RENEW

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ALARM 2022: Backlog grows but does this pave the way ahead for surface treatments?

FINDING THE ART OF THE POSSIBLE

A sustainable approach

RSTA

editor's note

Paul Boss | CEO, RSTA

> With everything that has happened in the last two years, it's great the RSTA annual conference was able to return to The Belfry for the first time in three years, welcoming members and guests with our excellent speaker programme.

Many people will be seeing each other in person for the first time since the beginning of the pandemic and I know from conversations and other communications with members, they cannot not wait to get back!

Local highway authorities are now in receipt of their individual allocations for the next three years 2022/23 to 2024/25. Whilst these are disappointing following the Comprehensive Spending Review last autumn, three year settlements will enable authorities to plan their maintenance programmes for the three years and indications are some authorities will be investing their own additional finance into their highway networks. We will continue to communicate the asset management approach, increasing efficiency, lowering carbon and increasing proactive preventative surface treatments and recycling.

Just a few weeks ago Covid-19, although waning was still the main issue. Who could have thought things would have changed so much in such a short time with the war in Ukraine and the knock on effect with energy, fuel and prices in general that is already a massive issue for our industry and individuals. The association is working with others in the industry to draw attention to the real issues this is causing for members and clients, and to advise clients regarding potential price rises and even shortages. We were heavily involved in the HM Treasury consultation regarding the withdrawal of rebated fuel (Red diesel) from specialist highways plant with effect from the 1st April this year and follow up meetings and further consultation. Unfortunately, Government decided to continue with the implementation of the change. There are not currently alternative fuelled vehicles available for the industry and all the change has done is to increase costs for members and clients further, the funding for which comes from HM Treasury through the DfT in any event. There was further pressure on the Government to reverse or postpone the change in the spring statement to assist the industry and their clients. Despite a petition of over 16,000 signatures at the time of writing, there was no reverse or postponement.

We all really hope for the sake of the people of Ukraine and the world economy, that things will return to some sort of normality in the coming months.

ALARM SURVEY 2022

ALARM Survey 2022 says maintenance backlog has grown by a quarter in 12 months

The backlog of carriageway repairs to fix local roads in England and Wales has reached £12.64 billion, compounded by increased costs caused by rising inflation.

This is up from £10.24 billion last year and despite an increase in average highway maintenance budgets (up 4% on 2020/21), the proportion being invested in the carriageway itself is down and the reported backlog of carriageway repairs has increased by almost a quarter (23%) on last year's figure to £12.64 billion – or £61,700 for every mile of local road in England and Wales.

Highway authorities have had their capital highway budgets have been frozen until at least 2024/25, representing a real terms reduction of between at least 18-25%, despite the October Budget and Spending Review giving £2.7 billion over the next three years for highway maintenance for those authorities not receiving a city region type settlement.

Local authorities can still get important maintenance work delivered over the next few years despite a reduction in funding and a growing maintenance backlog, according to the Road Surface Treatments Association (RSTA).

Its advice to local authorities is to try and focus on proactive surface treatments maintenance programmes as much as possible backed up by the risk-based approach, to keep as many roads as possible in a good condition for longer.

> It is not good that... highway authorities have had their capital highway budgets frozen until at least 2024/25

But Paul Boss, Chief Executive of the RSTA said: "It is not good that after the Comprehensive Spending Review and Budget in the autumn that highway authorities' have had their capital highway budgets frozen until at least 2024/25, representing a real terms reduction of between at least 18-25%, despite the October Budget and Spending Review giving £2.7 billion over the next three years. The results of this year's ALARM Survey shows that the maintenance backlog has risen again by a quarter in just 12 months. This is not good news for authorities making critical decisions on the state of the local network every day. The idea of a longer-term settlement is what we have been calling for in the highways sector, but it isn't much use if there is not any more money to spend, especially at a time when costs are rising."

"But regardless of how much money is available, the most efficient and sustainable way is going to be prioritising keeping the 'green' roads from slipping into 'amber' and the 'amber' roads from going into a red condition because that will always cost more money in the long-term as more roads head into the worst possible condition and therefore even more money needs to be spent on repairing them."

Mr Boss added: "Last year we called for a national strategy for highway maintenance for local roads to ensure the sector can work collaboratively to deliver more preventative surface treatments. Now, it seems, this is needed more than ever."

HEADLINES

LOCAL ROADS REPAIR BACKLOG

£12.64bn

↑ 23%

HIGHWAYS MAINTENANCE BUDGETS (AVG)

↑ 4%

OVERALL ROAD CONDITION SURVEY

11% **↑ 2%**

1.7M POTHOLES FILLED | 1 EVERY **19** SECONDS

37,000 MILES
of local roads need to be rebuilt within 5 years

67%
of local authorities using warm mix asphalt

66%
LAs selecting surfacing materials with longer life

Rick Green, Asphalt Industry Alliance (AIA) Chair, said: "Local authority highway teams have a legal responsibility to keep our roads safe, but do not have the funds to do so in a cost effective, proactive way. As a result, while they report some slight improvements in surface conditions, the structure of our roads continues to decline.

"Although surface repairs have a part to play in extending the life of local roads, short-term fixes, including filling potholes, is indicative of a network that is 'on the edge' and less efficient and sustainable when it comes to materials usage and whole-life carbon emissions."

This year marks the 27th successive ALARM survey, which received a record number of responses from 73% of local authorities in England and Wales. It reports local roads funding and conditions based on information provided directly by those responsible for its maintenance.

The findings of ALARM 2022, which relate to the 2021/22 financial year, show that in England and Wales:

- Local authorities would have needed an extra £1 billion last year just to reach their own target road conditions, before even thinking about tackling the backlog of repairs
- Almost one in five local roads could need to be rebuilt in the next five years – nearly 37,000 miles of the network
- One pothole is filled the equivalent of every 19 seconds
- Roads are only resurfaced on average once every 70 years.

Rick Green added: "The link between continued underinvestment and the ongoing structural decline and below par surface conditions of our local roads is clear. The country's ambitions to encourage active travel, plus cutting waste and carbon emissions, will not be achieved with a short-term approach that can't deliver a first-rate local road network.

"Recent government announcements regarding three-year spending on maintenance (for England) are a step in the right direction but don't go far enough. To ensure we have a safe, resilient, sustainable network on which we can all rely, a longer-term approach and significant investment is still needed across the country.

"The longer it takes for the funding to be put in place to tackle the backlog of repairs, the more it is going to cost to put it right in the future. Four years ago, the AIA calculated that an additional £1.5 billion per year was needed for 10 years to bring local roads up to scratch. In the meantime, the network has continued to decline and ALARM 2022 indicates that an additional investment of more than £2 billion a year over the next decade is now needed."

Reacting to the results of this year's survey, Local Government Association (LGA) Transport spokesperson, Cllr David Renard: "Despite the efforts of councils, which repair a pothole every 19 seconds, these stark new figures show our local road repair backlog is rising. To clear this growing backlog, councils need further government investment and certainty over future funding over the next decade.

"Roads are the most important transport infrastructure in the country. The ability of councils to improve local transport connectivity and infrastructure is critical to levelling up the country, supporting our long-term economic recovery from the pandemic and reducing transport related carbon emissions to meet the country's net-zero targets."

> Short-term fixes, including filling potholes, is indicative of a network that is 'on the edge' and less efficient and sustainable

Steve Spender, Chief Executive of the IHE said: "Highway authorities put great effort (and funding) into dealing with surface defects such as potholes but, as highlighted by this year's ALARM survey, there is not sufficient funding available to deal with the deterioration in the structural condition of the local networks and this remains a matter of concern.

