



CASE STUDY

Powering the spirit – safely, reliably, compliantly

Working for long-term client Diageo, Kigtek delivered an integrated electrical and automation solution at its Fife site in Scotland - expanding storage, improving product flow, and integrating seamlessly without disrupting production. Delivered safely within a complex COMAH environment, the project increased the client's flexibility and resilience, enabling Diageo to meet growing demand and support future growth.

Sector: Food & Beverage - Spirits Manufacture
Location: Fife, Scotland
Expertise: Electrical and Automation Engineering
Scope: Design, Build, Test, Installation and Commissioning

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Client & Requirements

In Fife, Scotland, Diageo operates one of the largest packaging and bottling plants in the UK, producing tens of million cases annually across a portfolio of globally recognised spirits brands. As a key hub for whisky and non-whisky products, the site supports Diageo's strategic priorities around sustainability, operational excellence, and supply chain resilience.

To meet rising global demand and improve flexibility, in 2024 Diageo launched a major infrastructure upgrade – the design and integration of a new multi-product tank farm. The project aimed to boost storage capacity and streamline spirit transfer routes across the site. Phase 1 involved the design, build and integration of 12 new 180m³ storage vats, construction of a dedicated tank farm with pipe bridge, pumphouse, and MCC room, and completion of around 30 tie-ins to existing production areas. Additional work included new lines at Vat Room 2 to enable efficient spirit transfer.

Diageo appointed a main contractor for the design and build of the facility, and Kigtek for the electrical and control system integration.

The solution needed to deliver increased capacity while maintaining operational continuity and meeting stringent COMAH safety standards. Seamless integration with existing systems, enhanced product routing, and alignment with sustainability goals were essential. The project also had to be completed within a tight timeline to support customer demand from April 2024 to December 2025, with flexibility and scalability built in for future expansion.

