



# Novanta Taunton Case Study

Eclipse Enables State-of-the-Art Cleanroom Facility for Novanta

Client: Bouygues Energies & Services Company: Eclipse (Control Engineering)

Bouygues Energies & Services, a subsidiary of Bouygues Construction, recently delivered a cutting-edge manufacturing cleanroom facility to Novanta, a global technology partner specializing in medical and advanced manufacturing industrial equipment.



To ensure efficient and reliable operations within this state-of-the-art facility located in Taunton, UK, Bouygues Energies & Services enlisted the expertise of Eclipse (Control Engineering), a specialist cleanroom systems integrator.

This case study highlights the successful partnership between Bouygues Energies & Services and Eclipse in designing and installing a Building Management System (BMS) for Novanta's unique manufacturing cleanroom facility.

## Project Overview

The Novanta facility in Taunton was specifically designed to handle Beryllium, a highly unique and valuable material. This manufacturing facility is one of only ten of its kind globally, and it boasts end-to-end solutions for polished and coated Beryllium optics, which are vital components in various mission-critical applications. Bouygues Energies & Services was awarded the contract to design and construct this multi-million-pound cleanroom manufacturing facility, spanning an impressive total gross floor area of 2777 sqm.

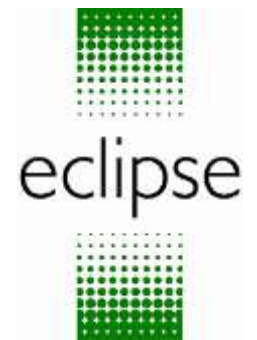
The company's comprehensive solution included construction, fit-out, electrical and mechanical services, commissioning, and validation.

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### **Challenges and Requirements**

The Novanta facility demanded strict adherence to validation and regulatory requirements. The facility needed to maintain a temperature-controlled environment within a tolerance of +/-2 degrees Celsius. Moreover, effective containment of airborne Beryllium particles was essential. To address these challenges, Eclipse implemented specialized design strategies throughout the facility, including an air pressure cascade system to manage containment. Dedicated extract streams equipped with HEPA filtration safe change housings were installed to direct contaminated air to large external extract stacks.

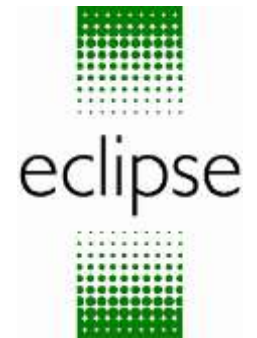
These measures ensured compliance with modern safety standards, making the facility fully operational and ready to house Novanta's world-class beryllium production line and ISO Class 8 cleanroom facility, featuring the most advanced material handling process in Europe.

### **Eclipse's Solution**

In March 2021, Eclipse (Control Engineering) mobilized its expert team to commence the project. The design specifications called for a comprehensive and autonomous plant control system for both the main plant and the environmental monitoring system (EMS).

To fulfil these requirements, Eclipse selected Honeywell Hawk main plant controllers with ISMA IO modules as the backbone of the BMS control system. At the supervisor level, they installed and commissioned the Arena NX, a Niagara N4 based supervisor, to oversee and manage the entire facility's operations.





### **Results and Benefit**

By partnering with Eclipse, Bouygues Energies & Services successfully delivered a state-of-the-art manufacturing cleanroom facility for Novanta. The collaboration between these two industry leaders ensured compliance with stringent validation and regulatory requirements. The implemented BMS by Eclipse provided seamless control over the main plant and environmental monitoring system, enabling efficient operations within the facility.



Novanta now benefits from a world-class production line and ISO Class 8 cleanroom facility, empowering them to fulfil their role as a global technology partner for medical and advanced manufacturing industrial equipment.

### **Conclusion**

The successful completion of the Novanta facility in Taunton stands as a testament to the expertise and capabilities of Bouygues Energies & Services and Eclipse (Control Engineering). Through meticulous planning, specialized design strategies, and the implementation of a robust BMS, Eclipse played a vital role in realizing Novanta's vision for a cutting-edge cleanroom facility.

This case study exemplifies Eclipse's commitment to delivering innovative solutions and further solidifies their position as a leading cleanroom systems integrator in the industry. Bouygues Energies & Services, a subsidiary of Bouygues Construction, has handed over a state-of-the-art manufacturing cleanroom facility to Novanta, a global technology partner for medical and advanced manufacturing industrial equipment.



# Novanta