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## BERNARD WEATHERILL HOUSE, CROYDON

### EPR Architects



The newly completed Bernard Weatherill House is located adjacent to the Grade II listed Victorian Town Hall and forms a revitalised civic hub in the centre of Croydon. The brief, for EPR Architects Ltd, was to design an administrative headquarters for up to 2,700 staff that was public facing and that also reflects Croydon Council's aspiration to be a forward-thinking, transparent authority. The building should be highly sustainable and offer flexible accommodation to support the council's current and future methods of working.

EPR took the brief on board and based its design solution on a lifecycle cost approach using high-quality materials and ensuring minimum ongoing maintenance costs.

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#### Climate Wall

The completed building is wrapped within a shimmering climate wall which provides a protective veil to maximise natural daylight while minimising solar penetration. The shading solution utilises a ceramic fritted pattern applied to the outer layer of glass, rather than relying on shading devices in the cavity between the inner and outer glazed skins. The combination of a second skin of glazing with a frit applied in thin bands across it, adds depth and richness to the facade whilst maintaining the desired transparency. Exposed galvanized steel has been utilized across the entire scheme, forming a large part of the climate wall structure. It has also been used at street level to form gates and barriers, to tie in with the facade materials. The decision to use galvanized steel rather than painted sections was driven by its negligible maintenance costs and desired negligible maintenance costs and desired aesthetics. During early detailed development of the climate wall with Italian cladding contractor **Focchi**, calculations indicated that the mullions and transoms supporting the climate wall glazing would need to be steel, to deal with the structural



loads. EPR were keen to explore the use of an exposed galvanized finish, as the inherent tonality and subtle variation was attractive to the design team and worked well against the crisp white spandrel panels, fritted glass and dark internal aluminum mullions. Coupled with this, maintenance walkway grilles between the two glazed skins were to be formed from galvanized grating for cost and durability reasons, and that the overall external climate wall structure read as one material.



#### Sustainability

Integration of a multistorey double skin facade providing good daylight into the internal space whilst creating an envelope efficient at reducing solar gain in summer and improving thermal insulation in the winter was quite an achievement. An atrium in the middle of the building provides daylight to the internal office areas reducing the lighting demand. An exposed concrete soffit provides thermal mass to the building to aid in the cooling and heating. Limiting U and G values was achieved by optimisation of high performance glazing. The equivalent G value for the climate wall was 0.19 with a U value of 1.20 W/m<sup>2</sup>k while still able to provide good light transmittance. This far exceeded the requirements of the regulations at time of design. The efficient design and material selection of the facade allows the building to use chilled beams to supply heating and cooling to the office areas. Central air handling units with heat recovery supplying straight runs of ductwork have allowed specific fan powers to be very low at 1.80 w/l/s.



#### Finished Article

The quality of the curtain walling is of a very high standard combining optimal design that is well conceived and skilfully executed. Combined with clean, unfussy detailing, it has allowed the fritted glass planes to read strongly when viewed from far and forms an attractive palette in detail. It has resulted in well-mannered facades, with tonality and subtly provided by the galvanized coating that counterpoint elegantly with the Grade II listed Town Hall adjacent.

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