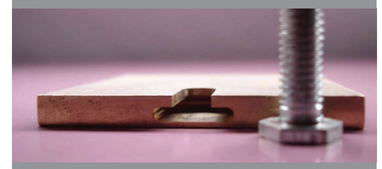
The bronze sub-contractor created a detailed 3D model of the project. This allowed the design team to evaluate proposed design changes from any angle. Once finalised, the contractor could easily extract the individual pieces for Computer Assisted Manufacture

Material Selection



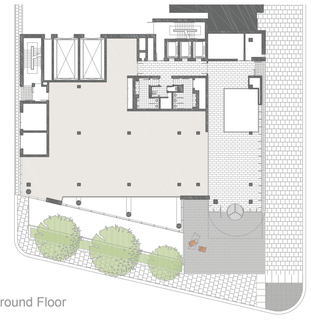
Fixing Detail

Support Structure

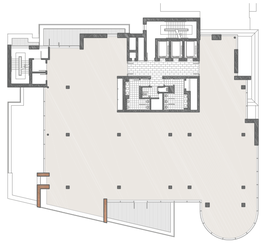
Installation of Bronze

Configured like a word from Oriental script, writ large, the dark bronze sculpture stands on equal footing with the pedestrians passing or entering the main doors of No1 Warrington Place. The work is designed to both compliment and contrast the architectural dynamic of the building façade with its wedge-like wall projection and multi-storied expanses of clear glass and shell-white Portland stone cladding. Primarily context-responsive, an important function of the 4.4 metre high structure is to bridge human scale to architectural scale. The artwork is robust and strongly reductive in style, its pure form belying a complex of visual ambiguities between the corresponding flat and curved planes of the sculpture. Read as a totality, the sculpture appears to be momentarily poised in an ever-higher climb like the attendant form of some huge wave wall that is just reaching the zenith of its structural possibility. What will happen next cannot be predicted with any degree of precision but monumental fluidity will inevitably take on new form leading, as it must, to new territory…

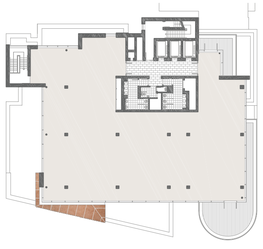
WAVE FORM (2008)



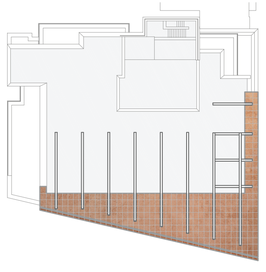
Ground Floor



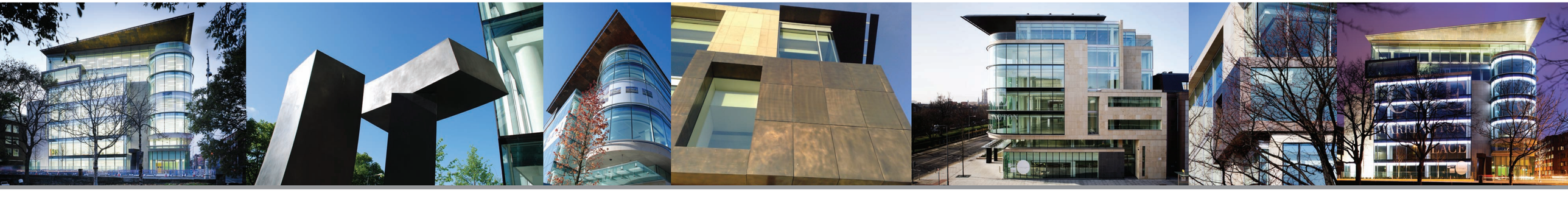
Upper Floor



Penthouse



Roof



ONE WARRINGTON PLACE

Architects: Henry J Lyons Architects
Cladding Consultants: Billings Design Associates Ltd.
Facade Design Consultants: T/E/S/S

