

## FIS COVID-19 Selection of Personal and Respiratory Protective Equipment and Face Masks.

At the time of writing there is remains pressure on all sectors related to the availability of Personal Protective Equipment (PPE) and Respiratory Protective Equipment (RPE). This document primarily focuses on task assessed protection related to common construction hazardous substances e.g. dust but highlights the added complexities of protection against COVID-19.

A key principle that it seeks to underpin is that, in light of difficulty sourcing PPE and RPE and the need to protect the NHS, it is vital that we identify and use the correct RPE and PPE based on task assessment and do not over specify. In this way we can protect use for tasks where higher protection is essential and ensure, wherever safe, works can continue.

When selecting PPE and RPE during the COVID-19 Pandemic, the first consideration must be:

1. How do I protect the operative from the risks associated with the task they are performing?
2. What additional protection is required to protect the individual from risk of catching the COVID-19 or reducing the risk of infecting others with the virus?

### Respiratory Protective Equipment

The PPE at Work regulations require the provision and use of certain PPE against particular hazards and provide all the information an employer needs to ensure compliance, they provide control criteria for procurement, issue, use and maintenance of all protective equipment. The regulations must be read in conjunction with "[Respiratory protective equipment at work a practical guide HSG53](#)". Please see the flow chart on page 4.

### Understanding the Risk Associated with the Task

Information will be available and if in doubt, consult with suppliers, but Manufactures Safety Data Sheets (MSDS) and COSHH risk assessments will identify the hazardous substances associated with a task. The two key areas are:

- Products used at work that are hazardous substances that come with a safety data sheet (SDS) provided by the supplier. Any product classed as 'dangerous for supply'

must come with this sheet by law and it should contain information on:

- health hazards (product labelling);
  - forms of the substances contained in the product;
  - type of RPE necessary for its use.
- Work activities, such as cutting or heating materials, may generate harmful substances, which contaminate the air in the form of dusts, mists, gases, or fumes. Further information on these substances is given in a series of COSHH essentials guidance sheets, please see [HSE COSHH Essentials](#).

The Covid-19 virus is known to be spread by droplets that spray into the air when those infected talk, cough or sneeze. The droplets can enter the body through the eyes, nose, and mouth, either directly or after touching a contaminated object or surface. Frequently washing hands with soap and water for 20 seconds and social distancing are key to minimising the risk of transmission. The use of RPE and PPE is not a substitute for these measures.

### PPE (including RPE) and COVID-19

For typical construction and maintenance activity, there is no Public Health England reference to using RPE as a protective measure against the spread of coronavirus (except for 'Specific Environments').

However, following a suitable and sufficient risk assessment, RPE or other (non-clinical) fluid-resistant face protection may be selected, with other PPE, to further reduce the risk from close proximity work:

1. as part of "all mitigating actions possible" (CLC SOP) and/or
- 2) in response to any client or main contractor requirements.

**Full face shields** protect the face and eyes and may lower viral exhalation risk, including from anyone who has COVID-19 but is not yet showing symptoms. However, a face shield does not provide inhalation protection. Subject to risk assessment, face shields may negate the need for light eye protection. Visors are not referenced in the CLC Site Operating Procedures, however are recommended in Guidance provided in Scotland and the Republic of Ireland

HSE has provided FIS the following statement on use of visors:

*Personal protective equipment (PPE) protects the user against health or safety risks they are being exposed to at work and PPE has not been advised for COVID-19 risks outside of healthcare and a few other exceptions where people work in close proximity to others for an extended period. In these situations, visors may be used to protect users against droplets from others*

*coughing etc. However, visors are not intended to protect other people from droplets that the user may emit.*

**FFP3 and other face masks** are primarily designed to protect against workplace respiratory health hazards, such as dust or asbestos (that is, beyond coronavirus). They must be suitably deployed to protect against any significant respiratory hazard, in addition to consideration as a possible coronavirus “mitigating action”. Note that certain ‘valved’ face masks present a potential viral exhalation risk, which may e.g. be mitigated by wearing a full-face shield.

