

# Highways

MAY 2020

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## Crossing the inflection point

### INSIDE

- COVID-19 recovery plans revealed
- Modelling a changing world
- The great reallocation

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# Opportunity at a point of juncture



ll things must pass, even global pandemics. The prime minister has said we are past the peak and the economic recovery is almost underway. The roads industry is already in recovery mode, as we reveal exclusively in our news pages this month. There is still a lot of uncertainty, but one thing is clear; the highways sector can take great pride in the work it has done, at no small risk, to make sure the country keeps operating. Never doubt that you are critical workers in a critical sector.

After great tragedy, societies and individuals want to know that something good will come out of so much loss. We want to know it hasn't all been for nothing. A central theme to this issue is what the long-term changes could and should be.

Will we see more home working and could this mean transport and traffic decouple from their familiar position as proxies for economic activity? Or could we see a boom period as people flood our roads and public transport, desperate to get out of the house and back to old routines? People could use cars more, so as to social-distance while travelling, or traffic could be limited through less road space as councils allocate more to the increasing levels of cycling and walking. Many urban authorities will certainly consider the opportunity to hold onto cleaner, legal, levels of air quality as a priority. While some will feel new infrastructure projects, including new roads, are a priority for boosting the economy.

We should be wary of making prophecies based on anomalies, but by the same token, we should be wary of falling for self-fulfilling prophecies, as can happen with predict and provide. In this sector, we have long known that transport can be used as a proxy or indicator for many underlying aspects of the economy but we also know that infrastructure strategies and investment have major social outcomes. We are building places in themselves, not just something to move past but somewhere we want to be.

We now have a benchmark for what our essential services are. We also have a baseline for the essential transport and traffic related to these services. This will no doubt fascinate economic and transport modellers for some time. And if it doesn't necessarily help us predict the future, it can at least help us shape it.

The most important question is what do we want the long-term impact to be. The whole country is in a moment of transition, which means there is a lot up for grabs. What happens in the next few years could change the shape of our industry for decades to come. New forms of collaborative working could take shape in all areas; from project contracts, to supply chain planning, to relationships with government and between key bodies.

For now, we must keep up the fight against COVID-19. But in this moment of change let's try and push things forward a little; let your dreams become ambitions, develop your ambitions into plans, and when tomorrow comes, make your plans a reality.



**Dominic Browne**  
Editor  
*Highways Magazine*

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# Sector maps out route to recovery

The Government and the Highways Sector Council (HSC) have formulated the beginnings of an exit strategy and recovery plan to boost the sector as it emerges from the COVID-19 crisis, *Highways* can reveal.

The first building block is 'Project SafeStart', which has seen council directors' body ADEPT and HSC release highways-specific safe operating guidance for the COVID-19 period.

The published guidance states: 'These are exceptional circumstances and the industry must comply with the latest Government advice on coronavirus at all times'.

It adds that 'if a depot or site is not consistently implementing the [new guidance] measures...consideration is to be given to safely closing it down'.

The document covers:

- When to travel to work
- Travel to depot/site
- Driving at work
- Depot/site access points
- Hand washing
- Toilet facilities
- Canteens and eating arrangements
- Changing facilities, showers and drying rooms
- Work planning to avoid close working

- First aid and emergency service response
- Cleaning

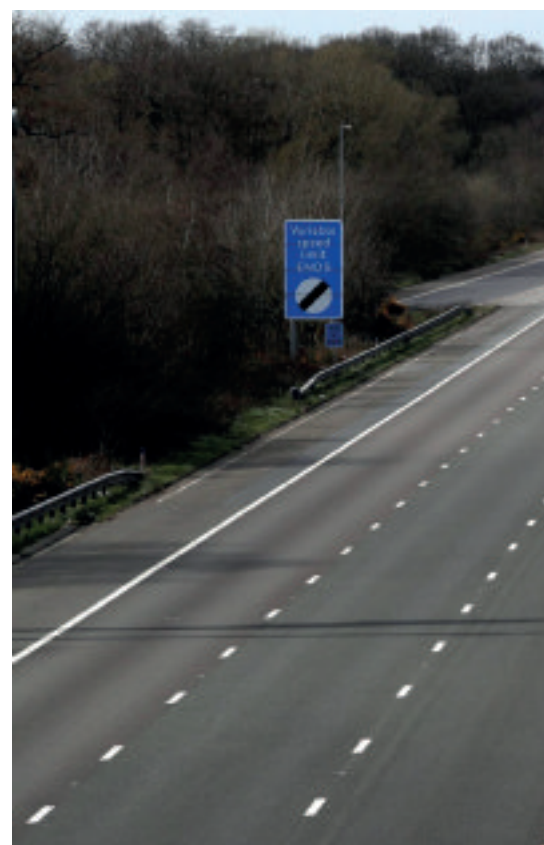
There is also an embryonic plan for the post COVID-19 recovery. The Department for Transport (DfT) asked the HSC to draw up the plans to 'accelerate' major maintenance and shovel-ready essential highway projects on all local authority highway networks.

The HSC plans identified 'Emergency/Critical Work' based around Tier One contractors, 'Key/Urgent Work' based around Tier Two and 'Planned Work' for Tier Three companies and specified the different works related to all three.

The HSC, which launched officially this month, includes Highways England, major contractors and professional bodies such as the Chartered Institution of Highways and Transportation, and is supported by ADEPT.

Chair of the ADEPT engineering board, Mark Stevens, who also sits on the UK Roads Liaison Group (UKRLG), revealed that Project SafeStart sets out a broad framework by which the highway sector can either stay as close to business as usual as possible, or, where organisations have scaled back, begin recovering some of the ground lost.

'Project SafeStart is about ensuring that the preparation and delivery of programmes



that are preventative, planned and restorative work continues to an enhanced scale where possible to capitalise on a local road network that has significantly reduced traffic volume,' he said.

While the post COVID-19 recovery plans are still at a formative stage, they are said to reflect a request from the DfT that HSC

## Four-pronged strategy for RIS 2 concrete works

Highways England has broken up its £400m concrete works for the second Road Investment Strategy (RIS 2) into four elements.

The Government-owned company has released a prior information notice on a three-part £330m programme across 2021-2025 covering design consultancy services, reconstruction and lifecycle extension frameworks. Contract notices on these frameworks are expected next month.

Highways England said the strategy is to procure the three frameworks as follows:

1. **Design** – two suppliers providing full design, technical assurance, site supervision and project management capability.
2. **Lifecycle extension works** – a multi-lot

specialist contractor framework that will deliver focussed repairs; two suppliers for each of the following specialisms: joint repairs, bay replacements, surface treatments and slab levelling (eight suppliers in total).

3. **Reconstruction works** – two suppliers to be appointed on a design and build arrangement with works to include demolishing existing pavement and replacement with new (flexible or composite), overlaying of concrete pavements and changes to or replacement of associated assets such as sub-surface drainage.

Highways England told *Highways*: 'The services being procured through this PIN will be a four-year framework from 2021 – 2025 up to a value of £330m. We need to do

some investigative work – largely surveys – in year one of this roads period (2020). This work is valued at circa £70m and is being procured separately off an existing framework. This makes up the remainder of the £400m that was published in the RIS.'

Highways England's strategic roads network (SRN) includes approximately 1,000 kilometres of concrete pavement.

The RIS 2 document says: 'It will take around 25 years to complete the task in full; but the process begins now, with around £400m of investment over the period 2020-25.'

Highways England intends to host a tender launch event or series of events anticipated to be this month (May). 🚧





maps out 'what a recovery looks like and how it can be best achieved'.

Mr Stevens told *Highways* that the advice was to take advantage of the empty roads as much as possible in the short-term to medium-term, seen as up until June and on to February 2021.

Following that there was the potential to

reshape the nature of the network and how we use it for years to come.

Mr Stevens said that 'the normal working landscape that we have been used to has to change' adding that 'ironically the scope exists for the current COVID-19 crisis to act as a catalyst for the positive change that the highways sector council

originally sought to establish'.

'The first phase of recovery must be to seize the opportunity of a quiet network. In simple terms, this means the UK Government confirming its funding allocations for this year, clients accelerating their works programmes, contractors and their supply chains re-mobilising; combined with asphalt and concrete plants reopening, materials suppliers reopening their doors and waste management once again handling recyclable and non-recyclable waste.

'But the second phase is crucial too; rethinking how our local road network is used and managed and that includes increased use of sustainable travel, how goods and services can be procured differently, how projects, be they shovel ready or otherwise, can move more swiftly through procurement to actual delivery, how contractual payments at all levels can be accelerated and exploring what other constraints can be relaxed to facilitate all of this.'

HSC chair Leon Daniels told *Highways*: 'It is self-evident that with so little traffic on the roads it is possible to do work safely with less disruption. Across England, there has been some difference across how all highway authorities approach this. [However] there is a great feeling we should seize this opportunity.

'More sustainability is definitely on the agenda. We must not allow this to set back efforts on air quality. Government and councils need to be encouraged to use this chance to supercharge air quality efforts. I think the Government will come forward encouraging this. The Government will want to advance this agenda.' 🚫

## Legal challenge to RIS 2

Environmental campaigners have launched a crowdfunding campaign to raise £38,000 to take the Department for Transport (DfT) to court and block the second road investment strategy (RIS 2).

The Transport Action Group plans to launch a judicial review with the High Court against the roads programme on environmental grounds, in the wake of a similar, successful challenge against Heathrow expansion.

In a statement, the group said: 'Scaling back RIS 2 to focus on maintenance would allow money to be diverted into public transport, rail freight, cycling and walking. We would have cleaner air and less risk of runaway climate change. With more funding, local councils could finally tackle potholes on their existing roads;'

A DfT spokesperson said: 'The second Road Investment Strategy is consistent with our ambitions to improve air quality and decarbonise transport. We will respond formally in due course.' 🚫

## COVID-19 tests for workers

The Government has set up an online booking system for key workers and their households to arrange a test for the coronavirus; this includes frontline highways and transport workers.

And as part of a recent expansion of the testing programme, symptomatic workers who are unable to work from home, including in construction and infrastructure staff, can also book tests.

Health secretary Matt Hancock said: 'Essential workers will be able to go on <http://gov.uk> and get a test for any of their staff who need a test. Workers will also be able to book an appointment for themselves directly.

'This applies to people in essential workers' households, who will be able to get a test too.

'Any worker who needs to leave their home to go to work, and their households, if any of them have symptoms can also get a test. This means construction workers to emergency plumbers, research scientists to those in manufacturing, can now be tested.' 🚫

## Trio named for £4bn SMP

Highways England has named three contractors to deliver a smart motorway programme (SMP) worth up to £4.5bn.

Costain has secured the northern region, BAM Nuttall/Morgan Sindall joint venture is reported to have won the Midlands and Balfour Beatty the southern area.

The 10-year framework will see the SMP Alliance deliver the key smart motorway elements of the Government's second Road Investment Strategy.

Costain is in line to deliver the A66 to Scotch Corner project worth around £1bn and the M62 Huddersfield to Rochdale smart motorway upgrade.

Alex Vaughan, CEO of Costain, said: 'This strategic programme will deliver the much-needed capacity and safety improvements across the strategic road network in England.'

Costain has also been awarded a £210m design and build contract by Highways England to upgrade an existing section of the A30 north of Truro, Cornwall. 🚫



by Dom Browne

# Highways England gets set to tender for £3.6bn framework



Highways England plans to continue normal procurement processes throughout the coronavirus crisis

Highways England is set to tender a £3.6bn, six-year Operations Scheme Delivery Framework (OSDF) this summer, having published a prior information notice announcing plans for virtual market engagement.

Throughout the coronavirus crisis,

Highways England plans to continue normal procurement processes, with a contract notice for the new framework set to be published in mid-June.

Malcolm Dare, executive director for commercial procurement at Highways England, told suppliers: 'I would like

to stress that all planned and ongoing procurement activities are continuing and they will be published via normal channels. For instance, this week we released the PIN for the £3.6bn, six-year Operations Scheme Delivery Framework.

'C-19 related challenges might result in delays to our normal approval times, but I would like to re-emphasise that we are continuing to operate as close to business as usual as possible.'

The PIN notice states: 'It is envisaged that this framework will straddle two Road Investment Strategy (RIS) periods (RIS 2 and RIS 3) enabling a smooth transition between them. Works for schemes have been divided into a number of workstreams that align with the contractors' specialisms, and will also include design. Bandings have been introduced into the framework model to differentiate some contracting terms between bands.'

Highways England will be hosting virtual market engagement activities to support the design of the procurement for the OSDF. ➔

## Marlborough smoothes the road for potential £156m

Marlborough Highways has scooped a potential £156m worth of work in London with the boroughs of Hackney and Haringey.

It has extended a relationship with the London Borough of Hackney that began in 2011 by clinching a new term maintenance deal worth up to £100m and bagged a £56m highways maintenance contract with Haringey.

The four-year Hackney contract starts in July and has an option to extend by a further four years and comes as the council hopes its highways operations can play a part in reducing carbon emissions.

Cllr Jon Burke, cabinet member for energy, waste, transport and public realm, said: 'We're looking forward to partnering with Marlborough Highways, who will help us tackle the climate emergency,

reach net zero emission by 2040 and meet ambitions to make our transport network even more sustainable.

'This will be achieved through new LED lighting upgrades across the borough to reduce energy consumption, improved facilities for pedestrians and cyclists, sustainable urban drainage and the largest urban street tree planting scheme in the country.'

Marlborough began working with Haringey last October on a four-year street lighting contract and starts work on the new highways maintenance deal in July.

Matthew Revell, managing director at Marlborough Highways, said: 'We have been working really well with Haringey on the street lighting contract and we are thrilled to have now also been awarded their highway maintenance

contract.

'We look forward to developing the relationship with Haringey further, providing a consolidated service between the two contracts.'

The work covers carriageway, footway and cycleway maintenance, along with new build highway projects such as junction improvements, traffic calming measures; gully, drainage works and sustainable drainage systems.

The Haringey deal will run for two years with the option of a further two years.

Marlborough will also provide emergency 24/7 response for the duration of the deal. The contract was awarded through the London Construction Programme (LCP) major work framework, which was set up in 2019 to cover contracts being awarded between £1m and £20m.

Highways is one of five



sectors covered by the framework along with housing & residential, education & leisure, capital projects and historical & heritage. While other sectors featured a number of different lots, the highways section of the framework featured one single pan-London lot.

Marlborough is up against FM Conway, Geoffrey Osborne, McLaughlin & Harvey and Thomas Sinden for any contracts that local authorities decide to use the LCP to procure work for. ➔

## Contracts round-up

■ Transport Scotland has started procurement for a pair of operations and infrastructure services contracts worth up to £70m. The agency is letting a £21m deal to operate the National Control Centre in South Queensferry, and a £49m contract to maintain its Intelligent Transport System and the design and construct of new infrastructure requirements. Interested contractors can bid for both deals, but one contractor cannot win both contracts.

■ Hertfordshire County Council has appointed Interserve Construction to carry out the final phase of a £23m improvement project on the A602. Environmental works have been carried out in recent weeks along



parts of the route between Tonwell and Watton-at-Stone, including ecological work and the removal of vegetation in preparation for construction to begin this summer.

■ Bethell, Dowhigh and Urmston-based J Hopkins Contractors are chasing a £1m package for surfacing works at various sites across Manchester for the city council. Tenders have been returned and the winner should be announced before the autumn. The deal, which also includes drainage, kerbing, road markings and service duct works, is due to start in 2021 and run for four months.

■ A total of 10 consultants have won places on a framework to provide transport advice to the UK's biggest housing association, London & Quadrant. The successful consultants are Ardent Consulting, Curtins, Jubb Consulting, Markides Associates, Pell Frischmann, Steer, Sweco, Systra, Velocity Transport Planning and WSP. The framework will run until 2024, and the value of the commission for each consultant has been estimated at £189,000.

■ Eric Wright has beaten a fleet of other contractors including Scottish outfit I&H Brown to a £2.5m deal to carry out a batch of



improvements to Whalley Road in Blackburn. The scheme for Blackburn with Darwen Borough Council comprises the creation of a signalised junction on the A677 and an access road to form an entrance to the Lancashire Advanced Engineering and Manufacturing Enterprise Zone at Samlesbury. Work will start later this year and run for around seven months.

■ Carlisle-based RH Irving has bagged a £1.1m deal to build a new section of road linking Greystone Avenue to Glenwhargen Avenue at Kelloholm in Dumfries. The project for Dumfries & Galloway Council will also include access to associated works. Work is expected to start on site this autumn and will take around six months to complete. —

## Three bid for £135m Enfield scheme

Three contractors will submit bids this month (May) for places on a £135m highways and infrastructure framework at the Meridian Water residential scheme at Enfield in north London.

