

Bedford Asphalt Surface Course (BASC)



Driving innovation through collaboration

The Wilden Road and Renhold Road resurfacing scheme in Bedfordshire stands as a leading example of how strong collaboration between Bedford Borough Council (BBC) and Heidelberg Materials can unlock meaningful innovation in highway maintenance. Delivered in April–May 2026, the project not only transformed a deteriorating rural route but also established a new, more efficient approach to asset management through the development and deployment of the Bedford Asphalt Surface Course (BASC).

Our collaborative approach

Rather than adopting a traditional client–contractor relationship, BBC and Heidelberg Materials worked in genuine partnership through an Early Contractor Involvement (ECI) model. This approach brought together the client’s network knowledge and willingness to embrace innovation as well as our delivery expertise and advanced material science capabilities.

Together, the team set out to address a shared challenge: how to maintain a failing rural road within tight budget constraints, while reducing environmental impact and disruption to the local community. Instead of defaulting to conventional patch-and-surface-dress methods, the partnership, built on a 14-year relationship, focused on designing a new material solution that could fundamentally change the delivery model.



Developing BASC

The result of this collaboration was BASC - a high-density hybrid asphalt designed specifically to overcome the limitations of traditional techniques. Engineered to be laid in a single pass at variable depths, BASC is capable of both regulating structural defects and providing a durable surface layer simultaneously.

Unlike conventional materials, BASC maintains its integrity even when laid between 40mm and 100mm thickness, preventing segregation and ensuring a consistent, impermeable seal against water ingress. It also delivers high skid resistance and texture suitable for national speed limit roads, improves overall rideability and carriageway drainage, making it both a structural and safety improvement.

This innovation was not created in isolation - it was a direct response to BBC's challenge to reduce whole-life costs and environmental impact while maintaining performance standards. The material's first full-scale deployment at Wilden Road demonstrated how collaborative product development can rapidly move from concept to real-world application.

Delivering enhanced outcomes

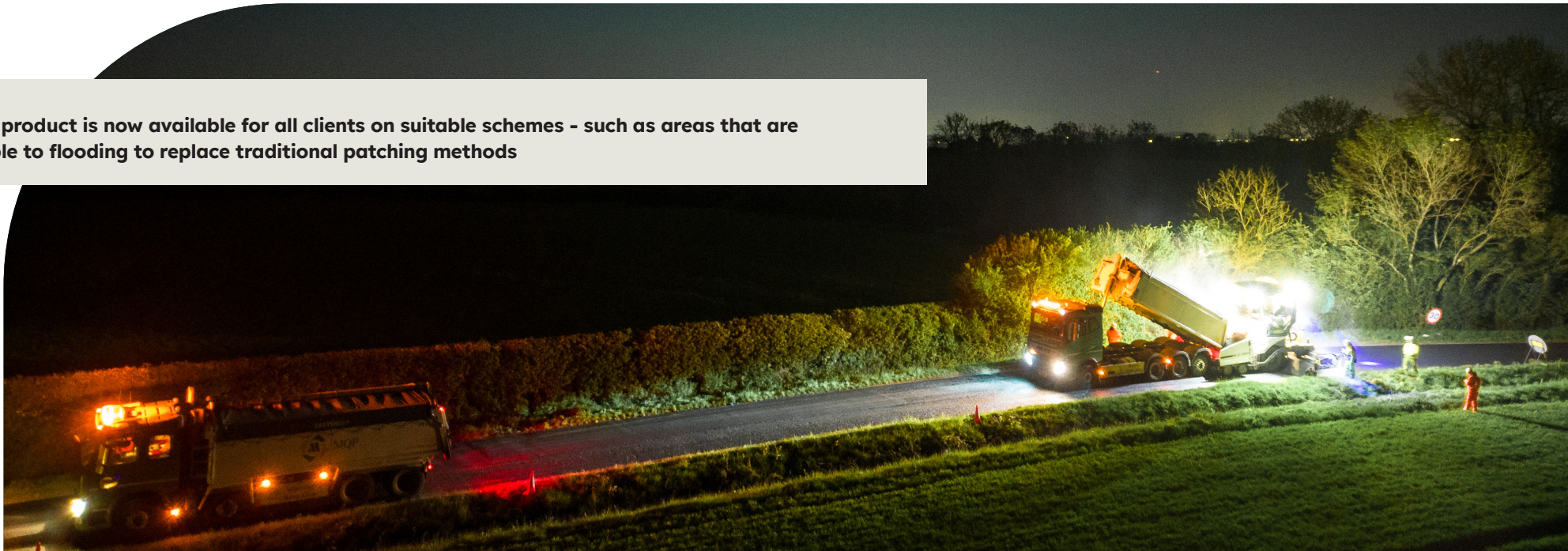
The adoption of BASC transformed the scheme's delivery and outcomes. The original design, based on extensive patching and surface dressing, was re-engineered into a streamlined programme using a single pass overlay approach.

As a result, the project achieved:

- Cost savings of over £320,000 (35%+), rising to £342,000 when additional works are included
- An 81% reduction in hazardous waste, cutting disposal volumes of coal-tar from 3,000 tonnes to just 572 tonnes
- Programme efficiencies, reducing construction from 23 shifts to 16 and minimising disruption through night working

These outcomes highlight the tangible value of innovation - not just in theory, but in measurable financial, environmental, and operational performance.

Our BASC product is now available for all clients on suitable schemes - such as areas that are susceptible to flooding to replace traditional patching methods



Understand the community

Collaboration also extended beyond technical innovation into stakeholder management. By shifting surfacing works to night shifts and using sectional closures, the team significantly reduced disruption to local businesses, residents, and public transport services.

This flexible, community-focused delivery strategy was only possible because of early alignment between BBC and the Heidelberg Materials delivery team, ensuring that programme decisions balanced engineering efficiency with local needs.

Setting a new, innovative standard

The Wilden Road scheme demonstrates that when local authorities and contractors work as integrated partners, they can move beyond incremental improvements and deliver transformative change. BASC is more than a new material - it is the product of a collaborative mindset that prioritises innovation, value, and long-term outcomes.

By co-developing a bespoke solution tailored to the network’s challenges, BBC and Heidelberg Materials have created a scalable model for addressing the wider UK road maintenance backlog. The scheme proves that effective collaboration can directly enable innovation, delivering safer, more sustainable, and more cost-effective infrastructure for the future.

Traditional Patch & Surface Dress	BASC
Multiple construction phases and site visits	Single-pass solution combining regulation and surfacing
Large volumes of hazardous coal tar waste removed	Significant reduction in hazardous waste
Numerous patch joints create future failure points	Seamless overlay improves durability
Extended traffic management and disruption	Reduced programme duration and fewer closures
Higher whole-life maintenance costs	Significant Cost savings
Variable ride quality between patches	Smooth, consistent carriageway surface
Higher material usage and environmental impact	Reduced material consumption and lower carbon footprint