**Surgical mask and face coverings** are, according to the [latest guidance from the HSE](#), not generally considered to be PPE in non-healthcare situations. They are primarily designed to help prevent the spread (exhalation) of airborne coronavirus droplets. According to the HSE, evidence suggests that wearing a face covering does not protect you, but it may protect others if you are infected and have not developed symptoms. Surgical face masks unlike face coverings are manufactured to a recognised standard and are resistant to droplets of fluids and splashes.

The Site Operating Procedures for England do not refer to deploying face coverings or surgical face masks in general onsite situations but PHE have noted that they may be a suitable “mitigating action” in ‘Specific Environments’ where there are no other significant respiratory hazards. The HSE advises that if people choose to wear face coverings in work you should support them. They are, however, referenced along with visors in guidance for Scotland and the Republic of Ireland.

**Higher-protection types of RPE** such as positive air pressure respirators, can offer effective onsite coronavirus respiratory and face protection if necessary (e.g. in confined spaces), provided they have effective air filters.

#### **Limitations/Considerations in the use of RPE/PPE**

PPE/RPE is last in the hierarchy of protection against any airborne hazard (including coronavirus) for reasons that include:

- wearing PPE/RPE – even if it provides extra protection - may change worker behaviour, undermining available social distancing and good hygiene practices – the two most effective control measures against viral spread
- ‘face fit testing’ is required for half masks, plus ‘fit checking’ before work starts
- protection can deteriorate during use
- face masks do not protect the eyes.

Donning and doffing PPE, and PPE sanitisation and waste disposal, must be carried out properly, to reduce the risk of viral contamination and spread, along with thorough hand cleaning.

#### **The Personal Protective Equipment at Work Regulations 1992 third edition 2015**

These regulations provide guidance on the steps to take to try to manage risks without resorting to PPE full details can be viewed at: [PPE Work Regulations](#). All health and safety legislation dictates PPE is to be used as a last resort. The regulation includes details of specific areas of risk and examples of the kind of PPE to consider using where the risk cannot be adequately controlled in other ways.

#### **Selecting PPE and RPE**

The key messages are:

- It is essential that employers put in place all necessary safe systems of work, control measures and engineering solutions so that use of PPE is minimised.
- Where PPE is needed it must be the most appropriate for the identified risk and should only be issued where it further reduces the level of risk. The temptation to over protect in this pandemic will cause supply problems in for other tasks and in other sectors. There are currently no clear recommendations for selecting RPE in the construction industry for protection against COVID-19.
- PPE is a safeguard of last resort since it only protects the individual wearer in normal circumstances. Before resorting to PPE efforts should be made to eliminate or reduce the risk (e.g. extraction).

#### **Extracts from the Regulations**

Here are some details extracted from the PPE regulations that are pertinent to the current pandemic.

#### **Regulation 4 PPE at Work**

**Regulation 4, (3)** Without prejudice to the generality of paragraphs (1) and (2), PPE shall not be suitable unless:

- (a) it is appropriate for the risk or risks involved, the conditions at the place where exposure to the risk may occur, and the period for which it is worn;
- (b) it takes account of ergonomic requirements and the state of health of the person or persons who may wear it, and of the characteristics of the workstation of each such person;
- (c) it is capable of fitting the wearer correctly, if necessary, after adjustments within the range for which it is designed;
- (d) so far as is practicable, it is effective to prevent or adequately control the risk or risks involved without increasing overall risk;
- (e) it complies with any enactment (whether in an Act or instrument) which implements in Great Britain any provision on design or manufacture with respect to health or safety in any relevant Community directive listed in Schedule 1 which is applicable to that item of PPE.

**Regulation 4, 28.** There are a number of reasons for making PPE the last resort:

- (a) PPE only protects the person wearing it, whereas controlling the risk at source can protect everyone in the workplace.
- (b) Maximum levels of protection are seldom achieved with PPE in practice and the actual level of protection is difficult to assess.
- (c) Effective protection is only achieved by suitable PPE, correctly fitted, and maintained and properly used.
- (d) PPE may restrict the wearer to some extent by limiting movement or visibility.

