

CASE STUDY

# The Forge, Redclyffe Road

Winner  
AJ Specification Awards  
2020



**RESIDENTIAL DEVELOPMENT:**  
192 homes comprising one, two, three  
and four bedroom apartments and  
townhouses.



**Telford Homes** acquired **The Forge**, in Upton Park, London, in 2014 in a swift unconditional purchase of a site without a planning consent. The site was formerly a bus depot bounded on two sides by existing residential developments.

**Radmat** was engaged together with **RM\_A Architects** to design a roofing scheme which would meet the strict attenuation and flow rate requirements imposed by Newham Council. The scheme comprises residential apartments, clustered around communal courtyards, accessed off a new public street with substantial public realm enhancement. The new buildings range from three to five storeys with a 14-storey focal building.

**Telford's chose Radmat for the following reasons:**

- Proven track record as a key account partner both manufacturer and Roofing Contractor
- Radmat's unique key account service which included scheme evaluation by inhouse architects, bespoke CAD drawings, Blue Roof calculations
- Products developed for the application including multiple depth **Blue Roof Geocells** and BBA certified **ProTherm Quantum** Vacuum Insulated Panels to achieve the thermal performance in the limited space
- Systems supported by BBA certification specifically certifying the Blue Roof components and a worked up design so that swift NHBC sign off could be achieved.

**RADMAT PRODUCTS USED:**

- PermaQuik PQ6100
- ProTherm Quantum Pure
- ProTherm G XENERGY SLP
- Radmat Blue Roof GeoCells & orifice restrictors
- MedO Green Roof System

**ARCHITECTS:** RM\_A Architects







The development faced many challenges, one of which was meeting the strict runoff requirements imposed by the council across a geographically restricted site with reduced height zones. Due to the restrictions of the site and close proximity to neighbouring properties, below ground attenuation had to be kept to a minimum, leaving the roofs and high level podiums as the key attenuation strategy.

Radmat's **Blue Roof System** had to be redesigned a number of times to meet the stringent attenuation targets, even utilising the 'fingers' of the roof to maximise the available space.

Because the development had to meet high thermal standards and provide as much amenity space to residents as possible while at the same time providing extensive attenuation – the system build ups were considerable and therefore design heights at thresholds and parapets were compromised in some areas.

A series of inverted **PermaQuik Hot Melt Blue Roofs** were specified to provide a robust waterproofing and were supported by BBA certification for both blue roofing applications and an independent durability statement for the design life of the building. In the most challenging areas Radmat proposed its **ProTherm Quantum Vacuum Insulated Panel system** which enabled the area to meet the thermal requirement in 80% less space compared to standard insulants, while still meeting the attenuation demands.

Finished with Radmat's **MedO Green Roof** systems – both fully vegetated blankets for areas overlooked by apartments and seeded biodiverse roofs surrounding the PV panels – the roofs also incorporated ecological requirements for bio-diversity with different growing medium formulations and planting incorporated on different roofs. These habitat roofs have been included to promote environments that will support bees, butterflies and birds.