



PERMEABLE PAVING CASE STUDY

Project Name: RAF Spadeadam
Client Ministry of Defence (RAF)
Contractor: Cubby Construction Ltd
Paver Type: CBPP (SUDS) – Marshall Piora
Site Size: 14,000 m²
Resiblock Product: Resiblock Envirofix
Date: March 2014



The Site

RAF Spadeadam – Electronic Warfare Tactics Range, spanning some 9,000 acres making it the largest RAF Base in the United Kingdom. The Base attracts a variety of aircraft from the RAF, Army, Navy, and NATO forces, both fast jets and helicopters including Tornado GR4, Tornado F3, Apache, Merlin, Chinook and Gazelle. NATO aircraft include F15 and F16.

The Challenge

Marshall's Piora permeable pavement system was specified and installed for its durability, strength and its ability to mitigate flood risk. The permeable pavement system removes surface water, through a permeable single sized stone filled joint and improves water quality –without the need for additional linear drainage systems. The pavement is subjected to helicopter movement (landing and takeoff) leaving hydrocarbon residue which the paver system is designed to manage. However, it was recognised that the jointing medium (2-6mm washed aggregate) would be subjected to rotor downwash leading to significant migration of the jointing medium, in turn potentially leading to destabilised paving and significant maintenance costs.

The Solution

Resiblock Envirofix is a one pack solvent free polyurethane/acrylic hybrid. It incorporates a unique hydrophilic bonding agent which allows the aggregate to be bonded whilst not adversely impeding the design of free draining joints (approximately 18,750 litres/second/hectare). Once cured it remains fully elastomeric accommodating small elastic deflections within the system. In addition it will stabilise the jointing aggregate preventing its erosion/removal from both natural and manmade forces.

Benefits

Resiblock Envirofix is easy to apply and requires no specialist labour. It binds the jointing aggregate preventing its erosion/removal from both natural and manmade forces. Once cured it remains fully elastomeric accommodating small elastic deflections incorporated within the pavement design. As Resiblock Envirofix is broadcast over the surface of the paving it provides an excellent degree of stain resistance to the paver surface. Its application does not adversely affect the skid resistance value (SRV).

Benefits at a glance

- ❖ *Once pack/Easy Application*
- ❖ *Solvent Free*
- ❖ *Binds jointing medium – maintains structural stability*
- ❖ *Prevents aggregate loss from both natural and manmade forces*
- ❖ *Inhibits the growth of weeds and grasses within the joints*
- ❖ *Significantly reduces maintenance costs.*



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