**ENVIRONMENTAL**

**TOOLBOX TALK**

# DUST, EMISSIONS AND ODOURS POLLUTION

# Dust, emissions and odours arising from a site will annoy neighbours and can even cause health risks at very high concentrations. They are particularly hazardous to site staff in confined spaces, so seek information on controls from the Company Health and Safety Manager.

# DUST

Dust is generally considered to be any airborne solid matter up to about 2mm in size. Particle sizes vary considerably, depending on their origin, and the smallest particles can be breathed in. Dust can affect people’s health by causing eye irritation and asthma can be exacerbated by exposure to respirable dust.

Dust blown onto watercourses can damage the ecology and surrounding plant life. As it is difficult to suppress dust once it is airborne, it is essential to stop dust being generated:

• Damp down traffic routes.

• Impose a strict speed limit on site.

• Wheel wash all vehicles leaving site.

• Use enclosed chutes for dropping materials to ground level.

• Minimise cutting and grinding on site or use wet cutting techniques and dust extraction.

• Locate stockpiles out of the wind.

• Ensure all dust-generating materials are transported to and from site under tarpaulins.

• Erect dust screens.

# EMISSIONS & ODOURS

Processes involving the use of fuels and the heating and drying of materials commonly emit fumes, odours or smoke. It is important to prevent emissions and odours as far as possible, to protect workers and because they annoy the public and affect the environment. Preventative measures should be taken to avoid emitting smoke and odours:

• Switch off engines when not in use.

• Ensure all vehicles comply with MOT emissions.

• Keep all plant and equipment well maintained.

• Use covered containers for organic waste and remove frequently.

• Do not burn waste on site.

• Store all chemicals and other dangerous substances in the appropriate manner.

• Take into account the wind conditions when planning activities.

• Keep refuelling areas away from the public.

• Site toilets away from public areas.

# WATER POLLUTION

It is vital to manage water properly on site to protect our environment. If watercourses are polluted, or unacceptable wastes are disposed of to a sewer system, you or the company may end up in court. Industries using water from a river downstream of site may be affected by reduced water quality and sue if this causes damage. The site does not need to be next to a river to cause a problem. Any pollutants getting into a surface water drain or groundwater can end up in a river even if it is miles away. These pollutants can be traced back to source. Spillages can be easily noticed. A gallon of oil can completely cover a lake the size of two football pitches.

# SITE DRAINAGE

There are generally two main types of drainage on site:

**Surface water drains** are designed to carry uncontaminated rainwater directly to a stream, river or soakaway. These should be colour coded blue. NOTHING should be allowed to enter surface water drains, except rainwater. Materials and plant should not be stored near drains. Even if described as bio-degradable, detergents are not suitable for discharge to surface water drains. Use of detergents should be carried out in designated areas draining to foul sewers.

**Foul water drains** are designed to carry foul water directly to a sewage works for treatment before being discharged into a watercourse. These should be colour coded red. It is ILLEGAL to discharge into foul sewers without agreement from the sewage undertaker.

It is an offence to cause or knowingly permit any poisonous, noxious or polluting matter or any solid waste matter (which includes cement, silt, concrete, oil, petroleum spirit, sewage or other polluting matter) to enter any controlled waters unless a consent to discharge is authorised by the relevant agency. Road drains and surface water gullies generally discharge into controlled waters and should be treated as such. DO NOT wash tools out in watercourses.

It is vital that a Spillage Response Procedure is in place on all sites.

# REFUELLING

The risk of fuel spillage is greatest during refuelling. Therefore, no refuelling should take place in, over, or adjacent to watercourses. Refuel all plant in a designated area at least 10 meters away from any watercourse. Ensure pedestrian foot areas near the refuelling area are protected from all moving plant.

