



IKO ROAD

MASTIC ASPHALT ROAD REPAIR
& MAINTENANCE SOLUTIONS



IKOGROUP.CO.UK

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WE ARE IKO

With more than 140 years' manufacturing experience, IKO is firmly established as the UK's market leader in roofing, waterproofing and insulation solutions, along with our fast-growing highways maintenance range. This hard-earned reputation has been built on a foundation of high quality products, exemplary customer service and an unwavering commitment to driving positive change and protecting what matters to our people and the planet.

With this comes a responsibility to continue investing in our product solutions, manufacturing facilities and extensive team of experts to deliver excellence at every level.



MANUFACTURED IN THE UK. MADE FOR THE FUTURE.

Our strategically-located manufacturing plants around the country, supported by our nationwide network of building contractors and distributors, make IKO best placed to provide our UK-wide customers with a reliable, responsible and responsive service.

We're BES 6001-accredited, which means our products and raw materials are responsibly sourced. And all of our sites are ISO 9001 and ISO 14001-certified. This includes our Prospect Quarry plant in Grangemill, Derbyshire, which is where our hot melt and mastic asphalt solutions for roads, flat roofing, car parks and pedestrian walkways are manufactured.

Tried and trusted by the highways industry, IKO Road solutions are versatile, robust and reliable. In addition to manufacturing these systems to the highest standard and minimising our environmental impact, we also provide dedicated project design support.

The IKO team is on hand to provide specification advice, technical drawings, wind uplift and thermal calculations, site visits and post-project support, such as maintenance and comprehensive guarantees – a comprehensive service that is all free of charge.





THE IKO ROAD PORTFOLIO

As demands on UK roads reach an all-time high, maintaining, protecting and repairing road surfaces quickly and effectively is critical to minimising unnecessary downtime, public frustration and costly repairs.

IKO offers a wide selection of polymer mastic asphalt road repair and maintenance solutions for applications such as steel rails, ironwork, highways and more. Our high performance IKO Road systems, including **IKO Pacopatch** and **IKO Permatrack**, are durable, easy to use and offer superior longevity, saving valuable time and reducing the need for expensive return visits.

All of IKO's road repair and maintenance products come with a five-year materials guarantee when installed in accordance with IKO specifications.

IKO Road products are manufactured in the UK, using responsibly sourced and, where possible, locally sourced materials to help reduce travel miles and curb carbon emissions (for further information on IKO's ESG goals, turn to page 26).



Why mastic asphalt?

Mastic asphalt provides a durable, highly versatile and consistent wearing surface with a long service life, making it the ideal choice for a wide range of highways applications, including bridge expansion joint systems, road surface patch repairs and ironwork reinstatement.

It comprises suitably-graded limestone aggregates bound together with an asphaltic cement (primarily refined bitumens) to produce a dense, voidless material

As a result, mastic asphalt can be laid quickly and easily, keeping road closures and disruption to an absolute minimum. It also outlasts other highways repair materials, helping reduce individual project and total life cycle costs in the process.

Despite being recognised as one of the world's most traditional construction materials, mastic asphalt continues to evolve with the times

Today's modern mastic asphalt solutions contain highly advanced, long-lasting polymer formulations that were pioneered by manufacturers, including IKO, and are continuously being developed in line with the latest specification and installation demands.

“The unmatched prestige, professionalism and performance of mastic asphalt makes it fit for purpose and fit for the future’.

PRODUCT OVERVIEW

IKO Pacopatch



Ironworks reinstatement system

IKO Permatrack



Bridge expansion joint system



Inlaid crack repair system



Transitional joint system



Road surface patch repair system



Flood defence system

IKO PACOPATCH IRONWORKS REINSTATEMENT SYSTEM



IKO Pacopatch is a long-lasting mastic asphalt system designed to reinstate failing surfaces surrounding manholes, drainage gullies and other public utilities ironworks. IKO Pacopatch has a long track record of being specified by local authorities and utilities across the country since 2001.

Product profile

This two-part system comprises IKO Pacopatch Grout and IKO Pacopatch Brick.