BAM Nuttall, VINCI and VolkerFitzpatrick are in the running for places on the agreement with the London Borough of Enfield.

Enfield Council's leader, Cllr Nesil Caliskan, said: 'We are looking for a world-class partner to help us deliver a world-class development and our shortlisted contractors leave me in no doubt that we have selected a strong field of potential partners, all of whom have a proven track record of delivering exceptional results.'

The main project on the framework will be delivering a boulevard through the £6bn development, which will eventually feature 10,000 new homes on an 85-hectare site



*Aerial view of how Enfield's Meridian Water scheme will look*

adjacent to Lee Valley Regional Park and within the London-Stansted-Cambridge Corridor.

The new highway will stretch from a new rail station to Lee Valley Regional Park.

Other work on the framework will also include delivery of more roads, bridges and flood mitigation measures, along with electricity, communications, water and sewage connections and new parkland.

'Improved transport links and infrastructure opens up opportunities for local people by providing better access to jobs and opportunities that are further afield

and improving their life chances,' added Mr Caliskan.

The infrastructure works are being funded by a £156m housing infrastructure grant from central government and will run for four years. All of the bidders could be successful, as the council has reserved the right to appoint up to three contractors.

Work has already started on the residential development. The £250m first phase is being delivered by Vistry and comprises up to 725 residential units, the new station building and associated interchange and drop-off facilities. —



# Kier pushes on despite troubled times



By Steve Menary

Kier has started this year with a surge in roads work and topped the quarterly top 20 in Glenigan's latest contracts leagues survey.

The firm bagged £324m-worth of work, including a £163m deal to improve access on the A5036 at the Port of Liverpool and an extension to its highways maintenance contract with Northamptonshire County Council worth a potential £120m.

Kier also landed a £38m interim contract on Birmingham's

Top 20 roads contractors – year to March 2020			
Client	No	Total (£m)	Last qtr
Balfour Beatty	26	1,183.4	1
Royal BAM	3	823.4	-
Tarmac	56	800.8	2
Eurovia/Ringway	11	599.0	3
Kier	12	593.6	14
Graham	11	544.5	6
Galliford Try	14	511.0	4
Farrans	4	269.4	10
FM Conway	9	253.8	17
nmcn	5	244.1	9
Interserve	3	238.9	11
Morgan Sindall	3	238.1	13
VolkerWessels	20	230.9	8
Bouygues UK	15	158.2	
Wills Bros	7	108.9	
One Group	9	98.9	-
Skanska UK	5	78.6	
Aggregate Industrues	5	77.3	20
Esh Group	6	62.9	
RJ McLeod	7	60.4	

Top 20 roads contractors – three months to March 2020			
Client	No	Total (£m)	Last qtr
Kier	5	323.8	11
Costain	1	290.0	-
FM Conway	4	187.3	-
Graham	2	140.0	3
Tarmac	12	124.7	1
Carey	1	117.5	-
Murphy	1	117.5	-
Galliford Try	3	46.9	4
One Group	3	41.1	-
Balfour Beatty	6	34.6	2
VolkerWessels	4	30.7	10
Eurovia/Ringway	4	26.8	14
Royal BAM	2	23.4	-
Skanska UK	3	20.7	12
Aggregate Industries	2	19.2	-
Wills Bros	3	17.9	-
Associated Asphalt	1	17.8	-
Drainline	1	17.8	-
Mildren	2	13.5	-
Dyer & Butler	4	13.4	-

roads network while the city council finds a replacement for Amey after the deal with the contractor on its original £2.7bn concession was terminated.

The single biggest contract award in the first quarter of this year was a £290m deal for Costain to upgrade a section of the A30 including a new 12.5km stretch of road between Chiverton, Carland Cross and Chybucca.

FM Conway were ranked third behind Costain in the quarterly top 20 with nearly £190m of orders. The group extended an existing relationship with the London Borough of Southwark with a new deal carried out in conjunction with consultants AECOM that has been extended until 2026 and is valued at up to £55m by Glenigan.

**The single biggest contract award in the first quarter of this year was a £290m deal for Costain to upgrade a section of the A30 including a new 12.5km stretch of road between Chiverton, Carland Cross and Chybucca**

Graham finished last year strongly and picked up another £140m-worth of roads orders in the first quarter of this year, including a £100m contract to carry out a batch of improvements to junction five of the M2 at Sittingbourne in Kent.

Tarmac topped the final quarterly table of last year and took its order book in the six months to Q1 2020 to more than £400m. The news comes after it secured £140m-worth of roads work in the first three months of this year with subsidiary JB Riney picking up a £110m deal with the London Borough of Bexley.

Carey and Murphy also made the top 10 after a joint venture

Client	No	Total (£m)	Last qtr
Highways England	36	2,063.5	1
East Riding of Yorkshire Council	6	1,010.9	2
Lincolnshire County Council	6	679.8	3
Hampshire County Council	4	548.7	4
Liverpool City Council	4	301.2	6
West Sussex County Council	4	298.3	17
Stoke On Trent City Council	5	98.0	10
Leicestershire County Council	5	96.4	9
Nottingham City Council	3	96.0	13
Birmingham City Council	4	86.8	-
Transport Scotland	3	46.0	11
Transport for Wales	4	39.8	15
London Borough of Brent	3	38.5	14
Persimmon	5	33.4	-
Surrey County Council	1	30.0	-
Stirling Council	3	26.3	-
Manchester City Council	5	21.0	16
Devon County Council	3	17.7	-
Lancashire County Council	3	16.5	12
East Renfrewshire Council	3	15.3	19

between the pair was confirmed as the contractor on a £235m street-scene project around London's Oxford Street for Westminster City Council

Galliford Try also edged into the top half of the table after picking up a £25m job to link the A47 with the A141 between Peterborough and Guyhirn in Cambridgeshire.

Only a handful of road maintenance frameworks were awarded in the first three months of this year. One of the largest was a £500m civil engineering, highways and transportation framework covering most of the South of England issued by Hampshire and awarded to 10 firms. Elsewhere, Stirling District Council recruited 14 contractors, including Colas, for its £24m four-year road maintenance and improvements framework.

In the annual leagues, Balfour Beatty retains the top spot despite a quiet quarter, while Royal BAM returns to the top 20 after meeting the criteria of winning three or more contracts in the last 12 months. The firm's total swelled even further with the revaluation of the Silvertown Tunnel contract from £1bn to £1.2bn.

With the industry struggling in the midst of the coronavirus threat, the news that Highways England has committed to more than £2bn-worth of contracts in the past year qualifies as good news in difficult times. ➔

Top 20 roads clients– three months to March 2020

Client	No	Total (£m)	Last qtr
Highways England	14	494.8	3
West Sussex County Council	2	272.0	11
Westminster City Council	1	235.0	-
Cornwall Council	1	145.0	7
London Borough of Bexley	1	110.0	-
Northamptonshire County Council	1	100.0	-
London Borough of Richmond	1	98.0	-
London Borough of Wandsworth	1	98.0	-
Birmingham City Council	3	78.2	16
London Borough of Southwark	2	71.5	-
Essex County Council	1	40.0	18
Stirling Council	2	25.5	-
Stoke On Trent City Council	2	22.0	14
Hampshire County Council	1	21.5	-
Persimmon	1	17.8	-
Blackburn With Darwen Borough Council	2	14.0	-
Devon County Council	1	13.5	-
Bath & North East Somerset Council	1	10.0	-
Monmouthshire County Council	1	10.0	-
Worcestershire County Council	1	10.0	-

#### Table queries

The information contained on these pages represents just a sample of the construction intelligence available from Emap Glenigan. For further details of their services call: FREEPHONE 0800 373771 or visit [www.glenigan.com](http://www.glenigan.com)

#### Criteria for inclusion

Emap Glenigan receives contract submissions from numerous contractors and consultants to ensure their companies are accurately placed within the tables. For more information on how to take part in this procedure or any queries regarding Emap Glenigan league tables please send an email with your company details and a contact telephone number to: [contractsleague@glenigan.emap.com](mailto:contractsleague@glenigan.emap.com)





# Turning a new page for roads investment

**Former Department for Transport director and current director of the RAC Foundation, Steve Gooding, discusses the recent release of the second road investment strategy (RIS 2) for Highways England and the potential 'new normal' post COVID-19**



**I** was very pleased to see the publication of the second Road Investment Strategy on 11 March. Not a moment too soon, since the first road investment period from 2015 to 2020 was about to expire. Hard on its heels came the Smart Motorway stocktake, uncertainty over which undoubtedly played its part in bringing the RIS 2 publication down to the wire.

Phew. Certainty at last. The cornerstone of the RIS framework – a solid basis for Jim O'Sullivan and his team at Highways England, along with the extended supply chain, to get on and deliver.

Normally, I would have expected rather more negative comments about the quiet shelving of some major projects – including the Trans-Pennine Tunnel and the Oxford-Cambridge Expressway. And given all the anxieties stirred by the absence of a hard shoulder from our motorways, I might have thought the media would find some vocal critics of the 'smart' concept to speak up.

But these are not 'normal' times.

Before the month was out the coronavirus lockdown was upon us. I have no wisdom to offer on our national response to COVID-19. I can only offer my thanks to the key workers, including those in the highways sector, who are keeping the country going.

What, though, does the dramatic fall in traffic across the entire road network signal for the future? Might RIS 2 turn out to have been stillborn?

Not for the first time I feel the need to stress that RIS 2 is about far more than capacity enhancement projects.

Flip to page 82 of the RIS document and you'll find a hugely welcome commitment to retiring concrete pavement, the carriageways built out of large concrete blocks, which is set to absorb some £400m over the next five years. Even more – up to £450m – is earmarked for safety barrier replacement. And £1.5bn is set to be spent on the maintenance and renewal of structures such as viaducts.

Then there are the performance metrics and the intention to develop new measures for journey time reliability, and for measuring delays from incidents and holdups on the strategic road network's (SRN) boundary with local roads.

RIS 1 was a huge step forward in the way Government set out its required performance from the newly created Highways England company, and its successor bears testament



to a great deal of work invested in tailoring an improved suite for the next five years while recognising that there is more to be done.

That said, RIS 2 does have quite a slug of cash earmarked for capital enhancements – just over £14bn according to the Statement of Funds Available. The Lower Thames Crossing and Stonehenge Tunnel will swallow a sizeable chunk of this money. But the numbers have left those at the more environmentally-focused end of the transport professional spectrum questioning how it can be right for more than half of the funds available to be earmarked for enhancements when on sustainability grounds, they argue, the priority should be on reducing traffic levels, not accommodating, or even inducing, more.

Furthermore, if we look at the dramatic impact of the lockdown on traffic levels could we not see our way to a new post COVID-19 normal, where working from home and online shopping have fundamentally reduced our appetite for travel; at least for those trips which we might happily leave behind, like the congested rush-hour commute?

I have been reading and listening to quite a bit of speculation about the lasting impact this crisis might have on our travel patterns and our transport networks, and I am tempted very broadly to marshal them into two categories: 'hopes' and 'fears'.

Under fears, I put the economic fallout from businesses at best going into weeks or months of suspended animation and at worst going into administration. It seems to

me implausible to think that the economy will recover overnight, not least because it is unlikely that the coronavirus will simply be defeated rather than constrained. That has major implications for the Treasury, on top of the cost of the current bailout measures, and surely merits a re-run of the National Road Traffic Forecasts.

Turning to the hopes, I've heard and read rather more about how the crisis might result in a cleaner, greener future where we choose to travel less and when we travel we do so predominantly by walking, cycling or on public transport, and not so much about why this is likely to be so.

If the new normal is going to be different in a positive way then it's going to take some positive action to make it so, and positive action generally comes with a price tag.

And it is in the context of these hopes and fears that I suspect the economic underpinnings of the RIS 2 enhancement programme will come under scrutiny.

So my former colleagues in Whitehall would be well-advised not to assume that they will simply stand, but instead should quietly get on with revisiting and re-testing the component elements of our much-debated transport appraisal system – the prices at which we monetise the value of our time, the value of our lives and the cost of our carbon emissions.

They should do this in order to be ready to debate the costs and benefits of the new normal that the Government, post lockdown, wishes to create. ➡



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# Keeping his eyes on the road

Malcolm Dare outlines to Dominic Browne how Highways England is keeping the roads sector moving



**T**he Government has made it clear that the highways and construction sector should continue operating throughout the coronavirus crisis. Taking up the challenge, Highways England has been determined to operate as close as possible to business as usual, even speeding up payment processes to give the supply chain a boost.

With his regular messages to the sector executive director of commercial and procurement, Malcolm Dare has been leading the charge.

## What back-up plans do you have to maintain materials and supply chain support as this may start to run dry during the crisis?

Our approach is to maintain flexibility so we can blend in with labour availability in order to optimise resources.

## How do you plan to support workers who would be away from home on projects as there are no hotels for them to stay in?

We have adjusted the place of work requirements and also issued letters to companies that have requested them. By doing this we are supporting our supply chain in dealing with this challenge.

## Have you established any difference between essential work that must continue and non-essential work that you will shut down? Or will all work continue?

Safety, as always, remains our first priority. Our approach to the COVID-19 challenges is focused on safely maintaining our critical services at all times and minimising the impact on our supply chain, our customers and our staff.

Everyone knows that the roads would be less safe without traffic officers, control rooms and without maintenance and repair teams. Likewise, our construction activities are safest when they are working to plan – we do not want to leave sites unattended and unmanaged due to the risks that presents. Furthermore, we want our roads ready for when restrictions are lifted, traffic returns and the next phase of work is due.

For these reasons, and subject to future Government policy, we intend to continue construction at our sites as close to plan as possible in accordance with the Public Health England guidance. We're following Government advice and will continue to operate as close to business as usual for the foreseeable future to ensure that we support and protect our supply chain.

We ask that all suppliers support their own supply chains in the same way, making a combined effort to minimise the risk to the overall Highways England supply chain.

It has also made it clear that travel is permitted where necessary, eg for construction workers operating on sites.

We ask the supply chain to ensure that their teams have the maximum possible protection aligned to the latest government advice and that they are minimising the risk of spreading COVID-19 so that we can continue to operate safely while fully supporting our employees and the country.

## Is work on smart motorways continuing, including work to highlight emergency areas which is due to be complete this spring?

Yes. We are fully supporting the Government's response to the COVID-19 pandemic in following their policy that construction activity should continue where it can be undertaken in accordance with the Public Health England and industry guidance.

## How have your staffing levels been affected by illness and self-isolation?

So far we have not seen a significant increase in absence, but we continue to follow Government advice and taking all appropriate and sensible precautions to protect and support people who work for us and on our behalf; we're also ensuring that in so doing we maintain a safe road network.

## How are you liaising with professional bodies and sector representatives to get any messages out?

Yes, we are using trade publications like *Highways* and professional bodies so that we can ensure a breadth of coverage so that all tiers understand our direction and intent. Highways England is part of the Highways Sector Council and we have been joining the regular calls to discuss COVID-19, and we are also liaising with Government to ensure that key messages are communicated quickly and effectively.

## Is there any work you are doing now to take advantage of lower traffic levels?


Traffic volumes have reduced as a result of travel restrictions and we're assessing options. We want to ensure that any work we bring forward is planned, necessary and offers value for money and well as being deliverable in accordance with the Public Health England and industry guidance.

## Any message to the sector?

We appreciate that these are challenging times and we would like to thank our suppliers for their support. We aim to operate as close to business as usual as possible so we can support the country and the supply base by ensuring cash flows through the tiers.

Should suppliers have any questions, business challenges or ideas that you'd like to share with us, get in touch at:

Corona.Information@highwaysengland.co.uk

Or through your normal contact within Highways England. 

# ORR and RIS 2: New plans, new targets

**Adam Spencer-Bickle, head of economics and policy for highways at the Office of Rail and Road gives *Highways* an exclusive insight into the ORR's new monitoring role for Highways England over the second road investment period**



**W**

hile no one would have anticipated that the second road investment period would begin on 1 April 2020 amidst the coronavirus outbreak, it still represents an important milestone in the roads reform process.

Running through to March 2025, the second Road Investment Strategy (RIS 2) – published earlier this year by the Government – sets out the long-term vision for what the strategic road network should look like in 2050, and the steps needed over the next five years to help realise this.

It shows the Government's continued commitment to the five-year planning and funding cycle, backed by the independent monitoring of ORR and by Transport Focus in its watchdog role.

As Highways Monitor, ORR independently monitors Highways England's management of the motorways and main A-roads in England and advises government on future RIS development. In doing so, we provide independent assurance to road users, government and wider stakeholders that Highways England is held to account.

We were involved at multiple stages throughout the RIS-setting process, culminating in the RIS 2 Efficiency Review. The scope of our efficiency review was to assess the level of challenge and deliverability in the draft plans prepared by Highways England, with a particular focus on proposed efficiency improvements, and to advise and make recommendations to Government.