"With a 23% rise in the reported backlog required to bring our local roads up to an acceptable standard, greater investment is needed to redress the balance and enable structural repairs to be undertaken. This is needed to enable local highway engineers to continue to protect their networks."

President of LCRIG, Will Britain, added: "With a continued squeeze on local highway authority budgets it is becoming increasingly difficult to maintain roads to a standard that people expect and deserve. Longer term planning is key to enable more efficient and effective planning and delivery.

"At LCRIG we continue to make the case for local roads and will work with our council members, the supply chain and key partners, including the DfT, to make sure that this message is delivered loud and clear. The work of local highway teams must be recognised and reflected through funding which will subsequently ensure that road users see improved highways."

2022 Alarm Survey highlights

Average highway maintenance budgets across England and Wales have increased by 4% to £24.7 million per authority but this does not account for the impacts of increased costs from rising inflation and the ongoing impacts of COVID restrictions and related changes to working practices

Not all local authority highway teams saw an increase in funding: 56% of authorities actually reported a cut or freeze in their highway maintenance budget, even before inflation is taken into account

The percentage of highway maintenance budget allocated to the carriageway dropped slightly to 51%, reflecting growing pressures to maintain other parts of the highway asset, such as structures, signage and drainage

However, increased average highway maintenance budgets still resulted in the average carriageway maintenance budget showing a marginal increase of 1.5% on last year to £13.2 million, which represents a cut in real terms against general measures of inflation

As a result, the one-time catch-up cost has increased by 23% on last year's reported figure to £12.64 billion and would take nearly a decade to complete. This is the amount needed as a one-off – to bring the network up to condition that would allow it to be managed cost effectively going forward as part of a proactive asset management approach

The average shortfall in the 2021/22 carriageway budget has leapt nearly 50% to £6.4 million per authority, with the total shortfall in the year exceeding £1 billion

The need to prioritise work means that an unclassified road is at least three times more likely to be classified as RED than either a principal or non-principal road

Road Condition Index (RCI) data reports the condition of the surface of the carriageway, not necessarily the structure of the road. While no category of road achieves the ideal profile, there have been slight improvements on last year, with an additional 2% of the road network classified as GREEN (being in a good state of repair)

Roads classed as RED (poor overall condition) also saw a 2% increase, bringing the total likely to require maintenance in the next 12 months to 11% – around 22,000 miles or the equivalent of travelling between London and Birmingham 175 times

The average frequency for all classes of road resurfacing now stands at once every 70 years, with a road being resurfaced today not likely to be so again until 2092

Feedback suggests that highway engineers focused on managing those roads classed as AMBER (where some deterioration is apparent) on their network, with many taking steps to return borderline AMBER roads to GREEN, if only temporarily

Over the last year 1.7 million potholes were filled – the same as last year – equivalent to one every 19 seconds. Overall, £107.4m was spent filling potholes in 2021/22 and the total spent over the last 10 years is more than £1.04 billion

Structural conditions data provides a more holistic assessment of the carriageway asset and 18% of the network (36,918 miles) is now defined as being structurally poor, with less than five years' life remaining – an increase of more than 2,000 miles on last year's figures. Structural maintenance is needed when surface maintenance alone won't suffice.

The full ALARM Survey can be downloaded **here**

THE VIEW FROM THE TOP

Taking the RSTA forward

Renew catches up with Paul Boss, RSTA Chief Executive as the 2022 surface treatment season gets underway.

Renew (R): Tell me what you have been prioritising within the RSTA at the start of 2022?

Paul Boss (PB): "We know that demonstrating the reduced carbon generated by using surface treatments and road recycling had to be the priority for this year.

COP 26 and the necessary commitments made at that event and before mean this had to be the top priority. We have been liaising with National Highways and ADEPT to ensure the carbon generation information for each treatment is calculated in a format that can be relied upon and accepted by all stakeholders. We need to ensure the figures can be relied upon and give National Highways and local highway authorities the insight they need to comply with their duty to use the most sustainable products and processes to reduce the carbon generated by their highway operations.

Furthermore, we need to demonstrate the massive carbon reductions that can be made in the medium to long term over the lifecycle of roads and footways with efficient and effective planned asset management utilising preventative surface treatments.

We also developed our new 3 year strategy 2022 – 24, 'A Sustainable Membership for a Sustainable Planet' that was approved by the Executive Committee in December 2021, this also prioritises training and collaboration at its heart. We have already begun our CPD and NVQ training programme this year and have technical events and stands at trade exhibitions organised to enable us to train and meet with colleagues from the national and local roads authorities; along with members and potential members. All our one and two day training and events this year will be face to face to ensure delegates gain the maximum benefit. Our collaborations with other bodies will enable us all to join forces for further training and events that will benefit the sector and those who work within it."

R: How are the Association's groups planning to work this year and what do you expect the outputs from these groups to be?

PB: "Following a consultation with members last year we put a new committee structure in place from 2022.

We now have 14 individual members technical committees with each of the committee chairs being given a place on the Executive from April. Previously the majority of these were sub-committees under the then Specialist Treatments Sector and were not directly represented on the Executive. Each committee has representation from a good proportion of the companies in each sector and have their own Codes of Practice and /or Guidance Documents for clients that are available for free download from the RSTA website.

We also continue to have a Asset Management group that is made up from RSTA members and local highway authority asset managers and other representatives.

A lot of the output from the committees will be reviewed updated Codes of Practice, training materials and technical presentations, however each committee will also be liaising with National Highways as part of the review of the MCHW, prior to the 'big bang' publication change due in 2024 or early 2025. We need to ensure the sector treatments are correctly included as we know most local authorities use the information from the national documents when putting out their own tenders."

R: What will you continue to work on with the DfT.

PB: "We need to work with the DfT to review the self-assessment questionnaire and process and ensure new sustainability and biodiversity questions are included for 2023. The review is long overdue, having been postponed in 2020 and 2021. Most if not all authorities are now current band 3 and as the original questionnaire and process was developed some 8 years ago there are no sustainability questions.

The world has changed a lot since then and sustainability and our environment is the top priority. It also makes sense as the most sustainable maintenance treatments are also the most efficient. The synergy between cost and time efficiency and sustainability is indisputable and should encourage good asset management planning.

After the disappointing three year local highways capital maintenance settlement announced as part of the Comprehensive Spending Review last year and despite the comprehensive business case for funding being developed and submitted to Government and HM Treasury, we will also be liaising to see what opportunities there may be to increase funding over and above that allocated.

Local highway authorities can also do their part to make the available funding go further. Whilst the settlement and allocations for the 3 year period 2022/23 to 2024/25 has been reduced to 2019/20 levels, they at least have certainty of funding for the period that should allow them to plan three year programmes of work for planning delivery with their supply chains."

R: How would you assess the lead up to this year's surface treatment season?

PB: "The lead up to this year's season has been somewhat fragmented as local authorities had to review their maintenance programmes in light of the reduced capital budgets allocated.

Experienced asset managers know the ringfencing of required budget for preventative surface treatments makes efficient and sustainable sense, but when budgets are reduced and more budget then has to be allocated to reactive works, preventative budgets can take a hit with pothole complaints filling Councillors Inboxes. However, if additional investment in capital maintenance cannot be secured, reactive works should be kept to the absolute minimum, utilising the Highway Inspector Competency Framework and risk based approach to ensure as much finance as possible is invested in preventative and other structural maintenance works. This way the roads falling into red can be controlled, minimising the backlog until further funding can be made available.

