Dust in Construction

Action Plan

Dec 2015 – Issue Health Working Group proposal to HBF forum members

Jan 2015 – Presentation of launch material to HBF H&S forum.

Jan/Feb 2015 – receive any feedback on launch material and review

Feb 2015 – issue launch material to all HBF members and add to HBF website (H& S section)

Feb/Mar 2015 – all HBF members to issue HBF requirements by standard letter to contractors and display support posters on sites

HBF requirements to be:-

- By 31st March 2015 all operatives that require RPE to have evidence of Face Fit Testing for the specific masks they are using.
- By 30th September 2015 all powered* tools will require water suppression or on tool extraction.

February 2015 onwards – all HBF members to support the implementation of HBF requirements and work with contractors/suppliers to improve compliance, including:-

- Working on improved solutions for battery operated power tools
- Raise profile of dust policy through local working group (IOSH/WWT etc.)
- Documentation to be added to HBF Website (H&S section)
- Contact with local colleges at which HBF member's apprentices are being taught and share our requirements.
- Paste 'good news' stories to Face Book, Twitter, Linked In etc.
- Video/Photograph good examples and share successes on products etc. through the HBF Health working group.

October 2015 – HBF Health Working Group to consider noise.

* Definitions - Powered means any mechanical equipment fed by mains (or generated electricity) through a cable, or powered by an engine.

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Duties of a principal contractor:-

- Ensure control of dust to required HBF standards is highlighted in tender discussions including issue of the Construction Dust Activity Matrix .
- At pre-commencement , ensure that the contractor has allowed for the provision of equipment (extract/ water suppression and PPE) to achieve the standard within the activity matrix .
- Prior to start, ensure the contractor's risk assessment /method statement.
- Stipulates the control required to HBF standards and ask for a details of face fit testing for his employees .
- Ensure appropriate details are contained in the site Construction Phase Plan
- At site start, provide an induction to the workforce that stipulates HBF requirements and expectations in respect of dust control .

Duties of a contractor:-

- Ensure that workers have been briefed on health issues surrounding dust and are competent in using equipment and PPE required to control exposure.
- Develop a method statement that stipulates your requirement for dust control taking into account the activity matrix.
- Provide appropriate controls for your workers as required by your method statement.
- Provide Face Fit Testing and maintain records for all your employees who wear RPE.
- Provide evidence of your testing records by supplying a summary matrix for your employees to the principal contractor.
- Provide supervision to ensure that control measures are being implemented adequately and take any action necessary to improve standards or provide replacement equipment or PPE.

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Date

Letter to:-

Dear Sir/Madam

Health - Dust in Construction – Do it Right!

We have been working with colleagues in the HBF and the HSE in formulating a strategy for the improvement of health management in house building. As a result of this, we have identified the need to reduce exposure to dust in the workplace in order to safeguard the health of our workers.

With your commitment, we can make a real difference by:-

- educating your workforce,
- updating your documentation to reflect detailed control of dust exposure,
- providing the right tools and personal protective equipment,
- providing Face Fit Testing and maintain records, for users of respiratory protection,
- providing summary records of Face Fit testing to the principal contractor
- adequately supervising and monitoring work activities,
- taking corrective action to meet the required standards.
- working together to eliminate potential dust hazards at source.

To this end, we have summarised our requirements for the standards of dust control in the attached 'Activity Matrix', which support the requirements contained within HSE publication CIS 36 – Construction Dust.

We realise however, that for some of you, this will mean changes to the current arrangements you may have, and so have taken this into account, by a phased requirement through 2015, outlined below:-

- By 31st March 2015 all operatives that require RPE to have evidence of Face Fit Testing for the specifc masks they are using .
- By 30th September 2015 all powered* tools will require on tool extraction or water suppression.

Please note that at the passing of each deadline, work activities that fail to meet the requirements, will not be permitted under any circumstances.

Although we have indicated a progressive approach to control of dust on our sites, the expectations of the HSE may not be satisfied on every occasion, and therefore it would be to your advantage, to ensure that legal requirements are met at the earliest opportunity.

In addition, throughout the year we will engage with you through meetings, poster campaigns, Tool Box Talks etc. to assist in identifying any particular difficulties with compliance and to share our knowledge of solutions and best practice.

We would also ask that you confirm to us, by the 31st April, your commitment to ensure compliance and to keep us updated on progress throughout the year.

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Should you require any support, or additional information, we would be happy to discuss the issue with you at any time.

Yours faithfully

Enclosed

*Definitions - Powered means any mechanical equipment fed by mains (or generated electricity) through a cable, or powered by an engine.

Dust in Construction – Measures to prevent exposure during selected work activities

Material	Activity	Control at Source: Water suppression or on-tool extraction (H or M class unit)	RPE: FFP3 or Half mask with P3 filter. Face Fit Testing required	Other PPE required
Brick, blocks, flags, roof tiles and other products containing silica	Powered **cutting** (e.g. cut-off saw) or **chasing**	Yes	Yes	Ear defenders and eye protection
	Powered core drilling	Yes	Yes where over 15-30 minutes trigger time with on-tool extraction	Ear defenders and eye protection
	Powered drilling: • One off holes • 15-30 minutes trigger time • Main activity	 No Yes* Yes* *Adaptors for cordless drills are available but are not M or H class	 No No Yes	Ear defenders and eye protection
Softwood, hardwood, plywood, MDF	Powered cutting: • 15-30 minutes trigger time • Longer work	 Yes# Yes# #Unless on-tool connection unavailable for battery powered equipment	 No FFP3	Ear defenders and eye protection
	Powered sanding	Yes	Yes	Ear defenders and eye protection
	Manual sanding	No	Yes	Eye protection
Plasterboard	Powered sanding	Yes+ +L class extraction is acceptable for this work	No	Ear defenders
Any dust	Removal	Yes	No	N/A

Definitions - Powered means any mechanical equipment fed by mains (or generated electricity) through a cable, or powered by an engine.

Construction Dust: Inspection and Enforcement Guidance

Formerly SIM 02/2009/01 and LAC61/2

Open Government Status

Fully Open

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Review date

09/05/16

Guidance owner

FOD, Construction Division, Construction Sector, Health Risk Management Unit

Target Audience

FOD Construction Inspectors (Bands 0-4)

SG Specialist (Occupational Hygiene) Inspectors (Bands 0-3)

Summary

This OG provides guidance on inspecting and enforcing where inadequate standards of control are found for construction dust risks**.** It focuses on common tasks, prioritising those with the potential for significant exposure / risk of ill-health.

Introduction

Dust control is a priority topic for Construction Inspectors. This Guidance assists Inspectors in deciding on the action to take where there are inadequate measures to manage the risks.

