delegation, and officers will consult with members of the committee as initiatives are developed.

3.2 Scheduled buses – issues and latest position

- Since 2018, Sheffield City Council working in partnership with bus operators has accessed HM government funding to support retrofit of buses in Sheffield to meet nationally accredited Euro VI equivalent emission standard. Circa 300 buses operating in Sheffield were retrofitted between 2018 and 2020.
- In April 2023 the Department for Transport (DfT) announced to affected Local Authorities that following an initial review they had identified that bus retrofit technology was not performing consistently and was not always achieving the certified equivalent Euro VI emissions standard.
- DfT paused all grant funding for bus retrofits including Clean Air Zone financial support schemes until they undertook further research and shared findings.
- A full study of retrofit performance has since been concluded by DfT, their outcome report was expected in October 2023, however this has not been shared as yet.

- Based on limited feedback from DfT since April 2023, it is anticipated that emissions from retrofitted buses will not be at the levels expected but this will not be clear until Government report on their findings.
- A number of our air quality hotspots in Sheffield are influenced heavily by bus emissions. With potentially 75% of our bus fleet not performing at Euro VI equivalent standards and approximately 25% 'paused' awaiting an upgrade solution, it is expected that this will pose a significant risk to achieving compliance at all locations in Sheffield in the shortest possible time.
- The impact on air quality of the delay in bus upgrades and potential under-performance of the technology will not be clear until later in 2024 when 12 months of air quality data is available for analysis – see section 2.5.
- Executive Officers within the Council are in regular discussion with Senior Officers within the DfT and Joint Air Quality Unit (JAQU) to make the case for enhanced financial support to accelerate the transition to a zero emission bus across the CAP area to meet legal air quality requirements within the shortest possible time.
- The Council Leader met with then DEFRA Minister Trudy Harrison in October 2023 to emphasise the Council's net zero ambitions and the need for HM Government to match that ambition to accelerate the transition to zero emission bus fleet in Sheffield

Funding strategy for scheduled buses:

The following funding sources are available to support the transition to a zero emission bus fleet:

- *HM Government, Zero Emission Bus Regional Areas (ZEBRA) scheme:* A successful bid to ZEBRA 1 fund will see the City Centre 'Connect' bus upgraded to new single decker EV buses in Spring 2024. SYMCA have also submitted a bid to ZEBRA2 which includes funding to secure 65 electric buses to serve routes across Sheffield. The DfT are expected to announce their decision in March 2024.
- *CAZ stretch fund:* JAQU allocated up to £7.9 stretch funding in relation to the Sheffield CAZ to support schemes that were oversubscribed. SCC Officers are seeking stretch funding to increase the level of financial support that can be made available to owners of scheduled buses to purchase CAZ compliant vehicles as an alternative to retrofit. compliant with the CAZ standards.
- *CAZ financial support allocation for buses (currently paused due by DfT):* HM Government awarded grant funding to support approximately 100 buses based on the proviso that a grant of £16k per bus was permissible. The £16k grant limit set by JAQU broadly is sufficient to fund a retrofit with Bus Operator commitment to fund residual retrofit costs and ongoing maintenance.

- SCC are making the case to JAQU that £16k grant contribution is insufficient to support purchase of a replacement bus and that a higher grant level contribution will be required per bus.
- As explained above, should the underperformance of the existing retrofitted buses require an alternative solution in addition to those currently awaiting financial support to upgrade, there will be a need make the case to HM Government that further funding will be required to support an accelerated transition to cleaner buses in Sheffield and reverse the impacts of the bus retrofit legacy.

4.0 HOW DOES THIS DECISION CONTRIBUTE ?

- The Council is under a legal direction (see section 6.3) to implement a local Clean Air Plan to meet legal nitrogen dioxide limits in the shortest possible time, the recommendations within this report assist in meeting the legal requirements.
- Delivers Transport Strategy 2019 policies:
 - Policy 4A - We will implement our Clean Air Strategy to address exceedance of legal limits in respect of oxides of nitrogen.
 - Policy 5B - We will aim to achieve a zero carbon public transport network
 - Policy 7A - We will develop our transport system to encourage active and healthier lifestyles, and reduce noise and air quality impacts
 - Policy 8A - We will adopt the Sustainable Safety approach. This will require separate provisions to ensure the safety and convenience of pedestrians and of cyclists, which respond directly to the level of threat posed by motorised traffic, and by each other.
- Contributes towards achieving the goals and objectives within the council's Decarbonisation strategy, 'The Way We Travel' section - [SCC Decarbonisation Routemap](#)

