

Developing understanding of target audiences

Local exhaust ventilation

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Amongst the planned activities of the Health and Safety Executive (HSE) for 2009/10, a significant element is aimed at reaching and influencing two different audiences with regards to LEV (Local Exhaust Ventilation). These audiences are: supply-side stakeholders; and SME businesses that use LEV to control their employees' exposure to hazardous substances. To inform these activities, a qualitative research study was carried out with users and suppliers of LEV equipment in April, May and June 2009. The objectives of the study were:

- To establish the current level of awareness and attitudes towards work-related disease amongst supply-side stakeholders and a sample of SME users in the HSE's target occupational groups of wood-working, general rubber goods manufacture, welding, soldering, and stonemasons.
- To determine the key influencers, enabling factors and barriers to good practice (in the context of preventing work related disease in the HSE's target occupational groups) among LEV supply-side stakeholders and a sample of SME users.
- To seek information on effective communication strategies amongst the target audiences.

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EXECUTIVE SUMMARY

Background and Objectives

Amongst the planned activities of the Health and Safety Executive (HSE) for 2009/10, a significant element is aimed at reaching and influencing two different audiences with regards to LEV (Local Exhaust Ventilation). These audiences are: supply-side stakeholders; and SME businesses who use LEV to control their employees' exposure to hazardous substances.

To inform these activities, a qualitative research study was required, with the following objectives:

- To establish the current level of awareness and attitudes towards work-related disease amongst supply-side stakeholders and a sample of SME users in the HSE's target occupational groups of wood-working, general rubber goods manufacture, welding, soldering, and stonemasons.
- To determine the key influencers, enabling factors and barriers to good practice (in the context of preventing work-related disease in the HSE's target occupational groups) among LEV supply-side stakeholders and a sample of SME users
- To seek information on effective communication strategies amongst the target audience

Sample Framework

A total of ninety user companies (giving one hundred respondents) were interviewed via individual and paired depths, both face to face and by telephone. All were Managing Directors (MDs) or main decision-makers in SMEs, spread throughout Great Britain.

In addition fifteen supplier companies were interviewed, with the interviewee being the Managing Director, another decision-maker or a sales representative. A small number of other company members were also interviewed at the same time as the key decision-maker.

Fieldwork took place between April – June 2009.

Main Findings

The occupational groups in the sample tended to display some similarities. For instance, rubber and electronics (soldering), generally the more modern and high-tech occupational groups in the sample, often had a clear division, in job role, between the shop-floor and office/administrative functions. These rubber and electronics companies tended to be involved in more complex processes, with the actual rubber-working or soldering comprising just one element of the overall production process. MDs of these companies could have a background in management or sales/marketing, and may have never worked on the shop-floor in these industries.

The stonemasonry and woodwork occupational groups, on the other hand, were businesses dependent upon their workers' craftsmanship and skills. These occupational groups tended to be involved in a more creative process, with everyone in the company aware of the end product,

rather than focusing simply on their small role in the overall process. The MDs in stonemasonry and woodworking companies were more likely to have worked their way up from the shop-floor, and many were still playing a 'hands-on' role.

Welding companies were more diverse than the other occupational groups, with small, informally structured companies predominant. Like stonemasonry and woodwork, they relied on their workers' knowledge and skills, and all three tended to be less reliant upon technology, reflecting the manual nature of the business with which they were concerned.

From the research findings, a three category typology of companies was constructed. Each category was characterised by a particular mindset in terms of attitudes towards the risks and hazards to which they were exposed. These have been classified as Category 1, 2 and 3, according to their behaviour and attitudes in respect of ventilation issues. A table is included in the Appendix, outlining their characteristics..

Category 1 companies were generally the medium sized companies or the 'larger' small businesses and they comprised around one in ten of the sample. They were most likely to be found in the soldering and rubber occupational groups, although there was one amongst the welders. Their knowledge and interest in the risks associated with their occupational group was obvious, as was their determination to take every precaution to prevent employees being exposed to unacceptable risks.

The majority of companies fell into the category 2 or 3 brackets, with category 2 outnumbering category 3. Roughly two thirds of the sample fell into category 2 and roughly one in five into category 3. The category 2 companies ' attitude to health and safety was characterised by a disregard, albeit somewhat reluctant,, for some of the finer points, such as the annual or 14 monthly inspections of LEV equipment. Category 2 companies were found in each of the occupational groups.

The category 3 companies had little interest in health and safety. These were principally small companies and predominantly found in welding, although with some presence in the other occupational groups. Key characteristics were lack of interest in health and safety, using old or second-hand LEV equipment if using any, and a relaxed approach to the control of risks and hazards.

MDs in the sample were delegating health and safety responsibility, although there was general recognition that they were ultimately responsible for health and safety on their premises. Level of interest in health and safety varied, although those in the category 1 and 2 companies were more likely to express an interest than those in the category 3 companies. Regarding ventilation, MDs were, on the whole, confident that they were doing enough to protect their workforce.. They demonstrated some awareness of the risks, or perceived lack of them, inherent in their sector and some knowledge, or at least conviction, that they were taking all or most of the necessary steps to minimise that risk.

A key concern amongst the companies in the sample was the current economic climate and its impact on business. For many, the survival of their company at the present time was uppermost in their minds. This was especially true for those involved in the construction trade, or with building repairs or improvements. Welders, stonemasons and woodworking companies mentioned reductions in the number of contracts received;, client budgets cut and work postponed. Only a minority of businesses felt they were thriving, mostly within the rubber and electronics (soldering) sectors.

A hierarchy of concern emerged in respect of health and safety, with safety seen as more important than health. Concerns regarding health tended to concentrate on those issues with an immediate impact, or which endangered health in the short-term. Health concerns relating to anything which might cause a delayed or long-term impact on health were rarely considered, except by category 1 companies. Long-term health risks resulting from noise, fumes and dust were mentioned but tended to be downplayed. Category 2 and 3 companies tended to regard them more as unpleasant by-products of working in the sectors in question, rather than as serious threats to health and well being. This was perhaps not surprising, given the relative lack of awareness of specific health threats posed as a result of exposure to these hazards, or the fact that statistical evidence relating to the vulnerability of these occupational groups was perceived not to exist.

Use of LEV and RPE varied, depending not only on whether the company fell into the category 1, 2 or 3 band, but also on the occupational group in question. The category 1 companies all possessed, and were using, LEV, as were the majority in category 2, but less so in category 3, where, although most it, it was not always used. Within the occupational groups, – stonemasons and welding companies – were less likely to use LEV on a regular basis than the others. When LEV was not used, RPE was often supplied and generally, but not always, used.

A number of key influencers to good practice were mentioned, with the major influencer being a full time, dedicated Health and Safety Manager. Not only were these specialists in health and safety, but they also had occupational sector-specific health and safety knowledge, which set them apart from the external consultants. No other influencers were found to be as powerful as dedicated internal Health and Safety Managers. In terms of next most powerful influencers, external sources such as Health and Safety Consultants played a part, but their influence was limited due to their general lack of disease-related knowledge specific to that occupational group, coupled with a lack of detailed knowledge of LEV. Where businesses were working for Local Authorities and other contractors, these emerged as having some influence in ensuring good practice, but mainly as regards ensuring a greater adherence to Health and Safety Regulations generally. Respiratory issues and ventilation needs appeared to be left to the judgement of the subcontractor. Subcontracting by the users themselves appeared not to be a significant influencer. Subcontractors were treated as their own staff with no special arrangements made as to their health and safety, other than ensuring they were supplied with the organisation's health and safety requirements on arrival.

A number of other influencers emerged, not widespread, but nonetheless present in a minority of cases. These included a previous HSE inspection or a previous accident. These were both powerful drivers in ensuring improved attention to health and safety, although they only guaranteed best practice, in relation to prevention of work related diseases, where the inspection or incident actually related to ventilation.

Enabling factors, construed as facilitators to good practice in disease reduction, rather than influencers, were almost non-existent. There was a little evidence of downloading of HSE risk assessments, but these were unlikely to relate specifically to the need for ventilation. In a few category 1 and 2 companies a relationship had developed between user and supplier, with some opportunity to discuss health and safety matters. However, most did not have a relationship with their supplier, which suggests there is some way to go before suppliers' potential as a facilitator of good practice can be exploited.

A number of barriers to good practice emerged, and were frequently voiced by category 2 and 3 companies. These comprised ignorance and complacency, specifically a lack of knowledge of the diseases and conditions resulting from fumes and dust, coupled with a prevailing mindset that there was nothing to fear. In fact, where a risk was suspected, it was often seen as a normal

and acceptable hazard of that occupation. Another major barrier was cost, not only of equipment but also of inspections and maintenance equipment. Time-factors and hassle involved emerged as additional barriers to compliance. Attitudes to HSE, principally fear of recriminations, in the form of inspections and resulting need for action, not only in relation to ventilation, but also in respect of general health and safety practices throughout the company, could comprise yet another deterrent to seeking advice.

Current communications – the HSE publication *Clearing the Air* (both the employee and employer versions) – had some appeal, in their visuals, coverage of various topics and tips. There was, however, also some low key criticism, regarding the perceived focus on detail, such as correct use of LEV and its maintenance, rather than on why it was needed in the first place. The findings suggest that a two-stage approach may be useful for communicating with category 2 and 3 companies, focusing initially on an introductory level to generate interest, followed by a secondary level to explain requirements.

In terms of channels, the ideal communications channel was found to be those that were HSE endorsed and, preferably those that involved HSE taking the initiative and making contact with users directly. Email bulletins were the preferred method of communication amongst these decision makers, with the HSE website (once its profile had been raised) and other HSE forums, such as road shows also popular. Other potential communication channels were discussed, with various official bodies such as Trade Associations, Business Link, the Federation of Small Businesses and Chambers of Commerce all emerging as potential conduits of information. Trade press and trade exhibitions were also seen as good vehicles for HSE messages. External Health and Safety Consultants could be another powerful channel for information relating to the risks. Suppliers of relevant trade equipment, e.g. tools, machinery, stone, metal, could assist in the future as channels for health and safety information, and Inspectors and Insurance companies could also be used.

Suppliers were split into two groups: top tier suppliers who showed an active interest in their clients' health and safety, considering themselves responsible and demonstrating considerable knowledge of the risks peculiar to each occupational group; and second tier suppliers who considered their clients' health and safety to be the clients' own responsibility and did not aim to take on an advisory role in this regard. Moreover, this tier displayed less knowledge of, or interest in, the risks to which particular occupational groups were exposed.

Business concerns of the suppliers included the current recession and clients' reluctance to have their equipment checked. Additionally, due to the recession, fewer new clients were coming forward to have ventilation equipment installed. LEV equipment was reportedly perceived as expensive. This was also leading to customers being even less likely to invest in effective LEV, choosing to opt for cheaper, more basic equipment.

Numerous key influencers to good practice were cited by suppliers, including reduction in costs and employee sickness, advice and recommendations from external consultants, fear of litigation, and pressure from HSE, Local Authorities, Insurance companies and employees themselves. Enabling factors comprised information sources such the HSE website and road shows.

Barriers to good practice included cost, i.e. the perceived expense of LEV; ignorance on the part of suppliers and users in identifying the correct equipment, and the selling process itself, whereby suppliers were wary of being too forceful in respect of health and safety, lest they jeopardise the client relationship.

HSE Communications on LEV were generally thought to be insufficiently hard-hitting. Scare tactics, including statistics and facts on the diseases and conditions resulting from exposure to dust and fumes, were needed, according to suppliers, coupled with HSE support to ensure users undertook the necessary inspections and maintenance on their equipment. Suppliers would be happy to channel appropriate HSE branded communications to users. There was some feeling that it would be good to target employees and encourage them to put pressure on management.

Conclusions

The Way Forward comprises policy recommendations, based on the data emerging from the fieldwork, and subsequent qualitative analysis of the issues, inferences and implications. These policy recommendations focus on the need initially to raise awareness of the hazards to which these occupational groups are exposed. Such a strategy needs to be supported by hard facts and statistics underlining the severity of the threat in order to overcome the barriers of ignorance and complacency. This is the point at which to mention any legislation relating to ventilation, and that enforcement action may result from failure to comply. The principal target audience is both Managing Directors and employees. Secondary audiences comprise suppliers, Health and Safety Consultants and Insurance companies.

Subsequent focus of the strategy should be on what LEV is needed and especially the fact that LEV needs to be bespoke and appropriate for a particular role within an occupational group. Issues relating to checks, maintenance and record keeping also need to be addressed, including the fact that annual / 14 month inspections are mandatory. This is the point at which to seek to offset concerns regarding the cost of this equipment and process with arguments explaining the cost of getting installation wrong, the cost of doing nothing and the cost of employee sickness to business.

Interested parties need to be directed to HSE resources, such as an HSE helpline dealing with ventilation needs in confidence, and to the HSE website which should support the campaign with prominent, clear and easy access to advice on ventilation issues. HSE's Clearing the Air could become a two stage booklet, focusing initially on an Introductory Level to generate interest, followed by a Secondary Level to explain requirements.

Control of Substances Hazardous to Health (COSHH) data sheets could be utilised further, with guidance as to the hazards of dust and fumes and direction to the HSE website for 'more information on what you can do to protect you and your workforce'. Additional channels of communication, apart from HSE, range from various official bodies such as Trade Associations, Business Link, the Federation of Small Businesses and Chambers of Commerce to trade press, trade exhibitions, suppliers of LEV and suppliers of relevant trade equipment.

Other bodies could perhaps be mobilised to assist HSE in its goals of disease reduction. These include Insurance companies, who could demand adherence to the HSE requirements in respect of LEV. Another option would be to consider institution of an industry accreditation system for suppliers, inspectors and Health and Safety consultants and for these bodies to assess user compliance and perhaps to license companies, on a regular basis, to continue business.

The measures suggested and the channels via which they can be conveyed to the target audiences should assist in the elimination of poor practice in respect of LEV and help to reduce the number of employees at risk of ill-health and premature death due to inadequate LEV equipment.

1 BACKGROUND, AIM AND OBJECTIVES

1.1 BACKGROUND

Amongst the planned activities of the HSE for 2009/10, a significant element is aimed at reaching and influencing two different audiences with regards to LEV (Local Exhaust Ventilation). These audiences are: supply-side stakeholders; and SME businesses who use LEV to control their employees' exposure to hazardous substances.

1.2 AIM

To develop an understanding of the knowledge-base, attitudes and influencers of LEV supply-side stakeholders and SME users of LEV in the context of preventing work-related disease amongst SME users in the HSE's target sectors.

1.3 OBJECTIVES

The objectives of the research were:

- To establish the current level of awareness and attitudes towards work-related disease amongst supply-side stakeholders and a sample of SME users in the HSE's target occupational groups of wood-working, general rubber goods manufacture, welding, soldering, and stonemasons.
- To determine the key influencers, enabling factors and barriers to good practice (in the context of preventing work-related disease in the HSE's target occupational groups) among LEV supply-side stakeholders and a sample of SME users
- To seek information on effective communication strategies amongst the target audience

1.4 INTERPRETATION OF THE DATA

Qualitative research is not intended to be statistically representative, nor is the analysis process meant to be objective. Qualitative data is drawn as much from what was *not* said by respondents, as from what was said, and by contrasting attitudes found in one group of respondents with those in another. The analysis process seeks to understand the implications of such data, identifying main themes which emerge from across the sample as a whole, giving shape to similar attitudes or groupings where they can be detected, explaining contradictions and highlighting lone or niche ideas only if it is thought they may provide useful stimulus or food for thought.

Qualitative research seeks to step inside the heads of respondents, to understand the world from their point of view, and to translate that into useful and actionable findings for clients. Sometimes this means qualitative researchers can turn directly to what respondents themselves have said for evidence to support ideas and recommendations. At other times though, inferences have to be drawn and implications drawn out. Thus it is possible, with the qualitative researcher's rounded, 360 degree view of an issue, to draw conclusions and recommend a way forward.

2 METHODOLOGY AND SAMPLE

2.1 RESEARCH APPROACH AND SAMPLE

Amongst users, five occupational groups were covered: woodworking, rubber goods manufacture, soldering, welding and stonemasons. Forty individual depth interviews, ten paired depth interviews and forty telephone interviews were conducted, giving a total of 100 SME user respondents across 90 SME companies, eighteen per occupational group.

User sample was derived by the usual qualitative methods of face-to-face recruitment and telephone recruitment using business directories. Supplier sample was sourced from trade association lists. All recruitment was supported by a letter from HSE detailing the purpose of the research and inviting participation.

Small companies (fewer than 50 employees) were in the majority. The occupational group with the most medium sized companies (ie over 50 employees) was soldering, with six companies out of the total of eighteen, followed by rubber with three. Amongst the stonemasons, two companies were medium sized whilst amongst woodwork and welding there was only one medium sized company in each group. Feedback from recruiters suggests this could well be a reflection of the marketplace, but this belief is anecdotal and not substantiated.

Depth interviews were ideal for this study, given its focus on understanding individual practices and histories. The depths allowed us space and time to hear the stories of individuals and their organisations, and to learn what influences them, as well as to understand their attitudes, behaviour and views.

The majority of face to face depth interviews were with the MD and each interview lasted around an hour. Paired depths comprising the main decision maker (MD) and a key adviser or influencer on LEV, and lasting around 1.25 hours, also took place. All the interviews were conducted on-site.

Forty telephone depths, each lasting around 40-45 minutes, were included in the sample. This methodology had the additional benefit of giving respondents an extra degree of anonymity and therefore more freedom to talk candidly about the health and safety related issues being discussed.

Some aspects of the on site interviews with SMEs were captured on video, once the interview had taken place, to give some resonance to the findings.

Fieldwork took place during April, May and June 2009.

LEV supply side stakeholder research was conducted as depth interviews (individual and face-to-face) in recognition of several factors. First, there was the need to maximise coverage of this group and get as much breadth in this target audience as possible, both geographically and in terms of different sorts of companies (e.g. by size, turnover, etc). Second, questions of company privacy emerged, in that there could have been a reluctance to share what could be seen as sensitive data with competitors and thus a resistance to anything other than a one-to-one interview. Finally, the nature of the information sought was very much individual

(organisation) specific, in that it related to company history, mission, structure, organisation and practices and thus required each respondent to tell their story, explore their own concerns and hopes, to articulate any gaps and propose remedies they might have felt were appropriate.

Ten of these depth interviews were with the MD in each company, as main decision maker. These individual depth interviews each lasted around 1 hour and took place at the respondent's place of work.