Note

This OG deals with respiratory risks from dusts and so does not cover dermatitis risks that can arise from construction dusts or specific substances like lead dust which have other associated health risks / control issues.

Action

Inspectors should assess on-site dust control measures for the common construction tasks identified in this OC against the “control standards” set out in HSE construction guidance CIS36. Inspectors should give priority to minimising the risk (i.e. control) over arrangements for managing the symptoms (i.e. health surveillance) and focus particularly on those common tasks where inadequate controls can result in an extreme or substantial risk gap under the EMM. This guidance sets out the steps Inspectors should take to assess the risks and apply the EMM. It also advises on the initial enforcement expectation (IEE) according to the level of control found relative to the expected control standard.

Step 1: Determine Risk

Inspectors should consider the work activities to establish the nature of the hazard and the level of the risk present on site. The factors to consider are set out in Appendix 1. Gathering and recording this information is important for supporting any subsequent action taken.

Step 2: Dealing with urgent matters: the risk of serious ill-health

Some activities can expose workers to dust levels that are sufficient to create an extreme risk of serious ill-health. These activities are set out in Appendix 3. Inspectors should deal with these situations as a priority to ensure the extreme risk is prevented / effectively controlled (e.g. by issuing a PN).

Step 3: Dealing with other matters through the EMM

Where inadequate control is found in less urgent / serious situations, Inspectors should determine the risk gap and IEE using the Enforcement Management Model (EMM). The basis for applying the EMM to Construction Dust is explained in Appendix 2. The EMM has been used to determine the IEE for deficiencies in control for common tasks (Appendix 3). The IEE has also been determined for management arrangements (Appendix 4). Dutyholder and strategic factors should be applied as normal.

Step 4: Enforcement Action

Where enforcement is appropriate, action should be taken against the dutyholder that 'creates and owns the risk'. In many instances, this may be the (sub) contractor carrying out the task in question. COSHH (Control of Substances Hazardous to Health Regulations 2002) is the primary legislation.

There may be other circumstances where enforcement against a Principal Contractor (PC) is appropriate. In many instances, the PC's employees may not be directly carrying out the work in question. In these situations, COSHH cannot be used to enforce against the PC. CDM (Construction (Design and Management) Regulations 2007) should be used instead with reference to Section 3. Further information on the approaches to take with different dutyholders is contained in Appendix 5.

Notices should be in accordance with the EMM, Enforcement Policy Statement and the information in this document. In some cases, both a PN and IN may be served to deal with the same set of circumstances – the former to stop an extreme risk of serious personal injury and the latter to secure longer-term compliance. COSHH is the primary legislation.

Proactive prosecutions should be considered where:

- Well established control strategies are completely inadequate (e.g. no or wholly ineffective controls for kerb/ flag cutting or dry grit blasting with silica containing material).
- There has been a sustained and very significant risk to workers health (e.g. regularly doing higher risk tasks without any or wholly ineffective controls)

Note: Always discuss any enforcement on health surveillance issues with an Occupational Health Specialist Inspector before taking action. This is particularly important for silica because of issues surrounding the extent and frequency of chest x-rays.

Background

The construction industry has high levels of ill-health. Exposure to construction dust contributes significantly to this. Construction dust is a general term used to describe the different dusts found on a construction site. There are three main types: RCS, wood dust and 'other' dusts.

Regularly breathing these dusts can cause diseases like lung cancer, asthma, silicosis and Chronic Obstructive Pulmonary Disease (COPD). Many of these conditions are irreversible and can eventually be fatal; all are disabling. Construction workers have a high risk of developing them because many common

tasks can create high dust levels if not adequately controlled. Over 500 construction workers annually are estimated to die prematurely from RCS exposure alone.

Organisation

There are no special organisational requirements.

Further references

Inspectors should pay particular attention to:

- Information on dust contained within the health section of the Construction Website
- CIS 36: Construction Dust
- CIS 69: Controlling Construction Dust with On-Tool Extraction
- HSG 53: Respiratory Protective Equipment at Work
- FAQs on Construction Dust
- NFRC guidance on roof tile cutting

Staff should also be aware of and familiar with other relevant Operational Guidance. In particular:

- OC 273/20: Control of substances hazardous to health regulations 2002 (as amended in 2004) – General enforcement guidance and advice
- Enforcement Management Model (EMM): Application to health risks
- Enforcement Management Model (EMM): Application to hazardous substances
- SIM 03/2008/09 Silica dust – guidance on risk and enforcement
- The RPE section of the HSE website
- The woodworking section of the HSE website

Contacts

Construction Sector: Health Risk Management Unit.

Appendices

The appendices for this guidance are available in PDF format.

- Appendix 1: Determining risk
- Appendix 2: Applying the EMM to Construction Dust Controls
- Appendix 3: IEE for Common Tasks Creating Construction Dust

- Appendix 4: IEE for Management Arrangements
- Appendix 5: Dutyholders and Enforcement

Appendix 5: Dutyholders and Enforcement

This information highlights specific issues Inspectors may need to take into account when enforcing on different dutyholders.

(Sub) Contractors and Small Sites

The transient and/or short duration nature of many small sites may require a different enforcement approach in relation to INs. While the service of a site specific IN may be justified, the timescale of the work may render it ineffective.

Site-specific INs should still be served where appropriate. Where this is not the case, an IN remains a valuable enforcement tool for ensuring sustained compliance. Inspectors should assess whether a dutyholder is likely to undertake similar dust generating work in the future and the extent to which current issues raise concerns about longer-term compliance. Where these concerns are significant and enforcement is appropriate, an IN should be used to address underlying issues including:

- Assessing the risks (employers employing 4 or fewer people do not need to record this) **AND** implementing the findings of the assessment;
- Provision of adequate controls;
- Information, instruction and training (not required for the self employed);
- Maintenance, examination and testing of control measures.

Where issuing an IN remains problematical, an Inspector is entitled to remind the duty holder that, even though a notice has not been served, action is still required to deal with the contraventions identified. Any continuing non-compliance with legal obligations will be cited as an aggravating feature at sentencing in any future prosecution.

Contractors Management Arrangements

Even where the right equipment is provided, control may not be achieved if underlying support arrangements are not in place; e.g. water supplies. Inspectors should determine whether the employer has done everything reasonable or if a particular worker(s) is failing in their responsibilities. The table below provides some lines of enquiry.

Table 12: Lines of enquiry for determining underlying failings

Issue	Examples
Has the dutyholder provided the right conditions to ensure the controls are effective?	• Is there enough water for all wet cutting work? • Are there arrangements to change filters or empty/replace collection units? • Are workers face-fit tested for masks?

	• Is equipment properly maintained and stored? • Are there effective supervision and management arrangements? • What should happen if things are not working and is action taken to support this?
Is the training satisfactory?	• Does the worker understand the risk? • Are they aware of the correct methods of work and the controls needed? • Do they know how to use these controls?