Our members are ready and most have a good forward programme of works. They continue to be innovative and are limiting price increases as far as possible, despite the removal of the rebated fuel (Red Diesel) entitlement from the 1st April and increases in the price of materials, plant and labour."

R: The need to become sustainable is still top of members' agendas-how does the RSTA plan to support them with this challenging task?

PB: "We are liaising with ADEPT and National Highways to determine what they need to assist them and their members with their carbon reduction targets. Some of our members are at an advanced stage with carbon figures, but we need to ensure what is presented to go in the National Highways asPECT tool and published for local authorities is in a comparable format to provide the insight and assurance to clients. There will be a lot of detailed work undertaken on carbon calculations over the next few years but there is a need to start supplying information in relation to each surface treatment this year.

Initially I would like for us to be able to supply robust cradle to gate carbon figures, with variable contract specific figures from gate onwards calculated in a standard way for each scheme or group of schemes.

On a separate but related note, we have again stressed the need for flexi permits in relation to Weather Dependent Mobile Maintenance Works (WDMMW) in the further consultation made by DfT in February. Flexi permits are essential to enable the delivery of WDMMW in an efficient and sustainable way whilst providing more reliable information to highway users regarding potential delays to their journey."

R: It is a welcome return to the in-person conference taking place at the Belfy on April 7th. Give us a insight into what the highlights will be?

PB: "After two years without a conference due to the pandemic, it was important this year to pick up on all the areas that have been on people's minds, some as a result of the pandemic itself and the changing patterns of work most people have become used to.

With the disappointing three year capital highways settlement announced last autumn, we will have DfT making the keynote presentation looking ahead to where they see highway maintenance going forwards. We will also be focussing on training, innovation, mental health and of course sustainability and carbon reduction. Importantly it will also be the first chance the industry and their clients have had to be able to properly network in person for the first time in over two years."

R: The conference seems to be popular again this year….how do you see this developing moving forward?

PB: "Yes, our members are really looking forward to their RSTA conference this year. It has been a staple for many years and often regarded as the industry opener for the year.

As soon as things were finalised and the promotional material went out, members were confirming their requirements and clients were speaking to their supply chain to get a place at the conference.

The association has had a lot of new members since the last conference in 2019 and unfortunately some of these have not been able to get a place this year as the majority of the bookings were ported from 2020 and 2021.

Moving forwards we are planning to grow the conference, making more places available and increasing indoor and outdoor exhibition space. We are also planning to offer more options in the way of our popular afternoon activities as an alternative to golf. Watch this space for news of conference 2023."

What is the art of the possible?

For 99 years, Kier Highways Solutions (KHS) has been serving the highways and construction industry with quality bituminous material. Formerly known as Ayton Products with a manufacturing plant based in Wymondham, Norfolk, the business has spent the last year overhauling its operations to become capable of servicing customers of all sizes.

Established in 1923, KHS manufactures bituminous road emulsions for use in the highways industry, as well as bespoke bituminous products and roofing products for the construction market. In 2011, the Surface Treatments Business arm was created, and the company began using its own product to deliver surface treatments works via its own contracts. Over 17,000 tonnes of bituminous material are produced annually and transported to various highways and construction sites nationally for internal and external customers, including Bristol City Council and Derbyshire County Council.

What is the art of the possible?

In 2021, Kier rebranded Ayton as is now known as Kier Highways Solutions, a unit of the Kier Highways business stream. The name change was the culmination of a three-month long transformational project with operational improvement specialists, Managementors (MM).

MM were presented with a challenge – 'what is the art of the possible?' Taking a facilitative approach, MM launched Project Reseal and worked with Kier to improve processes and management controls, as well as establishing improved interfaces to form a more resilient, efficient, and collaborative operation.

The Managementors team helped Kier to provide clarity around targets and improve performance visibility for all employees, ultimately helping to set clear expectations. Through close coaching and mentoring, Kier's teams were upskilled, roles and responsibilities were defined, and accountability was created at all levels of the operation. Alongside this, a new management operating system was implemented, and planning guidelines were developed.

The engagement with MM was not driven by a need to fix problems, - it was driven by wanting to take the business unit to the next level and test areas for betterment. Kier's aim was to see what the productivity capability of the business was and what investment would be needed to achieve and sustain those levels of productivity. This presented the opportunity to bring the two businesses together to collaboratively achieve maximum productivity.

General manager, Lee Draper, said: "For a number of years, we have ticked along nicely. But last year, we took a good look at everything we have to offer as a one-stop-shop now. We brought in Managementors to help us to holistically look at the business and assess where we can streamline our processes, improve sustainability, and offer a better, more efficient service to our customers."

Over £1m seasonalised financial benefits have been realised through a 38% increase on gang productivity, a management team restructure and modelling of manufacturing product utilisation and capacity, all aimed at delivering better value for money for clients and customers. Analysing and understanding how much product was being manufactured, as well as how much more could be made to increase bulk orders now gives Kier the ability to plan more efficiently. Bulk external sales increased from zero tonnes in 2020 to 3,200 tonnes in 2021 with a forecast of 4,300 in 2022.

Of course, none of this would have been achievable had Kier started the journey without the backing of the workforce. Using delivery partner Cleartrack, Kier piloted a behavioural change programme among the operational teams that focused on human and organisational factors. Effective communication, empowerment and autonomy and improved safety performance were all experienced as a result of the programme.

"We're a tight-knit team, with several long-standing employees. They are local people who care for their local business. It was imperative we got their buy-in to change. We hosted a series of workshops from the very beginning of Project Reseal and MM helped us with some close coaching.

"While we may have changed some things operationally, the one thing that has remained is the loyalty of our people. They care about each one of our customers, regardless of their size or spend", Lee added.

A traffic management design service was borne out of the improvement project. Based out of the area office in Retford, Nottinghamshire, a team of CAD designers produce traffic management drawings for both internal and external clients nationally. This additional service bolsters the current design capability of in-house surface treatment designs.

The new one-stop-shop offering now sees Kier providing TM Design Solutions, road emulsion manufacture, on-site temporary traffic management and surface treatments installation. The end-to-end service gives Kier greater control over delivery and ensures a more reliable service.

Keeping the country moving

The innovative partner of choice to provide safe, reliable and sustainable highways infrastructure for the future.

Want to know more? Please contact:

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A bright future despite the challenges?

As he passes over the reins as outgoing RSTA Chair, Howard Robinson, who was also the Chief Executive for ten years, talks to Renew magazine about the achievements of the association and the state of the surface treatments sector.

Renew (R): How do you think the association has progressed over the last few years?

Howard Robinson (HR): "The last few years have definitely been very positive for the association. Having Paul Boss now as Chief Executive has helped to strengthen our links with government and client bodies which means the RSTA can work a lot more closely with the likes of the DfT and UK Roads Board and offer advice as technical experts and influence policy in the right way.

The other area the RSTA has been strong at over the years is creating and maintaining Codes of Practice for each of the surface treatment sectors. These documents are recognised across the industry as representing best practice, written by and accepted by all RSTA members. That has been so important at a time when a lot of experience has left the sector and local authorities and other road operators are looking to work in different ways, embracing innovation.

Again, with Paul sitting as Vice-Chair of the UK Asset Management Board and his experience of working for local authorities alongside the excellent job Rory O'Connor is doing as Chief Technical Officer this has taken the association to another level with the technical advice we can now provide. Positioning the RSTA so it can influence political decision makers whilst also being able to provide independent advice and training to client bodies and members is one of our greatest achievements over the last few years. This is also reflected in the number of local authority members joining our asset management working group, which has strengthened it even further.