An additional two interviews were conducted with the MD and also included brief discussions with a couple of other relevant staff, either from the finance department or from the sales & marketing team, on-site at the time, so a more rounded perspective on the issues was gained. These lasted around 1.5hrs.

A further three Interviews lasting 1 hour each were conducted with sales representatives, since they were the interface between trade and users, and were able to provide views on some key elements within the objectives: winning new business; the health effects of their clients' work activity; other health & safety issues, etc.

In total, 15 companies on the LEV supply side were interviewed, across Great Britain, with all but one at the respondent's place of work.

Some aspects of the on site interviews with suppliers were captured on video to give some resonance to the data.'

NB It is important to note that the aim of this research was to provide a qualitative insight into attitudes and behaviour in respect of disease prevention. The research does not aim to suggest that the behaviours and attitudes outlined in this report represent those of all suppliers or all MDs / senior decision makers within the user groups.

3 RESEARCH FINDINGS: USERS

3.1 PEN PORTRAITS OF THE OCCUPATIONAL GROUPS

The following pen portraits detail key characteristics of each of the occupational groups in the sample. Some similarities emerged between particular occupational groups.

The occupational groups in the sample tended to display some similarities. For instance, rubber and electronics (soldering), generally the more modern and high-tech occupational groups in the sample, often had a clear division, in job role, between the shop-floor and office/administrative functions. These rubber and electronics companies tended to be involved in more complex processes, with the actual rubber-working or soldering comprising just one element of the overall production process. MDs of these companies could have a background in management or sales/marketing, and may have never worked on the shop-floor in these industries.

The stonemasonry and woodwork occupational groups, on the other hand, were businesses dependent upon their workers' craftsmanship and skills. These occupational groups tended to be involved in a more creative process, with everyone in the company aware of the end product, rather than focusing simply on their small role in the overall process. The MDs in stonemasonry and woodworking companies were more likely to have worked their way up from the shop-floor, and many were still playing a 'hands-on' role.

Welding companies were more diverse than the other occupational groups, with small, informally structured companies predominant. Like stonemasonry and woodwork, they relied on their workers' knowledge and skills, and all three tended to be less reliant upon technology, reflecting the nature of the business with which they were concerned.

3.2 SPECIFICS BY OCCUPATIONAL GROUP

3.2.1 Electronics (Soldering)

In terms of attitude, those involved in soldering emerged as the companies who were more technically able, knowledgeable and confident with LEV equipment. Whatever the size of the business, whether small or medium-sized, they tended to exude confidence, not only in their own skills, but also in their health and safety procedures and the ventilation equipment used.

"They didn't have any training [in using and maintaining the LEV] it's not that complicated ... It's an easy job, we do it ourselves, no need for outside assistance."

Electronics, 5.5 Employees, Hampshire

Moreover, due to their technical expertise, they were inclined to feel competent in attending to their LEV themselves, some in designing it, repairing it, or improving upon it, others in making their own LEV.

"Our fixed extraction system was altered by our Senior Equipment Engineer to improve its effectiveness."

Electronics, 150 Employees, Bedford

“We made it, it’s our own design.”
Electronics, 24 Employees, London

Their general confidence in health and safety procedures and ventilation equipment meant they were likely to be carrying out regular maintenance and checks.

“The two-stage filtration system has a pre-filter which we check monthly. The other filter on the main extraction unit gets changed once a year when they come round and do the checks. The other, smaller unit which is dedicated to the big machine is generally changed every three to four months ... We do visual inspection on the pre-filters on a regular basis. I have direct notes on the computer which flag up when it needs doing.”

Electronics, 11 Employees, Poole

“Smoke tube produces smoke and you can hold it to an LEV, and if the smoke goes away quickly I know that it is working, I didn’t need to fuff around looking for flow rates, unless of course it isn’t working very well and then I will check the flow rates ... check the air flow with an air flow meter which gives you a figure so then you can see if there is any deterioration and how much it has deteriorated by and then compare it to the HSE standard.”

Electronics, 230 Employees, Hampshire

“Every 14 months the LEV is checked for flow rates, there are annual checks for filters, a company comes in and checks all the filters and occasionally I will go round with a smoke tube and just check that the flow rates are visibly working and then respond to any complaints.”

Electronics, 230 Employees, Hampshire

Even when there was less knowledge and ability in terms of maintaining equipment, nevertheless some checks and maintenance were carried out.

“They’ve got gauges on the front with a green and a red zone. You check the gauges, and that’s all you can do ...It’s not something that someone would check, if you know what I mean, not like with fire extinguishers. It either works, or it doesn’t ... It’s just switched on and if it’s working you hear the motor going. It’s on or it’s off. The motor either spins, or it doesn’t. They are PAT tested, the last one was probably June last year ... Once a week I check the gauges and filters. There’s a different tone if the filters need changing. The noise the machine makes differs.”

Electronics, 3 Employees, Gwent

A few instances emerged of inadequate or no ventilation equipment. These were within smaller companies where soldering was small scale, perhaps with just one solderer (engaged in soldering full time) out of five or six employees. However, such companies were relatively rare amongst this occupational group.

“Are there any grants available to buy this kind of equipment?... The room where the soldering is done is vented [by a fan].”

Electronics, 6 Employees, Manchester

“I’ve been soldering for 30 years, I’ve never really thought about it ... I never smell them and I’m never conscious of inhaling them ...If it had been only a small cost I would probably have done it ... I might as well have stopped soldering because it just wasn’t worth it.”

Electronics, 2 Employees, Sheffield

Fewer myths or uncertainties appeared prevalent within the soldering occupational group than in others within the sample, although some confusion and uncertainty was evident amongst some, generally smaller companies, surrounding the reduction of lead in soldering. The perception that unleaded solder was safer resulted in some of the smaller companies believing that LEV was almost redundant in respect of soldering.

“That was an obvious risk with lead dust and the lead in fumes which you really shouldn’t breathe in...you still get fumes and dust with silver or antimony in it, but it’s better... modern solders are not so dangerous.”

Electronics, 15 Employees, Luton

“I don’t really know what the risks are with the soldering. They’re less than they used to be because there’s no lead used these days.”

Electronics, 25 Employees, Manchester

There was some membership of trade associations and other organisations including FSB, SBAC, Chambers of Commerce, CEDIA, EGAD and Intellect.

3.2.2 Rubber

The rubber industry emerged as a knowledgeable, efficient and organised sector, reflecting the scale of business within the sample, which tended towards medium-sized or ‘larger’ small, and also, we hypothesize, an indication of the fact that it was an occupational area which did not lend itself as easily as some others to the growth of ‘micro’ small businesses.

There was general awareness of some of the hazards inherent in working with rubber, namely risks arising from the processes involved, including compounding, moulding, cutting, vulcanisation, the high temperatures involved, the machinery used, etc. All were felt to be highly visible and well known in the industry.

“When I started there were some extractions, but not that many and it was more about reducing wastage. Over the years there’s just been more and more awareness of the medical problems and the long-term effects.”

Rubber, 35 Employees, Cambridgeshire

“Long time ago it was found that there was a high instance of bladder cancer in the rubber industry. There is a study ongoing at present to check these findings.”

Rubber, 24 Employees, Lancashire

Use of ventilation equipment and a responsible attitude to employees’ health was widespread in this sector.

“The most important thing is keeping up with their PPE and keeping on top of the LEV and all the insurance reports we have to have done. The LEV is very important to us; it’s concerned with every single area of what we do.”

Rubber, 30 Employees, Birmingham

“I have no concerns. I insure over occupational asthma by making sure that all employees don’t go anywhere near their monthly MEL with a personal exposure meter. The current MEL recommendation is 6mg per m² and we are currently working at less than half of that and it is part of our strategy to do that.”

Rubber, 54 Employees, Wrexham

“We have two Nederman extraction fans. We got them from them because they are very professional. They work out the air space affected and the cubic space of the air needing venting. They are expensive!”

Rubber, 20 Employees, Southampton

“It’s instinct that you don’t want to breathe in dust air, I wouldn’t want to breathe it in and I insist my staff wear masks.”

Rubber, 4 Employees, Surrey

On the few occasions where there was low use of ventilation equipment, there seemed to be a feeling that rubber was of minimal risk.

“The thing is with rubber that it is totally natural, you could eat it if you wanted.”

Rubber, 4 Employees, Surrey

“The ventilation side of it I haven’t really considered. It’s not something that has really appeared in any of our health and safety documentation.”

Rubber, 20 Employees, Scotland

“Since 1980s most cancer-causing agents are no longer used in moulding.”

Rubber, 23 Employees, Hampshire

There was some membership of trade associations and other organisations including FSB, BRMA, EEF, RAPRA, BVAA and IOD.

3.2.3 Stonemasonry

The mindset in the stonemasonry sector, as in woodwork, was often that of a company of specialist skilled workers or craftsmen, taking pride in their work and with specialist knowledge. As a result, in spite of the fact that management themselves may have had experience of the shop floor, there was a tendency for management to leave health and safety details to the operatives. They felt that operatives were the experts in health and safety and they assumed they would know what level of health and safety each operation required.

“I ask the guys to use their discretion on the masks. I make it clear that it costs £5 a mask so I don’t want them to just use it once and bin it or drop it on the floor - but at the same time I want them to feel that they can get a new one if it is dirty, so it is a matter of striking a balance.”

Stonemason, 3 Employees, Bristol

“The guy in charge of the stone workshop is always going on about this [silicosis] – I don’t know why.”

Stonemason, 7-8 Employees, Northampton

“[How do I know my LEV/RPE is effective enough?] I don’t know but my stonemason guy, who has 20 years experience, and has taught on stonemason courses, recommends these.”

Stonemason, 7-8 Employees, Northampton

“Everyone is issued with PPE but it’s not compulsory, it’s up to the mason’s own discretion, they have all had training. As a rule of thumb, if you were using the angle grinders or spinning pads you would wear PPE but you wouldn’t for chiselling.”

Stonemason, 60 Employees, Dorset

LEV was often used for practical reasons, i.e. to remove dust from the workplace, rather than for health reasons. In fact, stone dust was frequently thought to be low toxicity, although MDs had no evidence for this. It was however generally thought to be undesirable to inhale.

“Calcium carbonate congeals in the corners of my eyes, it probably does the same in your lungs but like your eyes it will harmlessly work its way out ... If we were using sandstone we would definitely wear dust masks but the dust is fairly innocent with the type of stone we use.”

Stonemason, 2 Employees, Corsham

“I have known stonemasons to die of work related issues but at a very very old age. There is no evidence to support that young people will die of lung disease caused by the job.”

Stonemason, 4 Employees, Essex

“I have never known anyone to have breathing problems from limestone ... Most health and safety is common sense. If a guy is in a dusty area you can see it. If your dust is toxic then you take measures but if your dust is fairly non-toxic you just take measures as to what you can see.”

Stonemason, 60 Employees, Dorset

There was a tendency to use old / second-hand LEV equipment in this sector and, as with welding, there appeared to be little appreciation of the importance of checking and maintaining LEV.

“We have 3 maintenance fitters and electrician employed who would take care of any maintenance if there was any, but as it is water-linked the filters don't really get blocked, it just keeps going.”

Stonemason, 60 Employees. Dorset

“All our equipment is checked annually but only the electrical components [PAT test}. We don't do any suction testing. Our equipment is only 3 years old you can see if it is working correctly.”

Stonemason, 7 Employees, Isle of Wight

There were some uncertainties in this sector. Whilst many claimed to work outside, and thus reduce any risks inherent in stonemasonry activity, work would continue under tarpaulin or some form of cover in poor weather, and there was uncertainty as to whether this increased the risks sufficiently for some form of LEV to be necessary. Additionally, wet cutting was reckoned to reduce the dust so significantly that LEV was often felt not to be needed.

“We often work outside where I don't think we need LEV, although sometimes we put a tarpaulin cover over the work area. We might need it [LEV] then but to be honest, having looked at it, I daren't think about it. It's the cost, it would mean that we would have to shut down.”

Stonemason, 8 Employees, Northampton

“We turn it on when it's needed, it's very noisy to keep on all the time and we hardly create any dust now that we have wet cut machinery.”

Stonemason, 25 Employees, Reading

Other myths centred on the type of stone used and the dangers, or lack of them, associated with it.

“Well we don’t work with sandstone. Limestone is not such a problem, as essentially it is calcium carbonate which is what most of our bodies are made out of, so it’s not as bad. So for potential respiratory problems I know that granite, which we don’t use a lot of, gives off certain other gases which aren’t great.”

Stonemason, 3 Employees, Bristol

“My concerns are with some of the ‘quartz’ which isn’t natural stone so we struggle to know what is in them. Hopefully we’re doing as much as we can, we change the filters in our masks and have one specifically for those. I’ve made it very clear they need to be changed over when we work with the quartz.”

Stonemason, 4 Employees, Essex

“We don’t have a problem with fumes as it is all natural stone so it doesn’t create a problem and we don’t have petrol fumes... We try and avoid artificial stone (resin based) which would be a problem.” Stonemason, 25 Employees, Reading

“We would certainly consider using LEV if we were using anything other than bathstone and needed it for medical reasons. Also if we had more than 2 sub-contractors in the workshop then we would consider further ventilation.”

Stonemason, 2 Employees, Corsham

Sandstone was reckoned a problem stone and there was a perception amongst a few companies that no LEV existed to cope with this.

“It seems nobody is really getting to grips with sandstone. Sandstone absorbs more water so the dust is heavy and then it clogs the machine up.”

Stonemason, 11 Employees Sheffield

Membership of trade associations included FSB, CITB, The Guild of Master Craftsmen, The Stone Federation, NAMM, Chambers of Commerce, NFB, and NAFD.

3.2.4 Woodworking

The woodwork occupational group was characterised by a dedication to craftsmanship, with recognition that they were involved in a creative process. There was evidence of skills in installation of equipment being put to use in installing their own ventilation systems. As with stonemasonry, LEV was often used for practical reasons, i.e. to remove dust from the workplace and thus allow work to continue. The role of LEV was essentially to vacuum the workplace.

“It’s just good practice to have LEV otherwise I’d have to pay someone to sweep up.”

Woodworker, 6.5 Employees, Hampshire

There was a tendency amongst smaller business to think that any health dangers were thought to stem more from toxic fumes from paint spraying and solvents than from woodworking activity itself.

“We were using a non-water-based glue, and we changed to a water-based solvent. You can get high on that stuff [non water-based solvent]. We were using aerosol base and we changed to a spray system. There’s no smell on it. No fumes coming off.”

Woodworker, 6 Employees, Buckinghamshire

Again, as with stonemasonry, there was evidence of old and second hand equipment being used, along with acceptance of the fact that it was not in great condition, but it was adequate for the job.

“I buy LEV from wherever – scrap-yards, auctions of bankrupt companies ... it’s the cost.”
Woodworker, 2 Employees, Sheffield

“[The LEV] isn’t entirely sufficient, you can see there is still dust in the workroom, but it works to a degree.”
Woodworker, 2 Employees, Sheffield

“I use to have a dust extractor. It was pretty cheap and pretty useless.”
Woodworker, 4 Employees, Bristol

“We have fixed LEV. I brought it from a woodworking company second-hand. Someone designed the system and we installed it ourselves.”
Woodworker, 14 Employees, London

There tended to be little appreciation in woodwork, along with welding, of the importance of checking and maintaining LEV. At best, sensory triggers were used to test the functioning of equipment.

“If I start feeling heavy-chested or eyes water after a job I review what precautions I was using.”
Woodworker, 2 Employees, Huddersfield

“One of the guys downstairs is our health and safety representative because we’re required by law to have one. As I say, we’re so small that you can see [any problems] by walking in and out. If he feels there’s an issue, he would report back to us.”
Woodworker, 6 Employees, Milton Keynes

“We went for 20 odd years without getting any testing, so I’m sure a few months will be ok.”
Woodworker, 6.5 Employees, Hampshire

“We check it when it stops sucking ... That kind of a log is more for bigger companies. If the place here is filling up with sawdust then we know something is wrong and one of us will do something about it.”
Woodworker, 6.5 Employees, Hampshire

“You’d spend all day looking at everything without actually doing any work.”
Woodworker, 8 Employees, Hampshire

“Filter Bags emptied but no maintenance done. Guys in the workshop would notice if there was a problem.”
Woodworker, 8 Employees, Exeter

“All health and safety tests are a joke, you just pay for someone to put something down on paper.”
Woodworker, 12 Employees, Kent

The main myth in this occupational group was that working with wood was low risk and ventilation equipment was used as much for clearing the workplace, to ensure it was a pleasant working environment, as for health reasons.

“It’s a very light and airy factory; we have big double doors which are open most of the time. There are only two people working in that big space so it’s not a problem.”

Woodworker, 6 Employees, Milton Keynes

“We have ventilation equipment both for people’s health, because it is a physical necessity – wood particles clog up the machinery and it won’t work – and because it’s a legal Health and Safety requirement.”

Woodworker, 14 Employees, London

Membership of trade associations included FSB, The Guild of Master Craftsmen, BWF and CITB.

3.2.5 Welding

A distinction emerged between the very small welding companies (less than 5 employees) and welding companies of other sizes. Within the smaller companies, the attitude tended to be less professional than in other occupational groups. They were characterised by a bravado attitude to risks and hazards and a strong general belief in their own experience and expertise. There was a definite lack of interest in health and safety amongst these businesses, coupled with general ignorance about ventilation specifics. LEV was seldom thought necessary.

“We don’t get bogged down by hard and fast rules and regulations.”

Welder, 2 Employees, Horsham

“I dare say it is not good for you to breathe in the fumes but breathing in traffic fumes or the air on the tube isn’t good for you. Nothing in this trade is good for you.”

Welder, 2 Employees, London

“I know my job so I’m not worried.”

Welder, 2 Employees, Kent

However, companies with 5+ employees tended to have a different attitude to health and safety, displaying greater interest and concern. They were likely to be compliant with Health and Safety regulations in at least some respects, and less reliant on the innate knowledge of their workforce for best practice.

“I sometimes have to give them a bit of a kick but through education and training most are very aware of wearing the correct equipment.”

Welder, 6 Employees, Exeter

“We take as many precautions as is practical to do.”

Welder, 6 Employees, Surrey

“I like to think we are adequately covered. We are on top of it and have a good record on health and safety and injury, we take it seriously.”

