



Alternative designs and manufacturing techniques for Face Masks and Face Visors Specification Document

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1. Overview

The following specification is purely to support a Network Rail initiative to seek alternative designs and manufacturing techniques for Face Masks and Face Visors, that creates a new and additional supply capability to provide these key devices. This initiative does not seek to influence or disrupt the supply chain for the traditional masks and visors as such, Network Rail are seeking to engage and collaborate with manufacturers who do not currently produce traditional face masks and visors but manufacturers in other industries or manufacturers who can suggest alternative materials, solutions or method of manufacturing that are still able to conform with specifications within this document.

2. Face Mask

2.1. Requirement

Network Rail is seeking to understand the capability of the market for alternative designs and manufacturing techniques, should the requirement arise to provide its workforce with infection containment masks. It seeks to provide its workforce who may elect to wear a face mask who may not know they have an infection (or the possibility of) to limit the spread of infection when exhaling to others and reduce the risk of droplets that are airborne entering.

Mask needs to allow the worker to carry out the functions of the job, especially of a maintenance job requiring physical work.

There is currently no requirement for general wearing of masks in the work force

2.2. Specification

Network Rail are seeking designs which can conform to the following technical specification:

- EN14683 type 1 and 2 capability for filtration. (Options of higher protection could be considered for very specific tasks)
- One, standard but adjustable size which ensures coverage from the nose to the chin.
- Providing the above two requirements are met, Network Rail encourage the use of any type of manufacturing method material or construction
- The mask should be easy to fit with minimal adjustment required
- If disposable, the mask must meet regulations for landfill disposal.
- If a frame type design with disposable filter; all the surfaces must be washable, resistant to disinfectants and sterilisers.
- Straps must be removable and replaceable
- CE marking is initially not required although Network Rail acceptance will be based on the capability of the product in line with the specification and the design being successfully certified in the fullness of time

2.3. Acceptance Criteria and Responses

In order to respond to this request for information, please email R&D@networkrail.co.uk with the following information:

- Price including:
 - Development investment required to meet the above specification
 - Unit Price and any volume discounts
- Availability including:
 - Information on the origin location of components
 - Manufacturing capacity per week
- Lead time – for development, manufacturing and delivery
- Conformance to the specification above or activities required to meet this
- If frame type, confirmation on availability of straps, and filter materials

3. Face Visors

3.1. Requirement

Network Rail is looking to provide its workforce with Personal Protective Equipment to fight against Covid-19. There is an expectation that all of the workforce may want to wear such a visor therefore expected volumes for visor demand from Network Rail is around 5000 units.

3.2. Specification

Network Rail are seeking visors for two possible use cases with varying specifications as below.

3.2.1. Control Room use

Network Rail are seeking designs which can conform to the following technical specification:

- EN166 class 1 optical quality and class S for mechanical properties.
- The design shall be similar to the NHS visor type design. Proposals for alternatives will also be considered.
- CE marking is initially not required although Network Rail acceptance will be based on the capability of the product in line with the specification and to be successfully certified in the fullness of time.

3.2.2. Maintenance use

Our typical maintenance worker will spend 4 hours to 8 hours per day out on the railway infrastructure. The face shield / visor needs to be suitable to fit a standard safety helmet and be comfortable for the user experience.

The visor needs to be suitable for typical UK weather and a person undertaking strenuous work at times

The visor needs to be Impact resistant. Occasionally ballast stones are kicked up at staff and therefore must resist such an impact at the face area. Our staff normally wear safety glasses Staff will undertake close work and so scratch resistance and lack of distortion are important

Network Rail are seeking designs which can conform to the following technical specification:

- EN166 class 1 optical quality and class S for mechanical properties.
- The design shall be mounted on standard NR safety helmet (size to be confirmed)

- The visor must be removable from the safety helmet
- Perspex to be scratch and shatter resistant (class 1 impact B or A)
- All surfaces must be washable, will not be degraded by disinfectants and steriliser and the ability to clean daily is essential
- Straps must be removable and replaceable
- Size must protect the face but allow the worker freedom of movement to achieve work safely
- CE marking is initially not required although Network Rail acceptance will be based on the capability of the product in line with the specification and to be successfully certified in the fullness of time.

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- Availability including:
 - Information on the origin location of components
 - Manufacturing capacity per week
- Lead time – for development, manufacturing and delivery
- Conformance to the specification above or activities required to meet this
- If frame type, confirmation on availability of straps, and filter materials
- Availability of Perspex cleaning materials; to avoid scratching and damage to surfaces