The emergence of the Incentive Fund has driven local authorities to adopt different working practices and maintenance techniques so having the RSTA there to help them adopt best practice quickly has been essential as a platform to help them achieve this. The association has also improved how it communicates with industry stakeholders finding different ways to raise awareness about the full range of surface treatments available to road owners and operators. It is more important than ever that asset managers know what's in their toolbox and how to use that toolbox in the right way at the right time as part of a proactive asset management strategy.

Finally, I would say another big achievement is the wide-ranging membership we now have that not only covers every surface treatment area but also reflects the changing dynamics of the industry as we see advancements in things like specialist testing and innovative asset management software, for example.

R: The wider representation of membership etc has also been reflected in new training as well. What are your thoughts on this?

HR: Training has always been a huge focus for the association and rightly so. The maintenance sector moves at an incredibly fast pace and with less resources available to local authorities in particular, as well as several other challenges, arguably there has never been such an important time to invest in training and development.

RSTA has recently developed a new course on skid resistance and there will be more new courses in the future to reflect the industry's needs.

Another big achievement of the RSTA in recent years has been the significant contribution it has made towards the development of new British Standards for In-Situ Recycling and High Friction Surfacing and this also means that the association has an important part to play in supporting this kind of development with new training courses supported by technical advice.

R: What do you see as the main challenges for the sector at the moment?

HR: This year is turning out to be just as challenging as the previous two years during the pandemic. Limited availability and price hyper-inflation of raw materials is making things very difficult for many member companies and road authorities. What with the war in Ukraine and the CPI rate of inflation looking increasingly persistent, it is going to be another difficult year.

The question is how do you handle it as a business? Do you absorb these cost increases or try and pass them on?

It's a question affecting every member of the RSTA with some probably deciding to take the pain at the moment and hope the market recovers, but not all companies are in a position to do that, especially the SME's. It potentially presents a problem with some maintenance schemes getting started this season. With local authority budgets effectively being cut due to inflationary pressures, they are going to struggle to pay more but the work still needs to be done.

The latest ALARM survey doesn't make good reading either with reports of the maintenance backlog growing. But this also presents a fantastic opportunity for the surface treatments sector. Now, more than ever, it is so important to get the message out there about the benefits of using surface treatments.

Other industries within the construction sector for example, have embraced the idea around protecting and preserving their products and materials to make them last longer because short-term maintenance

will be significantly reduced, and the customer will be happier. If you take that analogy and use it in the roads sector, then surface treatments have a vital role to play in protecting and preserving our road networks to keep them in better condition for longer-it's a no brainer isn't it? Especially when many surface treatments are both more cost effective and more sustainable offering lower carbon solutions compared to some of the more energy intensive techniques.

It's great to see the leadership from National Highways who are now seeking innovative ways to reduce their carbon footprint and one way to do this is to protect and preserve its network-this will be a game-changer for the industry when implemented."

R: How do you see the future for the RSTA and sector?

HR: Any organisation is only as good as its people and we have a lot of good people within the RSTA community. The dynamic of the industry is changing too and I'm noticing a younger, more diverse audience than ever at training courses and events. With that brings new ideas, and fresh talent that will question and challenge what we are currently doing and bring new improved ways of working. That is probably the best thing about the future of our sector.

Alongside this, the work that other organisations are doing such as LCRIG, IHE, etc who can help to expose surface treatments to a wider local authority audience is another great opportunity we have at the moment and long may that continue.

One of the biggest challenges in the future, as in the past, will be stretched local authority budgets. However we need to continue to encourage road authorities to invest in doing more proactive rather than reactive maintenance so over time the overall condition of our road network gradually improves. If we don't do this our network will continue to deteriorate, our roads will decline further and further and more money will have to be spent on reactive maintenance in the future, not less."

TRAINING & QUALIFICATIONS

The RSTA runs its own Assessment Centre to provide members with the facility to qualify their workforce to meet the demands of the Sector, and compliant with NNHH13 and NHSS16. We provide a one stop shop to meet all your training needs including access to grant funding for NVQ's and Short Duration Training leading to NVQ's Level 2, 3, 4 and 6 for operatives/supervisors. CSCS cards are applied for on completion of your chosen NVQ to gain your relevant card. We also provide a comprehensive NVQ assessment service at a discounted price for members.

Please see below a list of NVQs that the RSTA currently offers:

NVQ level 2
Roadbuilding (Construction)
- Surface Dressing – Machine
- Slurry/Microsurfacing – Machine
- High Friction Surfacing – Manual
- Slurry/Microsurfacing – Manual
- Bituminous Paving – (All remedials driver/operator)
- Surface Retexturing
- Pavement Marking (Machine & Manual)
- Pavement Marking (Road Studs)
- High Friction Surfacing (Manual & Machine)
- Crack & Joint Repair (Manual)
- Flexible & Semi Flexible Paving Plant which includes endorsements – Spray Injection Operator & Geosynthetic (membrane or steel mesh) installer
- Thermal Road Repair

Roadbuilding and Maintenance (Construction)
- Plant — Road Sweeping
- Plant – Road Recycling (Machine)
- Manual Roadbuilding – Resin Bonded and Resin Bound Surfacing (Manual)
- Excavation and Reinstatement (NHSS 16 compliant)

Diploma in Construction and Civil Engineering Operations – Excavation and Reinstatement (NHSS 16 compliant)

NVQ level 3
- L3 NVQ Diploma in Occupational Work Supervision

NVQ level 4
- L4 NVQ Diploma in Construction Site Supervision

NVQ level 6
- L6 NVQ Diploma in Construction Site Management. Highways Maintenance & Repair

If the NVQ qualification you require is not on the list then please contact the RSTA office as this might be something we can arrange for you.

CSCS Cards

We provide the only route for obtaining RSTA endorsed CSCS cards as required by National Highways Sector Scheme 13 (NHSS 13)

National Highways Sector Scheme 13, BBA HAPAS, RSTA Codes of Practice and most contractors and clients require proof of competence with up to date safety training, and this is provided by a valid CSCS card.

Instant recognition for your employees of NHSS13 compliance. Complete your NVQ through the RSTA and have your CSCS card endorsed with the coveted RSTA logo.

For further information or enquiries please contact the RSTA office:

enquiries@rsta-uk.org

01902 824 325

Kiely Bros brings surface treatment changes to Sandwell

Jim Conlon, Quality & Technical Services Manager at Kiley Bros talks to Renew about some of the company's work in Sandwell

Kiely Bros were commissioned by Sandwell Council to roll out its innovative KIELYlock surface treatment on a number of arterial routes across the borough. One example is The Black Country New Road where, over two successive seasons, Kiely successfully treated almost the entire route to keep local towns connected.

Prior to treatment works, Kiely delivered a successful package of essential patching and joint repairs to ensure the surface was in prime condition for the surface treatment. This approach saw the whole process – from prep to surface treatment and lining – completed as a single package of works. Kiely also provided the council with an effective and efficient programme of preventative maintenance works that enabled it to keep key travel partners and services informed of all works around the borough, and any unavoidable disruptions associated with maintenance works to a complete minimum.

This innovative process enabled Sandwell Council to treat more for less and seen Kiely handed a vast amount of its network, catching it before more costly reconstruction works were necessary and at a time when budgets were strained. The process has also helped with overall carbon footprint goals.

