Covid-19 Face Shield Clips - Overview

Quick to produce, low cost face sheild for protection against aerosol droplets.

Two clips and a hole-punchedsheet of A4 clear film can be easily attached to many items of standard PPE or used with an elastic headband or strap to make a quickly donned, effective, disposable face shield at the lowest possible cost. They have minmal transport and storage overheads. They can be packaged as small kits of pre punched film, clips and an elastic headband for rapid deployment.

Currently 3D printed in PLA but designed to be mass produced in large quantities using injection moulding with very simple tooling.

Testing so far has shown these to work well with a respirator or face mask with minimal fogging issues. They are surprisingly comfortable in use.
I envisage these will be used by care workers, public facing officials, police and the general public and free up more robust PPE for front line NHS workers.

I have made the files needed to print these available in the first instance through Thingiverse under a creative commons licence. They can be found here:

https://www.thingiverse.com/thing:4263301

Please contact me directly by email at iain.mitchell02@ntu.ac.uk if more information is required
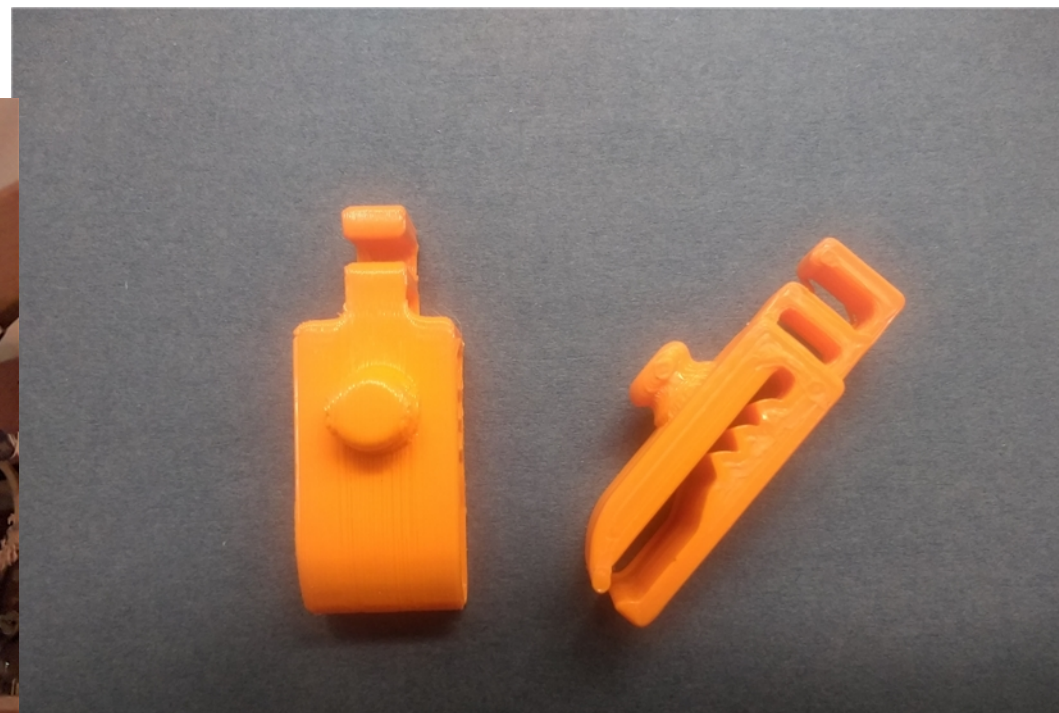
One pair of clips and an elastic band works remarkably well and is about as low cost and disposable as it comes. A headband or wider elastic loop will work just as well. Clearance from the face is adjusted simply by sliding the clips to the front or rear. The design pivots in use when the head is lowered which initially I had thought would be a problem but it actually has advantages over a fixed shield as it prevents digging into the neck or shoulders and helps to prevent the shield being dislodged, whilst offering more protection to the top of the head at the same time

