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TAKING THE
LEAD ON
TECHNOLOGY

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RESURFACING
WHITEHALL
IN WINTER

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EUROTUNNEL
PREPARES
FOR BREXIT



ISSUE 41

CONSTRUCT



Foreword



Adam Green

CEO FM Conway

WE HAVE A CLEAR DIRECTION,
AND I AM CONFIDENT OUR
GREAT PEOPLE WILL SHARE MY
ENTHUSIASM FOR THE EXCITING
TIMES AHEAD

This year, as we mark FM Conway's 60th anniversary, it seems appropriate to look ahead, as well as celebrating our past achievements.

We have just launched our business strategy for the next 10 years, which focuses on three pillars: self-delivery, recycling and carbon, and technology.

Our self-delivery model is unique; no other company can match our expertise and experience across the full range of asset management and maintenance activities. Now, we want to take that further, putting us in control of even more of the process, so we can ensure everything we deliver has the same high level of service, quality and safety.

We have also always been at the forefront of environmental sustainability, from our experience in recycled materials to our zero carbon commitment. This will continue to be one of the main pillars of our business, as well as sustainability in its widest sense - which means making sure we are an inclusive employer and a respectful partner for our clients and suppliers.

While we have always embraced technology to improve efficiency and safety, our plan over the next 10 years is to put technology front and centre of the business. There are so many ways that technology can make our working lives better, safer and more enjoyable, and I am really excited by the opportunities this will create for us and our clients in the years ahead.

The most important factor in making this strategy successful is, of course, our great people, who have helped build the business that we are today.

14



16



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85% CONTENT
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Anniversary



This year FM Conway celebrates its 60th birthday. In the last six decades the business has transformed from humble beginnings into one of the UK's leading infrastructure services companies.

Founder Francis Michael Conway could only have dreamed of what the company would go on to achieve and, if he could look back

now, would be immensely proud of what FM Conway stands for today.

With its strong ethos of self-delivery and family, and core values of care, innovation, integrity and excellence, the company's philosophy of great people : great work could not be more evident than in its 60 successful years.

VALUE ADDED SURFACE

A RECORD-BREAKING SURFACING
CONTRACT IN WEST LONDON
COMBINES 85% RECYCLED CONTENT
WITH WARM MIX ASPHALT



FM Conway has been working with Westminster City Council to build on its experience in recycled road materials by resurfacing a London road with a material containing 85% recycled content. And this time, the surfacing was a warm mix material, so there were even more advantages for the client, local residents and road users.

The material was SureLayer E, a version of the company's proprietary single layer surfacing material containing 85% recycled material – the highest proportion of recycled content used for surfacing on any London street. This recycled content was achieved with a combination of high polished stone value reclaimed asphalt pavement (RAP) and recovered aggregate.

The record-breaking surface course was laid in November 2020 on Third Avenue, a residential street in the north west of the City of Westminster, as part of FM Conway's long term contract to maintain the local authority's streets. Traditionally, the road would have been resurfaced using hot rolled asphalt, but in the last two years FM Conway and Westminster City Council have developed a palette of different materials, so the best option can be chosen for each situation.

That palette includes a 50% recycled content version of SureLayer, but FM Conway is

TIMELINE

2015

TfL: A1 –
50% RAP

2017

TfL: A40 –
50% RAP

2019

Westminster:
Sutherland
Avenue – 80%
recycled material

2019

Highways
England: M25 –
50% RAP

2021

Westminster:
Third Avenue
– 85% recycled
material

keen to demonstrate the potential of higher recycled content. A trial in June 2019 saw the company resurfacing one side of nearby Sutherland Avenue with 50% RAP material and the other with 80% recycled material to compare their performance. The site is monitored continually, and both materials are performing successfully, leading to the decision to trial 85% recycled content at Third Avenue.

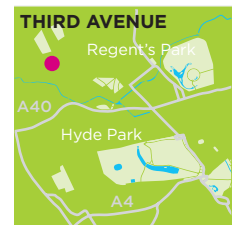
Combining this high level of recycled content with warm mix brings significant carbon savings over traditional hot mix materials. Warm mix asphalt is mixed and laid at a lower temperature, so less energy is required to produce it – and consequently less carbon. The Third Avenue scheme resulted in a 40% carbon saving compared with using hot mix asphalt.