Welder, 24 Employees, Aberdeenshire

However, even amongst some of the 5+ employee companies there were often no checks or maintenance on equipment, as in stonemasonry and woodwork, and no appreciation of the need for these.

“Ventilation is not a problem in our workshop as there is plenty of natural air and we are not welding and fabricating all day. I expect it could be a problem for other companies; it’s definitely a problem with smaller companies who wouldn’t supply PPE to their employees.”

Welder, 9 Employees, Aberdeenshire

“If you stand outside you can see the fumes coming out of the exhaust and there is nothing in the workshop, you would be able to see and smell it if it wasn’t working properly ...The LEV is low maintenance we check it about twice a year.”

Welder, 12 Employees, Perth

This was an occupational group where myths were prevalent. For example, there was some belief that flux gases were, on occasion, an inherent part of the welding process and thus prohibited the use of LEV, since it would remove them from the environment.

“Using LEV for welding fumes is ok for rod welding because it doesn't have any gas. If you are using inert gases the air flow from the LEV will possibly take the gases away leaving the poorest weld which is just a waste of time basically, so therefore it is not really suitable for the job.”

Welder, 3 Employees, Carlisle

Other myths were commonplace.

“Galvanised steel lets off a cyanide as a horrible white cloud, for this you would need a lot of ventilation or a mask, if not then you get flu like symptoms. If we were to be working with galvanised steel we would drink a pint of full fat milk which lines the stomach and stops the poison from seeping in ... although sometimes there’s no milk about.... I don’t use LEV. Zinc is the only thing that we use that is a problem and I do that myself [rather than the staff].”

Welder, 3 Employees, Carlisle

Membership of trade associations included FSB, Chamber of Commerce, Casting Foundrymen’s Association, Guild of Master Craftsmen. There was less membership of trade associations within this occupational group than within the others.

3.3 COMPANY SEGMENTATION

3.3.1 Types of company: Overview

From the research findings, a three category typology of companies was constructed. Each category was characterised by a particular mindset in terms of attitudes towards the risks and hazards to which they were exposed. These have been classified as Category 1, 2 and 3, according to their behaviour and attitudes in respect of ventilation issues. A table is included in the Appendix, outlining their characteristics.,.

The category 1 companies were generally the medium sized companies or the ‘larger’ small businesses and comprised around one in ten of the sample. Various reasons emerged to help explain their behaviour and attitudes. Principally, their attitudes to health and safety reflected their competence and desire for excellence in every respect. They aimed to provide high quality service and products and they believed in caring for their workforce. They believed that by having the correct LEV in place, they were more productive and their employees healthier and happier. This in turn freed them up to devote more attention to optimising their business strategy and growing their business, allowing them to invest further in health and safety overall and continue their good practices. They were most likely to be found in the soldering and

rubber occupational groups, although there was one amongst the welders. These category 1 companies tended to be those still thriving in the current economic conditions, with full order books and plans to expand. Other key points relating to category 1 companies were that they were likely to employ full time Health and Safety Officers or, in a few cases, to have an external Health and Safety Advisor. Their knowledge and interest in the risks associated with their occupational group was obvious as was their determination to take every precaution to prevent employees being exposed to unacceptable risks.

The majority of companies fell into the category 2 or 3 brackets, with category 2 outnumbering category 3. Roughly two thirds of the sample fell into category 2 and roughly one in five into category 3. The category 2 companies tended to react to events, such as the introduction of new legislation, or an economic downturn, rather than planning ahead for the unexpected. Consequently, they were faring less well in the present economic climate, perhaps downsizing, and were reluctant to commit more resources than necessary to health and safety. They would acknowledge that, in an ideal world, regular inspections would be carried out on equipment but reported that current financial constraints meant this was often not feasible. Likewise, they might have strong suspicions that more could and should be done in respect of health and safety, but they had no immediate plans to explore this. These were found in each of the occupational groups.

The category 3 companies had little interest in health and safety. These were principally small companies and predominantly found in welding, although with some presence in the other occupational groups. Key characteristics were lack of interest in health and safety, using old or second hand equipment if using any, and a blasé attitude towards risks and hazards.

3.3.2 Category 1

These companies were typically committed to health and safety, displaying a proactive interest in the area.

“The managing director is very pro-active on Health and Safety. It makes my job significantly easier. I hear from my peers that they have the devil’s own job persuading their bosses because they won’t add money to the bottom-line to cover Health and Safety measures.”

Electronics, 100 Employees, Bedford

“The LEVs are checked daily by operators and every 12 months by an external company in compliance with legislation.”

Rubber, 54 Employees, Wrexham

“We do everything you need to do: risk assessments, COSHH, audits and we have our own work-safe health and safety programme.”

Rubber, 75 Employees, Hampshire

“We know the ambient air inside is fairly good as we have it checked every few years at several points. LEV is there to protect the people and that is paramount, especially for soldering, as we know that soldering is a sensitizer so we have to control it very carefully ... if someone becomes sensitised to the colophony fumes that come off the solder then they can be sensitised and that means that they can get respiratory problems. Once you are sensitised you then can’t work with solder any more and then we [the company] are going down the road of possibly being sued by the individual.”

Electronics, 230 Employees, Hampshire

They believed health and safety sufficiently vital to necessitate a dedicated Health and Safety manager, probably full time and, possibly, external Health and Safety Consultant as well. A small number relied on the external Health and Safety Consultant fully supported by the MD. They had extensive systems in place, with frequent, regular and thorough checks on equipment, all documented and logged.

“I know about it because it was part of my training as Health and Safety Officer and there is a wealth of information out there about it through the net and through journals, so that if anything changes in the standards I’ll know about it, I get the magazines, HSE stuff and the HSE quarterly magazine so as long as you keep up to date with what’s going on, you shouldn’t miss any of these things.”

Electronics, 230 Employees, Hampshire

“It flags up on the computer when we need to carry out any checks or maintenance on our equipment. It is part of our planned maintenance system.”

Welder, 110 Employees, West Midlands

They demonstrated concern over the welfare of employees, and were likely also to carry out regular health checks on their employees.

“It makes it a healthier and more productive environment and that helps with recruitment and retention and means we reduce the time people take off as well.”

Rubber, 140 Employees, Cambridgeshire

“We follow all the usual Health and Safety legislation such as COSHH, LOLA, carrying out risk assessments ... we also have lung function tests carried out on all the welders, this is a new precaution that we decided to put in place to ensure staff safety.”

Welder, 110 Employees, West Midlands.

“It’s basically the other thing that you can get is asthma, people can be sensitised and become asthmatic through solder fumes and obviously if that happens it is quite a serious thing. That’s why we do annual health monitoring, so people do a lung function test every year ... anybody who works with solder has an annual medical, we have an occupational health nurse who comes in and does it for us.”

Electronics, 230 Employees, Hampshire

They demonstrated concern that employees should understand not only the Health and Safety regulations, but also the reasons for them. They would offer training in this.

“... that is down to management to make sure that people use the control measures that are there and training people. We are pretty good at that here as we do have a training school, a soldering training school and safety is one of the paramount parts of that. People understand that they must use the safety pipes in the right way, it’s no good having the extractor pipe here when you are soldering there, it has to be over the soldering so that the fumes go away.”

Electronics, 230 Employees, Hampshire

They were likely to see health and safety as an ongoing process, that is an everyday concern, not a box to be ticked once the health and safety consultant had left and then to be neglected till the next visit.

“We have a high level Health and Safety Consultancy. They come in twice a year to audit us. We also offer 24 hour advice and telephone access to him, and links to the Directors.”

Electronics, 100 Employees, Bedford

“Ideally we try to eliminate any potentially dangerous process. I always ask ‘why are we doing it that way, is it necessary?’ I’m constantly looking at ways to get round hazardous processes.”

Electronics, 100 Employees, Bedford

This attitude may go hand in hand with a desire to do everything properly for example. to adhere to the best practices possible in every respect, to buy in good quality equipment, and generally to take pride in their company.

“The Rolls Royce of electronics manufacturing.”

Electronics, 200 Employees, Bedford

3.3.3 Category 2

Companies within the category 2 bracket generally displayed moderate commitment to health and safety but, in contrast to the category 1 companies, theirs was a more pragmatic approach. Whilst they might employ an external health and safety consultant, his expertise did not always extend to specialist LEV knowledge and the very fact of employing him could lead to management devolving health and safety responsibility entirely to this consultant and thus taking no responsibility themselves. Others within this category bolted responsibility for health and safety on to the job description of another employee, acknowledging this was a less than satisfactory arrangement.

Category 2 companies may conduct annual LEV checks; even every 6 months; but their readiness to disregard these due to the economic climate revealed that health and safety was an area where compromises could be made. It was not their first priority. These were also the businesses where few if any checks, apart from cursory visual checks, were made on equipment in between formal inspections. If they were compliant with health and safety regulations, it was likely to be due to the influence of external sources, or chance rather than deriving from intrinsic knowledge.

“With LEV, we rely on the annual inspection. Apart from that, I can see whether they are on...”

Rubber, 20 employees, Southampton

“The individual users would know if they are working or not.”

Woodworker, 14 employees, London

Regular monitoring, maintenance and record-keeping tended to be sporadic, due to a combination of time and cost pressures militating against this, coupled with the relative lack of importance accorded to this in comparison with the category 1 companies.

“We do an annual check on our equipment and test it every now and then. I don’t think there is any need to test it further.”

Rubber, 20 Employees, Southampton

“The equipment is serviced regularly by external contractors who PAT test it. We would change the water as required, we stick a stick in it and see how much slurry sticks to it and empty when it’s dirty.”

Stonemason, 25 Employees, Reading

“[We know it is effective] by the quality of the work and the environment it creates, I would say. We still use PPE alongside it. Our operatives are aware of what is comfortable and what is acceptable.”

Stonemason, 29 Employees, Cambridge

A number of small companies, in particular in the Welding occupational group, believed they were compliant as they kept doors and windows open; whether this was correct or not was unproven, it was merely presumed.

“We use dust masks for any dusty hazard, we have dust extraction in the workshop and we work outside wherever possible”

Stonemason, 3 Employees, Bristol

“Ventilation is not a problem in our workshop as there is plenty of natural air and we are not welding and fabricating all day. I expect it could be a problem for other companies; it’s definitely a problem with smaller companies who wouldn’t supply PPE to their employees.”

Welder, 9 Employees, Aberdeenshire

Within category 2, there was an element who had good intentions regarding health and safety, and who seemed willing to take precautions where necessary, but where ignorance and complacency were paramount. These were small companies where ignorance took the form of unawareness that their LEV was inadequate. It may be old or second-hand and no checks had ever been carried out on it. They relied solely on sensory triggers, such as visual indicators or smell, as to the effectiveness of their LEV. Complacency was also in evidence, with claims that the equipment ‘had always been good enough’ and must be functioning adequately since there were no visible signs of malfunction.

“We got the LEV second-hand from a shipyard but it is like new ... The LEV is low maintenance we check it about twice a year.”

Welder, 12 Employees, Perth

“Filter bags emptied but no maintenance done. Guys in the workshop would notice if there was a problem.”

Woodworker, 8 Employees, Exeter

“It becomes obvious when it is not sucking properly. Then we clean it out - that is an outside job.”

Electronics, 4 Employees, London

“With fume extraction, if it doesn’t close the door it is not working properly.”

Woodworker, 2 Employees, Sheffield

3.3.4 Category 3

These category 3 companies tended to claim health & safety was the responsibility of each individual. Use of LEV or Respiratory Protective Equipment (RPE) was occasionally, if at all. Any LEV they possessed tended to be old or second-hand. Awareness of the risks was minimal or completely downplayed. They demonstrated a reliance on experience and a closed mindset, which refused to admit that their knowledge may be only partial or that there was anything they could learn from a health and safety expert.

“10 or 12 years ago powerful extractor fans were put in and there’s normally an open door in the summer.”

Rubber, 16 Employees, Fife

“In the workshop we don’t bother with a ventilator. There’s plenty of ventilation, the doors are open, and we just use our common sense. If we were standing there choking, then we’d do something about it.”

Welder, 2 Employees, Horsham

“Everybody has a degree of knowledge. I know what is dangerous and not dangerous. For example, they might say I need a safety harness, but in certain circumstances that can actually be more dangerous... Sometimes we use them[LEV] because it looks the part for the client, it looks a bit more professional, and often they come with a certificate that we can pass on to their health and safety guy which reassures him they’re in full working order”

Welder, 2 Employees, Horsham

“It’s the guys who operate the machines. I guess they must be inhaling a small amount of this fume, but I fail to see what we can do about it to be honest.”

Rubber, 16 Employees, Fife

Companies within this category were likely to make irrelevant points of comparison, to demonstrate that the risks to which they were exposing their workforce or themselves were negligible.

“What they breathe in here is no worse than what they’d get if they smoked.”

Electronics, 11 Employees, Luton

“I think welding is OK compared to something like soldering.”

Welder, 2 Employees, Horsham

“Guys in quarries are a lot more exposed [than our stonemasons].”

Stonemason, 6 Employees, Bristol

“Worse fumes from cars when you stand in the street.”

Welder, 2 Employees, London

“They do a lot [in respect of health and safety] in comparison with roadwork contractors, who you see working in the road taking none of the necessary precautions.”

Rubber, 37 Employees, Bedfordshire

There was also anecdotal evidence, from suppliers, of some companies with no regard for health and safety and the need for LEV, often employing immigrant workers since they were believed to be less aware of their rights as employees, and flouting the regulations. However, none of these were found in our sample. Given that those who participated were relatively confident about their response to ventilation issues, we hypothesize that among those who refused to participate there may have been some who were concerned about the adequacy of their approach to ventilation. .

3.4 OVERVIEW OF RESPONDENTS

3.4.1 Decision Makers: Managing Directors

MDs in the sample were delegating health and safety responsibility, although there was general recognition that they were ultimately responsible for health and safety on their premises. Level of interest in health and safety varied, with those in category 1 and 2 companies more likely to express an interest, than those in category 3 companies.

“I have personally checked the company Health and Safety policy with the HSE and I have made the staff aware of it.”

Woodworker, 8 Employees, Devon

“We are all responsible for changing the bags and filters [on the LEV]. I am the one who says: ‘Come on’, when it needs doing.”

Woodworker, 3 Employees, Birmingham

“I am aware of illness from my background as a chartered surveyor. I recently attended a HSE workshop set up with Edinburgh council on Respiratory Crystalline Silica which was very helpful and informative.”

Stonemason, 30 Employees, Edinburgh

Where an external health and safety consultant was employed, MDs would often rely entirely on their input, which in some cases led to a false sense of security, in that the company would receive the report, action any recommendations, then file it and forget health and safety until the next visit, believing there was no need to take more action until then. Positively, all appeared to feel obliged to act on their consultant’s recommendations.

“We have an external Health and Safety Company who come in a few times a year ... they make us aware of any new legislation and we take any appropriate action.”

Woodworker, 50 Employees, Pembrokeshire

External health and safety consultants’ knowledge did not always extend to detail on ventilation issues, and this resulted in some instances of companies in dispute with HSE, with the consultant’s advice questioned by HSE, to the surprise of the MD.

“Our Health and Safety Consultant tells us generally about health and safety but he does cover ventilation. They audited us 6 weeks ago and found no problems. However when HSE audited us 4 weeks ago they had a possible problem with the ventilation. I am surprised about this.

They are going to coordinate and discuss this on the day the air quality monitoring is done.”

Rubber, 23 Employees, Hampshire

In many category 2 companies, responsibility for health and safety was bolted on to the job specification of another employee and, as a result, often received less attention than it merited. This was seen as a fact of life and unavoidable.

“We don’t have the time or money to employ anybody full time on health and safety. It is built in to training and the production manager trains the trainees and we have added health and safety on his role.”

Rubber, 42 Employees, Derbyshire

3.4.2 Attitudes to H&S in respect of Ventilation

MDs were on the whole confident about their approach to ventilation issues. They demonstrated some awareness of the risks, or perceived absence of risks, inherent in their sector and some knowledge, or at least conviction, that they were taking all or most of the necessary steps to minimise that risk.

This confidence amongst MDs stemmed sometimes from actual shop-floor experience. In Small and Medium Sized Enterprises (SME) companies, especially in the woodwork, stonemasonry and welding sectors, it was not unusual for MDs to have experience of the shop floor, and thus some recognition of the hazards and the need for some ventilation. Additionally, in many small companies, the MD would have an office in, or near to, the workshop, and thus was also likely to be exposed to fumes or dust themselves.

“I started on the shop-floor, so I have a good understanding of how people work, and how the systems are supposed to work.”

Rubber, 140 Employees, Cambridgeshire

In the medium sized businesses, or the ‘larger’ small companies, MD’s would either walk the shop floor or, as outlined above, have personnel reporting to them whose role was to supervise/monitor health and safety, and thus they too received some feedback on conditions in their workspace.

“Health and safety comes under my wife and I, we are the joint directors. As the MD of a small company I pace the building quite a lot and I can see what’s happening.”

Rubber, 20 Employees, Southampton

“Different woods give off different smells and they are quite distinctive, if I was to walk in to the workshop and someone wasn’t using their extraction I would be able to smell it immediately and tell which member of staff it was from the type of wood they were using.”

Woodworker, 24 Employees, Pembrokeshire

3.4.3 Decision Making regarding Ventilation and LEV Supplier

Decision-making regarding LEV supplier was usually the prerogative of the MD, influenced by external factors, such as:

- H&S consultant recommendation
- Word of mouth in the industry
- Advice from trade association
- Trade press
- Proximity of supplier, i.e. local company
- Previous suppliers of equipment
- Current suppliers of tools for the trade

Indications emerged that some struggled with this decision, principally with finding a supplier they felt they could trust. There was some call for an HSE approved list of suppliers.

“It would be useful if HSE supplied a list of preferred suppliers so that I don’t have to listen to some guy telling me it is for a kitchen but it will do this job just fine.”

Stonemason, 5 Employees, Dorset

Known instances of inadequate equipment being installed had indicated to some MDs that this area could be a minefield for those without specialist knowledge.

“We had a waterwall initially, but HSE rejected it and we exchanged it for top of the range LEV, a booth, but the dust levels were still unacceptable, so our masons now wear air flow helmets as well.”

Stonemason, 11 Employees, Sheffield

MDs were often assisted or supported in their decision-making regarding LEV by other senior members within their company. These would often display more specialist knowledge than the MD and would have considerable input into the decision-making process.