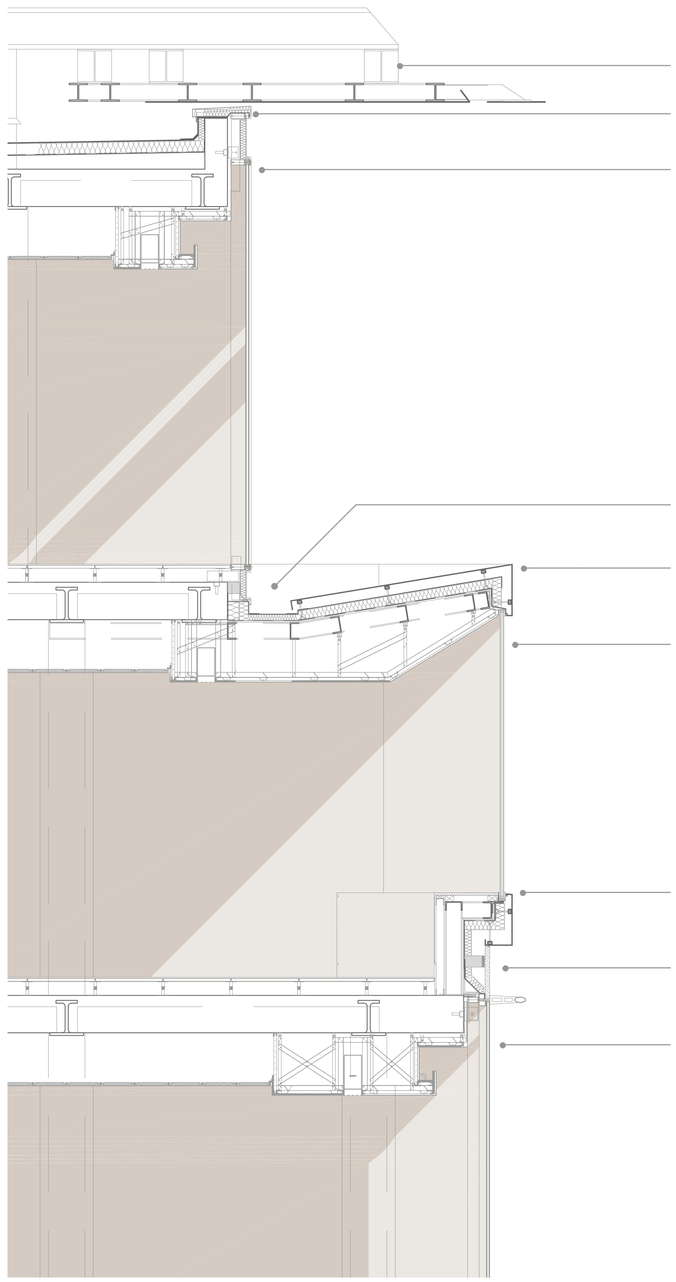
Main Contractor: G & T Crampton Ltd.
Bronze Sub-Contractor: Uppendahl Metall-Kunst-Guss
Sculpture: Michael Warren, MAGISA s.a.

The oversailing roof, cladding elements and a fluid sculpture by artist Michael Warren, all formed from bronze, provide drama to the elevational treatments of One Warrington Place. This material – sourced in Germany, fabricated in Italy and treated with bees-wax to maintain its natural lustre – adds a distinctive quality to the building's appearance. Bronze was chosen to add a civic quality to the building facade, providing visual interest and a unique signature for the building.

This high specification office building of 69,000 sq. ft. with individual floor plates of 10,000 sq. ft. is set on eight levels. The building overlooks the green spaces of the Grand Canal corridor and enjoys spectacular views over the city.

German limestone panels frame substantially glazed elevations which maximise the daylight quality of within the office spaces. A range of sustainable design measures are employed in order to provide a building with excellent environment manners.

HENRY J LYONS ARCHITECTS



1 6mm cast bronze plate with pre-patinated finish fixed to primary steel beams with stainless steel support system

2 4 mm extruded aluminium channel with natural anodised finish, 60mm PIR insulation core and mill finished aluminium inner tray

3 Double glazed thermally broken aluminium curtain wall with natural anodised finish

4 4 mm extruded aluminium channel with natural anodised finish, 60mm PIR insulation core and mill finished aluminium inner tray

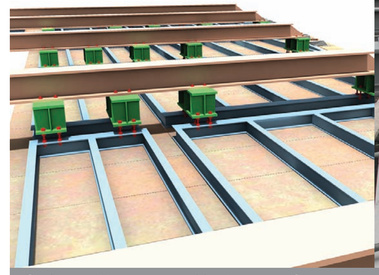
5 6mm cast bronze plate with pre-patinated finish fixed to primary steel beams with stainless steel support system, 100mm styrozone insulation on EPDM sealed to 19mm marine plywood

