

# Keeping Bardon Hill Quarry compliant using EPC-UK's 'Planning to Comply' expertise

A project devised to ensure all activities performed on a quarrying Site of Special Scientific Interest adhered to strict planning regulations, in accordance with established vibration restrictions.

**Project:** Planning to Comply - Bardon Hill Quarry

**Client:** Aggregate Industries

**Location:** Coalville, Leicestershire



An operating division of EPC-UK



## The project

Aggregate Industries' Bardon Hill Quarry in Leicestershire is a site designated as having significant scientific importance. Consequently, all commercial drilling and blasting procedures conducted by the company and its operating partners must be managed responsibly. To successfully achieve safe, optimum blasting results in such a specialist environment, intuitive, digitalized solutions were considered to be the most effective route to providing instant data access and constant event monitoring.

In collaboration with Bardon Hill's quarry management team, EPC Metrics' explosives engineers and consultants designed and delivered an appropriate and highly effective 'Planning to Comply' solution, involving the strategic placement of four fixed remote monitoring systems at key locations across the site.

## The objectives

- Respect the site's scientific importance and proximity to local amenities and residential areas.
- Facilitate immediate access to consistent and accurate event data, including blasting vibration and air over pressure.
- Supply reliable and accurate data.
- Pro-actively manage an operation that benefits all stakeholders.
- Provide reassurances to third parties involved regarding safe, responsible site management.
- Ensure blast optimisation.

## Situational challenges

Operating within a Site of Special Scientific Interest situated within close proximity to residential areas required the EPC Metrics team to respectfully foster good working relationships between the quarry, the local council and neighbouring residents. The need to perform safe operations remotely was also critical and resulted in the delivery of EPC Metrics' successful, fixed remote monitoring system solution, proven to reliably and safely provide consistent and accurate event data.

## Trust and transparency

EPC Metrics' collaborative approach with Aggregate Industries has enabled operations to be performed with clarity and assurance. The partnership, in conjunction with advanced remote monitoring technologies, has resulted in the assurance of a pro-actively managed and safe operation.

## Implemented technologies

### Fixed remote monitoring

The four fixed remote monitoring stations placed within the Bardon Hill site have facilitated immediate access to consistent and accurate event data, including blasting vibration and air over pressure. The stations, which are suitable for internal or external installation, can be either pole mounted with a solar panel, or wall mounted for mains power use.



“EPC Metrics' fixed remote monitoring system is giving us the capacity to accurately examine vibration, air over-pressure and environmental conditions at any time – day or night. This immediate access to data helps us to ensure that we proactively remain within the parameters that have been set and stay compliant at all times.”



## Key results & improvements

- Bardon Hill Quarry - a 58.2-hectare geological Site of Special Scientific Interest.
- A Geological Conservation Review site, the quarry has been operated for over 400 years and produces three million tonnes of rock a year - 15% of UK output.
- 4 fixed remote monitors installed.
- Continued compliance achieved adhering to planning restrictions.



## Planned procedure

EPC Metrics' engineers created leading indicators using predictive software and regression model creation. The method, combined with data realised by the fixed remote monitoring system, consistently provided reliable and accurate information to enable full compliance of planning permission constraints.



## Results of a collaborative approach

The professional partnership, implementation of advanced equipment and EPC Metrics' supporting consultancy service has provided reassurances to parties involved, strengthening external relationships, optimising blast performance and facilitating the continued success of the Bardon Hill Quarry business. The significant emphasis placed on adopting a proactive, rather than reactive approach to meeting planning permission constraints has also enabled the teams to sensitively manage potential objections and concerns locally and maintain cordial third-party relations.

“EPC Metrics' methodology and service has already enabled Bardon Hill to benefit from the 'Planning to Comply' process, together with the advanced capabilities of its cutting-edge quarrying technologies and equipment.”

## Values that define the way we work



Within all operations, EPC-UK performs using methods that support our company's established SPIRIT ethos, demonstrating **safety, passion, integrity, respect, innovation, and teamwork.**

The Bardon Hill 'Planning to Comply' project highlights a working example of where the company's SPIRIT values have been consistently evident.

Strong levels of trust and **teamwork** were employed throughout the operation, as all personnel involved applied **integrity** to their working methods within the special quarrying environment. Recognising the need to **respect** entirely the natural concerns local residents and council authorities could feel, the teams practiced outstanding **innovation** and safe working principles across a project that has been delivered with consideration, expertise and a **passion** for making **safety** the key priority.

## EPC Metrics solutions - Developing the Digital Quarry “The EPC Way”

Implementing new possibilities that are capable of digitally measuring, storing and analysing data throughout the entire drill and blast process - from surveying and design to measuring the resulting blast performance - EPC-UK, with support from the EPC Metrics engineering team, has achieved the development of a digital quarry supported with mobile and fixed plant telematic systems to significantly impact productivity, cost optimisation and most importantly, safety.



## Find out more

To find out more, scan or click the QR code to watch Dr. Liam Bermingham's explanatory presentation.