3.4.4 Relations between MDs and Employees

In spite of the fact that there was a tendency to expect employees to take at least some responsibility for their own health and safety, and indeed to have some specific knowledge of what was required, MDs would also hold the view that there was a general tendency amongst employees to leave health and safety to management

“It’s assumed in the industry that most people know what they are doing.”

Woodworker, 14 Employees, London

“You can tell them [employees] what they should do but they don’t really take it in they just leave it up to us.”

Woodworker, 2 Employees, Sheffield

Thus it appeared easy for real responsibility for health and safety to fall on occasion into a ‘no man’s land’, with each party believing the other was the more knowledgeable and expert.

There were MDs who felt uneasy dictating H&S requirements to employees, and other MDs who found it difficult to enforce use of Personal Protective equipment (PPE). However, there were a few employers who were more enlightened and believed in explaining the reasons for health and safety requirements to employees.

“Our Health and Safety Manager put together his own video for shop-floor workers showing the correct and incorrect ways of doing the job, to minimise exposure to fumes.”

Rubber, 140 Employees, Cambridgeshire

3.5 CURRENT BUSINESS CONCERNS

3.5.1 SME Attitudes

A key concern amongst the companies in the sample was the current economic climate and its impact on business. For many, survival at the present time was uppermost in their minds. This was especially true for those involved in the construction trade; building repairs or improvements. Welders, stonemasons and woodworking companies mentioned reductions in the number of contracts received, client budgets cut and work postponed.

When asked what their current business concerns were almost all users mentioned the recession.

“Lack of money on the system, since the end of November turnover is down 50% ...frighteningly hard, cannot predict what is going to happen.”

Welder, 8 Employees, Huddersfield

“Worried about future of Davenport Dockyard who is a good client. Possibility that work will be transferred to Portsmouth.”

Woodworker, 3 Employees, Cornwall

“I don't know what I'm doing in 3 weeks time; technically I'm 3 weeks away from bankruptcy.”

Stonemason, 4 Employees, Essex

“We don't hit the peaks and troughs of the building trade, but we do feel the impact.”

Stonemason, 29 Employees, Cambridge

“The market is shrinking without a shadow of a doubt.”

Rubber Worker, 20 Employees, Hampshire

“The biggest one at the moment is volume of business, which has declined in the last few months. There has been a major drop in confidence in the market and we see that reflected fairly quickly.”

Electronics, 11 Employees, Poole

As a result, there were instances of companies reducing staff numbers or diversifying into areas they had not worked in hitherto. For instance, one stonemasonry company was exploring opportunities for moving into the building / construction industry via offering a repointing service for the exterior of buildings, and another, a rubber company, was seeking new opportunities by diversifying into other products. .

Even when business was still thought to be relatively buoyant or indeed flourishing, companies expressed fears regarding delayed payments, cash flow and bad debts. In consequence, these too were often looking to expand into alternative markets.

As a result of their concerns, companies were reducing their costs, with aspects of health and safety (and health in particular) an easy target. They were cutting back on inspections and delaying investing in ventilation equipment.

“We had Occupational people come in 5 years ago and monitor dust, but we haven't had it done recently although we are looking to have more occupational tests done.”

Stonemason, 60 Employees, Portland

“Ventilation, we're pretty happy with, but we might upgrade some parts when funds are available.”

Rubber, 24 Employees, Preston

Only a minority of businesses felt they were thriving. These fell into a number of categories, mostly within the rubber and electronics sectors. They included companies:

- Operating in niche / high tech markets, e.g. rubber goods (flood defence, etc); electronics (military; aircraft; security; oil industry equipment, etc)
- Exporting, e.g. rubber goods
- Supplying in-home equipment, e.g. audio visual, entertainment, rubber goods
- Repairing equipment, since consumers were not buying new – e.g. electronics
- Supplying major industries worldwide

3.6 HEALTH AND SAFETY

3.6.1 Spontaneous Concerns

A hierarchy of concern emerged in respect of health and safety, with safety top of mind and health a secondary consideration. Any risk assessments undertaken generally focused first and foremost on safety and would include:

- Trips & Falls
- Amputated extremities or limbs (machinery)
- Vehicle accidents
- Burns
- Back injuries (lifting)
- Cuts
- Impairment to vision
- Fire

Safety was paramount due to its immediate impact on business, not to mention on the employee. It was highly visible, could lead to the loss of a worker and was known to carry potential for litigation.

For a minority, most concern in connection with health and safety was expressed over the unexpected, that is the unforeseen, hazard, rather than the more obvious issues which could be legislated for and precautions taken.

“I am very concerned about health and safety. We have had minor incidents in the past which became big issues because of the people involved. One employee broke his ankle by tripping on a quarter inch step. There was no way we could have foreseen this.”

Rubber, 20 Employees, Southampton

Concerns regarding health tended to concentrate on those issues with an immediate impact, or which endangered health in the short term. Health concerns relating to anything which might cause a delayed or long-term impact on health were of less concern.

This is not to say that there was no awareness of more long-term health risks, as demonstrated by the mentions of noise, fumes and dust, for instance, amongst these occupational groups. However, these health risks tended to be downplayed. They were regarded more as unpleasant by-products of working in that sector, rather than as serious threats to health and well being. This was perhaps not surprising; given the relative lack of awareness of specific health threats posed as a result of exposure to these hazards, or the fact that statistical evidence relating to the vulnerability of these occupational groups was perceived not to exist.

“I know that dust is an issue. We’re working in an environment of dust which I’d like to think is acceptable to our trade, but probably not acceptable in yours. We do take precautions and the guys are good with this. I don’t have to tell them to wear their masks, when I come in I see them on, they wear them like second nature.”

Stonemason, 4 Employees, Essex

“You can wear masks for breathing I suppose and have the proper ventilation, but I have worked in it for 40 years and had no problems... but then it might affect someone else. It’s like years ago I worked in an asbestos environment, some people got asbestosis [but] I, touch wood, haven’t, it just depends. There could be long-term lung problems, I suppose, you never can tell, though we all get older.”

Welder, 2 Employees, Bristol

3.6.2 Specific Concerns

Although each occupational group could mention a number of health threats, they tended to result in generic or non specific diseases, such as those potentially leading to problems with the lungs, which were perceived as chronic rather than acute, an inconvenience more than a threat to life. Moreover, each health threat would be referred to by only a small number within each occupational group.

Key threats to health and the potential health risks associated with them, by each occupational group, are discussed further in Section 7.

3.7 USAGE OF LEV & RPE

3.7.1 Usage Overview

Usage of LEV and RPE varied, depending not only on whether the company fell into category 1, 2 or 3, but also on the occupational group in question.

The category 1 companies all possessed and were using LEV, as were the majority in category 2, but less so in category 3, where although most possessed it, it was not always used. Within the occupational groups, two of these – stonemasons and welding companies – were less likely to use LEV on a regular basis than the others.

When LEV was not used, RPE was often supplied and generally, but not always, used. In addition there were companies who would use both LEV and RPE.

3.7.2 Usage Specifics

Amongst companies using LEV only, they were confident that this was adequate protection against fumes and dust and also claimed it was preferable to RPE from the employee viewpoint. MDs reported that RPE was sometimes seen by employees as an impediment to normal life and uncomfortable to wear. For a few, usually in the welding occupational group but on occasion in another, it was thought to be a sign of weakness, of being a new recruit to that line of work.

“We don’t have much need for RPE, we used to use it a lot but the staff didn’t like it. It got in the way of normal life and wasn’t very comfortable.”

Electronics, 200 Employees, Bedford

“Those who’ve been around in the industry a long time think it’s [wearing RPE] a bit girly. Some new starts will wear a mask until they start to get abuse.”

Rubber, 35 Employees, Cambridgeshire

Where companies were using both control measures simultaneously, this was due to perceived strong fumes, often involving fumes from paint and perhaps another material (e.g. metal), or when materials perceived as particularly hazardous were in use. It was most common in woodwork and welding.

“We get hazardous fumes from the paint and fine dust particles from MDF and other particle boards especially when they are being sanded. That’s when we have the LEV on and we would also be wearing air fed masks or dust masks at the least.”

Woodworker, 14 Employees, London

In other occupational groups, RPE tended to be used in conjunction with LEV only in times of particular need, for instance when carrying out maintenance on equipment.

“The particular occasions when we use RPE as well [as LEV] is when we are doing preventative maintenance. That’s when we are taking machinery apart, as this gives off more fumes. The solder breaks down in to its parts and it gives off dust which contains a high proportion of lead.”

Electronics, 200 Employees, Bedford

Where companies were not using LEV or using it only occasionally, common practice was to rely on employees’ judgement as to whether to use RPE or not, with encouragement on occasion from management. This was frequently disposable masks but instances were also cited of full face masks.

“We make sure that staff wear their masks when we are there but we have no way of knowing what they do when we are not about, we can only assume that they wear them.”

Stonemason, 5 Employees, Carmarthenshire

“Dust masks are available if requested. Staff can have air-fed welding masks if they desire but at £150 each no one has desired one.”

Welder, 17 Employees, East Anglia

“They have to be jogged to remember to put their masks on. I could arm-twist them, but you think ‘what’s the point?’. They’ll say ‘I’m alright’. I don’t like it, and it might be partly macho, but what else can you do? ... I’m not going to fire people for not wearing their mask. You’ve got to try to encourage them really, so you explain it’s in the manufacturer’s safety material that they’ve got to wear a mask. Some wear them for a quiet life and some don’t because they want to be a rebel.”

Rubber, 35 Employees, Cambridgeshire

Checks on RPE and changing of filters were definitely seen as the responsibility of employees, with encouragement from management.

“We use masks like cyclists wear, you can buy them from anywhere; B&Q, builders merchants. There are various ones, all good, and we throw them away at the end of the day.”

Stonemason, 3 Employees, Newcastle

However, filter change was often haphazard.

“You can see the dirt on them, they get pretty disgusting and then we change them.”

Stonemason, 3 Employees, Carmarthenshire

There was an instance of RPE use without LEV as LEV was believed to be impractical in this situation.

“There is one section where we remove rubber dust but we hit metal at the same time so it causes sparks and it can't go up a normal LEV system, so when they're doing something which heavily causes dust, they always have the door open and use RPE.”

Rubber, 30 Employees, Birmingham

3.8 AWARENESS AND ATTITUDES TOWARDS WORK RELATED DISEASE AMONGST A SAMPLE OF SME USERS IN THE TARGET OCCUPATIONAL GROUPS

3.8.1 Overview

Knowledge regarding work-related disease tended to be poor and vague, merely a general awareness of the basics, i.e. inhalation of dust and fumes was not likely to be beneficial. This knowledge tended not to relate to specific conditions, beyond some spontaneous and sporadic mentions of a few diseases and conditions.

“It's not a good idea to breathe in dust ...Hard woods contain carcinogens.”

Woodworker, 3 Employees, Manchester

“There's nothing particularly hazardous that comes off silicon no. I don't suppose it would do you good to breathe in the fumes all day long.”

Rubber, 14 Employees, Leicestershire

“Fresh air is good for you so I imagine breathing in too much of anything that has something in it isn't good for you.”

Electronics, 2 Employees, Sussex

“General lung disease, could not give you a specific name.”

Rubber, 14 Employees, Sussex

“Fumes from processing are not good for you, potential respiratory problems.”

Electronics, 150-160 Employees, Hampshire

“Granite contains a high percentage of silica which is carcinogenic ...Cement can cause dermatitis ... Stone dust can clog your lungs up.”

Stonemason, 6 Employees, Chippenham

Additionally, there was no understanding of the degree of risk to those in the relevant occupational groups, such as, for example the proportion of welders that suffer from lung disease. This lack of knowledge of the evidence weakens the arguments for health and safety in respect of ventilation.

“I don't know anyone amongst the older generation of stonemasons who's suffered any consequences ... But if they've proven that it does cause serious health issues then I would take precautions. I'd want to see case studies where people have suffered.”

Stonemason, 2 Employees, Sheffield

“Blacksmiths are always about 100 [years old, in spite of breathing in lead fumes] it obviously never does them any harm.”

Welder, 3 Employees, Carlisle

Some general feeling emerged, amongst category 2 and 3 companies, that these were hazards associated with these occupational groups and were unavoidable in these sectors.

“There’s nothing you can do about it (the fumes), you can’t get LEV under a car.”

Welder, 2 Employees, London

3.8.2 Key Threats and Health Risks

Perceived key threats to health, i.e. awareness that a particular material or process was hazardous, and the potential health risks associated with these threats, by each occupational group, were believed to be as follows. It should be noted that by no means all the threats or risks were cited by all respondents and the more specific diseases were mentioned by only one or two. This cannot be stressed too strongly; frequently respondents were only able to talk in very general terms about health issues.

Rubber

The general perception was one of relatively serious threats posed by working with rubber. These threats derived from exposure to fumes, powder and dust, and hazardous substances, e.g. solvents. Potential health risks mentioned by some in this occupational group included dermatitis, various cancers (bladder / nasal / liver) and impact on fertility (women’s).

“Solvent fumes and rubber dust are the main areas of concern but we’ve always had extraction which works very well, and obviously if there are any signs that it isn’t working well we’ll get it overhauled immediately.”

Rubber, 30 Employees, Birmingham

Soldering

The general perception amongst this occupational group was that soldering was now safer than previously, due to lead having been excluded from solder. Health threats from fumes remained, however, and there were some mentions of potential health risks, including emphysema, occupational asthma and respiratory problems, including a few references to lead poisoning.

“Flux can have a serious impact on lung functioning, possible worse than cigarette smoke.”

Electronics, 100 Employees, Bedford

“Not that I could tell you of. In the past they could have had something to do with respiratory disease to do with soldering because of rosin based fluxes. It’s a very minimal amount, and we have got a very good extraction system.”

Electronics, 24 Employees, London

“It’s a bit strange that now they’ve banned lead, so there shouldn’t be any issue with soldering, so why are they driving this ventilation.”

Electronics, 2 Employees, Sheffield

“I don’t really know what the risks are with the soldering. They’re less than they used to be because there’s no lead used these days.”

Electronics, 6 Employees, Manchester

“We used to do soldering with lead, but that’s all gone now. We’ve got a very good extraction system [too].”

Electronics, 24 Employees, London

Woodworking

The threats to health from working with wood were generally seen as not particularly severe. Whilst potential for lung problems / disease was acknowledged by some, the severity was often downplayed. These threats derived from exposure to paint fumes, dust (especially from MDF), beech wood and hardwoods. Dermatitis from dust and hearing problems due to the noise were also mentioned.

“It’s not a good idea to breathe in dust.”

Woodworker, 3 Employees, London

“It can cause breathing problems as far as I understand.”

Woodworker, 8 Employees, Hampshire

“Certain dusts are carcinogenic.”

Woodworker, 18 Employees, Bristol

“Hardwood dusts have a carcinogenic element ... and people could suffer from allergies to particular woods. I haven’t come across anyone with cancer caused by wood dust but I am aware of it through HSE publication, BWF and through having had the 14 month test on the equipment.”

Woodworker, 24 Employees, Pembrokeshire

Welding

The general perception was that welding was relatively low risk in terms of long term chronic health threats. There was more awareness of immediate hazards such as metal flu and arc eye, both of which had a relatively swift impact on the welder. Galvanised steel, fumes, including paint fumes, copper and brass were each recognised as health threats by some, with brass thought to be more dangerous than steel.

“[When probed about fumes] there are only a small amount, zinc coated is harsh but we don’t use it. Mild steel is not a problem, only if it gets oily and then staff can request LEV if they want.”

Welder, 17 Employees, Essex

“Don’t really know of any problems that breathing in welding fumes can have on your health, I just suppose it can’t be good for you.”

Welder, 9 Employees, Aberdeenshire.

“Galvanised with its high quantity of zinc and stainless steel with its chrome will both cause welder’s lung. That’s when the small hairs in your lungs which filter the air get burnt and can’t do their job any longer.”

Welder, 12 Employees, Perth

Stonemasonry

Relatively widespread awareness of the general health threat from stonemasonry emerged amongst this occupational group, with threats to health thought to be granite with its links with radiation, sandstone and dust from dry finishing. However, any potential health risks were

thought to be white finger, dermatitis or (non specific) cancer as much as silicosis or lung problems.

“Our guys, 10 or 15 years ago, were measured by the HSE, [Silica causes] respiratory damage, it’s like breathing in sandpaper, just shreds your lungs and sits there, you’re unable to pass it through that’s my understanding. Ourselves as a business, we don’t have an issue with silica.”

Stonemason, 29 Employees, Cambridge

“We keep dust to a minimum with LEV, luckily Portland Stone has low silica content so it’s not too bad in small amounts.”

Stonemason, 60 Employees, Dorset

The exceptions to this were a minority of companies, comprising those within the category 1 band who, even if they were not aware of disease specifics relating to their occupational group, tended to be aware of the risks associated with the processes used.

3.9 KEY INFLUENCERS, ENABLING FACTORS AND BARRIERS TO GOOD PRACTICE IN THE CONTEXT OF PREVENTING WORK RELATED DISEASE

3.9.1 Overview

In comparison with barriers to good practice, influencers and enabling factors were relatively weak. The exception to this was category 1 companies.

3.9.2 Key influencers

A number of key influencers were mentioned, with the major influencer being a full time, dedicated health and safety manager. Not only were these specialists in health and safety, but they also had occupational sector specific health and safety knowledge, which set them apart from the external consultants. By virtue of their role, they were valued and trusted members of the team and their advice carried weight. Present in all the category 1 companies, they were invaluable in driving good practice.

“My Health and Safety Officer is NEBOSH trained [The National Examination Board in Occupational Safety and Health], and she looks after me and keeps me up to date with legislation and works on risk assessment which involves identifying jobs that are done and walking them through what’s involved and what can be done to avoid the risks.”

Rubber, 37 Employees, Bedfordshire

No other influencers matched the power of dedicated internal health and safety managers. In terms of next most powerful influencers, external sources played a part, but their influence was limited due to their general lack of disease related knowledge specific to that occupational group, coupled with a lack of detailed knowledge of LEV. Such external sources comprised health and safety consultants and insurance companies. Their strengths were seen to lie in their broad sweep of health and safety expertise and, in the case of the consultants, in alerting management to any areas of health and safety currently of particular concern to the HSE. Even some small companies employed external consultants.

“We do risk assessments and take every precaution we can, as well as what we have to do by law. This has also been pushed by the insurance companies, which is part of our quality assurance. We spend a lot on PPE because you can’t mess around with people’s safety.”

