

# Engineering High-Performance Compressed Air Solutions

## At a Glance



- Delivered a tailored compressed air system to meet site demand
- Integrated modern controls for energy optimisation
- Located plant into a repurposed building
- Achieved 30% energy savings and significant carbon reduction

## Engineering Precision into Compressed Air Performance

Faced with the challenge of an oversized legacy installation, the client required a future-ready compressed air system that could meet stringent performance and environmental targets. Projective engineered a solution that balanced precision, reliability and sustainability, delivering long-term value through intelligent design and collaborative delivery.

## Smart Solutions for Complex Demands

To meet the site's specific compressed air requirements, Projective delivered a fully tailored solution that balanced performance, resilience and long-term operational value. Every element was designed with precision from technology selection to integration, ensuring the system could adapt to future demand while delivering immediate efficiency gains.

- Verified future compressed air demand and selected water-cooled compressors with heat-of-compression dryers
- Designed a chilled water backup system to maintain dryer performance in high ambient conditions
- Delivered full mechanical and electrical design, including P&IDs, PFDs, layout drawings and control panel specifications
- Developed compressor tender documents and conducted life cycle cost analysis



## Solution Summary



### Energy Efficiency

524 MWh/year saved



### Cost Reduction

£65,000/year saved



### Carbon Reduction

135 tonnes of CO<sub>2</sub> saved

## ▶ Efficiency That Delivers More Than Savings

The upgraded compressed air system has delivered tangible results across energy efficiency, cost reduction and environmental impact. By replacing an oversized legacy installation with a right-sized, intelligently controlled solution, the client now benefits from significantly lower energy consumption and improved operational reliability.

The system's design ensures optimal performance under varying conditions, reducing waste and enhancing resilience. With a 30% improvement in energy efficiency, the project has not only cut annual operating costs but also contributed to the site's sustainability targets, reducing carbon emissions by 135 tonnes per year.

This outcome reflects Projective's commitment to engineering solutions that go beyond compliance, delivering long-term value through innovation, precision and partnership.

## ▶ A Strategic Upgrade with Long-Term Impact

This project demonstrates how targeted engineering can unlock significant operational and environmental benefits. By right-sizing the compressed air system and integrating intelligent controls, the client now benefits from improved reliability, reduced energy use and measurable cost savings.

The outcome reflects a collaborative, client-focused approach, one that prioritises long-term value, compliance and performance.