IKO Pacopatch Brick forms the bulk of the system, providing dimensional stability while helping cool the IKO Pacopatch Grout. IKO Pacopatch Brick comes ready-made and can be broken, as necessary, depending on the shape and size of the reinstatement.

IKO Pacopatch Grout is a hot-applied, polymer-modified mastic asphalt utilised as the infill and surfacing material. The molten material flows around the IKO Pacopatch Brick to create a solid, impervious and voidless reinstatement system.

Key benefits – at a glance:

- No costly second visit - IKO Pacopatch provides a long-term road reinstatement installation solution every time, with results guaranteed for 5 years and a life expectancy of up to 10 years
- No void system – it is an impermeable and monolithic mastic asphalt reinstatement solution
- No compaction required - no roller or plate compactor is required, resulting in no further damage to ironwork seating
- No extended road closures – installation can be completed quickly and easily
- Smoother transition from ironwork to flexible pavement - for improved structural continuity
- System materials guarantee – for up to five years

| | |
|-------------------------|-----------------------|
| CE Certificate | 0809 - CPR - 20006778 |
| UKCA | 0836-CPR-14/F082 |
| British Standard | BS EN 13108-6 |





| Product | Description | Format / Nominal Weight |
|--|---|-------------------------|
| 1 IKO Pacopatch Grout (First Layer) | A polymer-modified mastic asphalt utilised as base layer | Block/20kg |
| 2 IKO Pacopatch Brick | Forms the bulk of the system, providing dimensional stability and helps cool the Pacopatch Grout | Brick/6kg |
| 3 IKO Pacopatch Grout (Final Layer) | A polymer-modified mastic asphalt utilised as the in-fill material. It flows around the IKO Pacopatch Brick to create an impervious and voidless reinstatement system | Block/20kg |



IKO PERMATRACK BRIDGE EXPANSION JOINT SYSTEM



Over time, bridge expansion joints can become distorted due to heavy, slow-moving vehicles and overloading. This can lead to irreversible damage being caused, especially in areas where low movement asphaltic plug-type systems have been implemented

Product profile

The IKO Permatrack Bridge Expansion Joint is a heavy duty, structurally-enhanced movement joint designed to repair and replace bridge damage and withstand differential movement.

The system can accommodate any localised surface deterioration, eradicating the need for more expensive jointing systems.

Key benefits – at a glance:

- Flexible plug joint with longitudinal movement range (+/- 20mm, 40mm overall)
- Versatile and waterproof
- Rapid installation reduces delays and inconvenience
- Suitable for repairing joints of depths exceeding 70mm and any width
- Long-term durability
- Withstands heavy traffic
- Cost effective
- Range of finishes to match different surfaces and skid resistance levels
- High bond strength to substrate

National Highways-registered No. 028 –22/08/2002

Complies with DMRB document CD 357 'Bridge expansion joints' as a Flexible Plug Joint.

| Product | Description | Format / Nominal Weight |
|---|--|--|
| 1 IKO Permatrack Bridge Deck Expansion Joints (BJ) | A high modulus material that uses a binder comprising SBS-modified bitumen and Trinidad Lake Asphalt, providing the low temperature flexibility and high temperature stabilities required for heavily trafficked roads | Block/20kg • Hot-charge (molten state)* |
| 2 IKO Permatrack PSB | A rubberised waterproofing layer designed to increase flexibility and improve adhesion to existing surfacing | Block/12kg |

* Delivered to site in purpose-built transporters which are heated and thermostatically controlled and continually agitate the product

IKO PERMATRACK INLAID CRACK REPAIR SYSTEM



A rapidly-installed repair system that provides a long-term solution to reflective cracking in traditional asphalt or concrete roads and is designed to withstand the heaviest traffic loads, including aircraft, trucks and tracked vehicles. It can be used for repairing a single crack or adjacent multiple cracks.

Product profile

This structurally-enhanced solution supports adjacent wear surfaces, accommodates differential movement within substrates and protects substrates from deterioration caused by moisture and de-icing salts. The cracks are normally routed or planed out to form a recess and the IKO Permatrack Inlaid Crack Repair system is applied flush with the highway surface.