Rubber, 13 Employees, Yorkshire

“We have an external company who come in at least twice a year to do checks and keep us updated with health and safety ... They make us aware of any new legislation.”

Woodworker, 50 Employees, Pembrokeshire

Where businesses were working for local authorities and other contractors, these emerged as having some influence in ensuring good practice, but it was as much a passive influence as an active one. Local Authorities and large contractors generally were perceived to know the health and safety rules and regulations and, in respect of these occupational groups, would focus on obvious health and safety issues, such as scaffolding / ladders, with little or no focus on industry specifics, such as respiratory issues and the need for LEV. Respiratory issues and ventilation needs appeared generally to be left to the judgement of the subcontractor. Moreover, local authorities and contractors themselves were not driving all the specifics, but rather ensuring a particular precautionary mindset on the part of their contractor. This could lead to these occupational groups taking more care when working for these organisations, and acting more ‘properly’ to impress the client and appear professional, by showing certificates to the health and safety officer and wearing masks.

“Working on site we abide by all the client’s regulations. Large sites are very demanding but it is box ticking. It means we tend not to scrutinise the site as we would otherwise.”

Stonemason, 8 Employees, Northampton

“When we’re working at a school, we only set up when the children are not there. Normally [i.e. when working on other sites] we just try to enforce the 3 metre exclusion zone.”

Stonemason, 2 Employees, Newcastle

Having said this, local authorities and contractors would generally produce their own, detailed health and safety requirements specific to them, which business, as the sub contractor, would be expected to follow. This compliance would often take the form of a set of procedures involving:

- Submission of a Construction Design & Management (CDM) plan and method statement, including their health and safety policy and any concerns regarding the site, to the client health and safety officer
- Client health and safety officer inspecting working practices and following this with on site meetings

Sub-contracting appeared not to be a significant influencer. Subcontractors were treated as the SMEs own staff with no special arrangements made as to their health and safety, other than ensuring they were supplied with the organisation’s health and safety requirements on arrival.

“A health and safety manual is given for staff and that has method statements about handling and lifting. We review health and safety on a monthly basis through management meetings. We had independent consultants look at the business and set up a health and safety system. Managers are given a folder with their responsibilities which is reviewed. There’s a meeting if there’s an issue that needs addressing.”

Stonemason, 15 Employees, Cambridgeshire

There was also a reliance on subcontractors to be responsible for themselves & their area of work. However, there was tacit acknowledgment, amongst some category 3 companies, that their health and safety standards were not of the highest. Evidence emerged of employers reluctant to take on staff, apprentices or work experience candidates, because this would necessitate enhanced compliance with health and safety regulations.

“I wouldn’t take on an apprentice. I don’t have the time to spend with an apprentice, and also with apprentices you know they’re not allowed to use certain machines because of health and safety.”

Welder, 2 Employees, Bristol

A number of other influencers emerged, not widespread, but nonetheless present in a minority of cases. These included a previous HSE inspection (there were several instances of these) or a previous accident. These were both powerful drivers in ensuring improved attention to health and safety, although they only guaranteed best practice, in relation to prevention of work related diseases, where the inspection or incident actually related to ventilation.

“We had a HSE inspection last year when we had just moved in to our new premises, they highlighted the need for ventilation, it would have been something that we would have got round to getting anyway.”

Stonemason, 11 Employees, Sheffield

Likewise, in a minority of instances, an MD with a mindset attentive to health and safety could drive attention across the board to health and safety. Such an MD would set the culture in the workplace. However, the converse also applied, where an MD could attempt to ignore health and safety and suppress demands for LEV from employees.

“The previous MD to me was a bit old school and wasn’t really in to health and safety, I have a military background so am quite up on it. When I took over as MD the staff asked me for ventilation and I got it for them.”

Electronics, 5.5 Employees, Hampshire

Other, less ‘positive’ influencers also emerged, although these were low key and seldom voiced in respect of disease amongst these occupational groups. These comprised fear of HSE action and concerns over health and the need to avoid illness, seen as both bad for business and also with a danger of litigation.

3.9.3 Enabling Factors

Enabling factors, construed as facilitators to good practice in disease reduction, rather than influencers, were almost non-existent. There was a little downloading of HSE risk assessments, prompted by external contractors and some citing of prompts from the Federation of Small Businesses, but these were unlikely to relate specifically to the need for ventilation.

Few supplier-led enabling factors emerged, apart from some within category 1 and a few category 2 companies, where a meaningful and continuing relationship had developed between user and supplier. These were the users who aimed for the highest quality equipment, who took advice regarding the equipment and some of whom had regular inspections of their equipment by the supplier.

A minority of these category 1 companies would hold regular meetings, monthly in one case, with the supplier, to discuss what was new on the market, and it would be at this time that health and safety issues would be discussed

“We use a local supplier who helps us make our decision. We have monthly contact with this supplier who will pop in to show us anything new on the market. We usually go to them if we need anything.”

Rubber, 54 Employees, Wrexham

For most, supplier as enabling factor was non-existent, perhaps because LEV was not thought to require an ongoing relationship with a supplier; or because it was bought sufficiently infrequently for any relationship to get established; or because the supplier himself did not encourage this, viewing the purchase as a one-off and a commodity with no extra or ongoing responsibilities.

3.9.4 Barriers to Good Practice

A good number of barriers to good practice emerged, and were frequently voiced by category 2 and 3 companies.

The major barriers, evident amongst many category 2 and 3 companies, were **ignorance** and **complacency**. Specifics relating to the diseases and conditions resulting from fumes and dust were unknown and there was a prevailing mindset that there was nothing to fear. In fact, where a risk was suspected, it was often seen as a normal and acceptable hazard of that occupation, with the attendant risk of respiratory disease no greater than the risks in normal, everyday life presented by, for instance, fumes from cars on the road.

Experience on the job was often rated more highly than attention to health and safety regulations and guidelines. This particularly applied to the welding industry, but was also found in other occupational groups,

“Wherever you’re working they [the client] insist on hard hats, all the gear, which is not really necessary. They’re trying to cover across the board, every eventuality, and don’t take into account that I’m bringing 30 years of experience to this.”

Welder, 2 Employees, Horsham

“I don’t actually know that the LEV or the RPE is effective enough but my stonemason guy is very experienced and has taught on a stonemason course ...”

Stonemason, 8 Employees, Northampton

Myths prevailed. There was some belief that large spaces, open windows and fan extraction was sufficient most of the time, and as a result, LEV was only brought into action if the work was conducted in a small enclosed space. A further common myth amongst category 3 companies was a belief that short working periods led to limited exposure and thus meant precautions were unnecessary

“In the workshop we often don’t bother with a ventilator. There’s plenty of ventilation, the doors are open, and we just use our common sense. If we were standing there choking, then we’d do something about it.”

Welder, 2 Employees, Horsham

“If I was doing a little bit I wouldn’t bother, there has to be enough fumes to warrant putting the extractor fan on.”

Welder, 2 Employees, London

“I don’t have any worries about lead because I don’t do enough soldering. I probably do between 30, minutes to 1 hour a day in 2-5 minute stints. I always have the solder iron on so I can just pick it up when I need to. The fumes just drift away or I blow them away. I never smell them and I am never conscious of inhaling them.”

Electronics, 2 Employees, Sheffield

Invisible dangers were often equated with being non-existent.

“If you can’t see it [the dust] then it is not there in a quantity to matter, if you can see it then you need to do something about it.”

Stonemason, 60 Employees, Dorset

Uncertainty was in evidence amongst a few category 2 companies in relation to some of the details surrounding ventilation equipment, such as required frequency of checks on equipment; how to check the equipment, how often to change filters and how to find an organisation to conduct annual checks.

Another manifestation of ignorance and complacency was lack of organisation in relation to H&S checks. Even amongst a few companies mostly abiding by recommended good practice, such as conducting annual checks on LEV, and where there was a relationship with the dust extraction company carrying out these checks, there were instances of a failure to perform regular maintenance checks.

“We get our LEV repaired, maintained and tested annually; apart from that, we don’t do anything except clean it every now and then. There’s no need to test it more.”

Rubber, 42 Employees, Derbyshire

There were also a few category 3 companies who claimed it was too much trouble to attend to health and safety practices if, for instance, they were working off-site– it would be impractical to transport equipment to clients’ homes.

Finally, a few instances emerged of management desire for a quiet life. Some mentioned a fear of workforce disruption if employees were exposed to too much health and safety knowledge and thus they preferred to underplay this. Likewise, tales were told of employee reluctance to wear RPE and employers doing little or nothing to enforce this out of a desire to avoid conflict.

Another major barrier to good practice, and voiced by category 2 companies as well as category 3, was **cost**. This had several manifestations. A key element of this was cost of equipment, with LEV, and even RPE, seen as expensive. Additionally there was the cost of inspections which, at £600 for an annual check meant many were shelving them during the current recession; a fact also borne out by suppliers. Also disregarded were maintenance of equipment and replacement of filters.

“I know that we are meant to get our LEV certified every 12/14 months and it should have been done in February, but this year we have had to let it lapse. I am waiting to see if the company survives before I get it done.”

Woodworker, 8 Employees, Petersfield

Budget pressure from clients emerged as another element in the cost argument. Tenders needed to be not only competitive but also as low in price as possible, thereby – the argument ran – prohibiting rigorous adherence to Health and Safety Regulations, however desirable they might be.

“If we had to build that [bespoke LEV] into the costs, we’d never get any work, people wouldn’t want to pay it, we’d be out of business.”

Welder, 4.5 Employees, Kent

“Currently we have to price in to our tender, for work, what equipment we think will be required. Someone can undercut us by using cheaper equipment. I would like to use better health and safety equipment but I would never get any jobs.”

Stonemason, 6 Employees, Doncaster

This was the mindset which saw health and safety relating to health as just a cost, with no material gain. Health and safety compliance was not felt to assist in the generation of business, since clients were thought to view it as a ‘given’.

Another key barrier, often voiced by category 2 and 3 companies, was **time**. Adherence to health and safety could slow a job down, and was consequently ignored. The main manifestations of this, noted by MDs, were a tendency amongst employees not to move LEV whilst working and to omit checks on equipment, since both these detracted from actual work time.

“We have a moveable fume extractor, but the guy won’t use it as it is too cumbersome and slows them down.”

Welder, 3 Employees, Bristol

Attitudes to HSE emerged as yet another deterrent to seeking advice. Although a minority had experience of being helped by HSE, for many the mention of HSE made them apprehensive. Even amongst some who were open to help and would indeed welcome this, fear dominated their mindset. HSE was perceived to focus on areas of weakness, not on areas where health and safety was well handled. They worried that by asking for advice from HSE, they would be exposing their shortcomings, and would be likely to provoke an inspection during which numerous instances of non-compliance would emerge. They would then be expected to abide by unreasonable, in their view, regulations and penalised for failing.

It should be added that the category 1 companies were appreciative of HSE, with the only criticism being that it could take 5-6 months for HSE to report back after an inspection, and that some immediate feedback would be useful.

Overall, there was scope for HSE to promote a helpline, encouraging questions about good practice without fear of penalties.

3.10 EFFECTIVE COMMUNICATION STRATEGIES

3.10.1 Communications: Content

Only a minority possessed or had seen any **HSE leaflets**. When shown, there was some appreciation of Clearing the Air (both the employee and employer version). Its visuals, coverage of various topics and tips were appreciated. There was however also some low key criticism of HSE material. The current material was perceived to focus on detail, such as correct use of LEV and its maintenance, rather than why it was needed in the first place.

Current HSE communications were too elementary for category 1 companies and some category 2, who were way beyond this in their knowledge and behaviour.

“I’d have thought most of it [Clearing the Air] was common knowledge by now. In this industry most people are aware of the obligation to have these things. If this is a recent publication then it feels a bit horse and stable door.”

Rubber, 35 Employees, Cambridgeshire

Most category 2 companies however did need this information. They regarded the booklet as comprehensive, but for dipping into, rather than reading cover to cover. This was, for them, a relatively peripheral topic and one that was not top of mind when they gave thought to health and safety. The booklet required them to persevere to discover what they actually should be doing, what checks should be undertaken and when they should take place. It should be noted that the majority of category 2 companies were unlikely to read this booklet because they perceived they were already compliant or sufficiently so. Most were not interested since they were not seeking more information.

“If I received Clearing The Air I would probably glance at it and then not read any further. I don’t feel the need. For what I need I know enough.”

Welder, 2 Employees, Horsham

“The booklet looks good. I love the cover of that! But even if you sent it out free, I am not sure people would read it ...”

Electronics, 4 Employees, London

Category 3 companies were way behind this. They needed the basics, an introduction to the risks from dust and fumes, why they needed it, precisely what the dangers were and a simple guide to LEV.

“I keep up to date with health and safety through HSE and I have a book with leaflets in from HSE, although it is old and needs updating. I would like to know more about LEV. It would be good to have some spot checks because, although I think I am doing everything right, it would be good for someone to come in and tell me if something is unsafe, otherwise I might not realise.”

Welder, 3 Employees, Carlisle

“I don’t really keep up to date with Health and Safety. It’s all common sense, if something’s dangerous, it’s dangerous. I don’t need to know about anything more than that.”

Electronics, 30 Employees, Luton

The findings suggest that a two-stage approach may be useful for communicating with category 2 and 3 companies, perhaps on the following lines:

Introductory Level to generate interest

- Establish evidence-based link between work practices and disease
- Use this to develop understanding and recognition of the importance of health and safety in this respect
- Combine this with a statement of legal requirements and recommendations
- Explain why LEV is needed and when it should be used.
- Outline different types of LEV

Secondary Level to explain requirements

- Expand on different types of LEV
- Discuss procedures relating to LEV
- Warn of dangerous working practices, e.g. inadequate checking and maintenance procedures
- Explain that legislation has changed and what this means for business

Woodworker specific communications generated low key reception from the woodwork occupational group, with only a cursory interest shown. As with the booklet, it was perceived to be wordy and, in terms of content, of little interest since there was a general feeling that they were compliant with health and safety regulations.

3.10.2 Communications: Channels

For users, the ideal communications channel was HSE linked and, preferably, involved HSE taking the initiative and making contact with users directly. The idea of email bulletins was popular, with links to relevant elements on the HSE website, in conjunction with links to any other useful websites.

“I think they could do better at mailing or emailing out to companies about basic legislative changes and you can look at and take a view whether you need to seek further information.”

Electronics, 11 Employees, Poole

“The best way of getting health and safety information to me is through emails.”

Rubber, 13 Employees, Hampshire

“I try to keep up to date with health and safety but it is one of these things where I can barely have the time to get enough work done to bring the money in, let alone spending my time trying to find out if there have been any changes to health and safety rules. We did see a while ago that there had been some changes to legislations regarding ladders so one of the guys downloads some information for us all to have a read.”

Stonemason, 3 Employees, Bristol

Once it was recognised that HSE was unlikely to be able to affect this, due to not having contact details of the relevant companies, other means of communication were considered.

A key potential channel was the HSE website itself. Only a minority used it currently, with others never using it and some unaware of its existence. Although it generated mixed views amongst those aware of it, with some hints that it covered too many areas and that the search facility was not good, there was felt to be scope for promotion of this facility. With heightened awareness of it, this was felt to be potentially the ideal one-stop-shop for all information on health and safety legislation and recommendations for all occupational groups. Criticisms of the current website seemed to stem from lack of real familiarity with it, but it is worth noting these perceptions.

“I would search Google but if it is health and safety oriented then I wouldn't think to look any where else [other than HSE] because everything else is commercial.”

Electronics, 4 Employees, London

The following HSE forums also had some appeal:

- HSE roadshows
- HSE DVDs, provided they were inexpensive

“We’d be interested in HSE health and safety training DVDs. We do have our own introductory health and safety courses for new employees and it would be great to have DVDs for them too. Basic slips and trips DVDs are often quite expensive, so it would be good if the HSE provided these more cheaply.”

Rubber, 23 Employees, Hampshire

The Internet itself was already used to obtain information, with users talking of typing in the issue of interest into a search engine, such as Google, and then scanning available sites. This could be further utilised by HSE if a policy of ensuring a link to an HSE website appeared whenever a key word, such as ‘fumes’ or dust extraction, was entered.

Other communication channels were discussed, with various official bodies emerging as potential conduits of information. Trade associations (linked to the relevant occupational group), Business Link, the Federation of Small Businesses and Chambers of Commerce were all mentioned. Occupational group forums were also mentioned, as good channels for information.

“It [membership to the BEMA] just gives us an access into legislative help. They track legislation changes in terms of employment law and help us keep our employment contract up to date.”

Electronics, 11 Employees, Poole

General communication channels such as press and poster campaigns were noticed and commented upon by a number of users, albeit from the perspective that HSE communications tended to focus predominantly on personal injury. However, such a campaign highlighting the risks from dust and fumes would be likely to generate awareness of the dangers.

Trade press and trade exhibitions were also seen as good vehicles for HSE messages. Users often commented that HSE always had a presence at trade exhibitions and it was an easy, and non-threatening, way in which to access HSE information and discuss health and safety issues.

“I think they need to come down to ground level. There are just normal people trying to do a job. Ask what your business is, and say: ‘Can we help you to make things better in your work place? Here’s a book for your type of work’.”

Woodworker, 3 Employees, Birmingham

External health and safety consultants would be a powerful channel for information relating to the risks from fumes and dust, since they are already providing key advice. It was mentioned that they would often inform their clients as to areas the HSE were focusing on and thus may be likely to pick up swiftly on developments in this area.

“We have an external company who come in at least twice a year to do checks and keep us update with health and safety.”

Woodworker, 50 Employees, Pembrokeshire

“We have an external Health and Safety Advisor who carries out inspections at the yard and provides information as well – news, letters and updates.”

Stonemason, 30 Employees, Edinburgh

Category 1 companies expressed some enthusiasm for suppliers of relevant trade equipment, e.g. tools, machinery, stone, metal, as channels for H&S information. The advantage of these was that, since some companies had developed a relationship with these suppliers over time, they were seen as genuinely interested in the business and in staff welfare, and not solely motivated by sales of more equipment. This latter point was important. Suspicion that what

was being delivered was a sales pitch dressed up as health and safety would undermine its effectiveness. To avoid this, HSE support and backing was vital.

“We use a local supplier who helps us make our decision. We have monthly contact with this supplier who will pop in to show us anything new on the market. We usually go to them if we need anything.”