6 Double glazed screen with perimeter aluminium channel frame with polyester powder coat paint finish and silisone sealant to vertical joints between glazed units

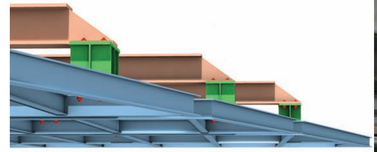
7 6mm cast bronze plate with pre-patinated finish fixed to primary steel beams with stainless steel support system, 100mm styrozone insulation on EPDM sealed to 19mm marine plywood

8 40 mm Jura limestone cladding panels fitted to secondary steel structure with stainless steel support system, 80mm PIR insulation on EPDM fixed to 12mm cement particle board

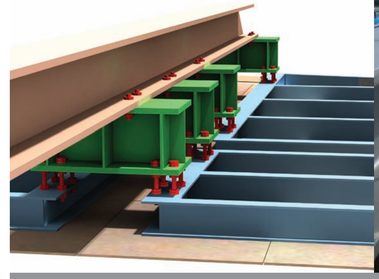
9 Double glazed structurally glazed thermally broken aluminium curtain wall system with natural anodised finish



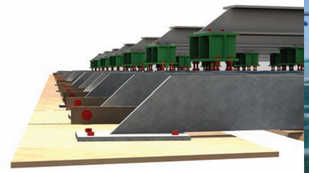
Cantilevered beams support the bronze roof



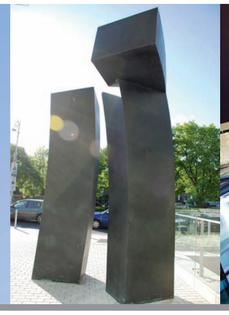
Support framework awaiting installation of cladding

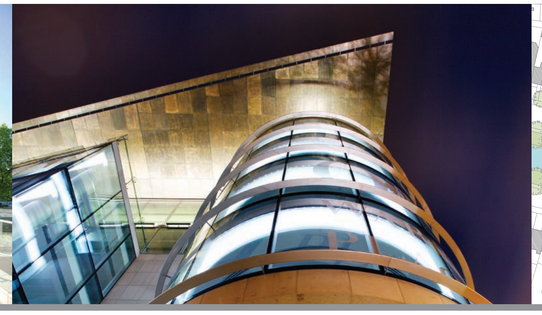


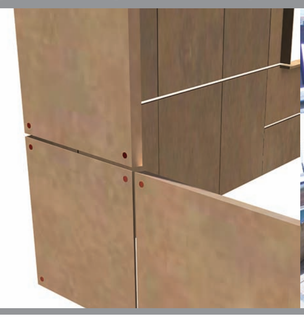
Aligning and levelling the roof structure



Cantilevered supports for the “fin”
Specially cast bronze fixing bolts to box cladding







The design intent for the bronze canopy and cladding to No. 1 Warrington Place is for large planes of flat bronze sheet. Various options were explored to achieve the aesthetic. It was quickly found that off-the-shelf sheet material would be too thin and that extruded profiles would not provide the planar effect required. Therefore, a solution using cast bronze plate had to be developed.

The design team worked closely with the fabricator, Uppendahl GmbH from Germany, to develop a bespoke bronze rainscreen for the canopy and wall cladding. Thick bronze plates were specially cast and rolled to the required thickness of 6mm. Then the plates were cut to size. The fabricator blasted the surface and applied the required surface patination. A bespoke panel retention system was developed utilizing stainless steel fixings counter-bored into the hidden face of the panels. The machining into the back of the panels had to be carefully controlled to ensure sufficient strength in the connection.

The fixing system was laboratory tested with full size pieces taking loads up to 4 tonnes per m^2, far exceeding the required performance. The fixing system was independently analysed by a materials scientist to ensure there would be no issues with bimetallic corrosion.

The completed installation is one of a kind illustrating the ability of thick bronze plate to give a rich warm texture, unachievable with any other material, while maintaining a contemporary planar aesthetic.