Key benefits – at a glance:

- Simple, versatile system
- Unlimited repair width and depth
- Rapid installation reduces delays and inconvenience
- Long-term durability - designed to last a minimum of three years
- Cost effective
- Range of finishes to match different road surfaces
- High bond strength to substrate

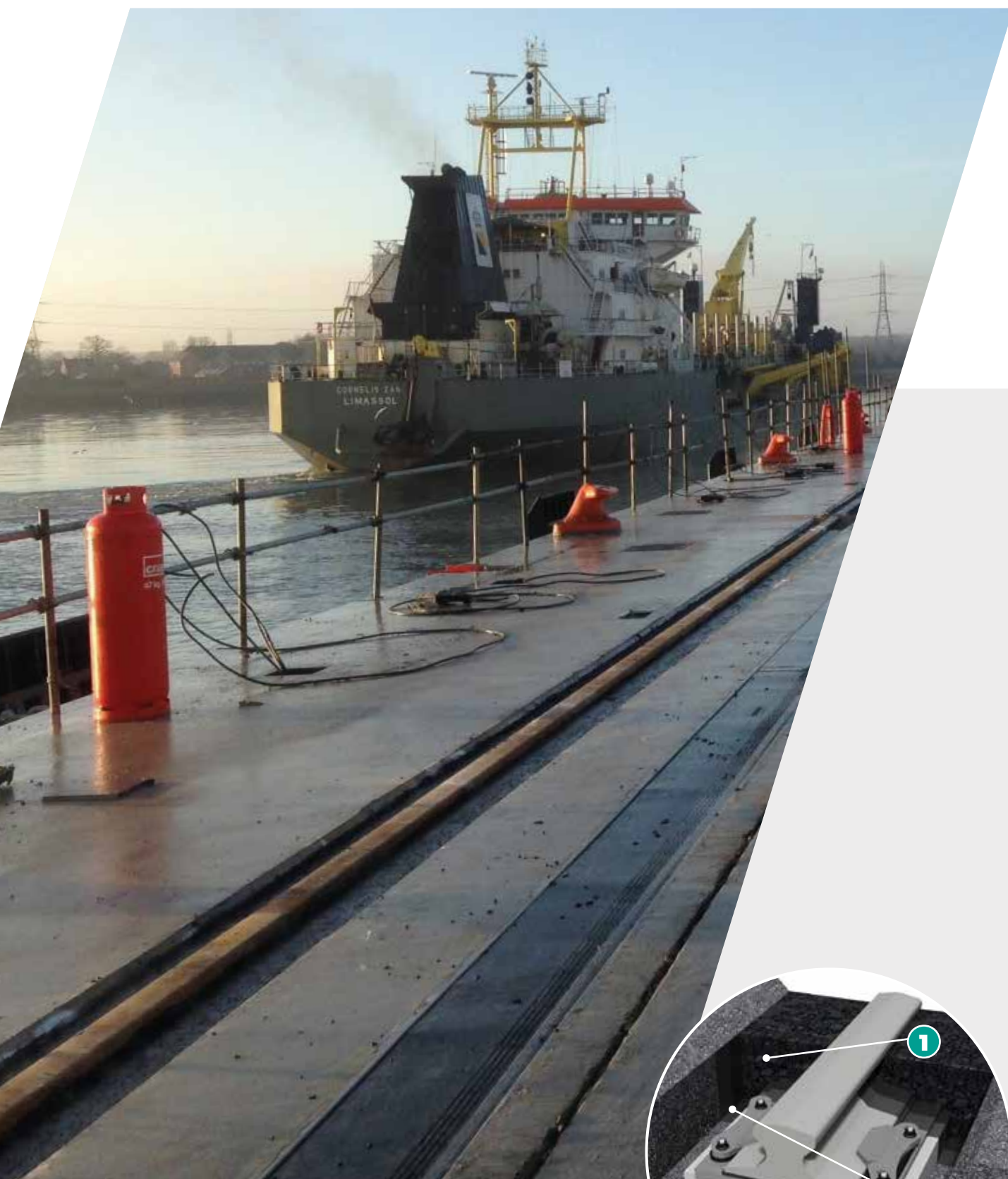
BBA HAPAS-approved certificate 02/H072 'IKO Permatrack Crack Sealing Systems for highways