Rubber, 54 Employees, Wrexham

There was also potential for LEV inspectors and insurance companies to deliver appropriate health and safety information, although it should be noted that inspections may be disregarded in difficult times.

4 RESEARCH FINDINGS: SUPPLIERS

4.1 PEN PORTRAITS

LEV suppliers were placed into two categories: top tier and second tier, described in the following pen portraits.

Broadly speaking, top tier suppliers showed an active interest in their clients' health and safety, considering themselves responsible. They also demonstrated considerable knowledge of the hazards and risks peculiar to each occupational group with which they worked. Second tier suppliers generally considered their clients' health and safety to be their own responsibility and did not aim to take on an advisory role in this regard. Moreover, they had little knowledge or interest in the risks to which particular occupational groups were exposed.

However, there was general awareness in both categories of improper use of LEV.

“It happens a lot that we see clients using inappropriate equipment, it’s often not turned on, not being maintained, or employees especially those with a strong union presence, tamper with equipment for an excuse to down tools. There was an Irish rail company whose employees put rags in the pipework as an excuse to down tools, one of our engineers had to go out to remove the rags.”

Top tier supplier, Manchester

“I see bad installation and bad practice all the time. People get the equipment but don’t maintain it properly – we offer a maintenance service but we are rarely taken up on it as they will always find cheaper. I went to one plastic recycling company where it was like walking around in snow. I have seen filter boxes fitted but with no filter in them – the council should check or the installation company should supply certificates.”

Second tier supplier, Norwich

“Some equipment you need to operate, for example move an arm, and a lot of the time we’ve found it’s not being used. I’d put it down to laziness or not being trained properly and understanding the dangers they are being exposed to.”

Second tier supplier, Leicestershire

4.1.1 Top Tier

Top tier suppliers comprised about half of the sample. They were knowledgeable, showed a great deal of understanding and were interested in keeping up with legislation. They were quickly able to name conditions which their clients' employees may suffer from. For example, cancer risks, dermatological and respiratory problems, COPD, Parkinsons, and welding fume fever were among the diseases and conditions mentioned.

“If it is stainless steel welding you have nickel chromium and carcinogenic fumes. Soldering it might be the rosin ... they have reduced the rosin which has the lead in it but ultimately, in the high end of electronics, it doesn’t create such a high quality soldering joint so they have had to go back to it in some places, but ultimately even rod steel welding generates weld fume fever. It

can cause staff to go off sick and cause flu symptoms all the time ... galvanised is one of the worst ... mild steel is as bad as the rest but people think that it is not as bad... but galvanised is one of the worst because it contains zinc and zinc contains nickels and stuff like that as well and, more importantly, someone who is welding galvanised will get ill, very, very ill very quickly.”

Top tier supplier, Leicestershire

“For our clients who are unsure what dangerous substances are in welding fumes, we’ll give a presentation explaining the dangers and the substances they could be breathing in. The size of welding fumes particles means they can breathe them in and stain their lungs.”

Top tier supplier, Oxfordshire

“MDF has carcinogenic material in it which is dangerous, soft wood is processed and treated which when cut and breathed in can be harmful. I went to a factory the other day and it's so bad you can taste the dust, and it's hardwood which is carcinogenic which is a big problem.”

Top tier supplier, Lancashire

“I know MDF is lethal, it clogs the lungs, and leads to death. There are lots of second and third rate workshops out there, where the workers don’t even wear a mask. MDF should be banned. Any fine dust is harmful; your lungs can only digest so much.”

Top tier supplier, London

“In welding there’s some danger with all the metals. They use a visor, which means they can’t use a full-face mask, so they must have LEV if they are working in an enclosed space.”

Top tier supplier, London

They showed great understanding of clients’ businesses and knew exactly which LEV they needed. When clients requested inadequate equipment, they would sometimes refuse, in spite of the fact that this could lose them business if the user refused to then pay for the correct equipment.

“I hope you have a question there that asks if we would walk away from a job ... yes we do ... for example someone rang us up this week and they want an arm and a fan for welding. He says he is welding things that are quite big and he doesn’t have time to move his self supporting extraction arm. He could have a bench, he could have an air fed mask and he could have torch extraction, which is the means of taking away at point, but he wants a fan in the wall. Which we can’t sell. Because the fan in the wall means he is still going to blow the dust up and it will go past his face and outside ... so we said to him, if you want a fan in the wall there are 2 a penny companies out there who will sell you a fan, we are a fume extraction company so we are not interested. It’s a shame, it’s a sale lost for us but we are not going to get someone come back to us and say ‘you sold us something that doesn’t work and someone is going to get ill.”

Top tier supplier, Leicestershire

“We don’t always win a job but we would still advise a customer, regardless of us losing a job, what they need to take into consideration when that system is installed by others. [This is] not to discredit or devalue what has been installed, but to make sure that the customer gets something that is absolutely fit for purpose.”

Top tier supplier, Leicestershire

“I deal with MDs, those with top purchasing power. These companies will get three or four quotes. If they don’t want to spend the money, I’ll tell them to wait until they have got the money and then do a proper job. But they don’t always listen to me! With this equipment, it either

works or it doesn't. There's nothing in between, especially if you're moving fumes and solid particles."

Top tier supplier, London

Through experience top tier suppliers knew that equipment was not always correctly used. For example, on returning for checks they would find arms moved out of the way or filter bags clogged. There was awareness in this group that supplier advice to users was sometimes ignored.

"In my experience the machines aren't being used properly if the filter bags are non efficient or been clogged up and nobody has done anything about it."

Top tier supplier, Lancashire

"I feel they don't use them because they are lazy and it's impractical moving the arm as you weld. In some cases there is a lack of awareness of the dangers of what they are doing."

Top tier supplier, Oxfordshire

These companies sold proactively, using their knowledge of H&S regulations with confidence.

"As part of the sales process we will assess what they [our clients] need to do to meet health and safety requirements. Because of our experience, and the knowledge of our products, and our knowledge of health and safety we know what they need."

Top tier supplier, Oxfordshire

"LEV has to be tested within every 14 months, which is part of the regulations so yes we do keep in contact with them. There is also an opportunity for repeat business if they have filters, we can sell them new ones."

Top tier supplier, Oxfordshire

The HSE booklet, Clearing The Air, recommends obtaining three quotes before buying LEV systems. This was a source of conflict for suppliers who wanted to win a client, but top tier suppliers would hand out this leaflet despite this conflict of interests.

"You could see this as quite negative for us [turn to page 4 of "Clearing the Air"] 'How to select an LEV supplier'. They have rung us and they want us to do their fume extraction system, now they ring us and that's one quote, but we are going to go and tell them to go and get 3 quotes, so we are actually telling them don't just take our quote go and get two more. But it [Clearing The Air] is the main document."

Top tier supplier, Leicestershire

Top tier suppliers were already using health and safety requirements to support their sales pitches, either via the broad requirements of general health & safety regulations, or via the technique of selling on specific items designed to help employers meet health and safety requirements, e.g. air flow indicators to help them monitor their LEV systems. One company had, in the past (pre Data Protection legislation) used HSE enforcement data to target and sell to non-compliers.

"Up until 6 months ago we used the HSE enforcement website to gain business, which we got a tremendous amount of business from. The information used to go up 6 weeks after a HSE visit, now it has changed because of the data protection regulations and the data on there is old, it is usually solved by the time we get there."

Top tier supplier, Leicestershire

4.1.2 Second Tier

Second tier companies, comprising about half of the sample, did not always specialise in LEV for industry but often dealt with commercial and domestic products as well as industrial. Thus LEV was often just one branch of their business, which included other products such as air-conditioning and even plumbing. The current economic climate was partly responsible for this, leading some to begin to move away from industrial equipment into domestic. In spite of this, companies would have a dedicated manager for industrial LEV. However, these managers' views would be influenced by the company's general approach and main client base which often led to a mindset that was less specifically concerned with industrial issues.

"We supply to supermarkets, department stores, housing, pharmaceutical firms and industry. Some units have collection for dust, that's specialist kit which we will buy in. We use specialist companies for that."

Second tier supplier, Hertfordshire

"We do kitchens, offices, factories, which includes fume removal, vehicle exhaust vents and woodworking. We do a lot of local authorities e.g. hospitals, schools. We have also been doing a lot recently for skill centres which will require ventilation for all sorts of trades e.g. plumbing, welding."

Second tier supplier, Manchester

"We range from the small builder chap who might come off the street to blue-chip retail operations."

Second tier supplier, Hertfordshire

"Our customers go from Aston Martin to the local corner shop. We mainly do office ventilation, hotels and restaurants. We also deal with factories."

Second tier supplier, Birmingham

They were more likely to have an off-the-shelf approach to LEV, rather than offering bespoke units for the factory, often buying in pre-made parts from other companies. The specifics of their client's business were not a high priority to them, and they showed little interest in this.

"We work for mechanical services consultants. They do the whole scheme and they just get us involved on the ductwork side."

Second tier supplier, Birmingham

"The equipment at the end of that, we usually buy in, be it a big fan, or a big air conditioning unit. But if we need to we'll make it."

Second tier supplier, Hertfordshire

Ignorance of the specific dangers encountered by particular occupational groups was prevalent. Nonetheless, they were often broadly aware that it was not good to breath in dust or fumes and raised general concerns such as cancer risks or skin conditions.

"It wouldn't actually kill you."

Second tier supplier, Manchester

"We know very little about the dangers of our clients' businesses until we attend site to see what they need, we use HSE books to tell us the health issues."

Second tier supplier, Norwich

“Limestone dust is supposed to be quite bad because of the weight of it; it’s a heavy kind of poisoning.”

Second tier supplier, Leicestershire

“There’s so many different processes out there, you’re learning all the time. If you are breathing in solvent fumes it certainly wouldn’t be very good on the paint processes. What does my Tippex bottle say? That ‘strong solvents that can cause problems to personnel if exposed over a long period of time’.”

Second tier supplier, Hertfordshire

“Breathing in fine wood waste dust, particularly MDF, is bad. MDF is carcinogenic.”

Second tier supplier, Hertfordshire

“I don’t know. I would imagine that it could cause lung problems, anything to do with breathing. As regards the actual outcome of not having extraction, I wouldn’t know.”

Second tier supplier, Birmingham

“Toxic fumes, potential explosive dusts, sawdust, MDF powder. A lot of people just think they can throw it outside, but they can’t, they’ve got to collect it. That’s when it starts to get expensive. They just want to stick a tube through the window and get rid of it. Some of it is hazardous waste, and potentially explosive as well.”

Second tier supplier, Birmingham

“I haven’t thought about this really.” (Health effects of clients work activity.)

Second tier supplier, Aberdeen

Testing was generally conducted on completion, after which it was often seen as the client’s responsibility.

“A lot of it is just general, just keeping their kit clean, changing filters. Again we will give them the parts. Ducting there’s very little to do, unless it’s kitchen, which gets dirty. A lot of it is just self cleaning, really. You clean the filters and the unit, and the ductwork stays clean.”

Second tier supplier, Hertfordshire

“There’s a lot of in-house testing. You only have to buy a testing instrument really. As long as they’ve tested the airflow rates and can show the system has been checked, that’s enough, to be fair. A lot of the systems are simply on or off. A lot of them are on 24 hours. Or on a BMS [building management system] which would mean the systems come on automatically. To be honest, our type of systems, there isn’t very much that can go wrong.”

Second tier supplier, Hertfordshire

“We will test the system on completion anyway. And issue certificates confirming it’s actually achieving what it’s designed to achieve. Then they take the responsibility to maintain it and change the filters. It depends on the process.”

Second tier supplier, Hertfordshire

There was a minority view, based on clients’ perceived lack of knowledge and expertise in this area, that it could be preferable if clients did not attempt to check and maintain their equipment. This would avoid the risk of clients reducing the effectiveness of the equipment or even damaging it.

Sometimes we use them[LEV] because it looks the part for the client, it looks a bit more professional, and often they come with a certificate that we can pass on to their health and safety guy which reassures him they're in full working order

"I would rather they (clients) didn't touch it."

Second tier supplier, Hertfordshire

One company acknowledged equipment needed to be tested, but pointed out they were not qualified to do this and expected the users to seek out an independent third-party company.

"We will provide them with operation and maintenance manuals. Maintenance is something we don't do. There's maintenance companies in the industry who will do that."

Second tier supplier, Hertfordshire

Second tier suppliers might be members of a trade association, suggesting that membership of a trade association was no guarantee of expertise. Many of their sales derived from passive selling, i.e. predominantly repeat business, with any new business coming in through word of mouth, exhibitions and the internet.

"It's mainly referrals to be fair, we try to stay away from new business. We do do some, but in this economic climate we just try to stay with people we know."

Second tier supplier, Birmingham

"80% of our business is repeat business."

Second tier supplier, Norwich

"5 to 10% of our business is new business, the rest is repeat business. We rely on word of mouth. We have a Marks & Spencer mentality that the customer is always right and try and build a good reputation."

Second tier supplier, Yorkshire

"90% of our work is repeat business."

Second tier supplier, Hertfordshire

They showed less interest in the health and safety of their clients and, in fact, when asked about health and safety concerns, they were likely to return repeatedly to the subject of the health and safety record in their own factories, or protecting their own employees on site, as opposed to discussing their clients' health and safety issues. They found it difficult to respond on the subject of particular health issues which might be of concern to specific occupational groups.

(What are your concerns about client's H&S issues?) "I have refused to do stuff in the past that I have deemed dangerous. Normally it's access really or working at height."

Second tier supplier, Hertfordshire

"We employ a firm of consultants, but generally most of the companies we work for have their own health and safety and we have to comply with their rules, although we have got our own. Basically we have got risk and method statements, and anyone starting, they have to go through them. We have to train them how to use the machine. All our fitters have got score cards to show they're capable of erecting towers or driving trucks or whatever."

Second tier supplier, Birmingham

"Most sites that we're working on now we have an induction on-site before we do any work, probably for a good hour. Covering general health and safety, what the rules and regulations

are. Most sites have their own videos now to watch. We have to fill questionnaires in and make sure they pass the test.”

Second tier supplier, Yorkshire

There was some selling in of further services to users, specifically maintenance, via warnings concerning the validity of guarantees. This was in contrast to top tier suppliers who would sell in additional services from the perspective of health & safety and the legal requirement for regular checks on equipment.

“Always sell it on the warranty part – if you don’t maintain it, your warranty is null and void. Air conditioning companies do that all the time.”

Second tier supplier, Hertfordshire

4.2 CURRENT BUSINESS CONCERNS

Business concerns of the suppliers included the current recession and the fact that, as a result, fewer new clients were coming forward to have ventilation equipment installed. LEV equipment was perceived as expensive. This was also leading to customers being even less likely to invest in effective LEV, choosing to opt for cheaper, more basic equipment.

“The recession means that people stop spending on capital investment equipment. We’re 25% down on last year and have made 25% redundancy.”

Top tier Supplier, Manchester

Top tier suppliers would attempt to counter clients’ concerns regarding the cost of equipment by explaining that the correct equipment could save the customer money in the long term, through a reduction in days taken off ill by factory staff. Second tier suppliers were less likely to provide such arguments.

Additional business concerns voiced by suppliers included clients’ reluctance to have their equipment checked, even when told this was illegal. The reason for this, again, was the expense.

“Some companies are quite good and some are terrible. We do LEV and COSHH testing as we install extraction equipment into the wood waste industry to extract the waste dust or chippings from the machinery. By law every 14 months they are supposed to have this test, where we monitor the environment that they are working in, we then come back and do a computer print out with the information on there. Unfortunately with the economic climate as it is, people are saying they don’t want it doing, and I’m like, hang on a minute this is by law and they’re saying ‘I’m not bothered’.”

Second tier supplier, Manchester

4.3 RESPONSE TO OBJECTIVES

There were three objectives to this research: firstly, to establish the current level of awareness and attitudes towards work-related disease amongst supply-side stakeholders; secondly, to determine the key influencers, enabling factors and barriers to good practice (in the context of preventing work-related disease in the HSE’s target occupational groups) among LEV supply-side stakeholders; thirdly, to seek information on effective communication strategies amongst the target audience.

4.3.1 Levels of Awareness and Attitudes to Work Related Disease

Top tier suppliers were more aware than second tier suppliers of the risks in the workplace relating to improper provision of ventilation. They could provide information on diseases and conditions prevalent in these occupational groups and had facts at their fingertips about the threat of disease in the workplace when LEV not used. Their attitude towards these work related diseases was one of concern.

“At the moment on the latest HSE letter which has gone out there are 6000 respiratory chronic obstructive pulmonary disorders and if for example LEV systems were working properly that figure could be reduced by at least 2000 people a year dying, they are dying, these people are dying ... 4000 or so are usually smoking related illnesses so you can’t help with those ... in welding for example a 139 people, men, die each year from welding related asthmatic, chronic obstructive pulmonary disorder and 13 women. That was from the HSE man himself 2 weeks ago.”

Top tier supplier, Leicestershire

“MDF is lethal for woodworkers, it clogs the lungs and leads to death... any fine dust is harmful... there are still some products in soldering which will harm your lungs if inhaled... all the metals in welding pose some danger and must have LEV... I’m very concerned, even if they are only working for a short time, they must have adequate ventilation.”

Top tier supplier, London

Second tier suppliers were aware that it was not good to breath in fumes and dust, but were unable to isolate exactly why. They tended to make vague references to carcinogens or asthma, but with no specific facts to hand. They demonstrated less concern than top tier companies, due to their lack of specific knowledge.

“Breathing in fine wood waste dust, particularly MDF, which is what the carcinogenic glue is ... to be honest, going in as an outsider into their company, you can probably notice it more, because they’re in it all day long. I go in there and I come out feeling ill because I’m not used to it.”

Second tier supplier, Hertfordshire

4.3.2 Influencers, Enabling Factors and Barriers to Good Practice

Influencers to good practice were factors which encouraged the user to install LEV, whilst enabling factors could be defined as events or information which facilitated installation and maintenance of LEV. Finally, barriers were factors which discouraged or prevented the user from accessing or using LEV.

4.3.3 Influencers

Top tier suppliers could state the influencers to good practice with ease and readily construct arguments to encourage their clients to invest. One key argument was that the user could save money by investing in LEV, since this would reduce employee sick leave. Another argument was reduced cleaning bills resulting from a cleaner workplace. Additionally, heating bills could be reduced since, without LEV, many factories would leave doors and windows open for

ventilation, thus increasing heating expenses. These bills could be reduced through the use of LEV and a heat recovery plan, by which hot air was retained.

