

<b>Committee:</b> Port Health and Environmental Services	<b>Dated:</b> 18 05 2021
<b>Subject:</b> Ella Adoo Kissi-Debrah Inquest - Prevention of Future Deaths Report	<b>Public</b>
<b>Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly?</b>	2,11
<b>Does this proposal require extra revenue and/or capital spending?</b>	N
<b>Report of</b> Jon Averbs	<b>For Information</b>
<b>Report author:</b> Ruth Calderwood Air Quality Manager, Markets and Consumer Protection Dept.	

### Summary

In December 2020, a Coroner ruled that a London child, Ella Adoo Kissi-Debrah, had died of asthma, with exposure to excessive air pollution being a contributory factor. This is the first time that air pollution has been explicitly linked to a named individual's death.

The child's death occurred in 2013. The first inquest into Ella's death did not investigate the role of air pollution. Ongoing research into the health effects of air pollution, since the original inquest took place, led to approval being given for a new inquest into the cause of Ella's death.

On finding that levels of air pollution contributed to Ella's death, the Coroner published a report to prevent future deaths. The Coroner listed three matters of concern in the report: the discrepancy between current national targets for particulate matter and those recommended by the World Health Organisation; the lack of public awareness about air pollution; and insufficient communication by clinicians to patients about the risks of air pollution.

Following the inquest, the Environment Food and Rural Affairs Committee recommended that the Environment Bill is amended to include a specific target to reduce the annual mean concentration of particulate matter PM<sub>2.5</sub> to under 10µg/m<sup>3</sup> by 2030. This level is in line with current World Health Organisation guidelines. This recommendation has been echoed by a group of a dozen Mayors, business leaders and Non-Government Organisations, including UK 100, which represents over 100 local authorities.

Improving air quality has been an important priority for the City Corporation for many years. The current Air Quality Strategy details the Corporation's commitment to achieve World Health Organisation Guidelines for particulate matter by 2030. It also outlines the ongoing commitment to air quality monitoring, and the dissemination of information about the health impacts of poor air quality. The City Corporation has

delivered several significant interventions in the Square Mile that have led to local air quality improvements, a notable example being around the Aldgate School for which the organisation received a national air quality award.

Although air quality has been improving year on year, nitrogen dioxide and PM<sub>10</sub> remain above World Health Organisation Guidelines adjacent to busy roads. Levels of PM<sub>2.5</sub> are above the Guidelines throughout the City, and indeed across most of London. The City Corporation continues to pursue better air quality through its wide range of strategies that support the Air Quality Strategy, and through its proposals in the Emission Reduction (Local Authorities in London) Bill, which has had its first reading in the House of Lords.

## **Recommendation**

Members are asked to:

- Note the report.

## **Main Report**

### **Background**

1. Ella Adoo Kissi-Debrah died at the age of 9. She had severe, hypersecretory asthma causing episodes of respiratory and cardiac arrest that required frequent emergency hospital admissions. On 15 February 2013 she had a further asthmatic episode at home and was taken to hospital where she suffered a cardiac arrest from which she could not be resuscitated. Ella lived in the London Borough of Lewisham.
2. The first Inquest into Ella's death took place in September 2014. The cause of death was recorded as Acute Respiratory Failure caused by severe asthma. This inquest did not investigate the role of air pollution. New findings from research into the health effects of air pollution, since this inquest took place, led to approval being given for a new inquest into the cause of Ella's death.
3. The conclusion of the new inquest, delivered on 16 December 2020, was that Ella's death was caused by:
  - 1a) Acute respiratory failure
  - 1b) Severe asthma
  - 1c) Air pollution exposure
4. The narrative supplied for the cause of death was that Ella died of asthma, contributed to by exposure to excessive air pollution. This is the first time that air pollution has been explicitly linked to a named individual's death.

5. The Coroner found that air pollution was a significant contributory factor to both the induction and exacerbation of Ella's asthma. During the course of her illness, between 2010 and 2013, she was exposed to levels of nitrogen dioxide and particulate matter in excess of World Health Organisation (WHO) Guidelines.
6. A key role of the coronial system is to avoid future deaths of a similar nature. Consequently, the Coroner presiding over Ella's case produced a report to prevent future deaths.

