

# Kiln Workshop Guide 4: PPE

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## 1. Background

Workshops were held on “*Planned and unplanned maintenance on kilns and pre-heaters*” and a number of priorities were addressed by experts drawn from the cement, contracting and refractory industries.

Recommendations relating to these priorities have been published in 4 Kiln Workshop Guides. These are Maintenance, Monolithic Linings, Bricking Rigs and PPE.

This document concentrates on a relatively narrow set of health and safety priorities specific to the selection of Personal Protective Equipment (PPE) during planned and unplanned maintenance on kilns and pre-heaters in the United Kingdom.

Compliance with any guidance set out in this document does not absolve the user from his legal duties under the Health and Safety at Work etc Act 1974 to form his own site specific assessment of his workplaces and operations and to provide accordingly for such matters.

## 2. General

The main requirement of the PPE at Work Regulations 1992 is that PPE is to be supplied and used at work wherever there are risks to health and safety that cannot be adequately controlled in other ways.

PPE should be properly assessed before use to ensure it is suitable. Any PPE that is bought should be CE marked and compliant with the PPE Regulations 2002. It should be maintained and properly stored. Replacement PPE should be readily available. EN numbers have been given against each type of PPE but clearly the right type of PPE has to be selected under each EN number.

PPE should be provided with instructions on how to use it properly and it should be used correctly by employees. Anyone using PPE should be aware of why it is needed, when it is to be used/repaired or replaced and be aware of its limitations.

## 3. Hard Hats (EN 397)

### Recommendations

- The use of hard hats is compulsory.
- The use of High Temperature type hard hats should be considered depending on the work to be carried out.
- Hard hats without guttering should be used to avoid dust build up, (this can eventually fall into eyes etc).
- Standard colours should be agreed for contractors.
- Any stickers that are issued for use on helmets should be polycarbonate safe.

## 4. Boots (EN 345 /EN 150 20345)

A number of companies have banned the use of 'Rigger Boots' on the belief that they provide insufficient ankle support. They have also proven difficult to remove following ankle injuries.

### Recommendations

- Steel toe caps are compulsory.

### Where Rigger Boots are banned:

- The use of lace up boots is recommended, to provide full ankle support. (i.e. not trainers or shoes).
- Foundry boots are suggested as the preferred option.
- Boots must be in good condition (without splits and properly laced)
- Various boots offer different qualities for example puncture resistance, vibration resistance and improved grip and these should be considered during selection.

## 5. High Visibility Clothing (EN 471)

High visibility clothing meeting current EN standards must be worn. High visibility overalls are the preferred option as high visibility vests can be taken off. Subject to a risk assessment by a competent person vests may be worn due to temperature considerations or over the top of disposable overalls etc.

### Vests

#### Recommendations

- Compulsory with reflective 'H' strips
- Orange is suggested as the preferred option (as this shows up in front of yellow plant).
- Vests must be in good clean condition

### Overalls

#### Recommendations

- A full one piece suit should be used (as this prevents dust from contacting 'builders backside').
- Proban is suggested as the preferred option.
- For dirty tasks a one piece disposable suit is suggested as the preferred option. Hoods should be worn where there is a risk of dust entering the top of the suit.

## 6. Dust Masks (EN 149)

### Recommendations

- The use of dust masks is compulsory and subject to the HSE Face Fit Test (and personal preference where possible);
- There should be no smoking in kilns.

### For wrecking

#### Recommendations

- Vented face (to prevent glasses misting up).
- ‘Air stream’ type fan assisted is the preferred option.
- Many Monolithic Refractories contain Silicon Carbide which in service converts to potentially harmful Tridymite and Cristobalite. Full face respirators must be used by personnel carrying out demolition of such linings.

## 7. Eye Protection (EN 166)

### Recommendations

- The use of eye protection is compulsory for all activities.
- Safety glasses should be worn for all general tasks.
- Goggles /Shields must be worn for wrecking and by shim drivers.

### For spectacle wearers

#### Recommendations

- Over-protection is compulsory (or prescription safety glasses are recommended).

## 8. Ear Protection (EN 352)

### Recommendations

- Ear protection is compulsory in line with Control of Noise at Work Regulations 2005 and Risk Assessment/Method Statements.

- Disposable are suggested as the preferred option.

## 9. Gloves

### Recommendations

- The wearing of gloves is compulsory & employees/contractors involved in kiln work should be able to present a pair when challenged on site.
- General purpose gloves should be sufficient unless job specific gloves are required for example; Gel for anti-vibration or gloves suitable for bricking.

## 10. Sundry Items

### Recommendations

- The use of helmet lights is recommended.
- The use of barrier creams and after work protection is recommended (and should be covered during inductions).

## 11. Application of Standards

The behaviour and adherence to safety rules by site employees is a vital influence on contractors. However, PPE standards are not always applied consistently’ with contractors complaining that the ‘*1 or 2 strikes and your out*’ concept is not applied to site employees. Furthermore, contractor employees are expected to bring their own PPE.

### Recommendations

- PPE standards, and who should supply the PPE, should be agreed before work commences.
- PPE standards should be rigorously enforced and uniformly applied.
- No contractor should be allowed on site unless they are compliant with company procedures e.g. passports or safety inductions.
- Procedures must be in place to check the authenticity of passports/safety inductions attended etc.

**Disclaimer:** *The BCA has prepared this document in the interests of promoting a high standard of safety awareness in its industry. Compliance with any guidance set out in this document does not absolve the user from his legal duties under the Health and Safety at Work etc Act 1974 to form his own site specific assessment of his workplaces and operations and to provide accordingly for such matters. Whilst the BCA has taken all reasonable care in preparing its guidance neither the BCA nor its members will accept any liability in relation to the guidance. Readers are reminded that legislation, official guidance and best industry practice are all subject to change over time. This document was last revised on 14th May 2008.*