



WES Safety Clothing and Footwear Survey Results

A survey of women
and men in the
science,
engineering,
technology and
built environment
about their
experiences with
personal protective
equipment

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&
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The Women's
Engineering Society in
association with



1. Background

This survey was undertaken using the Survey Monkey on line survey tool.

The project team brought together by WES (Women's Engineering Society) to address the issues surrounding the available PPE clothing includes representatives from:

- The Association of Women in Property
- Women and Manual Trades

1. The Women's Engineering Society (WES) is the voice of the Woman Engineer. WES inspires women to achieve their potential as engineers, scientists and leaders. Members work in engineering, science and technology at all levels of seniority and with a variety of different qualifications. Membership includes students on engineering and related courses, companies and others who share WES' aims.
www.wes.org.uk
2. Women and Manual Trades (WAMT) is a national membership organisation for women training and working in non-traditional manual occupations. Established over 30 years ago, it provides a range of services to support tradewomen including an online 'Find a Tradeswomen' directory, which the public can search to find a tradeswoman in their area. In spring 2009 a three-year 'Building Work for Women' programme was completed, which helped newly-qualified tradeswomen get a head start in their career by giving them extra skills and work experience. WAMT has also delivered projects on behalf of the Olympic host boroughs, teaching DIY skills to unemployed women.
www.wamt.org
3. Women in Property is a national organisation which was founded in 1987. With over 1,400 members and 12 regional branches it represents all disciplines within the property and construction industry and provides a forum for business opportunities, the exchanging of views, networking and personal development.
www.wipnet.org



WES safety clothing survey

This survey was undertaken by the Women's Engineering Society to inform the collaborative work programme around personal protective clothing (PPE) that is being developed with Women and Manual Trades, the Association of Women in Property and the WISE Campaign.

Purpose of survey

We set the survey up to provide some facts to support the anecdotal evidence from on-line discussions about the personal protective equipment (PPE) worn by women. We wanted to understand:

- Is there a real issue with PPE for women?
- What type of PPE is most problematic?
- What could be improved?

We were spurred on by an initial email survey in 2006 of PPE suppliers which was summed up by one company "we know this is an issue but it isn't a priority". Some distributors do stock PPE in women's sizes but often this is just an extension of men's clothing and is even designed around a male mannequin.

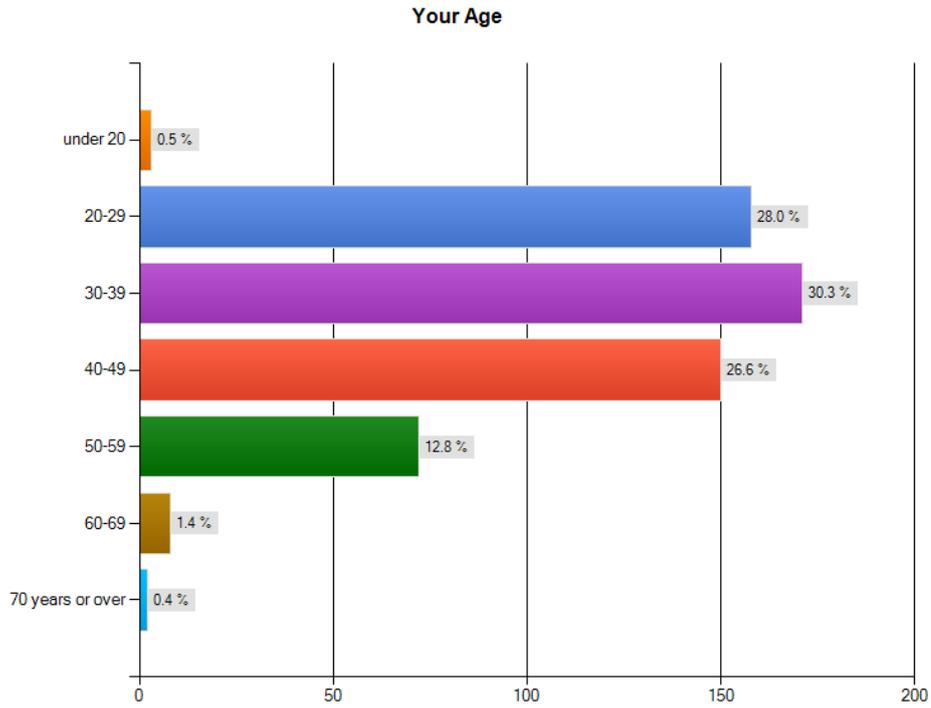
Respondents

The survey link was hosted on the WES website and the survey was developed using the Survey Monkey tool. The survey opened on 11 September 2009 and was promulgated through newsletters, journals, women's networks, Prospect and Unite and personal connections of the partners organisations. It was promoted through the engineering press and two WES members took part in a discussion on BBC Radio 4 Woman's Hour.