Where appropriate, Inspectors should consider taking enforcement action against individual workers (e.g. a PN) where the employer has complied with their duties but the worker is still creating a serious risk by failing to comply with their duties under S7.

The Self-Employed

COSHH applies to self-employed people with the exception of regulations 10 and 11. The guidance in this document should be applied as normal apart from those instances.

FFI does not apply to the self-employed where nobody else is affected. Inspectors should consider the extent to which other workers in the vicinity are being exposed – taking into account the factors in Appendix 1. The risk to those workers may be the same as that to the self-employed individual – i.e. their long-term health could be affected by the repeated nature of such exposures (both previously and potentially in the future). These workers may also not be wearing (or indeed face-fit tested for) RPE so that they would be unprotected. Exposures could be more significant due to this. Consequently, FFI charges would apply to material breaches in such circumstances.

The risk to members of the public in such circumstances is quite different. Their exposure is generally "transient" and very brief (probably only a few seconds). In addition, they are unlikely to experience repeated exposures. FFI is therefore unlikely to apply in most instances except for those highlighted in the section below.

Principal Contractors

There may be circumstances where it is appropriate to enforce against a PC even when they do not have employees directly involved in the work. In these situations, CDM should be used instead of COSHH with reference to Section 3.

- **Competence:** Having competent people on site is key to preventing risk. A PC's competency assessment should ensure sub-contractors have appropriate arrangements to manage and control construction dust. For example, face-fit testing for RPE should be part of a sub-contractor's competency assessment. PCs are not expected to subsequently verify face-fit testing records each time that subcontractor comes to site unless

deemed necessary as part of the managing and monitoring arrangements within the construction phase plan.

- **Construction Phase Plan:** A key duty of the PC is to properly plan the construction phase work and set out how key health and safety risks will be managed. The likelihood for dust exposures where these risks are relevant should be indicated. The plan should include suitable and sufficient measures to address such risks, including any site rules. The level of detail should be proportionate to the risks involved. However, it is reasonable for the plan to contain brief site-specific statements. This might include:

  – The presence of dust risks / the different types / the tasks with the greatest risks;

  – A statement on the control measures (or types of measures) that will be expected (possibly including more specifics for unusual / very high risk tasks);

  – Criteria to help assess where dust exposure is unacceptable or processes / conditions that will not be tolerated;

  – Arrangements for managing / supervising these risks.

- **Implement and Monitor:** Another key PC duty is to implement and monitor the plan to ensure that it works in practice. A PC should have appointed competent sub-contractors and is not therefore expected to undertake **detailed** supervision of their work. However, a PC must take appropriate action to deal with the risk where contractors do not work safely or comply with the plan.

- **Risk Control:** The main duty to control dust rests with the dutyholder that 'creates and own' this risk. This will often be a sub-contractor doing the work and not the PC. However, a PC, by virtue of their position, is 'a person in control' of the work on site. Some circumstances may therefore merit action against them under CDM reg 26(2). This requires every place, so far as is reasonably practicable, to be without risks to health for any persons at work there.

Designers and CDM Co-ordinators

Inspectors should track back where significant issues are identified on site and reasonably practicable design solutions are evident. They should establish whether the designer / CDM-C have sufficient understanding of construction health risks. They should also verify that consideration of health risks are incorporated within design risk management arrangements.

Clients

It is important that clients take a lead on ensuring management of dust issues, particularly on major projects. Where appropriate in line with the Division's plan of work, Inspectors should examine the extent to which the client has

taken reasonable steps to ensure there is a suitable construction phase plan for the work that covers within it the issue of dust.

Issues Affecting Members of the Public

The risk of lung disease is generally linked to people who regularly breathe construction dust over a period of time. While breathing construction dust over a short period is unpleasant, such “transient” exposure is unlikely to produce long-term effects in members of the public given the relative short duration / isolated nature of these instances. Issuing a PN solely for the protection of members of the public is therefore generally inappropriate. However, there may be some exceptions to this. In particular where:

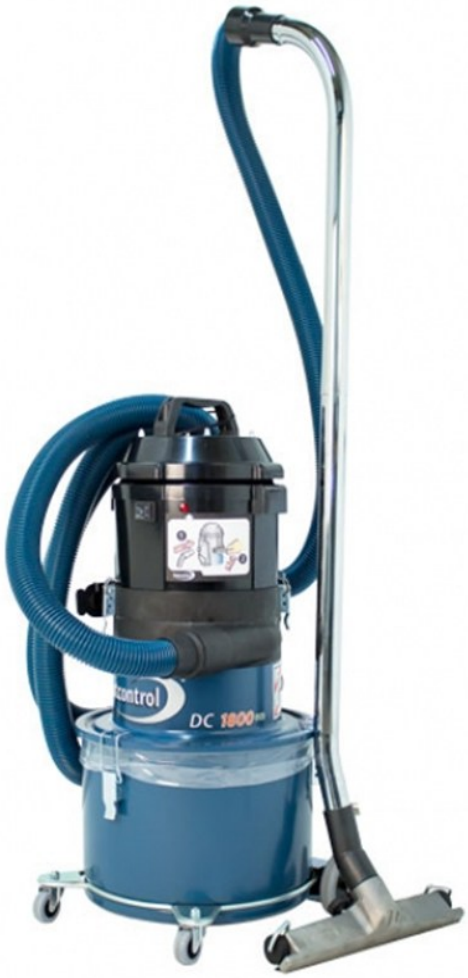
- Potent asthmagens are being used (e.g. Western Red Cedar);

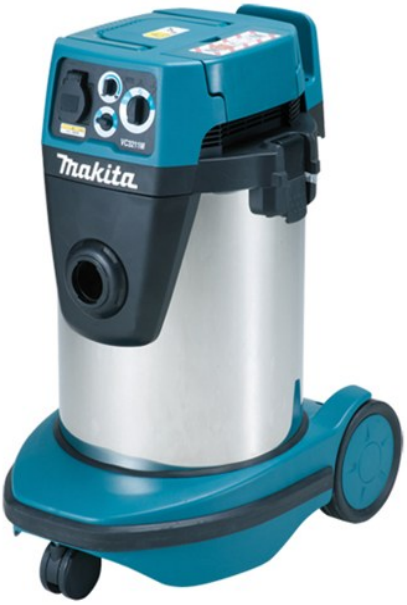
- Dust levels are extreme and the work is longer duration (e.g. dry grit blasting/ the same individuals are experiencing significant and repeated exposures during the course of a lengthy project);

Where there are vulnerable / susceptible people (e.g. a hospital environment where patients have an underlying respiratory / other medical condition that could be aggravated by the dust).