Using warm mix also reduces disruption on the network, because the lower mixing temperature means the newly laid surface reaches a temperature at which it can be reopened to traffic sooner. The material is also expected to be more durable, as there is less damage to the bitumen during the manufacturing process.

"When we began our contract with Westminster City Council, they traditionally just had a single specification for all their



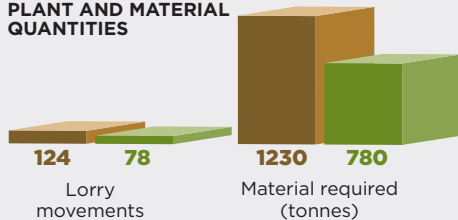
LOCATION



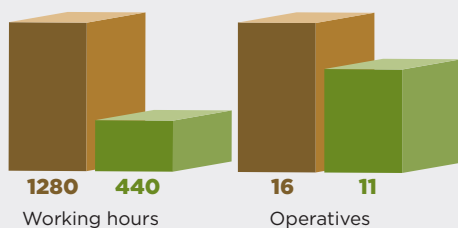
SAVINGS/BENEFITS

■ HRA ■ SURELAYER E

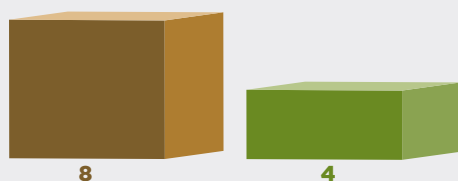
PLANT AND MATERIAL QUANTITIES



PERSONNEL



WORKS DURATION (DAYS)



FACTS

Contract
Third Avenue resurfacing

Client
Westminster City Council

Contract period
November 2020

Material
SureLayer E

Recycled content
85%

FM Conway divisions
- **Term Maintenance**
- **Surfacing**
- **Aggregates & Asphalt**

streets – hot rolled asphalt,” explains FM Conway’s performance manager Ivan Farrell. “Since then, we have introduced a lot of innovation in surfacing materials, so we wanted to establish more of a ‘horses for courses’ approach, where we get the most appropriate material into each location.”

Working together, FM Conway and Westminster City Council developed a palette of seven different options for the current tranche of planned preventative maintenance work. Hot rolled asphalt is still on the list, but Ivan says: “Our priority with reducing carbon is that we want everything to be warm mix if possible.”

In 2019, Westminster City Council declared a climate emergency, with the aim of all works in the borough being carbon neutral by 2030. The high recycled content and warm mix of SureLayer E helps to support this ambition.

In addition to the carbon savings, this combination of recycled content and warm mix also gives sustainability benefits, resulting from fewer plant and vehicle movements; and safety benefits, as fewer operatives are working around the heavy plant. The single layer is also far quicker to lay than hot rolled asphalt – the Third Avenue contract was completed in four days rather than eight – making it far less disruptive for local residents.

SMART BUSINESS STRATEGY

INVESTING IN TECHNOLOGY IS A
PILLAR OF FM CONWAY'S BUSINESS
PLAN FOR THE NEXT TEN YEARS TO
IMPROVE EFFICIENCY AND SAFETY

Technology is now so central to FM Conway's business that Kamal Uddin, IT and transformation director, says: "We're not only an infrastructure services company; now we're an infrastructure technology company. Our recent investments in technology show how committed we are to it."

FM Conway's approach to investing in technology is based on a number of key criteria, which include using cloud-based technologies and services to provide security, resilience and scalability; investing in big data solutions to pull together information from disparate sources to make data-driven decisions; and using the Internet of Things (smart sensor technologies) to collect live condition information about the assets, enabling a digital twin of the physical built environment to be created.

"By applying machine learning to the data we collect, artificial intelligence can make the data work for us and our clients," says Kamal. "Recent investments in mixed reality



KAMAL UDDIN
IT AND
TRANSFORMATION
DIRECTOR,
FM CONWAY

"Technology is going from the back office to front and centre in the business"

and augmented reality solutions take data interaction to the next level and fit perfectly alongside this approach."