Meets the requirements of the **Manual of Contract Documents for Highway Works (MCHW) Volume 1 Specification for Highway Works (SHW) Series 700, Clause 711** for Inlaid Crack Sealing Systems.

| Product | Description | Format / Nominal Weight |
|---|--|--|
| 1 IKO Permatrack H Inlaid Crack Repair | A high modulus material that uses a binder comprising SBS-modified bitumen, providing the low temperature flexibility and high temperature stabilities required for heavily trafficked roads | Block/20kg • Hot-charge (molten state)* |
| 2 IKO Permatrack PSB | A rubberised waterproofing layer designed to increase flexibility and improve adhesion to existing surfacing | Block/12kg |

* Delivered to site in purpose-built transporters which are heated and thermostatically controlled and continually agitate the product





IKO PERMATRACK TRANSITION JOINT SYSTEM



Severe fatiguing and traffic damage can occur where road surfaces meet metal tram and train rails. This damage is not only caused by road vehicles, but from the increased vibration and excessive tensile movements within the rails at crossovers and bends.

Product profile

This system has been specifically developed to resist rail stresses and provide a flexible and long-lasting solution. In particularly heavy traffic areas, an additional 20mm buffer zone can be added on either side of the IKO Permatrack sections for added reinforcement.

Key benefits – at a glance:

- Versatile and waterproof system
- Accommodates differential movement
- Rapid installation reduces delays and inconvenience
- Unlimited joint width and depth
- Long-term durability
- Withstands heavy traffic
- Cost effective
- Range of finishes to match different surfaces and National Highways skid resistance specifications
- High bond strength to substrate

| Product | Description | Format / Nominal Weight |
|--|---|--|
| 1 IKO Permatrack H Rail Infill (RI) | A high modulus material comprising SBS-modified bitumen and Trinidad Lake Asphalt, providing the low temperature flexibility and high temperature stabilities required for heavily trafficked roads | Block/20kg • Hot-charge (molten state)* |
| 2 IKO Permatrack PSB | A rubberised waterproofing layer designed to increase flexibility and improve adhesion to existing surfacing | Block/12kg |

* Delivered to site in purpose-built transporters which are heated and thermostatically controlled and continually agitate the product

IKO PERMATRACK ROAD SURFACE PATCH REPAIR SYSTEM



Increased traffic levels combined with severe weather has led to a marked increase in potholes in recent years, with highway engineers being put under growing pressure to repair them quickly with minimal disruption.

Product profile

This system has been specifically designed to address the pothole problem, along with larger de-laminated areas, such as bus stops, HGV pull-ins and areas with severe sub-base problems.

The material arrives on-site ready-mixed, and after the defective area has been removed by cold milling, is levelled into place.

Key benefits – at a glance:

- **Rapid installation reduces delays, inconvenience and maintenance costs** – repaired roads can be reopened to traffic within just two hours
- **Minimum depth of repair** - 40mm
- **No maximum depth**
- **Repairs thin wearing layers** - with no need for large patch removal, including SMA
- **Rut resistance** - at 50°C 3mm/hour
- **Excellent skid resistance properties**
- **Long service life** - even in high shear situations and standing traffic areas