Those plans had good supporting evidence in many areas. They represented a step-change in quality compared to plans produced

for the first road period, reflecting the company's growing maturity and capability. However, we still found areas where they could be improved upon, including identifying more than £600m of additional cost reductions and efficiency savings.

We recommended they be put towards a newly created risk reserve. We also recommended a more challenging efficiency target, and that we should monitor and hold Highways England to account for efficiency improvements across all of its activities – and Government reflected our recommendations in the final RIS2 package.

[Following the efficiency review advice from ORR, Highways England was set the objective that during the second road investment period, it should demonstrate £2.304bn of additional savings on operating and capital expenditure.]

Our preparations for the start of the second road period did not end with that advice. In January 2020 we consulted on updating our monitoring framework and enforcement policy for Highways England, before publishing our new, combined Holding Highways England to account policy at the end of March. This sets out how we will hold Highways England to account and the actions we may take to secure improvement.

Our approach provides continuity from the first RIS to RIS 2, retaining a staged approach to the escalation of issues with a focus on early resolution wherever possible. It also expands and updates the tools available to us. For example, the inclusion of hearings provides a useful addition to our toolkit in the early resolution and investigation stage.

Our strongest sanctions such as fines, which our policy is clear should be a last

resort, remain available and have been updated to ensure they strike the right balance as a deterrent while seeking to better protect the funding available for Highways England to do its job.

Work closing out the first road period and preparing for the second is continuing in these challenging circumstances. In summer 2020, we expect Highways England to publish its Strategic Business Plan and Delivery Plan for the second road period. These documents will set out more detail on how it will deliver RIS 2, inclusive of the Government's smart motorways action plan.

The ORR has previously engaged Highways England to provide evidence relating to smart motorways safety, and the DfT's subsequent stocktake concluded that smart motorways are at least as safe as conventional motorways and it has proposed an action plan to go further in improving smart motorways.

We consider it important that Highways England continues to review and assess any evidence relating to smart motorways as more data becomes available. We will also continue to monitor the company as it delivers the DfT's action plan to improve safety.

Later this year, we will also publish our annual assessment of Highways England's performance. This year's report will differ from previous years and will provide an assessment of Highways England across the full road period, rather than focusing on the latest year.

As you would expect during this period of change, we have been engaging closely with Highways England and will continue to do so while taking a pragmatic approach to our work as a monitor. ☹





# A new Boss at the RSTA

**Paul Boss takes over as chief executive of the Road Surface Treatments Association (RSTA) on 1 July. He has more than 30 years' experience within local authority highways and since 2005 has been the highway asset manager looking after strategic, tactical and operational highway asset management in Staffordshire. He speaks to Dominic Browne about life in lockdown, the past and the future**

## Where did you grow up, and what brought you into engineering and highways?

I was born in Birmingham but grew up in Rugeley, Staffordshire, where I still live today. While working as a production controller at the local bathroom manufacturers, I saw a job advert for a highways and trench inspector at the local authority, Cannock Chase District Council, who were then highway agents for the county council. I got the job and started in 1989.

I was like a duck to water and never looked back, beginning years of day release at university studying engineering. I believe the two lots of study and experience I gained with Cannock and Stafford Borough Council, where I was taken on as an engineer and eventually became group manager for highways maintenance and traffic management, helped me to become highway asset manager for Staffordshire County Council when the highway agencies were taken 'in house'.

I later took up a similar role within the Amey/Staffordshire County Council Infrastructure Plus Strategic Partnership, a unique public/private partnership, the principles of which could successfully be taken up by many authorities throughout the country.

## Can you tell us some of your career highlights so far?

As team leader for highway maintenance and traffic management at the Stafford Borough Council highways agency, I led the team to embrace preventative maintenance before the

term 'highways asset management' was as common as it is today.

Back then, most roads authorities were practicing highway maintenance management rather than the modern asset management. When I became highway asset manager at Staffordshire CC in 2005, I initially managed strategic asset management for the authority, but it was difficult to follow this through to tactical and operational outcomes as the actual design and works were under area management control and not everyone followed the strategy.

In 2009, we began a virtual joint venture with Enterprise and centralised the tactical and operational functions under highway asset management. I was able to set up my own team, with a strategy to manage our assets with reducing budgets.

I was able to make the case for additional funding using developed models that showed what was required for effective and efficient asset management. We continued to improve the network and then maintained a steady state while budgets were reduced by half, with a strategy of preventative and 'enhanced' preventative surface treatments.

## You must be sad to leave Amey and Staffs?

Leaving Amey/Staffs highways team after nearly 31 years is massive for me. I will miss working for such a great company and client and many of the people are friends as much as working colleagues. What is truly humbling is

the number of staff who, while very happy for me, are sad I am going. They were sure I would be there until retirement and tell me it just will not be the same, but the partnership will continue to prosper under the great leadership and management I leave behind.

## How is the highways sector reacting to the COVID-19 threat?

Despite the Government recommendations to keep construction going, including road maintenance and construction, many companies have had to suspend at least part if not all of their operations. Some of this is due to staff self-isolating or unfortunately suffering from the illness, but also due to authorities suspending operations (believing they are doing the right thing) and sometimes even because the public is challenging operatives on site, incorrectly believing they should not be working.

Availability of suitable accommodation for contractors' staff to stay in has also become an issue as hotels have closed. Amey and Staffordshire have followed the Government advice and from the outset it has very much been business as usual albeit with additional risk assessments and measures being put in place, including operatives travelling to site in separate vehicles and following other social distancing guidelines.

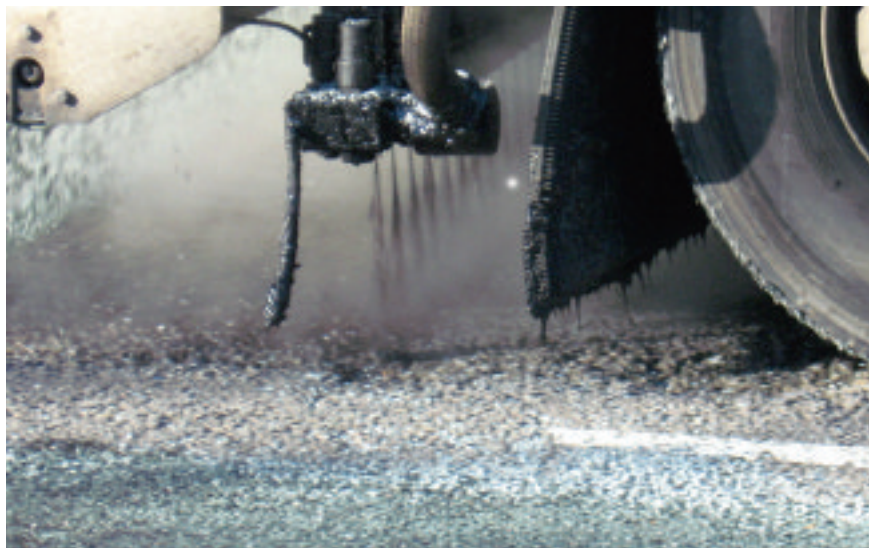
Operatives also carry 'essential worker letters' with them and additional signs are placed on site advising that the activity is essential highway work.

When our partnering surface treatments sub-contractor could not find accommodation for their operatives, they arranged self-contained 'pod' accommodation, and in consultation with our client we opened up an emergency COVID-19 highways depot on land owned by the client. That enabled the pods to be installed and their operations to be run from the new temporary depot, ensuring our programme for the season can be delivered.

## How have you been managing throughout the coronavirus?

The teams have been fantastic, rising to the challenge at the most difficult of times. We have brought many road construction and maintenance schemes forward, especially those on the principle road network, to take advantage of the much quieter roads. My





colleagues have also been ensuring we patch the potholes and perform other frontline safety works.

While I have worked from home one or two days a week for some time now, the transition to full time working from home has been surprisingly easy, although I do miss the face to face contact.

#### What attracted you to the RSTA role?

Road surface treatments have become a part of me as much as they are an integral part of effective and efficient highway asset management. When I saw the spec for the CEO role at the RSTA, I knew it was the job for me and the only one that could tempt me to give up the asset management role in Staffs.

I know I can achieve so much for the organisation, its members and highways GB.

#### What are your main ambitions for your time at the head of the RSTA?

I want to cement and improve promotion of the benefits member companies bring to the highway asset management sector.

The standards and quality RSTA member companies work to, and the training and certification provided by the organisation, are respected throughout the industry but their contribution to innovation and efficient highway asset management is still not fully understood. I want to prove it to the Government and to the decision-makers, asset managers, design engineers and others who are charged with managing our highways.

Yes, we need more investment, but it's not just about the money, it's about how we use it to really make a difference while reducing our carbon footprint, removing the potholes and making our highways some of the best in the world without compromising our planet for our future generations.

I want to ensure the Department for Transport and the Government hold local authorities to account, ensuring they manage their networks effectively and efficiently within

the financial constraints they have.

#### What are the main challenges and opportunities for road surfacing now (excluding the COVID-19 threat)?

The main challenges are to empower and educate the decision-makers and asset managers to do the right thing, often in the face of local political opposition.

It's about communicating the plan, setting targets and showing the outcomes that can be achieved.

Many are doing the right thing, but few are truly embracing asset management in its truest sense and there is always scope for improvement. With sustained additional funding already pledged by central government and indications that certainty of funding will be forthcoming over the medium-term, there are opportunities for those that manage our road network to put comprehensive asset management plans in place that will create even greater efficiencies and innovation within the industry, to the benefit of clients and contractors alike.

#### What do you see as the future for road



#### surface treatments?

Road surface treatments will become the backbone of carriageway (and footway) asset management. They will be the efficient prevention that prolongs the life of our network surfaces, proving their worth with whole-life costing, while current and future innovations provide enhanced and additional benefits. If highways are properly funded and managed, asphalts will only be required on new builds and to replace those roads and footways that have reached the end of their useful life.

#### What advice do you have for people coming into the RSTA or the sector?

There are no quick wins and you must be in it for the long-term. Clients rightly expect durability and longevity for your product at a competitive price.

You need to form long-term partnerships and work with your clients if things go wrong. Allow them to help your business grow and prosper, encouraging your innovations and sharing the risks in the pursuit for continual improvements.

#### Tell us something about you that not many people know?

I ran my first half marathon at the age of 50 and thoroughly enjoyed the training and the run itself. It was another year before I ran my second though! I ran Park Runs nearly every Saturday until the recent lockdown and was about to complete my 99th. I am also an 80s music nut.

#### Why should people join the RSTA?

RSTA membership is your certificate of quality for both your products and your trained and certificated staff. It gives you a voice in government and with those that make the decisions in asset management. It is an organisation respected throughout the industry, and in your field a ticket to work in collaboration with Tier One suppliers and their clients – along with clients you can contract with directly. ●



# Portsmouth City Council has a sense for parking

**Local authorities across the country are developing innovative new systems using smart city technology, which are set to transform transportation in the future. Pam Turton, assistant director of transport at Portsmouth City Council and Association of Directors of Environment, Economy, Planning and Transport (ADEPT) member, talks about a new parking sensor trial in Portsmouth**

**P**ortsmouth is a densely populated city that experiences high volumes of traffic, and the competition for road space is significant.

The area attracts lots of tourists, particularly when we have good weather, and this means traffic movements and patterns change. Often people circle the city trying to locate parking spaces. This generates unnecessary congestion and mileage, which has a detrimental impact on air quality.

Like many other local authorities, Portsmouth declared a climate emergency in March 2019 – becoming carbon neutral by 2030 and improving air quality are key aspirations. We recognise that there is no single solution and we are working on a number of measures to address climate change. One of these is using smart city technology to help make the best use of the highway infrastructure that we have in Portsmouth.

Working with our partner, AppyWay, we have developed a trial parking sensor scheme that will provide real-time information about parking availability via an app. Some 4,000 smart sensors with vehicle recognition functionality have been installed at locations throughout the city on lamp posts and other existing street infrastructure.

The new system will also introduce frictionless parking. Sensors will automatically recognise the vehicle and people will only pay for the time they are parked within the bay. The sensor will recognise when they leave and stop charging from that point.

Our objective is to reduce unnecessary mileage and reduce congestion by providing a facility that gives reliable information about parking – this will not only improve the flow of the traffic across the city but will also help our air quality.

Although people will still be able to pay for parking with cash if they wish, another key benefit is that the system will reduce the need for cash collection. The use of cash in society is declining quite significantly and this trial sensor project allows us to be responsive and make our systems more efficient. Cash collection also has a high risk factor for staff and is very expensive.

Although the AppyWay system is not due to launch until later in the year, an unexpected benefit has been around the collection of data. The sensors have been installed and



Pam Turton

are already collecting information – as we are currently refreshing our local transport plan and parking strategy, we have found this really helpful and are building the data into our planning.

In the future, we will be able to use the data to shape our plans even more. For example, we will be able to identify parking trends and see where, and when, there are demands. As we get a better understanding, we will be able to make more informed decisions on parking and transport in the city and reallocate space if required.

Parking can be a hugely emotive issue and this data will be useful in looking at how to use space and how we develop and regenerate our cities. It will help us to be responsive to how people travel, will take into consideration the different patterns of work and types of journeys, and help investment in public transport.

There have been challenges around the unknown elements of the system. For

example, as people will now pay only for the parking time they have used, this could potentially mean a drop in the revenue generated by parking fees. However, we have assumed this will even itself out and we will monitor it closely.

Some people have asked if this will encourage vehicle use but it is just one element of our comprehensive transport strategy, which sets out plans around public transport and active travel, such as the creation of dedicated route-based bus priority through our South East Hampshire Rapid Transit programme.

ADEPT believes that additional Government funding is required to enable more innovation and harness the best use of technology. In addition, a cohesive, overarching strategy is needed to identify opportunities and ensure that all government levels are working together. This will enable us to meet the challenges facing us and the climate. 🌱

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# Metrail: Stars of roads, bridges and TV

**For several years now, Metrail Construction Limited has been one of the UK's leading specialist contractors for repair and maintenance services, including concrete repair, bridge deck waterproofing and bridge deck expansion joints. *Highways* meets managing director Martyn Sherwood (pictured) to find out about the history of the firm and where it will go next**



**M**etrail Construction was established as a start-up in 2007 to provide repair and maintenance services in the infrastructure sector.

As chief operating officer, Martyn Sherwood took on the day-to-day responsibility for winning and executing contracts. In 2011, he became managing director and sole-owner of Metrail Construction with a strategy to grow the business into a major player in the sector. Over the last 20 years, he has built up considerable experience in all aspects of the business with particular hands-on expertise in bridge deck waterproofing. Mr Sherwood works across a range of areas from arranging contracts to using his experience on site to ensure a project is delivered on time.

He started work with Foster Wheeler in 1986 then joined Colebrands in 1995 to work on framework contracts with London Underground to maintain the ageing tunnel infrastructure.

He later moved to VolkerLaser in 1997 where he learned his waterproofing skills utilising Stirling Lloyd products (Stirling Lloyd was acquired by GCP Applied Technologies in 2017). In 2000, he became operations director for Renovo responsible for overseeing infrastructure repairs.

For a period he was MD of New ISG before establishing Metrail in 2007, which now has a turnover in excess of £3m per annum.

The company, which has its head office in Hailsham near Eastbourne with regional offices in Yorkshire and Scotland, is a Stirling Lloyd approved contractor licensed to apply and install the complete range of Sterling Lloyd waterproofing and expansion joint products. Sterling Lloyd also provides technical back-up and support when needed.

Metrail saw a number of significant contracts successfully completed last year and early this year it even appeared on national TV, featuring on the documentary *The Motorway* for Channel 5.

Metrail was called in to carry out a significant proportion of the waterproofing on both the new Queensferry Bridge over the Firth of Forth in Scotland and also on the new Mersey Gateway bridge near Liverpool.

During the summer of 2019 Metrail was appointed to carry out concrete repairs, waterproofing and joint replacement on the refurbishment of Tinsley Viaduct on the M1



*Refurbishing the Tinsley Viaduct was a major project for Metrail in 2019*

near Sheffield. The contract was awarded by A-one+ who expressed particular satisfaction at the way Metrail performed and the quality of the completed works.

Towards the end of 2019, FM Conway appointed Metrail to carry out concrete repairs, waterproofing and joint replacement on the refurbishment of the Rochester Bridge in Kent. As a heritage project, the work is complex and access is not always straight forward so Metrail maintains a specialist team on site to carry out the works, which are progressing satisfactorily.

'I took over full control of Metrail in 2011 and am particularly proud of what has been achieved by the business since then and the growth that we have seen,' says Mr Sherwood.

