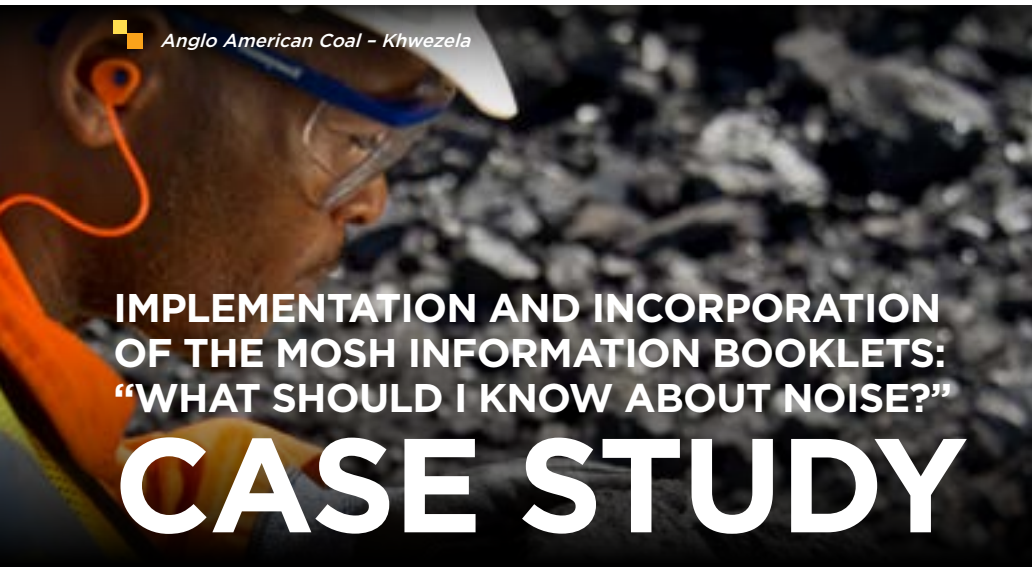




## IMPLEMENTATION AND INCORPORATION OF THE MOSH NOISE BOOKLETS CASE STUDY



Anglo American Coal - Khwezela

# IMPLEMENTATION AND INCORPORATION OF THE MOSH INFORMATION BOOKLETS: “WHAT SHOULD I KNOW ABOUT NOISE?” CASE STUDY

### FULL DESCRIPTION OF THE RISK ADDRESSED

Afrimat Lyttelton is a quarry situated within the Centurion municipal district, which forms part of the Greater Tshwane Metropolitan, from which dolomite aggregates are extracted for processing. Excessive noise exposure is a significant occupational hazard that can lead to hearing loss for workers. The Occupational Exposure Limit (OEL) for noise over an 8-hour period is at 85dB(A), at which hearing impairment is likely to result. The published MOSH noise Information booklets have assisted Afrimat with awareness training for their employees as part of their bigger noise risk management approach.

Afrimat Lyttelton utilises the services of a professional Occupational Hygienist on a contract basis. In conjunction with the Occupational Hygienist, management has developed a noise monitoring programme that involves measuring the noise levels in different areas of the mine, identifying potentially high noise risk areas and providing recommendations to control the noise. Medical surveillance is done annually to monitor all employees' hearing.

The laboratory was identified as an area of concern due to the high noise levels. Lyttelton management issued the employees with custom moulded hearing protection devices to reduce noise exposure due to the lack of any engineering control identified to reduce exposure in the laboratory.

Following this change management process, a need was identified to engage all Afrimat Lyttelton employees in formal awareness training to ensure compliance with the administrative control implemented. Although noise is part of everyday life, too much noise can cause permanent and disabling hearing loss. With hearing loss, conversation becomes difficult or impossible, you might not be able to hear warning signals, and this could compromise your general safety.

Afrimat management identified that employees were oblivious to the risk of noise and adopted the MOSH information booklets: “What should I know about noise?” to use for formal awareness training.

By communicating to their workforce about the risk of noise exposure, employees were better equipped to identify potential sources of noise emission and they reported control failures more swiftly to Supervisors. Furthermore, they are now knowledgeable about the hearing protection required, how to care for and maintain the HPDs issued, and they also know their rights and responsibilities regarding withdrawal from dangerous work.

Overall, informed workers make for a safer working environment for all Afrimat Lyttelton employees.

“It’s both the employer’s and employee’s (your own) responsibility to protect your hearing and work together on the development/ implementation of measures to reduce the risk of noise-induced hearing loss.”

