

CASE STUDY

Carlsberg Britvic Brewery



Garland System
StressPly Flex SA

Sector
Industrial

Client
Carlsberg Britvic Brewery

Size
13,000 m²



The Carlsberg Britvic Brewery in Northampton is a complex, architecturally distinctive facility that presents significant technical challenges for roofing design and delivery.

Designed in the 1970s and inspired by the form of a Danish longship, its roofscape is defined by steep vertical planes, complex geometry and extensive exposure.

When Carlsberg Britvic planned a major roof refurbishment, the requirement was clear. The project needed a technically robust, fully flame-free solution capable of managing installation complexity at scale while delivering long-term performance. Garland UK was appointed as system designer and manufacturer, working directly for the client and providing full technical delivery oversight, alongside Garland UK Approved Contractor, Cambridge Flat Roofing.

The brief focused on upgrading more than 13,000 m² of existing roof coverings to improve waterproofing and durability across the brewery. Particular attention was required at the extensive vertical slopes and detailed interfaces, where legacy construction and exposure increased long-term risk. The client required a fully flame-free specification compliant with NFRC Safe2Torch guidance and insurer requirements. Garland UK led the system design, detailing strategy and technical assurance throughout, supporting the client team and approved contractor from pre-construction through to completion.



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Challenge

The challenge lay in both scale and complexity. The roof includes 141 individual vertical upstands, commonly referred to as 'kit kats', each acting as a termination point and restraint detail. Together, these created hundreds of linear metres of vertical waterproofing interfaces, all requiring individual consideration rather than standard detailing.

A strict no-hot-works policy applied across the live site, removing traditional torch-on installation methods entirely. Winter working conditions added further constraints, particularly around moisture management and sequencing, increasing the importance of precise installation control.

Long-term performance was critical. Vertical and steeply pitched surfaces required enhanced restraint to prevent membrane movement over time. In parallel, the roof needed to meet fire performance requirements and remain compatible with future upgrades, including potential solar installations. polycarbonate units, eliminating safety hazards and improving the quality of



Solution

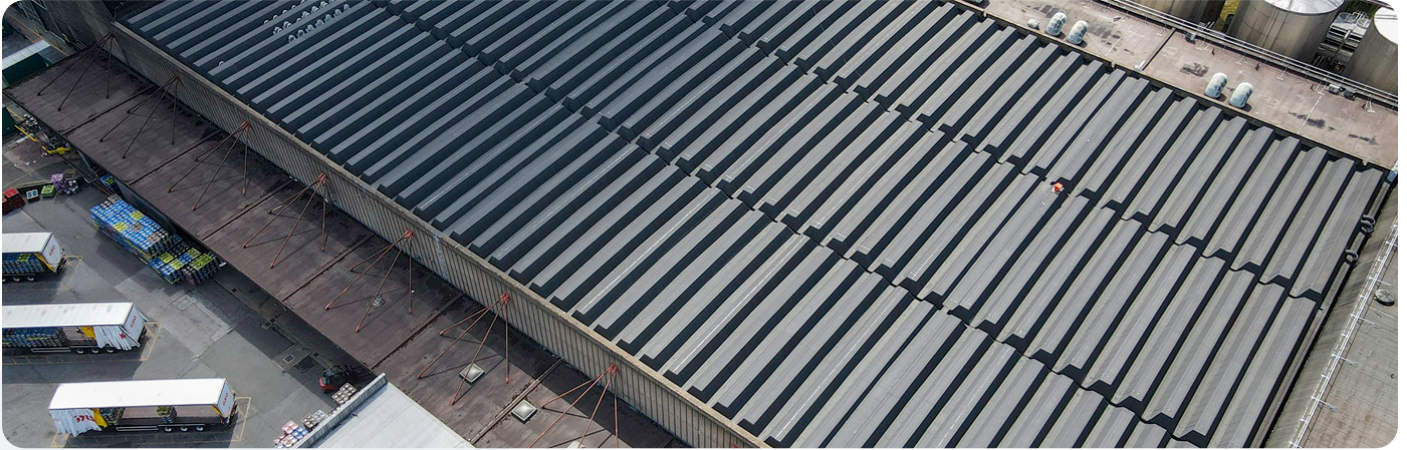
Andrew Fox, technical manager at Garland UK designed a flame-free waterproofing solution using the StressPly Flex SA system. The system combines self-adhesive modified bitumen membranes, hot air welding and solvent-free adhesives, delivering full NFRC Safe2Torch compliance while maintaining high performance across horizontal and vertical applications.

An A1 fire-rated, non-combustible board was incorporated into the build-up and mechanically fixed into the concrete deck. Garland UK coordinated site-specific pull-out testing to confirm fixing depth and performance, specifying stainless steel fixings to mitigate long-term corrosion risk.

All elements of the system were mechanically fixed. Restraint bars were installed at all head laps across the vertical upstands, providing restraint and protecting against future movement. In total, more than 4.5 km of restraint detailing was installed across the roof.

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With hot works prohibited and winter conditions present, ETorches were used to manage moisture safely during installation. This flame-free drying method was essential to maintaining progress while eliminating fire risk, a key consideration on a live operational site where safety, continuity, and insurance compliance were critical. Garland UK managed the technical delivery throughout, coordinating detailing strategies with Cambridge Flat Roofing and maintaining strict quality control through regular site inspections.

Outcome

The refurbished roof now provides Carlsberg Britvic with a flame-free, technically robust waterproofing solution designed for long-term performance. Complex vertical detailing has been fully addressed, membrane movement risk has been eliminated through comprehensive mechanical restraint, and fire safety requirements have been met without compromise.

Despite challenging conditions, the project was delivered safely, compliantly and to specification. Garland UK's technical oversight ensured installation quality remained consistent across the entire roofscape, giving the client confidence in both the system design and its execution.

Following the successful completion of Phase 1, Carlsberg Britvic has confirmed that Phase 2 of the refurbishment programme will commence, continuing the collaborative approach established on this project.

Andrew Fox adds, "This project demanded absolute technical control. The scale, vertical detailing, and no-hot-works restrictions meant every decision had to be right. By maintaining close technical oversight throughout installation, we delivered a flame-free solution that addresses long-term performance, fire safety and durability in equal measure."



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Garland UK
Second Way Centre, Second Way, Avonmouth, Bristol, BS11 8DF

✉ contact@garlanduk.com ☎ 01174 401 050 🌐 garlanduk.com