

HEARING PROTECTION

Helping to protect people at www.hsmsearch.com

HSM
Do you receive a copy of the HSM e-newsletter? If not, go to: www.hsmsearch.com

Let's hear it for better noise management

BULLETIN

Wakefield Acoustics specialises in the design, manufacture and supply of acoustic products and solutions

For more information: Wakefield Acoustics
Brooke Mill
Hightown Road
Cleckheaton
ED19 5JS
Tel: 01274 872277
E: noise@wakefieldacoustics.co.uk

www.wakefieldacoustics.co.uk

It's a noisy old world out there, with annoying and potentially damaging sounds invading almost every aspect of modern life. You need only glance at the media to realise that the din of modern life is reaching 'unheard of' levels with things such as mobile phone rings, car alarms and barking dogs being cited as some of the most irritating aural annoyances

Fortunately, for most of us, these irritating sounds remain just that – irritating. Yet we can usually escape them and are seldom exposed to them for long periods. For those working in industry, however, prolonged exposure to excessive noise is a much more serious proposition and one which can have serious health implications.

The Health and Safety Executive (HSE) estimates that 1 million people in the UK are exposed to excessive noise levels at work and are at risk of suffering hearing damage. It was to combat this problem that stiff new requirements were introduced under the Control of Noise at Work Regulations in 2005. Non-compliance is not an option and the days when companies could simply issue staff with ear defenders at specific noise levels are gone.

The HSE advises that the most effective and efficient way of controlling noise is by technical and organisational means that protect workers at source. These might include changes in process, introducing engineering controls (e.g. silencers and damping) modifying the path by which noise travels through the air to exposed people (e.g. enclosures) and reducing time spent in noisy areas.

Wakefield Acoustics, based in Cleckheaton, West

applied there have been clear gains in productivity and efficiency through providing employees with a quieter, more comfortable environment.

Secondly, hearing loss is usually gradual and irreversible. Just because staff do not seem to be affected now does not mean that several years down the line they won't suffer the consequences of working in an excessively noisy environment. Hearing loss is also distressing for those close to the actual sufferer and can cause real social problems.

Thirdly, installing noise control measures can prove very cost effective. These can range from low cost engineering solutions based around in-house maintenance regimes, for example, through to more sophisticated noise control management programmes and systems. They all represent an excellent investment, often generating higher levels of productivity, and reduce the risk of potentially expensive compensation claims.

The turnkey service that Wakefield Acoustics offers is well illustrated by the work the company recently carried out for Control Techniques UK, based in Telford. Control Techniques, a division of the Emerson Group, is a market leader in intelligent drive automation for a wide variety of industrial applications.

Following a factory reorganisation programme the company was anxious to reduce the noise from the sawing area of its manufacturing plant. The specific machines in question were emitting noise levels of around 100dB (A). This needed to be reduced in line with the recently introduced Noise at Work Regulations, so the company was looking for a 20 – 25 dB(A) reduction.



Yorkshire, is one of only a few companies capable of providing turnkey industrial noise solutions, from providing the noise assessment survey through to the design, development, manufacture and installation of the actual solution.

Assessing noise levels and whether they constitute a risk can be a complex area. However, not providing an effective solution could lead not only to enforcement by the health and safety authorities but also potentially expensive insurance and civil claims on behalf of employees whose hearing has been damaged. If all this sounds like just another bureaucratic imposition, then perhaps we should look at the issue from another perspective:

Firstly, results from across the industrial spectrum show that where noise control measures have been correctly

Subsequent to a detailed assessment being carried out by the Wakefield Acoustics Noise Consultancy Division, which worked closely with the Control Techniques team, a solution was prescribed which involved installing a 9m long by 4m high acoustic screen to give the attenuation required. As both access and visibility were also key requirements for Control Techniques, suitable heavy duty doors and glazed windows were designed into the solution.

Although industrial noise is a common factor in our lives it can be reduced and controlled with significant benefits for both employer and employees. The HSE advises that full compliance of the Control of Noise at Work Regulations 2005 would eliminate noise induced hearing loss to a point where no new cases would arise by 2030.

11732 www.hsmsearch.com/enquiry



National Food Safety Week - Noise Control

Safer conditions for manufacturing sites

Addressing noise problems at work is no longer simply an option for companies. It is now an obligation firmly laid down under the Control of Noise at Work Regulations 2005 and non-compliance can lead to enforcement action from Health and Safety Authorities, Insurance companies as well as both civil and compensation claims from employees.

The days when companies could simply issue employees with ear defenders to combat noise have gone. Now, employers have to be proactive by identifying the sources of potentially damaging noise and taking measures to reduce the hazard.

Some companies are going beyond the requirements of the regulations to ensure that their employees do not join the 2.2 million in the UK who are estimated to be exposed to excessive noise levels within the working environment.

