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LANTERNS

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NEW POROUS
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WOOLWICH
TERMINALS



ISSUE 42

CONSTRUCT



Foreword



Adam Green

CEO FM Conway

WE ARE EMERGING FROM THE PANDEMIC AS A STRONG BUSINESS WITH A RENEWED FOCUS ON OUR CORE VALUES

This issue of Construct arrives just as COVID-19 restrictions start to be lifted and many aspects of our lives return to something like normal. The pandemic has had an impact on us all, and has been very difficult for a lot of people. I want to ensure that we extract positives from the situation and use them to make our business better.

We are looking at how to adopt some new ways of working, while ensuring the mental wellbeing of our employees is an absolute priority.

We have secured some great contracts, many of them long-term contracts and frameworks, and we've further strengthened our self-delivery model as Toppesfield has now become part of the FM Conway group. They have a great team that is going from strength to strength, and I would like to welcome Bill Pryor and everyone at Toppesfield and congratulate them on their stellar performance.

We have also restructured and strengthened our senior leadership team, with the appointment of James Tallon as managing director. James will spearhead a number of our operational divisions, allowing me to focus on the delivery of our three strategic pillars of self-delivery, technology, and carbon and the environment.

Despite the impact of COVID-19, we are not letting up on our commitment to become net zero carbon. We will soon be launching our Net Zero Strategy, which I'm really excited about. This will show how we intend to achieve net zero and what it means for the way we work.

We are also supporting our clients on their net zero journeys, with initiatives like our SureCharge electric vehicle chargepoints and converting Westminster's heritage lighting from gas to LED lamps.



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Contract

FM Conway has won a contract to refurbish London's Blackfriars Bridge, which includes a full refurbishment of the cast iron parapets and repainting the entire structure.

The 285m long, Grade 2 listed structure was built in 1869 and widened in 1909. It is owned by Bridge House Estates and managed by the City of London Corporation.

ENERGY SAVING LANTERNS

OLD MEETS NEW IN A PROJECT TO CONVERT WESTMINSTER'S HERITAGE GAS LANTERNS TO LED LAMPS

IMAGES: INDOLIGHTING



Central London's historic squares and alleys have an atmosphere that comes in part from heritage lighting columns powered by gas. The City of Westminster currently has 299 gas lamps on its asset register, in historic areas like Covent Garden, St James's, and Knightsbridge.

While gas lighting provides the right ambience for these historic areas, the high energy and maintenance costs make it very inefficient. Gas lamps have a lot of individual parts, and every time a part needs maintenance the lamp has to be disconnected from the mains, taking it out of action for months at a time.

Another downside is the carbon footprint: each gas light on Westminster's list generates 10 times more carbon emissions than the equivalent low energy LED.

With all this in mind, FM Conway and WSP, the company's partner on Westminster's street lighting framework, recommended converting the gas lamps to LED lamps, without losing the atmosphere of the old lights.

"We were confident we could convert them using new technology but keep the aesthetics," says FM Conway business, client & technical support manager Steve Deakin.

FACTS

Project
Gas lighting conversion

Client
Westminster City Council

FM Conway divisions
- Lighting
- Structures
- Traffic Management

Number of lights
299

Carbon savings compared with gas
10 times

"The columns can be some distance from the gas main, so we might have to dig a 20m trench through solid concrete"

After a pilot in St James's, the three year conversion programme has just started.

Matching the atmosphere and appearance of the old gas lamps is achieved with LEDs that create the same brightness and warmth as the gas lighting combined with replacement lanterns and columns that match the originals exactly. The business has worked very closely with lighting manufacturer Pudsey Diamond Engineering on both elements.

"There is not enough space in the old lanterns for the new electrical components, and it would be very difficult to retrofit them because you are dealing with materials that are 80



years old or more," explains FM Conway street lighting service manager Gary Thorne.

Pudsey Diamond Engineering Ltd took moulds of the original handmade cast iron lanterns and columns and used them to create new aluminium and copper versions that even include replica gas mantles, timers, pipes and valves. The company's commercial sales manager Lynn Roberts says: "Proudly designed and manufactured in the UK, combining old and new technologies from sand castings to hi-tech 3d scanning and printing and the many challenges this presented along the way, the results are amazing.

"We are honoured to be working on this high-profile project to re-light the prestigious and renowned world heritage site of Westminster."

Before the replacement lamps can be installed the old ones have to be disconnected from the gas supply. "Some of the areas they're in, like Covent Garden, are very busy with tourists and shoppers," explains FM Conway senior contracts manager Aaron Clark. The company's traffic management division is helping with road and footway closures.

Gary adds: "The columns can be some distance from the gas main, so we might have

The lamps are in historic areas throughout Westminster

to dig a 20m trench through solid concrete around services to get to the point of disconnection."

The new lamps are connected to a management system (CMS) that continually monitors their condition, and if there is a fault it can be sorted out in hours rather than months. This system can also be used to vary the brightness, switching between low level, atmospheric lighting and brighter lighting for safety or security.

