



To: Ryarsh Protection Group and other interested parties

Date: 28th March 2018

From: Borough Green Sand Pits

Subject: Respirable Crystalline Silica (RCS).

In addition to our previously released statement, Borough Green Sand Pits, as an active member of the Mineral Products Association (MPA) would like to provide some more detail on respirable crystalline silica (RCS).

We appreciate that there are a number of issues that have been raised about the potential sand pit at Roughetts Road that will need addressing in time. However we are concerned about the anxiety that might be caused by some of the current misinformation over the risks of silicosis from RCS.

RCS has recently been included in the European Carcinogens and Mutagens Directive at Work and this has consequently increased the debate around the occupational safety and safety of nearby neighbour communities causing increased press and media attention.

The information presented below, presents an industry position and a summary of information supplied by Industrial Minerals Association – Europe (IMA-Europe) which has established a working group (IMA RCS) – Safe Silica.

The existing www.crystallinesilica.eu website provides full information on this new legislation and clarifies important aspects such as the fact that the health problems related to crystalline silica dust only occur at the workplace, and not in the general environment.

The following sections present a summary of this information.

In summary

- We are a **responsible company** who care about our people and the community.
- The new regulation is solely about Respirable Crystalline Silica (RCS) – a type of very fine dust created during industrial processes.
- The dust is **only poses a risk to those working in industrial workplaces**, and only when high quantities are inhaled in these environments on a **regular basis over many years**.
- There is no risk to those not working in these environments. There is a natural background level of RCS in the air, but the levels are so low that it poses no risk – and a quarry / factory / plant near you does not increase levels of RCS beyond that natural background level.
- In Great Britain, the government Health and Safety Executive (regulator) is very clear in its advice;

“No cases of silicosis have been documented among members of the general public in Great Britain, indicating that environmental exposures to crystalline silica dust are not sufficiently high to cause this occupational disease.”

- **Crystalline silica is essential**, and a completely safe component of many products we use every day – including our computers and phones, cars and buses, roads and railways, glass and ceramics, and our homes



The following is an extract from the HSE's website¹

Silica

*'One of the health risks from working in the quarry industry is that of exposure to fine dust containing crystalline silica (otherwise known as quartz). Quartz is found in almost all kinds of rock, sands, clays, shale and gravel. Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis". It usually takes a number of years of regular daily exposure before there is a risk of developing silicosis. Silicosis is a disease that has only been seen in workers from industries where there is a significant exposure to silica dust, such as in quarries, foundries, the potteries etc. **No cases of silicosis have been documented among members of the general public in Great Britain, indicating that environmental exposures to silica dust are not sufficiently high to cause this occupational disease.**'*



The Institute of Occupational Safety and Health provides a great deal of information about Respirable Crystalline Silica in the workplace, in particular the Factsheet² which includes the extract below:

Research from Imperial College London suggests that around 900 new cases of lung cancer each year in Britain can be attributed to past exposure to silica dust in construction, granite and stone industries, and various industrial processes. Lung cancer is difficult to treat and most of those diagnosed with the disease will die within a few years – only one in 20 will live 10 or more years. It's estimated that nearly 800 people die a year from lung cancer caused by silica exposure at work.

¹ <http://www.hse.gov.uk/quarries/silica.htm>

² <http://www.notimetolose.org.uk/Free-resources/Resource-library/Pack-3-Silica.aspx>

Frequently Asked Questions

Q: What is crystalline silica?

A: Crystalline silica, also known as silica or quartz, is a mineral which is present in almost every type of rock. It is one of the most common minerals on the planet, making up around 12% of the earth's crust.

Q: Which rocks contain crystalline silica?

A: Almost every type of rock contains crystalline silica in some form, but the most commonly known is quartz, which is a form of crystalline silica. Other commonly used materials which contain crystalline silica include concrete, ceramics, glass, and clay. Overall, crystalline silica makes up around 12% of the earth's crust.

Q: Is this the same silica that is used in product packaging?

A: Silica gel sachets, which you often find in packaging, contain small beads that are manufactured via a process that starts with silica. The small beads are used as a desiccant - meaning that they absorb water very quickly - to keep products in the packaging dry.

Q: What is crystalline silica used for?

A: Crystalline silica really is one of the building blocks of modern life. It is used in millions of different essentials we use on a daily basis - our computers and phones, cars and buses, roads and railways, glass and ceramics, and even our homes.

Q: Why is crystalline silica used?

A: Crystalline silica has prized physical and chemical properties. It is inert, extremely hard wearing and temperature resistant, so has is useful in lots of products. Together, these properties make it extremely versatile.

Q: Is crystalline silica replaceable?

A: No. For some applications (e.g. glass manufacture) there is no alternative to crystalline silica. In other applications, only crystalline silica can provide the physical and chemical properties necessary for products to function well. Where alternative raw materials do exist, they often contain a proportion of crystalline silica.