- Over 550 responses including x men.
- Only 25% of respondents were associated with a women's network

The age distribution of the women respondents covered a broad spectrum with the majority being early – mid career:





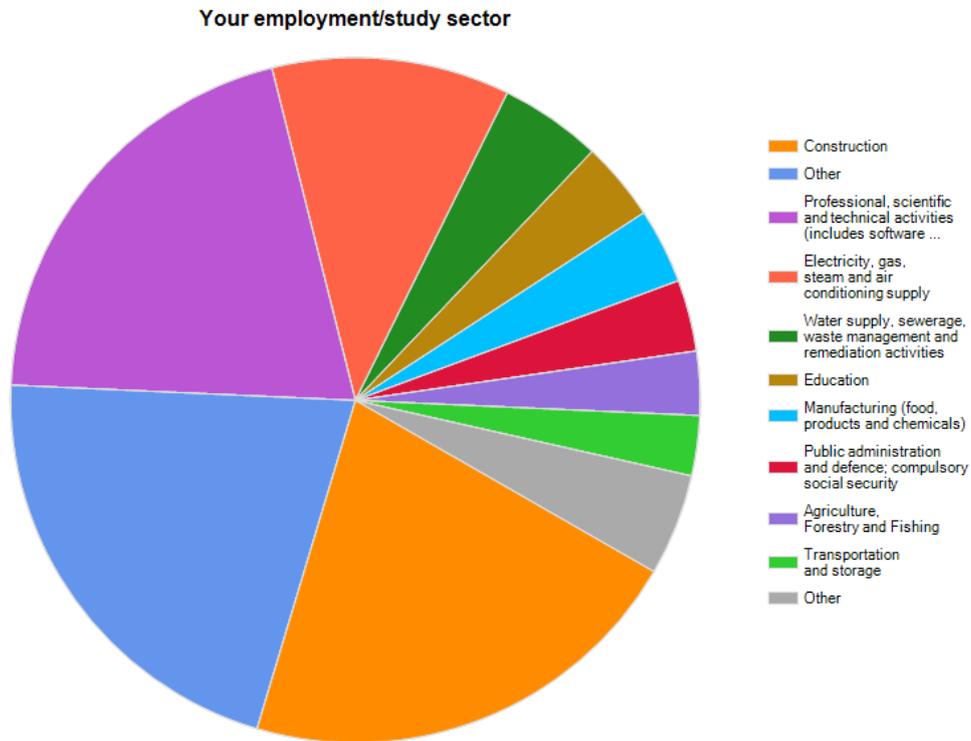
91% of female respondents were employed, 2.8% between jobs and 4.4% students. Just 07% were on a career break and the same percentage retired.

Responses by Sector

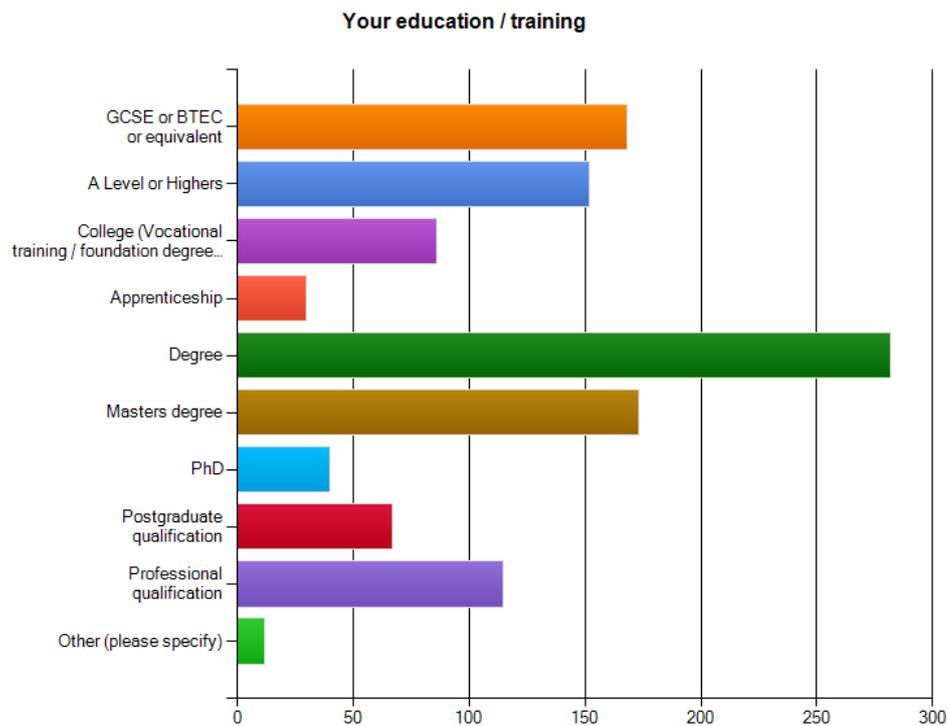
21.3% construction, 20% work in professional, scientific and technical roles and 11.2% electricity, gas steam and air conditioning supply.