Westminster City Council's street lighting project manager Dean Wendelborn says: "As custodians of 300 gas lighting assets, which usually result in costly and lengthy delays to repairs outside our duty to maintain the lights, the method with which FM Conway and suppliers have approached the electrification of our gas assets both above and below ground, shows the importance they have given to manage the work yet maintain their aesthetic appearance, even with delays due to COVID. This has assisted in greatly reducing the carbon emissions and energy consumption they produce as part of our climate emergency.

"The new lights look great and the ability to remotely control the output via the CMS adds that flexibility without affecting the aesthetic."

READY TO REACT

THE CONTRACT IS UP AND RUNNING TO MAINTAIN ROADS IN SOUTH LONDON UNDER TRANSPORT FOR LONDON'S NEW WORKS FOR LONDON PROGRAMME

On 1 April this year, FM Conway began work on an eight-year framework to maintain the south area of Transport for London's (TfL's) road network. A dedicated mobilisation team was established and as soon as the contract started, the new team hit the ground running.

TfL's Works for London programme covers a wide range of services, including safety inspections, reactive maintenance, planned works and small-scale capital projects. FM Conway won a contract to maintain TfL's roads in south London, based out of a hub at Beddington Lane in Croydon, where the team is co-located with TfL's own staff.

"Our role within Works for London covers maintenance works, cyclical activities and capital renewal schemes," explains FM Conway contract's director Andy Best. "We carry out core maintenance – like fixing potholes – and cyclical maintenance including grass cutting, gully cleaning and line markings, as well as winter maintenance.

"The contract also includes reactive maintenance and emergency call-outs, for example if the road needs repairing after a traffic collision or a burst water main. Keeping TfL's road network operating safely and reliably is critical to London's prosperity and we carry out these activities 24/7," adds Andy.

This was demonstrated as soon as the contract began. "In our first week, we were called in to do emergency surfacing after a fire in the Blackwall tunnel," Andy recalls. "And, at the same time, we also had to extend our winter maintenance season and keep gritting some of the roads because it was unseasonably cold."

While the reactive and cyclical maintenance activities were up and running straight away, the larger planned projects – like surfacing and lighting projects – have a greater degree of design and planning to make sure we provide the best design solution and minimise disruption during construction. "We have a portfolio of schemes for delivery this year," explains FM Conway senior contracts

The new contract is being run from a depot in south London, which has been fitted with SureCharge chargepoints for a fleet of electric cars and vans



manager Mark Goudy. "Designs are underway and we are working with stakeholders to make sure these are delivered safely and in a way to minimise disruption."

FM Conway was appointed as both Principal Contractor and Principal Designer, so the consultancy division will have a big role to play, as will other parts of the business. "We facilitate the work for other departments," explains Mark. "For example, we don't have our own surfacing department for this contract. It's the beauty of our self-delivery model: we can rely on other divisions, and they can scale up as and when we need them."

Mark adds: "We help to facilitate the design, traffic management and stakeholder engagement, which is an important part of our role. The works might be on TfL roads, but they all impact on roads in London boroughs."

An example of this is the expansion of London's Ultra Low Emission Zone, a high profile project that reflects a commitment from London Mayor Sadiq Khan to improve air quality in the capital. From October 2021 the zone will extend to incorporate a wider area, and FM Conway is installing all the gantries and signage associated with this.

"It is a huge signage scheme, which involves collaboration between our structures, surfacing and term maintenance teams," says Mark, adding: "The signage goes across

NUMBERS

over
22,000
lighting and
electrical assets

over
18,000
drainage assets

over
450
structures

over
5,000t
of salt to deliver
the winter service

over
6,500
trees

over
750,000m²
of grass

each borough, so there is a lot of stakeholder liaison."

Before winning this contract to be part of Works for London, the business had previously worked with TfL in the northwest of the city on the London Highways Alliance Contract (LoHAC), and many of the people working on the new contract joined from there.

"Our management team has a huge amount of experience of working on the TfL road network," says Andy. "We brought across some of the team from the LoHAC contract, and inherited people from the contractor that previously worked in the south region, who have a lot of knowledge of the network. And, of course, we have the invaluable back-up of the wider business for delivery."

TfL's asset operations south area manager Gary Oliver says: "I am impressed with FM Conway's efficient, safe and collaborative ways of working, particularly on our strategic roads."

He highlights the use of blockades to carry out work on the A316, saying this decision reduced the risk of vehicle incursion into the works area and provided opportunities for the local borough to carry out street cleansing at the same time. "Building on this success, FM Conway have further blockades programmed to be completed this summer on the A20 and A102/A2. This approach minimises disruption for all road users."





AIRFIELD ASPHALT

FM CONWAY HAS DEVELOPED
A POROUS ASPHALT SPECIFICALLY
FOR AIRFIELDS

Last year FM Conway's aggregates & asphalt division received an interesting request from their colleagues at Toppesfield: to design and supply a porous asphalt surface course for a runway on an RAF base. Runways in the UK are traditionally surfaced using dense mix Marshall Asphalt or the French BBA standard, so porous asphalt is an unusual choice.

Porous asphalt has an open structure that enables rainwater to flow into the pavement structure and then be released into the ground, making it much better than traditional surface options for minimising standing water. The Defence Infrastructure Organisation (DIO), which manages the UK's defence infrastructure, does have a specification for the material, but this was the first time it had been requested.

