CASE STUDY:
GALLIONS QUARTER
LONDON, UK

Prestigious Royal Albert Dock Development

The area around the Royal Docks is experiencing significant regeneration and substantial commercial investment following the construction of a new Crossrail station at Custom House. Gallions Quarter is a mixed-use development by Telford Homes adjacent to Gallions Reach DLR station near Royal Albert Dock, London E16. The development includes plans for 530 new homes, three new apartment blocks, alongside more than 1500 sq m of non-residential space, a new public square, recreation areas, shops and cafes.

GP® TITANFLEX®

GP® TITANBOND®

GP® H

Material
GP® TITANFLEX®

Volume: 62,000 m²

Material
GP® TITANBOND®

Volume: 12,000 m²

Material
GP®H

Volume: 20,000 m²

Date: 2019-ongoing

Specialist Installer
UK Membranes

Verification and sign-off
MEC Environmental

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JUTA UK was engaged early in the conceptual design process by the client's architect and engineering teams to enable this brownfield development to commence with the most sustainable mindset from the onset.

The area around the Royal Docks is classed as contaminated land with bulk ground gas contained within the site fill material, and residual hydrocarbon contamination throughout, which is common in dockland areas.

Elevated concentrations of arsenic, lead, TPHs and PAHs were encountered within the Made Ground across the site. The site is classified as a CIRIA Characteristic Situation 2 and gas protection measures were required for both permanent / bulk gas and volatile organic compounds, in order to discharge planning conditions on site.

GP® TITANTECH® membranes were chosen to provide the protective barrier layer. This was due to their inherent resistance to the passage of ground gas and VOC's, as well as being proven to be robust and durable when immersed in hydrocarbons. This was of particular concern around the habitable basement areas in the development, which were also subject to structural waterproofing requirements as outlined in BS8102.

Michael Corban, Managing Director at MEC Environmental said:
"JUTA UK continuously delivers true value engineering and reassurance for our clients and their warranty providers nationwide using high quality BBA approved products. The level of independent test data is unrivaled in today's market. I always scrutinise and challenge the manufacturers marketing claims, and JUTA UK is always able to provide the relevant information when required to justify the material selection and use"

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GP® TITANTECH® membranes are the first products of their kind to combine water resistance with protection against hazardous gases, VOC vapours, hydrocarbons and other chemicals that may be present in contaminated land; providing an innovative and durable solution to problems faced with many development sites across the globe.

For developers of brownfield and contaminated sites the GP® TITANTECH® family of products – TITANFLEX®, TITANTANK® and TITANBOND® – represent a major step forward in safeguarding projects against gaseous and chemical contamination.

JUTA UK has invested significantly in the testing of the system, providing a substantial amount of product and test data, to enable the end user, specifiers and clients to take comfort that the products are suitable, fit for purpose and designed to last for the lifetime of the structure.

Installation of the system was completed by UK Membranes, as the nominated specialist gas membrane and waterproofing installer.

A full on site verification and validation process for the implementation of gas protective measures was also required, and completed by MEC Environmental.