



Pictured: Tower House in Arundel, West Sussex (courtesy Historic England).

Meticulous Mastic Asphalt Refurbishment at Tower House

Mastic Asphalt Council (MAC)

Due to its longevity, waterproofing reliability and suitability for heritage projects, mastic asphalt is often selected as the ideal roof refurbishment system for listed buildings where it is crucial to retain the character of the building or structure in question.

As one of the world's most traditional waterproofing materials, mastic asphalt has been relied on for roof refurbishment works on heritage projects for many years. It is frequently specified by the National Trust and English Heritage, as well as other public and private property owners in this sector.

Mastic Asphalt Council (MAC) contractor members are regularly involved in roof refurbishment projects on listed buildings, one of which is Sussex Asphalte. The company has recently completed

a small but meticulously delivered mastic asphalt application on a Grade II listed building known as Tower House in Arundel, West Sussex.

Built in the early 1800's, the former vicarage now forms six luxury

apartments. Sussex Asphalte were instructed by Seraph Property Management to resurface the asphalt valleys and gutters around the various slate roofs. The gutters ran around the perimeter of the roof and between slate roofs that finished on different levels.



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This project involved a significant amount of asphalt heritage detailing - in fact much more than the flat roofing area. Sussex Asphalte laid 27m² of horizontal asphalt and 51m² of asphalt detailing including skirting, fillet, sloped faces, collars, corners and solid asphalt drip edges.

The Existing Roof

The existing asphalt on the roof had provided many years of service but had slumped and cracked, taking it well beyond its usable life.

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The roof was leaking in several places; some of these leaks were simply due to the age of the work, whilst other areas were poorly retrofitted roofing works carried out in non-heritage materials as an attempt to cover leaks. As part of the project, Sussex Asphalte also had to replace several rooflights and a roof hatch, as well as address many areas of broken or slipped pitched roof slating.

Sussex Asphalte overcame several challenges during the project, many of which involved working around enclosed gutter areas. The refurbishment was carried out during a particularly rainy period and there was a great deal of enabling works required to clear the areas. Every evening Sussex Asphalte fully removed and replaced the existing asphalt whilst ensuring all edge details were properly weathered to avoid any water penetration.

This involved removing slates covering lay boards, relocating satellite dishes and arranging scaffold adjustments so that Sussex Asphalte operatives could apply the correct asphalt details without the scaffolders drilling and fixing into the heritage status building.

Sussex Asphalte also had to temporarily drain and move a cladded water tank on the roof, along with its pipes that went through the roof, and arrange its reinstatement following the asphalt works carried out underneath. Unorthodox details were uncovered on the roof so Sussex Asphalte devised a new solution to ensure that the new asphalt effectively weathers these awkward details, providing strength and durability for years to come.

One area featured a corner section with three vent pipes very closely arranged. The skilled asphalters merged three different solid asphalt collars into one to ensure there was an even thickness of collar all the way around the protrusions. As the pipes were located in a corner, the asphalters had to navigate enclosed spaces, making use of their wide range of asphalt tools.

In another area where an old roof hatch had to be replaced, the hatch space was already quite close to the layboard, and so fitting a new hatch with an insulated curb up to the latest regulations proved to be a challenge. To solve this problem, the asphalters managed to use the vertical face of the kerb as one



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clearing the area so the roof area could be stripped and re-asphalted.

This needed to be implemented with military precision to ensure the area was covered with two coats of mastic asphalt, marrying in all the asphalt joints and solar painting, so that the tank could be reinstated the next day.

The extra complication to this was that some of the area underneath had a rotten deck, which needed to be removed and reboarded before any asphalt could be laid. The tank was re-positioned in the same location as before, but IKO Protectoboard were laid underneath to protect the asphalt from point loading.

The mastic asphalt refurbishment has reinstated the waterproofing on Tower House, ensuring the residential properties are not at risk of water penetration for many years to come. III



side of a valley and the layboard as another, laying mastic asphalt in the middle to not only strengthen the joint but to create a fall that would move water away from the detail and drain onto the roof.

Complicated Scheduling

The scheduling of the works was also a complicated factor. The greatest challenge in this regard was the resurfacing of asphalt in a flat area underneath the functioning cladded water tank referred to above.

Sussex Asphalte had to arrange with the residents serviced by the water tank the appropriate timings to have a qualified plumbers drain the existing tank in order to move it, with its associated pipes,