'As in all businesses, there have been ups and downs but Metrail continues to go from strength to strength as a leading supplier in the market. As a specialist contractor, customers rely heavily on the Metrail capability to deliver on time and on a budget so that the overall contract programme is maintained. Metrail has always been prepared to go the extra mile to ensure customer satisfaction.

'Having a core team of experienced personnel on-site and in the office is a

key driver for success. Training and skills accreditation plays an important role in the business to ensure safe working practices and quality workmanship. I am personally committed to ensuring the highest standards of health and safety in Metrail.'

Despite the current challenges, and indeed because of the expectation that the Government will push forward with infrastructure projects to help with the COVID-19 recovery, Mr Sherwood expects the country to see an upcoming boom in new infrastructure.

'The decision to go ahead with HS2 is a major boost for the industry, which will provide significant opportunities for specialist contractors like Metrail.'

In the short-term, Metrail is already in negotiations regarding a number of opportunities in 2020 including the high profile refurbishment of London Bridge.

'We are now recognised as one of the leading specialist contractors in the sector with an excellent track record working with Tier One contractors.'

More information about Metrail can be found on their website at <http://www.metrail.co.uk>, which includes a link to *The Motorway*, which featured Mr Sherwood and his team in action on the M1 in Yorkshire. ➡

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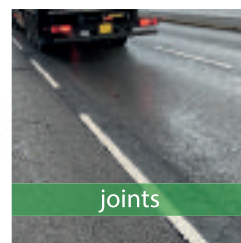
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# Seizing a difficult moment

The improved air quality in our major cities has been one of the few bright spots of the national lockdown. Westcotec, a leading traffic safety systems manufacturer, is leading the way with the supply of air quality monitoring devices and specialist systems to help combat high pollution levels and ease congestion. In this article, it argues that local authorities can be bold and turn crisis into opportunity

**S**ince the UK was hit with the outbreak of COVID-19, Westcotec has been analysing data from its array of air quality monitors

around the country – including a first of its kind network in Central Bedfordshire – and downloading traffic data from more than 10,000 of its vehicle activated signs.

This network is the result of Westcotec being at the forefront of the vehicle activated sign industry since being founded in 2001. Based in Norfolk, it has grown to become one of the biggest suppliers of intelligent traffic safety systems in the UK with its own manufacturing capability and providing bespoke solutions with fast turnarounds to suit individual traffic safety requirements.

Innovation has always been critical to Westcotec's business, and the strong relationship it has built up with local authorities has allowed it to continually develop products and create specific solutions to meet and exceed client's needs.

## Cleaner air

After meeting in Holland followed by a trip to their offices in Krakow, Poland, Westcotec signed an exclusive supplier deal with leading air quality monitor manufacturer Airly.

Airly devices are sleek in design, powered by any existing power source or mounted to existing infrastructure such as electronic signage or street lights. The monitors record PM1, PM2.5, PM10, NOx gas, temperature, humidity, pressure and wind levels, with data available in real-time. This data can either be publicly available on an interactive map (<https://airly.eu/map/en/>) or hidden using a secure login for authorities who do not wish to share it.

Westcotec began by placing Airly devices next to existing DEFRA approved monitoring sites for comparison prior to contacting local authorities. The results were conclusive across the board, with 90% accuracy.

The next priority was to showcase the potential of a dense network of sensors within a county.

Westcotec approached Central Bedfordshire Council with the proposal, and a project was created with 30 sensors would be placed around the county. There are currently 24 sensors installed and actively transmitting, with an additional six being offered alongside a school interaction project.



## What can we achieve?

The use of a real-time monitoring system, with a public interface, will allow members of the public to see the impact that their choices are having. By making this information available, someone who would regularly drive to work might decide to cycle or walk in. This decision, if taken by many, would begin to improve the air quality of the area, and this could all be visible on the platform, as well as the unit itself.

There is an LED strip, which will display a particular colour to display the level of air quality. As seen in the project with Central Bedfordshire Council, Westcotec installed informative plate signs below the units, to give details on the colour of an LED.

This data can also be used to trigger vehicles activated signs (VAS) to divert vehicles around areas that are currently experiencing high levels of pollution. If a city/town centre is experiencing significantly high pollution levels, vehicles such as HGVs can be diverted via the signage to avoid these areas.

The main aim is to encourage highway users to utilise sustainable transport, which is in keeping with the company's culture and policy. For every piece of equipment, Westcotec manufactures and sells, a tree is planted on company owned land located in the village of Fransham, Norfolk. To date, over 10,000 trees have been planted.

## Act now

Chair of the ADEPT engineering board, Mark Stevens, who also sits on the UK Roads Liaison Group (UKRLG), said: 'Part of the thinking is that action needs to take place fairly quickly and that is happening in local authorities at the moment. There are some really strong lessons to be learned here from an environmental and sustainable travel perspective, and I think that's what we have to capitalise on.'

The data being analysed since the outbreak of COVID-19 in the UK has shown what can be achieved with reduced vehicle use against air quality.

With exceptionally low air pollution levels monitoring devices are developing a baseline data set centred on only essential travel. If authorities install now, they can track this with real-time monitoring as normality slowly returns.

This is one of the greatest opportunities available to implement appropriate interventions in relevant locations with the ability to obtain accurate and timely data, enabling discussions on the available interventions such as electronic diversion signage and an increased push to sustainable travel.

Westcotec is available for a free consultation at [sales@westcotec.co.uk](mailto:sales@westcotec.co.uk)



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# Learning lessons from a crisis

**Tom van Vuren, technical director and practice leader transport planning Australia, at Mott MacDonald, discusses what the COVID-19 outbreak can teach us about transport modelling**

**A** newspaper article in the earlier stages of the coronavirus pandemic used a headline that many of us working in transport could relate to: 'Coronavirus exposes the problems and pitfalls of modelling' (*The Guardian* 26 March 2020). The need for, and reliance on, epidemiological modelling in this particular case has been exceptional and very visible to a public seeking answers, rather than wanting to understand how these were derived.

Transport models have long faced similar confrontations. Inevitably, transport policies and projects result in winners and losers, and obviously those losers will be vocal. The models are blamed. Often the distribution of the costs and benefits are skewed, with concentrated costs for a few and dispersed benefits for many, which exacerbates the opposition to the measure and has regularly led to attempts to discredit the models used to underpin the decision. Modelling itself cannot be the sole defence – experience, expertise and judgement in the use of the results are essential.

Of course, for decisions as important as the long-term consequences of a transport policy or project on urban structure and

the wider wellbeing of the population, we need some kind of modelling. We must have predictions of the outcomes of alternative decisions. And that is even more pertinent in the evaluation of the success of an intervention after its implementation – modelling the counterfactual (what would have happened if we had done nothing or something different) will help explain the issues to a critical public and help decision-makers learn for the future.

***Any debate on travel demand forecasts should, first and foremost, focus on the assumptions rather than the model itself***

*The Guardian* headline mentioned above and more recent articles elsewhere, for example, a *Nature* article of 2 April and a *Conversation* article of 4 April point to a number of lessons that we can learn from the COVID-19 response to modelling.

Without good data it is really hard to model, and the results inevitably have wide error bands. That was obvious in the early stages of the spread of the coronavirus, but it is also true for transport modelling. To what extent will previous trends and relationships continue? Will the way in which different modes are valued, the number and types of trips we make, differ in a post COVID-19 world? More than ever, old trends or poorly collected new surveys will make the models and the predictions less useful and more dependent on assumptions.

As they are mathematical constructs of complex phenomena, every model is full of assumptions. It is important to make these explicit so that a reader or end-user understands the model's limitations and to what extent the results can be relied on in each application. I would say that any debate on travel demand forecasts should, first and foremost, focus on the assumptions rather than the model itself. Without understanding and respecting these, the cautious findings of researchers will become the self-assured claims of politicians or activists.

There is always the risk of tried-and-tested models not being applicable for new situations. In the early stages of my career, all road forecasts were made with single-mode, car-only assignment models. Only after we saw practical examples of induced demand, generated traffic, did our practical models evolve to become multi-modal and represent additional responses to roads projects – not only mode choice but also destination choice and even departure time choice. These had existed in academia, but had been rarely implemented and used in actual decision-making. Some models may have an inherent bias; Caroline Criado Perez's book *Invisible Women* provides examples that force us to question traditional segmentation in transport models, and the valuation of benefits and disbenefits across the population.

We need to be prepared to change the model and to change the inputs and assumptions when new facts emerge, even if that indicates that a previous decision was wrong. Be willing to learn! Anecdotal evidence suggests that this is what led to a change in government policy in response to the COVID-19 crisis. Just think what would be possible if new facts emerge showing that a transport intervention is actually not such a good idea. A political problem, probably, but what a triumph for evidence-





*Transport modelling effort in the UK is focused on project appraisal*

based decision-making! Models cannot make the decisions – sense-checking, peer review, triangulation – we have enough tools available to validate the numbers, including the results from alternative models.

There is always uncertainty in the inputs to the forecasts. The future is even more uncertain than before and transport models rely on predictions of the economy, of the population, of urban development, and of travel behaviour over a long period of time, possibly more than 30 years ahead. Transport demand forecasts made before 2020 will inevitably turn out wrong – were the models wrong or our assumed future inputs? We must be willing to model different futures, different scenarios and be able to explain to people that there is a range of forecasts and that sometimes it's impossible to say which one is more likely to occur. And let's hope for a more helpful response than that attributed to President LB Johnson: 'Ranges are for cattle, give me a number.'

Ever since stepping foot on British soil, it has surprised me that so much of the transport modelling effort in the UK is focused on project appraisal, and how little it is used to support policy-making. Even WebTAG, as Transport Analysis Guidance, is strongly driven by the needs of a robust

appraisal of projects. It is not clear to me if such models contain all the levers or represent all responses to transport policies that focus on say behavioural change or active mode promotion. As I wrote in my July 2019 *Highways* article *Limited Visibility*, models will need to change to support climate change policy, and models will need to change to support a post COVID-19 transport world.

Quite a few of my transport planning colleagues hope that some of the beneficial side-effects of the responses to the pandemic: empty roads, improved air quality, greatly increased numbers of cyclists, will remain a feature of the future post COVID-19 transport system.

Modelling cannot help establish whether that will or will not be the case. But modelling can help identify what kinds of measure might help lock in these behaviours, be they regulatory or behavioural nudges or supply-side measures such as the temporary bicycle lanes installed in cities around the world. Rather than claiming the ability to forecast that future, what-if scenarios will help determine how the future transport system can be cleaner and greener. We can use our models better, to move from a predict and provide a paradigm to one of decide and provide.

Research is necessary to underpin the credibility of model assumptions. For example, will the continued need for social distancing mean that public transport becomes a less attractive alternative than is currently reflected in our models? To what extent will work from home become the norm? And will a reduction in commute trips be counterbalanced by increased travel for leisure and exercise? How will economic uncertainty affect car ownership? And what about oil prices?

The COVID-19 crisis has illustrated to many that transport is indeed a derived demand, but that not everyone has the same opportunity to respond. We must model (and then keep monitoring) the wider health, environmental and socio-economic impacts of transport interventions post-lockdown and control measures, with short, medium and long-term timeframes, and with a social lens to look at how this impacts differentially across society.

We should welcome greater transparency and participation to allow effective scrutiny and challenge from scientists outside of our field.

For me, rather than the coronavirus having exposed the problems and pitfalls of modelling, it has illustrated its value. The same is true for transport. ➡



# The great reallocation

**Dominic Browne looks at the debate around long-term changes post COVID-19 and whether more road space will be reallocated to active travel**

**L**ockdown in London; the empty roads are both eerie and oddly pleasant. Even on main roads, you can smell the spring blossom. It was noticeable immediately, and it shocked by the sudden realisation of its former absence.

Transport professionals, as with any social observers, are always interested in moments of change, transitions, peaks and tipping points. They don't come much bigger than this.

The problem started with pedestrians social distancing on narrow pavements. So naturally, they looked over to the road and realised it was hogging all the space. And calls for 'a great reallocation' began.

Chair of the ADEPT engineering board, Mark Stevens, who sits on the UK Roads Liaison Group (UKRLG), said local authorities are looking to capitalise on environmental gains made during the crisis and even at reclaiming 'some of the existing road space away from road vehicles and giving it to those sustainable travel modes'.

'We are starting to think the unthinkable' he said.

The battle over street space in cities has been comprehensively won by the car over the last 100 years, but is it unthinkable that something could shake its hegemony?

The Department for Transport (DfT) is playing carefully with the situation. Ministers told the transport select committee that while moves to reallocate more space to cyclists, for instance, were not being directed from central government they 'were aware' of the issue.

A letter sent to councils from the DfT provided 'temporary guidance' on the current flexibility, especially around the publicity requirements, when making Traffic Regulation Orders (TROs) during the crisis. It was widely reported as being a relaxation of the rules but, in fact, did not change regulations at all; it just clarified them.

A DfT spokeswoman conceded there had been no change to regulations and that road closures are a matter for local authorities. However, she highlighted that 'traffic authorities have powers to close roads or change their use for instance to pedestrianise them or to widen pavements or cycle lanes, through traffic orders'.

This is important because of what the DfT has not said. While it has not – it is unlikely it has the spare resources right now – changed regulations, it certainly seems keen to give the impression it is on the side of cyclists and walkers right now.

This raises a crunch issue as there appears to be confusion over what powers councils actually have and how they can be implemented.

As *Highways* went to press, Hackney cabinet member for transport, Cllr Jon Burke, wrote to transport secretary Grant Shapps urging clarification on whether 'the DfT regards the use of the Road Traffic Regulations Act 1984 section 14 (2) as a legitimate mechanism for the delivery of temporary modal filters, road closures and bus gates at this time'.

He also suggested that experimental traffic orders (ETO) could be used to make road layout changes and asked for further guidance on this as well.

At the time of writing the DfT has not clarified the situation. However, our very own *Ranty Highwayman* advised that ETOs do not need a consultation or even initial feedback period, as the ETO 'is the consultation'. However, they should be used on schemes where there is



a view to making the change permanent.

He added that part V of the Highways Act 1980 is 'the most powerful piece of legislation for making changes to highway layouts'. While it can't be used to close a road automatically, he argued, it provides 'all sorts of interesting powers', including varying lane widths, constructing cycle tracks, installing pillars walls, barriers, planting vegetation and installing traffic calming.

Cllr Burke argues, no doubt correctly, that he has a strong majority and mandate from vocal residents, but the question his officers are wrestling with is whether radical changes are open to legal challenge. Any change in public policy might face judicial review, and opponents have plenty of scope to tie a council down with arguments about proper consultation. But who would contest such changes?

In fact, consultations themselves are difficult and open to contest. Cllr Burke says that ETOs 'would seem like the natural mechanism' to bring change, adding that regrettably, he has 'come to the view that consultations are not an effective way to get anything done', at least when it comes to the minutia of road layout changes.

Despite the challenges, Hackney is pressing on with a widespread filtering programme – using bollards and planters to prevent rat-running but maintaining access for emergency vehicles – including closing Broadway Market to traffic for six months under an ETO.

Interestingly, Cllr Burke points out the importance of parking restrictions. 'You need a holistic set of proposals a lot of which are based around parking services. Around 90% of Hackney comes under a controlled parking zone and we are looking to make that 100%. These zones significantly remove inner borough movement and are something of a prerequisite to wider moves like modal filtering, road closures and bus gates.'

Manchester City Council has also become a prominent advocate for the 'great reallocation'.

A section of Deansgate is set to be temporarily closed to traffic using removable bollards, and in other busy areas of Manchester, pedestrian space is to be increased using heavy-duty 'Rhino' barriers to create extended footways.



London's Trafalgar Square at rush hour – after the lockdown

Executive member for transport, Cllr Angeliki Stogia, said: 'When the essential lockdown measures start to be lifted, we need to make sure there is more space for people to walk in the city centre and busy district centres. That's why we're planning these changes, which will aid the economy in its recovery, boost air quality and contribute to the city's ambitious target of becoming zero-carbon by 2038 at the latest.'

*Highways* spoke to transport expert, and Labour party adviser, professor Phil Goodwin, about possible long-term changes post COVID-19.

He said that with the restrictions on movement, the value given to walking and cycling 'has been better appreciated, and there is no reason why this should not be encouraged to last'.

'Some tensions are working through whose outcome will depend on the way in which Governments continue to manage the crisis and especially the transition arrangements for getting back to the new normal, yet to be defined. These especially relate to the relationship between cars and other modes.

'There is, of course, a long-lasting policy question about the importance of localisation, which has been central to policy debates about planning and sustainability.

'There has been a widespread observation that air quality has gained from the reduction in car use. The big question is whether the special experiences gained through this period will have a lasting impact on the images and acceptability of different modes.

'I think there is a bigger question. The situation "before" was itself not stable, but was a complex process of trend shifting which in recent years has especially seen important changes even in the direction of mobility trends, related to the type of area and age. The question "will people return to their original habits after the crisis?" is the wrong question.

