

CASE STUDY: Retro-fit of High Performance Gas-Vapour Barrier

Former Warehouse Redevelopment – London U.K.

A 2,000 m² floor space of a vacant building in London, formerly used for warehousing and storage, was to be redeveloped into a number of start-up business premises. Due to the potential for ingress of harmful volatiles from contaminated land below the building (high benzene soil concentrations from a historic paintworks onsite) a high performance gas-vapour barrier was required to provide protection to the future tenants of the building. Geo-Seal® was chosen owing to its physical robustness against post-application damage, seamless construction and ease of sealing around 111 steel stanchions and retro-fit terminations. Geo-Seal comprises two integrated HDPE layers bonded together with a continuous spray applied latex co-polymer asphalt core layer thereby providing three layers of protection against vapour intrusion plus resistance to damage from follow-on construction activities. A full design, product supply and installation service was provided for the Geo-Seal system, including a 20 year warranty.



Placing the BOND Layer

Due to the nature of the building and phases of construction, Geo-Seal was laid both above and below the concrete slab level with several different terminations required, including:

- Sealing to existing walls
- Sealing around structural steel supports – 111 in total
- Sealing around rebar and service duct penetrations
- Sealing around a lift shaft



Sealing around Steel Stanchion

Installing Geo-Seal at the site eliminated the need to break up the slab and undertake soil remediation works.

About the Geo-Seal® Gas Vapour Barrier

Geo-Seal is the ideal blend of chemically resistant HDPE sheet and spray applied membrane technologies, resulting, in the most appropriate gas vapor barrier technology used to eliminate vapor intrusion on Brownfields or environmentally impaired sites. Geo-Seal is a chemically resistant material placed between the subgrade and building foundation to seal off exposure pathways and stop vapor intrusion into buildings. By selecting Geo-Seal, developers can ensure a healthy indoor environment while reducing the cost of site remediation and expediting site construction.



Finished Surface showing BOND Layer

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