Award

MCLAREN TECHNOLOGY CENTRE

Woking

Architect Foster and Partners **Structural Engineer** Arup **Steelwork Contractor** William Hare Ltd
Main Contractor Kier Build Ltd **Client** McLaren Group

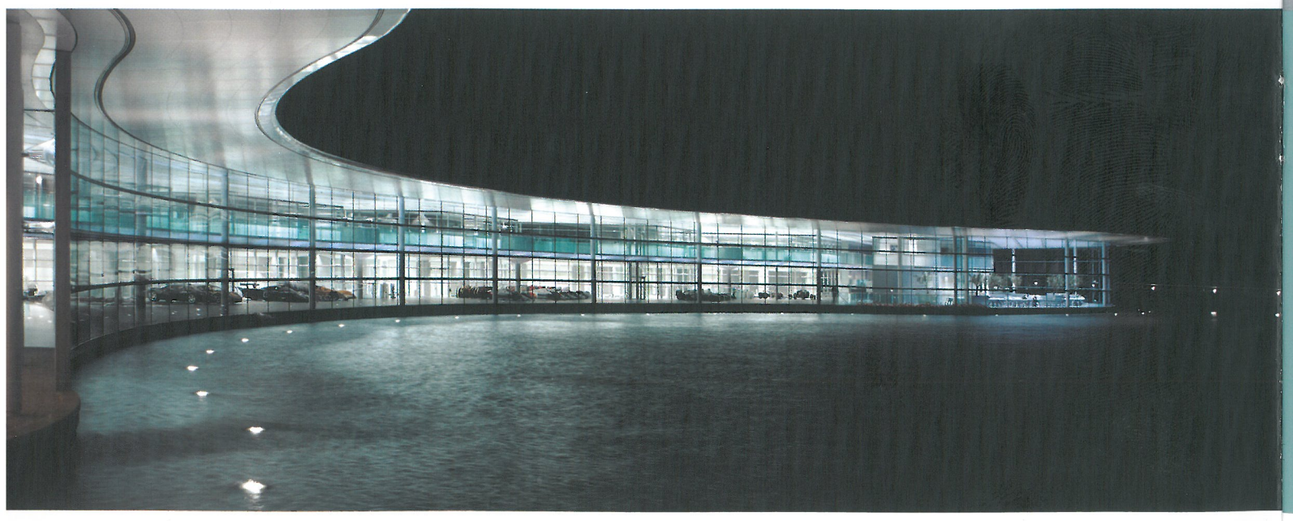
The McLaren Group is a collection of high-tech companies involved in the design and development of Formula 1 cars, high-performance road cars, electronic systems and composite materials. Since McLaren began competing in Formula 1 in 1966, it has established a global reputation as one of the most successful teams in the history of the sport.

The McLaren Technology Centre provides a headquarters for the majority of the group's staff. It includes design studios, laboratories and testing and production facilities, electronics development, machine shops, prototyping and production facilities for Formula 1 and road cars including the Mercedes-Benz SLR McLaren, as well as a 145m long wind tunnel. A Visitor Centre is located in a separate building at the entrance to the complex. It houses educational facilities, a temporary exhibition space and presentation theatre and is linked to the main centre by a subterranean building. This two-storey structure is buried underground - like the rest of the Technology Centre it is designed to make a minimal intervention in the landscape - and is visible only by its circular rooflight.

The building posed the challenge of sensitively accommodating a building as large as Stansted Airport on a 50-hectare green belt site. The required 60,000m² of accommodation had to be contained within a 20,000m² footprint. The site's constraints, determined by a 10m datum, surrounding flood plains, public footpaths, a river and restricted land, resulted in the low, deep-plan building sunk into the landscape, shielded from view by the planting of 100,000 new trees. Equally, time was an important factor. Steelwork was the most practical solution, as it allowed prefabrication off-site.

A design strategy that would allow for flexibility was an important requirement of the brief. The mix of disciplines and the varying processes involved in each of the specialist industries dictated a structure that could allow for changing needs. Consequently, both the concrete and steel components of the structure have been designed to allow for future additional service penetrations.

High quality finishes are used throughout the complex, while landscape design and sustainability are successfully brought together in the dramatic lake adjacent to the McLaren Technology Centre. The lake is central to the building's environmental strategy - its 50,000 cubic metres of water form a vital part of the cooling infrastructure for the entire complex. The lake also serves to marry the building to the landscape by making the long, curved, transparent façade look directly onto the lake.



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Judges' Comment

This temple to engineering excellence is approached rather in the style of a great country house, set in its orchestrated Surrey idyll. It is the result of a clear synergy between a strong client and an equally strong architect. Both have been fascinated by, and demanded, perfection in this joint endeavour. Only this standard has been good enough, and this is manifest in the building.

The judges were almost stunned into silence by the calm environment and the quality of the construction, which approaches in relative terms, that of a F1 racing car.

Effective, but reasonably straightforward, steelwork has been raised to a level of precision which stretches the horizon of the possible.

In some ways this is a disturbing building for human occupation, but it fascinates the intellect and is destined to become a timeless classic.

In order to emphasise the close relationship between the lake and the building, a minimal structure was needed. To achieve this the architects worked closely with the glass-systems company Schüco International and with McLaren's own engineers, combining aerospace and Formula 1 engineering technology to find the strongest and most transparent solution for the façade. Computer-cut aluminium 'windblades' absorb the windloads, while the vertical loads are supported by stainless-steel tie-rods that are the same as those used to support the bodywork of a Team McLaren Mercedes Formula 1 car. Thus the laminated glass is suspended with almost no visible means of support, creating a virtually uninterrupted dialogue between the landscape and the interior of the building, and creating dramatic views of the lake and the surrounding countryside.

Aside from offering a solution to the challenges of time and planning restrictions posed by the project, the extensive use of steel was also key to articulating McLaren's work. The exposed engineering structure reflects the client's precision engineering industry, and keen eye for quality. The use of steel is key to the functionality of the building and clearly articulates the values of The McLaren Group itself.