'The real issue is what happens to the already unstable trends. This will be very influenced by what Governments decide to do about the bigger crisis of climate change, which has not gone away simply because our attention is focussed on the more immediate one.' ☹

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A selection of the **Confirmed Papers** are:-

- **Reducing the impact of HGV traffic on MOVA - update; does it work?** Mark Roxburgh - Highways England
- **Sensor fusion and AI for safer and smoother traffic** Michael Deruytter - FLIR
- **GPS based Advanced Vehicle Location Bus Traffic Light Priority system** Chris Gough - Via EM (Nottinghamshire County Council)
- **SVS, trialling Smartmicro UMRR-11 Type 44 multi lane radar** A-one+, SVS, and 4way Consulting
- **"ImFlow, let's take a look under the bonnet"** Dynniq
- **How crowd sourced journey time monitoring can provide instant impact on SCOOT timings around events for the benefit of road users** Andrew Rhodes - Clearview and Bristol CC
- **DfT Connected Vehicle Data Strategy** Andy Graham - White Willow Consulting and Darren Capes - DfT
- **Innovation in Cycle Highway Design and Integration** Alex Moody and Laurence Brown - Siemens
- **'They are Talking Traffic' in Europe... Are we?** Dynniq
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**On 31 March the Highways Industry Alliance (HIA) formally launched at a virtual meeting, ratified its terms of reference and announced its first chair, Jennie Martin of ITS United Kingdom, and vice chair, Kealie Franklin of ARTSM. In this article, Ms Franklin discusses the alliance's aims and ambitions**

**T**he current transitions and rapid changes in highways technology, and the need to protect the environment, mean that the ITS and traffic sector currently has high and dynamic complexity. Government, users and suppliers do not fully know what the future holds and therefore how they may need to adapt.

What we do know is that there is not likely to be a 'one solution fits all' approach.

The general view is that decisions about planning and development will need to be done differently, with a much greater degree of collaboration necessary to deliver the vision we all aspire to.

Society is more dynamic now than ever before with the new generation being totally engaged in the technological world. There is no going back, and things will have to be viewed entirely differently going forward, changing from the previous distinct hierarchies to a much more integrated complex whole.

***Collaboration should be more than a trend or a buzzword. Collaboration should be a cornerstone for the challenges and changes ahead***

Demonstrator projects, trials and challenges need to be worked through collaboratively to achieve the desired outcomes. There is an increasing need to expand the amount of engagement required, including with the user community, and for Government to work more collaboratively with SMEs.

The industry is continuously trying to improve the dialogues it has, but these are still limited, and largely done through an

innately narrow, top-down approach and not via a wider bottom-up engagement.

#### **A more collaborative sector**

There has been much reported about collaboration in the press over the last two or three years, but much of this has been scattered and concentrated on repeating previous collaborative arrangements rather than penetrating the whole industry.

Neil Gibson of council directors' body ADEPT stated in an article that 'the first important thing is that there is no single voice for the sector...' (*Highways* Dec 2019). Collaboration should be more than a trend or a buzzword. Collaboration should be a cornerstone for the challenges and changes ahead. Sharing knowledge and expertise as widely as possible is key to ensure that any transition is effective, low cost and minimally disruptive.

Recognising this, in May 2018 the

highways industry issued a call to action which received an overwhelmingly positive response. A first open meeting was held in May 2019 bringing together the CEOs and senior representatives from a substantial number of UK trade bodies, societies, and professional institutions across the whole span of the highways industry, for the purpose of reviewing areas of commonality between them and creating an informal, open, inclusive alliance, which can speak with a common voice with government, and its associated bodies, to develop a more seamless and broader-based platform to improve collaboration and consultation without increasing the time and effort expended for any party.

The HIA brings together through our memberships, expertise and knowledge of legacy, technology and professional development in the field. We consider that we can represent the present and the

# A new alliance for highways



Deal document states: 'Contractual and practices in the construction sector often disadvantage small firms in the supply chain. These practices can unfairly transfer legal risk or economic risk in relation to cash flow. They act as a barrier to the development of more strategic and collaborative relationships across the supply chain and inhibit investing in productivity-enhancing technologies and skills. Changing this business model is essential to maximising the potential of digital and manufacturing technologies to deliver improved productivity.'

***We also recognise a need to address sensitive issues head-on, including knowing what parts of our industry are at risk and being able to understand what we can do***

Having such a UK forum will be beneficial in future transport consultations by preparing our members, and providing guidance and support for government strategies. Our members need to be prepared for transition, losses, adaptation and new opportunities, and if key groups are not involved in all consultations feeding through to the whole of the sector, the disruptions to delivery will be significant.

We also recognise a need to address sensitive issues head-on, including knowing what parts of our industry are at risk and being able to understand what we can do to reduce the risks. We need to know how we should adapt and ask questions such as who will be affected and, in some cases, who may not survive. A wide ranging and open dialogue will help this happen.

The HIA is made up of a technical working group, informed by experienced practitioners and standards makers, in short, experts. We are innovative, flexible, agile, responsive, constructive and resilient. We consider ourselves to be effective representatives of our areas of the transport sector and want to make a positive contribution to the discussions about the sector's the future. ➔

● ***If there are any trade bodies, institutions or other organisations who feel they would like to be included in this Alliance, please contact Jennie Martin on [jmartin@its-uk.org.uk](mailto:jmartin@its-uk.org.uk) in the first instance. There is no joining fee or expectation other than that proposed in our terms of reference.***

future, the manufacturers and innovators, and most of all the various organisations that maintain and support the development of industry standards.

Our members sit on numerous committees and groups to ensure that the sector is well regulated in a manner that complies with UK law and is relevant and adaptable. We believe this makes us an essential group to be involved in reviewing the standards for change.

The HIA is supportive of the Department for Transport (DfT), devolved governments, the Transport Technology Forum, ADEPT, the Local Council Roads Innovation Group, and other user bodies by providing access to industry interest groups, standards groups, technical working groups and focus groups.

The Alliance was publicised at the DfT Traffic Signs Working Group in June 2019 and through other dispatches to the DfT and other bodies including ADEPT

and TOPAS. All in all, our vision of a collaborative, operational organisation has been well received.

#### **One for all**

The HIA is a broad church and has worked hard to identify the diverse parties that have a common interest in seeing a closer liaison between users, industry and government. We are always looking for new collaborators. Our individual associations include companies across all tiers, large corporations, SMEs and individuals in a raft of specialisms from signs to signals and all areas of technology in between, and we also include organisations involved in the training of engineers across all elements of the highway sector.

The HIA's aims and objectives clearly align with the Government's Industrial Strategy and SME Agenda. The Government's 2018 Industrial Strategy Construction Sector



# Keeping up with the standards



**Critical industry standards have recently been updated, and it's just possible your attention was elsewhere. Don't worry. Barry Turner, technical manager at Wrekin Products and former chairman of the BSi BSEN124**

**Standard Committee, shares an overview of both BS 7903:2020 and CD 534, helping explain these crucial changes to manhole and gully tops**

**I**n the UK, BS 7903 has just been updated to the 2020 version, which supersedes the 1997 version. It gives guidance for the selection and installation of manhole tops and gully tops conforming to BS EN 124:2015 used in conjunction with other components and materials in highway applications. It expands on EN 124 with particular reference to UK practice and is an important normative reference (a document to which reference is made in the standard in such a way as to make it indispensable for the application of the standard) contained in many UK standards, regulations and specifications, including CD 534.

BS 7903 advises its users to consider the desirability of obtaining third party certification of conformity with BS EN 124. It goes into much more detail than EN 124 on the importance of installation materials and their compatibility and interaction with the frame. Regarding classification and place of installation it also highlights the need to consider pre-service loads, such as construction site traffic. Also to be taken into account are dynamic forces from traffic leading to seating wear and frame bearing pressure.

In February 2020, DMRB/CD 534 was introduced as a Highways England Technical Regulation.

The *Design Manual for Roads and Bridges (DMRB)* has recently been updated by Highways England. For over 10 years HA 104/09 (an

'advice note' within the *DMRB*) has been a key document for chamber tops and gully tops setting out procedures and denoting materials which highway authorities believe provide the best possible performance for installations in trunk roads and motorways.

This crucial HA 104/09 advice note has now been replaced by CD 534, a new Technical Regulation posted and referenced on the European Commission Technical Regulation Information System (TRIS) website.

Both documents were produced by Highways England in association with Transport Scotland, the Welsh Government and Northern Ireland's Department for Infrastructure, and contain Highways England's requirements for road chamber top and gully top installations on motorway and all-purpose trunk roads.

Whereas HA104/09 was ostensibly a stand-alone document, CD 534 contains normative references and must be read in conjunction with these as they contain some of the important requirements for chamber tops and gully tops that were previously explicit in HA104/09. Linked with CD534 is Series 500 of Volume 1 of Highways England's *Manual of Contract Documents for Highway Works (MCHW)*.

## Third-party certification to BS EN 124 continues to be required

In clause 3.5 of HA 104/09, there is a requirement that chamber tops



and gully tops be certified by one of the accepted UKAS certification bodies (e.g. BSI Kitemarked) to BS EN 124. There is no such clear requirement in CD 534. However, detailed study of the regulation and its cross references reveals that under its clause 1.6 the Highways England requirements contained in GG 101 shall be followed. G101 is the introduction to the *DMRB* and states 'the requirements and advice given in *DMRB* documents are provided on the basis that the works are constructed in accordance with the *MCHW*'. Appendix B of the *MCHW* concerns 'product certification schemes' and it is here we find the requirement for a third-party certification scheme for BS EN 124.

## Areas of difference between HA104/09 and CD 534

There are several areas where CD 534 differs from HA104/09 and some of these are summarised

in the table opposite. There are several major topics that warrant a fuller explanation – the first one that will be discussed is bearing pressure.

## Bearing pressure

The prevalence of bedding material disintegration due to concentrated loads from poor frame/bedding design is the most common cause of ironwork failure and the subject of several independently published research projects, including the WRc Portfolio project CP373, report No. P8228 (Moy et al., 2010) and *The performance of road ironwork installations* (Brown, C. J. and Brown, S. F.), Proc. Inst. of Civil Eng., *The Municipal Engineer*, Vol. 121, 1997, pp 175-185.

Premature failure of ironwork installations is a source of danger to public road users; with bedding failures varying in consequence from noisy operation to chamber



top covers being flipped from their frames with the resulting openings posing potentially fatal hazards.

In summary, the problem is caused by dynamic vehicle loads acting on the corner supports of UK double triangular chamber tops. These focused loads can overload the strength of bedding materials, causing disintegration of the bedding and unrestrained movement of the cover assembly culminating in cover loss from ejection or assembly fracture-failure through fatigue.

HA104/09, required manufacturers to increase the flange area of frames to spread out these high loads by stating that the average bearing pressure from the test load of 400kN or 600kN (depending on the load class) must not exceed 2.1N/mm<sup>2</sup> on the bedding.

This advisory value is also referred to in BS 7903:2020. Neither CD534 nor any of its

linked documents have this explicit requirement but it is implied in Series 500 (507-24) as the bedding material properties specified are identical to those of its predecessor; HA104/09, it must therefore logically anticipate the same bearing pressure maxima. All the evidence indicates installing chamber tops and gully tops that spread and dissipate traffic loads into the bedding, and bedding materials capable of handling relatively high complex loads from the frames, are key factors in avoiding hazardous situations and costly reinstatements.

## Skid resistance

HA 104/09 had two required levels of polished skid resistance value (PSRV) depending on whether the site was 'average/low risk' or 'high risk'. CD 534 now categorises high risk sites as 'those where the predominant use is vehicular' thereby requiring all Group 4

## Changes to the standard: A quick guide

HA 104/09 Requirement	CD 534	Comment
Third-party certification	Not explicit but captured in the linked appendix B of the normative reference <i>MCHW</i>	BS 7903 highlights consideration of third party certification. Also recommended by CEN Technical Committee TC165
Chamber top frame bearing pressure to be $\leq 2.1\text{N/mm}^2$	Not present explicitly	BS 7903 refers to this requirement and HE's Series 500 of the <i>MCHW</i> specifies bedding mortar strength properties which assume a bearing pressure of 2.1N/mm <sup>2</sup>
Frames weighing more than 15kg must have provisions to allow balanced lifting	Not present explicitly	BS 7903 recommends this requirement (6.19)
Bedding mortar compressive (30N/mm <sup>2</sup> ) and tensile strength (5N/mm <sup>2</sup> )	Not present explicitly but captured in 507.24 of the normative reference <i>MCHW</i>	BS 7903 expands on the importance of mortar specification under 5.5
Packing materials must be compatible with the mortar	Not present	BS 7903 expands on the importance of the compatibility of packing materials under 5.5
Chamber top PSRV of >45 or >60 depending on the site risk	All Group 4 chamber tops to have a PSRV >60	Sensible to have PSRV tests carried out and confirmed by a UKAS accredited laboratory
Consider E600 chamber tops in certain circumstances	E600 chamber tops must be used where the AADT LGV >1500 in each direction	Introduces the requirement for E600 chamber tops in many roads

chamber tops to have a minimum PSRV of greater than 60 when measured by the pendulum test method in accordance with BS EN 13036-4 2011.

EN13036 doesn't explain how to prepare or where to test each sample. BS 9124, as required in HA104/09, is far more prescriptive and therefore more suitable. Neither standard defines where to set the datum for the test but the top surface of the chequer pattern is more representative of the actual surface in contact with a tyre than the lower surface of the chamber top cover.

CD 534 also introduces an alternative test method for deriving PSRV. It contains a formula to convert the results of a WRc test described in their final report UC 12974 to PSRV equivalence. There is no requirement for third-party verification of PSRV. However,

in view of the general desire for third-party accreditation contained in Highways England's Appendix B of the *MCHW*, it would seem sensible to use a UKAS-accredited laboratory.

## E600 load class requirement

HA 104/09 stated that the installation of higher category chamber tops such as E600 should be considered in applications where the chamber is in the wheel path of a motorway, trunk road or other road carrying over 1500 commercial vehicles per day in each direction. CD 534 goes further than this stating that where the AADT (Annual Average Daily Traffic) LGV (Light Goods Vehicle) for a carriageway exceeds 1500 in each direction, grade E600 chamber tops shall be specified. ➡



# Smart solutions for replacing safety barriers

**DELTABLOC UK's managing director, Tony Walker, explains why he is looking forward to the challenge of the second road investment strategy (RIS 2) and why off-site manufacturing is the place to be**



With £450m allocated to the renewal of over 1,000 miles of safety barriers, RIS 2 certainly has exciting potential for the barriers

sector over the next five years.

We expect a significant proportion of this investment to be spent on the replacement of corroded steel barriers at the end of their useable life. These are likely to be replaced with rigid concrete barriers in the central reserve to meet the requirements of the newly issued CD 377. DELTABLOC has developed a complete family of precast barrier products designed to work together specifically for this application to provide an end-to-end solution to any scheme.

Our products are already prevalent on many smart motorway projects and other types of schemes identified in RIS 1. This increased use of multiple, precast concrete barrier installations has demonstrated that Highways England's plan to use pre-fabricated components through increased off-site manufacture has gained momentum and started delivering the benefits they set out to achieve.

The potential for further improved efficiencies is clear, and the use of precast concrete barrier is recognised as a more efficient alternative to traditional on-site slipform methods of construction.

The scale of the RIS 2 work programme presents a real opportunity for all major stakeholders to develop a more efficient process. If the supply of off-site manufactured products was procured at programme level rather than the 'project by project' approach, this would give the supply chain the confidence to invest in more efficient off-site production methods, flatline production and deliver increased efficiencies to projects. Should this approach come to fruition, our team would fully support this initiative to improve delivery.

DELTABLOC is focused on optimising our processes and building on our proven track record from RIS 1 of providing the right products, through innovation and listening to the industry's needs. We have the service and production capacities to meet the demand, and we see this as being key to the improvements we can offer throughout RIS 2.

For instance, following industry feedback, we have offered recent innovations to the market. Our new 2-in-1 model uses the permanent barrier as a temporary barrier during construction; delivering both in one reduces costs, increases site safety and



***The use of precast concrete barrier is recognised as a more efficient alternative to traditional on site slipform methods of construction***

programme efficiency and provides a leaner procurement process. We have also launched our precast concrete lighting column solution and a fully crash tested combined vehicle restraint system and noise wall.

The modular lean construction process, using precast units leads to a quick and efficient on-site operation, where the quality of the product can also be guaranteed. For many contractors, certainty of delivery all year round is a key driver. The risks associated with inclement weather are removed with the 'dry' precast installation process.