Of the 21% who described their work in other areas, the most commonly mentioned were archaeology and environmental including conservation



Respondents had a variety of educational backgrounds, 15% had obtained a vocational training, foundation degree or City and Guilds qualification; half were educated to degree level and a fifth also had a professional qualification.



Personal Protective Equipment

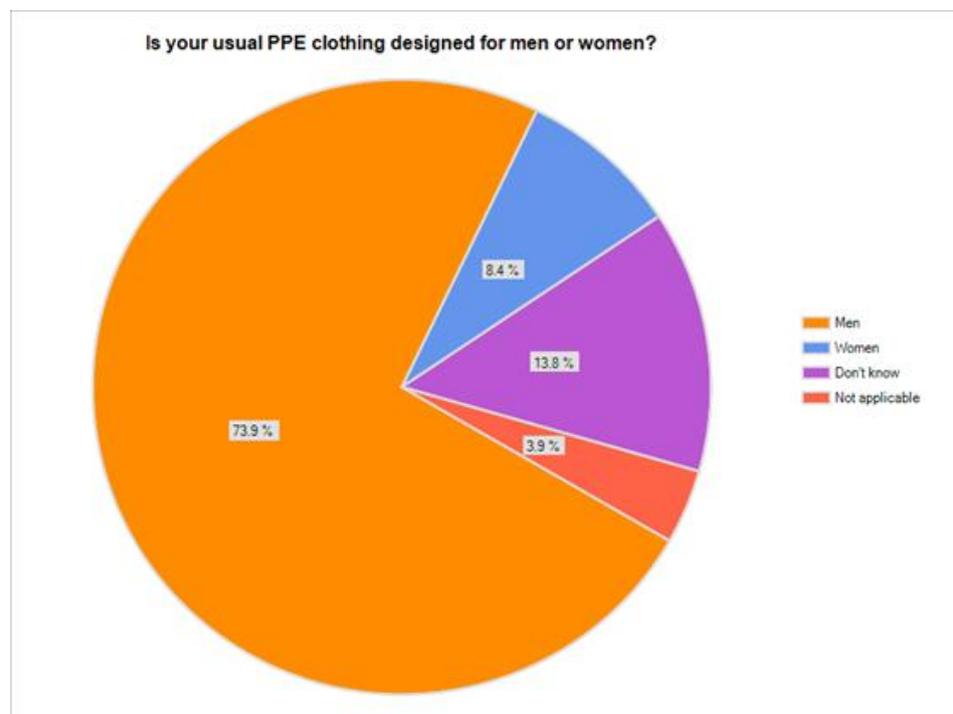


Three quarters of PPE that respondents use is purchased by the employer and the employee owns and looks after it. Ten percent of respondents borrow the PPE from a pool. And ten percent purchase their own.

Two thirds of respondents wear their PPE as a formal requirement of their work or course of study.

Do women wear specially designed PPE?

The majority of PPE worn by the women respondents (three quarters) was designed for men and a small percentage, almost a fifth didn't know or said it wasn't applicable whether the PPE was designed for men or women. Only 8% wore PPE designed for women.