Underpinning these technologies is FM Conway's unique approach to asset management, which is set to transform the way highway assets are maintained and, ultimately, to support clients' own smart city strategies.

As Kamal says: "Technology is going from the back office to front and centre in the business to deliver smart and modern solutions for our clients as well as smarter working for us."

HOLOLENS

The structures team has been trialling Microsoft's HoloLens mixed reality device, a lightweight headset that displays information in front of the wearer and sends images back to remote viewers in real time.

Head of structures Adam Barnes says the technology has unlimited potential. "I think there are three levels of user interface for this," he explains. "At the first level, anyone can put it on and have a bit of fun. It's very user friendly, and very easy to walk around and show people what you're doing."

On the next level, Adam says HoloLens can really add value if it is used to communicate with clients, for example for completion of inspections. "You could use it any time you finish a bit of work – especially at the moment, with a lot of customers not wanting to travel."

"Instead of doing a site visit, we can have a call with the client while a technician does an inspection," he adds. "Everyone is watching in real time, and can click on their

screen if they want the technician to go in closer. "It means there's no need for people to come to site, which results in savings in the carbon footprint of the project."

HoloLens could also be used for plant and equipment maintenance. "You can upload the user manual and be talked through a troubleshooting process by an engineer, fitter or mechanic without them having to be there," explains Adam, adding that HoloLens is already being used for virtual safety inspections and site audits.

At the highest user level, Adam says there are many ways in which a trained CAD technician could use HoloLens in conjunction with 3D models to improve the construction process.

"One example would be when we are refurbishing a bridge and are about to plane off the surface and take up the kerbs and footways before laying new waterproofing," he explains. "The HoloLens operator can lift up the layers and dig 'virtual trial pits' to see what's under there before we dig."



INTELLIGENCE-LED ASSET MANAGEMENT

FM Conway is using artificial intelligence to deliver a holistic asset maintenance solution.

"One of the greatest challenges to highway asset maintenance is data," says IT and transformation director Kamal Uddin. "Asset management systems are great at processing traditional asset lifecycle and works management data, but there are so many opportunities to enrich this data by overlaying other sources such as historic information, real-time

data from sensors, or external sources like weather forecasts and surveys. This combined information can assist in making intelligent, informed decisions about maintenance requirements and timings.

"There are areas of our business that are already using smart technology, such as gully and lighting sensors, but we are now offering a near turnkey solution for our clients," he adds. "This service complements systems already in place, but

introduces machine learning to help all parties think beyond planned and reactive maintenance approaches to a more predictive model, with assets being managed before they become problematic.

"This end-to-end solution will allow our clients to take a risk-based approach to contracts. It gives them a targeted service in the places where it's needed, stops the over-maintenance of assets that don't require it and ensures client budgets are used optimally."

AUGMENTED REALITY

Striking live services is a common issue in construction that adds time and cost, and can have serious safety implications. Safe digging is one of FM Conway's Big Ten Risks, which is one reason the consultancy team has been trialling augmented reality to help site workers know where buried services are when they start digging.

"We often create a 3D model of the underground utilities as part of the design, based on a ground radar survey of the site," explains consultancy director John Holliday. "We then give the operational people a 2D drawing showing these services, which they mark up on the ground with a can of paint. But as soon as the ground is broken with an excavator, all those markings disappear."

Augmented reality can be used to create a virtual street scene, which shows the underground services superimposed onto the actual road or footway, even after the excavator has been in. "The augmented reality will carry on showing you where the services are, regardless of where the surface is," says John.

The system has been trialled on a footway project in Victoria for Westminster City Council. The footway and adjacent roads were surveyed using the ground radar and then our software partner turned this into an augmented reality version, which can be viewed using a tablet or HoloLens.

Augmented reality means that anyone can access the information – so if the driver or gang changes, the information is still retained. And, ultimately, the excavator operator could see the augmented reality version inside the cab, making it much easier to avoid hitting cables or pipes.



CULVERT RECOVERY

INNOVATIVE TECHNIQUES AND MATERIALS HAVE SAVED A DAMAGED WATER STRUCTURE FROM COLLAPSE IN SOUTH WEST LONDON

The water and drainage management (WDM) division recently carried out a survey and repair to a damaged culvert that would have presented a significant health and safety risk if it had been left unattended.