Precast parts can be installed with up to five times higher output than compared to traditional slipformed barrier systems. In fact, we are getting closer to our goal of installing 1km of precast barrier per working shift. Productivity is also helped by the flexibility of the installation process, which means that teams have the ability to change work fronts with minimal impact on the programme.

From a health and safety perspective, the

precast systems also reduce the exposure of both the travelling public and the workforce through less delivery vehicle movements into and out of site. The number of linear metres per truck of precast, off-site manufactured elements far exceeds the linear metres able to be formed on-site from a single mixer truck.

Modular off-site construction also means less waste is generated in the production process and on-site waste is reduced as there is no requirement to flush out or clean the installation equipment at the end of each shift. Supply of raw materials is not an issue as most factories have in-house batching plants on-site. With some RIS 2 schemes in more remote locations, the off-site modular construction approach removes the issues often involved with the supply of ready mixed concrete.

We are seeing a huge increase in the number of contractors choosing to adopt off-site construction methods and choosing precast concrete barriers over the more traditional methods of construction. This approach is being championed across the highways sector at a very high level.

The benefits include financial savings generated through faster construction phases and programme delivery, environmental improvements through reductions in traffic flow, reduced energy usage and wastage, and even social improvements in health and safety.

DELTABLOC precast barriers are at the forefront of smarter highways construction, and we look forward to playing a big part in RIS 2. ➡



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## A new Boom period in roadside safety

Highway Care gives *Highways* a briefing on new developments in barriers that can protect workers at the roadside and provide security for sites during the lockdown

**T**here are a number of temporary barrier solutions that offer all types of vehicle incursion, perimeter security, access control and traffic control protection at this time when businesses and the general public are in lockdown and frontline workforces, such as the NHS and police, are under more pressure than ever.

One way to ensure that various sites are kept secure from vehicle incursions is to install a type of temporary barrier. These can be concrete or steel – both offering different types of perimeter protection. A fence can be added to a SecureGuard steel barrier to create a full, access perimeter solution with up to three metres of height protection.

Each barrier will protect against impacts made by vehicles at varying speeds. For sites that require hostile vehicle mitigation, concrete barriers such as the SecureGuard CB or HC350 can be easily deployed by a small number of Highway Care operatives. These are temporary solutions, which can quickly be removed when restrictions start to be lifted.

Highway sites and construction sites may not only have concerns around security at this time but also around reduced staff numbers. Where highway and construction sites may still be in limited operation, vehicle incursions still need to be mitigated.

The Instaboom vehicle incursion gate

removes the need for site security personnel. A key code, a fob or an intercom system is used to allow approved people through. The Instaboom is solar powered, needing a quick charge every couple of weeks via a site generator. Even in poor light conditions, the unit will operate for up to three weeks before a 110V top-up charge. It also provides a GS6 Boom option – particularly useful for sites near bridges.

The GS6 Boom acts as an over-height warning and asset protection system for highways and railways, which physically closes a work lane as a breach is detected. It works by detecting an obstacle up to 6 metres away at the set height and triggering Instaboom to close, securing the lane from an overhead strike.

GS6 Instaboom was developed with the Kier Highways M20 team after they received the coveted Blue Star award for safety implementation using the standard anti-incursion Instaboom product.

On Kier's scheme, an overhead power line spanned both carriageways and the active work areas. Kier Highways wanted to see a radical improvement of the safety and protection over a standard GS6 pole and cone layout.

Within weeks of the first discussion, the team deployed a patented prototype detection system using an IP68 laser detector mounted on a standard GS6 pole. The sensor was connected to a barrier some 40 metres down

the work lane.

As the set height restriction is breached, the laser triggers the barrier to come down, barring further access to the work zone and preventing a cable or overhead obstacle strike.

An emergency number notice allows the stopped vehicle to request assistance and the site manager to assess if the detected over-height vehicle has been reduced and is safe to proceed.

John Quarless, health and safety manager for the M20 Smart Motorway Upgrade, says: 'Instaboom is a very useful innovation and tool for preventing vehicles coming too close to the workforce in a busy and challenging environment such as smart motorways.'

'We also trialled the GS6 Boom on the M20 project, which is an add-on that uses a sensor to detect if an over-height vehicle approaches and deploys the barrier. This was ideal for the M20 due to an overhead electricity cable being in the works area.'

'This innovative solution enabled us to protect the workforce from this hazard effectively.'

In October 2019, GS6 Instaboom was awarded Highways England Safety Initiative of the Year for the M20 project with Kier.

Since the initial roll-out on the M20, other Kier sites have deployed the system to protect the public and their workforce including on the M6 and M23 smart motorway projects.

# Strong joints make for healthy bridges

**Steve Dalton, technical manager for civils and highways at IKO Plc, discusses key considerations when repairing bridge expansion joints**

**P**robably the most common types of bridge repair work in the UK are associated with the failure of the original expansion joints.

The role of a bridge expansion joint is to allow for continuous traffic between structures while accommodating movements caused by shrinkage, wind, traffic flow and temperature variations.

There are different types of bridge expansion joints, all designed for varying applications and a range of movement, but in the UK the most abundant is the 'Flexible Plug Expansion Joint', formally known as an Asphaltic Plug Joint (APJ). These make up almost 50% of all bridge joints.

## Why expansion joints fail

Over the lifespan of a bridge, expansion joints can cause many problems. Without the correct specification of joint, material, maintenance or installation, joints can deteriorate. This allows water ingress into the bridge structure and a rough, noisy experience for the road user.

There are some advantages of using flexible plug expansion joints, which is why they are used so frequently. For example, installation is relatively simple and inexpensive, which means road closures are also kept to a minimum due to the speed of installation. Typical flexible plug joint materials are also inherently waterproof by their nature.

However, the material needs to be flexible enough to cope with the stresses imparted on the structures, and rigid enough so as to not deform under trafficking. Too soft and the material will rut badly, especially on highly trafficked routes and areas of congestion; too hard and the material will crack under stress.

## Repair solutions

When faced with these situations, there are repair solutions such as IKO's Permatrack H heavy duty



bridge expansion joint.

Utilising traditional mastic asphalt techniques, combined with polymer technology, IKO has developed a product that not only allows for joints of any width and depth but also can be supplied 'hot charged', ready mixed in volumes up to 18 tonnes.

The flexible polymerised elastic bituminous membrane allows the joint to move up to 40mm, while the high modulus infill consisting of SBS modified bitumen, and Trinidad Lake Asphalt provides a rut resistant infill.

The ability to work with a joint of any width and depth allows for two adjacent, failed traditional flexible plug joints to be replaced by a single, wider Permatrack joint, offering a cost-effective and time-saving solution.

## Case study: M4 Chiswick Flyover, London

Chiswick Flyover is situated at the end of the M4, joining the motorway to the A4. It is a main

arterial route carrying thousands of vehicles into central London every day. The road is prone to heavy congestion causing queues of traffic to sit stationary on top of the bridge, which places immense pressure on the expansion joints in the structure.

Traditional asphaltic plug joints (APJ's) had been originally installed, and owing to their inherently soft material properties, they had prematurely failed and displayed severe rutting because of the prevailing traffic conditions. Essential repair work was required to extend the life of the road and reduce future maintenance.

Consultants, Mouchel Parkman, chose IKO Permatrack high modulus bridge deck expansion joint system, incorporating IKO Permatrack H and IKO Permatrack PSB to re-instate the expansion joints.

Its suitability for use on any size and depth joint, while still offering exceptional resistance to

rutting, load, shear and deflection stresses, meant it was an ideal choice.

In addition, two failed APJ's could be replaced on this project by a single wide IKO Permatrack joint, thereby offering a cost-effective and time-saving solution.

A total of 412 existing APJ's were converted into 206 IKO Permatrack Expansion Joints on this stretch of the M4.

Commenting on the project, Marcus Lee, sales director for hot melt and mastic asphalt products at IKO Plc, says: 'IKO Permatrack H was the sensible choice for this refurbishment. It is compatible with virtually all common surfacing products.'

## Repair works

The system was installed by Laser Special Projects, a subsidiary of VolkerWessels UK.

In total, 2,250 tonnes of IKO Permatrack H was used. The majority of this material delivered 'hot charged' direct to site in specially designed tankers, which can carry up to 18 tonnes of material.

The size of each joint was approximately 2.5 metres wide 7.3 metres long, with an average depth of 250mm.

The IKO Permatrack surface was finished with pre-coated chippings to offer the same skid resistance performance as the surrounding carriageway.

Mr Lee says: 'Road closure times for the motorway were kept strictly to schedule and it was opened on time each day. This also meant no additional traffic management costs were incurred. The system is quick to apply and has the ability to take standing traffic within 90 minutes after installation, subject to weather conditions.'

'The combination of exceptional product properties and effective project management meant this project was a resounding success, with completion ahead of schedule.'



# Highways Bulletin COVID-19



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We thank key workers across the industry, all of whom are working around the clock throughout COVID-19. We are honoured to play our part in this huge logistical effort, ensuring essential services keep moving; none of which would be possible without the collaborative efforts of this incredible community.



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As we adapt and evolve to assist industry by offering training online, we would like to say THANK YOU to all others within the Highways sector, who continue to support the Government and NHS by ensuring the UK's road network is safe and accessible for all key workers and services

## Tracsis

The Tracsis Team would like to thank the NHS and all key workers for the amazing work they are doing during this period. Thank you to our valued customers for continuing to utilise our services for data collection and analysis in new and existing ways.

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With the coronavirus pandemic changing how we all live and work, *Highways* has dedicated a section of our magazine to a community message board to help bring us all together.

Any company can send a message out free of charge to the sector; we are all one network, one community.

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To all the front line workers in the UK; NHS, emergency services, food suppliers/retailers, hauliers, and many more. To those in our sector, the Highways and Utilities companies keeping roads safe, lights on, and the internet working. And to the ones at home, keeping businesses in business. Thank you all!



We are proud to work alongside the UK's vital sectors, and give our thanks and appreciation to the Emergency Services and Highways keyworkers who, at this difficult time, continue to serve the country, keeping us safe and operational. Thank you.

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The RSMA wishes to extend its thanks to all the key workers upon whose efforts the nation is so dependent, and whose continuing exceptional work is helping to keep us all safe and saving lives. We're continuing to operate a 'business as usual' policy and are supporting members as much as possible.



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We are so grateful to all the key workers that have helped our company to keep going. Alongside our amazing NHS and care workers we are so thankful to our bin collectors, supermarket workers, postal workers, lorry/delivery drivers and more. Thank you all.



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We would like to offer our sincerest thanks to all key workers that are helping to keep our country moving during such a difficult period. We know how hard everyone is working to keep us all safe and we are beyond grateful. Thank You!



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# The mission to make roads 90% recycled



**Despite its negative environmental image, asphalt could be the second most recycled material in the world after water. But can we improve? Bruce Spencer-Knott, managing director of Minster Group, discusses how the company is helping lead the fight to make our sector more environmentally sustainable in its most basic element**

**A**s construction industries go, road surfacing is certainly not considered the most environmentally-friendly. The production of virgin asphalt takes a hefty toll on the environment.

Road surfacing is widely seen as dirty and pollutive, and it is easy to see why. The strong smell of a freshly laid road, the oil-soaked asphalt and the roar of heavy machinery don't exactly scream 'natural' or 'environmentally-conscious'.

But at Minster Group, we are making a huge effort to reduce our impact on the environment. With the use of innovative technology, we produce roads that are around 50% recycled. We hope to take that further – making roads which are 90% recycled, helping to make road surfacing a smarter, cleaner and greener industry.

Depending on traffic and climate conditions, asphalt roads generally have a lifespan of 25 years, after which they need to be relaid. This means that just as

frequently as we are laying roads, we're ripping up old ones which need to be replaced, so the construction industry is hungry for materials.

Asphalt is made from distilled crude oil and mineral aggregate, two resources that are finite and in short supply in this country. Quarries in the UK are struggling to keep up with the demand for virgin aggregates and, as you may notice every time you fill up your car, the price of oil is rising. As a result, so too is the cost of road surfacing.

Worse than the financial cost is the environmental cost. As well as taking raw materials from the earth, these materials have to be refined, processed and transported long distances.

One way to resolve these issues is to increase recycling in the industry. Increased recycling would reduce the demand for new materials, make replacing roads a much more efficient process, reduce carbon emissions and cut down on the quantity of material that is sent to landfill once it is removed from a road surface. This might

sound like wishful thinking, but recycling in road surfacing is as easy as it sounds: the technology has existed for years, it's constantly improving and it can even reduce overall costs.

## Rejecting tradition

Traditionally, roads used to be made using coal tar. Despite coal tar having medical and industrial uses, it is a carcinogen and the Environment Agency classifies asphalt waste that contains coal tar as hazardous. Because of this, many companies won't touch it, so it has to be safely disposed of. This means even if the material contains just 0.1% coal tar, all of it goes to waste.

However, this wasteful practice can easily be avoided. Even material which is over 0.1% coal tar can be safely reused and handled with care, in line with environmental and local authority standards as a base layer for a new road, where it is safely sealed and cannot harm anyone.

It is still the case that the very top layer of a road should be virgin asphalt to guarantee a smooth, unblemished surface that will meet all local authority requirements, but the 100mm thick base layer and 100mm thick binder course can be made up of almost entirely recycled material.

## Cutting carbon footprints

Minster is passionate about recycling and waste reduction, and has invested in numerous cutting-edge technologies and systems to make road surfacing as green as possible. The widespread use of recycling technology is a vital first step for the industry.

Many have been slow to catch on, but we were one of the first companies in the UK to take on the challenge and use OCL Regeneration's Foambase recycling technology and we now use it as part of a circular economy system.

With Foambase technology, material that is removed from old road surfaces is converted into a durable alternative to asphalt, as well as binder course products like foamed bitumen. This creates a safe and durable product that can be recycled and relaid many times.

As well as reducing the need for more mineral aggregate or crude oil, the creation of Foambase is much more efficient and sustainable than traditional hot asphalt; it produces 32% less CO<sub>2</sub> and the technology even allows for material containing coal tar to be safely recycled and reused.

Thanks to the Foambase technology, recycled material can be used to produce farm tracks, industrial yards and car parks which are 100% recycled. It can also be

*Continued on page 40*

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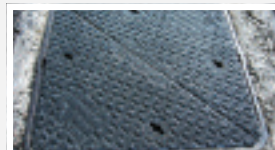
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*Two rollers on a road near Roughton, Norwich*

**Continued from page 38**

used to create the sub-base, base and binder course layers of new roads, or it can be used in pothole repairs.

This one innovation has allowed Minster to save hundreds of thousands of tonnes of coal tar from going to landfill, which can cost councils up to £100 per tonne.

The businesses which use our services have massively reduced the carbon footprint of their developments through our technology.

We currently recycle around 50% of the material which we remove, but even the 'new' material we buy is more sustainable than it used to be.

A significant quantity of the material we use is produced from secondary aggregates supplied by construction solutions provider Tarmac. This reuses byproducts of industrial processes in steel manufacturing to create materials with high sustainability and performance credentials for use on the road network.

As an example of how rapidly things change in this industry, we are currently developing and laboratory testing the next generation of recycled road material. This will enable us to make all roads we work on 90% recycled.

Our recycling and waste reduction systems already save thousands of tonnes of mineral aggregate and crude oil from having to be extracted from the earth and cut thousands of tonnes of CO<sub>2</sub> emissions. However, this new technology will double what we can achieve.

### Added benefits

While the ecological argument for these innovations is clear, there is a strong business case for embracing new ways of working, because businesses that embrace technology are becoming a more attractive proposition for clients, which have their own sustainability goals.

Being technology-focused also makes the road surfacing industry more attractive for young people, who may be considering a career in the construction or surfacing industry. At a time when there is a substantial skills shortage and a growing number of experienced operatives are reaching retirement age, this is more important than ever.

Getting the next generation interested by investing in technology and modernisation is a key way of demonstrating that road

surfacing is an industry that is embracing innovation, technology and greener ways of working, is full of opportunities and a place where hard work is rewarded.

### A changing industry

Road surfacing is a rapidly transforming industry, with green innovations saving thousands of tonnes of carbon emissions, where high tech equipment is delivering incredible results, where we can fix a road as soon as a fault is reported and where workers are well protected and well rewarded. You might think road surfacing seems old-fashioned; yet in a world where more people and businesses are becoming conscious of their impact on the environment, the road surfacing industry has been quietly working to make itself more innovative and sustainable. ➡



*Aerial view of the Foambase recycling plant*



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# Highways AWARDS

RECOGNISE | REWARD | CELEBRATE

**A**t this year's *Highways Awards* (13 October) we have developed a new category for mental health support, to recognise those who have gone above and beyond in helping protect the sector's most valuable asset, its staff.

Mind highlights that every year, one in four of us will experience a mental health problem, and it is working hard to make sure no-one faces them alone.