### OVERVIEW

#### Mining company

Afrimat

#### Commodity

Dolomite

#### Operation/Mine

Lyttelton quarry

#### Health and safety case study

The implementation and incorporation of the MOSH information booklets:

“What should I know about noise?”

#### Number of employees affected

91 employees

#### Stakeholders consulted

Safety Officer/Procurement Personnel/Occupational Hygienist

#### Occupations affected/benefited

Employees in the laboratory  
Plant Operators/workers, TMM Operators, Drill Operators and maintenance employees.

## FINDINGS AND LESSONS LEARNED FROM THE IMPLEMENTATION AND INCORPORATION OF THE MOSH INFORMATION BOOKLETS: “WHAT SHOULD I KNOW ABOUT NOISE?”

The noise information booklet is a comprehensive document that aims to assist the mining industry in addressing general awareness with regards to noise impacts related to mining activities. The aim of this information booklet is to facilitate adequate awareness among health and safety practitioners as well as the general workforce on their duties pertaining to the health and safety requirements stipulated in the Mine Health and Safety Act (MHSA) (Act No.29 of 1996), as amended, and in addition, understand the general noise risk and implication thereof on their own health, as well as the health of fellow workers.

The noise information booklet has highlighted the legal requirements;

- 1 the exposure limits,
- 2 the need for a hearing conservation programme, and
- 3 the requirements to be considered when procuring noisy equipment.

The MOSH noise information booklet further addresses the noise measurement requirements which assisted the mine to positively engage with the professional occupational hygienist and ensure the contract covers the requirements as stipulated in SANS 10083.

The booklet also assists with information on the effects of noise and highlights the possible risk areas. Afrimat utilised this information in the format of a PowerPoint Presentation to communicate this information to their employees to ensure a general awareness of Noise Risk Management Requirements.

Providing the employees with training on the noise information booklet assisted employees to be more aware of what noise is, what potential noise sources are present in their work environment and how noise could result in noise induced hearing loss (NIHL).

After employees were provided with the training information, Afrimat management allowed them the opportunity to recognise different noise levels and to engage in discussions of high noise risk areas.

One key lesson Afrimat management took from these engagement sessions were that the success of noise mitigation measures is dependent on the communication between the exposed employee and the employer/supervisor. An informed workforce could be allies in maintaining effective and efficient controls.

Another essential lesson learned was the importance of hearing protection devices and the care thereof. Correct fitment of hearing protection is crucial, and employees should know when replacement of disposable hearing protection devices are due.

## BENEFITS AND IMPROVEMENTS REPORTED BY AFFECTED STAKEHOLDERS

BENEFITS GAINED FROM THE IMPLEMENTATION OF THE MOSH INFORMATION BOOKLETS:

### “WHAT SHOULD I KNOW ABOUT NOISE?”



Employee general noise awareness improved



Reduced employee exposure to noise



Improved employee/employer communication



Improved noise source risk identification



Reduced risk of noise induced hearing loss

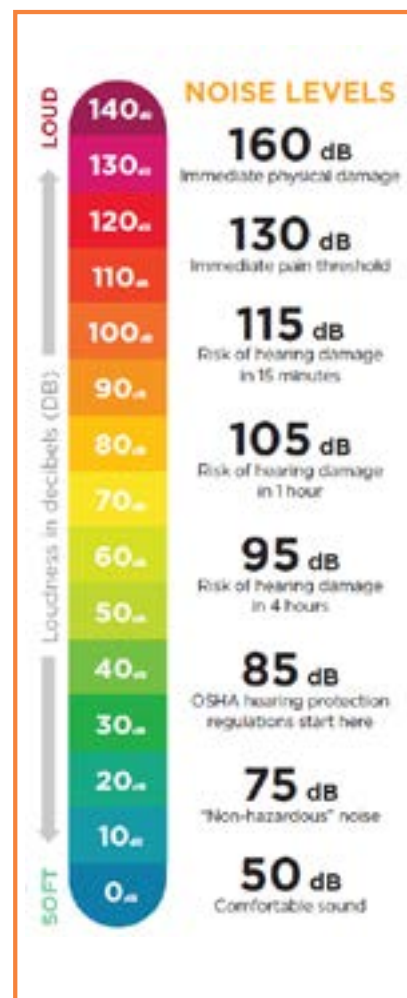


Guidance on how to take care of hearing protection



Guidance on how to fit hearing protection devices

The MOSH noise information booklets can be found on the MOSH website at: <https://www.mosh.co.za/noise/documents>



# AFRIMAT NOISE

## INTRODUCTION

1

Noise is part of everyday life, but too much noise can cause permanent and disabling hearing loss. With hearing loss, conversation becomes difficult or impossible, your family could complain about the radio or TV being too loud, you have trouble using the telephone, and you may be unable to sleep. By the time you notice this hearing loss, it's probably already too late to stop it.