**Regulation 4, 37** An employer cannot ask for money to be paid to them by an employee for the provision of PPE whether returnable or otherwise; this also relates to returnable deposits.

**Regulation 4, 41.** The aim should be to choose PPE which gives maximum protection while ensuring minimum discomfort to the wearer, as uncomfortable equipment is unlikely to be worn properly.

**Note:** These points have been drawn out to aid understanding and should not be considered in isolation.

#### Penalties

Contravention of this regulation that shows a failure by an employer to comply with a general duty imposed by HSWA 1974, ss 2–7, on summary conviction is the penalty is six months imprisonment or an unlimited fine or both. New legislation removed the original fine cap and allowed magistrates courts to give out unlimited fines for offences committed on or after the 12th of March 2015.

#### CE Marking

Regulation 4, 44 Employers should ensure that any PPE they buy bears a 'CE' mark and complies with the PPE Regulations 2002/14 concerning the design or manufacture of PPE with regard to health and safety. These regulations implement the PPE Directive 89/686/ EEC 15 which requires manufacturers to CE mark their products (whether intended for people at work or the wider public) to show compliance with the Directive.

Further information is available at CE-Marking and for a [British Safety Industry Federation checklist please see BSIF CE Certificate Checklist](#)

#### Regulation 5 Compatibility of PPE

Regulation 5, 51 If more than one item of PPE is to be worn, they must be compatible with each other and when used together, should adequately control the risks. For example, a half-mask respirator, provided under the Control of Substances Hazardous to Health Regulations 2002 (COSHH),<sup>16</sup> may not be compatible with a pair of goggles, provided under these regulations, preventing either from fitting properly and leading to increased risk of eye injury and/or respiratory exposure. The manufacturer's instructions may provide guidance on what can or should be used together, for example hard hats and certain types of ear protection may be available as a single unit.

#### Regulation 7 Maintenance and Replacement of PPE

Regulation 7, 59 In general, PPE should be examined to ensure it is in good working order before being issued to the user. Such examinations should be carried out by appropriately trained staff. It should not be issued if found to be defective. While most PPE will be provided on a personal basis, some items may be used by a number of people. There should be arrangements for cleaning and disinfecting the PPE, so there are no health risks to the next person using it. This must be applied to visors used in construction where the two-metre social distancing cannot be maintained.