“Fume and dust extraction is a capital investment but they can’t relate to it producing revenue..., that is because ultimately they will have less sick leave and all the associated things that come with that...although fume extraction systems are going to cost a lot of money, well depending on the solution... they can’t see the initial pay back period, they think I don’t really need that, I have windows and doors.”

Top tier supplier, Leicestershire

External health and safety consultants were seen as key influencers on health and safety generally, with the potential to influence further in respect of LEV needs. However, health and safety consultants were not thought, by suppliers, to be offering exhaustive information at present on the health risks specific to the occupational groups.

“Usually with the larger companies they’ll employ a consultant. He lays down guidelines about what extraction rates are required and we have to work to that. Generally it’s mapped out for us, but if we do a direct job ourselves, we’ll just liaise with the fan people to make sure we’ve got the right number of air changes.”

Second tier supplier, Birmingham

Fear of litigation was a key influence on employers mentioned by the suppliers. As yet there had been no high profile cases in respect of ventilation but it was felt to be only a matter of time.

“It won’t be long before the first high profile case.”

Top tier supplier, Oxfordshire

HSE and local authorities were also cited as influencers, both with power to achieve more in this respect. The HSE could enforce the law, thus compelling companies to invest properly in LEV. Local authorities also had the power to make demands on companies through the environmental health officer. Both these were seen as channels which currently did some policing of company behaviour but were not achieving their full potential in this respect.

“I went to a company only last week and they had a welder who had been welding for 35 years. He’d only been with them for 11 months... he’d gone to the doctor and said he had a chest infection. He’d welded all his life before that, so that is the reason for his injury..., anyway he made an anonymous phone call to HSE, the company got a visit, then got an enforcement notice, which was good, and subsequently they brought fume extraction to protect the employees. They wouldn’t have bought it had he not made the phone call and the HSE man come round and checked and so forth.”

Top tier supplier, Leicestershire

“We do get quite a few referrals now from the local authorities who’ve been in contact. Normally the council say, well you’ve got to do it, or we’ll shut you down. They get prohibition notices.”

Second tier supplier, Hertfordshire

Pressure from employees was mentioned by some suppliers as one means of influencing companies to install LEV equipment. There were reports of employees having complained of headaches due to inadequate ventilation

Insurance companies were also seen to be an influencer with the power to compel usage of LEV, or at least to have the potential to act in this way. Only a minority of suppliers considered this to be a current concern for insurance companies.

“The most important person for us is the insurance company. If they [User] don’t have insurance, they’re not going to function as a company. So if the insurance company turn up at their premises and does the same as the HSE man and says “what are the risks from welding?, oh you don’t have any fume extraction – and what if that man makes a claim against you in the next 5/6 years?” Then he will either issue or not issue them an insurance certificate, and all insurance companies talk to each other, so they [User] can’t just move insurance companies, they have to buy something. If they [insurance and HSE] were in cahoots with each other that would be good.”

Top tier supplier, Leicestershire

An additional and powerful potential influencer, suggested by some suppliers, would be to give consideration to the institution of an industry accreditation system for suppliers, inspectors and health and safety consultants. It may be feasible for accredited organisations to assess user compliance with legislation and to license companies to continue business on a regular basis – and thus provide an avenue whereby the HSE could delegate powers in order to achieve their goals of greater compliance leading to improved disease reduction.

4.3.4 Enabling factors

From the perspective of suppliers, enabling factors had mainly to do with information.

HSE itself was considered a good source of information although there was some criticism of the volume of information and the website, which was not felt to be kept up to date. Whilst this feeling was not LEV specific, but rather a comment on health and safety requirements generally, it would nonetheless encompass LEV. A more easily navigable HSE website was suggested, with perhaps an explicit section on LEV, including details of any changes in requirements.

“Its requirements are moving all the time, and you need to be aware of what the new legislation is bringing in, especially if there is a new product, so we try to keep tabs on new developments.”

Second tier supplier, Manchester

“HSE need to be more definite, to help all the companies who read HSE information and think they don’t need anything. Mind you, I came across a company who were doing a small amount of soldering, about 15 seconds a day, who have spent an arm and a leg on LEV and it’s not necessary, it’s a huge cost and the amount of fumes is just so small it is not a threat. HSE advice is advisory not mandatory and causes confusion.”

Second tier supplier, Norwich

“It [HSE Information] needs to be filtered, because if you’re just bombarded with it, you’re likely to miss something that is relevant.”

Second tier supplier, Hertfordshire

“Other ludicrous HSE legislation means important stuff like LEV gets lost, it’s a minefield for employers.”

Top tier supplier, Manchester

Suppliers also felt road shows were a powerful enabler of good practice, allowing users both to gain an initial insight into the importance of LEV and to develop their understanding; naturally suppliers also appreciated the sales opportunity for themselves inherent in such events.

“The Total Show – Total process and packaging so anything to do with food, pharmaceutical, chemical and you want to buy something for your factory you are going to buy it from that show, so it’s a big show for us to be at because we will meet aerospace, pharmaceuticals, food companies and other companies who may want fume extraction and we will buy the list at the end and add them to our marketing database.”

Top tier supplier, Leicestershire

The selling process could also provide an opportunity to inform users of good health and safety practice. Some suppliers already used HSE information to support their sales pitch and there was scope for this to grow in importance as an enabling factor. This would be facilitated if it were possible for HSE to present health and safety requirements in respect of LEV as mandatory.

4.3.5 Barriers

A key barrier to users investing in appropriate LEV equipment highlighted by suppliers was the **cost**. As mentioned before, this problem had been exacerbated by the recession.

“Some of them don’t give a monkeys because it costs money, even though we can prove that with our equipment they can save money, they still don’t want to make the capital out there.”

Top tier supplier, Oxfordshire

“Some people are extremely good, some people don’t consider the price to be an issue. They are looking for ultimate protection for their operator but they are few and far between.”

Top tier supplier, Leicestershire

“Cost is the biggest thing. We could put a scheme together for say £100,000 and the client might come back and say ‘we’ll spend £20,000 to get us up to scratch’ and it’s part of my job to advise them on what they need.”

Second tier supplier, 7 employees, Manchester

“They don’t bother about it. They’ll overlook it because of cost even more so at the moment. They are not getting ventilation installed at all. They are just not doing it.”

Second tier supplier, Norwich

“They will go for the cheaper quote but what they are doing is saving money but not having the job done properly, this might be at the expense of the environment. Unless they are checked regularly they can go on for years without this being picked up.”

Second tier supplier, Norwich

“They all cost money and lots of small companies just can’t afford it.”

Second tier supplier, Yorkshire

Ignorance on the part of the supplier and user could prevent companies from making informed choices. Amongst suppliers there was some belief that, for welders, for instance, LEV and/or RPE were automatically part of the kit, as this occupational group was used to taking precautions. In practice however, when looking at welding companies, this belief was not borne out, suggesting that suppliers did not always know their target market as well as they thought.

Occasional instances were cited of suppliers being insufficiently knowledgeable, with the result that equipment provided was inadequate for a particular job.

“I went to a place recently where a company had built a fume extraction system from a competitor and the fume extraction system they had sold them was the wrong type - he was doing a welding process that the particulates going through would not be filtered by this machine. It was actually passing the particulate that was the hazardous part back in to his environment and he got nickel poisoning and he had to have a complete blood transfusion, because he nearly died. He had stopped wearing his facemask and everything else because he had brought a fume extractor.”

Top tier supplier, Leicestershire

The **selling process** could itself be a barrier to good practice for suppliers, with HSE regulations a double-edged sword. On the one hand, there was evidence of them being used by suppliers in sales pitches; on the other hand, some suppliers were wary of being too forceful with health and safety regulations lest they jeopardise the relationship with their clients. These latter suppliers put their commercial relationship above considerations of client health and safety compliance.

“My job is not to lay the law down. I don’t want to scaremonger. At the end of the day they’re my clients.”

Second tier supplier, Manchester

“It was sending up plumes of fumes and the operators were saying ‘we need LEV’ and the new Health and Safety guy was asking me ‘do we really need it’. It would have been relatively simple – just moving the work to an external wall, with a hood over the zone and extraction to the outside, but they didn’t want to spend the money. It’s not for me, I couldn’t force that issue. All I could do was explain the consequences of them not following it.”

Second tier supplier, Manchester

“If they say they don't want it, we have no power at all to enforce it, and it's only going to be missed if the HSE go into that particular factory to see what's going on. It's a joke and it's sad in a way.”

Second tier supplier, Manchester

4.4 THIRD OBJECTIVE: ATTITUDES TO COMMUNICATIONS

The following section is divided into three sections. The first deals with attitudes to communications as they currently are. We then come on to an examination of communications content, i.e. what suppliers would like to see happen to health and safety communications in the future. The final section covers how, i.e. through which channels, suppliers thought messages could be conveyed.

4.4.1 Current communications

The general impression of HSE information on LEV was that it was not hard-hitting enough.

“HSE need to be more definite...”

Second tier supplier, Norwich

“Clearing The Air is better than nothing, but it has very little impact.”

Top tier supplier, Manchester

Clearing The Air was seen as generally good, but it was thought to target those users who already had LEV. The main criticism was that those who did not have LEV already would not understand either of the leaflets available from the HSE. It was widely considered that Clearing The Air alone was not sufficient.

“It [Clearing the Air] is informative but it’s not enforcing it, it’s not really heavy-handed enough ... Is this going to make someone buy the kit you want them to buy? No!”

Second class supplier, Manchester

COSHH data sheets were thought to be a good source of information for suppliers and users.

“We’d normally gather the data sheets for any particular nasties being produced by a process and then we can go out and interview specialists and select the best bit of kit that’s good for that.”

Second tier supplier, Hertfordshire

Suppliers queried whether it was right to target decision-makers, rather than the workforce, with HSE information.

“HSE don’t reach the right person with their communication. Their advertising, and particularly their campaigns, need to get right down to the ground to the operators. At the moment it only gets as far as management or the people in the position of influence, but the actual person who is technical in danger knows very little. Advertising in a magazine, when is a welder or an operator ever going to read that magazine? It goes in to the office, maybe sales will read it but it’s never going to leave that office.”

Top tier supplier, Leicestershire

“More personal contact perhaps, but it’s just making people aware of the HSE because then they know where to go.”

Top tier supplier, Yorkshire

There were some positive comments on a health and safety DVD available, which included hard-hitting and memorable images of welders’ lungs with and without the use of LEV.

4.4.2 Communications content

Suppliers felt that the current information available from the HSE was too advisory and would prefer it to be more hard-hitting. Scare tactics were recommended for the HSE, such as a campaign featuring images of diseased versus healthy lungs. Moreover, it was felt the ‘stick’ approach as opposed to the ‘carrot’ approach would be more effective: it was time to prosecute and then to publicise the prosecutions.

“The video shows a man who has been welding ever since he was 16. He went to the doctors at 39 and the doctor said to him that he needs to stop doing stainless steel work because you have really got a bad chest, and you are really ill, he should have told him to stop welding altogether but he went on for another 10 years and now he has a total disability.”

Top tier supplier, Leicestershire

Statistics and facts were needed. One supplier spoke about chronic obstructive pulmonary disease (COPD) and quoted statistics per year of around 7000 deaths, of which around 2000 were attributable to lack of LEV in the workplace. These kinds of hard-hitting facts were felt by suppliers to be needed to convince users to take their responsibilities regarding LEV seriously.

HSE support could assist in helping suppliers ensure users did undertake the necessary inspections and maintenance on their equipment.

“Last year we had about 98% come back for the COSHH test, now it's about 60% which is a frightening amount of people being exposed to dust. There is nowhere to report to, nobody to talk to because I did speak to the HSE and really it's not up to someone like me, it's up to them to find these companies, and chances of them finding them are slim.”

Second tier supplier, Manchester

4.4.3 Communications channels

Suppliers would prefer the HSE to shoulder the burden by producing information which they could then pass on to their clients. HSE branded information had the added advantage of being seen as less of a sales pitch than any information produced by the supplier and therefore would be taken more seriously by the user. The HSE could channel information via suppliers. Suppliers saw this as a potentially useful sales tool, a genuine excuse for sales contact with potential and existing clients.

Some suppliers suggested a radio or TV campaign would help to get this information out to machine operatives, as they tended not to read email bulletins or trades magazines.

“HSE should run a TV ad ... ‘Is your boss putting you at risk?’ ... target the employees who will then take the subject up with their employers.”

Second tier supplier, Norwich

“Television, radio [are the best ways to get health and safety messages across. The chances are that every workshop you go to are breaking the rules due to the flipping radio being above the ear decibel level and if they had on local radio targeted campaigns it would go straight in to ‘Are you a welder ... have you got fume extraction?’.”

Top tier supplier, Leicestershire

5 WAY FORWARD: USERS & SUPPLIERS

First and foremost, there is a need to raise awareness amongst the occupational groups in question about the hazards to which they are exposed and the resulting diseases and conditions. Hard facts and statistics underlining the severity of the threat should be effectively conveyed. This is essential if the deeply rooted barriers to compliance are to be overcome. The barriers of ignorance (lack of awareness of the risks and hazards), and complacency (conviction that their response to ventilation issues is sufficient), need to be actively and assertively challenged. Such a strategy needs to do what past campaigns have done for asbestos, lead and smoking – ensure high awareness of the dangers.

Ideally this raising of awareness would take the form of a stand alone campaign focusing on the dangers posed, in order to ensure MDs appreciate the severity of the threat to their employees without being distracted by attendant concerns relating to the cost and practicalities of LEV. In addition, using any channel or mechanism available to support and underline this message would be beneficial.

There are two key target audiences for this campaign: Managing Directors, since they are the decision makers when it comes to purchasing LEV, as well as being ultimately responsible for health and safety; and employees since they are the ones principally at risk, and can be mobilised to put pressure on management. Both need educating in respect of the dangers to which these occupational groups are exposed.

There are peripheral audiences too for this information: second tier suppliers of LEV, because they too need enhanced awareness and greater knowledge; top tier suppliers because they can use this information to assist their sales pitches. In fact, giving weight to the dangers should overcome the fear expressed by a number of suppliers that too strong a focus on health and safety regulations in a sales pitch may jeopardise business. Additionally, health and safety consultants and insurance companies would also benefit from this information, since ventilation appears to be an area where their knowledge is less strong.

Initial focus of the strategy should be to highlight why LEV is needed. The research suggests it must be direct and hard hitting. This is the point at which to mention any legislation relating to ventilation, and that enforcement action may result from failure to comply.

Subsequent focus of the strategy should be on what LEV is needed. This is where the details need to be conveyed. An important element of this is the fact that it is not a question of purchasing just any LEV, but that it needs to be bespoke and appropriate for a particular role within an occupational group. This could be supported by case studies outlining instances of installation of incorrect equipment and the accompanying expense and hassle involved in rectifying this. This is the point to seek to offset concerns regarding the cost of this equipment with arguments explaining the cost of getting installation wrong, the cost of doing nothing and the cost of employee sickness to business.

Checks, maintenance and record-keeping on LEV is vital yet research shows that it is an easily forgotten element in the process, even amongst some category 1 companies. Exactly what checks should be carried out and how to do this needs to be explained, to overcome the tendency to assume that occasional sensory (sight and sound) appraisals are sufficient; the fact that annual or 14 month checks are mandatory is a crucial detail. The importance of these elements should be stressed, along with the consequences of failure to comply, i.e. that this could compound the degree to which employers were held responsible in the event of litigation.

Interested parties need to be directed to HSE resources which can give further help and information. An HSE helpline dealing with ventilation needs could be promoted, with the reassurance that calls will be in confidence, without fear of penalties or recriminations. The HSE website is another valuable source of information and needs to support the strategy with prominent, clear and easy access to advice on ventilation issues. And HSE's *Clearing the Air* could become a two-stage booklet, focusing initially on an introductory level to generate interest, followed by a secondary level to explain requirements.

Control of Substances Hazardous to Health (COSHH) data sheets were mentioned by many suppliers and users and there appeared to be widespread reliance on these for accurate information on how to deal with chemicals and materials in the workplace. However, a message about proper use of LEV in conjunction with substances hazardous to health was not reported in any of the interviews. Clear health warnings, such as those seen on cigarette packets, could be used on COSHH data sheets to convey the basic message on LEV. Given the complexity of ventilation, however, these would need to be supplemented; direction to a specific area of the HSE website is probably the best route for this – 'for more information on what you can do to protect you and your workforce'.

Additional channels of communication range from HSE emails directed to MDs or health and safety managers (were that to prove possible), to other HSE forums such as road shows. Other potential communication channels emerging were various official bodies such as trade associations, Business Link, the Federation of Small Businesses and Chambers of Commerce. Trade press and trade exhibitions were also seen as good vehicles for HSE messages. Suppliers of relevant trade equipment, e.g. tools, machinery, stone, metal, could also assist as channels for health and safety information.

Insurance companies are another possible means of influencing companies to provide sufficient LEV provision. It is hypothesized that, if they were in close contact with the HSE, and demanded the same LEV requirements, this would effectively force companies to remain in-line with legislation. And suppliers of LEV themselves are, and would continue to be, happy to channel appropriate HSE branded communications to users, the more so if there was appreciation that compliance was mandatory.

An extra weapon in the battle to improve standards, and one suggested by some suppliers and some users, would be to give consideration to the institution of an industry accreditation system for suppliers, inspectors and health and safety consultants. It may be feasible for accredited organisations to assess user compliance with legislation and to license companies to continue business on a regular basis – and thus provide an avenue whereby the HSE could delegate powers in order to achieve their goals of greater compliance leading to improved disease reduction.

The measures suggested and the means by which they can be conveyed to the target audiences should begin to eliminate misuse or non-use of LEV and, importantly, reduce the number of employees at risk of ill-health and premature death due to inadequate LEV equipment.

6 APPENDIX

6.1 RECRUITMENT QUESTIONNAIRE: USERS

We are carrying out a Market Research Survey on Businesses in certain sectors and are looking for people to take part in a one-to-one interview/ telephone interview. As a token of our appreciation for participation eligible attendees will receive a cash thank you for their time. I just need to ask a few questions first...

Q1a Occupation (*Probe fully*):

Qualifications: _____

Number in Charge of: _____ SOCIAL GRADE: _____

All to be Managing Directors of their companies at Q1a

Q1b Can you tell me which of the following, if any, happens on site or off-site in your company?