PPE comfort

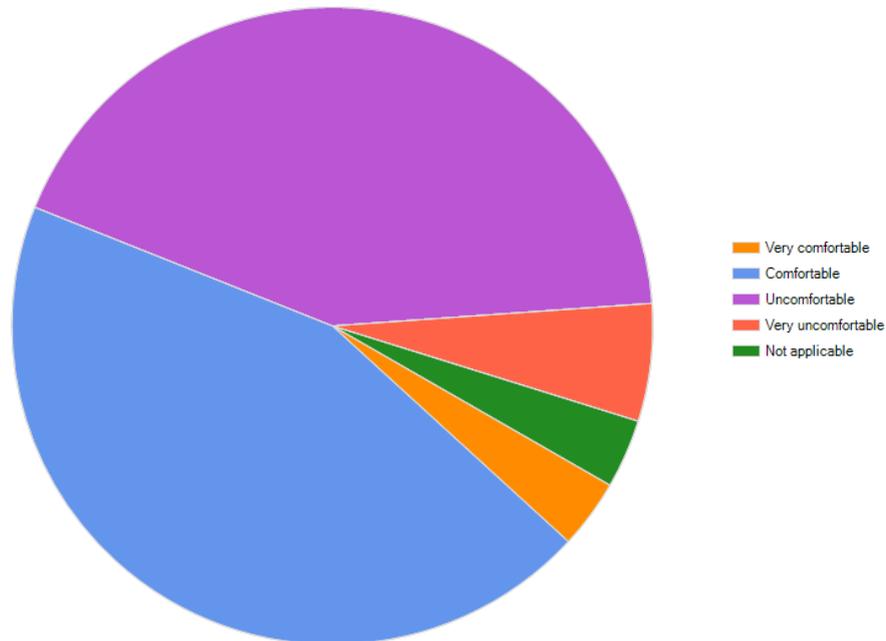
There were significant discomfort levels among PPE wearers. Half described their PPE as comfortable or very comfortable half described it as uncomfortable or very uncomfortable. When the male respondents are filtered out satisfaction levels fall.

A cross comparison of women who wore PPE designed for women showed a big increase in the levels of comfort.

Of the women who wore PPE designed for men only 2% described it as very comfortable and 42% as comfortable. Almost 60% described it has uncomfortable or very uncomfortable with male respondents saying this wasn't applicable. This was followed by a rise in the level to which the PPE has hampered their work to over 60%.



How comfortable is your PPE?



We asked for more information about the problems encountered with the PPE and had Over 240 responses. Some of the more common answers are:

'Shaped for men. Pops open in places. Arms and legs too long'

'Safety shoes in the right size is very difficult'

'Too big, too heavy'

'Shoes and vest fit OK but the winter jacket is huge'

'It doesn't tend to fit in the right places!'

Some of these were elaborated with often amusing or wry anecdotes for example the challenge of having to work for long periods in a crouching position wearing a jacket that was large enough to go around hips but left too much fabric ruckled up around the chest and armpit region making working very difficult especially when crouching

Which PPE clothing is the worst?

During the survey development it became obvious that ill fitting boots weren't the only problem. The survey asked about the PPE that people had to wear that was ill fitting. The question was not compulsory and some respondents only chose to answer the relevant fields.

The most frequently cited items were:

- Jackets (76%)
- Gloves (59%)
- Shoes (57%)
- Trousers (56%)



- Headwear (29%)



Again many descriptions of the difficulties were given:

'Overalls fit Ok but getting safety shoes in the right size is very difficult. Either women's are too narrow (and look awful) or the equivalent men's are too big and don't fit properly.'

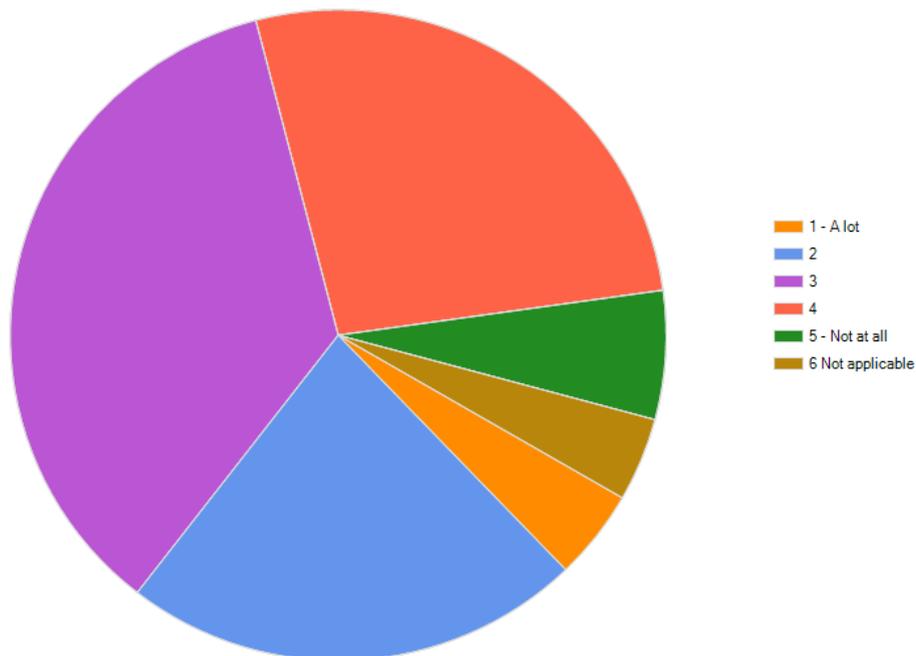
'Shoes are bought to fit me, lab coat is the right size, sleeves a bit long but not a problem safety specs are prescription and so ordered specially'

