



# PROBLEM SOLVED™ PAPER

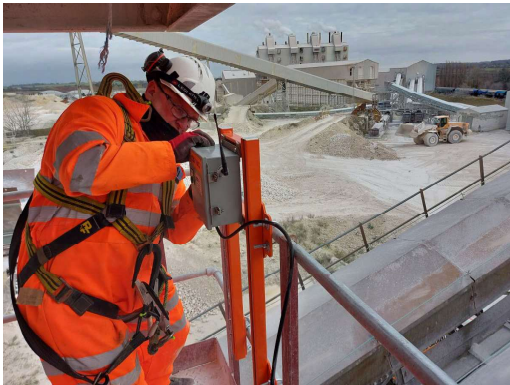
**SOLUTION:** Martin® N2 Position Indicator

**INDUSTRY:** Limestone Quarry

**LOCATION:** Singleton Birch, Melton Ross Quarry, Barnetby, UK



Site visits are conducted using the Mr. Blade truck, which is a self-contained blade servicing station.



The N2 Gateway receives signals from installed PI units and sends data through the cloud to the app.



The N2 Position Indicator works with belt cleaners to maximize service and inspection efficiency.

## PROBLEM

Singleton Birch in Barnetby, England, produces 1.3 million mtpy of processed limestone and chalk, as well as approximately 300,000 mtpy of calcium oxide. Sourced from the nearby Melton Ross Quarry, the operation employs over 85 conveyors that need regular servicing and inspection. Contracted for 24 visits per year, Martin technicians were unable to visit every belt cleaner on each visit, which meant that some units would be out of tension or require replacement blades before they became aware of the problem. Having to physically inspect every cleaner wasted time checking healthy belt cleaners requiring no service work, while others had serious carryback issues, leading management to seek a more efficient approach.

## SOLUTION

Martin representatives introduced the N2® Position Indicator (PI) technology to managers. One N2 Gateway and 43 PI units were installed. The equipment delivers remote monitoring of the belt cleaner blade status on mobile devices via the proprietary Martin Smart Device Manager App. Communicating through the gateway, the technology uses sensors to indicate remaining blade life, notifying technicians and operations personnel when re-tensioning or replacement is required. The PI maximizes the blade's usable surface area and reports with certainty when a blade is nearing the end of its useful life. It will also collect data and provide information on any belt cleaner utilizing a Martin blade.

## RESULT

Maintenance planning was simplified with detailed information available on demand, allowing technicians to focus immediately on problem areas and install replacement wear parts as needed. The result was a dramatic increase in efficiency and a 50% reduction in site visits, saving money on labor and improving safety through reduced exposure to equipment, offering a quick and calculable ROI. "The N2 is a clever piece of kit that's safe, saves time and is easy to use," said Stuart Howden - Engineering Manager of Singleton Birch. With additional data, the facility also developed a plan to service secondary cleaners when an alert is received on primary cleaners to further enhance efficiency.

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