Having utilised the KIELYlock process on both unclassified and classified roads, it is clear to see the benefits the process offers, from treating estate roads to high-speed dual carriageways.

A 14/6 double dressing was utilised across the classified locations and provided confidence that old HRA and high-volume traffic routes could be treated successfully and with ease, helping to contribute to Kiely's goals of maintaining and prolonging the life of the network in the most efficient and cost-effective way.

Public perception has also been notably improved upon, particularly following the second stage of the process which 'locks' the new surface into place.

Having gone through a prolonged deep cold spell over the winter, the threat of any post-treatment chipping loss has been totally eliminated. This certainly reinforces the thinking that KIELYlock is a surface treatment fit for the future.

> This innovative process has enabled the council to treat more for less

Kiely has also worked hard recently on sustainability and reducing carbon.

The company explored the idea of transporting aggregate for a contract in Manchester via rail instead of road, recognising the potential to drastically reduce the job's carbon footprint (one of its major goals as a business).

There were three possible options. The first two involved hauling the stone by road using either a 24 tonne or 28 tonne capacity wagon. The third option involved hauling the aggregate via rail freight. By calculating the vehicle consumption and total vehicle movements, Kiely discovered that it was a lot more environmentally friendly to transport the aggregate via rail. On top of the obvious carbon reduction, there would also be a massive reduction in vehicle movements on the road, resulting in less congestion and strain on an increasingly busy road network.

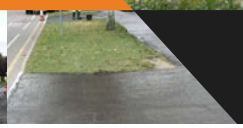
On the back of impressive results, Kiely is looking to replicate this on as many other contracts as possible.

KIELY

Innovation for every application

Kiely Bros is a quality assured contractor specialising in highway surface treatments.



Our services

This commitment provides the basis to continually improve in our specialised field and integrate the latest technologies and best practice to our processes. Our structured investment programme ensures we have the resources to effectively and efficiently deliver our annual surface treatment programme maintaining the highest quality standards.

Our collaborative approach to service delivery has helped secure our position as one of the key providers of highway surface treatments in the UK.

With every client we form an open relationship where we align our strength and experience to jointly understand and exceed their individual expectations.

Contact us for further details

Tel: 0121 772 3800

or email: info@kielybros.co.uk

SURFACE DRESSING
Surface dressing is the most efficient and cost-effective process for maintaining and preserving carriageways.

KIELYLOCK
Secures the 'chippings' in the road surface to enhance the performance of surface dressing.

MICROASPHALT
KIELYpave™ is a high quality micro-asphalt which has been formulated in conjunction with one of the UK's leading bitumen suppliers with input from one of Europe's foremost specialists.

SURFACING
Dedicated and skilled teams in the KIELY Bros surfacing division have a surfacing solution to suit all requirements.

RETREAD
Versatile, economical and environmentally friendly recycling process for roads that have exceeded their life cycle.

FOOTWAYS
Footway solutions for a range of commercial and trade clients.

SURFACE RETEXTURING
An effective solution for increasing macro and micro texture to restore skid resistance and extend asset life of asphalt and concrete surfaces.

ROAD MARKINGS
Extensive experience of adding the finishing lines and markings to surfaces, including anti-skid, cat's eyes, solar studs and more.

HIGH FRICTION SURFACING
High friction or anti-skid is a specialised surfacing that provides another option when it comes to road safety.

The journey to making Calderdale carbon neutral

Renew talks to Toby Fitzsimmons at Miles Macadam about its latest carbon neutral project in Calderdale.

Renew (R): What were the main challenges you needed to solve in Calderdale?

Toby Fitzsimmons (TF): Calderdale Council have numerous concrete carriageways on their highways network. These sites had been overlaid with conventional materials and were demonstrating typical failure characteristics such as reflective cracking leading to water ingress and deterioration of the surface course and the sub base. Milepave provides a durable fully sealed surface as the liquid asphalt element of Milepave prevents water ingress, reinforces surface strength, slows the oxidation process and increases flexibility.

In tandem with our pre and post jointing system Milepave is specifically designed to address the issues of current and future concrete joint failure and water ingress, eradicate these problems and ensure long term successful performance.

R: How did you go about planning for the carbon neutral project?

TT: When discussing the concept with the Highways and Environmental teams in Calderdale, it was clear from the outset that there was a real desire to embrace and address carbon issues associated with highway maintenance. This was really refreshing given the resistance, lack of awareness or understanding that many of the local authorities that we deal with, have on the issue. In the past year, only seven authorities have so far carried out or shown interest in Carbon Reduction Highways Maintenance Programmes.

Calderdale has the ambition to be Carbon Neutral by 2038 and delivering a carbon neutral surfacing scheme with Milepave complimented this goal. We worked closely with the Highways team to identify the sites and from this we designed the programme in the same way as any other surfacing scheme. The difference, however, was that running parallel to this, the Environmental and Communications team were heavily involved in supporting the scheme and delivering the message on the innovation and benefits to the authority and the residents of Calderdale Council.

> With Calderdale there was a real desire to embrace and address carbon issues associated with highway maintenance

R: How did you calculate what carbon savings would be made?

TT: We've developed a Carbon Calculator to accurately identify the Carbon Footprint of our surfacing projects. This has been developed, audited and assessed by Carbon Footprint Ltd, who are audited by QAS (Quality Assurance Standard for Carbon offsetting), VCS (Verified Carbon Standard), CFS (Carbon Footprint Standard) and Ricardo-AEA Ltd. The data for the Carbon calculations is derived from numerous verified databases including the Inventory of Carbon & Energy (ICE), The Environment Agency & DEFRA, this data is also cross checked with our suppliers information.

The Carbon Calculator allows us to compare Milepave against conventional Asphalt materials and work out the subsequent savings.

R: How do you work with clients to offset the carbon needed to achieve 'Carbon neutral'?

TT: There are a variety of Verified Carbon Standard (VCS) and Gold Standard accredited carbon offset projects available both here in the UK & abroad. Sadly certified schemes in the UK are currently limited, but this is something we are seeking to change. Our first steps are to understand the client's policy concerning offsetting. Once this is identified a scheme can tailored to suit this policy. It is our hope that more environmentally sustaining schemes such as seagrass planting, acid lake regeneration and the like, will become accredited in the coming months and we are actively trying to drive this.

R: What role does Milepave play in all this?

TT: Milepave is, by design, a low carbon surfacing material that utilises less

> At Miles Macadam we're attempting to lead by example on carbon reduction and innovation

resources and lower mixing temperatures than conventional asphalt. Milepave consists of a paver laid open graded receiving course. The open graded element enables us to achieve a greater spread rate per tonne leading to a 12.5% aggregate saving. It also has a lower binder content which offers a 20% saving in straight run bitumen; a highly carbon intensive constituent. Added to this it is a warm mix material. The result is a process with lower carbon credentials yet a proven track record in longevity and performance.

R: How far can we go with carbon reduction in the highways sector?

TT: As an industry we are beginning to see a real change in focus towards carbon awareness, analysis and reduction.

Highway maintenance will always have a high carbon footprint as will construction, but great efforts are being made in these sectors. Last year warm mix asphalts only accounted for 4% of all asphalt production in the UK but this year that percentage is rising significantly.

Other factors being utilised is the use of lower PSV aggregate for low speed areas of the network sourced locally, rather than using finite sources of high PSV stone. These are all positive steps.

At Miles Macadam we're attempting to lead by example on carbon reduction and innovation. As a company we are actively encouraging our sub-contractors to embrace carbon neutrality, which in turn will raise their awareness around carbon usage and reduction techniques.