### **Report to Prevent Future Deaths**

7. The Coroner listed three matters of concern in the report. The full copy is attached as Appendix 1 (Annex A).
  - I. The national limits for Particulate Matter are set at a level far higher than WHO guidelines. Legally binding targets based on WHO guidelines would reduce the number of deaths from air pollution in the UK.
  - II. There is a low public awareness of the sources of information about national and local pollution levels. Greater awareness would help individuals reduce their personal exposure to air pollution. It was clear from the evidence at the inquest that publicising this information is an issue that needs to be addressed by national as well as local government. The information must be sufficiently detailed, and this is likely to require enlargement of the capacity to monitor air quality, for example by increasing the number of air quality sensors.
  - III. The adverse effects of air pollution on health are not being sufficiently communicated to patients and their carers by medical and nursing professionals. The evidence at the inquest was that this needs to be addressed at three levels:
    - a. Undergraduate.
    - b. Postgraduate.
    - c. Professional guidance.
8. The report states that concern 1 above should be addressed by Central Government Departments, concern 2 by Central Government Departments, the Mayor of London and the London Borough of Lewisham and concern 3 by the professional organisations named in the full report. All parties are required to respond to the report by 17 June 2021.
9. Whilst the report is not directly addressed to the City Corporation, concern 2 is directly relevant to the organisation in delivering its local authority function.
10. Following the inquest, the Environment Food and Rural Affairs Committee recommended that the Environment Bill, which is working its way through parliament, is amended to include a specific target to reduce the annual mean

concentration of particulate matter PM<sub>2.5</sub> to under by 2030<sup>1</sup>. This level is in line with current World Health Organisation guidelines. This recommendation has been echoed in a letter issued by a group of a dozen Mayors, business leaders and Non-Government Organisations, including UK 100 which represents over 100 local authorities <sup>2</sup>.

11. World Health Organisation Guidelines for air pollution are under review, with the outcome of the review expected this year. Given that exposure to air pollution is being linked to an increasing number of diseases, it is likely that the guideline levels will be tightened.
12. The current annual average target for PM<sub>10</sub> in England and Wales is 40µg/m<sup>3</sup> with the current WHO Guideline being set at 20µg/m<sup>3</sup>. The current annual average target for PM<sub>2.5</sub> is 25µg/m<sup>3</sup>, whereas the WHO Guideline for this pollutant is 10µg/m<sup>3</sup>.
13. Levels of PM<sub>10</sub> in the Square Mile are approximately 24µg/m<sup>3</sup> at busy roadsides, and around 17µg/m<sup>3</sup> at background. PM<sub>2.5</sub> is approximately 11 – 12µg/m<sup>3</sup> everywhere.

### **The City Corporation's position**

14. Improving air quality has been an important priority for the City Corporation for many years. The current Air Quality Strategy details the ongoing commitment to air quality monitoring and to disseminating information about the health impacts of poor air quality. The Corporation has delivered several significant interventions in the Square Mile that have led to local air quality improvements, a notable example being around the Aldgate School, for which the organisation received a national air quality award.
15. The City Corporation runs a very dense network of air quality monitors. The type and location of sensor used to measure air quality is reviewed every year. At present there are well over 100 sensors collecting data about air pollution in the Square Mile. The data is used to assess compliance with standards, measure the impact of interventions to improve air quality and to provide information to the public about air pollution. Detailed air quality monitoring has continued throughout the pandemic.
16. Information about air pollution is provided using a range of channels, for example a monthly e-newsletter, the free smart phone app CityAir, business engagement, the City Corporation and London Air web sites and social media. Residents and businesses are supported to carry out air quality monitoring to help them understand how they can reduce their own exposure. Officers continuously seek opportunities to disseminate information in an effective and timely manner.

---

<sup>1</sup> <https://committees.parliament.uk/committee/52/environment-food-and-rural-affairs-committee/news/139068/improving-air-quality-should-be-at-core-of-postpandemic-rebuild/>

<sup>2</sup> <https://www.uk100.org/blog/2021/01/city-leaders-call-tougher-pollution-targets-and-ps15bn-air-pollution-fund>

17. Air quality in the Square Mile is improving year on year. Pre-pandemic levels of nitrogen dioxide were approximately a third lower than that measured in 2013, the year that Ella died. PM<sub>10</sub> and PM<sub>2.5</sub> were a quarter lower over the same period. In 2019, 67% of the Square Mile met the WHO Guideline for nitrogen dioxide compared to around 0% in 2013.
18. The impact of the pandemic resulted in levels of nitrogen dioxide being 35 - 40% lower than in 2019, with particulate matter, PM<sub>10</sub>, being around 10% lower over the same period. PM<sub>2.5</sub> was roughly the same. The negligible impact on PM<sub>2.5</sub> of such a significant reduction in activity in the Square Mile highlights the challenge that the City Corporation faces in implementing measures that would have a measurable impact on this pollutant.
19. Once full activity returns to the Square Mile, levels of nitrogen dioxide and PM<sub>10</sub> will increase, though they are unlikely to return to pre-pandemic levels.
20. Improving air quality is firmly embedded into a range of corporate policies and strategies such as the Transport Strategy, draft City Plan, Responsible Business Strategy and Procurement Strategy. Action taken to deliver the aims of the Climate Action Strategy, such as moving away from fuel combustion towards the greater use of renewable energy, will lead to further air quality improvements locally. COP26 this year will also provide opportunities to ensure that air quality improvement is at the forefront of climate action.
21. Once the relevant bodies have responded to the Report to Prevent Future Deaths, Officers will consider whether further action needs to be taken by the City Corporation to both measure air pollution and publicise information about air quality.

