CASE STUDY:
MERIDIAN WATER
LONDON, UK

Significant UK Regeneration project gets the GP® TITANTECH® treatment

JUTA UK were delighted to support Network Rail in the first phase of development on this prestigious UK Regeneration project. Over the next 25 years the regeneration will deliver 10,000 new homes and thousands of new jobs with a Gross Development Value of £6 billion.

GP® TITANFLEX® XL

GP® TITANBOND®

Material
GP® TITANFLEX® XL

Volume: 22,000 m²

Material
GP® TITANBOND®

Volume: 8,000 m²

Date: 2019

Specialist Installer
Prestige Air Technology

Verification and sign-off
Membrane Testing Solutions Ltd

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The development is intended to transform the economic base of the borough, creating an environment to attract a new mix of employers in the creative, professional, low-carbon, digital, media, hi-tech and engineering sectors, with a range of large businesses alongside dedicated space and support for start-ups. All benefiting from excellent transport and Internet connections in a high quality environment.

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To enable development a brand new Meridian Water railway station, funded and delivered by Network Rail was constructed. The first trains ran in June 2019.

The former Gas works site, falls into the previous use category, and as such the development works are treated as a Brownfield development, or regeneration. Planning conditions exist on the site, which require assessments to be made in accordance with the Environment agency guidance for contaminated land under Part 2A of the Environmental Protection Act.

As part of the risk assessment process conducted prior to development, a number of in ground contaminants were identified. The potentially harmful pollutants must be remediated or removed from the ground and/or controlled prior to development and subsequent occupation by people.

Part of the remediation process includes designing protective barrier systems into structures to prevent any residual contaminant left in the ground from entering structures and potentially being in direct contact with human receptors. This is common practice in the UK, due to our country's small land mass, with lots of previously used brownfield land undergoing development works.

In-situ contaminants on site included a number of hydrocarbon pollutants, such as diesel and chlorinated solvents, as well as the risk of methane/carbon dioxide generation potential from made ground infill.

Andy Collins, Director at Prestige Air Technology said:
"The GP® TITANTECH® family of membranes are the best performing membranes on the market. When you combine this with exceptional service from the team at JUTA UK, and the competitive price points, it's unbeatable value."

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The new railway station is classified as a Civil Engineering Structure, which has an anticipated working design life in the UK of 120 years. Any protective barrier system included within the structure, would therefore be required to have a similar anticipated design service life, to prevent any wholescale maintenance requirements.

GP® TITANTECH® membranes were selected as the most suitable, and sustainable product by ARUP, the consultant geo-environmental engineer. The membranes would deal with any ground pollutant pathway breakages over the anticipated design service life of 120 years.

Main contractor, Volker-Stevin engaged the services of JUTA's approved specialist gas membrane installers Prestige Air Technology to ensure the best possible standard of workmanship with the GP® TITANTECH® barrier install.

An independent verification company, Membrane Testing Solutions Ltd, was then utilised to conduct a third party check on the installation, this was to ensure a complete and continuous seal of the building was provided. A verification report was produced and submitted to the Local Authority to enable discharge of the planning conditions.

A spokesperson for Network Rail also commented on the project overall, he said: *"JUTA UK worked with the supply chain, consultant engineers and main sub-contractors to deliver a hydrocarbon gas membrane solution. This was designed to prevent the ingress of chlorinated solvents and VOCs into the structures. JUTA and the other subcontractors carried out the project to the highest standard and we were pleased with the workmanship and overall results."*