

CASE STUDY

# Principal Place



**MIXED USE DEVELOPMENT:**

- Retail
- Offices
- Residential



**Radmat Building Products** were contracted by specialist building contractors Prater to provide an insulation and waterproofing system for the mixed use 600,000 sq ft development, combined with a 15-storey office building, Principal Place and a 50 storey residential apartment block, Principal Tower. Comprising nearly an acre of roof terraces, Radmat's **ProTherm G XENERGY SLP** insulation and **PermaQuik Hot Melt Monolithic Membrane** waterproofing systems were chosen due to their durability and compatibility with both green and brown roofing requirements.

- High-quality 'zero falls' standard waterproofing
- Insulation effective and compatible with green and brown roofing with A+ Green Guide rating
- Small building footprint presented problems with managing various installations.

**RADMAT PRODUCTS USED:**

- ProTherm XENERGY SLP
- ProTherm XENERGY MK Filter sheet
- PermaQuik PQ1600
- PQ2017 Detailing Membrane
- PQ2060/PQ2061 Reinforcing fabric
- EshaPrimer
- Texsa Protection Sheet

**ARCHITECTS:** Foster + Partners





Set on the border between Shoreditch and Central London, Principal Place is largely centered around the integration of commercial and residential. This is incorporated via the 15-storey Office building (home to Amazon HQ) along with 20,000 sq ft of restaurants, shops, a boutique gym, and half-acre public piazza to be activated by year-round arts and events programmes. On top of all that, the development also includes Principal Tower, a 50-storey residential tower, one of the biggest residential buildings in London, which is due for completion in 2019.



One of the development's ambitions was to incorporate green and brown roofing over the many roof terraces in order for the building to achieve a BREEAM certification and provide adequate drainage and sustainability. Radmat's **PermaQuik Hot Melt Monolithic Membrane** was chosen due to its durability and reliability for green and brown roofing, and its BBA certification to last 'the lifetime of the building'. **PermaQuik PQ2017 Reinforcing Fabric** and **PQ2061 Detailing Membrane** were also used within the waterproofing system to provide reinforcement for the PQ6100 system, ultimately delivering the highest and most robust standard of waterproofing.



Radmat's **ProTherm G Xenergy SLP** was the chosen roof insulation primarily due to its extremely high standard of heating insulation, as it uses infra-red blocking particles to scatter and reflect heat radiation, hence was able to meet and exceed the thermal requirements of the development. ProTherm G Xenergy SLP additionally has an impressive environmentally-friendly status, with a Zero Ozone Depletion Potential, a Global Warming Potential of less than 5, and a Green Guide to Specification A+ rating. Meeting the desired efficiency standards of the building.

The biggest challenge faced during the project was the small building footprint. With multiple trades onsite, work and deliveries had to be planned meticulously to ensure no conflicts with fellow contractors. Detailed forward planning ensured that congestion was eased and the potential for accidents was reduced.



Principal Tower has been designed to reduce energy use, the tower targets the Code for Sustainable Homes Level 4, with environmental strategies including a combined heat and power plant, roof mounted photovoltaic panels and grey water harvesting, this is due for completion in 2019.