

Description

- ◆ Services Design Solution were the Building Mechanical and Electrical Technical Advisors in respect to the £17m development to create a £170m facility to construct a 30,000m² new composite wing structures manufacturing and assembly facility for GKN Aerospace to act as their international centre of excellence in composite wing structure, design and production
- ◆ £5m of mechanical and electrical services which included provision of services to two class 8 clean room spaces, one of which was 4,000m² and 15m high, highly services production space, ultra-sensitive manufacturing assemblies, storage facilities with crane gantries, offices and amenities
- ◆ The site included state-of-the-art composites manufacturing operation that incorporated automated high precision production technologies, with 'moving line' assembly operation that uses guided vehicles to move the wing structures through a series of semi-robotic work stations
- ◆ Conversion of two existing high-bay logistics warehouses, creation of a 20,000 m² composites production unit
Creation of a 10,000m² wing component assembly unit.



Phase 1 development programme for GKN Aerospace utilising emerging advanced composites technology

Involvement

- ◆ Main contractor technical advisors on specialist contractors construction issue information
- ◆ Main contractor quality control inspectorate to review and comment on specialist contractors completed works including:
 - ◆ HV ring around the site with 4 number transformers
 - ◆ High output T5 high frequency lighting served from lighting busbar
Intelligent lighting controls switching at 10% / 50% and 100%,
to suit space occupancy and available levels of natural daylight through roof lights
 - ◆ Emergency lighting with central battery system to achieve increased emergency lighting levels in areas of high risk
 - ◆ Overhead power with armoured cabling on cable racks to process plant, control panels and general power
 - ◆ Gas fired radiant heating coordinated to the lighting installation
General supply and extract system to general space
 - ◆ Specialist air system design to clean rooms incorporating duplicate AHUS and hepa filtration, direct gads field heating and chilled water cooling and humidifiers
General supply and extract system to general space
 - ◆ Compressed air and specialised gas distribution systems
 - ◆ Deionised water to local equipment.

Benefits Delivered

- ◆ Set-up and managed defects control and monitoring system to assist in reducing the extent of defects to the end user
- ◆ Undertake quality walks with specialist sub-contractors to identify emerging quality issues and enable preventative measures to be implemented
- ◆ Pre-closure inspection sign off procedure withhold points in construction programme to remedy defects
- ◆ Reviewed and monitored commissioning plans and programmes, provided early warning to contractor of risk area.