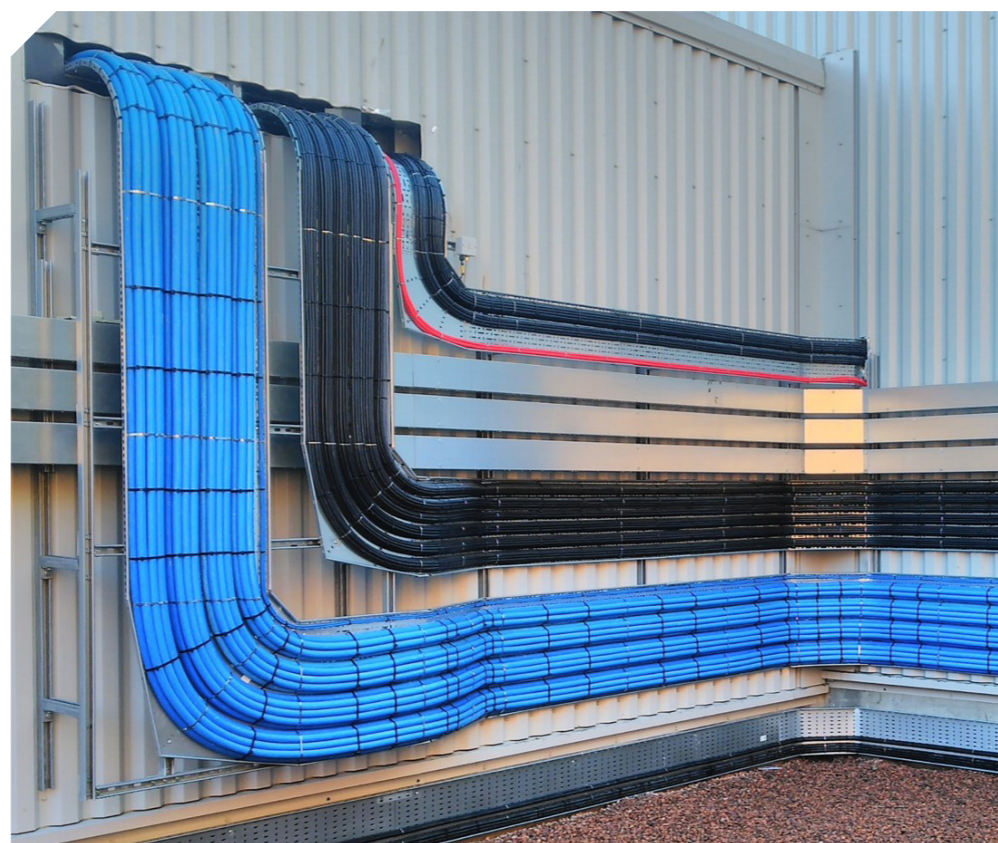


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The Challenges

The complexity of the project presented several challenges:

- **Changing power requirements** during the design phase led to scope adjustments, requiring agile responses from the project team
- **Coordination across multiple contractors and phases** added further complexity, particularly as the work involved invasive tie-ins to live production areas
- Additionally, the project was executed within a CDM-controlled, top-tier COMAH site, demanding **rigorous health and safety compliance** and oversight throughout.



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The Solution

Kigtek delivered a **comprehensive electrical and automation integration solution**, fully aligned with Diageo's site standards and leveraging industry-recognised Siemens hardware and software.

The work began with **detailed process electrical design, including safety systems** and multi-rack ISP node panels, followed by the design and manufacture of Form 4 Type 7 MCC and associated distribution boards for the new switch room. Kigtek also developed and tested PCS7 **control software**, including integration with Schneider ProLeiT systems for specific plant areas, and delivered full functional safety design in compliance with Diageo's standards.

On the hardware side, Kigtek manufactured and tested **22 new process control panels** and junction boxes, installed **over 30 kilometres of cabling**, and integrated **more than 200 valves and instruments** across the site. Additional infrastructure included five large underground power and earth cables spanning over 150 metres, fibre-optic cabling and terminations, and trace heating systems to maintain operational integrity.

The project required significant enabling works and invasive tie-ins to live production areas, completed during 10 scheduled break-in weekends to **minimise disruption**. These tie-ins brought new valves, instruments, and VSD panels online in stages. Commissioning activities included equipment power-up, network configuration, IO testing, and rigorous functional safety validation. At peak, Kigtek deployed up to 17 electricians on-site to meet the scale and complexity of the work.

This phased approach – covering design, procurement, panel build and FAT, electrical installation, and software commissioning – ensured **the project was delivered safely and efficiently** within a CDM-controlled, top-tier COMAH site under strict health and safety oversight. Diageo's compliance was embedded throughout the design and panel-build phases prior to site delivery, ensuring sign-off and approval to minimise rework and maintain project momentum.



This project is a strong example of how we deliver a fully integrated electrical and automation solution that is built around the client's operational needs. From early design through to commissioning, our team ensured seamless integration with live production while maintaining the highest standards of safety and compliance in a complex COMAH environment.

By taking a phased, end-to-end approach, we enabled increased capacity, improved product flow and future scalability – all without disruption to operations. It's a result that reflects our commitment to delivering a first-class outcome for the client.

Scott Fleming,
Business Development & Projects Manager

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Operational Benefits

The solution delivered a number of improvements at the Diageo plant, the most prominent of which are listed below:

- **Increased capacity and flexibility** - expanded spirit storage and improved transfer routes support changing production demands.
- **Optimised product flow** - enhanced routing reduced bottlenecks and improved efficiency.
- **Improved reliability and resilience** - upgraded systems reduced downtime risk and strengthened operational performance.
- **Future-ready design** - scalable solution enabled straightforward expansion.

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Commercial Benefits

Beyond operational gains, the project delivered clear commercial value by:

- **Supporting revenue growth** - increased capacity and enabled higher output corresponding to rising product demand.
- **Reducing operating costs** - greater efficiency lowered energy use, waste, and labour intensity.
- **Protecting revenue during delivery** - zero disruption safeguarded production and avoided downtime costs.
- **Reducing compliance risk** - delivery aligned with COMAH and CDM requirements.

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