"We were contacted in May 2020 by Toppesfield because their client, Amey, had a potential project at RAF Odiham in Hampshire to resurface the runway using DIO specification porous asphalt," explains FM Conway development director Tim Metcalf. "This is quite a radical change from traditional Marshall Asphalt or BBA-type runway material."

Porous asphalt usually includes a relatively soft bitumen, making it susceptible to rutting and fretting. However, the softer bitumen does prevent reflective cracking – when movement in the layers below causes cracks to appear in the surface layer.

"Porous asphalt is not usually the first choice for longevity, but in this case they were looking for longevity and to reduce standing water," explains Tim.

The aggregates & asphalt division initially created a mix that included a soft penetration bitumen to meet the DIO specification. Then, working with the Technology Centre, the team developed an alternative mix that still had an open structure but included the company's own high-quality polymer modified binder to stop the asphalt rutting and fretting while minimising reflective cracking.

The business spent five months developing and testing the mix, now known as SurePol HD. "The role of the Technology Centre was massive," says aggregates & asphalt head of technical Mark Flint. "They did some very unusual tests and had a lot of dialogue with the DIO."

"Porous asphalt is not usually the first choice for longevity, but in this case they were looking for longevity and to reduce standing water"

FACTS

Project
**Runway
resurfacing,
RAF Odiham**

Client
Toppesfield

Contract period
**January-
February 2021**

FM Conway
divisions
**- Aggregates
& Asphalt
- Technology
Centre**

Material supplied
**8,500t porous
asphalt**

Plant
Theale

Aggregates & asphalt commercial director Rhia Morgan adds: "It was a big piece of work putting the tender in, and we did a lot of client engagement to explain what we were going to do."

A key decision at tender stage was the commitment to dedicate the Theale asphalt plant solely to producing the porous asphalt for the contract. "We used it as if it was a site plant," explains Rhia. "That was our differentiator. None of our competitors could take a plant offline and still serve their other clients."

Tim adds: "You have to set up the plant, calibrate it and then run it continually for this type of material. It demands a high standard of quality control, and the best way to get that is not to run different materials through the plant."

Once the plant was up and running, it produced up to 600t of asphalt a day, delivering over 8,500t to the site in total to be laid to a thickness of 40mm.

Toppesfield contracts director (south) Steve Whittingham describes the project as "an excellent demonstration of collaboration between Toppesfield, our client and supply chain partners" and says it was "a fantastic effort from everyone involved."

"Our breadth of experience working for the defence sector allowed us to deliver this project under strict access, and the works were phased so sections of the runway were operational at all times," he adds. "Using FM Conway's SurePol HD material, we have been able to offer our client asset resilience."

Amey project manager Duncan Malloch also praised the level of collaboration: "The works went quicker than imagined – especially in the weather conditions we faced. It has been a great team effort, and without everyone playing their part we would not have made it."

The Theale plant was dedicated to producing the new mix for the Odiham contract

THAMES

THE SPECTACULAR ILLUMINATED RIVER ARTWORK IS NOW LIGHTING UP THE CAPITAL AFTER 4,500 INDIVIDUAL LIGHTS WERE INSTALLED ON NINE LONDON BRIDGES

In April, nine of London's bridges across the Thames were linked into a single artwork as Illuminated River was switched on. The artwork is made possible by the installation of thousands of lights under and on the bridges, all installed by FM Conway.

Phase one, completed in 2019, featured London, Southwark, Cannon Street and Millennium bridges. Now the art commission has been extended to include Blackfriars, Waterloo, Golden Jubilee, Westminster and Lambeth Bridges.

The latest phase of the work was delivered on time, despite disruptions caused by

FACTS

Project:
Illuminated River (phase 2)

Client
Illuminated River Foundation

Contract period
August 2020 - January 2021

FM Conway division
Structures

COVID-19 during 2020, with each bridge taking an average of 12 weeks.

Illuminated River was conceived by US artist Leo Villareal and British architecture practice Lifschutz Davidson Sandilands. Each bridge has a different form of construction, including cable tension (Golden Jubilee bridge), steel arch (Lambeth) and concrete cantilever (Waterloo), and the lighting design varies from strips of 20mm diameter LED nodes to large individual lamps weighing 75kg each.

"The main architectural and running constraint is that it is 'visible but not visible'," explains Adam. "You have to be able to see all the lights at night, but not see the fittings."