Dust in Construction

All vacuums used for on tool dust extraction to be Type M or H





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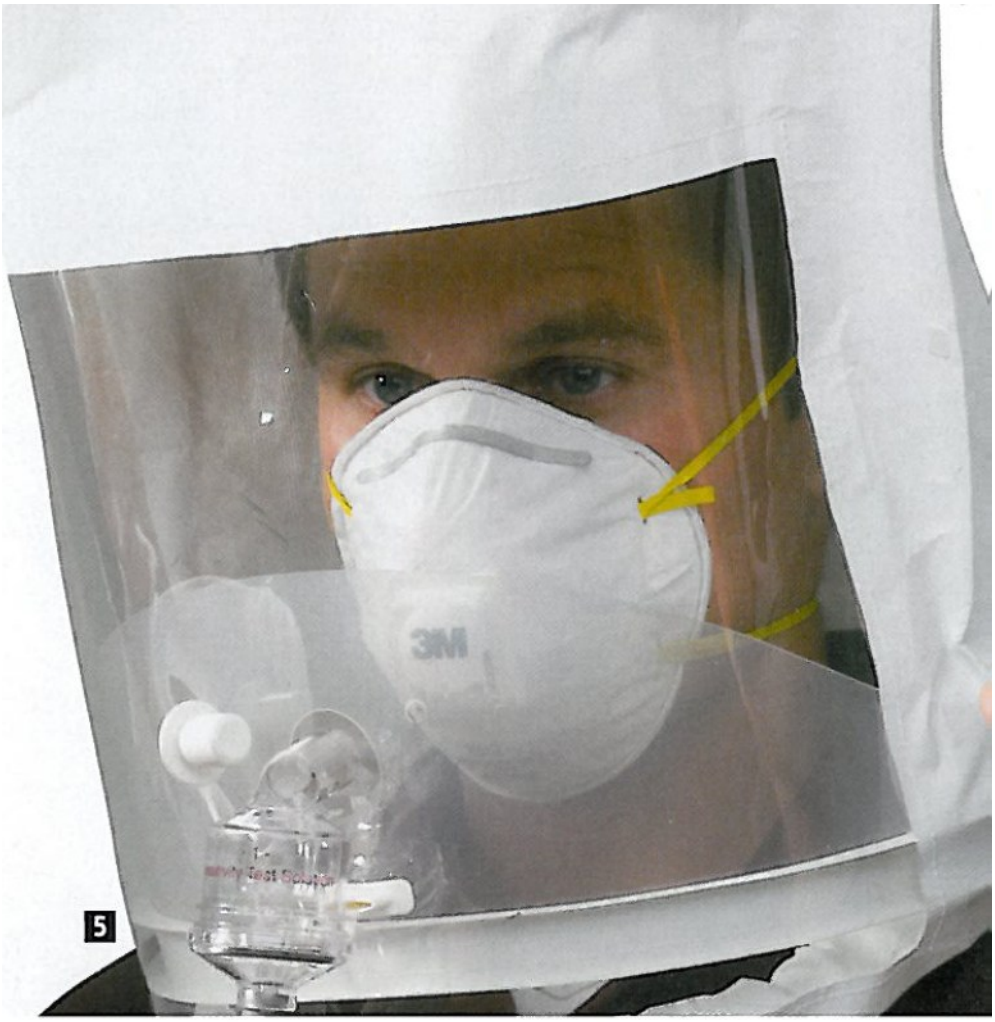
Dust in Construction

All respiratory protection to be face fitted to the user through a robust test carried out by a competent individual.



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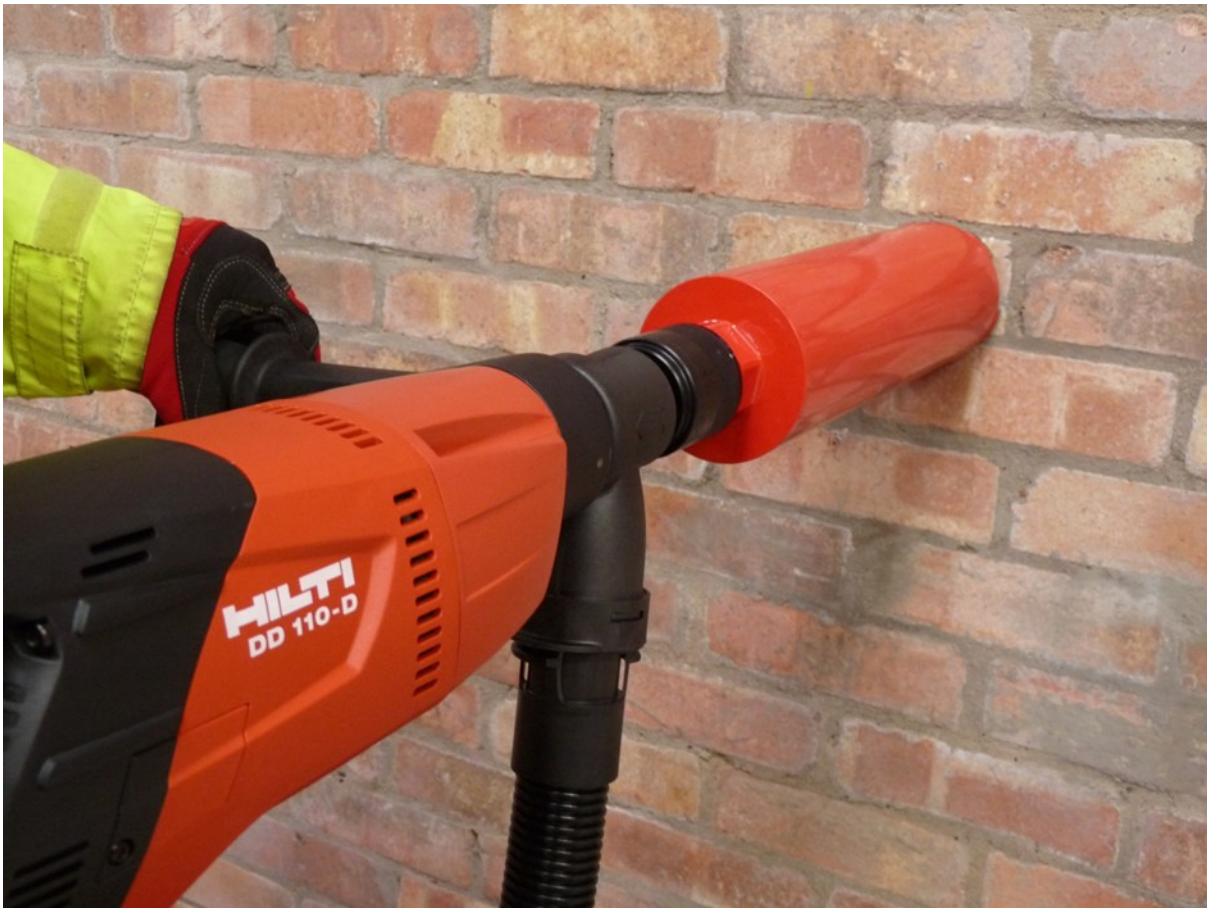
Dust in Construction

Core drilling through concrete materials to have on tool vacuum extraction, with FFP3 respiratory protection, (for over 30 mins trigger time) ear and eye protection.



