



# 21150 Live PM10 monitoring

Aggregate Industries > Bardon Hill Quarry **4**



## DESCRIPTION

Bardon Hill is a large quarry and asphalt operation that monitors and controls exposure to RCS for its workforce and a large residential area situated on its boundary in the direction of prevailing winds.

The site monitors RCS levels using static monitoring in production buildings, and personnel dosing meters, and also has an array of static PM10 monitors at properties just over the boundary. However, the results of the monitors were always retrospective, and so although Aggregate Industries could see the value of PM10, it could not necessarily pinpoint the cause accurately enough to do anything about it.

Using the philosophy of “if you can measure, it you can manage it” they looked for equipment that could accurately measure dust levels in real time.

A unit was identified that could be installed alongside the standard PM10 monitors and would feed information live to an online portal. The unit has set points just below the boundary limits and can e-mail the dust team/management team if there is a spot breach of this limit, allowing action to be taken to limit emissions.

In addition, a recorded CCTV system monitors the site from its highest vantage point. This is used to review the operation at the time when dust levels were elevated so a possible root cause can be identified. To provide additional data, a weather station was set up on-site and recorded the weather conditions, this data is also fed to an online portal. This allows wind direction/speed in combination with the dust information to be looked at to help them better manage the overall process.

## BENEFITS

- Greater clarity and understanding of PM10 performance
- Visible dust associated with quarries is easier to spot and to control
- Technology supports the control of less visible RCS and PM10's
- Live data has improved operative's awareness of RCS
- Greater worker involvement in finding ways to reduce emissions of dust
- More effective management of emission reduces risk to workforce
- Better management of environment to benefit of all.

## TRANSFERABILITY AND DEVELOPMENT

- The equipment is available to the industry, and the protocol to use them in a combined way is easy to share
- Using this equipment is having a positive effect on the boundary PM10 and internal RCS levels by raising the awareness across the workforce.

Monitoring station