5.0 CONSULTATION

- Public consultation on the Clean Air Plan including the Clean Air Zone was undertaken at key stages between 2019 and 2022. Engagement with key stakeholders has been ongoing since 2019, including during the pandemic.
- In 2019 Sheffield City Council ran an eight-week long online consultation from August 2019. These consultation reports are on the website.
- Further statutory consultation was undertaken to inform the final proposals for inclusion within the Full Business Case. This consultation ran from 22nd November 2021 until 17th December 2021, the primary purposes were to:
 - Provide detail of the final proposals of the S&R Clean Air Plan
 - Consult (statutory requirement) on the final proposals for the Sheffield CAZ scheme
 - Provide detail of the proposed exemptions and seek stake holder views
 - Provide detail of the financial support measures, and seek stakeholder views

- Feedback from consultation and stakeholder engagement activities has shaped the implemented scheme, in particular informing local exemptions and the financial assistance schemes. The consultation reports can be found on the website [More information about the Clean Air Zone | Sheffield City Council](#)

6.0 RISK ANALYSIS AND IMPLICATIONS OF THE DECISION

6.1 Equalities impacts

- The introduction of the CAP including the CAZ and other measures is supportive of the council's obligations to tackle inequalities, principally in helping to reduce health inequalities (a key cause and symptom of wider inequalities) associated with poor air quality and the promotion of Active Travel and Public Transport. It is also noted that financial assistance is available to alleviate the costs of vehicle upgrades.
- Equality Impact Assessments have been undertaken to consider the implications of the CAZ for people and communities and these are currently being reviewed and updated to consider its ongoing impact.
- School streets and mode-shift stars aim to improve safety, facilitate cleaner travel choices and improve air quality for children around schools. Safer roads and reduced numbers of collisions involving traffic and pedestrians is expected to be positive for all road users, but particularly the young and elderly.
- The proposed expansion of school streets, mode-shift stars and school 20 mph restrictions support the Council's obligations as a Public Authority under the Equality Act 2010 (Public Sector Equality Duty) to have due regard to the need to advance equality of opportunity for people who share protected characteristics, which, in this instance, are assessed as being principally Age (i.e. children, younger people and older people) and/or Disability. No negative equality impacts have been identified.

6.2 Finance and commercial – Forecast CAZ income, and investment of surplus.

Current Financial Position

Accumulative forecast over the duration:						
	22/23 (1M)	23/24	24/25	25/26	27/28	28/29 (11M)
Net Surplus Deficit	£4,977,280	-£536,076	-£3,779,607	-£5,690,273	-£6,511,003	-£6,433,851

- This is modelled on a 1% decrease in Fee income and a 2% decrease in PCN income per month as fleet becomes cleaner and therefore compliant over time.
- We are therefore forecasting that by the end of 23/24 there will be a £536K Surplus after taking into account future decommissioning provisions. There is still inherent uncertainty around this, owing to income volatility.

- We therefore anticipate future surplus generation in 24/25 It is therefore prudent to only release the initially outlined investment of £1M at this point in time.
- Specific projects will be costed in line with this outlined ceiling and will include where appropriate full life cycle provisions to ensure that there will be no future revenue burden on substantive budgets created by this investment.
- These proposals have received the authorisation of the Director of Finance.

6.3 Legal Implications

- Under Part IV of the Environment Act 1995 (“the 1995 Act”), the Council is required to have regard to any national strategy on clean air which is published by the Secretary of State, to review and assess air quality in their areas. and to report against objectives for specified pollutants of concern to the Secretary of State. The Council undertakes these duties in accordance with the requirements of the Local Air Quality Management framework.
- In addition to this, the Secretary of State, in exercise of the power conferred by section 85(5) of the 1995 Act, directed the Council to:
 - take steps to implement the local plan for NO2 compliance for the areas for which they are responsible.