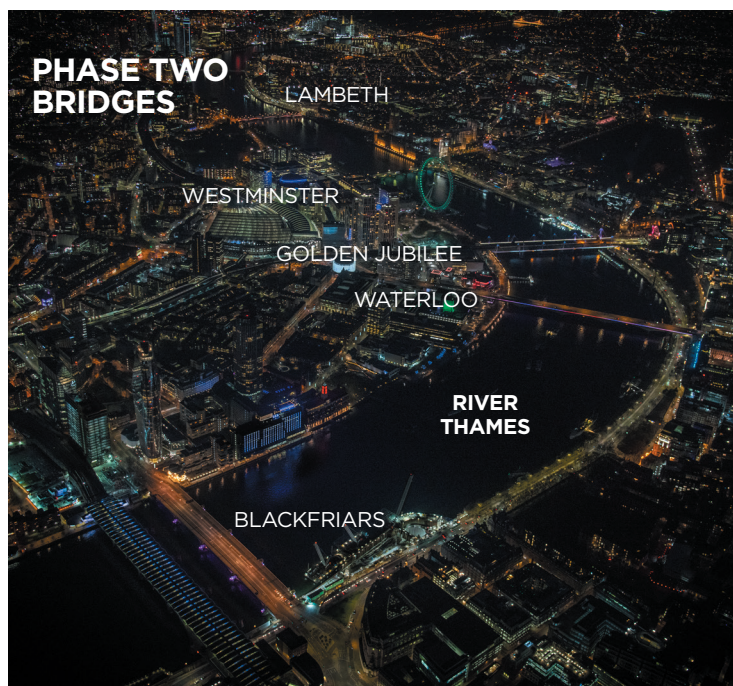
Most of the cables for the lighting were installed underneath the structures, using complex access platforms and even abseiling. "Working out the most effective access to all of these bridges was the biggest investment of time," says Adam.



Each of the 4,500 lights in the artwork has its own internet address and is connected to data and fibre networks. In the midst of the pandemic Leo Villareal was unable to travel to the UK to programme the artwork in person. Instead he used streaming technology to view and adjust the light sequences in real time from his New York studio, transmitting footage with less than a second in time delay and allowing him to fine-tune the artwork. Illuminated River is the first completed art project in the UK to use LiveU streaming technology from a remote location.

Sarah Gaventa, director of the Illuminated River Foundation, says: "The launch of the Illuminated River artworks marks the culmination of five years' work by the Foundation and we're very excited to finally share it with the public.

"Through various collaborations with some incredible partners, we have been able to deliver this monumental installation, which we hope the public will be able to enjoy in the years to come."



Project

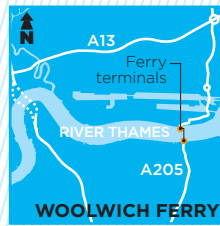
An important element of London's transport infrastructure is the Woolwich Ferry, a free vehicle and pedestrian service across the River Thames that has been operating for over 130 years.

In 2020 Transport for London (TfL) started operating the ferry service directly and wanted to know that the terminal infrastructure is fit for purpose and safe to use. With FM Conway just beginning a contract to support TfL's asset management strategy under the Works for London framework, TfL approached the business to carry out a safety inspection.

The terminals on each side of the river consist of concrete approach viaducts connected to hydraulically-operated steel bridges that link to the ferries when they dock alongside floating pontoons. Huge magnets fixed to the pontoons are used to position the ferries and ensure stability during loading and unloading.

There is an additional timber maintenance pontoon at the south terminal used for dry

LOCATION



The drone survey was carried out on a Sunday morning before the ferries started operating

docking the ferries for maintenance and inspection.

"The ferry runs every day, and we couldn't shut it down to do an inspection," explains FM Conway principal engineer Wellington Takundwa. "The area is tidal, which makes it very difficult to carry out a close visual inspection from the watercourse, and you don't want to be putting anyone in that type of environment where they are working at height over the Thames."

Instead, the consultancy team proposed utilising new and emerging technology by using camera mounted drones to carry out the inspection. "The quality of the images is very good, and it removes the need for anybody to be abseiling to see below the asset or climbing up at height," says Wellington.

FM Conway engaged specialist subcontractor Sensat to assist with the drone survey, programming it for a Sunday morning in April before the ferry started operating. "We started

DRONE-MOUNTED CAMERAS
PROVIDED A SAFE AND EFFICIENT
METHOD OF SURVEYING
LONDON'S HISTORIC WOOLWICH
FERRY TERMINALS

AERIAL SAFETY CHECK



with the dry dock on the south terminal, then the drone went along one side of the approach structure, across the top, along the other side and, finally, underneath," explains Wellington. "Then we did the same on the north side."

"The whole survey took around two hours and was finished before the ferry opened. Drones have issues with magnetic fields, so we knew we needed to be finished before the magnets were turned on at 11am."

Wellington adds: "We gave Sensat a brief of what we needed – some very good still images for the report and a point cloud survey of the structures."

The team had to get permission from both the nearby City Airport and The Port of London Authority to carry out the survey.

The drone got right under the concrete approach ramps to check there was no water damage, as well as surveying all the support

FACTS

Project
**Woolwich Ferry
Terminals
survey**

Client
**Transport for
London**

FM Conway
division
Consultancy

Specialist
subcontractor
Sensat

structures and the pontoons. "By looking underneath, you get a very good indication of what's happening on top," explains Wellington.

"If there is any water seepage you know the waterproofing has failed or there is no waterproofing. That presents a problem for any concrete structure."

In fact, the survey did not reveal any water seepage, and proved that all the terminal structures are in very good condition.

Darren Ellis, TfL's general manager marine & Woolwich Ferry, says: "With safety our priority, we needed a way to ensure the Woolwich Ferry is running optimally without disrupting the daily service and taking into account the varying tidal river conditions. FM Conway and Sensat rose to the challenge with their innovative use of drones, whose pictures gave us a clear, reliable idea of how each aspect of the ferry is functioning.

