



## Agency Board Meeting 27 July 2021

Board Report Number: SEPA 22/21

### Update on SEPA's work on air quality and multiple benefit opportunities moving forward

<b>Summary:</b>	<p>To inform the Board of the recent work SEPA has been carrying out within the field of air quality and provide a short update on the implications for SEPA flowing from the Scottish Government's new air quality strategy, Cleaner Air for Scotland 2 – Towards a Better Place for Everyone.</p> <p>Identify and discuss opportunities as to how SEPA's work on air quality can be expanded for use in wider fields such as carbon emission modelling, development of sustainable cities, improving the health and wellbeing of Scotland's population and the transition to net zero.</p>
<b>Risks:</b>	Medium – Mostly reputational aspects.
<b>Resource and Staffing Implications:</b>	All current work is conducted via existing GIA or charging schemes.
<b>Equalities:</b>	Poor air quality is sometimes concentrated in lower income areas so playing our role to improve air quality can potentially have equality benefits.
<b>Environmental and Carbon Impact:</b>	None for SEPA.
<b>Purpose and audience of the report:</b>	To update the Board and seek any feedback.
<b>Report Author:</b>	Colin Gillespie (Principal Scientist – Air) and Graham Applegate (Principal Policy Officer – Air Quality and Energy)
<b>Appendices:</b>	None.

## 1. Introduction

- 1.1 The air that we breathe is fundamental to our health and the environment. Air pollution places quality of life and the natural environment at short and long-term risk. Despite the massive improvements in air quality in recent years, sustained and systemic action continues to be required to ensure we keep making progress. Scotland is performing well by UK, European and global comparison, with both ambient concentrations and mass emissions of the main air pollutants largely continuing to fall (with the notable exception of ammonia). This is a result of actions taken to date, however, more remains to be done though, not least as we better understand the impacts of air pollution and its links to other environmental risks such as climate change.
- 1.2 SEPA has both a direct regulatory and key support role to protect and improve Scotland's air quality. SEPA regulates industrial sites which may contribute to air pollution and works with local authorities to ensure local air quality meets legal limits. SEPA also works closely with Scottish Government in the development of air quality policy, guidance and legislation, provision of scientific evidence and technical advice, provision of communications and public engagement. SEPA is a key partner in the delivery for the [Cleaner Air for Scotland \(CAFS\)](#) process and its air quality policy aspirations.
- 1.3 The purpose of this paper and session is to:
- Inform the Board of the recent work SEPA has been carrying out within the field of air quality, including the development and delivery of Scotland's low emission zones (LEZs), analysis of data in response to COVID-19, development of publicly accessible Spotfire apps, and the development of Scottish Government's Cleaner Air for Scotland 2 (CAFS 2) strategy.
  - Provide a short update on the implications of the Scottish Government's new air quality strategy, CAFS 2, for SEPA.
  - Identify and discuss opportunities as to how SEPA's work currently conducted for improving air quality can be expanded for use in wider fields such as carbon emission modelling, development of sustainable cities, improving the health and wellbeing of Scotland's population and the transition to net zero.

## 2. Background

- 2.1 The past 18 months have shown us the fragility of our communities and the importance placed on our environment. Every year, air pollution contributes to an estimated 36,000 deaths in the UK and is regarded as the single largest environmental health risk we face today. The Scottish Government has maintained its commitment to introduce LEZs across the four largest cities (Aberdeen, Dundee, Edinburgh and Glasgow) by March 2022. Through the National Modelling Framework (NMF), as set out in the original CAFS strategy, SEPA has worked in partnership with Transport Scotland to support the four local authorities (LAs) and build the evidence-base for LEZs.
- 2.2 During this time SEPA has also been heavily involved in supporting the Scottish Government's review of CAFS to develop a new clean air strategy which will take Scotland forward to 2026. The CAFS process outlines the contribution that reductions in air pollution and better air quality in Scotland can make to sustainable development and net zero in ways that improve health and the natural environment outcomes and reduce health inequalities for the citizens of Scotland. CAFS brings together policy delivery in areas such as environment, public health, placemaking, transport, industry and business and climate change to ensure policy goals are aligned and maximised to achieve multiple benefits and minimise possible policy conflicts or disbenefits. SEPA

has been a key delivery agency working with Scottish Government since the CAFS process began in 2012.