Q: Is crystalline silica poisonous?

A: No. If you touch or are around crystalline silica in the everyday natural environment, it is completely inert and safe. Crystalline silica can only cause a potential health risk when rocks, minerals and other products containing it are used in industrial processes like cutting, drilling,

crushing etc. Under these conditions, a very fine dust airborne called Respirable Crystalline Silica (RCS) can be produced, which if inhaled at high levels over many years, can cause lung diseases.

Q: What does RCS stand for?

A: RCS stands for 'Respirable Crystalline Silica', a very fine airborne dust produced during industrial processes using certain rocks, minerals or other products containing crystalline silica.

Q: What is the danger of RCS?

A: When rocks, minerals and other products containing crystalline silica are used in industrial processes like cutting, drilling, crushing etc., RCS can be produced. If high levels of RCS are inhaled regularly over many years in an enclosed environment, it can irritate the lining of the lungs, and cause lung diseases.

Q: Should I be worried about RCS?

A: RCS only poses a risk to people who are working in industrial workplaces, where products containing crystalline silica are used in processes such as cutting, drilling and crushing. RCS caused by these processes does not spread beyond the direct environment of the industrial activity.

And the risk to people working in these environments can be mitigated by following simple and easy to implement health and safety good practices. Since 2006, these simple good practices have been freely available online to all industries where RCS poses a risk, through a body called NEPSI – which was set up by industry, unions and the European Commission to protect workers health.

Q: Is there such a thing as a safe level of RCS?

A: The EU Directive on "Protection of workers from exposure to carcinogens or mutagens at work" recognises a limit of RCS as 0.1 mg/m³ - although you will only ever come close to this limit in industrial workplaces where products containing crystalline silica are used in industrial processes. The risk from RCS in the workplace can be mitigated by following simple and easy to implement health and safety good practices.

Q: Will I become ill if I am exposed to RCS for a short time?

A: No. RCS only causes lung diseases in people who have been exposed to high levels of the dust regularly for many years.

Q: I live near a quarry / factory / plant – am I at risk from RCS?

A: No. The body is only impacted by inhaling high levels of RCS over many years, meaning that only people working in the direct vicinity of industrial processes are at risk. There is a natural background

level of RCS in the air, but the levels are so low that it poses no risk – and a quarry / factory / plant near you does not increase levels of RCS beyond that natural background level.

Q: What is the new EU legislation about? Why is this an issue now?

A: The EU Directive on “Protection of workers from exposure to carcinogens or mutagens at work” implements a set of legal limits on exposure to certain substances in industrial workplaces. One of the substances recognised in the legislation is RCS, which is known to cause lung diseases in workers who are exposed high levels of it regularly for many years.

However, this is not a new issue – lung disease from workplace exposure to RCS it has been known and understood for centuries. That is why the industrial minerals industry, and other industries which use products containing crystalline silica, already have health and safety measures in place to protect workers from exposure to RCS. Following good practices brings exposure to RCS below the new legal limits implemented in the EU Directive, and mitigates the risk to workers health.

Q: What can be done to limit exposure to RCS for workers?

A: Thankfully crystalline silica-related disease can be prevented through the application of good practices – for example using ventilation and air filtering devices in industrial workplaces, and using respirators when engaging in industrial processes which produce a lot of RCS. These good practices are freely available online through NEPSI – a body set up by industry, unions and the EU to advise on protecting workers health from RCS (nepsi.eu).

Q: What are the potential health effects caused by long-term RCS exposure?

A: Long term exposure to high levels of RCS dust can cause lung fibrosis, commonly known as silicosis. The main symptom of silicosis are a cough and shortness of breath. Severe cases can lead to fatigue, chest pain, loss of appetite, and weight loss. People with silicosis are also at higher risk of lung cancer. The risk of silicosis from workplace exposure to RCS is the reason we have good practices in place to mitigate the risk to workers health.

Q: How do I know if I am at risk from RCS?

A: RCS only poses a risk to people who are working in industrial workplaces, where products containing crystalline silica are used in processes such as cutting, drilling and crushing. If you do not work in these environments, you will not be exposed to high levels RCS.

Q: Where can I find more information about crystalline silica and RCS?

A: Further information about crystalline silica and RCS are available online at <http://crystallinesilica.eu>. Good practices for companies are available online at <http://nepsi.eu>.

There are detailed factsheets about silica dust in the workplace available at:
<http://www.notimetolose.org.uk/Free-resources/Resource-library/Pack-3-Silica.aspx>

Q: Does construction / building work create RCS?

A: Some construction work does produce RCS, especially if it involved cutting, drilling or crushing materials which contain crystalline silica such as concrete. In general, it is high energy mechanical processes that create the most airborne RCS dust. The risks can be minimised through good design (eg. reducing how many times a material needs to be cut), and by following good practices for dust prevention and control. This does not pose a risk to those living near to construction sites.