# NOISE POLLUTION

Excessive noise levels on site represent a major hazard to site workers and can annoy neighbours. Noise causes more off-site complaints than any other topic and can rapidly sour relations. Noise can also disturb our wildlife and natural heritage. It is not only loud noises that cause complaint, but also anti-social activity and irregular or tonal noises such as reversing sirens. Other complaints include shouting, swearing, radios and out of hours deliveries. Some construction activities that cause the greatest problems are; pneumatic tools, petrol driven saws, traffic. Therefore, we must have in place a plan to avoid excessive noise levels emitting from our work activities:

* Reduce the need for noisy assembly practices e.g. fabricate off site.
* Keep noisy plant as far away from public areas as possible.
* Turn off all vehicles and plant when not in use.
* Screen noisy areas off
* Fit generators and plant with silencers/mufflers.
* Maintain plant and equipment properly to avoid rattles and squeaks.
* Electrically operated plant is quieter than diesel or petrol driven plant.
* Adopt working hours to restrict noisy activities to certain periods of the day.
* If you receive a complaint from the public be diplomatic and report it to site management.
* If an Environmental Health officer approaches you, be co-operative and take them to see the site management.

# SCREENING

Noise will generally radiate in all directions from a construction noise source and will bend around and over walls and buildings. It will also reflect back off solid surfaces. Some plant and activities generate more noise in one direction than another, so careful siting of the source can pay dividends. Screening between the source and the receiver is effective if it obscures the direct line of sight between the two.

If designed and used correctly screens can reduce noise levels from a site considerably and at relatively very low cost. Factors affecting the efficiency of a screen include distance from source and the receiver of noise, density of the material used, height and length of the screen (12mm thick ply minimum). The higher a screen is, the more effective it is. A screen that is placed near to either the noise source or receptor is more effective than one placed in the middle of the two.

# CONTROL MEASURES

Noise may be controlled by:

**Engineering:**

Purchase equipment, which has low vibration and noise characteristics, achieving design solutions to noise problems including using quieter processes, operate rotating and reciprocating equipment as slow as practicable.

# SPILLAGE RESPONSE PROCEDURE

Construction sites are often criticised for the damage they cause to the surrounding environment. This damage can take many forms, for example excessive noise, dust etc., however spillages statistically account for the greatest harm to the environment. There are many precautions that can be taken to avoid spillages. These include the use of bunds around oil storage tanks and the use of drip trays around mobile plant. Advance planning can avoid the need for emergency response if things do go wrong. For example, sandbags, or even sand, can be used as a barrier to protect sensitive areas, or block off drains, during refuelling.

# SPILLAGE TYPES

**MAJOR =** cannot be controlled; pollution has entered or could enter a drain or watercourse. Report to foreman/supervisor immediately, who in turn should report the incident to the Environment Agency and complete an Environmental Incident report.

**MINOR =** Can be controlled; pollution has not entered and cannot enter a drain or watercourse. Spillage should be cleaned up immediately using the appropriate materials e.g. spill kits etc.

# SPILLAGE RESPONSE PROCEDURE

* STOP - CONTAIN - NOTIFY

Personnel on discovering a spillage should:

**STOP =** Work immediately and prevent any more material spilling e.g. right an oil drum, close a valve. Eliminate any sources of ignition, e.g. switch of engines, and extinguish cigarettes.

**CONTAIN =** the spillage using bunds of earth, sand, drip trays etc. immediately. Check that the spillage has not reached any nearby drains/manholes, watercourses, ponds and other sensitive areas. Bund the drains/manholes to stop the spillage entering the drainage system.

**NOTIFY =** your foreman/ supervisor immediately giving the following information:

• Whether the spillage has entered the drain/watercourse or is affecting the environment.

• Material/substance involved

• Location

• Reason for the incident

• Quantity involved

Spill kits should be available on site at locations where spills are more likely to occur e.g. refuelling points, storage areas etc.

* The correct medium for the spillage should be used.
* Careful measures must be implemented for hazardous materials and COSHH safety data sheets must be available and read before attempting to deal with hazardous materials/substances.
* Disposal of spillage waste e.g. oil granules or pads should be bagged up and placed in the designated special waste skip.

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| **TOOLBOX TALK ATTENDANCE FORM**  **(All staff and contractors must complete)** | | | | |
| **TOOLBOX TALK TOPIC** | | | Environmental | |
| **SITE** | | |  | |
| **DATE** | | |  | |
| **TRAINER (PLEASE PRINT NAME)** | | |  | |
| **COMPANY** | **NAME** | **POSITION** | **JOB ROLE** | **SIGN TO CONFIRM UNDERSTANDING** |
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By signing this register, you are confirming that you attended the toolbox talk and understand the requirements for working at height safely and using the correct PPE