

CASE STUDY

KGX1 Google HQ



RADMAT PRODUCTS USED:

- PermaQuik Hot Melt
- ReadySeal Cold Applied
- Protherm G XPS X 300 SL Insulation
- Radmat MedO drainage panels
- EshaFlex Firesafe Membranes

“From the beginning, the project to give Google a new home in King’s Cross has been extraordinary. Rather than impose a universal style on Google’s buildings in the UK and the USA, we have tried to create an interestingness that fits the scale and the community of King’s Cross. The Silicon Valley startup garage meets the London train sheds in a building that couples clarity with eccentricity and anchors innovation with heritage.” said Bjarke Ingels and Thomas Heatherwick in a joint statement.

ARCHITECTS:
Bjarke Ingels Group (BIG) and
Heatherwick Studio

Google’s new headquarters in King’s Cross, London or KGX1 is a groundbreaking project that exemplifies innovation and sustainability. Designed by Heatherwick Studio and Bjarke Ingels Group (BIG), the headquarters is often referred to as a “landscaper” due to its unique horizontal design, which stretches over 330 meters – longer than the Shard is tall. Unlike conventional skyscrapers, the building’s low-rise design reflects Google’s intent to create a workspace that is both flexible and sustainable, integrating into the local industrial character of King’s Cross.

Radmat was engaged by Lindner Prater, the waterproofing contractor, to supply **PermaQuik Hot Melt Waterproofing System**, chosen for its strength and reliability.



The building, which spans 11 stories, features cascading workspaces across multiple floors and a terraced rooftop garden. These spaces are designed not only for functionality but also to foster employee well-being and productivity. The ground floor includes public amenities such as shops, market halls, and communal spaces, which help establish the headquarters as a vibrant part of the local community. The inclusion of flexible office spaces ensures that the building can adapt over time to meet changing work patterns.

The headquarters will ultimately accommodate over 7,000 Google employees, offering them a workspace filled with natural light, fresh air, and outdoor spaces designed to promote wellness.

Sustainability is a key focus of the building's design. Constructed using cross-laminated timber (CLT) and glued laminated timber (GLT), the structure incorporates renewable materials to reduce its environmental impact. The energy-efficient systems within the building, combined with its rooftop garden, contribute to both improved air quality and reduced energy consumption.



The rooftop garden is a standout feature of the new headquarters. Spanning approximately 300 meters, the terraced garden provides green spaces for employees to relax, exercise, or work outdoors. In addition to promoting employee well-being, the garden plays a significant role in enhancing biodiversity and reducing the building's environmental footprint.

The green roof improves insulation, reduces energy consumption, and manages stormwater runoff, while also contributing to air quality and mitigating the urban heat island effect. The design of the garden, which mirrors the cascading layout of the workspaces below, seamlessly integrates the building's outdoor and indoor environments, creating a harmonious space that connects occupants with nature.

An integral part of the roof construction is the waterproofing. Radmat's **PermaQuik Hot Melt Waterproofing System** ensured a watertight seal with a 40-year guarantee and BBA Certification for the "design life of the building on which it is incorporated." Combined with Radmat's **Protherm G XPS X 300 SL insulation** the construction team was confident that the tiered rooftop gardens, pathways, and various surfaces would be durable and leak-free. Given the 330m length is an activity roof, it was essential for it to support the planted gardens and withstand both foot traffic and weather conditions.



The underground plenums.

Thanks to its durability, flexibility, and strong adhesion, the PermaQuik waterproofing system was also applied in the underground plenums. This step was crucial to ensure the building's foundations remained watertight. It is quite an unusual approach and quite difficult to produce so a collaborative approach was needed to maintain its integrity. The system was combined with **EshaFlex 370 Reinforced Bitumen Firesafe Membranes** and the **ReadySeal Cold Liquid Applied Waterproofing Membrane** was used to seal steel-work and pipework joints.

KGX1 is a pioneering development that blends modern architectural innovation with sustainability and community engagement. It reflects Google's vision of a flexible, eco-friendly workspace that nurtures employee wellness and respects the character of its urban environment. The building sets a new standard for corporate architecture, marrying technological advancement with environmental stewardship and local heritage.

The reliability of Radmat's waterproofing products will ensure the construction remains watertight for very many years to come. Scan the QR code for product system information.