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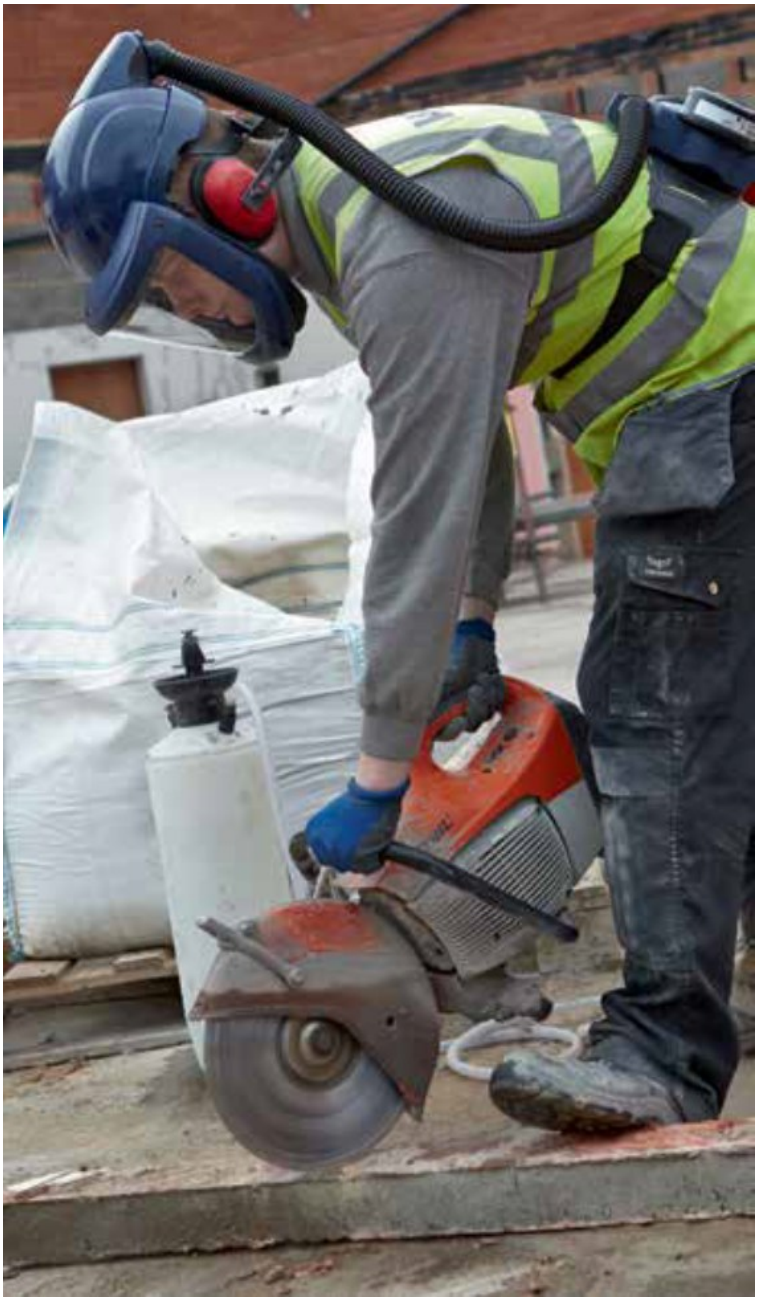
Dust in Construction

Cutting of all concrete products to incorporate water suppression, FFP3 minimum respiratory protection, ear and eye protection.



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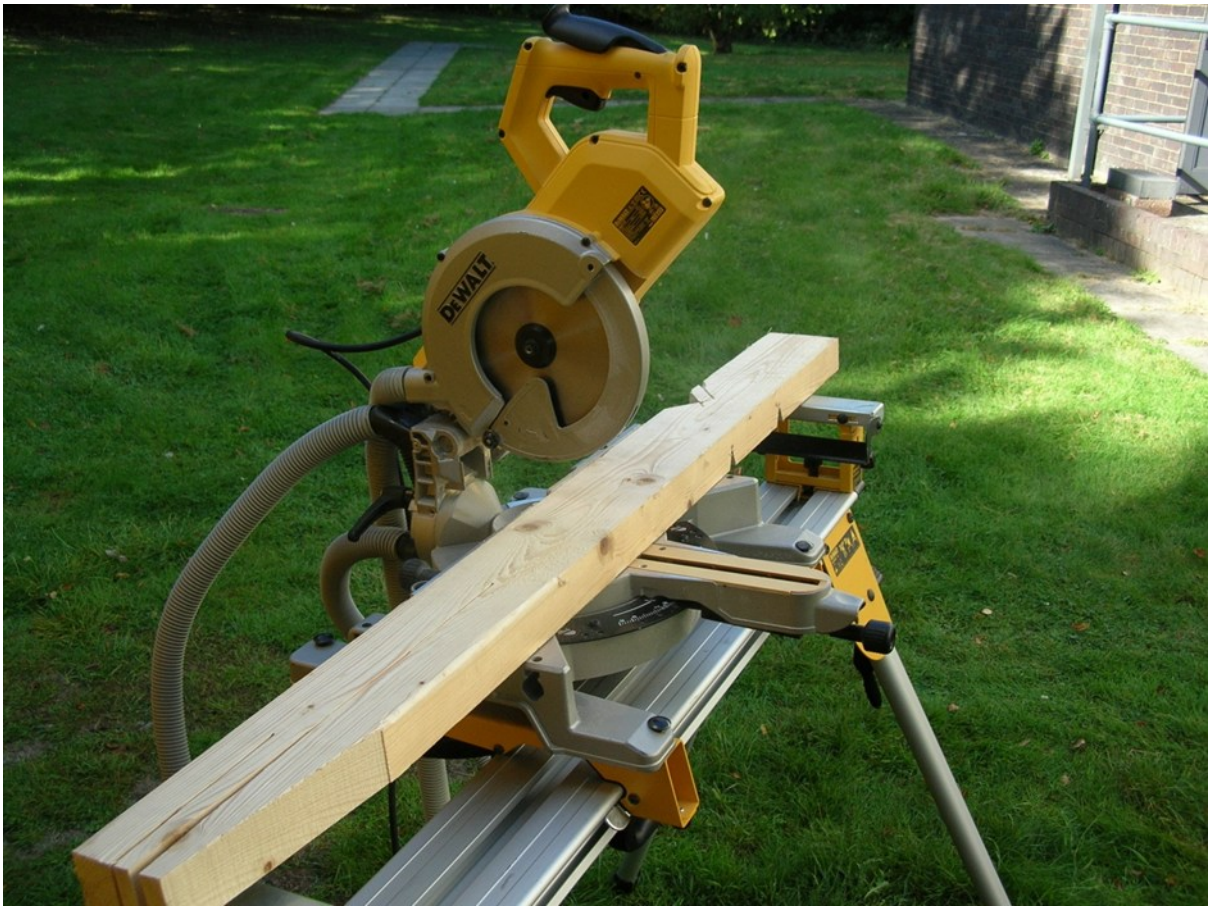
Dust in Construction

Cutting of all concrete products to incorporate water suppression, FFP3 minimum respiratory protection, ear and eye protection.