#### Other useful information:

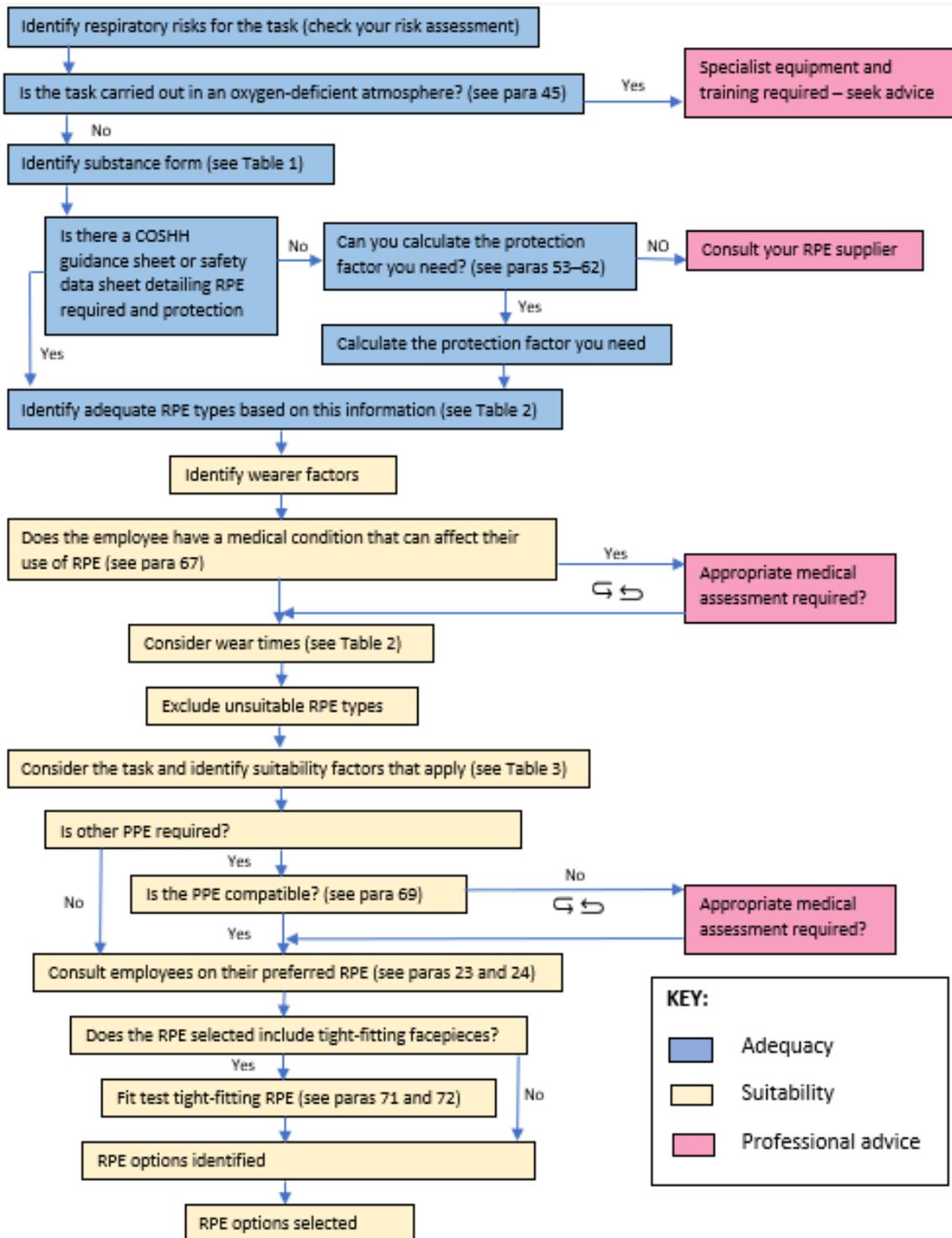
- A technical bulletin produced by 3M [compares respirators and surgical masks](#) for COVID-19
- [Public health management of persons, including healthcare workers, having had contact with COVID-19 cases in the European Union](#)
- [Evaluating the protection afforded by surgical masks against influenza bioaerosols HSE RR619 \(2008\)](#)
- [BSI Guidance on PPE](#)
- [Coronavirus \(COVID-19\): personal protective equipment \(PPE\) hub](#)

With thanks to BESA and ECA for sharing resources and their assistance in pulling this information together.

Further resources to support members in managing issues associated with COVID-19 are available through the [FIS COVID-19 Hub](#). This Hub includes links to the Site Operating Procedures produced by the CLC and Construction Scotland as well as supplementary advice provided through the CICV in Scotland. It also covers a variety of Task Assessment and Risk Management Tools produced for members of the FIS.