- 2.3 The sophisticated criminal cyber-attack on SEPA's IS system in December 2020 interrupted our ability to undertake air quality modelling and deliver our CAFS NMF obligations and also provide support to the Scottish Government in the finalisation of CAFS 2. As explained in section 3 below, we quickly found ways to rebuild this capability to ensure we could make our contribution to the broader Scottish effort.
- 2.4 SEPA has built a strong working relationship with Scottish Government and key stakeholders becoming a respected, trusted and authoritative provider of data, analysis, evidence and advice on air pollution and air quality, while retaining its direct regulatory role. This has greatly assisted SEPA in its process of rebuilding our capacity after the cyber-attack and returning to more normal levels of service.

### **3. Recent SEPA work**

#### **Implementation of Scotland's Low Emission Zones**

- 3.1 SEPA's air quality modelling work for the CAFS NMF has been fundamental to the development of [Scotland's LEZs](#). SEPA has formed strong and trusted working relationships with Transport Scotland, local authorities, and importantly the public transport operators.
- 3.2 Prior to SEPA's cyberattack, the LEZ process was nearing the final stages, with evidence assessment reports planned for submission to LA committees in Spring 2021. Through the LEZ Leadership Group meeting in early February, SEPA was directed by the then Cabinet Secretaries to agree an interim solution with all partners. This involved developing a solution under extreme time constraints, building our modelling capabilities, developing an IT system that would facilitate our specialist software and manage resources to meet Scottish Government timescales for delivery of LEZs.
- 3.3 Since late March, SEPA has rebuilt up its modelling capabilities, providing emissions modelling to complement the traffic models, creating bespoke visualisation tools using Spotfire and assist LAs in finalising the individual LEZ proposals. SEPA submitted all four LEZ Emission Reports to the LAs within agreed timescales and provided further assistance in the lead-up to the LA Committee meetings.
- 3.4 Over the past few weeks, SEPA has met with councillors across all political parties, providing Q&A sessions on specific aspects and concerns of each of the LEZ proposal. SEPA continues to have an excellent working relationship with LEZ stakeholders and is trusted to provide the impartial and transparent scientific evidence which underpins the need for, and extent of, LEZs in Scotland's four largest cities. SEPA also has developed bespoke public facing Spotfire applications to assist the LAs in their statutory consultation for the LEZs. These include specific apps on pollution emission changes, LEZ boundary options and traffic management proposals. As SEPA expands on its modelling capabilities, supporting local authorities throughout the statutory consultation period, we will provide further modelling evidence for ministerial approval at the beginning of 2022.

#### **Assessing the impacts of COVID-19 restrictions on air quality**

- 3.5 Recognising the work previously conducted by SEPA for CAFS to implement the NMF the Scottish Government requested SEPA to develop further our capability to collect

and analyse data on the impacts of COVID-19 on air quality and the environment. This work initially focussed on the lockdown period and has since progressed to assess the impacts of the recovery phase.

- 3.6 COVID-19 lockdown provided SEPA with an opportunity to investigate the wider, potential impacts on air quality, with an emphasis on carbon emissions reduction. Transport Scotland in partnership with SEPA and Glasgow City Council began to collect traffic data during the lockdown at key locations around the city (including within the LEZ boundary). This data allowed us to monitor changes in fleet composition and traffic flows as a result of the restrictions, but more importantly it allowed us to reflect on the possibilities for reduction in carbon emissions through future sustainable transport options.
- 3.7 Whilst the LEZ, on its own, has focused on cleaning the vehicle fleet to reduce NO<sub>2</sub> concentrations within the City's most polluted areas, during lockdown reductions in traffic levels across the wider Glasgow City area resulted in significant drops in NO<sub>x</sub> and CO<sub>2</sub> emissions.
- 3.8 The [Spaces for People programme](#) commenced in May 2020, as part of Glasgow's strategy to provide additional space to maintain physical distancing during the pandemic and subsequent recovery phase. Temporary infrastructure measures were introduced in the city centre, along active travel routes and in surrounding areas and included footway widening, road closures and temporary cycle ways. SEPA provided the evidence for the Glasgow City Council's sustainable travel strategy and is looking to focus efforts on providing further evidence in moving LEZs towards zero-carbon zones.