Do it right

Dust in Construction

All static saws to be fitted with vacuum (Type M or H) dust extraction



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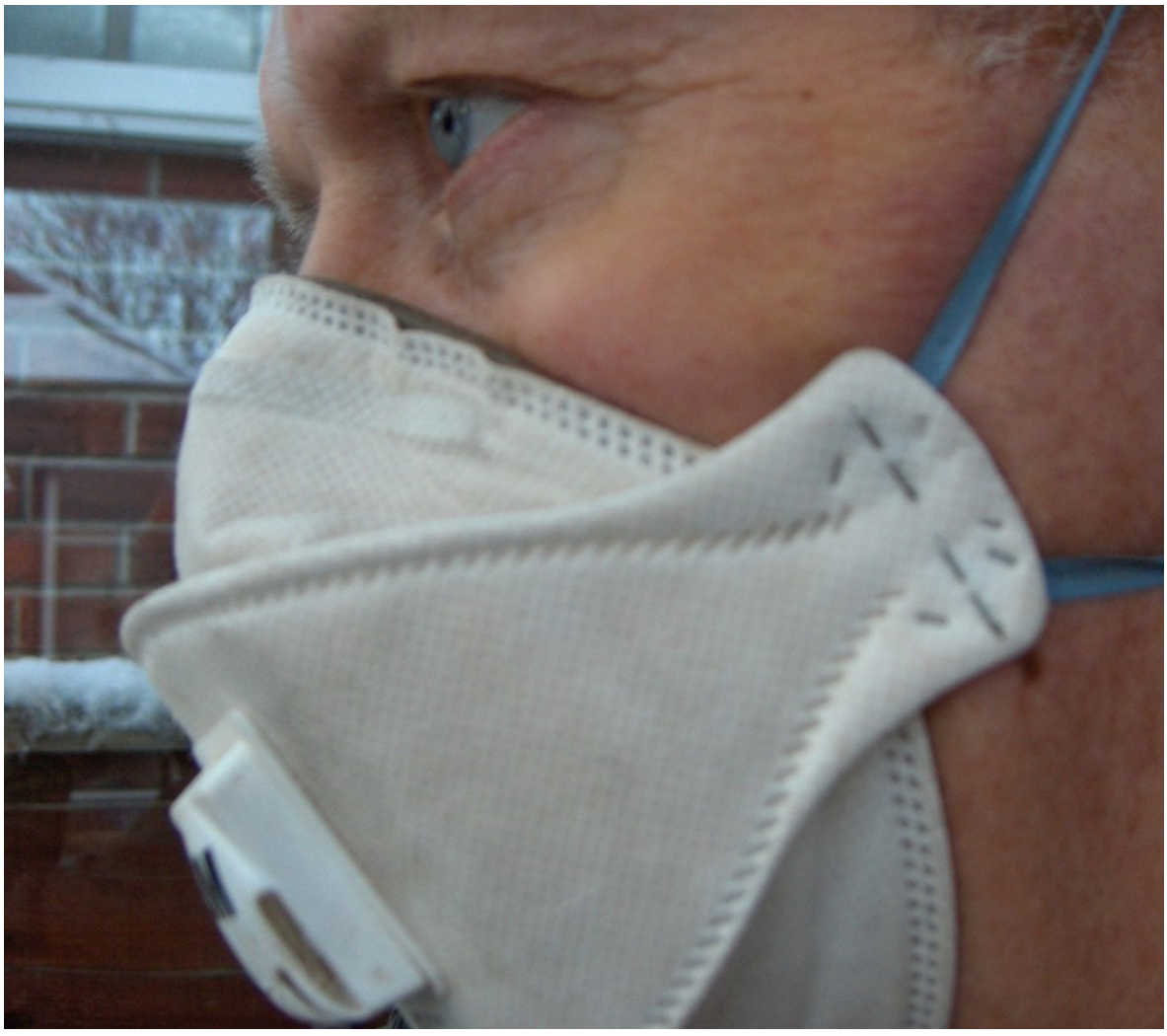
Dust in Construction

