

# Mastic Asphalt Meets the Heritage Challenge

**E**arlier this year, the mastic asphalt industry's most impressive projects and professionals were recognised at the Mastic Asphalt Council's (MAC) Annual Awards.

The Challenge Trophy Award, recognising the most impressive project across the year carried out in the most testing conditions, was presented to MAC contractor, BCC Asphalt for the Church of St Mary and All Saints in Fotheringhay, Peterborough. Despite the roof refurbishment being carried out during one of the coldest winters on record, the project was completed in 14 days.

The church is a magnificent 15th century, Grade I listed building, which has been home to a number of historical events, including the execution and beheading of Mary, Queen of Scots in 1587. The church roof had never been protected with a roofing system since the structure was first built and the natural stone and concrete substrate were allowing damp and water to penetrate into the building. Urgent roof repairs were required as well as stonework repairs to the church tower and the replacement of leadwork and timbers.

The architect specified mastic asphalt for the roof due to the building's listed status and the fact that the material has an outstanding track record of use in heritage projects such as Westminster Cathedral, St Paul's Cathedral, the Tower of London and Dover Castle. Traditionally consisting of graded limestone aggregate bound together with bitumen, today's mastic asphalt systems are now manufactured using advanced polymer modified formulations to ensure all the performance characteristics of traditional asphalt systems, with the added benefits of increased flexibility, enhanced handling and sustainability. The incorporation of modern polymers into mastic asphalt systems has helped lead to its resurgence in the construction industry.

Three roofing contractors tendered for the work at the Church of St Mary and All Saints and BCC



Before and after (right).



Tight access to the asphalt gutters was a real problem and extremely challenging



The magnificent, Grade I, 15th century Church of St Mary and All Saints in Fotheringhay, Peterborough.

Asphalt were awarded the contract based on the competitive price, track record of successful mastic asphalt applications and the fact that BCC Asphalt is a member of MAC.

Four operatives from BCC Asphalt were involved in the roof refurbishment and the only access to the roof for the duration of the contract was two material hoists set in two stages of the scaffolding. All material had to be hoisted up to the first 50ft gantry and then the second access point, which was approximately 100ft up at the top of the church tower, all in windy and very cold conditions.

Once repairs to the stonework were completed and the existing surface had been cleaned and primed, sheathing felt was installed before two coats of a specially formulated mastic asphalt roofing system were applied. Mastic asphalt was also applied at a thickness of 20mm in two coats to existing falls, including the church's perimeter gutter. A further two coats of mastic asphalt were applied at 13mm to the skirting of the stonework, before being painted with solar reflective paint.

The building was kept watertight as works progressed and different contours and curves of gutters were expertly matched using mastic asphalt. Again, tight access was a problem to the asphalt gutters and it was extremely challenging for the roofing contractor to lay the asphalt skirting and complete the detail work.

BCC Asphalt is headed up by Managing Director, Wayne Cooper, who first started his career as a Mastic Asphalt Apprentice undertaking a four-year apprentice at Hackney College. He established BCC Asphalt with a former partner in 1992 and has been a member of MAC for the past seven years.

He said, "The Church of St Mary and All Saints project was one of the most challenging I have ever been involved in over the years. The application was undertaken in February during one of the coldest winters in many years and the wind circled around the church from morning till night. It was an awkward application with severely restricted access, and not much room for us to manoeuvre, but mastic asphalt was absolutely ideal for this job due to the Grade I listing of the building and the detail work we could carry out using mastic asphalt.

"We are getting more work for heritage applications where mastic asphalt has been specified and are being contacted by the likes of English Heritage. This job is the third mastic asphalt contract we have completed on a Grade I listed building in the last two years, and that looks set to continue, as more people involved in heritage applications realise the benefits of mastic asphalt and its proven ability to offer a design life well in excess of 100 years. We need more mastic asphalt applicators in the industry to help continue its legacy," Wayne said. ■■