### **Cleaner Air for Scotland 2 (CAFS 2) – Towards a Better Place for Everyone**

- 3.9 [CAFS 2](#), Scotland's new air quality strategy, and accompanying [delivery plan](#) were published on 15 July 2021. The strategy sets out how the Scottish Government will continue to deliver air quality and multiple improvements for related policy areas (such as health and wellbeing, climate change, placemaking, industry and agriculture) running to 2026. The actions set out in CAFS 2 build on the work of an independently led review of the original CAFS completed in 2019. SEPA is acknowledged by Professor Campbell Gemmell, Chair of the Independent Steering Group, for our input into the review process, supporting and participating in the Working Groups and assisting with the final stages of reporting to the Scottish Government. SEPA assisted the Scottish Government significantly in drafting CAFS 2 and its delivery plan.
- 3.10 CAFS 2 builds on the original CAFS process started in 2015, which focussed on reducing air pollution in our urban centres and the impacts of poor air quality on health, to acknowledge the wider environmental and societal impacts of exposure to air pollution. CAFS 2 still contains many actions in relation to transport, health, placemaking and governance, however, the scope of the strategy has been broadened out to cover a wider range of issues where air pollution and improving air quality still need to be addressed. These include:
- Public engagement and behaviour change.
  - Tackling currently unregulated sectors which contribute to air pollution such as agriculture and domestic combustion.
  - Tackling non-transport vehicle emissions (such as non-road mobile machinery).
  - Improving the data and evidence surrounding air pollution in Scotland.

CAFS 2 will maximise the benefits from action to tackle poor air quality by building on the linkages with other key government policies and strategies across transport, climate change, health, environment, planning, energy and land use.

- 3.11 SEPA is a key delivery agency for CAFS 2 and has responsibility for leading or supporting the delivery of actions in nine of the ten priority sectors. SEPA will therefore be integral to the success of the CAFS 2 strategy and its delivery plan. In particular SEPA is tasked with the following tasks.
- Utilising its sector plan approach to encourage businesses to go beyond compliance to achieve further reduction in air pollutants and greenhouse gas emissions.
  - Assessing the currently regulatory regimes (such as PPC) for gaps, activities which may need to be regulated and appropriateness of qualifying thresholds.
  - Working with the agricultural industry to develop a voluntary code of good agricultural practice for improving air quality in Scotland, sharing best practice and raising awareness of greenhouse gases and ammonia, and actions that farmers and crofters can take to minimise their environmental impact while improving efficiency.
  - Continuing work to implement Scotland’s LEZs.
  - Continuing to improve air pollution data and evidence through development of new data collection and storage methods, modelling and tools and reporting capabilities.
  - Developing guidance on co-related aspects to air pollution such as noise and non-industrial emissions.
  - With Scottish Government conducting a review of the current local air quality management system (LAQM) system to update guidance and improve the methods for assessment and reporting.
  - Playing a key role in the governance of the CAFS 2 process.

#### **4. Opportunities to inform the Green Recovery**

- 4.1 SEPA’s capability to provide high quality data and expert analysis will strengthen its reputation as the authoritative agency which provides evidence and information on the state of our environment to support the critical decisions that need to be made on the greening of our cities and the transition to a net-zero society. This area of work aligns inextricably with SEPA’s [One Planet Prosperity – Our Regulatory Strategy](#), our organisational characteristics and fulfilment of our Statutory Purpose. There are also significant opportunities to achieve multiple benefits through this work in the areas of climate change, health and wellbeing improvement, reducing social inequalities and economic benefit.
- 4.2 SEPA has developed capability to assess carbon impacts in conjunction with air pollution thereby adding considerable value across these interrelated policy areas and the move towards a net-zero society. This data will allow an assessment of the potential impacts of various proposed recovery and policy measures and also allow us to identify whether measures are performing adequately or having the desired effect (such as the impact of introduction of low and zero emission vehicles, and the move to active travel and sustainable transport options). In the future these types of output will allow local authorities to design measures that support a green recovery in our cities reducing local air pollution and CO<sub>2</sub> emissions.

- 4.3 In July 2021 the Scottish Government announced a new Advisory Council to provide advice on its economic strategy to recover from COVID-19 and create greater, fairer and greener prosperity. The data and evidence of the kind discussed in this paper should prove invaluable in informing parts of this process moving forward.
- 4.4 Moving forward, the assessment of the impact of measures on carbon reduction will become increasingly important. The [Committee on Climate Change](#) has set out six key principles for a resilient recovery and with advice on how reducing GHGs and adapting to climate change should be integral to any recovery package.
- 4.5 The Committee noted the importance of good air quality to public health and how important climate change measures will be in delivering co-benefits for reducing air pollution, encouraging fairness, shifting to positive behaviours, reduced reliance on transport and encouragement and enabling of active travel and improvement in health and wellbeing. Evidence provided by SEPA will be able to be used to inform the updates of Scotland's [Climate Change Plan](#) and measure progress towards meeting the targets set by Scottish Government policy.
- 5. Recommendations**
- 5.1 The Board is recommended to note the contents of the paper on the work SEPA has been carrying out on air quality.

**Author(s) and Date**

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