

# Apsley Quay Redevelopment

## Watertight construction solution for underground car park



Our reference in Hemel Hempstead (United Kingdom): Apsley Quay Redevelopment

### The background

Apsley Quay is a canal side redevelopment of former industrial buildings set in strategic flood zone as a consequence of the adjacent River Bulbourne.

Formed as two courtyard blocks and stepped from three to five strays, the mixed tenure accommodation creates an active row-path elevation. The architecture is inspired by traditional brick industrial buildings that typically line the waterside.

### The challenge

Waterproofing the base slab and partial 'canal side' retaining wall of the development, which is situated in the canal's floodplain.

As the area would be used as a car park, the below ground structure was designed in accordance with BS 8102 to Grade 2 waterproofing protection in order to reach levels of approved dryness for the structures against water ingress.

### Project:

Apsley Quay Redevelopment

### Location:

Hemel Hempstead

### Main contractor:

Kaybridge Construction

### Concrete producer:

Hanson

### Market sector:

Watertight Concrete

### Products used:

MasterLife WP 799

MasterLife WP 910 & 912

MasterLife WP 925

MasterLife WP 590

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### Our solution

This project took full advantage of Master Builders Solutions watertight concrete solution complying with BS 8102 Type B structurally integral protection.

Using a range of Master Builders Solutions waterproofing products, which included the addition of MasterLife WP 799 water resisting admixture to the concrete, which forms part of the Type B waterproofing system for structurally integral protection.

MasterLife WP 910 & 912 system was used to eliminate the risk of water ingress through unavoidable construction joints. Using the MasterLife WP 912 as the adhering sealant for MasterLife WP 910 hydroswellable waterbar, this was a simple solution which was 'fit for purpose'.

Additionally, MasterLife WP 925 combi-pack, which includes hydroswellable rings and plugs, was used for the formwork tie sleeves.

### The customers benefit

- Estimated cost saving of approximately £8,000, in comparison to the previously specified system on this project.
- MasterLife WP 799 high performance integral waterproofing system used in the concrete mix for the concrete slab and partial 'canal side' retaining wall.
- All products were supplied by Master Builders Solutions providing a single source system approach with single point liability.
- BBA approved system.

### Project facts at a glance

- Underground Basement car park completed with Master Builders Solutions BS 8102 Type B watertight concrete solution.
- MasterLife WP 799 – Water resisting admixture for concrete
- MasterLife WP 910 & 912 System – Hydroswellable waterbar and mastic (adhesive) for construction joints
- MasterLife WP 925 – Swelling rings and plugs for formwork tie-holes
- BBA approved system