We're also trying to lead on carbon offsetting which will always be needed to achieve a Net Zero status, whilst driving an initiative for the Government to set up a National carbon bank, to standardise credits and centralise carbon reduction schemes.

R: What advice would you give any local authorities setting out on the journey of carbon reduction?

TT: In 2019 most local authorities declared a climate emergency and the vast majority have Net Zero or Carbon Neutral ambitions. Carbon reduction involves many factors, both large and small, which collectively will make a difference.

Any carbon policy needs to be clear and direction and decision making taken on a multifaceted approach involving all departments. Colleague engagement is key, so that they are clear and supportive about the policy and objectives.

For carbon reduction to take off, it is vital that we all understand the aim, embrace the idea and are encouraged to seek out personal and corporate carbon reductions.

About the RSTA

The Road Surface Treatments Association (RSTA) aims to raise awareness of the benefits of road surface treatments and promote workforce competence and safe working practices.

Membership covers the whole supply chain and includes large national and regional contracting companies, Local Authority Direct Labour Services Organisations, materials and equipment suppliers, test houses and consultants.

Members are required to be registered with the National Highway Sector Scheme 13 or HAPAS Product Certification and Approved Installers Schemes where applicable.

For further information on the RSTA, its objectives, membership and programme of industry initiatives and training visit www.rsta-uk.org.

Follow us on Twitter, LinkedIn and YouTube

Traffex

NEC Birmingham, UK

14-16 June 2022

See us on stand

G120

RSTA

A CONCRETE REPAIR SOLUTION FOR LOCAL ROADS

Concrete carriageways have been in the news over the last year as National Highways started major concrete upgrades on parts of its network, also producing its first concrete roads handbook in more than 30 years, bringing together the latest updates, advice and guidance from industry experts on how to maintain, survey and repair roads.

The new Concrete Pavement Maintenance Manual is a key part of National Highways £400m nationwide drive to revitalise concrete roads in England.

But there are many concrete roads managed by local authorities too.

Historically concrete pavements were installed with the expectation for them to last forever but we all know without regular appropriate maintenance this is not the case.

The traffic volumes on the primary highway networks have increased tremendously over the last 20-30 years, leading in many instances to earlier-than-expected failures of highway pavements.

Many local authorities over the years have utilised thin bitumen-based overlays, such as slurry seals or micro asphalts, as a maintenance tool for concrete pavements. These treatments can offer a quick cost-efficient option, initially providing a uniform appearance with a smoother and often quieter running surface.

roadtechs

Fast forward to today and there are many locations across the UK where the bituminous surface layer has delaminated and failed for a variety of reasons. Such failures typically start at the structurally weak points in the underlying concrete pavements, such as concrete bay construction joints, existing utility reinstatements, access chamber locations and other defective areas resulting from slab movement and displacement.

Road operators are often unhappy with the appearance of their roads and want something done about it. From the local highways perspective, the question is what are the options? Do they remove the overlay material — what is left of it that is and then what? The thin surfacings were probably installed in the first instance to cover over a range of defects and now these will have to be dealt with. Often the budget will not be available to have a full depth reconstruction.

So, there are a number of questions, what are the defects likely to be, how can they be repaired and can further additional life be achieved from what is often a sound substrate. The overriding question is how much this is going to cost and who has experience of dealing with these unique environments?

As an industry, we continue to develop techniques and procedures that will result in cost effective and longer lasting pavement rehabilitation. Roadtechs have collaborated exclusively with Power Plane to deliver solutions on both local authority and strategic road network (SRN) throughout the UK. The repair process involves the removal of the existing thin surface treatment and retexturing of the underlying concrete pavement via planing and fine milling with any required repairs being treated with Roadtechs Techcrete material.

Brighton & Hove is an example of a local authority that still operates and maintains considerable concrete carriageways that when left alone will deteriorate slowly over decades.

Alongside this, the City Council has a push to become Carbon Neutral in 2030, and the Highway Asset Maintenance Team decided it needed to become ‘Carbon Clever’.

Looking at the way they traditionally dealt with maintenance of its road network and where value engineering and the change of process can reduce the carbon footprint of a scheme, without impacting on the long-term resilience of the solution, has become a key part of this thinking.

County Oak Avenue in the city, was a case in point, a concrete road that had been overlaid with a thin Micro asphalt (there are many roads like this in the City) - aesthetically it was looking tired and needed an effective maintenance solution before more long-term issues started to arise.

Working in partnership with Brighton & Hove City Council's Term Maintenance contractor, RJ Dance, Brighton & Hove City Council engaged with Roadtechs and Power Plane to deliver concrete pavement rehabilitation works at County Oak Avenue, Brighton.

As an industry, we continue to develop techniques and procedures that will result in cost effective and longer-lasting pavement rehabilitation. Concrete pavement rehabilitation with fine milling and Techcrete repairs is one such technique.

The work on this scheme in Brighton & Hove included:

- Removing the thin microasphalt surface, using a fine milling machine
- Repairing all the joints using Roadtechs' proprietary product - Techcrete
- Fixing failed gullies with a five-year warranty
- Replacing the failed speed humps and dealing with the ponding issues around them – using Roadtechs proprietary repair system, Techprint pattern imprinted paving

During the works, near a local primary school, we gained an audience with some of the children intrigued as to what we were doing and the vehicles we were using. Our site supervisor took some time to explain the process to the children and their parents which was very well received (and will hopefully encourage our highway engineers of the future!).

The picks used by Power Plane are diamond tipped as these are very hardwearing allowing them to retain their shape when used on concrete surfaces and therefore provide a consistent finish. Once down to the concrete the aim is to remove between 3mm and 5mm from the existing worn and polished concrete pavement using average beam technology. The process retextures and realigns the surface restoring it to an as-new condition. Laser levelling ultrasonic sensors, averaging beam and PTS, enables in some instances the carriageway to be reprofiled and retextured in one pass.

County Oak Avenue BEFORE

AFTER

Once the fine milling process has been completed, the underlying pavement joints, cracks and other areas of potential weakness and failure are all treated with Techcrete.

Techcrete is a concrete repair innovation designed, manufactured, and installed inhouse by Roadtechs and is National Highways and TRL approved.

The installed repairs, provide excellent adhesion and extension at relatively shallow depths (20mm to 50mm being the norm), whilst maintaining high tensile strength and compressive resistance.

The flexible qualities of the product, allow the material to absorb the movement ranges associated with concrete pavements, without needing to introduce additional expansion and contraction joints.

This solution enables in-situ localised repairs, is versatile in the types of repairs and is rapid setting, thereby being suitable for short duration closures. It typically takes around 30 to 40 minutes to cure before the carriageway can be reopened to traffic, making it a very fast, durable, and cost-effective repair.

The process restores ride quality, seals the surface from further water ingress and the use of high PSV aggregates, provides a safe durable repair in the rehabilitating concrete carriageways.

This process has also successfully been repeatedly undertaken on other local authority networks in Essex, Surrey, Hounslow, and Medway Towns in recent years.

PROFESSIONAL TRAINING

RSTA in association with XAIS

SKID RESISTANCE

INTEGRATED ASSET MANAGEMENT COURSE

ABOUT THE COURSE

All Local Authorities are required to manage their road maintenance programmes in line with the Code of Practice "Well Managed Highway Infrastructure" which promotes the adoption of an integrated asset management approach delivered by competent staff.

