



STORMFORCE

ROOFING & MAINTENANCE LTD

Truro County Court

Truro County Court building is an award winning architectural masterpiece with many unusual angles and details.

The roof was approximately 2000m² and made up of concrete deck, polystyrene insulation, screed to falls and a 20mm asphalt covering with solar reflective chippings. The roof has a huge amount of plant and roof lights which obviously causes issues for many roofing systems due to the complexity and size of some of the details.

The use of solar reflective chippings can itself present many problems. They add dead weight to the building structure; they tend to retain dirt and water making them an ideal environment for organic growth; they make the tracing of leaks almost impossible whilst they are in place, and so on. The option of laying them loose is just as problematic as they tend to be moved or blown around the roof, exposing areas of the deck and blocking up outlets and gutters. When this happens, exposed and unprotected areas exist, resulting in thermal shock which quickly leads to the asphalt cracking and water ingress.

Cracks and stress lines could be seen in the existing asphalt, suggesting excessive movement or thermal shock was being experienced.

It was agreed with the client to provide a thermal upgrade to the existing roof to meet present and future insulation regulations.

Due to existing plant and rooflights on the roof, a liquid system was put forward for the refurbishment, namely, liquid plastics.

The Liquid Plastics built up roofing system has the following benefits:

- Cold applied, seamless technology - cold fusion bonded, zero heat, zero flame application
- Easy to install system with simple application in detail areas
- Increased working window - no restriction to holiday & shutdown periods
- Key systems independently approved by BBA, LPCB and FM
- Systems achieve high tensile strength, resisting tear from building movement
- High elasticity - allows for greater thermal movement
- Highly resistant to erosion, cracking or other defects
- Designed to last the lifetime of the building
- Insulation used within the built - up and inverted roofing systems are free from Halogens, CFCs & HCFCs, giving Zero ODP (Ozone Depletion Potential)
- Also available as a tapered system
- Comprehensive guarantees are available for 10, 15, 20 and 25 years
- Easy to install top-up systems for extended guarantees
- Available in wide range of colours, with skid inhibiting options
- A wide range of accessories are available to complement your chosen roofing system
- No fire watch required during application - installed system achieves highest fire ratings, BS 476 : Part 3, FM approval, DD ENV 1187 : 2002 Test Method 1, 2 and 3



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It was agreed with the client to go with the Delta 25 system, which carries a 25 year guarantee, and 40mm Decatherm insulation to provide the thermal upgrade.

The chippings were removed mechanically then the substrate was pressure washed and treated with Liquid Plastics Biowash. The existing asphalt was made good and used as a vapour barrier. Decotherm flat board insulation was installed using Decostik cold fusion adhesive. This was followed by Liquid Plastics carrier membrane, again using Decostik.

The Decothane Delta 25 system was then applied. This consists of a Decothane base coat, reinforced with Reemat Premium glass fibre matting followed by Decothane intermediate coat and, finally a Decothane topcoat.

Walkways were then installed using a contrasting colour Decothane top coat and a skid inhibiting agent.

Eight weeks were allowed for the works and it was completed on time, on budget and with no disruption to court services whatsoever.