BBA HAPAS-approved certificate 02/H072





IKO PERMATRACK FLOOD DEFENCE SYSTEM

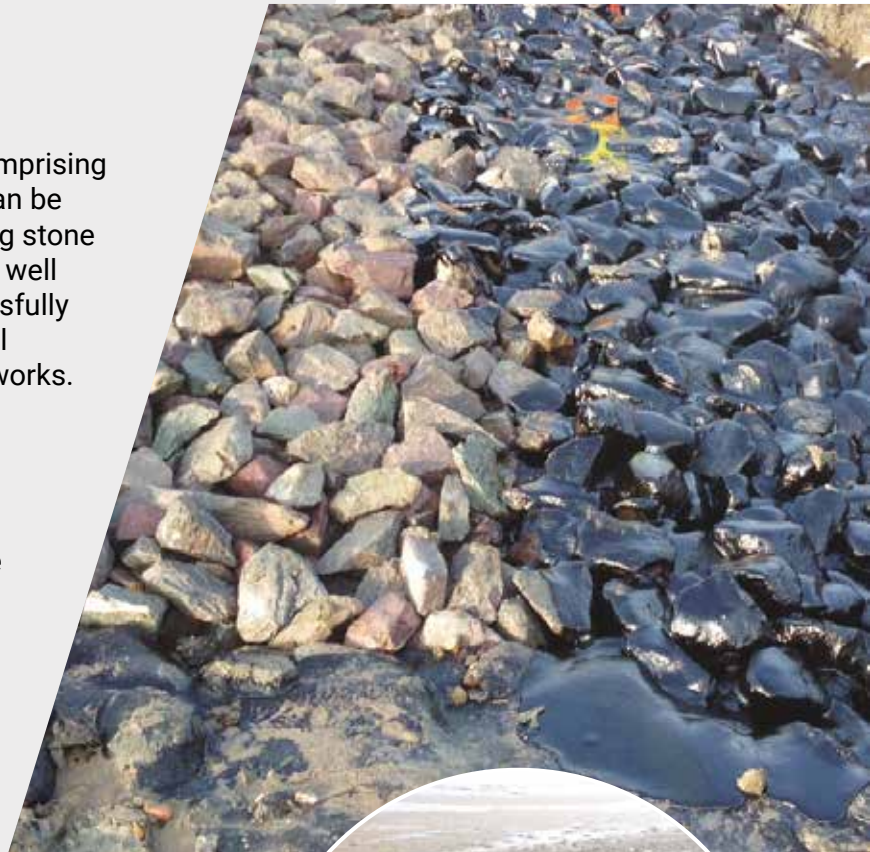
IKO's Permatrack products, especially our grouting mortars, have become synonymous with the highest quality range of flood defence systems. They have been developed in close collaboration with the Environment Agency, regional water companies, local authorities and major civil engineering contractors.

Product profile

Our grouting mortars are hot-type mixes comprising sand, filler and bitumen. Stone and gravel can be added, if required. They are ideal for grouting stone revetments above and below water level, as well as slab construction, and have been successfully used on numerous sea walls, river and canal embankments, channels and underground works.

Key benefits – at a glance:

- **Can be placed both above and below the water level** - unlike other systems
- **Simple to install**
- **Outstanding strength and robustness**
- **Flexible enough** - to follow long-term settlement of sea defence structures
- **Can be recycled at end of working life**
- **Cost effective solution**
- **Long-term protection** – for up to 40 years



CASE STUDIES



BRIDGE DECK SURFACING

Project: Tower Bridge, London

Product: 400 tonnes of IKO Permatrack Bridge Surfacing System

The bridge was closed for three months while necessary repairs were made to the lifting sections, walkways and approaches.

The work was carried out by Infallible Systems and involved removing the existing asphalt and replacing it with IKO's Permatrack Bridge Surfacing System, which was applied over mastic asphalt waterproofing.

Due to the IKO Permatrack Bridge Surfacing System being so quick and easy to install, the high profile project was completed a week ahead of schedule, allowing the bridge to re-open in time for Christmas.

“ We've been IKO customers since we were founded more than 30 years ago. Their Permatrack Bridge Surfacing System is excellent, after service is fantastic and technical team's help with the initial spec invaluable.

John Chapman, Director, Infallible Systems.





BRIDGE DECK SURFACING

Project: M4 Chiswick Flyover, London

Product: 2,250 tonnes of IKO Permatrack Bridge Expansion Joint System

Located at the end of the M4, the Chiswick Flyover connects the motorway to the A4. A main arterial route into central London, the A4 is prone to heavy traffic congestion and queues on the flyover, putting its expansion joints under immense daily pressure.

Constructed as a T-shape, the flyover was historically installed using two traditional asphaltic plug joints positioned at widths of 500mm with a 750mm gap between them. Over time, due to their inherently soft material properties, the plug joints prematurely failed and severely rutted because of the constant heavy traffic. Meanwhile, rainwater from the road surface had leaked through into the failed joints and eroded the flyover supports.