One such company is Robert McBride Ltd., the UK's leading supplier of private label household and personal care products. Having reorganised their manufacturing

facility at their Bradford site, the company called-in industrial noise specialists Wakefield Acoustics Ltd to identify sources of noise which exceeded legislation and to recommend ways of reducing or eliminating them.

The Wakefield Acoustics survey quickly showed that a recently installed compressor was emitting noise levels over 90dB(A), compared with the maximum of 80dB(A) required by Robert McBride Ltd. The solution was the installation, within one working day, of a bespoke acoustic enclosure around the compressor. With fully demountable acoustic panels and several double-leaf doors providing easy access for maintenance, the enclosure has produced a much safer and

more pleasant working environment. It has its own ventilation system and a double-glazed viewing panel and, because it was being sited in a brand new plant, its panels were powder coated in colours to give a pleasing match with its environment.

Dave McCue of Robert McBride Ltd said: "Some noise is inevitable in manufacturing but we are adamant that staff should not be exposed to excessive long-term noise. That's why we consulted Wakefield Acoustics whose ability to provide a turnkey solution from survey through design, manufacture and installation was of great benefit. Everyone operating in that area now has a much more



Food and Drink May 2007

Wakefield Acoustics Ltd
Brook Mill, Hightown Road, Cleckheaton, West Yorkshire BD19 5JS

Tel 0044 (0)1274 872277

Email noise@wakefieldacoustics.co.uk

Fax 0044 (0)1274 873377

Web www.wakefieldacoustics.co.uk



pleasant working day." Based in Cleckheaton, West Yorkshire, Wakefield Acoustics were founded in 1980 and work with a wide range of international blue-chip clients. They supply a complete range of noise reduction solutions which, in addition to enclosure and cabins, include silencers, louvres and sound havens. Their customers operate in the food and drink, water and waste treatment, packaging and steel industries and they are one of very few companies to provide a complete service – from noise audit to installation and commissioning of the specified solution.

Managing Director Jane Dawson said, "Pressure will continue to grow on companies to reduce noise levels and thereby protect employees from possible hearing damage. In addition, environmental demands mean that companies must become more aware of the effects of noise on those outside the boundaries of the company, such as residents and schools, for example.

"Dramatic improvements can be made that quickly repay any investment. People work more efficiently in an improved environment and by taking the right measures companies

can insure themselves against the possibility of facing action by enforcement agencies, insurance companies and staff whose hearing may have been damaged through noise at work."

Wakefield Acoustics: **01274 872277**
for further information email:
noise@wakefieldacoustics.co.uk
Website: www.wakefieldacoustics.co.uk

WA Wakefield Acoustics
INDUSTRIAL NOISE
CONTROL SOLUTIONS

Specialists in providing Noise Control Products and Solutions to industry for over 25 years.

We offer a complete solution to your noise issues including:

- Site Survey, Noise Surveys and Noise Risk Assessments
- Product design and manufacture
- Installation
- Ongoing Noise Control support

www.wakefieldacoustics.co.uk

Wakefield Acoustics Ltd, Brook Mill, Hightown Road, Cleckheaton, West Yorkshire BD19 5JS
Tel: 01274 872277
Fax: 01274 873377
noise@wakefieldacoustics.co.uk
www.wakefieldacoustics.co.uk

Wakefield Acoustics Ltd. - 25 years in Noise Control Solutions

In April 2006, the control of Noise at Work Regulations 2005 were implemented requiring a reduction in action levels from 85 to 80dB(A) and the control of noise at source. It is estimated that over 1 million employees in Great Britain are exposed to levels of noise which put their hearing at risk necessitating immediate attention and action by their employers. It will no longer be sufficient to simply provide hearing protection.



Wakefield Acoustics has over 25 years' experience engineering, manufacturing and installing noise control solutions.

With a blue chip customer base which spans a wide variety of sectors, applications are vast and include experience and many applications within the Food and Drink sectors.

Wakefield Acoustics offers specialised expertise in acoustics and noise control, sophisticated design and development software, modern manufacturing methods and a full support service - from initial noise survey and assessment through to design, manufacture, installation and ongoing monitoring.

For further information contact Wakefield Acoustics Ltd at:
Brook Mill, Hightown Road, Cleckheaton, BD19 5JS Tel : +44 1274 872277
Email: noise@wakefieldacoustics.co.uk Website: www.wakefieldacoustics.co.uk

Food and Drink May 2007

Wakefield Acoustics Ltd
Brook Mill, Hightown Road, Cleckheaton, West Yorkshire BD19 5JS

Tel 0044 (0)1274 872277 Fax 0044 (0)1274 873377
Email noise@wakefieldacoustics.co.uk Web www.wakefieldacoustics.co.uk

Health & safety

Sound advice on noise pollution

Regulations that came into force last year place the onus of ensuring aural wellbeing firmly with employers. Jane Dawson explains how Wakefield Acoustic has helped the water industry comply with the law and protect employees.

