

Dust is generally considered to be any airborne solid matter up to about 2mm in size.

Legislation

Environmental Protection Act Part I

Dust, emissions and odours often generate complaints of discomfort or inconvenience. Abatement notices can be served on the contractor, and through application to the magistrates court for an abatement order to stop the nuisance. Breach of an abatement order is a criminal offence.

Clean Air Act 1993

This replaces the 1956 and 1968 part of the COPA 1974. Primary legislative control over smoke, grit and dust. Enforced by the LA and applies to emissions of dark smoke from industrial or trade premises e.g. demolition and fires on site.

Dust Generation on Site

Impacts on ecology

- ♦ Dust blowing onto watercourses can damage the ecology
- ♦ Dust may also affect plant growth
- ♦ Alkaline dusts may change species composition
- ♦ Ash trees may drop their leaves up to 6-8 weeks early following exposure to high levels of dust
- ♦ Dust can cause mechanical or electrical faults to equipment and lead to the clogging of filters.

Annoys Neighbours:

- ♦ Have to re-clean washing, dusty cars and dusty windows are unsightly.
- ♦ May cause eye and chest irritation.
- ♦ Impact on project programme and budget.
- ♦ Working to comply with strict dust levels can impose cost and/or programme constraints.
- ♦ If a statutory nuisance is caused, an abatement noise may be issued.

How to avoid problems on site:

To avoid causing complaints, the site should operate a management system that ensures that:
Dust, emissions and odour from general operations are minimised through the adoption of good working practice
Special consideration from control measure is given in circumstances where general "good practice" may not be sufficient to avoid causing problems
It may be an idea to keep a log of daily dust conditions on site in case of future disputes

Damp down using water:

The most effective application of water in suppressing dust is by using a fine spray, but the efficiency depends on the speed of the bowser. Repeat spraying frequently, especially during warm and sunny weather when water will evaporate quickly.

Haul routes

- ✓ Select suitable haul roads away from sensitive sites if possible.
- ✓ Pave heavily used areas, or use geotextiles e.g. around batching plant or haul routes. Sweep these regularly.
- ✓ Provide a length of paved road before the exit from the site.
- ✓ Reduce the width of haul roads (while still allowing two-way traffic) to minimise surface area from which dust may be produced.
- ✓ Sweep paved access roads (while still allowing two-way traffic) and public roads regularly using a vacuum sweeper.
- ✓ Limit vehicle speeds - the slower the vehicles the less the dust generation.
- ✓ Damp down

Checklist - preventing emissions of odours

Vehicles and plant

- ✓ Keep vehicles and plant used on site well maintained and regularly serviced.
- ✓ Ensure that all vehicles used by contractors comply with MOT emission standards at all times.
- ✓ Control deliveries to site, to minimise queuing.
- ✓ Make sure that engines are switched off when they are not in use.
- ✓ Control staff car parking to minimise queuing.
- ✓ Keep refuelling areas away from the public.
- ✓ No fires on site.
- ✓ Do not burn waste materials/tyres on site.

Waste storage

- ✓ Use covered containers for organic waste and remove frequently.
- ✓ Remove organic waste (e.g. weeds and other vegetation) before it begins to decompose.

Chemicals on site

- ✓ Store fuels and chemicals and other dangerous substances in the appropriate manner.
- ✓ Take account of the wind conditions when arranging activities that are likely to emit aerosols, fumes, odours and smoke.
- ✓ Position site toilets away from public areas.

Demolition

- ✓ Use enclosed chutes for dropping to ground level demolition materials that have the potential to cause dust and regularly dampen the chutes.
- ✓ The use of mobile plant for crushing materials such as bricks, tiles and concrete is covered by the EPA 1990.
- ✓ Locate crushing plant away from sensitive sites - consider siting within buildings.

Plant

- ✓ Clean the wheels of vehicles leaving the site so that mud is not spread on surrounding roads - dry mud turns to dust
- ✓ Ensure that exhausts do not discharge directly at the ground

Earthworks and excavations

- ✓ Revegetate or seal temporary or completed earthworks as soon as possible.
- ✓ Keep earthworks damp - try to programme to avoid exceptionally dry weather.

Materials Handling and Storage

- ✓ Locate stockpiles out of the wind (or cover) to minimise the potential for dust generation.
- ✓ Keep stockpiles to the minimum practicable height and use gentle slopes
- ✓ Compact and bind stockpile surfaces
- ✓ Revegetate long term stockpiles
- ✓ Minimise the storage time of materials on site
- ✓ Store materials away from the site boundary and downwind of sensitive areas
- ✓ Ensure that all dust-generating materials transported to and from site are covered by tarpaulin
- ✓ Store materials away from the site boundary and downwind of sensitive areas
- ✓ Minimise the height of fall of materials
- ✓ Avoid spillage and clean up as soon as possible
- ✓ Damp down
- ✓ Concrete batching and pouring
- ✓ Mix large quantities of concrete or bentonite slurries in enclosed/shielded areas
- ✓ Before concrete pours, vacuum dirt in formwork rather than blowing it out
- ✓ Keep large concrete pours clean after they have gone off, as they generate large quantities of dust
- ✓ Cutting/grinding/grouting/packing
- ✓ Minimise cutting and grinding on site
- ✓ On cutters and saws use dust extractors or a wet cutting technique
- ✓ Spray water during cutting of paving slabs to minimise dust