"We are pleased that the inspection found no faults with the service."



EXPERTISE ON SHOW

A CONTRACT TO REMEDIATE A TRUNK ROAD JUNCTION SHOWS THE POWER OF SELF-DELIVERY, WITH DIFFERENT DIVISIONS WORKING TOGETHER

FACTS

Contract
A27 Temple Bar

Location
**East of
Chichester**

Client
Costain

Value
£300,000

Contract period
March-April 2021

FM Conway divisions
**- Civil
Engineering
- Surfacing
- Water and
Drainage
Management**

The benefits of FM Conway's wide range of in-house expertise have been demonstrated on the A27 trunk road, where the civil engineering, surfacing, and water and drainage management (WDM) divisions combined their skills to remediate the carriageway and drainage.

The business has a surfacing contract with Costain, which is Highways England's Category Manager for major roads in the area. But at the Temple Bar junction, just east of Chichester, the remediation needed a range of activities – not just surfacing – so more divisions were brought in.

Lack of maintenance over the years had resulted in filter drains alongside the carriageway and on the entry and exit slip roads becoming blocked and damaged. Drainage pipes and gullies also needed checking and either replacing or repairing.

The WDM team carried out a CCTV survey to identify where pipes were damaged, then designed a repair schedule. "We either cut out a section of pipe and replaced it with new, or WDM inserted a liner, depending

on the extent of the damage," explains FM Conway project manager Andy Weymouth. "The liner can be installed remotely, so you don't have to excavate down."

Filter drains alongside the carriageway were blocked with silt and debris, so the civil engineering team dug out the old stone and installed new pipes where they were needed before filling back up with new stone.

The main section of surfacing was on the eastbound slip road, where a depression in the road was causing flooding. It was surfaced using a heavy-duty binder course and FM Conway's SurePhalt stone mastic asphalt.

The contract started in March 2021 and lasted six weeks, with most of the work done at night to minimise disruption. "We closed the entry and exit slips and also had a full carriageway closure in one direction on some nights, when surfacing was being carried out and when we were repairing gulley grates up against the central reserve," explains site agent James Cook.

LOCATION





GOING ELECTRIC

SURECHARGE CHARGEPOINTS ARE BEING INSTALLED ACROSS THE CAPITAL AS DEMAND FOR ELECTRIC VEHICLES CONTINUES TO GROW

Following the launch of FM Conway's SureCharge electric charging solution earlier this year, units are appearing in London streets at a rapid rate. The business has already installed more than 390 Surecharge chargepoints for electric vehicles (EVs) in the London Boroughs of Merton, Kingston-upon-Thames, Hounslow and Hammersmith & Fulham, with another 150 set to go in over the next month.

SureCharge is FM Conway's end-to-end solution for installing, operating and maintaining on-street electric chargepoints, offering local authorities a one-stop shop that includes financing and revenue collection. Most of the units that have gone in so far make use of existing street lighting columns, although more standalone units will be needed as demand goes up.

As well as benefitting local authorities, SureCharge is designed to make life easy for EV drivers. "This is all about simplicity," explains lighting director Graham Cartledge.

"A single app allows drivers to plug into SureCharge and with the click of a button they are charging. When the customer plugs the lead in, they can see if it is

"The chargers are used for market stalls during the day and EV charging at night"

properly connected or not, and if the car is requesting the charge. And if there is a fault, they can see what type of fault it is and if an engineer needs to go out or if the chargepoint needs a remote reboot."

Most of the new chargepoints are being installed on residential streets for EV owners, but FM Conway has also been asked to provide them for an ice cream van and market traders. "The chargers are used for market stalls during the day and EV charging at night," explains Graham.

"We are also deploying SureCharge to support our own fleet," he adds, explaining that 13 chargepoints are being installed at the company's Beddington Lane depot, and more will go in to service contracts throughout the city.

ON THE FINANCIAL SIDE OF THE BUSINESS

5 MINUTES

Q What were you doing before FM Conway?

A I trained at KPMG in the audit team, then worked on mergers and acquisitions. After that I went to Taylor Woodrow, and was risk management director in their North American business during the merger with George Wimpey.

After that I went to Laing O'Rourke, and I also worked at ISG and Interserve at very interesting times for both companies.

I've always found construction interesting. I like the honesty it engenders – you've either built it to specification or you haven't – and that what we do is actually making the world better.

I've also served in a Territorial Army Infantry Battalion, and am proud that FM Conway is a signatory of the Armed Forces Covenant and is committed to supporting the Armed Forces community.

Q You joined during lockdown. How's it been?

A When I agreed to join the Conway family we didn't know COVID-19 was coming. But it meant I needed to very quickly get my arms around who the stakeholders were, what might be needed in terms of financing our growth plans, what we were likely to deliver and what the obstacles were.

We re-financed the Group in February 2021, securing our long-term funding, and we now have three of the four largest banks in the country supporting us, who all want to be part of the FM Conway journey.

Against the backdrop of the pandemic, banks were focusing on supporting their existing customers, so for HSBC to join our syndicate at this time is a real vote of confidence.

