

# Case Study



**SAPPHIRE**

Transport House,  
Dagenham

*“ I’ve been working with Sapphire for around 10 years. Good as gold and wish every company would take a leaf out of your book. 10/10. ”*

*Project Manager, Hollybrook Limited*





# Transport House, Dagenham

**Client:** Hollybrook Limited

**Contractor:** FP McCann Ltd

**Architect:** Ambrose McCallum Architects  
ATP Group LLP

**Location:** Dagenham, Essex

**Balconies:** 132 balcony lifts



## History

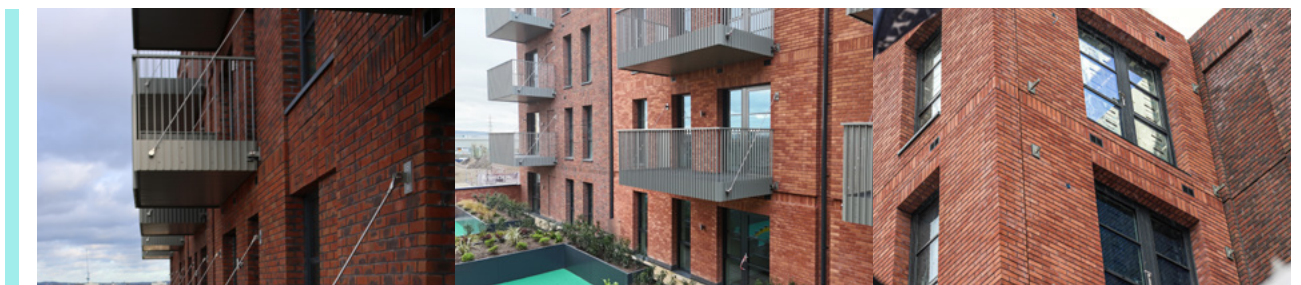
Situated on the former site of the Unite trade union in Dagenham, Transport House brings 149 new residential units to the area, with the building itself touted as a sustainable development, using air-source heat pumps to reduce the building's carbon footprint whilst the building is in use, reducing the CO2 emissions by 20% compared to a gas boiler and 70% when compared to an electric system.



## Streamlined by Innovation, Delivered by Sapphire

Be First and Hollybrook aspired to deliver environmentally friendly, MMC-built homes fit for both now and the future in Dagenham. Both they, and Sapphire, had collaborated once before on the Chequers Lane development, so building upon the previous relationship was a crucial starting point.

With over half of the development designated as affordable housing and 100% of the development focused heavily on sustainability, Transport House needed to utilise old brownfield sites successfully to create more affordable housing. With Transport House, the



key principles followed throughout were good quality housing, green spaces, pedestrian links and sustainability, designed to celebrate Dagenham's industrial heritage whilst providing residential space for the growing community.

Hollybrook and Be First, however, were constrained by needing to hit sustainability goals. By using a precast sandwich façade panel, embodied carbon and water was reduced, making the development resource-efficient from a very early stage. However, adding balconies to a precast façade became a sticking point, as special connections would be needed in order not to compromise the sustainable benefits of the precast façade.

Once Sapphire came on board, we worked closely together with Hollybrook and Be First to ensure the project could be streamlined by innovation. We used a cast-in bracket on the façade panels, providing tie-wire connections that could clip onto the cast-in anchors. These tie-wire connections were not only more sustainable due to their small penetrations but also did not penetrate the fire barrier at all, making them safer to use. By triangulating the forces with a clip-on tie-wire connection, moment forces can be reduced on top of reducing embodied carbon and water penetration, making the balcony far more efficient to construct in the first place and taking weight off of the building structure, making Transport House energy efficient and sustainable both on completion and well into the future of its tenancies.



# NBS Specification

## Transport House, Dagenham

**Manufacturer** Sapphire Balconies Ltd 11 Arkwright, Road Reading, RG2 0LU  
0344 88 00 553  
[support@balconies.global](mailto:support@balconies.global)  
[www.balconies.global](http://www.balconies.global)

**Reference** Tie-Rod aluminium balconies with vertical bar balustrading and flat sheet panels

**Balcony anchor** Stainless steel M16 anchors connected to the front plate. Stainless steel M16 tie-rod connectors integrated into outer fascia of side balustrade panel

**Arms** n/a

**Cassette® structure** Standard 400mm modular Tie-Rod balconies

**Soffits** Polyester powder-coated aluminium-controlled draining soffits

**Deck finish** Innova® A2-rated decking fixed with hidden clips

**Toprail** 60 x 35 sloped top aluminium extrusion, polyester powder-coated

**Guarding** Type 1: 40 x 12 mm aluminium flat vertical bars.  
Type 2: 40 x 12 mm aluminium flat vertical infill bars with a 3 mm aluminium sheet clad to the outside face with colour-matched 40 x 12 mm bars fixed to the outside in an 'X' pattern

**Base fixing** Mechanically fixed to balcony

**Fascias** 6 mm behind vertical bar aluminium, polyester powder-coated



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