

Transport for London



Your ref: TfL118957

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9 January 2012

Dear Simon

Air quality on London Underground

The Mayor's Office has asked me, on behalf of Transport for London, to respond to your letter to the Mayor dated 18 December 2011, regarding dust on the Underground. I have dealt with the general points you make first and have then responded specifically to your ten suggested action points.

The safety of our staff and passengers is our top priority and, as part of this, we maintain dust levels as low as reasonably practicable. You are aware that the independent report by the Institute of Occupational Medicine (IOM) concluded that dust on London Underground (LU) is highly unlikely to be damaging to passengers or to cause damage to the health of our staff. The report concluded that a comparison with outdoor air pollution could be misleading because of the difference in dust size and content. Regular monitoring carried out on behalf of LU shows that the levels of dust on the Underground are stable and are well below the Health and Safety Executive (HSE) limit for general dust, meaning levels are safe for both staff and customers.

As you recognised in your letter, the respirable dust concentrations for LU staff are below 0.4 mg/m^3 for train staff and below 0.7 mg/m^3 for station staff. These concentrations are based on exposure measured over 8 hours and are significantly below the HSE's Workplace Exposure Level of 4 mg/m^3 . Passengers will be exposed to a much lower level due to the much shorter time they spend on the Underground. The average journey time on the Underground is around 20 minutes, so the average commuter is exposed to the low levels of dust about 12 times less than those of some of our staff who work for a whole shift below ground.

MAYOR OF LONDON



VAT number 756 2769 90

Levels around 1 mg/m^3 have been measured at a small number of stations. This monitoring is for static levels of dust and cannot be compared directly with the HSE's Workplace Exposure Levels (WELs) or the WELs suggested by the Institute of Occupational Medicine. These levels are expressed as exposure over a specified period of time (usually 8 hours).

We are aware of the IOM's statement earlier this year which we understand was made to stimulate debate about whether occupational exposure levels should be lowered. In the meantime, the standards set out by the HSE apply, but please note that the respirable dust concentrations on the Underground are already below the level of 1 mg/m^3 that the IOM suggested in May 2011.

The concentration of dust in LU's deep Tube tunnels, while very low, are higher than those of the other systems you mention because LU is unique in having deep level small bore tunnels. While the quantity of dust produced on LU is similar to other systems, it is dispersed in a significantly smaller quantity of air thus producing higher concentration levels.

My response to your ten specific action points is as follows.

- 1. Adopt throughout Transport for London's activities and with immediate effect the latest advice from the TUC and the authoritative IOM on occupational health limits for exposure to 'respirable dust' i.e. 1 mg/m^3 ;**

Any change to safe dust exposure limits is a matter for the HSE. However, as I have already explained, the respirable dust concentrations on the Underground are below the IOM's suggested levels (below 0.4 mg/m^3 for train staff and below 0.7 mg/m^3 for station staff). Passengers are exposed to a much lower level of dust as they spend much less time on the Underground than our staff.

- 2. Ask the Government to consult the Committee on the Medical Effects of Air Pollutants on 'tube dust' and invite the Health and Safety Executive to update its advice on 'general dust' including 'respirable dust' and 'inhalable dust';**

The decision on the need for a review by the Committee on the Medical Effects of Air Pollutants on dust on the Underground is one for the Committee. Given that the levels of dust on the Underground are significantly below the HSE's threshold and are lower than those suggested by IOM, we would consider that a review would not be the most effective use of the Committee's time and resource.

- 3. Write to the Chair of the HSE Board inviting the HSE Board to update its advice on occupational exposure to 'respirable dust' and 'inhalable dust' reconsidering the advice of ACTS and taking into account the most recent statements by IOM and the TUC;**

Please note that the HSE has recently (On 19/12/11) updated its guidance on Workplace Exposure (WEL) limits (EH40/2005 Workplace exposure limits) and the WEL for dust remain the same.

- 4. Ask Transport for London to reduce 'tube dust' at source and in the air. It is possible that large, self-standing air filters could reduce concentrations of dust and exposure to it in the most polluted parts of the 'tube' (i.e. without the need for ducting). In the interests of disclosure, CAL is sponsored by Camfil Farr, the world leader in the development and manufacture of air filters;**

Our maintenance programme involves routine cleaning and, where appropriate after certain major works, supplementary cleaning or dust suppression. While this maintenance work continues to manage dust effectively on the Underground, we do not consider that it is necessary to install air filters which would only have localised impacts. We continue to do everything reasonably practicable to keep dust levels low, including plans to introduce to the Tube a new, specially designed tunnel cleaning train within the next few years. This will make the cleaning regime more efficient but may not reduce the concentration of airborne dust.

- 5. Warn employees (and vulnerable people travelling on the London Underground) of the possible health risks from 'tube dust';**

Given that the tunnel dust on the Underground is highly unlikely to be a health risk to staff or passengers, we consider that it is unnecessary to warn our customers about issues relating to dust on the Underground. However, as information on dust is already available on our web site we will review this information and in future will include the results of our routine dust measurements, together with an explanation of what they mean.

We communicate the output of our dust monitoring to our staff each time we carry out the dust measurements. The results are also shared with our Trades Unions Health and Safety representatives.

6. **Allow London Underground employees – who ask for them and whether tube drivers, platform staff, cleaners or others – to wear respiratory protection during their working day including in public places. Engage transparently with unions and others who are concerned about this issue;**

Our assessment of the air quality on the Tube shows that there is no significant health risk to our staff or customers. As a result, our staff do not need respiratory protection during their working day.

7. **Make clear that customers who are concerned about the issue, such as vulnerable people, may choose to wear breathing protection on the tube if they wish to do so.**

For similar reasons, to 6 above, we do not feel that this is a necessary measure..

8. **Take rapid action to reduce on a long-term basis 'tube dust' before the Olympics to make this another legacy from the 'greenest Games ever';**

As noted above the air quality of the Underground is highly unlikely to present health risks to passengers or staff and is well within the HSE's limits and those proposed by IOM. These low levels of dust and the resulting good standard of air quality are as a result of measures and practices LU has already identified and implemented. We do not consider that there are further economically viable measures that would reduce the already low levels of dust.

9. **Facilitate independent monitoring, analysis and scrutiny of 'tube dust' for example by the highly regarded Environmental Research Group at King's College London; and**

We commission regular monitoring, by a third party (4Rail Services), of air quality on the Underground. The results are reviewed by appropriately qualified and experienced staff within London Underground. We do not consider that funding further research would represent good value for money.

10. Improve public understanding of 'tube dust' by publishing on the TfL website the IOM report in 2003/4 and the five 'annual' reports on the monitoring of 'tube 'dust'.

As noted in question 5, we will put relevant information on the TfL web site which will provide assurance to our customers that dust on the Underground is highly unlikely to be damaging to the health of our passengers or staff.

I hope this letter provides you with assurance about our approach to ensuring that the levels of dust on the Underground is at a level that is safe for our staff and customers.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Peter Hendy', with a stylized, flowing script.

Peter Hendy