



# The Kingspan **KoolDuct**<sup>®</sup> System

## GLOUCESTER LEISURE CENTRE



**Fibre-free  
Core**

  
**Kingspan**<sup>®</sup>

*Low Energy –  
Low Carbon Buildings*

When Gloucester Leisure Centre was regenerated in 2002, it was vital that the new facility offered a wealth of sport, leisure and cultural opportunities to Gloucester and the surrounding areas, all within a building built to last. Renamed to GL1 and now managed by Aspire Sports and Cultural Trust, the centre features a top-quality specification, which included the use of The *Kingspan KoolDuct*<sup>®</sup> System.

With four swimming pools, a gym, spa areas, along with other luxury amenities such as performance spaces and a café, GL1 plays a vital role in supporting the physical, mental health and wellbeing of the local community. To ensure resources could be focused on offering the best possible opportunities, reducing long-term running costs was an important consideration. The *Kingspan KoolDuct*<sup>®</sup> System was specified as part of this approach.

A total of 9,000 square metres of The *Kingspan KoolDuct*<sup>®</sup> System was installed throughout the leisure centre.

The System was used to fabricate ductwork in a variety of sizes, from 1800 x 1200 mm to 200 x 100 mm, connecting to eight air handling units (AHU) inside the plant room.

The steel ductwork used to extract the moist air from the swimming pool areas are also connected to the plant room with The *Kingspan KoolDuct*<sup>®</sup> System. Unlike traditional ductwork constructions, which require sections to be lagged with insulation once installed, The *Kingspan KoolDuct*<sup>®</sup> System panels are pre-insulated with a premium performance insulation core. This single-fix, lightweight design helped to reduce installation time when the leisure centre was built in 2002.

The ductwork is inspected annually by CJP Ducting, who have reported no reduction in performance since its installation. A recent assessment of the ducting showed that, aside from a small section which needed routine repairs, the ductwork was in perfect condition with all joints and seams sealed, preventing corrosion caused by moisture ingress.



Ductwork fabricated from The *Kingspan KoolDuct*<sup>®</sup> System can reduce air-leakage rates to a fraction of those typical of rectangular sheet metal ductwork. Recent research from Sweett (UK) Limited has revealed that this can lead to “whole life” HVAC savings of over 25% compared with traditional galvanised sheet metal ductwork.

The *Kingspan KoolDuct*<sup>®</sup> System is UL Listed as a Class 1 Air Duct, to Standard for Safety UL 181 (Underwriters Laboratories: Factory Made Air Ducts & Air Connectors), when fabricated to a specification clearly defined by UL.



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