Dominic Browne speaks to Dane Kramberger, head of workplace wellbeing services at Mind, about the issues facing the infrastructure sector and the challenging times we live.

**Thank you for your support of the *Highways Awards*. How would you assess the state of mental health in the infrastructure sector? And how do you think working with *Highways Awards* can help get the message out?**

Construction and infrastructure can be a rewarding and varied industry to work in. However, it is also one where pressures can be high, and people can be more likely than average to experience work-related stress and other mental health problems.

For employees, it often has not felt easy to come forward, mention that something is wrong or ask a colleague to talk. But things are changing. More and more construction businesses are starting to see their staff's mental health as a priority. Working with *Highways Awards* provides Mind with an opportunity to emphasise this message, showcase best practice and encourage the industry to drive forward further positive change.

**What impact is the coronavirus having on your work at Mind?**

Like many organisations, the coronavirus outbreak has resulted in all Mind staff working remotely and we have taken advantage of the Government's furlough scheme for employees that are simply not able to work anymore (such as our colleagues in Mind shops).

For our network of around 120 local Minds, who deliver key services, many of them are finding themselves needing to adapt to moving to digital or telephone delivery.

**What resources/guidance/advice have you made available to help people through this crisis?**

We have created several resources and guidance to date and we're continually

One of the most important messages we can ever send to anyone in need of help is that they are not alone. That is why *Highways* has teamed up with the UK's leading mental health charity Mind to provide support and guidance in these difficult times and to celebrate the work done by infrastructure companies to help their workforces

## Mental health and Highways: Q&A with Mind

updating and adding to these as this fast-moving situation evolves. Some of our key resources include:

- Coronavirus toolkit containing various resources to support organisations and employees
- Our key tips for managers on how to support their team when working remotely
- Working from home tips from Mind staff
- Toolkit for small businesses and self-employed
- Blog on how to support the wellbeing of staff being furloughed
- Advice for key workers

**How can employers help protect their staff's mental health through this difficult period?**

This is a challenging period for organisations and employees alike. Employers are being faced with making difficult decisions such as furloughing staff, or in some cases making

redundancies, and many employees will be feeling the impact of this, along with other potential challenges such as feeling isolated, or juggling caring responsibilities with work and financial issues.

It is important that all employers recognise the impact these challenges may have on employees and ensure staff are supported through regular, clear and open communication, as well as signposting to support both inside and outside the organisation. Employers should also provide opportunities for their staff to ask questions and provide feedback on what support they would find most useful.

**Many highways staff will still be working on the roads. What is your advice to those still working who face a difficult time out there?**

Our advice for key workers may be helpful to people who have to leave their house for



work during the coronavirus outbreak. If you are a key worker, you may experience difficult feelings, such as stress and anxiety, so it is important to understand what these feelings are and how to manage them. You may find it more difficult to look after your mental health and wellbeing during this time but there are things you may be able to do, such as:

- connecting with colleagues, friends and family
- using support available within and outside your organisation
- taking care with how often you access news and information
- making time for yourself wherever possible (eg keeping active and looking after your physical health).

### What is your advice to employers in terms of aftercare and support when the crisis passes?

It is vital for employers to plan ahead as

much as possible. It is important that regular wellbeing check-ins with employees are in place now, whether they have been furloughed or not, and that these continue once the crisis has passed.

The stress and impact on employees' mental health may also have been increased by external factors related to the current situation, such as family bereavement, financial difficulties or strained relationships at home.

If employers have an employee assistance programme (EAP) in place, it is worth reminding employees that they can use this for additional support. For returning furloughed employees, it is a good idea to set up a one-to-one in advance to discuss positive personal and professional steps that will support their return to work. A phased return to work may be worth considering and ensure that employees have the time to get back up to speed within their roles.

### How does social distancing impact mental health support? Is it harder to provide counselling from a distance?

Beyond the general impact on everyone's mental health, social distancing has also affected people's ability to access their local mental health services.

We are doing all we can to work in partnership with the NHS mental health services and local authorities across England and Wales to ensure that the mental health support needs of people are met.

While face-to-face is often the best way for many people to receive counselling and the other support they need, we are working to find alternative ways to provide that support. Many of our local Minds are providing e-counselling, support over the phone, online training and live Facebook events. We also have our Elefriends community where people can access peer support online and our Infoline remains open on 0300 123 3393 to provide information about mental health problems and signpost where people can get help near them.

### It must be difficult for Mind's staff to tackle such serious work every day. How do you find the strength and make sure you also look after yourself at this time of crisis?

Our team is similar to many others in that the current situation has an impact on all of us and has changed our focus, priorities and workloads within a very short space of time.

We need to ensure we maintain our own wellbeing so that we have the capacity and resilience to support other people's but thankfully we have access to the information of how best to cope mentally within the workplace and a collaborative, supportive team spirit, even though we are all currently working remotely. This is underpinned by actively promoting the support available and the ability to work as flexibly as possible, particularly for parents and carers who need to juggle work with caring responsibilities.

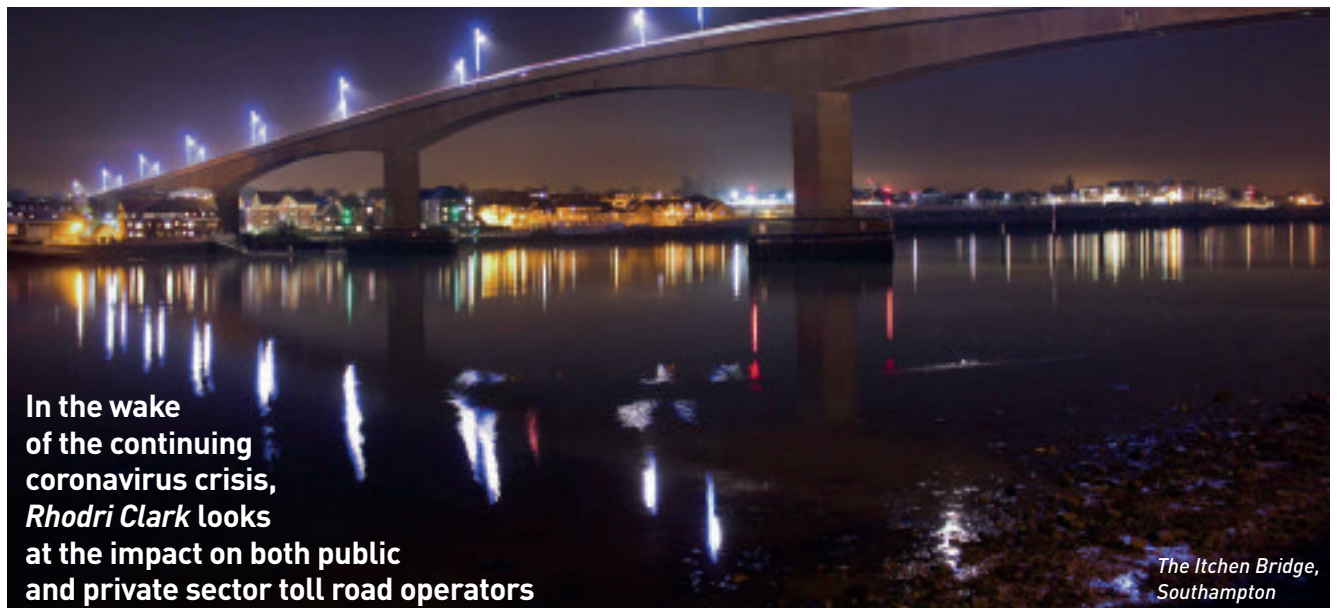
Some of the steps Mind has taken to enable more flexible working are:

- Further flexibility around working hours, allowing employees to work at times which suit them but also making it clear that there is no expectation to work longer days or to respond to emails outside of traditionally 'core hours'
- Ensuring workloads are manageable and having mechanisms for staff to feedback and get support when this is not the case
- Encouraging staff to take regular breaks throughout the working day, including taking the time to step away from work (eg having a walk at lunch) ☺

For more information or to support Mind visit <https://www.mind.org.uk/>



## Exclusive: Toll road operators to pursue compensation



**In the wake of the continuing coronavirus crisis, Rhodri Clark looks at the impact on both public and private sector toll road operators**

*The Itchen Bridge, Southampton*

**P**ublic and private sector operators of toll roads will seek additional Government funding when COVID-19 restrictions begin to ease,

*Highways* can reveal.

The organisations are now keeping their infrastructure open despite revenue nosediving or, in some places, disappearing completely. Operators have also chosen to not cut costs by closing their infrastructure at night or weekends, for example, to help keep the network moving and provide vital freight routes.

*Force majeure* clauses in private finance initiative (PFI) contracts may come into play on 'shadow toll' roads – where the Government pay operators based on traffic use.

M6 Toll chief executive Andy Cliffe told *Highways*: 'As with nearly all organisations in the world, our business has been significantly impacted by COVID-19 as non-essential business and leisure journeys have ceased.'

He said the road was a vital part of UK infrastructure, particularly for freight: 'For that reason, the road remains fully open. However, to ensure that we can maintain safe operations for both our colleagues and customers, we have changed the way that we operate to remove payment by cash.'

Cash payment is also suspended on the Humber Bridge and Clifton Suspension Bridge in Bristol.

Tolls and charges have been suspended by some authorities, including Southampton City Council at the Itchen Bridge.

A Plymouth City Council spokeswoman said: 'The tolls on the Tamar Bridge and Torpoint Ferry were suspended from 25 March to help reduce the spread of the

coronavirus by protecting customers and bridge and ferry staff, while still keeping these vital transport links open for key workers, emergency services and those travelling for essential reasons.

'Cornwall Council and Plymouth City Council will discuss with the Government how this necessary and important action to protect public health will affect the long-term funding of the two crossings when we are in a position to review future operations once Government restrictions have been relaxed.'

Contrasting approaches are evident within some city regions.

Transport for London has suspended 'all road user charging schemes in the capital' but Highways England continues to collect the Dart Charge (a congestion charge rather than a toll).

Highways England was unable to tell *Highways* the scale of the Dartford Crossing revenue reduction.

Liverpool city region mayor Steve Rotherham announced on 26 March that Mersey Tunnels tolls were suspended because only key workers were using them.

However, users continue to pay tolls on the new Mersey Gateway Bridge because the Government has refused Halton Borough Council's request to suspend the tolls.

The bridge's funding package was agreed on the basis that tolls will cover most of the £1.86bn cost, up to 2044.

A council spokesman said: 'Project revenues are currently at 50% – and falling – of year-on-year values.'

'There is no additional assistance being provided by Government during this period beyond that which is already within the funding model for the project. Halton council will seek financial support from the

Government to recompense the council for any costs associated with COVID-19.'

Highways England pays shadow tolls – linked to traffic volumes – for eight roads procured through Design Build Finance Operate (DBFO) contracts. They include the M40 Denham-Warwick, the A1(M) Alconbury-Peterborough and the M1-A1 link east of Leeds.

Highways England was unable to say how much traffic on those roads has reduced.

'Payments to DBFO operators who are paid on the basis of shadow tolls are set annually, based on the prior year's traffic volumes. Current payments to DBFO operators are unaffected,' said a spokeswoman.

'Our DBFO contracts contain *force majeure* clauses. We are constantly in dialogue with our DBFO providers regarding the operation of the strategic road network including the financial impact of coronavirus.'


Shadow tolls also cover the A55 across Anglesey to Holyhead ferry port, where activity reduced when the UK and Irish governments prohibited leisure travel. Data from the A55 further east reveals reductions of 30% in heavy goods vehicles and over 70% in other traffic.

A Welsh Government spokesman said shadow tolls were paid annually. Traffic reductions in late March and early April would feature in the annual reconciliation of figures in June. Those from early April onwards would not be known until June 2021.

Following the June 2020 reconciliation, 'monthly payments will be adjusted accordingly from July 2020,' he said.

'In line with typical PFIs of the era, there is a definition of *force majeure*. We are not yet in a position to determine what effects this will have on the contract.' 🚫

# HIGHWAYS AWARDS 2020

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13 OCTOBER 2020

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## Highways AWARDS

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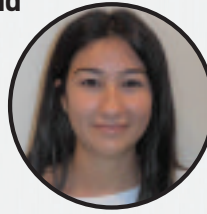
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# Contracting after the crisis

This month, Hannah Ishihara, Khalid Ramzan and Jon Hart of award winning infrastructure law firm Pinsent Masons LLP, provide some thoughts as to what contracting might look like after COVID-19 and the challenges associated with establishing a sustainable business model for highways construction and maintenance projects and those in the wider infrastructure sector



**T**he cliché is that is often darkest before dawn. At the time of writing it is unclear whether the peak of infections and tragic fatalities has been reached, nor is there any clarity as to when and how our communities may be emerging from lockdown. This moment does, however, seem like a good time to pause and reflect on how things might be changed for the better, post COVID-19.

In previous issues, we have commented on incentivisation for parties to 'do the right thing' in contracts, the willingness of English courts to imply a duty of good faith into certain types of long-term 'relational' contracts and the benefits of collaboration.

The current crisis provides further examples of this kind of approach, although this is often in spite of, rather than because of, contractual arrangements.

The lead given by the Government through the issue of its procurement policy notes, such as *PPN 02/20* has highlighted that, in extreme conditions, parties can agree to take a radical approach in safeguarding payment streams and for providing relief for a specified period of time and more generally. Particularly in relation to local government and other framework contracts, there have been numerous examples of the reallocation of resources, re-scoping of services in a flexible way and dealing with each other in different ways to meet the extraordinary demands being faced across the country.

What lessons might be learned from this? Once the current

crisis is over, it is likely to become more crucial than ever for parties to collaborate on infrastructure projects, especially given the extensive financial support from the Government. A key area to watch will be the pace of take-up in the industry of initiatives that were already emphasising new ways of working and the role of digital technologies in developing more resilient commercial models to face the challenges ahead.

## The problem with the transactional model

A criticism of many projects is that they are too often delivered late, over budget and with inconsistencies in standards and subject to defects. These problems have in turn become subject to extensive claims and litigation.

It has been suggested that this is sometimes the inevitable consequence of procurement practices and contracting approaches in which relationships between members of the supply chain are seen as purely transactional and decisions are taken largely based on cost and risk.

Inherent to this approach is the idea that sometimes the contracts with the lowest cost are the most valuable because there is no consistency or transparency in how contracts are priced; although

this is to ignore the difficulties associated with work becoming spread more thinly and with projects becoming less co-ordinated in terms of design and implementation.

There is sometimes a perception that the role of the contractor has gradually evolved into the role of administering and managing sub-contracts rather than planning and carrying out the works. A further issue is that on some projects, sub-contracting can increase inefficiencies down the supply chain and increase the overall project cost.

A key question is going to be whether this transactional approach is 'fit for purpose' for the future and if not, what 'better' might look like.

## Project 13: An enterprise model

One answer to this may be found in the Project 13 initiative. Launched in 2017 by the Institution of Civil Engineers (ICE) with support from major



employer and contractors, Project 13 aims to 'deliver better outcomes for the public and customers of infrastructure, a more highly skilled, innovative workforce and lead to a more sustainable, productive construction industry'.

ICE says Project 13 will 'establish a better business model for infrastructure delivery, improving productivity, performance and mitigating the skills risk'.

At the heart of this is a shift away from traditional contracting relationships to more collaborative contracting models. It promotes an 'enterprise' model of contracting rather than the traditional transactional model and the hope is that it will make arrangements between parties more efficient and profitable and that it will encourage innovation and the adoption of new technologies.

The initiative looks to shape the delivery of major projects into an enterprise model with a 'Capable Owner' at its helm. Rather than a fragile 'us and them' culture that plagues traditional one-off transactional relationships, the idea is that the Capable Owner invests in selecting the right partners based on capabilities and behaviours, and develops appropriate value-based incentive mechanisms that focus on outcomes and whole-life asset performance.

Project 13 requires investment in a governance framework that enables effective and collective decision-making, with high levels of transparency and layers of assurance built into the process, ensuring that quality of outcome remains at the core of the enterprise's objectives.

It is not intended to promote a particular form of contract (although certain contractual forms, such as the NEC4 Alliance or TAC-1, or its framework cousin FAC-1, may be more capable of adaptation to this type of approach).

Overall, Project 13 represents a key development, which is helping to shape how projects are delivered. This kind of approach could be carried into highways construction and maintenance projects when establishing how parties will work together. There are a range of industry

examples where this kind of approach has delivered benefits for participants and end-users. Even where a fully-fledged project enterprise has not been achieved, some of the more pernicious aspects of more transactional contracting approaches have been mitigated by effective project governance and successful collaborative techniques.