The flyover underwent an extensive refurbishment programme in which the heavy duty IKO Permatrack Bridge Expansion Joint System was used. The Permatrack system was specified for this particular project due to its suitability for use on joints of depths exceeding 70mm and any width, as well as its ability to offer exceptional resistance to rutting and load/sheer/deflection stresses.

During the project, two failed asphaltic plug joints were replaced by a single wide Permatrack joint, providing a highly cost effective and time-saving solution.

Ultimately, the combination of exceptional product properties, effective project management and efficient operations meant this project was a resounding success, delivering an excellent solution with completion ahead of schedule.





BRIDGE DECK SURFACING

Project: Selby Swing Bridge, Selby
Product: 1,200m² of IKO Permatrack Bridge Expansion Joint System

The Ouse Swing Bridge, which was built as part of the Selby Bypass, opened in 2005. Ten years later, everyday wear and tear meant the bridge and roads on either side of the bridge needed to be resurfaced.

IKO's Permatrack Bridge Expansion Joint System was specified and installed by Briggs Amasco. The first phase of the five-day project involved stripping the existing mastic asphalt surfacing and bridge deck waterproofing away.

IKO supplied a total of 100 tonnes of IKO Permatrack Bridge Expansion Joint System in six loads. The system was applied by machine as opposed to traditional hand laying, which ultimately resulted in a highly efficient installation process. On the second day alone, the machine laid approximately 400m² in around two hours, which included the addition of pre-coated chippings and rolling.

The machine application also produced a more uniform surface, providing an overall better ride quality for vehicles. Meanwhile, the existing construction meant the system had to be laid at a thickness of around 36mm, which was the ideal environment for the Permatrack Bridge Surfacing System. This is due to the fact it forms a homogeneous, voidless, waterproof mix that is not impacted by water ingress or freeze thaw cycling.



BRIDGE DECK EXPANSION JOINTS

Project: Dock Road, Tilbury
Product: 233 linear metres of IKO Permatrack H Bridge Deck Expansion Joint System

As the major route in and out of the Port of Tilbury, Dock Road is heavily used by HGV vehicles every day, which had resulted in the road joints deteriorating. A cost effective solution was required to repair the joints with minimal disruption.

The IKO Permatrack H Bridge Deck Expansion Joint System was selected for this project, having historically being used to repair countless other joints across the length and breadth of the UK's motorway network.

It was vitally important that the solution could be installed on joints wider than 500mm (up to 875mm), and due to strict timing schedules, could be installed quickly and efficiently. Utilising 'ready to lay' material from a hot charge vehicle meant IKO could match the strict schedule and help reduce traffic disruption.

Working overnight and maintaining a traffic flow enabled the work to take place during quieter traffic periods, with closures and disruption kept to an overall minimum. Meanwhile, a robust night schedule made sure the joints were completed and ready for full road use by 5am the next morning.





HIGHWAY CRACK REPAIRS

Project: M4, Junctions 5 to 7

Product: 400 tonnes of IKO Permatrack Inlaid Crack Repair System

Longitudinal and transverse cracks that had developed across the first two lanes of the M4 needed to be repaired. In particular, a 6.7km-long, reflective crack had formed, which was repaired using IKO Permatrack Inlaid Crack Repair System.

The existing surface was planed to the top of the wet mix layer to a depth of 140mm and to a width of 300mm. After cleaning and drying, the excavation was primed before a 5mm layer of IKO Permatrack PSB was applied to the bottom and vertical edges of the joint. IKO Permatrack H was then laid into the joint in two 50mm layers.

The carriageway was able to be reopened to traffic the next day. The following night, IKO Permatrack H was applied as the running layer before being overlaid with 40mm of thin surfacing.





HIGHWAY CRACK REPAIRS

Project: Wigman Road, Nottingham
Product: 14,000 linear metres of IKO Permatrack Inlaid Crack Repair System

Wigman Road is a major thoroughfare located on the outskirts of Nottingham. High volume traffic travelling in and out of the city every day had resulted in widespread deterioration to the road network. In particular, Wigman Road needed to be resurfaced to be able to withstand the sustained pressure of heavy traffic.