ensure that the local plan for NO2 compliance is implemented so that—

- (a) compliance with the legal limit value for nitrogen dioxide is achieved in the shortest possible time, and by 2023 at the latest;
- (b) exposure to levels above the legal limit for nitrogen dioxide are reduced in the shortest possible time.
- The Secretary of State made the direction having determined that it was necessary to meet obligations placed upon the UK under EU Ambient Air Quality Directive 2008/50/EC. These obligations continue to have effect, including the legal limit value for nitrogen dioxide which must be monitored by the Secretary of State according to the requirements of the Air Quality Standards Regulations 2010.
- The Council is under a duty to comply with the direction per section 85(7) of the 1995 Act. Failure to comply may result in the Council being subject to an environmental review initiated by the Government’s Office for Environmental Protection or judicial review by any individual or organisation with sufficient standing to bring a claim.
- The Clean Air Zone is a charging scheme as defined by the Transport Act 2000 (“the 2000 Act”), that charging scheme being brought into operation via the Sheffield Clean Air Zone Charging Order 2003. The Council made this order on 2nd February 2023 and it came into operation on 27th February 2023. Schedule 12 to the 2000 Act defines income as “*the amounts received under or in connection with the scheme*”. It includes the charges imposed by the charging scheme (the ‘Clean Air Zone charge’ for using a non-compliant and non-exempt vehicle on a road in the Clean Air Zone) but also the income associated with enforcement (penalty charges for non-payment of the Clean Air Zone charge).

- Schedule 12 of the 2000 Act, in conjunction with the Road User Charging and Workplace Parking Levy (Net Proceeds) (England) Regulations 2003, imposes requirements upon the Council in respect of its accounting practices for the income received. An account must be kept for each financial year, documenting the income/expenditure and published as part of the Council's annual accounts (para 6). If the account is in deficit, it is to be balanced by the authority from their general fund (para 7) and, where there is a surplus, it must be spent on “facilitating the achievement of local transport policies” (para 8) – anything not spent must be carried forward to the next year. The Council complies with these requirements.
- Paragraph 10 imposes a further requirement that five and ten year plans for the use of the "net proceeds" must be included in the charging scheme. Net proceeds are defined as the surplus income remaining once the expenses of the scheme are met. The proposals in this report are considered to align with the five and ten year plans included within the Clean Air Zone Charging Scheme Order (CSO) and as set out in Annex 5 of the Sheffield Clean Air Zone Charging Scheme Order 2023 - [Clean Air Zone Charging Scheme Order | Sheffield City Council](#).

6.4 Climate Implications

- The local CAP legal Direction is specific to reducing nitrogen dioxide – not other air pollutants such as fine dust particulate matter (PM₁₀ and PM_{2.5}) and carbon dioxide. The CAZ has previously been assessed as having a neutral impact on carbon emissions but actions within the CAP compliment measures such as the decarbonisation of motorised vehicles and sits alongside our wider investment to encourage an increase in active travel and zero emission public transport which are needed to deliver overall net zero targets.
- The overall impact of the initial investment projects on carbon emissions is considered broadly neutral, with the possibility of a small positive impact in terms of encouraging smoother driving at lower speeds (improves fuel efficiency) and of improving pedestrian and cyclist safety, thereby supporting a shift to active travel modes. The potential for reduced emissions will contribute to the overall resilience to climate change.
- Prohibiting traffic outside of schools at entry and leaving means that children’s exposure to nitrogen dioxide is reduced.
- A reduction in vehicle speeds can potentially reduce vehicle emissions and this will contribute towards improved air quality. Lower speed limits can reduce air pollution through lower vehicle emissions and also reduce noise.

7.0 ALTERNATIVE OPTIONS CONSIDERED

- The parameters for use of CAZ income are described in section 3.1 and 6.3 of this report. Options for investment of CAZ surplus must meet the legislative purposes set

out in the CSO [Clean Air Zone Charging Scheme Order | Sheffield City Council](#). Options that do not meet the legislative key criteria cannot be considered.

- As described in section 3.0 eligible options are under development and will continue to be reviewed with TRC members as work progresses. Options being considered for further development include strategic infrastructure projects that provide significant improvements to active travel, public transport and complementary public realm and environmental infrastructure (e.g. green walls).

8.0 REASONS FOR RECOMMENDATIONS

- Our modelling (approved by Government) at OBC and FBC stage included showed that all buses in Sheffield and those on key routes in Rotherham needed to be a minimum of Euro VI standard equivalent to achieve nitrogen dioxide legal limits in the shortest possible time as per our Ministerial Direction.
- Therefore, achieving reduced emissions from scheduled buses is a material part of our Directed scheme, fundamental to achieving compliance with legal limits and continued liaison with HM Government to secure greater financial support to provide funding and solutions to reduce bus emissions and transition to a zero-emission bus fleet in Sheffield is critical.
- As set out in this and the December 2023 committee report a cautionary approach will be taken to expenditure of CAZ surplus income to ensure sufficient funds are retained to cover life-cycle operation costs and any further mitigating activities required to achieve legal nitrogen dioxide limits across the city. However, it is important that there is continued investment in complimentary activities to reduce traffic emissions and improve air quality.
- The recommendations for initial investment build on existing, successful schemes enabling these to be expanded to benefit school children and communities across Sheffield.