A lot of people joined the business in lockdown, and everyone has done a great job.

Q Why is FM Conway different?

A From a financial point of view, there are a lot of benefits to being a family business; being able to invest for the long term is important.

I like the mix of infrastructure services and manufacturing. It's a business that's complex, but you can get your arms around it and get to know the people. It's a nice sized business.

It's amazing that we take raw materials shipped into our own wharfs, with our own bitumen terminal, transport the materials ourselves to our own asphalt plants and from there to our own sites.

And I like the fact that the company is pioneering in recycling. People outside our industry think it's not a green industry, yet we are recycling millions of tonnes of planings and gully arisings. We are also designing better carbon reducing products.

Q Why is self-delivery important?

A From a financial point of view, self-delivery de-risks the Group and enables you to prevent value leakage. And it means you can do what you say, because you're in control of what you do, so the clients are getting their roads maintained at the right time at the right price.

It also means that everyone's focused on the same goal, which makes it a lot easier for everyone to align behind the objectives and strategy.

If you're not vertically integrated it's difficult to get an asphalt plant to open on a Saturday afternoon because a client has an urgent need.

We will always look to grow our self-delivery capability, particularly in providing new services to our clients.



**MARK
GOLDSWORTHY**
CHIEF FINANCIAL
OFFICER

Q What is the plan for the future?

A We are going to grow significantly this year and are coming out of the pandemic a stronger business.

For me the future is all about looking ahead and driving our strategy – to self-deliver, focus on carbon reduction and employ emerging and new technologies.

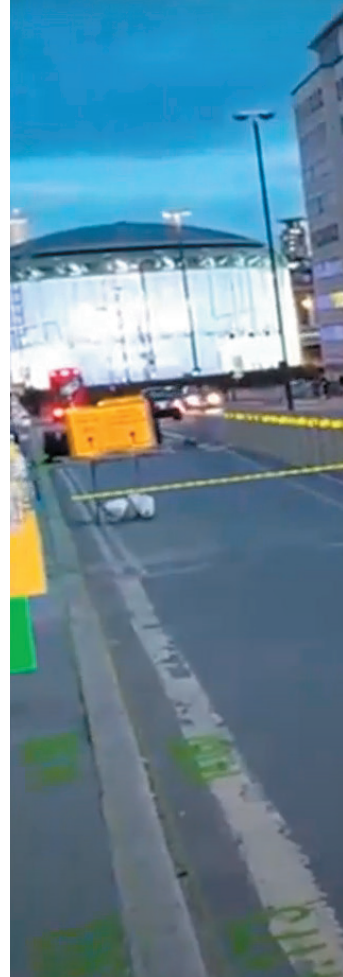
We have just completed the acquisition of Toppesfield, which

was also a family-run business, so was a natural fit. This strengthens our surfacing offering and provides us with a national presence, while supporting our self-delivery model. We are already seeing the benefits of working closer together.

The business is exploring new opportunities – like SureCharge, and using technology to deliver a service that clients don't even know they need yet. We're using technology to create new markets.

CUTTING OUR CARBON

THE JOURNEY TO NET ZERO CARBON
HAS STARTED WITH ENGAGEMENT
THROUGHOUT THE BUSINESS
AND THE SUPPLY CHAIN



FM Conway is firmly committed to reducing its net carbon emissions to zero by 2045 – five years ahead of the UK government’s target – but this can only be achieved by working closely with clients and suppliers to share knowledge and support each other.

In April the business brought together key suppliers at an event called Working Better Together: Shaping Zero Carbon Construction. “The purpose of the event was to set out our challenges and opportunities surrounding net zero and to bring our supply chain on board with our target and journey,” explains FM Conway head of carbon and the environment Vanessa Hilton.

At the event, two of FM Conway’s major clients, Westminster City Council and the London Borough of Hammersmith & Fulham, discussed their concerns and ambitions, and acknowledged the role of client organisations in creating the demand for sustainable construction delivery. Two key supply chain partners, Speedy and Marshalls, also gave presentations to showcase some of the innovations they are working on.

CARBON FACTS

2045

Net zero
deadline

5 Years

Ahead of UK
government

£5m

Tenders
requiring carbon
commitment

**“We all
acknowledged
that it isn’t a
straight road
to net zero and
that it requires
commitment,
investment and
collaboration”**

In turn, FM Conway head of structures Adam Barnes demonstrated the capabilities of Microsoft’s HoloLens mixed reality device, which the business is using to reduce the number of people who need to visit site, and therefore cut out the carbon associated with travel.



JOIN THE DISCUSSION

Are you confused about green energy suppliers? Are you thinking about getting an electric vehicle? Do you know how to make your home more energy efficient? Do you want to reduce your carbon footprint but don't know where to start?

This Autumn FM Conway will launch its Net Zero Strategy, outlining why carbon reduction is so important and how the business intends to reduce net carbon emissions to zero by 2045. To coincide with the launch, Vanessa will be running a week of talks to address the carbon reduction issues that most affect FM Conway employees.

What would you like these talks to cover?
Email vanessa.hilton@fmconway.co.uk and tell her what you want to know.

