GREATERLONDON AUTHORITY

(By email)

Our ref: MGLA280121-4872

15 February 2021

Dear

Thank you for your request for information which the GLA received on 28 January 2021. Your request has been dealt with under the Environmental Information Regulations (EIR) 2004.

You asked for;

- 1. Estimates including projections of ammonia's contribution as a source to average total PM_{2.5} concentrations (i.e. anthropogenic plus non-anthropogenic) in the Greater London agglomeration in each of the following years: 2017; 2018; 2019; 2020; 2022; 2025; and 2030 i.e. in micrograms per cubic metre (ug/m³) and % ages.
- 2. Estimates including projections of wood burning's contribution as a source to average total PM_{2.5} concentrations (i.e. anthropogenic plus non-anthropogenic) in the Greater London agglomeration in each of the following years: 2017; 2018; 2019; 2020; 2022; 2025; and 2030 i.e. in micrograms per cubic metre (ug/m³) and % ages.
- 3. Estimates including projections of the contribution of any (other) sources from outside London if they are estimated to contribute on average to more than one ug/m3 of total PM2.5 in London.

Our response to your request is as follows:

1. Ammonia plays a role in the formation of secondary aerosols, which are a key component of background particulate matter (PM_{2.5}). In the London Atmospheric Emissions Inventory (LAEI) modelling, secondary aerosols from ammonia were aggregated together as the regional background contribution which is uniform across London. This figure was calculated by King's College London (now Imperial College London) using inputs from the Community Multiscale Air Quality Modelling System (CMAQ) model. To disaggregate further, please refer to the method for the CMAQ model as it includes the chemical reaction of long-range secondary particulate matter in the atmosphere: https://www.cmascenter.org/cmaq/.

Ammonia as a primary emission is reported in the "Other pollutants" category of the London Atmospheric Emission Inventory, under the "Emissions" subgroup. This is available for LAEI 2013 and we have now published this data for LAEI 2016. These are available on the London datastore: https://data.london.gov.uk/air-quality/.

We keep our inventories under periodic review as changes in information and understanding, methodology and improvements in forecasting become available.

- 2. The methodology for calculating wood burning's contribution as a source to average total PM_{2.5} concentrations in London is included in the methodology document for the LAEI 2016. We have also published a technical note titled "Regional Background Concentrations Update", drafted by King's College London (now Imperial College London) during the development of the LAEI 2016. This includes additional technical detail relating to the wood burning methodology and its contribution to regional background emissions. This includes the regional background assumptions included in the "PM2.5 in London: Roadmap to meeting WHO guidelines by 2030" report. Both reports are available on the London datastore: https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2016
- 3. As described in [1], in the London Atmospheric Emissions Inventory (LAEI) secondary aerosols from ammonia are aggregated together as the regional background contribution which is uniform across London. This figure is calculated by King's College London (now Imperial College London) using inputs from the Community Multiscale Air Quality Modelling System (CMAQ) model. However, estimates including projections of the aggregated contribution to PM_{2.5} from outside London can be found in Appendix 8.4 of the "London Health Burden of Current Air Pollution and Future Health Benefits of Mayoral Air Quality Policies" report, which is available online here: https://www.london.gov.uk/sites/default/files/london_health_burden_of_current_air_pollution_and_future_health_benefits_of_mayoral_air_quality_policies_january2020.pdf

If you have any further questions relating to this matter, please contact me, quoting the reference at the top of this letter.

Yours sincerely

Air Quality Manager (Transport Emissions)

If you are unhappy with the way the GLA has handled your request, you may complain using the GLA's FOI complaints and internal review procedure, available at:

https://www.london.gov.uk/about-us/governance-and-spending/sharing-our-information/freedom-information