Soldering	1
Stonemasonry	2
Welding	3
Woodwork	4
Work with Rubber	5

Depths 1-8, Paired Depths 41-42 and Telephone Depths 51-58:
All to have woodwork happening on-site or off-site in their company at Q1b

Depths 9-16, Paired Depths 43-44 and Telephone Depths 59-66:
All to have work with rubber happening on-site or off-site in their company at Q1b

Depths 17-24, Paired Depths 45-46 and Telephone Depths 67-74:
All to have welding happening on-site or off-site in their company at Q1b

Depths 25-32, Paired Depths 47-48 and Telephone Depths 75-82:
All to have soldering happening on-site or off-site in their company at Q1b

Depths 33-40, Paired Depths 49-50 and Telephone Depths 83-90:
All to have stonemasonry happening on-site or off-site in their company at Q1b

Q1c And roughly how many employees do you have working full time in the areas just mentioned? (across all your company's sites if you have more than one premises)

	Number of employees
Soldering	_____
Stonemasonry	_____
Welding	_____
Woodwork	_____
Work with Rubber	_____

All to have at least 5% of members of staff working full time in at least one of the areas listed at Q1c

Q1d You mentioned soldering/ stonemasonry/ welding/ woodwork/ work with rubber happens on site at your company's premises. With regard to these specific areas of work can you tell me who is the main decision maker for:

- i)** health and safety compliance?
- ii)** supplier and product decisions (i.e. choosing the supplier and type of product purchased)?

	i)	ii)
Raw Materials	1- _____	1- _____
Ventilation	2- _____	2- _____
Machinery	3- _____	3- _____
Tools	4- _____	4- _____

All to be responsible for health and safety compliance AND supplier choices etc with regard to ventilation and Local Exhaust Ventilation equipment (LEVs) at Q1di & ii

If Managing Director is not involved in making decisions about the LEVs they use please ask to speak to the main decision maker who is responsible for making long term/ day to day decisions about the LEVs they use at Q1c

NB: Screen other member of staff fully and indicate job title on respondent profiles

Q1f And how many people work in you company?

0-1	1
2-5	2
6-20	3
21-50	4
51-100	5
101 -200	6
201-500	7
501+	8

Aim for a spread of company sizes across the sample at Q1c

Q1g And how long have you personally be working in this industry/ companies using LEV's

0-1 years	1
2-5 years	2
6-10 years	3
11+ years	4

Aim for a spread of respondent experience across the sample at Q1f

DEMOGRAPHICS

Q2a Code Gender:

Male	1
Female	2

**To fall out naturally at Q2a
(aim for a spread)**

Q2b Age: _____

**To fall out naturally at Q2b
(aim for a spread)**

OCCUPATION/INDUSTRY EXCLUSIONS

Q3 Thinking about the following occupations, can you tell me which, if any:

- a)** you currently work in or have worked in the past?
- b)** any member of your family or close friends currently work in?

Read out:	a)	b)
Advertising	X	X
Market Research	X	X
Public Relations	X	X
Journalism	X	X

Marketing	X	X
Any manufacturer/ distributor/ retailer of exhaust or ventilation systems	X	X
<hr/>		
None of the above	0	0

**If yes to any responses above the line, close interview
All to code None of the above at Q2a and Q2b**

Q3c Do you intend to work in any of those occupations in the next 6 months?

Yes	X	Close
No	2	Continue

PREVIOUS ATTENDANCE

Q 4a – 4c do not matter. However, if they have done research on H&S in the past 6 months or are involved in any enforcement action with HSE, please close

Q4a

Are you scheduled to participate in a market research group discussion/depth interview in the near future?

Yes	X	Close
No	2	Continue

Q4b Have you ever attended a market research group discussion/depth interview?

Yes	1	Ask Q4c
No	2	Go to Q5

Q4c How many market research group discussions/depth interviews have you attended in total?

If more than 3 market research group discussions/depth interviews attended in total close

Q4d What was each of those market research group discussions/depth interviews about?

6.1.1 Interviewer write in:

6.1.2

1. _____
2. _____
3. _____

If on a similar subject as this survey, close interview
If they have done any research on Health & Safety close interview

Q5 This research will be conducted by completely independent researchers and everything you say will remain entirely confidential, nothing you say will be linked or attributed to any individuals or your organisation. Are you happy to take part in this research?

Yes 1 **Continue**
No **X** **Close**

ASK Depths 1-40 and Paired Depths 41-50 only:

Q6 As part of this research the independent researcher would like to bring their camcorders with them. They would not take any footage without your prior authorisation and no footage would be linked to any comments made in the course of the interview. Are you happy for them to bring their camcorders on the day?

Yes 1
No 2

Q6 b Any materials emerging from this research would be used only for purposes of the research project within the Client team. They will remain anonymous and not attributable to you or your business. Are you happy for this to be the case?

Q 6c We would like to seek your permission to get back in touch with you after the research, about the possibility of wider usage of materials emerging from this research. Are you happy for this to be the case? You would have the right to refuse any requests made at that time

ASK Paired Depths 41-50 only:

Q7 We would like to conduct this research as a Paired interview with someone in your company that you consider to be a key adviser or influencer when it comes to making decisions on ventilation and Local Exhaust Ventilation systems.. Can you put us in contact with that person?

Yes 1 **Take Name & Contact details**

Colleague's name: _____

Colleague's job title: _____

Contact details: _____

No 2

INVITE TO PARTICIPATE IF RESPONDENT MEETS ALL QUOTAS

6.2 RECRUITMENT QUESTIONNAIRE: SUPPLIERS

We are carrying out a Market Research Survey about Exhaust and Ventilation and are looking for people to take part in a one-to-one interview. As a token of our appreciation for participation eligible attendees will receive a cash thank you for their time. I just need to ask a few questions first...

Q1a Occupation

Industry: _____

Company name: _____

Qualifications: _____

Number in Charge of: _____

Depths 1-12:

All to be Managing Directors from companies that supply Local Exhaust Ventilation (LEV's) equipment at Q1a

Depths 13-15:

All to be Sales Representatives from companies that supply Local Exhaust Ventilation (LEV's) equipment at Q1a

Q1b And can I ask whether you manufacture & supply LEV?

What local exhaust ventilation equipment does your company manufacture and supply? Please explain briefly main industries supplied (i.e. rubber, woodwork, soldering etc) and the volume of sales (rough estimate in £££) you have in the different industry sectors?

Industry 1 (write in): _____

Number of sales: _____

Industry 2 (write in): _____

Number of sales: _____

Industry 3 (write in): _____

Number of sales: _____

Record information on profiles at Q1b

Exclude any company who manufactures only RPE (Respiratory Protective Equipment)

Q1c Thinking about your particular job role nowadays, can you tell me how involved you are in making long term and day to day decisions about the LEVs your organisation supplies?

If Managing Director is not involved in making decisions about the LEVs they supply please ask to speak to the main decision maker who is responsible for making long term/ day to day decisions about the LEVs they supply at Q1c

NB: Screen other member of staff fully and indicate their job title on respondent profiles

Q1d Can I just check which of the following associations, if any, is your company currently a member of?

SHAPA	1
INITA	2
HVCA	3
Other (write in) _____	4

All companies to be members of SHAPA, INITA or HVCA at Q1b

Q1e And how many people work in you company?

0-2	1
2-6	2
6-21	3
21-50	4
51-100	5
101 -200	6
201-500	7
501+	8

Aim for a spread of company sizes across the sample at Q1c

Q1f And how long have you personally be working in this industry/ companies involved in LEV's

0-1 years	1
2-5 years	2
6-10 years	3
11+ years	4

Aim for a spread of respondent experience across the sample at Q1f

DEMOGRAPHICS**Q2a** Code Gender:

Male	1
Female	2

To fall out naturally at Q2a**Q2b** Age: _____**To fall out naturally at Q2b****OCCUPATION/INDUSTRY EXCLUSIONS****Q3** Thinking about the following occupations, can you tell me which, if any:

- c)** you currently work in or have worked in the past?
d) any member of your family or close friends currently work in?

Read out:	a)	b)
Advertising	X	X
Market Research	X	X
Public Relations	X	X
Journalism	X	X
Marketing	X	X
<hr/>		
None of the above	0	0

If yes to any responses above the line, close interview
All to code None of the above at Q2a and Q2b

Q3c Do you intend to work in any of those occupations in the next 6 months?

Yes	X	Close
No	2	Continue

PREVIOUS ATTENDANCE

Q 4a – 4c do not matter. However, if they have done research on H&S in the past 6 months or are involved in any enforcement action with HSE, please close

Q4a Are you scheduled to participate in a market research group discussion/depth interview in the near future?

Yes	X	Close
No	2	Continue

Q4b Have you ever attended a market research group discussion/depth interview?

Yes	1	Ask Q4c
No	2	Go to Q5

Q4c How many market research group discussions/depth interviews have you attended in total?

If more than 3 market research group discussions/depth interviews attended in total close

Q4d What was each of those market research group discussions/depth interviews about?

6.2.1 Interviewer write in:

4. _____

5. _____

6. _____

**If on a similar subject as this survey, close interview
If they have done any research on Health & Safety close interview**

Q5 This research will be conducted by completely independent researchers and everything you say will remain entirely confidential, nothing you say will be linked or attributed to any individuals or their organisations. Are you happy to take part in this research?

Yes	1	Continue
No	X	Close

ASK Depths 11-12 (360 interviews) only:

Q6a As part of this research the independent researcher would like to bring a camera and camcorder with them. They would not take any footage without your prior authorisation and no footage would be linked to any comments made in the course of the interview. Are you happy for them to bring a camcorder on the day?

Yes	1
No	2

Q6 b Any materials emerging from this research would be used only for purposes of the research project within the Client team. They will remain anonymous and not attributable to you or your business. Are you happy for this to be the case?

Q 6c We would like to seek your permission to get back in touch with you after the research, about the possibility of wider usage of materials emerging from this research. Are you happy for this to be the case? You would have the right to refuse any requests made at that time

Q6d The researchers would also like to walk around your company's premises and talk to other members of staff where convenient. Are you happy for them to do this? (again they wouldn't go anywhere without your permission/speak to members of staff before liaising with you first)

Yes	1
No	2

INVITE TO PARTICIPATE IF RESPONDENT MEETS ALL QUOTAS

6.3 TOPIC GUIDE: USERS

Introduction and Warm Up

- Background to research (we're seeking the views of companies working in your field)
- Reassurances (confidentiality)
- Introductions

Job Role & the Company

- The company – tell us about your company:
 - size
 - structure
 - length of time trading
 - main activities
 - company mission
 - types of customers
 - type of work conducted - specifics
 - etc
- Membership of trade association – Which one? Why? Benefits?
- Key business concerns
Spontaneous initially
 - goals
 - mission statement
 - issues to be taken into account
 - etc
- As a company, what would you say are your strengths? Any areas where you are less strong? Tell us about these
- You in the company
 - How long there, your role
- Outline job role now
- Who reports to you; their job roles; degree of responsibility / autonomy they have

H&S Aspects of Work Conducted

- H& S precautions taken? What & why?
- Any particular concerns?

Look for any mentions re ventilation

- Exactly what do you know about the health effects of your work activity?
 - Who's most at risk... in what areas (on-site or off-site) ... what are the specific risks?
(If off-site working, probe for concerns; how it's managed; specifically how deal with their Client & H&S issues...)

- How do you protect your employees from exposure to hazardous substances in their workplace – do they use LEV and/or RPE?
 - Why do you do this?
 - What specific diseases/conditions are you concerned about?
 - Any particular reasons for knowing about these?
-
- Re any precautions taken, how do you know these are being used – being used correctly?

Probe here for details, both on and off-site

LEV / RPE Specifics

- What exactly LEV / RPE do you use?
 - Length of time using this... if switched, why?
- Who do you buy it from? Why this company? What do you know about them? How often do you have contact with them? What sort of contact?
- How do you know your LEV/RPE is effective enough?
 - What tests do you carry out? (*Look out for any mention of smoke bomb test*)
- How do you check and maintain your LEV/RPE?
 - Frequency; degree of rigour; recording of this; etc

‘Health & Safety’ Concerns & Information

- What are your main concerns (if any) about H&S?
Look for where ventilation occurs in the hierarchy... probe on why this is
- Thinking specifically about ventilation, do you receive Health and Safety information and assistance from your LEV or RPE supplier?
 - If not, is this because it was never offered... or have you turned it down?
 - If you do, what form does it take? How often do you receive this? Do you pass the information on to your workforce? If not, why not?
- Are you satisfied with the H&S information and assistance provided by your LEV or RPE supplier? Tell us about this...
- If you are not satisfied with the H&S information and assistance provided by the LEV or RPE supplier, how could it be better?

H&S Communications

- How do you keep up to date on H&S?
 - Specifically re ventilation and generally?
- Whose responsibility is H&S in your company? What is your role... to what extent are you involved?
- Any other sources of information re H&S?

- Awareness of any HSE branded posters, leaflets, information
- Inspectors, mail outs, leaflets, Advertising
- Do you ever use any websites to find out about H&S at work e.g. the HSE website?
- What would be, in your opinion, the best way for the HSE to get their messages to you about H&S issues for your particular work situation?
- Interest in possible learning / advice tools such as – HSE website, E-Learning modules, DVD for in-house training, One day events on H & S?
- What's the best way of getting H&S information to you?

Show comms stimulus

- Seen any of this?
- How does this sound –informative / interesting / essential reading / possibly of some use / would never look at it
- What would you do with this if you saw it? Share it with workforce / build it into sales approach / file it away...

Conclusion

- Summary of behaviour, attitudes & views towards H&S in respect of ventilation equipment
- Potential useful sources of information
- Any other comments

Thank respondent for time

Ask permission to use camcorder on site, if appropriate!

6.4 TOPIC GUIDE: SUPPLIERS

Introduction and Warm Up

- Background to research (we're seeking the views of ventilation equipment suppliers)
- Reassurances (confidentiality)
- Introductions

Job Role & the Company

- The company – tell us about your company:
 - size
 - structure
 - length of time trading
 - main activities
 - company mission
 - types of customers
 - type of equipment sold
 - new models vs old?
 - etc

- Membership of trade association – Which one? Why? Benefits?
- Key business concerns
- As a company, what would you say are your strengths? Any areas where you are less strong? Tell us about these
- You in the company
 - How long there, your role
- Outline job role now
- Who reports to you; their job roles; degree of responsibility / autonomy they have

Sales Issues

- Proportion of sales as repeat business / new business?
- Type of equipment sold
- Sales support surrounding each sale
- How do you go about winning new business?

Health & Safety Issues

- How much do you tend to know about your Clients' Business, from a Health & Safety point of view?

Talk through specifics here, related to individual Clients, if possible

- (If appropriate) How do you get to know this about your Clients' business?
 - Do you visit... talk on the phone... etc
- Do you have any concerns about your Clients' approach to Health & Safety?
- What are your main concerns about Clients' approach to H&S?
- What do you know about the health effects of your Client's work activity?

Again, talk through specifics here, related to individual Clients, if possible

- Given what you've just outlined, how do you know the LEV you supply will be effective? ie is right for that Client? that they will use it properly? that they do not need additional equipment?

Look for emerging concerns re Client selecting inappropriate equipment; misusing equipment; etc

Health & Safety Information

- Where do you get H& S information from?
- How do you keep up to date on H&S?
 - Regarding your practices and the equipment you manufacture
- How do you currently learn of **HSE H&S messages**?
 - Is this a satisfactory method
 - Could it be better... if so, how?
- Any recall of past communications?... When / where / from whom?
 - Awareness of any HSE branded posters, leaflets, information
 - Inspectors, mail outs, leaflets, Advertising

- Do you ever use any websites to find out about H&S at work e.g. the HSE website?
- What would be, in your opinion, the best way for the HSE to get their messages to you about H&S issues for your particular work situation?
- Interest in possible learning / advice tools such as – HSE website, E-Learning modules, DVD for in-house training, One day events on H & S?

Show comms stimulus

- Seen any of this?
- How does this sound –informative / interesting / essential reading / possibly of some use / would never look at it
- What would you do with this if you saw it? Share it with workforce / build it into sales approach / file it away...

Ideal Health and Safety Approach

- Are there any H&S precautions which, **in an ideal world**, you would build in at point of sale to your Clients? What are these, and why?
- How would you best get this message across to Clients?

Conclusion

- Summary of behaviour, attitudes & views towards H&S in respect of ventilation equipment
- Potential useful sources of information
- Any other comments

Thank respondent for time

Ask permission to use camcorder on site, if appropriate!

Table 1 Company segmentation in respect of ventilation issues

<i>Category</i>	<i>Occupational group</i>	<i>Company size</i>	<i>Prevalence in sample</i>	<i>Knowledge of H&S hazards</i>	<i>Status of H&S in company</i>	<i>Attitudes & Behaviour in respect of H&S regarding ventilation issues</i>
1	Most likely to be found in soldering & rubber	Medium sized or 'larger' small	c. one in ten	High level awareness of hazards associated with occupational group	Have dedicated H&S personnel.	Interested and concerned in H&S re ventilation issues. Take all necessary precautions to protect employees
2	Found in each of the occupational groups	Found across the SME spectrum	c. two thirds	Moderate knowledge	H&S responsibility likely to be bolted on to job description of another employee.	Precautions taken but aware more could be done. Disregard some of the finer points
3	Predominantly but not solely found in welding	Small	c. one in five	Low level awareness of hazards	H&S the responsibility of each individual employee	Little interest in and negligible regard for H&S. Relaxed approach to control of risks and hazards

Developing understanding of target audiences

Local exhaust ventilation

Amongst the planned activities of the Health and Safety Executive (HSE) for 2009/10, a significant element is aimed at reaching and influencing two different audiences with regards to LEV (Local Exhaust Ventilation). These audiences are: supply-side stakeholders; and SME businesses that use LEV to control their employees' exposure to hazardous substances. To inform these activities, a qualitative research study was carried out with users and suppliers of LEV equipment in April, May and June 2009. The objectives of the study were:

- To establish the current level of awareness and attitudes towards work-related disease amongst supply-side stakeholders and a sample of SME users in the HSE's target occupational groups of wood-working, general rubber goods manufacture, welding, soldering, and stonemasons.
- To determine the key influencers, enabling factors and barriers to good practice (in the context of preventing work related disease in the HSE's target occupational groups) among LEV supply-side stakeholders and a sample of SME users.
- To seek information on effective communication strategies amongst the target audiences.

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