"The event was very much focused on collaboration and sharing best practice," says Vanessa. "We all acknowledged that it isn't a straight road to net zero and that it requires commitment, investment and collaboration."

"These events are crucial on our journey to net zero, as we know we cannot achieve it in isolation," she adds. "We believe that by working with our clients, partners and supply chain, and through engaging with our own people, we will achieve our 2045 target."

New rules set to come into force in September will make close working relationships with supply chain partners even more crucial. From that date, any company bidding for government contracts over £5 million must submit a Carbon Reduction Plan as part of their bid, showing the organisation's current carbon footprint and the steps it is taking to achieve net zero by 2050.

"This will be very important to us as a business, because nearly all our clients are government organisations," explains Vanessa. "When we price for a job, the

The business is using HoloLens mixed reality to reduce the number of people visiting sites

people involved in tendering and accounts will be looking at carbon accounting."

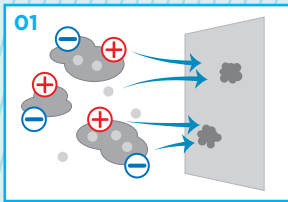
Information has to be provided under three headings: Scope 1, covering direct emissions from owned or controlled sources such as gas, diesel and gas oil; Scope 2, covering indirect emissions from consumed electricity; and Scope 3, which includes indirect emissions that occur in the supply chain.

Vanessa says a lot of companies are used to reporting Scope 1 and 2 emissions, but may find it difficult to calculate their Scope 3 emissions, especially if they have complex supply chains. FM Conway's self-delivery model means considering fewer external suppliers, because the business directly controls so many activities.

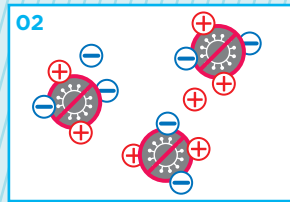
"A lot of what would be other people's Scope 3 is our Scope 1, because we manage so much of the process ourselves and we're already measuring that," she explains. "But we also want to work with our external supply chain partners to reduce Scope 3 emissions as soon as possible."

Technology

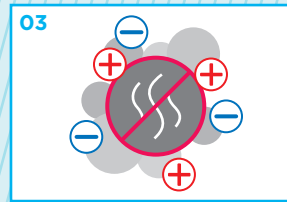
How bipolar ionisation works to clean the air of pollutants



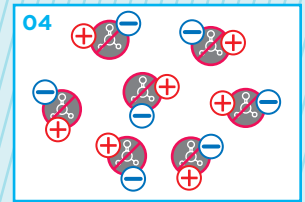
01 Airborne particles are charged by ions causing them to cluster and be caught in filters



02 Bacteria and viruses bond with oxygen ions and are inactivated



03 Many odorous gases and aerosols oxidise with oxygen ions and are neutralised



04 Oxygen ions cause a reaction with VOCs breaking down their molecular structure

ILLUSTRATION: PLASMA AIR

CLEAN AIR ZONE

THE BUSINESS IS INVESTING IN NEW TECHNOLOGY TO MAKE SURE ITS PEOPLE CAN BREATHE CLEAN AND HEALTHY AIR

One of the biggest health concerns in modern society is poor air quality – both inside and outside – and FM Conway is determined to make sure people working in its buildings have the best possible air quality to promote health and wellbeing.

Typically, workplaces rely on heating and ventilation systems that bring in outdoor air, mix it with indoor air and recirculate it throughout the day. Air is heated or cooled during this circulation process, and large dust particles are removed using filters, but there can still be airborne contaminants, including small particulates, volatile organic compounds (VOCs) from paint and furniture, bacteria, and pathogens like cold and flu viruses.

FM Conway has started implementing a solution that could remove these contaminants: bipolar ionisation. It works by introducing positive and negative ions into the air, which seek out atoms and molecules to trade electrons with. During this process they create hydroxyls which neutralise bacteria and virus molecules, odorous gases and aerosols, and VOCs.

At the same time, small airborne particulates are attracted to each other and bond together, increasing their mass and forcing them to fall

“Recent studies have confirmed that this technology is also successful at deactivating the COVID-19 virus”

out of respiratory zones. The business had just started assessing the air quality in its own buildings when COVID-19 arrived in the UK, putting the issue of airborne pathogen transmission firmly on the agenda.

“We already knew that bipolar ionisation works well at eliminating the aerosol transmission of other viruses,” says FM Conway lighting director Graham Cartledge, “and recent studies have confirmed that this technology is also successful at deactivating the COVID-19 virus both in aerosol format and on surfaces.”

Bipolar ionisation has so far been introduced at two FM Conway locations: the Heathrow asphalt plant and the Dartford office.



STRENGTHENING THE TEAM

FM Conway has strengthened its senior leadership team by appointing James Tallon as managing director responsible for delivering highways maintenance across London. James has over 18 years' experience in the industry, having begun his career as a highways apprentice at FM Conway in the London Borough of Merton. He is passionate about driving the development of apprentices and championing the next generation of talent.



OADES ACQUISITION

FM Conway has acquired Oades Traffic Management, enhancing the business's traffic management capabilities in the south of England. The new acquisition will see the traffic management division absorb Oades's assets, customer base and location, providing FM Conway with a new depot in Egham, Surrey. This will help to increase FM Conway's operational reach in the South, with a particular focus on Surrey and Hampshire.