CLEANING WATER can be a noisy business. The decanter centrifuges used to separate solids from liquid during the treatment process run at speeds of around 3,000rpm. Untreated noise levels can typically exceed 80dBA.

Worldwide, increasingly stringent regulations are coming into force in order to limit worker's exposure to industrial noise. More than one million employees in Britain are exposed to levels of noise at work that puts their hearing at risk. And 170,000 suffer from deafness, tinnitus – ringing, humming or buzzing in the ears – or other ear conditions as a result.

By law, employers must assess and identify measures to eliminate or reduce risks from exposure to noise.

Where the risks are low, the actions taken may be simple and inexpensive. But, where they are high, they should be managed with a prioritised noise-control action plan.

Sound rules

Today's employers must be aware of the stringent new rules introduced under the Control of Noise at Work Regulations, which came into force in April 2006. The directive is designed to ensure all workers are protected from the effects of noise and the risk of damage to hearing.

Employers have to ensure that, where required, hearing protection is provided and used, any other controls are correctly applied, and information, training and health surveillance is provided.

Factors that contribute to hearing damage are:

- Noise levels (given in decibels - dBA)
- How long people are exposed to the noise, daily and over a number of years

The focus of the new legislation is on:

- A reduction of 5dBA in the exposure levels at which action has to be taken – from 90dBA and 85dBA in the previous directive to 85dBA and 80dBA in the new one
- Implementing good practice noise control and risk-management procedures, such as reducing noise exposure and providing employees with hearing protection, information and training
- Controlling noise at source by technical or organisational means, such as introducing quieter processes and equipment and a low-noise purchasing policy

The new legislation moves away from an over-reliance on assessment, quantification of exposure levels and consequent hearing protection. The new agenda is one of proactive and active control and management of noise issues.

Noise control

In the water treatment process, particles, sediment and solids fall to the bottom of the settling tank due to gravity. The centrifuge is then rotated rapidly, replacing gravity with controllable centrifugal forces that can be up to 3,000 times greater than gravity. This can create quite a racket.

In order to comply with both industrial and environmental noise legislation, a UK water utility was looking for a



Outdoor installation of weatherproofed acoustic enclosure on centrifuge platform

solution that involved a degree of noise attenuation. On this particular application the specification was to reduce emitted noise levels at a distance of 1m to no more than 74dBA.

The company supplying the centrifuges, Alfa Laval, called in industrial noise control specialist Wakefield Acoustics. Wakefield has provided noise and acoustic control products and solutions for industrial, commercial and environ-

mental applications worldwide since 1980.

Alfa chose to use Wakefield because of this experience, and specifically its track record of working within the wastewater sector throughout the UK. It has worked closely with original-equipment manufacturers, contractors and directly with water authorities. Wakefield has provided noise-control solutions for applications such as sludge dewatering, aeration, filtration and odour control.

Tailor-made solution

Wakefield Acoustics' solution was to supply bespoke designed and purpose-built enclosures for several decanter centrifuges in the dewatering plant of the water utility's wastewater treatment works.

The decanter required a detailed maintenance programme. With this in mind, the enclosures were designed to achieve the required noise reduction while providing access for installation and ongoing regular upkeep.

A one-piece lift-off roof and side panels were provided to allow for easy installation and removal of centrifuge components. Quick-release catches

were also included in the design, along with fan-assisted ventilation.

All Wakefield Acoustics' enclosures are application engineered to customer requirements, and are suitable for heavy-duty applications. They can incorporate acoustic doors, windows and access panels. Enclosures range from modular panel-to-panel bolted constructions to one-piece drop-over units.

The new agenda is one of proactive and active control and management of noise issues

Following installation, the water utility commissioned an independent noise report. It recorded noise levels at 72dBA, lower than the original specification of 74dBA and well below the limits set under the 2005 Control of Noise at Work Regulations.

All parties – the utility, Alfa Laval and Wakefield Acoustics – reported they were satisfied with the solution.

"Thanks to Wakefield

Acoustics' engineering expertise, we have reduced the noise levels," says Alfa's Steve Twinn. "This was an area with a particular noise problem. Wakefield Acoustics have provided a cost-effective solution, and have worked with the project team to reduce the noise issues to comply with environmental and legal requirements."

Wakefield Acoustics specialises in providing practical and cost-effective bespoke engineered industrial noise-control solutions. Its acoustic design software is backed up with more than 27 years experience. The company says this allows it to accurately diagnose noise problems, and to provide effective acoustic products which optimise noise control requirements, airflow, cooling, access and maintenance issues, as well as overall cost.

Wakefield Acoustics' Noise At Risk Assessment service starts with a free consultation, where any specific noise factors can be taken into account. ■

Jane Dawson is managing director of Wakefield Acoustics.
T: 01274 872 277



Indoor installation of acoustic enclosure around centrifuge

For further information about products and services in this issue of WET News, please visit <http://wetnews.hotims.com>

August 2007 | WET News | 21

Wet News August 2007