In section B.5.6.2 the code specifically states that Authorities will need to define "competence levels of staff to set or approve Investigatory Levels" and that "each site investigation should be undertaken or led by suitably competent personnel".

This two-day course has been developed by the RSTA together with XAIS Asset Management to help staff gain a competency and be able to demonstrate this competency to auditors.

By attending the course, delegates will:

- learn how to develop a hierarchy for their road network
- develop the skills needed to identify appropriate risks
- gain a complete understanding of the entire skid analysis process – including insight into the award-winning LASR Approach methodology
- know what information to collect in order to identify and prioritise the appropriate action
- understand the availability and suitability of different treatments/materials
- understand the implications of using different solutions
- understand the key elements of maximising best value and minimising whole life costs.

The course ends with a test paper that will enable delegates to demonstrate their understanding and competency in the subject.

COURSE DATES

4/5th May 2022
The Ridgeway Centre
Featherstone Road
Milton Keynes, MK12 5TH

10/11th May 2022
A K Bell Library
2-8 York Place
Perth, PH2 8EP

28/29th June 2022
LCRIG, The Beehive
Shadsworth Business Park
Junction 5, M65
Blackburn, BB1 2QS

SEE A PREVIEW OF THE COURSE AGENDA ON THE NEXT PAGE

Competency and CPD certificates will be made available to attendees.

In addition to learning about managing the skid resistance of the road network attendees will be provided with information about the RSTA highway sectors and the free to download Codes of Practice and other Guidance Documents available from the RSTA website, to provide them with the information they need to be an informed client.

To book a place or for further information please contact the RSTA at:

e enquiries@rsta-uk.org

t 01902 824325

Visit the RSTA online at:

rsta-uk.org

Empowering councils with comprehensive roads data

News from this year's ALARM Survey of a growing maintenance backlog suggests that it is more important than ever to have an accurate and detailed picture of the state of the local road network.

Reliable, safe roads are fundamental to our everyday lives and to flourishing communities and economies.

Their performance and condition hinges on the decisions of their owners and operators.

Every day, local authorities face the same challenging questions: Which roads to prioritise for treatments? How to defend those decisions? How to apportion resources and grapple with tightened budgets? How to build cases for further funding?

To address these problems, asset managers need one critical 'tool' - data. That data must be detailed, accurate and comprehensive and help them to build a rich understanding of the asset, its existing condition and its likely condition in 5/10 years.

It must also enable them to confidently answer the 'what if?' questions – What if we intervene with this material? What if we take this action?

It should support them to take the best decisions over the whole-life of the asset – ensuring its reliability and continued high performance.

Technology – transforming condition surveys

For many years, local highway authorities have relied on the Surface Condition Assessment for the National Network of Roads (SCANNER) survey system for capturing and submitting roads condition data to Government.

But, advances in technology have resulted in a number of competing systems coming to market. Today, these are transforming how condition surveys are undertaken and the outcomes that result for the network operators and for the customers who use our roads every day.

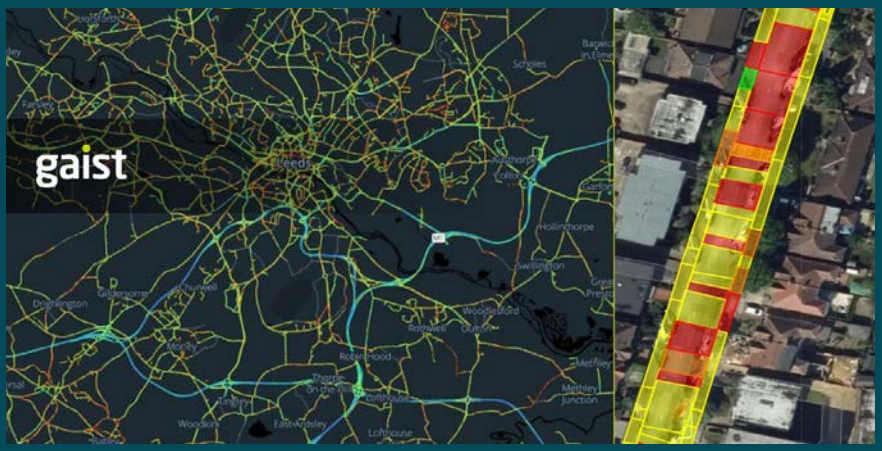
At Gaist, we identified the need for this many years ago. We set to work to produce a new type of solution that would harness

technologies to provide the deep intelligence on the road and roadscape that is vital to inform the most effective repair and maintenance strategies.

The advanced processes underpinning our condition surveys enable us to capture the most detailed possible information on the highway and present our customers with a level of analysis and modelling which has not previously been possible.

The benefits include:

- High-definition data in an unparalleled level of detail, covering over 35 different defect types and providing a new level of understanding for asset managers.
- User-friendly, colour-mapped analysis
- Integrates with existing asset management systems at no additional cost
- Sustainable: Gaist is accredited to ISO 14001, the international standard for environmental management systems.
- Cost-effective (don't take our word for it, hear from our customers below).



> It gives us fantastic data without actually having to go on site, which can be quite costly

Bristol and Edinburgh: The benefits of our new approach

More than 40 local authorities are now working with Gaist to secure the depth of intelligence and analysis they need to underpin their asset management strategies and extend the life of their networks.

At Bristol Council, Sean Taylor, explains[1] why he turned to Gaist when he began the search for solutions which would help him manage his network more effectively.

"We found SCANNER was not always providing the outcomes we needed to make informed decisions on our unclassified and urban roads.

'This gives us a real opportunity to get the best value for money."

It's the same story in Edinburgh, where Sean Gilchrist, Asset and Performance Manager for City of Edinburgh Council, explains[2] why he turned to Gaist in 2020: "Gaist carried out a full network survey for us. We had numerous data sets captured with just one drive-by survey.

"It gives us fantastic data without actually having to go on site, which can be quite costly."

With Gaist, he can also gain the holistic view of the network he needs to develop the most effective planning and maintenance strategy. "One of the main reasons we went with Gaist is that their data is compatible with Confirm (its asset management system). It allowed us to bring in that data into our existing asset management system."

Repairs and maintenance work can be properly grouped together, minimising costs and the disruption caused to residents, he explains.

If you would like to find out more and see how our data can help you, contact: **jake.lawson@gaist.co.uk**.

Further reading

1. https://www.highwaysmagazine.co.uk/Life-after-SCANNER-in-Bristol/5465
2. https://www.gaist.co.uk/wp-content/uploads/2022/02/Gaist_Case-Study_Edinburgh_Jan22.pdf

A single-point reference for road surface repairs

IKO has collated its high-performance range of highway and ironwork repair solutions into a singular point-of-service division: IKO Road. Previously called Highways and Civils, the industry-leading quality of the products contained within it remains the same.

An innovator in mastic asphalt materials, IKO has been at the forefront of the manufacture and supply of high performing, long lasting road repair products, with its range of IKO Permatrack solutions gaining an unrivalled reputation across highways, bridges and infrastructure restoration projects. From the elevated section of the M4 motorway at Chiswick (2014), to numerous bridge joints and concrete bay joints on the M25 Motorway network, IKO Highways and Civils has been dedicated to the use of mastic asphalt on highways. In recent years, the IKO Permatrack brand has grown into other fields of road and ironwork repairs under the new IKO Road provision.