## **Corporate policies**

## **Corporate & Strategic Implications**

### **Strategic implications**

22. Air quality policy and action at the City Corporation is framed in the Air Quality Strategy 2019 – 2024
23. The work on air quality directly supports two Corporate Plan outcomes:
  - ‘People enjoy good health and wellbeing’
  - ‘We have clean air, land and water’

### **Financial implications**

24. None.

## **Resource implications**

25. None

## **Legal implications**

26. The City Corporation has a statutory duty to measure air quality and develop and implement an action plan to improve air quality where targets are not met. The Environment Bill, which is currently passing through parliament, contains proposals to place increased responsibility on local authorities to meet air quality targets.
27. The City Corporation has taken steps to reinforce the legislative provisions on clean air through a Private Member's Bill.
28. The Emissions Reduction (Local Authorities in London) Bill, which was drafted by the City Corporation in collaboration with London Councils, seeks discretionary powers for local authorities in London to control emissions from combustion plant if their area has air pollution above WHO guidelines, and if they choose to declare their area an 'Air Quality Improvement Area'. In any area so designated, the Bill provides that NOx and PM emissions emitted by plant such as boilers, stationary generators and non-road mobile machinery must be less than an amount specified in regulations made by the Secretary of State.
29. The Private Members' Bill was introduced in the Lords in January 2020 by Lord Tope and will be re-entered into the Ballot for the coming session. If the bill does not progress, steps will be taken to table amendments to the Government's Environment Bill reflecting the provisions of the Private Member's Bill.
30. The three concerns outlined in the Report to Prevent Future Deaths, as outlined in Appendix 1 and section 7, outline actions for Central Government Departments (Defra, DfT and DHSC), the Mayor of London and the London Borough of Lewisham. This in turn may influence future actions local authorities are expected to address in relation to air quality. However, the City Corporation is already taking many positive actions to address the concerns.

## **Risk implications**

31. Air quality is listed as a Corporate risk. The latest Deep Dive into the risk was presented to Audit and Risk Management Committee in January 2021.

## **Equalities implications**

32. Action to improve air quality has a positive impact on all sections of the population. The benefit is greatest for children and the elderly as they are more susceptible to the health impacts of air pollution. There is also a positive impact on individuals whose lives are affected by asthma and other respiratory and cardiovascular conditions.

## **Security implications**

33. None

## **Conclusion**

34. In December 2020, a Coroner ruled that a London child, Ella Adoo Kissi-Debrah, had died of asthma, with exposure to excessive air pollution being a contributory factor. This is the first time that air pollution has been explicitly linked to a named individual's death.

35. The Coroner published a report to prevent future deaths. Three matters of concern were listed: the discrepancy between current national targets for particulate matter and those recommended by the World Health Organisation; the lack of public awareness about air pollution; and insufficient communication by clinicians to patients about the risks of air pollution.

36. Improving air quality has been an important priority for the City Corporation for many years. The current Air Quality Strategy details the Corporation's commitment to achieving World Health Organisation Guidelines for particulate matter by 2030. It also outlines the ongoing commitment to air quality monitoring and the dissemination of information about the health impacts of poor air quality. The City Corporation has delivered several significant interventions in the Square Mile that have led to local air quality improvements, a notable example being around the Aldgate School.

37. Although air quality has been improving year on year, nitrogen dioxide and PM<sub>10</sub> remain above World Health Organisation Guidelines adjacent to busy roads. Levels of PM<sub>2.5</sub> are above the guidelines throughout the City, and indeed across most of London. The City Corporation continues to push for better air quality through its wide range of strategies that support the Air Quality Strategy, and through its proposals in the Emission Reduction (Local Authorities in London) Bill.

## **Appendices**

Appendix 1 (Annex A) – Report to prevent future deaths, dated 20 April 2021

## **Background papers**

City Corporation Air Quality Strategy 2019 – 2024

Committee Report: Deep Dive CR21 Air Quality, ARM Committee, 13 January 2021 and PHES Committee 20 January 2021

Ruth Calderwood, Air Quality Manager

T: 020 7332 1162

E: [ruth.calderwood@cityoflondon.gov.uk](mailto:ruth.calderwood@cityoflondon.gov.uk)