

**Subject:** Warmsworth Residents Questions Response

**Scope:** Response to written questions posed by residents of Warmsworth via Parish Council and Sibelco Liaison Meeting of 11<sup>th</sup> December, 2018

**Author:** Mike Davies, Sibelco

**Date:** 31<sup>st</sup> January, 2019

Sirs,

Further to the Community Liaison meeting of the Sibelco Warmsworth Quarry from 11<sup>th</sup> December 2018 it was agreed that a written response to the eleven questions from residents proposed by Mr Simon Auty would be provided.

I have taken the liberty of aligning several questions which covered the same points.

**Q1) Magnitude of blasting allowed?**

**Q2) Amount of explosives permitted / used?**

**Q6) Readings from the 2 seismometers around the quarry?**

The use of blasting as a means of liberating mineral within quarrying is a regulated activity covered by The Quarry Regulations 1999, enforced by the Health & Safety Executive.

Whilst there is no limitation on the amount of explosives which can be used in a single blast, the magnitude of the blast is limited and generally conditioned within a quarry sites planning or permit conditions. Magnitude is measured as a measure of ground vibration. Blasting activities at Sibelco Warmsworth are subject to such conditions.

The 5 blasts undertaken between February and November 2018 were all monitored by consultants independent of Sibelco. Results for each blast were below the consented levels. The data is made available Doncaster Metropolitan Borough Council.

During each blast seismographs were deployed at locations around the site to monitor ground level vibration. The number of seismographs was in excess of the conditional requirements, the purpose of this was to gain detailed and accurate data. The data from all of the seismographs deployed is made available Doncaster Metropolitan Borough Council.

**Q3) Noise: Constant use of jigger pick type machinery as the quarry face nears Mill Lane. Times of use and are the sound levels monitored?**

**Q8) What independent experts are used to assess any noise levels, damage, dust pollution?**

Sibelco Warmsworth has traditionally used mechanical breakers attached to excavators to quarry and size reduced rock from the face. This is a process which we undertake on a twice yearly campaign basis, generally 12 week in winter and 12 weeks in summer.

In the last 5 years the development has been by working lower sequences of the deposit. As the development heads to the East of the site and closer to Mill Lane the workings will be on the top sequences thus making the operation more visible and any noise more obvious. To reduce the impact on the closest neighbours the perimeter fence line has been repositioned to the final extraction points allowing screening bunds to be constructed along the Eastern flank. The fence relocation has been undertaken sensitively leaving in place a permissive footpath along Sibelco land which is outside of the extraction limits.

Additionally, whilst loading works commence from around 06:30 hrs during the quarrying campaign periods, the largest machinery and pecker is not started until 08:30 hrs. This is a decision made by Sibelco following comments received from the local community to mitigate the impact of noise during early mornings. This is above conditions set by site planning and permitting. All quarrying / extraction equipment finishes at 17:00 each day.

The decision to move to blasting, which is a less cost efficient means of extracting mineral, has been taken by Sibelco as a means of reducing the length of time mechanical breakers would need to operate each year.

Noise and dust monitoring is undertaken by a consultancy independent of Sibelco. The data is reported to Doncaster Metropolitan Borough Council.

**Q4) Dust; Is any dust suppression used?**

Process plant is fitted with dust abatement equipment, there is a road sweeper contracted to a weekly programme with additional call in as required. An automated vehicle was is fitted and maintained.

In 2016 site renewed the driveway water suppression system and over 800m of pipework to cover the full length of the site driveway, latest technology water atomisers were fitted to give maximum coverage to the roadways.

Additionally in 2016 site renewed the dust extraction and filter system for the process dryer. This was a major investment and provided the best available technical dust extraction system for the process plant. Performance of this equipment is monitored by external consultants, data from this monitoring is reported to Doncaster Metropolitan Borough Council.

**Q5) Structural damage to buildings drains pipes etc. Monitored?**

**Q7) What underground damage could be being done to the surrounding area, including property foundations – can residents have monitors in their homes & gardens?**

The use of explosives within quarrying is strictly regulated through The Quarry Regulations 1999. Sibelco appoints an external specialist to undertake all blasting and monitoring. Every blast is carefully planned, logged and recorded.

Sibelco Warmsworth has conditions on vibration levels through blasting set within planning and permitting. Monitoring of these levels is undertaken in accordance with BS7385 Vibration Monitoring & Structural Damage. Data from all blasting activities is made available Doncaster Metropolitan Borough Council.

Ground vibration monitoring is carried out using calibrated seismographs. The location of the seismographs is determined by planning and permitting conditions and location of blast. For consistency a number of locations have been selected to ensure accurate trend analysis is achieved. The base data that these readings provide is used to plot a regression graph which can accurately predict the vibration which will be felt at receptors in a radius from the blast site. This means of monitoring and analysis is compatible with BS7385.

Planning conditions and the design and execution of blasting includes a large factor of safety. The levels of vibration permitted and achieved through blasting are considerably lower than levels at which damage to property would take place. Typically the effects of vibration on the human body can be felt at levels of 0.5mm/s, minor structural damage does not occur until levels in excess of 100mm/s. Conditioned levels at Sibelco Warmsworth are 12mm/s. The effects on foundations and drainage of ground vibration caused by blasting is further mitigated by the nature in which such structures are held. Vibration is stifled within the ground, the effects above ground are greater than those within the ground.

**Q9) Which Streets in Warmsworth receive letters from Sibelco?**

Letters were sent to the following addresses:

Warmsworth Primary School  
Mayflower Crescent (1-6)  
Mayflower Road (1-18)  
Mill Lane (1-69 odd only)  
Sheffield Road (5-163 odd only)

**Q10) Can Sibelco use the village website and chronicle to liaise with residents?**

This point was discussed at the December liaison meeting. Sibelco would be happy to provide information which has previously been corresponded via letter through the village website and notice boards. It was agreed that the Parish Council would undertake the administration of the information provided.

**Q11) Is there a planned blasting / working schedule that residents can be informed of?**

Sibelco has a programme of works which could be shared with the local community. The programme is however subject to change based upon the availability of contractors and consultants, production demands and weather conditions. If such a flexible plan is of benefit to the community Sibelco would be happy to share this and propose the information is relayed to the Parish Council.

I trust that these questions and responses will assist in the understanding of the operations and controls in place within the Sibelco Warmsworth Operations. It is hoped that the liaison meetings will provide a means of providing the community with ongoing updates and dialogue.