They clip securely onto the legs of safety glasses and spectacles. They do also attach directly to the straps of some makes of respirator
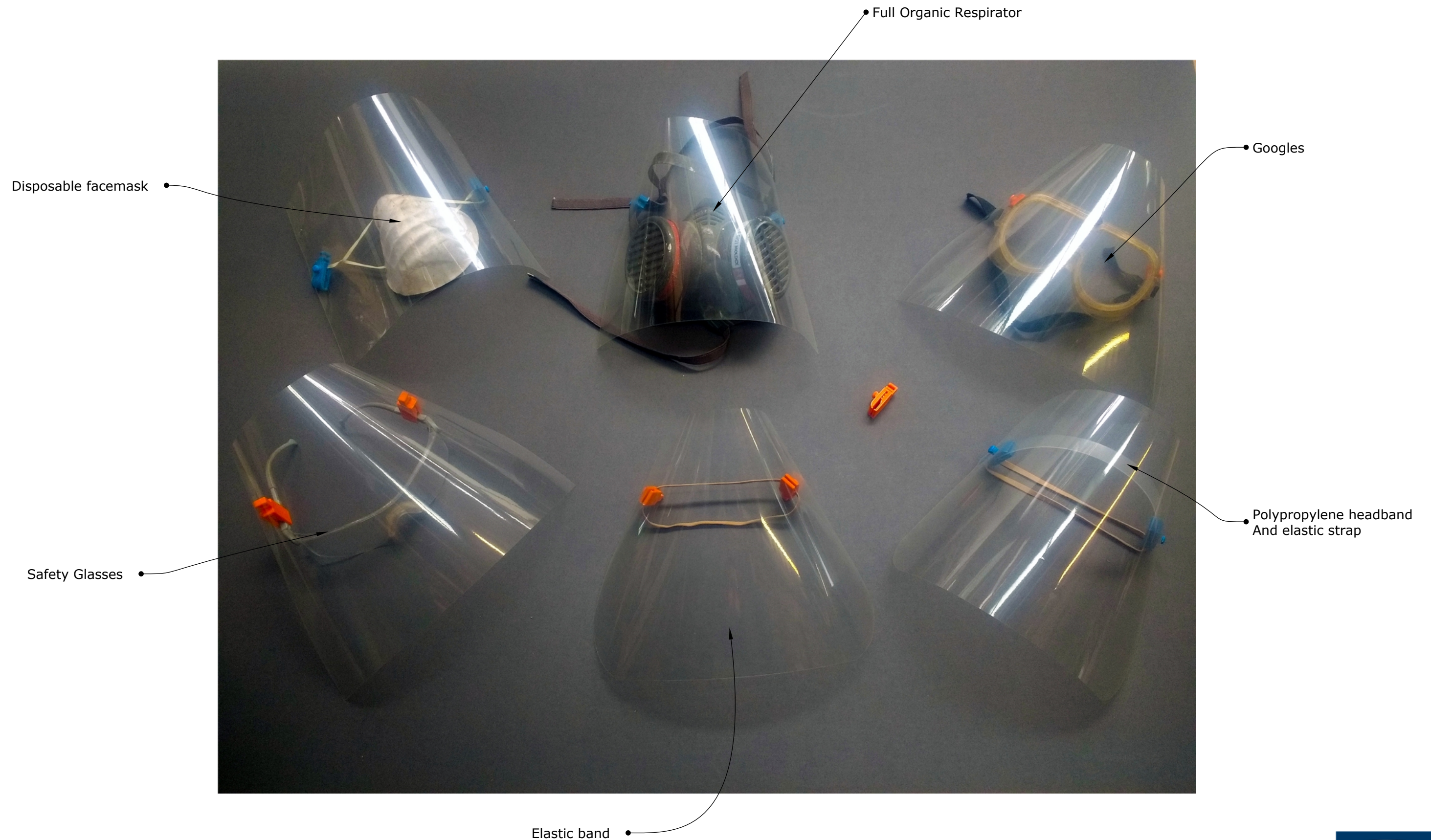
Designed by,
Iain Mitchell | Senior Workshop Technician - Fabrication
Department of Engineering | School of Science and Technology
Room 001 | Engineering Building | Nottingham Trent University |

NTU
NOTTINGHAM TRENT UNIVERSITY

Covid-19 Face Shield Clips
Some ways to deploy

Full Organic Respirator

Googles

Disposable facemask

Polypropylene headband
And elastic strap

Safety Glasses

Elastic band

Designed by,
Iain Mitchell | **Senior Workshop Technician - Fabrication**
Department of Engineering | School of Science and Technology
Room 001 | Engineering Building | Nottingham Trent University |

NTU
NOTTINGHAM
TRENT UNIVERSITY

Covid-19 Face Shield Clips