Committee	Dated:
Port Health and Environmental Services Committee Health and Social Care Scrutiny Sub Committee	23rd July 2019 16th July 2019
Subject: Air Pollution at St Bartholomew's Hospital - Update	**Public**
Report of: Director of Markets and Consumer Protection	**For information**
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Summary

The City of London Corporation has been measuring nitrogen dioxide at St Bartholomew's Hospital for over 20 years. Nitrogen dioxide is a colourless gas that is the product of fuel combustion. It has an impact on health at high concentrations.

A significant increase in nitrogen dioxide was measured on site following the installation of a new energy centre at St Bartholomew's hospital in 2016. The energy centre consists of 3 large boilers, 2 large generators and a combined heat, cooling and power plant (CCHP).

Barts Health NHS Trust was contacted on a regular basis about this increase in pollution, however officers were unable to get an adequate response. In March 2019, the Chairman of the Health and Social Care Scrutiny Sub Committee wrote to Barts Health NHS Trust Chief Executive Officer enquiring about the hospital's plans to mitigate the high levels of air pollution. The letter led to a site meeting with one of Barts Health NHS Trust energy contractors. Subsequent investigations revealed that the CCHP plant had not been operating as expected, this was rectified in May of this year.

At the time of writing this report, monitoring data is not available to establish whether the modifications undertaken have been effective at reducing levels of air pollution. Officers will be working closely with Barts Health NHS Trust staff to measure the impact over the next few months.

Recommendation

Members of the Port Health and Environmental Services Committee and Health and Social Care Scrutiny Committee are asked to:

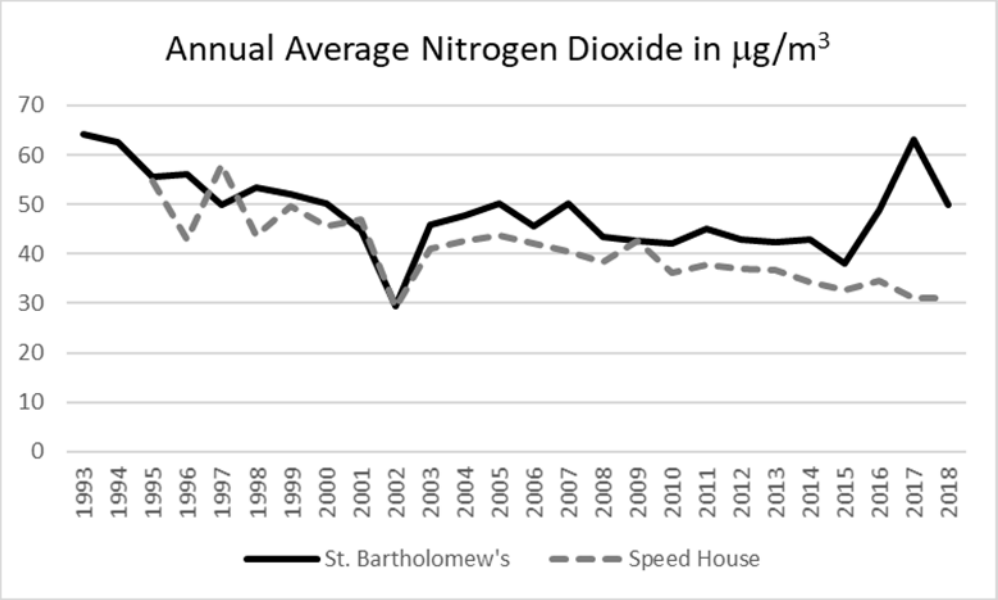
- Note the content of this report

Main Report

Background

1. The City of London Corporation has been measuring nitrogen dioxide in the central courtyard at St Bartholomew's Hospital for over 20 years. Nitrogen dioxide is a colourless gas that is the product of fuel combustion. It has an impact on health at high concentrations.

2. The graph below shows annual average levels measured at the hospital since 1993. It is compared to data collected at Speed House in the Barbican. This is a similar 'background' site in the Square Mile i.e. a location that is away from the direct influence of road traffic.



The overall trend at both sites is very similar until 2016 where there is a significant increase in nitrogen dioxide at the hospital. The annual average concentration, below which it is considered there is no impact on health, is 40 $\mu g/m^3$. Levels at St Bartholomew's hospital were below this in 2015 but increased to 49 $\mu g/m^3$ in 2016 and to over 60 $\mu g/m^3$ by 2017. The increase in nitrogen dioxide at the hospital coincided with the operation of a new energy centre located south west of this monitoring site.

Action taken by the City Corporation

3. Barts Health NHS Trust was contacted on a regular basis about this increase in pollution, however officers were unable to get an adequate response. In March 2019, the Chairman of the Health and Social Care Scrutiny Sub Committee wrote to the Barts Health NHS Trust Chief Executive Officer enquiring about the hospital's plans to mitigate the high levels of air pollution. The letter led to a site meeting with one of Barts Health NHS Trust energy contractors.

4. During the site meeting, City Corporation officers advised that they didn't think the energy plant was working correctly due to the behaviour of the exhaust gas coming

from the chimney. In early May 2019, action was taken by Barts Health NHS Trust contractors to investigate and subsequently rectify the problem.

5. The energy centre consists of 3 large boilers, 2 large generators and a combined heat, cooling and power plant (CCHP). Investigations revealed that the CCHP plant had been operating under capacity. This may have led to the elevated levels of nitrogen dioxide.

6. At the time of writing this report, monitoring data is not available to establish whether the remedial action undertaken has been effective at reducing levels of air pollution. Officers will be working closely with Barts Health NHS Trust staff to measure the impact over the next few months.

7. Officers have also submitted a formal request for information from Barts Health NHS Trust under the Environmental Permitting (England and Wales) Regulations 2016 to establish whether the energy centre requires a permit to operate due to the cumulative size of the plant.

Corporate & Strategic Implications

8. The work undertaken to mitigate the impact of the energy centre on local levels of air pollution at St Bartholomew's hospital supports the following outcomes from the Corporate Plan 2018 to 2023.

    - Outcome 2 'People enjoy good health and wellbeing'
    - Outcome 11 'We have clean air, land and water and a thriving and sustainable natural environment'

Conclusion

9. High levels of nitrogen dioxide have been measured at St Bartholomew's hospital site following the installation of a new energy centre. Nitrogen dioxide is a colourless gas that is the product of fuel combustion. It has an impact on health at high concentrations.

10. An investigation into the operation of the combined cooling heat and power plant in the energy centre revealed that the plant had been operating under capacity. This may have led to the elevated levels of nitrogen dioxide.

11. At the time of writing this report, monitoring data is not available to establish whether remedial action undertaken has been effective at reducing levels of air pollution. Officers will be working closely with Barts Health NHS Trust staff to measure the impact over the next few months

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