British-made IKO Road surface repair range

At a time when the UK construction sector is falling prey to supply chain issues and the logistical challenges of importing goods from Europe and further afield, IKO's advanced mastic asphalt waterproofing systems are British-made in manufacturing sites across the UK. This can drive down lead times, enable better quality control and lower transportation costs. Furthermore, it is far more sustainable to choose suppliers which manufacture their products in the UK rather than import from abroad. Fewer miles result in materials with lower carbon emissions. It's an approach that aligns with National Highways, the new-look builder and operator of the country's motorways and major roads who aim to bring road maintenance and construction to net-zero emissions by 2040.

IKO constantly strives to minimise its carbon footprint as far as possible and since January 2015 has been involved in a number of emission offsetting projects that contribute to the CarbonZero™ programme run by CO2balance. In a five-year period, IKO has offset 9264.69 tonnes of CO_2 – the equivalent of 4343 returns flights to New York - through its involvement in an energy efficient stove project in Kenya and a bore hole rehabilitation project in Uganda, activities which reduce CO_2 emissions from the burning of firewood.

CASE STUDY

Laggan, Torvean and Benavie swing bridges

A crucial component of the IKO Road range, IKO Permatrack Bridge Surfacing mastic asphalt is a long-established surface course for steel bridges. It provided the waterproof surface course finish for three swing bridges based in the Scottish Highlands. Located in Laggan, Inverness and Fort William, each structure was in need of a proven surface solution which offered a voidless application without the need for compaction. IKO Permatrack Bridge Surfacing mastic asphalt proved more than capable for the task.

Challenges

For each project, IKO Permatrack Bridge Surfacing was supplied ready-to-lay for installing contractor BriggsAmasco. This in itself presented a challenge due to the projects' remote location. To prevent the products' consistency from altering in transit, IKO had to ensure the material's mix composition and temperature control were correct at the point of manufacture. This meant that 11 hours after leaving IKO Grangemill's production plant, the IKO Permatrack Bridge Surfacing solution was in prime condition upon its arrival on site.

Collaboration

A close working relationship between IKO and BriggsAmasco was crucial to the success of each swing bridge project. The collaborative effort proved particularly useful to ensuring material deliveries to Torvean Swing Bridge arrived on the agreed date despite severe snow storms causing disruption throughout the region at the time. The fact that the hot charge works arrived safely and ready-to-use

despite the poor weather and long journey involved was due in no small part to IKO employing its haulier, Punchards Haulage Ltd, to supply the additional drivers and vehicles required.

IKO Materials

IKO Permatrack Bridge Surfacing: manufactured under the controls of ISO 9001 Quality Management System and in accordance with the requirements of BS EN 13108 Part 6, a harmonised European standard which specifies the requirements for mixtures of the mix group mastic asphalt for use on roads, airfields, and other trafficked areas. Mastic Asphalt is used for surface courses, binder courses, protection layers, inter-layers for bridges, tunnels and troughs.

Laggan Swing Bridge

Torvean Swing Bridge
Inverness

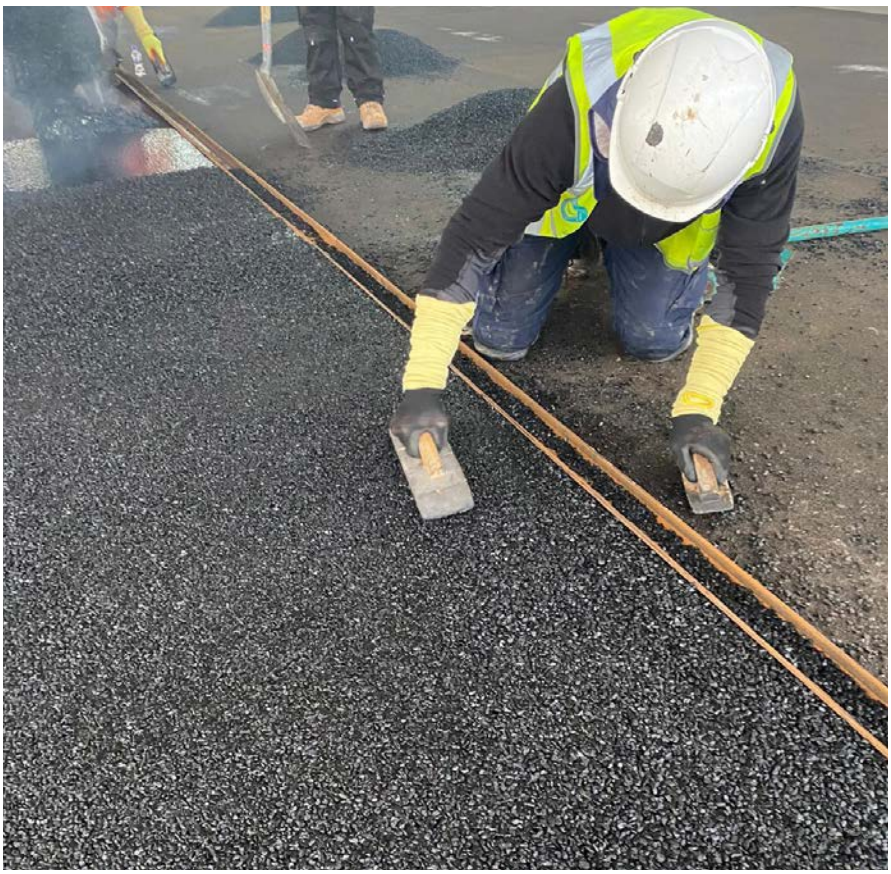
Approximately 32 tonnes of IKO Permatrack Bridge Surfacing were supplied and installed across a 320m^2 area for this new bridge construction, which was carried out by Briggs Amasco for Leiths (Scotland) Ltd, who were a subcontractor to R J McLeod. BriggsAmasco installed nominal 40mm IKO Permatrack Bridge Surfacing on a PMMA liquid waterproofing system which included a suitable tack coat.

Laggan Swing Bridge
Laggan

A total of 30 tonnes of IKO Permatrack Bridge Surfacing was supplied for this refurbishment project. The programme involved stripping the existing surfacing and installing 40mm IKO Permatrack Bridge Surfacing mastic asphalt on nominal 5mm IKO Permatrack PSB rubberised bitumen waterproofing. Whilst the mastic asphalt was still hot, 6mm bitumen-coated chippings of a high PSV aggregate were broadcast into the surface to provide texture and skid resistance.

Benavie Swing Bridge
Fort William

Approximately 7.5 tonnes of IKO Permatrack Bridge Surfacing were supplied. This involved a series of 40mm thick patch repairs to replace the existing and bring the surfacing back to an acceptable standard. The works to the Benavie and Laggan bridges were carried out under the watchful eye of the client BEAR Scotland.



Conclusion

For each of the above projects, IKO Permatrack Bridge Surfacing proved its quality in terms of its excellent usability and in-situ performance. Unlike conventional road asphalts IKO Permatrack Bridge Surfacing can be laid relatively thinly – either by hand or suitable laying equipment at a nominal 40mm – whilst contributing to a surface's overall weather tightness. In total, 69.5 tonnes of mastic asphalt was installed on the above projects, which equates to offsetting 10.88 tonnes of CO_2.

With IKO Permatrack Bridge Surfacing, specifiers are also provided with assurances from test data for Resistance to Fatigue, Indirect Tensile Stiffness Modulus, Retained Tensile Strength (Freeze/Thaw), Bond Strength. Such peace of mind is testimony to this product's tried-and-trusted credentials in bringing a wide range of projects to a successful conclusion over many years, with its quality likely to be keeping our roads and bridges safe and operational for many years to come.

RSTA

WWW.RSTA-UK.ORG