

CASE STUDY

Waterproofing

MAKERS

...makes the difference

PROJECT

Watergardens London

STRUCTURE

Community Gardens

CLIENT

Church Commissioners
of England

CONTRACT



The Watergardens incorporating Burwood Place Basement car park was designed by award winning architects Trehearne, Norman, Preston & Partners and was constructed by Wates. The original construction consisted of 3 x 12 storey residential blocks, 2 podium decks, a 202 space basement car park and the Watergardens designed by Philip Hicks Landscape Designer.

Originally constructed for the Burwood Place Development Company, a subsidiary of the Church Commission, this housing project provided 1200 dwellings for residential use built in what is described as 'Brutalist or Modernist Style'.

The basement car park beneath the Watergardens had almost incurred leaks and water penetrations from the outset, but with the continued deterioration of the structural fabric and significantly reduced occupation of the car park with more attractive premises being available, the car park became redundant and closed to the general public.

The distinct lack of income meant that routine maintenance was not undertaken and so the appearance of the car park took on a dilapidated and menacing appearance eventually leading to its decommissioning as a car park facility.

Safestore contacted the Church Commissioners and formulated a plan to seek planning permission to convert the decommissioned car park into a Warehouse/Storage facility.



Before



Before

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Planning permission was granted for converting the car park, but remedial work to the structure and roof voids of the basement car park were required to make the structure structurally safe and watertight. The whole roof structure was pared back to its original construction as at 1966. The planters, pools, pedestrian and road way surfaces had to be exposed back to the original concrete, inspected repaired and waterproof then re-instated. This colossal undertaking took place within a residential area in the centre of London and against the backdrop of a business desperate to take possession.

The existing pools had been leaking into the structure since its completion in 1966 containing over 148,000 litres of water. Serious amounts of silt, mud and debris had accumulated and the existing drainage system no longer worked. The pools were pumped out, taking water down through the car park voids to storm drains. Silt and debris were removed and planters emptied. Once washed and dried the planters were structurally repaired and then waterproofed using Triflex reinforced ProTect Detail Systems. Previously sealed day joints were raked out and replaced with Triflex FlexFiller and reinforced before applying the fully reinforced waterproofing. To protect the waterproofing from puncturing through garden maintenance 'no dig' Corex board was introduced to the base and walls of the planters.



Removal of Silt



Pared back to original concrete



Waterproof Coating

The infill of the voids were a new construction, and designed to be lightweight, capable of supporting the roof but strong enough to allow the formation of two new green roofs. Metal deck formers were placed level with the existing soffit and flexible joints created to the perimeter. Once in place the concrete slab was poured 150mm thick in C35 Concrete. The pedestrian paving areas 1500m² in area and 600mm depth of backfill was removed which left bridges and podium decks a float. The concrete slab was cleaned and repaired and again construction day joints were repaired using Triflex FlexFiller followed by reinforced banding and double application of Triflex ProTect System. The pedestrian areas were backfilled to a height of 550mm which was then compacted. The desired paving design was then cemented in place to the required falls.



Complete



Local Nursery, pondlife project



Children help re-install the fish

Before commencement of work, the pondlife needed to be safely removed and so Makers invited local nursery school to the residents to be involved. This was an opportunity to do a project on pondlife, fish and wildlife, inviting several classes to come to site and witness the removal of the fish. A drawing competition was organised with selected winners receiving reading books. All the children attending were provided with coloring pencils and pencil cases and the winners had their pictures framed. On completion of the project the children returned to help re-install the fish back to their ponds.

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