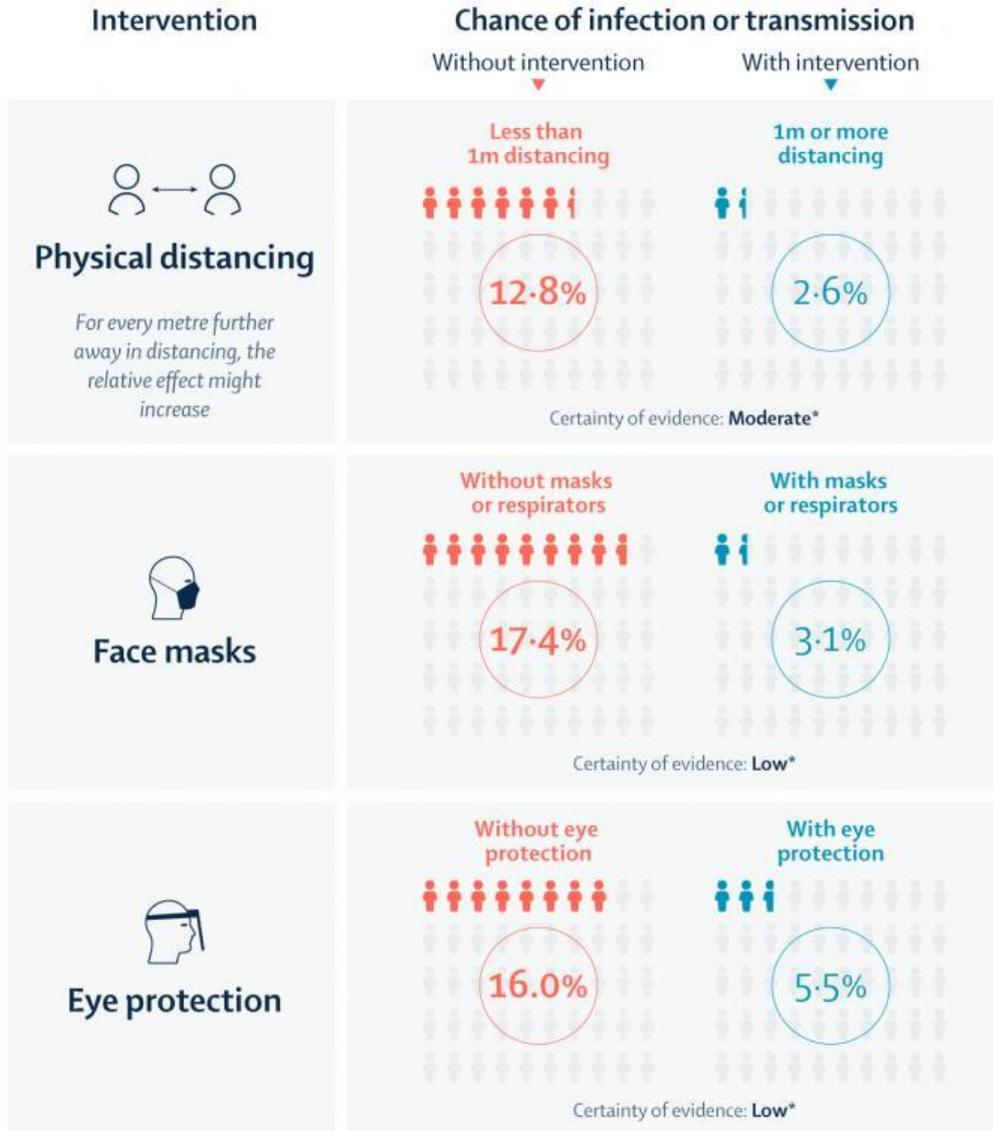
## Respiratory Protective Equipment (RPE)

Selecting RPE that is adequate and suitable is detailed in the [HSE HSG53 \(fourth edition, published 2013\) Respiratory protective equipment at work HSE HSG53 RPE](#). This flowchart is drawn from this publication this flowchart, it has not been updated to cover specific elements related to the COVID-19 pandemic.



The reader is strongly advised to consult legislation and sources of information applicable to individual circumstances, the task and work environment. While every care has been taken to ensure the accuracy of the details presented in this document, we regret that FIS cannot be held responsible for any errors or omissions contained herein.

# What protects against COVID-19 infection or transmission?



\* See the paper below for full explanations of certainty and why these categories are used. Moderate certainty: we are moderately confident in the effect estimate; the true effect is probably close to the estimate, but it is possibly substantially different. Low certainty: our confidence in the effect estimate is limited; the true effect could be substantially different from the estimate of the effect.

**Even when properly used and combined, none of these interventions offers complete protection and other basic protective measures (such as hand hygiene) are essential to reduce transmission**

Chu DK, Akl EA, Duda S, et al.  
Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. *Lancet* 2020. Published online June 1.

THE LANCET

**Source:** [Physical distancing, face masks, and eye protection to prevent person-to-person transmission of SARS-CoV-2 and COVID-19: a systematic review and meta-analysis. Published in The Lancet 1<sup>st</sup> June 2020](#)