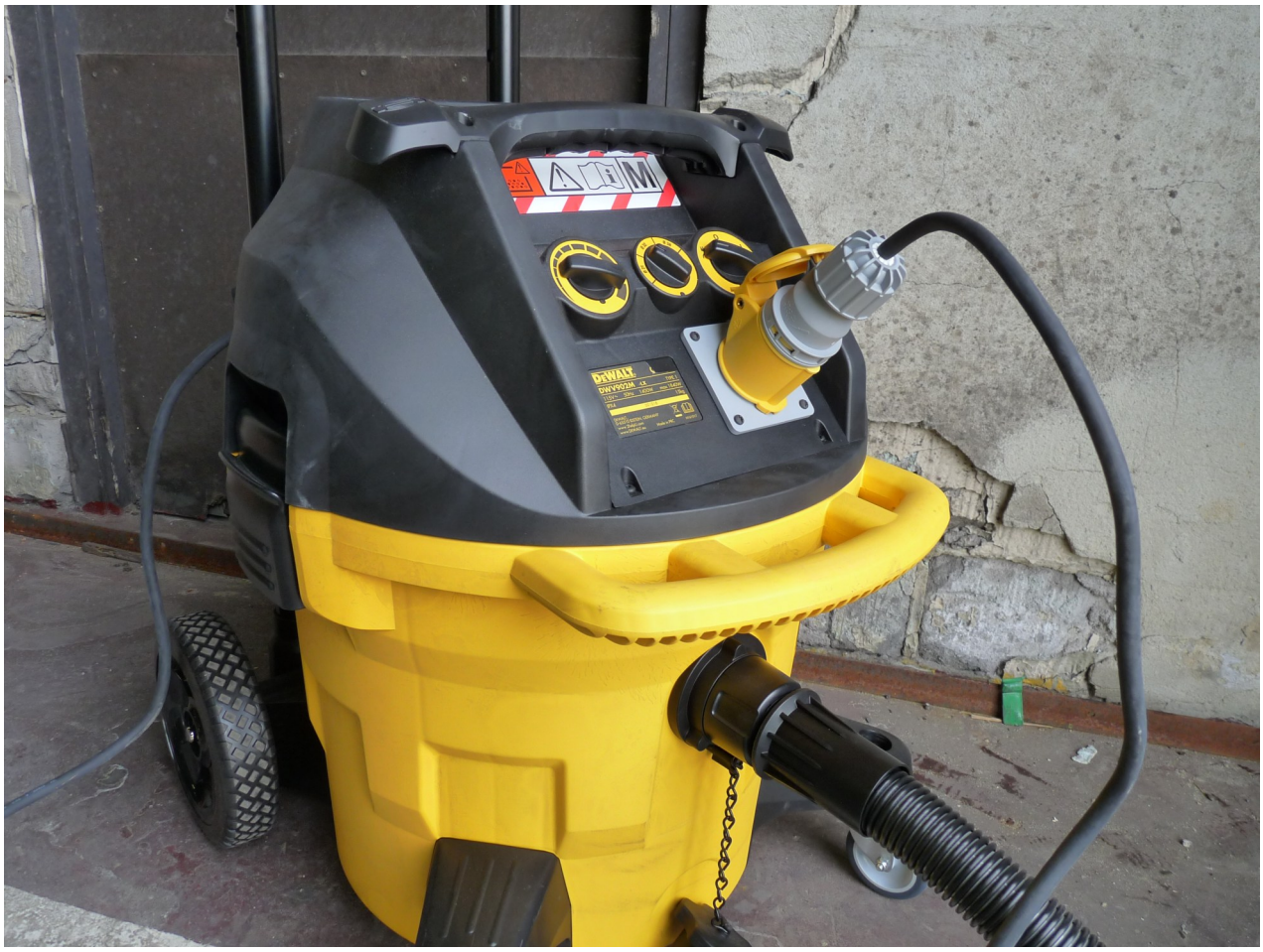
All individuals wearing tight fitting respiratory protection must be clean shaven

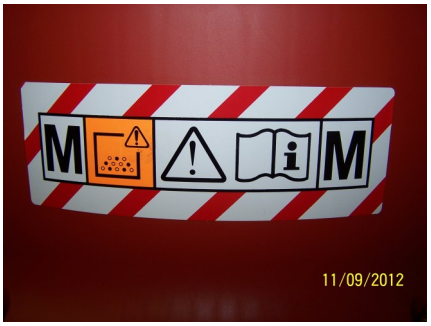


Do it right

Dust in Construction

Type M or H vacuums when using on tool extraction





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Dust in Construction

On tool extraction when mechanically sanding down plaster products

Do it right

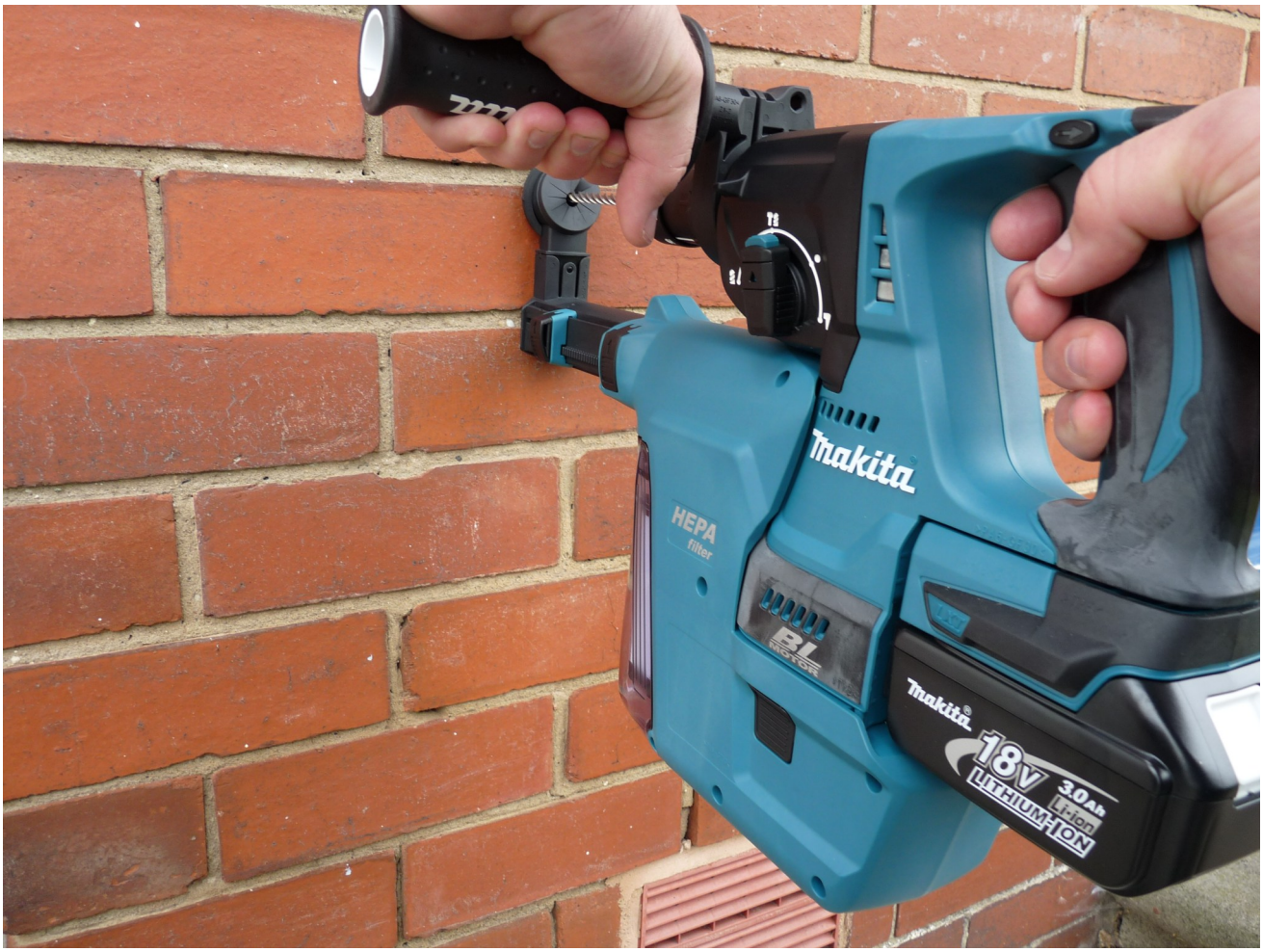
Dust in Construction

Vacuum, don’t sweep.

