Dust
TfL carries over a billion passengers each year on the Underground. The movement of trains over the rails, engineering works and customer use all contribute dust to the system.

We manage the dust levels by regular cleaning of London Underground stations and tunnels. This ensures that the train service runs smoothly, a safe environment for staff and customers and a more pleasant travelling experience for customers. The safety of staff and passengers is our top priority and as part of this, we ensure that dust levels remain as low as reasonably practical.

Our ongoing monitoring shows that the levels and content of dust in the underground sections of London Underground's infrastructure do not pose a significant risk to the health of our customers or employees.

Further information
In 2004, we commissioned an independent report by the Institute of Occupational Medicine (IOM) to research the health impacts of tunnel dust. The results have provided sufficient reassurance that the dust on the Underground does not pose a risk to the health of our customers or employees. The report also concluded that a comparison with outdoor air pollution could be misleading because of the difference in particle size and content. We carry out regular independent monitoring to check the levels of dust on the Underground.

We compare the levels of dust on the network to the safe levels set by the Health & Safety Executive (HSE), the enforcing agency for health and safety in the UK. The monitoring shows that dust levels are consistently below the HSE workplace exposure limits for general dust (4 mg/m^3). The following table summarises dust levels recorded across London Underground stations and trains from 2004 to 2016.

Year of report	Stations dust level range mg/m^3	Trains dust level range mg/m^3
2004/5	0.01 to 1.14	0.06 to 0.61
2006/7	0.04 to 1.38	0.12 to 0.56
2007/8	0.06 to 0.98	0.13 to 1.44
2009/10	0.04 to 1.38	0.12 to 0.56
2011/12	<0.02 to 1.23	0.03 to 0.30
2012/13	0.01 to 0.96	0.08 to 0.56
2014/15	<0.02 to 1.76	0.04 to 1.81
2016/17	<0.02 to 1.30	0.05 to 0.86

As part of this, and ongoing research, we know that almost all of the dust in the London Underground system (around 90%) is iron. The dust also contains trace amounts of quartz (1-2%), chromium (0.1-0.2%), manganese (0.6-1%) and copper (0.1-1.5%). The composition of dust varies in different parts of the network, though it does not vary significantly. This monitoring has also shown that the composition of the dust does not contain components at levels which are likely to pose a risk to health of TfL passengers or employees.

Our ongoing monitoring shows that the levels and content of dust in the underground sections of London Underground's infrastructure has not changed markedly over time. The monitoring results give us sufficient reassurance that the conclusions of the IOM report remain valid and that dust on the Underground does not pose a significant risk to the health of our customers or staff.

In spite of the increased demand, higher level of service and increased level of upgrade and maintenance works being delivered in recent years the dust levels remain low across the Underground. We have a stringent cleaning regime in place and implements dust reducing measures where possible to keep tunnel dust to very low and acceptable levels.

We also monitor research carried out by others very closely, particularly research into air quality on metro systems. Our Occupational Health team reviews all new, relevant research relating to air quality and assesses the relevance to the Underground. In a number of cases, we have gone directly to the research team to better understand its work and how it may potentially apply to the Underground. Where necessary, we undertake monitoring into the type and composition of dust in underground sections of the Tube network, or into other aspects where we feel this might provide useful information about protecting the health of our employees and passengers. To date, studies of air quality in other parts of the world have not identified any concerns that are not being addressed through our existing monitoring programme.