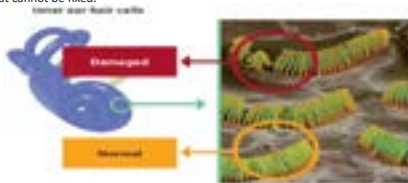
However, there is no need for your hearing to be damaged, either at work or at home. It's both the employer's and employee's (your own) responsibility to protect your hearing and work together on developing/implementing of measures to reduce the risk of noise-induced hearing loss.



## HOW NOISE CAUSES HEARING LOSS

2

Exposure to loud noise may cause wear and tear on the hairs or nerve cells in the cochlea that send sound signals to the brain. When these hairs or nerve cells are damaged (get pushed flat), some sound signals cannot be sent to the brain that well anymore, and hearing loss occurs. This hearing loss can last for a short time until the hairs recover and manage to rise up again. However, if this continues, the hairs or nerve cells can become permanently damaged and die, which results in permanent hearing loss that cannot be fixed.



## EFFECTS OF NOISE

3

Hearing loss is not the only problem when you are exposed to noise. People may develop tinnitus (a ringing, whistling, buzzing or humming in the ears), which is stressful, as it can disturb your sleep and disrupt your lifestyle. You may have noticed this after being exposed to a loud noise. It usually goes away after a while, but it is a warning sign of being exposed to too much noise. There is also no known cure for this, but it can be managed by going through tinnitus retraining therapy.

There are a few other problems that can also result from exposure to noise. For example, workers who have noisy workplaces and who suffer hearing loss are absent from work more often and perform poorer at work, which could cause them to lose their jobs. It can also cause social and family tension and relationship breakdowns.



## SAFETY RISKS

4

Noise at work can interfere with communications and make warning signals or alarms hard to hear. It can also reduce people's awareness of their surroundings. These issues can lead to safety risks - putting people at risk of injury or death.



## NOISE ZONES

5

Workplaces where noise has been identified as a risk are demarcated as noise zones, and symbolic signs are posted at their entrances. Obey the sign and only enter if you are wearing suitable hearing protection devices correctly.



### NOISE ZONES HEARING PROTECTION DEVICES

Hearing protection, such as earmuffs and earplugs, is your last line of defence against hearing damage. Your employer should provide you with the correct hearing protection devices, train you on how to correctly use it and how, where and when to get replacements.



## WHAT MORE CAN I DO?

6



- **Cooperate:** Help your employer to do what is needed to protect your hearing. Make sure you use any noise-control devices provided properly and follow any policies and procedures that have been put in place to reduce noise
- **Attend any training** that has been arranged to educate you on noise, the ways to reduce it and to protect yourself
- **Report any problems** with noise-control devices or your hearing protection immediately
- Let your **supervisor and health and safety representative** know of these problems
- **Wear hearing protection** that is given to you properly (you should be trained on how to correctly fit your hearing protection devices), and make sure you wear it all the time when you are doing noisy work, and when you are in the demarcated noise zones
- **Attend hearing checks** (audiometric testing). It is best to find out if you have any hearing damage as soon as possible, and especially before the damage to your hearing becomes disabling

## TAKING CARE OF HEARING PROTECTION

1



### Customised/reusable earplugs:

- Clean your customised/reusable earplugs daily with soap and water
- Ensure they get replaced if damaged or at the end of the stipulated useful lifespan
- Never share your customised/reusable earplugs with anyone else
- Store your customised/reusable earplugs in a safe place when not in use
- Check your customised/reusable earplugs for damages daily
- Ensure that custom made hearing protection is handed in for maintenance, as specified by the manufacturer or your employer

### Foam earplugs

- Ensuring they get replaced daily
- Never share them with anyone else
- Store them in a safe place when not in use

### Earmuffs (special circumstances):

- Clean them regularly with soap and water
- Ensure they get replaced if damaged or earmuff cushions begin to harden or crack
- Do not stretch the headband
- Remove any trapped hair around the cushions
- Never share them with anyone else
- Store them in a safe place when not in use