'Gloves in particular are too big and make it difficult to handle stuff - also they fall off easily'

How does ill-fitting PPE hamper work?

Over half of respondents reported that their PPE has hampered their work in some way. With a quarter reporting this as significant.

On a scale to 1 to 5, to what extent has ill fitting PPE hampered your work?



- 'Big clothes can be a safety hazard'
- 'Oversized gloves make it difficult to work safely or accurately'
- 'Boots not fitting correctly caused me to stumble on site'
- 'Jackets too big, sleeves too long....it reaches almost down to my knees so hard to walk up and down banks'

Found when wearing boiler suits I have had to wear a belt...body length is generally too long, so the crotch ends up around my knees affecting the way I walk.



Cannot move fast enough!! Dangerous around heavy plant



We were curious to learn if wearing PPE when pregnant was an issue and had almost a fifth of respondents having worn PPE up to different stages of pregnancy. This was accompanied with a range of comments such as:

Used my existing PPE as no maternity PPE available. Coats etc. were large enough to cover my bump!

I needed to wear a much larger size, hence it only fitted round the "lump" not anywhere else! My jacket actually fit better when I was larger Garments too tight and sometimes having to open zippers in order to perform tasks, making PPE useless

Luckily I stayed very slight, so it wasn't too much of a problem - no more than usual, although I did have to roll the waistband on my waterproof trousers down around the base of my belly, otherwise they were uncomfortably snug

It fitted just as well as usual!!

What can i say, its not designed for pregnant women but you make do with larger sizes and roll up sleeves etc - pretty normal even when not pregnant

Better! My bump filled up the usually oversized high vis jackets/vests! Nightmare!!! My normal cleanroom suit wouldn't do up over my bump. I had a to wear an extra large size and ended up like the Michelin man with rolls of material all down my arms and legs!

Summary and next steps

Some of the comments in the survey should ring alarm bells for training organisations and employers:

I left engineering because I could not use engineering equipment, because the clothing was not female friendly.

The survey results fitted with the anecdotal evidence that led to the survey development. For the most part ill-fitting PPE has not been something that has been a major complaint, but rather something that has been accepted as part of 'the way things are'. Early enquiries made by members of the Women's Engineering Society of PPE clothing manufactures in 2006 and 2007 were similar:

We know it's an issue but it's not a priority'

This survey has demonstrated how widespread the issue is but also shows the lack of awareness of the availability of PPE clothing designed for women and how women's PPE still falls short of the mark in terms of comfort and being 'fit for purpose'. As with women's



clothing designed for the 'petite' frame there is no simple solution for a perfect fit as petite in height may not mean a lack of curves.



In taking this campaign forward, WES, along with the partner organisations will develop a wider campaign around the Purple Boot theme and as part of this will:

- Publicise the need for women's fit for all PPE with some technology built into the design
- Build links with manufacturers
- Development of a dedicated range of PPE in women's sizes with a bit of technology built in.
- Promote safety clothing and the people who wear it in a major campaign connecting the wearers with young people to share the excitement of our jobs with others.

WE will also aim to use this on-going campaign to help change the perceptions of the women who work in engineering, technology, science and the built environment. AS a starting point we asked a question: tell us about your favourite shoes and found a wealth of humour, stories and pragmatism among these women:

Pink steel toe caps, brilliant and just because you are on site and can shift tonnes of soil a day doesn't mean you are not a woman.

Female Archeologist

All beautiful pair of purple patent leather heels which I wear with suits to boring meetings as they make me smile and cheer me up knowing they are under the table!!

Female Health and Safety Inspector

And PPE footwear isn't just for working on site:

My workboots. Grinell safety walking boots. They are so comfortable I practically live in them. I wear them out of work at home to go walking and casually. They look good with all my trousers. I would like to add here I have trouble getting trousers to fit. I am a small size 8. Not every supplier does this size and even my current size eight trousers and small clothing I wear drowns me.

Female Nature Conservationist



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