

# Reducing Diesel Emissions

It is estimated that more than 230 construction workers die from occupational cancer each year in Britain as a result of past exposure to diesel engine exhaust emissions. According to data from the HSE (2018) this equates to around 6.5% of all construction-related cancer deaths annually.

Depending on your exposure time there can be varying outcomes of exposure to diesel fumes.

- Short Term – Fumes can irritate the eyes and lungs.
- Long Term – More prolonged exposure will lead to chronic respiratory ill health including coughing and breathlessness. In the worst cases, long term exposure can lead to lung cancer.



**Start Stop Machines**



**Removal of Exhaust Gases**

As part of the risk assessment the use of diesel machinery on site should be reviewed on a project by project basis. The first step is to try to eliminate the hazard completely or reduce as much as is practical, after that you should isolate and control the risk (ERIC).

## **Eliminate (E)**

- Removal of diesel powered equipment from sites by using electric powered plant.
- Take the work offsite and use mains electric.

## **Reduce (R)**

- Filters attached to plant can lessen the release of harmful gases.
- Petrol alternatives – Petrol engines tend to produce less harmful exhaust gases, although still not good for you they are the lesser of two evils.
- Diesel additives – Certain additives can reduce the concentration of the exhaust fumes.
- Catalytic Converters added to plant items reduce exhaust emissions.

## **Isolate (I)**

- Site Inductions, tool box talks and clear signage about the risks of exposure.

## **Control (C)**

- Offsite Construction – By constructing offsite you have better environment control.
- Removal of exhaust gases from the work face or improved air flow.
- Intelligent machines with stop start technology have been developed for plant similar to those used in cars. Equipment is often left running onsite whilst not being used.