APPRENTICE WINS

— Duo scoop top awards

Two FM Conway apprentices took the top prizes at the CECA (Southern) Awards. Alex Viner (left) won Most Promising Apprentice while Naim Suleiman (right) won Most Promising New Entrant Trainee Civil Engineer.

FM Conway head of internal audit Martin Wicks praised Alex's positive attitude and desire to learn, saying: "He continues to overcome obstacles and, in becoming a Disability Confident Ambassador, demonstrates that no matter what a person's situation, everyone has value to offer to an employer."

Naim, who started his career at FM Conway with limited knowledge of civil engineering, "has continually impressed with his positive attitude and work ethic and demonstrated the confidence to take on significant responsibility at project level to become a key member of the civil engineering team", according to senior contracts manager Larry Kyan.



GOLDEN TICKETS

DON'T FORGET TO CHECK IF THERE IS A GOLDEN TICKET IN YOUR ISSUE OF CONSTRUCT. YOU COULD BE THE LUCKY WINNER OF CASH, VOUCHERS OR A CAMERA



As part of FM Conway's 60th year celebrations, each of Construct's quarterly releases will feature 15 Golden Tickets, randomly inserted in the copies sent to employees. Each ticket guarantees the finder a prize, which could be annual leave vouchers, a camera or a cash prize of up to £600.

Here are some of last issue's Golden Ticket winners:

Dene Humphrey
Technician apprentice, IT

This issue's jackpot prize winner is IT technician apprentice Dene Humphrey, who bagged himself £600. "It meant a lot to find that golden ticket, but even more so to turn it over and find the jackpot win," says Dene, who has been with the business for two years and has just moved into a new home. "I was definitely lost for words, and it couldn't have happened at a better time. I have recently moved into a new place, so the winnings have come at a really good time to help with purchasing stuff that I need."

Steve Cooper
Operative, Traffic Management

Traffic management's Steve Cooper won £60 with his Golden Ticket. He has been with

the business for three years and loves to read Construct to stay informed about what is happening around the business, but was shocked to find a Golden Ticket in his copy. "I knew about the Golden Ticket prize scheme but never really expected to be a winner," he says. "Winning was a pleasant surprise and gives me the opportunity to treat my wife and I to a lovely meal just as lockdown eases."

David Cartwright
Manager (parts department), Workshop

Another lucky winner was workshop manager David Cartwright, who has been with the business for seven years and won a camera. David was delighted with his prize and can't wait to share it with his family. "I'm going to give it to my wife – she is the family photographer," he says.

Andy Wood
Training instructor, Learning and Development

Andy Wood, a training instructor in learning and development, won a camera with his Golden Ticket. Andy, who regularly reads Construct to see what is going on around the business, says: "I was aware of the golden ticket scheme and thought I would not ever find one, but it goes to show that it's not just Charlie from Willy Wonka and the Chocolate Factory who finds a ticket! I am going to make sure I get some good photos for the future and to share memories with my wife and children."

Tina Quinn
MI analyst, Business Transformation

Tina Quinn discovered a Golden Ticket with a £60 prize. "I've read about them in the business updates but never thought I'd actually get one," she says. "I never win anything! I'm going to put the money towards some new trainers. Thank you."

A JOB WELL DONE



Mark Wasilewski
@wazzo_m

The historic site of Christchurch Gardens, a small urban park on Victoria Street, looking splendid following major transformation & redesign @VictoriaBID @CityWestminster @RS_Landscape @FMConwayLtd @ThorneyIslandSo @LondonInBloomUK



Will Norman
@willnorman

Good to see @FMConwayLtd introducing e-cargo bikes as it cuts carbon emissions in London. Time and time again we've seen how cargo bikes can be quicker & more efficient than vans and trucks at moving small items between construction sites in the capital.



Compliment from
Member of the public

Division
Surfacing

Operatives involved
Rob O'Grady, Bob Weeden, Simon Crawford, Kage Piper, Tom Nolan, Jason Douglas, Tomaz Lazdauskas, Raimondas Lazdauskas, Mark Caton, Alan Truman, Paul Cheney

Location
Whitstable

"On the night of Friday 29 January, the entire degraded road surface around the bend linking Faversham Road to Joy Lane was resurfaced to first class condition, including the surface being white lined. Now this is impressive...you chose a time when the minimum amount of disruption would be caused."

Compliment from
Steve Cooper, principal highway officer, London Borough of Merton

Division
Permitting

Operative involved
Shilpi Shukla

"Shilpi takes pride in getting our report correct and I am grateful for the extra effort that is put into this. I am sure there are others involved but I do find Shilpi is really keen to pick up any discrepancies and find out where these are, and rectifies them."

Compliment from
Member of the public

Division
Term Maintenance

Operative involved
Paul McCormack

Location
Merton

"Some time ago, I reported a vandalised bench opposite Raynes Park Station. This has been restored to a tip-top condition. Must be one of the best in the borough now! Please convey my thanks to whoever carried out this work in such difficult times. The workmanship shows a true passion for the work and not just another job to be done. Thank you."



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