

**CASE STUDY:**  
FLIGHTSHED  
BIRMINGHAM, UK

**JUTA**



**TITANTECH®**

# Ex-Royal Air Force Base redeveloped for next generation

Designed by bouncing bomb inventor Sir Barnes Wallis, the Longbridge hangar in Birmingham featured the biggest unsupported roof in Europe at the time it was built in the 1930s. Among the planes made inside was the Hawker Hurricane, which played a crucial role in the Battle of Britain. Developer St Modwen was re-purposing the now derelict site with a new town centre totalling an investment of £70 million, which includes a £5 million youth centre and 113 new homes in Lickey Road.



**GP®**  
**TITANFLEX®**

**Material**  
GP® TITANFLEX®

**Volume:** 40,000 m<sup>2</sup>

**Date:** 2018

**Specialist Installer**  
UK Membranes

**Verification and sign-off**  
MEC Environmental

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**Given the site's rich heritage and critical wartime importance, it predated environmental permitting. It was not surprising then that the site was heavily contaminated from its previous use. Groundwater monitoring also identified an in-situ chlorinated solvent plume below the newly proposed residential units.**

The Geo-environmental engineer conducted a vapour and gas risk assessment. This concluded that following initial excavation and removal of bulk pollutants, a protective barrier membrane was needed to be incorporated into the residential houses as part of the damp proofing measures to break potential contaminant pathways.

Detailed assessment of various vapour membranes were conducted by the engineer, to assess permeation rates of volatile organic compounds (VOC's) to determine the most suitable material for use.

In ground Chem-ox reduction preceded the design and incorporation of a specialist VOC membrane to residential units. The GP® TITANFLEX was selected as the most suitable given the extensive third party testing JUTA UK had completed, it's exceptional durability when immersed in aggressive chemicals, and it's unrivalled permeation resistance to VOC's.

The delivery of 113 homes, with installation of the GP® TITANFLEX membrane took just under 12 months. Installation work was completed using UK Membranes as an approved installer of GP® Ground Protection membranes, ensuring exceptional standards of workmanship.

Independent Construction Quality Assurance and on site testing of the GP® TITANFLEX installation was completed by MEC Environmental as the appointed independent verifier. The validation plan (CQA plan) for the completed installation was then submitted to Birmingham City Local Authority to discharge contaminated land planning conditions, enabling safe occupancy of the residential units

**Kevan Shotter, Managing Director at UK Membranes commented:**  
*"Having worked closely with JUTA UK for many years now they have helped us deliver our membrane systems. With a critical insight into our business, backed up by a powerful technical & customer support ethos JUTA UK ensures that we are constantly dynamic and competitive in the marketplace."*