#### **Key differences between the transactional and enterprise model**

The structure of the enterprise model differs in a number of key ways. ICE has highlighted a range of new descriptions and terminology for some of the key participants in an enterprise, as set out in its 'Blueprint'. For example, the asset owner is central and surrounded by the key Advisor, Investor, key Supplier and Integrator and these entities all work as one cohesive team. The asset Owner has relationships directly with the suppliers (rather than through the client entity, as is often the case in a transactional model). A unique part of the enterprise model as envisaged under Project 13 is that there is an 'Integrator' entity, which acts to tie together and engage all levels of the

supply chain.

A key focus is that a properly functioning enterprise will be concerned with looking at 'risk management' rather than 'risk allocation'. The contractual governance structures for the enterprise will be crucial, rather than the more familiar contractual risk allocation approaches seen in the majority of contracts. This is a particular consideration when looking at projects that claim to be proceeding on an enterprise basis. Do the contractual documents really reflect the reality that goes with this type of approach – or is this just window dressing? Legal agreements for enterprises, like proper alliances, can sometimes be seen to be more challenging for what they do not say than for including detailed clauses dealing with penalties, liquidated damages and compensation event claims: risk should be jointly mitigated across the parties rather than simply transferred from one to the other. Another key difference is that profit and reward is based on the value added.

Historically, one of the biggest challenges that has faced the construction sector has been its cynicism. Certainly there are aspects of enterprise contracting that may be unfamiliar and a long way from more traditional contracting approaches. For many projects this approach may not be appropriate – although in the roads sector where employers are able to identify large value pipelines of capital and maintenance work, there are perhaps fewer obstacles than where projects are about delivering individual facilities or one-off assets. It might be suggested that the sector – both employers and contractors – cannot afford to look at this kind of approach to delivering infrastructure. A response to this might be that, coming out of lockdown, the industry simply cannot afford not to. ➔





## MEMBER OF THE MONTH

# Introducing: Katharine Kelly

**Katharine is a principal engineer within the highways team of Jacob's Glasgow office, alongside around 150 others. She is the resource manager for around 70 people, direct line manager for seven and is responsible for overseeing the technical traffic sign and road marking design on major highway schemes.**

## What inspired you to become an engineer?

My father is a mechanical engineer and during my childhood I always took interest in his job designing and building car production lines; I always remember thinking how cool it was that my dad worked with robots. I originally wanted to go into automotive or motorsport engineering, but it was my father who encouraged me to pursue a career in civil engineering due to the stability of the industry. Seventeen years on I still have no regrets and am thankful for his good advice.

## Can you describe a typical working day?

A typical working day starts with dropping my two daughters off at primary school, before

jumping on the bus into town. I'm lucky to have a really easy commute to the office and I tend to arrive just after 9am.

I'm currently working with a design team in Calcutta so mornings will be spent on Skype meetings going over design issues and getting project updates. Then after lunch I'll probably try and focus on report writing or answering emails. This week I am having goal setting meetings with my team so will sit down for one-to-ones between 4.30pm and 6pm.

## Are there any particular challenges or unusual aspects to your role?

I'm the resourcing manager for around 70 members of the highways team and



this role brings me the most challenges; keeping everyone busy (but not overloaded) while providing a variety of design work

## NEWS

### North West Branch seminar

In March, the North West Branch held an evening seminar during which Cheshire East Council – in partnership with Ringway Jacobs and its supply chain partner IWJS Ltd – gave presentations on managing the effects of flooding and storm intensity on infrastructure and local communities.

First up was Paul Reeves, flood risk manager for Ringway Jacobs/Cheshire East Council, who gave an interesting presentation on how Cheshire East is tackling the ever-growing frequency of severe weather events.

Cheshire East experienced four extreme weather events during 2019, which impacted on residential and commercial properties, closing both major and residential roads and causing substantial damage to a number of highway infrastructure assets. Mr Reeves provided useful information on relevant legislative frameworks and key regulatory activities.

His presentation was forward thinking, both in terms of how we can future proof the environment, and also how we can excite and encourage the next generation of water and drainage engineers to take on climate change and related challenges.



IWJS, which provides operational support and flood management services to local highway authorities, brought a vast range of their equipment to the event. Attendees were able to inspect this during the interval and IWJS's staff were extremely helpful in discussing how the equipment worked.

The ability to inspect and learn more about the equipment brought added value to the event and the North West Branch are grateful to IWJS for doing this.

Brian Nelson and Peter Maasz of IWJS then provided an insightful presentation on IWJS who have more than 40 years' experience of delivering sewer services,

waste management and industrial cleaning to essential infrastructure services across the UK.

Brian and Peter described the varied range of effective flood management services that IWJS has provided to Cheshire East Council. Embracing innovation and new technology is a theme that ran throughout the whole evening and ensured that the event was enjoyed by all.

The North West Branch is looking forward to publishing a calendar of future events and is also seeking new members for its committee. If you are interested in becoming a committee member please email [northwest@theihe.org](mailto:northwest@theihe.org).

for graduates and those working towards professional review. Ensuring that people get the chance to do some on-the-job training can be really tricky, but very rewarding.

#### Tell us about a professional achievement

My claim to fame is that I designed the signs for Glasgow's Commonwealth Games – around 800 bright pink signs that directed athletes, officials and dignitaries between venues. I even managed to keep hold of one afterwards – it's currently hanging in my kitchen.

#### Why did you join the IHE?

It was the IHE's approach to getting chartered, which appealed to me, as did the opportunity to specialise in different highway design elements (traffic signs, in my case). I joined as a member in 2017 and immediately set about preparing my portfolio for professional review, for which I received lots of help and encouragement from the local branch.

#### What contributed to your decision to become professionally registered?

I was carrying out a performance review for an apprentice and he started asking me about which professional body he should join and what would be his best route to getting qualifications.

It was a bit of a lightning bolt moment for me; people had been nagging me to get chartered for years but it wasn't until I was trying to help someone else on that journey that I realised it would be a huge advantage to be able to speak from experience. I signed up to the IHE that night and went along to a branch event a couple of weeks later.

#### In what ways has registration benefited your career?

I was promoted, given a pay rise and made a team leader. Being chartered has allowed me to work in more senior roles for clients who can demand professionally qualified employees. Becoming a team leader was a huge deal for me as I've always enjoyed helping others in their careers, and watching others grow in their roles is really rewarding.

#### Is there any advice you would pass on

#### to someone considering professional registration?

Just bite the bullet and go for it. You have nothing to lose and so much to gain. Find yourself a mentor who can coach you through the process and prepare to spend a couple of months working late to gather evidence for your portfolio. If you don't know where to start, pick the easy things like gathering CPD logs and updating your CV.

#### Given the current economic and environmental climate, what do you consider the biggest challenges facing the highways and transportation industry

I think we need to be looking at more innovative ways of working with our existing infrastructure to allow it to operate more flexibly and efficiently. We may not be able to build as many new roads as we have in the past, but the skills of highways and transportation professionals will be even more in demand to enhance the operation of our current networks, making them safer and increasing integration between different travel modes.

## NEWS



### Progress your professional registration

As an IHE member have you thought about achieving professional registration or progressing to the next level?

To gain Engineering Council registration, engineers and technicians prove their competence and commitment in a professional review of their portfolio submission to the IHE.

In recent weeks we have been bringing you step-by-step tutorials on how to achieve EngTech, ICTech, IEng, CEng or CITP through the IHE.

If you have missed the tutorials, we might not hold a valid email address for you, or your email preferences may need updating.

If you would like to participate, please email [web@theihe.org](mailto:web@theihe.org) with your choice of tutorial.

#### Weekly Programme

**Week 1 – Establishing your route**

**Week 2 – Getting started**

**Week 3 – The application form (1)**

**Week 4 – The application form (2)**

**Week 5 – The application form (3)**

**Week 6 – Completing your submission**

## NEWS

### Richard Hayes attends last council meeting

At its council meeting held at Brindley Place in Birmingham on 19 February, IHE council members paid a fond farewell to departing chief executive Richard Hayes.

IHE President Jonathan Pearson reminded all present that Richard has been a long-standing member of the council, joining initially as a student member back in 2004, following which he joined the presidential team in 2006, becoming president in 2012.

Even before finishing his term as immediate past president he took up the role as CEO in 2015 and has remained at the heart of the council until this meeting.

The members of all joined in wishing him farewell after



serving the Institute and council for the past 16 years.

Mr Pearson presented him with a card and gift to mark his departure offering his own personal thanks to Richard for his hard work and support over such a long period of time.

Mr Hayes said that he hoped he was leaving the leaving the Institute in a much stronger position and wished his successor Steve Spender every success for the future.

#### CONTACTS AND LINKS

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# 'Mini' Highways Directory

The Highways Directory 2019/20 – a useful reference for companies and suppliers looking for new partners – is available online at [www.highwaysdirectory.com](http://www.highwaysdirectory.com) and in digital book format at [www.highwaysmagazine.co.uk](http://www.highwaysmagazine.co.uk)

For your convenience, we have produced a 'mini' Highways Directory here, that lists our featured suppliers under useful category headings. To find the full contact details for each company, please use the URL below followed by the extension listed. For example, to find 'Acklea' online please use [www.highwaysdirectory.com/acklea](http://www.highwaysdirectory.com/acklea).

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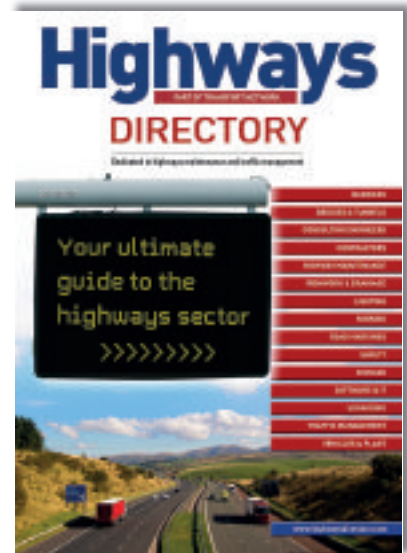
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# Highways People

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## Lugg makes a PACTS

**Matthew Lugg OBE**

(pictured) has been selected to chair the Parliamentary Advisory Council for Transport Safety (PACTS) Road Environment Working Party.

Following an open selection process, sector heavyweight Mr Lugg was chosen to lead the group, having been a former president of council directors group ADEPT and of the Chartered Institution

of Highways and Transportation. He is also head of profession for local government at WSP.

The unpaid appointment is initially for three years, renewable by mutual agreement. He succeeds Heather Ward who served for six years.

He will be supported by vice-chairs **Martin Wiltshire**, assistant manager for traffic and safety at Hampshire



County Council, and **Kate Fuller** acting CEO at the Road Safety Foundation.

Mr Lugg said: 'I'm delighted to be taking on the chair of the PACTS Road Environment Working

Party, an organisation that champions the need for a safer highway infrastructure to reduce road casualties.'

PACTS executive director David Davies said: 'There are many challenges to address regarding making the road infrastructure safe for all users, including smart motorways, 20mph limits and adapting for zero carbon, zero emissions and autonomous vehicles.

The working party, with members drawn from many sections of the safety community, plays an important role in advising PACTS and shaping policy.'

Because of the COVID-19 lockdown, the working party will meet via video conferencing until restrictions are eased.

PACTS is a registered charity and supports the All-Party Parliamentary Group for Transport Safety.

## Labour transport team take their driver's seat

New Labour leader Keir Starmer has named **Jim McMahon OBE** as shadow transport secretary.

Mr McMahon (pictured) follows in the footsteps of Andy McDonald, who was moved to shadow employment secretary.

The new shadow transport secretary is Labour and Co-operative MP for Oldham West and Royton and is the son of a truck driver, which should give him a head start with the road haulage community.

He will also know the local road and bus sectors well, thanks to his background in local government, having become a councillor in 2003 and then elected leader of Oldham Council in 2011.



He served on the Greater Manchester Combined Authority with lead responsibility for transport before moving to Parliament as an MP in 2015.

He was later appointed shadow minister for local government and devolution in 2016.

In 2015 he was awarded an OBE for services to the community in Oldham. His appointment to shadow transport secretary was welcomed by many in the sector and in local government.

Mr McMahon said: 'Transport is critical to our economy and

society, for both to succeed we must plan well in advance. As much as the big-ticket schemes are important, we must not lose sight of the day to day concerns of millions; the quality of their local public transport services. I look forward to supporting key infrastructure projects which place us well in the long term, but also to consider how every village, town and city is served too.'

### Labour's Shadow Transport team

**Shadow Secretary of State:** Jim McMahon

**Green & Aviation Minister:** Kerry McCarthy

**Rail Minister:** Tan Dhesi

**Regional Transport:** Mike Kane

**Buses:** Matt Rodda

## RSTA gets a new Boss



**Paul Boss** has been appointed chief executive

of the Road Surface Treatments Association (RSTA) and will take up his new post on 1 July.

And **Rory O'Connor**, who is interim chief executive until then, has been appointed RSTA chief technical officer and will take up his new

post on 1 May.

Mr Boss (pictured), who takes over from Mike Harper, has over 30 years' experience within local authority highways and since 2005 has been the highway asset manager looking after strategic, tactical and operational highway asset management in Staffordshire.

Mr Boss is a chartered engineer and Fellow

of the Institute of Highway Engineers, Fellow of the Chartered Institution of Highways and Transportation (CIHT), and member of the Institute of Asset Management.

He is also vice chair of the UK Asset Management Board and chair of the Midland Service Improvement Group's Asset Management Task Group.

Mr O'Connor has worked closely with the RSTA for 10 years as a director of RSTA member company Tarstone Surfacing Ltd. He has worked in various capacities as RSTA executive committee member, chairman of the Surface Dressing Sector, and participant in numerous technical groups including BBA/HAPAS, BSI and CEN

committees.

Mr O'Connor said: 'I am delighted to be part of promoting the association's championing of best practices and raising industry standards through the development of codes of practice, training and qualifying the workforce and ensuring safe working.'

• **Big Interview** – p16-17

# Highways JOBS



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# Trying to make sense of highways and transport in the UK

**This is the continuing story of a chartered engineer who worked in a local highways department. Today, still wanted by the highways industry, he survives as a soldier of fortune. If you have a problem, if no one else can help, and if you can find him, maybe you can hire...The Ranty Highwayman. In this article he discusses life off-road during the coronavirus**



There's of course only one subject to write about this month, and before I get into it, I want to pay tribute to the people who are keeping the country going during these difficult times. Our industry has many people still out working to keep the highway network safe for those who have to travel and exercise; including the NHS workers, we are relying on. Thank you all.

As I write this, I have been working from home for a month and who knows where we'll be when you read this. I've now got a daily routine which includes getting out on my cycle, although the ride will include a reason for a utility such as food shopping etc. I have varied my route to break the monotony, and this has included using some dual carriageways (with cycle tracks) that I would only ever use if they were time savers because of the normally noisy and polluted environment they offer. However, the huge drop in traffic has made these roads quiet to the point where one can even hear the birds singing, and the air is noticeably cleaner too.

On more local roads I have been annoyed, but not surprised about the poor driving and speeding I'm seeing from some drivers; but everywhere I go, there are more people out walking, running and cycling than I have ever seen before. But what has struck me most about my travels is just how much space in and around our communities has been given over to motoring; whether moving cars or storing them. In the same way, it is

also striking to see how little space is given over to people moving under their own effort which is thrown into sharp contrast by the need to physically distance ourselves from each other.

***We are living through some frightening and destabilising times, but we do have the chance to think about the future and to start laying the groundwork now***

A few UK councils have started to look at using their powers to make some quick changes to streets in order to give people more space to walk and cycle in safety, but they are the exception and when you see other parts of the world rolling emergency street changes out it puts us to shame. Bogotá in Columbia was the trailblazer with 72 miles of cycle lanes rolled out by mid-March to take the pressure off the bus network<sup>[1]</sup> and a bit closer to home Berlin is building temporary layouts, which actually offer some protection<sup>[2]</sup> – you can even have a look at the design guide for them<sup>[3]</sup>.

Part of crisis management includes the recovery phase, and with a crisis the size

of the coronavirus, it is going to take us many months, if not years to be back to normal. In planning to get ourselves back to normality, we have the chance to define what it should look like. I would like to see it is one where we can reduce the need to travel long distances in favour of more people being able to work flexibly and at home. I would like us to acknowledge that we can, in fact, remove significant amounts of motor traffic capacity to enable people to walk and cycle in their neighbourhoods. I'd also like to see a shift in spatial planning policy that puts local shops and services at the heart of development – the very places we are currently visiting because they are close to home.

We have made some very rapid changes to our way of life for some very stark reasons. Perhaps it's because there is a visceral link between behaviour and the daily news cycle that we have seen people largely accept the reality we are in. This contrasts sharply with issues such as air pollution and climate change, which are perhaps more abstract for many people to deal with but have implications far more serious than the virus. We are living through some frightening and destabilising times, but we do have the chance to think about the future and to start laying the groundwork now. ➡

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