IKO Permatrack Inlaid Crack Repair System was used to carry out joint repairs that spanned 14,000 linear metres. The system, incorporating IKO Permatrack PSB and IKO Permatrack H, enabled repairs to be made that are capable of accommodating high levels of movement while also providing a hard-wearing and long-lasting surfacing.

Once the damaged surfacing had been removed and cleaned to create a highly adhesive layer, IKO Permatrack PSB was applied. This was followed by IKO Permatrack H high modulus polymer-modified asphalt, which was installed up to the level of the existing roadway surfaces. Pre-coated chippings were then rolled into place to provide the necessary surface texture and skid resistance.

The joint infills were completed within 12 hours, causing minimal disruption to traffic and disturbance to local residents.



IRONWORKS REINSTATEMENT

Project: Market Harborough

Product: IKO Pacopatch Ironworks Reinstatement System

When a sunken manhole near a residential area in Market Harborough needed to be replaced, Northampton County Council required a long-lasting road ironwork reinstatement solution.

Every time vehicles drove over the manhole; it made a loud clanking noise that disturbed the local residents. It was also a risk to pedestrians and cyclists, who walked/cycled over it, and caused damage to vehicles that drove directly over it.

Ironwork and civil engineering contractor, Manly Co Ltd, used the IKO Pacopatch Ironworks Reinstatement System to reinstate the manhole. It was selected due to its long-lasting capabilities and proven track record in reinstating surfaces around other manholes, drainage gullies and other public utilities ironworks.

“ We have used IKO Pacopatch for the last 15 years. Because IKO Pacopatch is voidless, no compaction is needed. It is a simple system that is quick to install, meaning we can reopen roads to traffic quicker.
Alan Lee, Managing Director, Manly Co Ltd.



THE IKO SERVICE



Consultation

We start by listening to you, your requirements and your brief for the project



Design

Bespoke to your project requirements and the results of the survey



Solution

The result of stages 1 and 2 culminating in the right IKO specification for your project.



Inspection

Visits to site before and during the project to achieve a quality, reliable installation



Installation

Reassurance that your project will be installed by IKO Approved Contractors



Guarantee

A long-term commitment from you deserves an equally long-term commitment from us.



Aftercare

The final step, making sure your investment delivers years of faultless service.

PROTECTING WHAT MATTERS

As a responsible UK manufacturer of innovative road repair and maintenance solutions, we aim to limit the environmental impact of our operations and lifecycle of our products, from maximising energy efficiency and minimising waste to locally sourcing raw materials and reducing carbon emissions from transportation. All IKO manufacturing sites in the UK now also run on renewable energy.

IKO continues to make significant strides forward

We have committed to a programme of continuous improvements that apply to our ways of working, manufacturing and initiatives to reduce, reuse and recycle materials. This includes investing in more sustainable packaging and recycling on-site asphalt and hot charge waste at our Grangemill plant, which enabled us to achieve 100% zero waste-to-landfill in 2021/2022.

Our R&D and product development teams continue to evolve and grow our portfolio of responsibly sourced products to help our customers meet their sustainability targets. For example, we have eliminated Trinidad Lake Asphalt within our IKO Road Permatrack Inlaid Crack Repair System, which has enabled us to reduce the solution's carbon footprint, increase production efficiency and reduce labour costs. Meanwhile, our IKO Permaphalt mastic asphalt system is 100% recyclable. All materials are also resistant to weathering, chemical oxidation and UV radiation, ensuring long-term durability, which is a key environmental sustainability factor.

Meeting our wider ESG goals

We have introduced a number of initiatives as part of our wider ESG framework, ranging from installing bug hotels and nurturing the talent of the future, to offering mental health support to all IKO people. However, we haven't stopped there – our efforts extend beyond our employees.

Whether it's the people who live in the communities around our manufacturing sites, or those who work, live or learn under our roofing and waterproofing solutions, we aim to protect what matters to them most and create a positive legacy.

[Learn more about our ESG journey](#) 





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