



Air Quality Management Protocol

The British School strives to provide staff and students with an environment that maintains and manages the highest standards of indoor air quality possible. This Air Quality Management Protocol describes the TBS management of air quality, including responsibilities, procedures for measuring indoor and outdoor air pollution, and actions taken at different levels of pollution.

How do we manage air quality at TBS?

a. Air Quality Task Force

Members of the Board and the school leadership along with an external air quality expert consultant created an Air Quality Task Force to tackle the issues of Indoor Air Pollution for the school. The team meets once a month during the school year to discuss and strategise the plan for air quality improvement.

b. Infrastructure

One of the main tasks accomplished by TBS was to get the building fitted with a high quality centralised filtration system that brings in fresh outdoor air into the building after **5-stage filtration**, thereby filtering it from all the outdoor pollutants. The filters used are imported **EUROVENT certified** filters from the most trusted filter manufacturers of the world. Various improvements have been made to this system to further enhance the efficacy of the air quality.

The next step has been to set up a real-time monitoring network in the school. In addition to a monitor being installed to track outdoor air quality, each indoor zone of filtration has its own real-time monitoring solution that updates stakeholders with the results of air quality measured on various parameters. The consolidated results are also shown on a screen in the school premises and can be accessed on the following:

<https://tinyurl.com/yy6dq2d8>.

The school has also invested in a high grade EPA approved A-grade real-time monitoring equipment so that the results from the lower cost network of monitors can be validated easily. This sensor (TSI DustTrak) is calibrated as per manufacturer recommendations and is used to ensure that all readings, indoor and outdoor, are within a certain level of drift. If any sensor starts to drift more than a set deviation, it is sent back to the manufacturer for replacement or calibration.

There is a big difference between low cost sensor networks and the data typically given by US Embassy and government monitoring stations. Government stations use gravimetric methodology, considered the gold standard for measuring particulate matter. However, real time sensors use laser/ light scattering methodology. This converts an analogue signal to a digital number using algorithms and assumptions. Hence, there can be a difference between government readings and indoor air quality monitoring sensors. At TBS, we use government readings when available to make decisions regarding red and yellow flag days. When not available or when offline, we use the EPA Approved A-grade sensor. When none of the two are available, we rely on the low cost sensors deployed around the school.

c. Oversight

The responsibility of devising air quality procedures rests with the Air Quality Task Force and Committee which has representation from senior leadership, governors, staff, experts and parents. The school takes regular advice from air quality expert and consultant who is responsible for ensuring that air quality remains within specified limits. The Chair of the Air Quality Task Force and committee, who is also part of Senior Leadership Team, is responsible for implementing the procedures, while Head of Operations is responsible for upkeep and serviceability of the Air Quality system and equipment.

The school has organised awareness sessions for students, staff and parents to help them understand the impact of air pollution and ways to manage its impact.



The school has also **changed the school calendar** to extend the Diwali and Christmas holidays when pollution is at its highest, and altered the summer holidays to accommodate this change.

TBS recommends all children and staff to wear protective masks during poor air quality days to minimise the impact of air pollution on the lungs. Masks are available in the school uniform shop and are also available in most pharmacies in Delhi, as well as online.

d. Actions

We have a clear outdoor policy which is communicated on a daily basis through colour coded flags. Outdoor activity is restricted when pollution levels are too high to protect students and staff from the harmful effects known to be associated with cumulative exposure to particulate matter.

A simple two-category system is in place to determine whether students' outdoor activities need to be restricted. If AQI is 250+, students' outdoor activities and play are limited, while at lower AQI levels there are no limitations. On days when AQI is 250+, red flags are displayed in prominent locations around campus (known as Red Days), and a message is posted on Firefly. When AQI is lower than 250, yellow flags are displayed (known as Yellow Days) to communicate outdoor activity can take place.

The outdoor activity schedule is managed carefully to minimise its impact on students. For example, we utilise a range of indoor spaces within the school to allow students physical activity during red days.

e. Future Plans

The Air Quality Task Force is dedicated to further improving the indoor air quality at TBS for the health and well-being of students. Towards this, one of the main recommendations from the consultant on the team has been to close the corridors and treat the air in this space. During the summer of 2019, the ground floor corridors were closed, thereby making this a usable space with clean and conditioned air. Once the efficacy of this system is proven, the same will be extended to upper floors as well.