Do it right

Dust in Construction

Purchase new battery operated tools with on tool extraction



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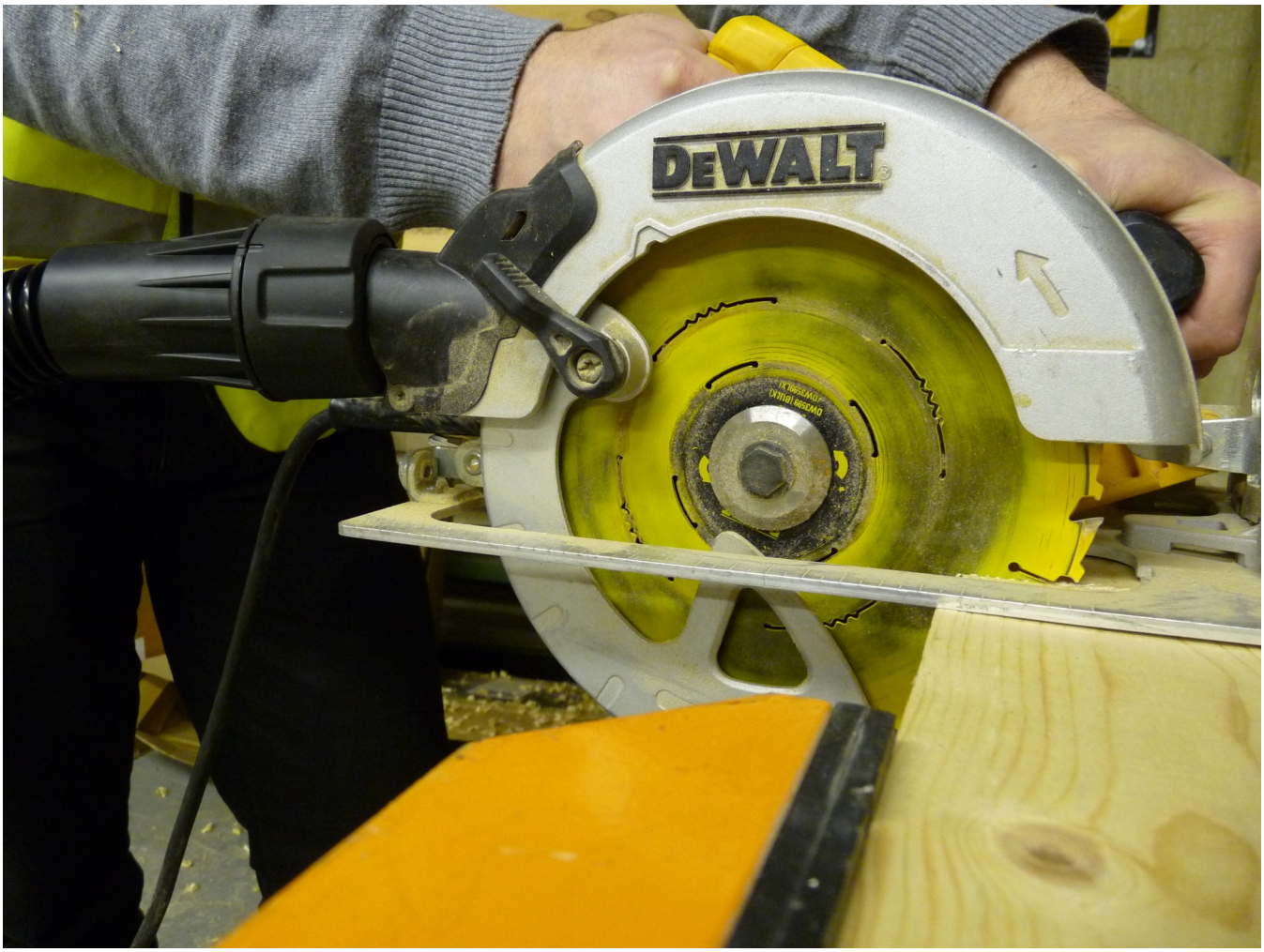
Dust in Construction

Powered tools to have on tool extraction



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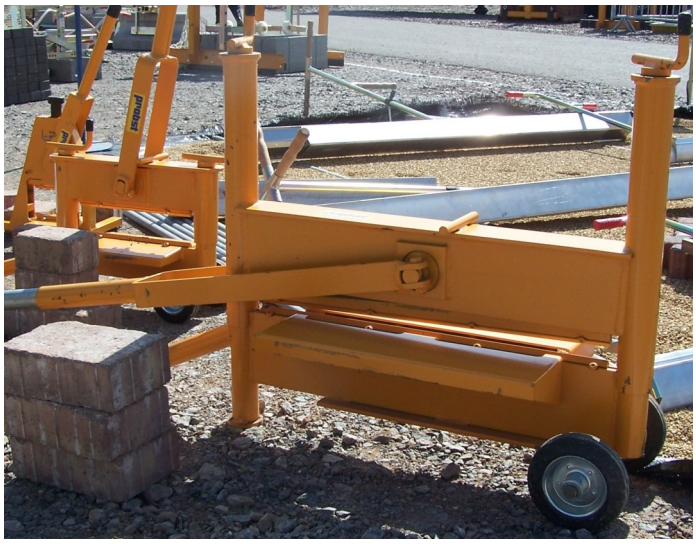
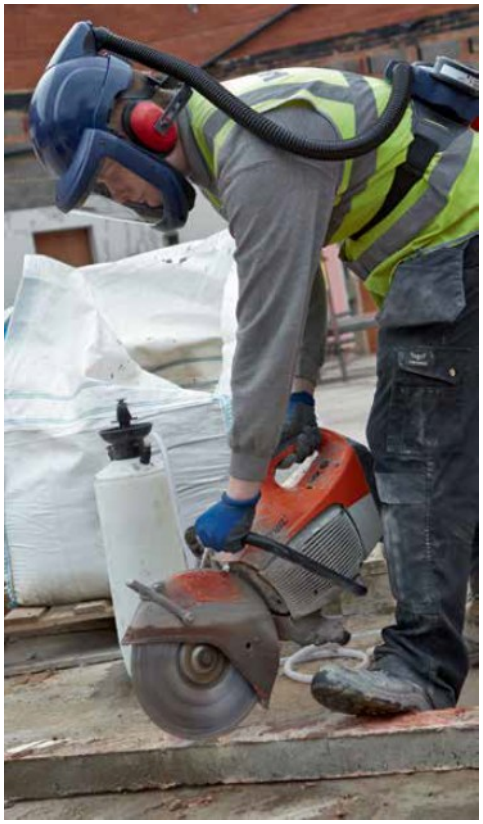
Dust in Construction

Eliminate dust generation by selecting an alternative method to power cutting.



1st Choice ✓



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Do it right ✓