The concrete culvert, at Liberty Avenue in south west London, passes under the residential street in two locations and also encroaches under an adjacent A-road. FM Conway's client, the London Borough of Merton, knew that there were some structural defects in the culvert, and asked the WDM team to carry out a survey of the area to identify the full scope of work required to make it safe.

When the team arrived, they found that the crown of the pipe had collapsed in places, leaving reinforcement bars exposed, as well as damage caused by tree roots. There were also a number of connections intruding into the main pipe.

After completing the survey, FM Conway's team recommended a variety of different repair techniques that would meet all the

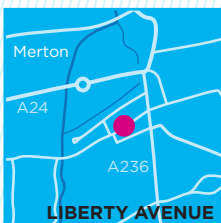
structural requirements and accommodate changes in shape and diameter within the culvert, allowing Merton to choose the best options to meet the budget.

To avoid extensive excavation, Merton chose to focus on the installation of internal structural repairs to four sections where the culvert passed completely or partially under the carriageway. These included a bespoke GRP structural lining that provides full structural rehabilitation with an expected service life of over 100 years.

In other areas, the WDM team installed UV-cured GRP liners to create a pipe of single internal diameter within the culvert's different shapes, then filled the surrounding space with grout to provide additional structural integrity.

The use of these bespoke, innovative solutions ensured that FM Conway delivered a cost-effective approach while maximising the repairs that could be done within the budget. The team also minimised disruption to local residents and traffic by using "no-dig" techniques for all the work.

LOCATION





TAKE CHARGE

FM CONWAY ENTERS THE ELECTRIC
CHARGEPOINT MARKET WITH A
UNIQUE TURNKEY SOLUTION

FM Conway has entered the electric vehicle (EV) charging market with a unique service that combines expertise in chargepoint installation with an understanding of the needs of local authority clients.

SureCharge is a turnkey solution that will help local authorities scale up their EV chargepoint provision while optimising their budgets and minimising disruption to residents. The solution sees FM Conway funding and installing chargepoints, using existing lighting columns where possible to avoid digging in the carriageway or footway.

Under the SureCharge offer, FM Conway also operates and maintains the chargepoints, with revenue shared between the company and the local authority.

Sales of electric vehicles are expected to increase dramatically following the government's announcement in November 2020 that the sale of new petrol and diesel cars will be banned in the UK after 2030.

More than 66,600 pure electric vehicles (EVs) were sold in the first nine months of 2020 and, since the government announcement, leading car manufacturers including Ford, Volvo and Jaguar Land Rover have committed to going all-electric. As a result, there is a massive requirement for EV charging points in cities throughout the UK.

A programme to install 50,000 on-street chargepoints in London is already underway, and over the last two years, FM Conway has installed around 1,500 public chargepoints for other contractors in London boroughs including Hammersmith & Fulham, Kensington & Chelsea and Westminster.

As a result of this experience, the business was convinced it could offer a better, more efficient chargepoint solution combining its expertise in smart technology, understanding of local authorities' needs and experience in delivery and maintenance. The result is SureCharge, which gives clients an end-to-end EV charging solution that wraps funding, installing, operating and maintaining charger networks into one package.

SureCharge was developed by the lighting division, as one of the many innovations involves using existing lighting columns to provide the power and mounting for the chargepoints. By doing this, any local authority's existing infrastructure can be

SURECHARGE AT A GLANCE

TURNKEY SOLUTION

Planning, installation, operation and maintenance

LIGHTING COLUMNS

Turning existing infrastructure into chargepoint network

FLEXIBLE FUNDING

Cost and revenue sharing options

GREEN ELECTRICITY

Supplied by Octopus

SMART TECHNOLOGY

Internet-connected, real-time monitoring

NO-DIG SOLUTION

Minimum disruption during installation



transformed into a network of smart, internet-connected devices without the need for permits, extra street furniture or digging up the roads.

Where this is not possible, FM Conway can easily install the chargers on standalone pedestals.

"This is a full turnkey solution," explains FM Conway's lighting director Graham Cartledge. "We can do everything from the cost study – how many chargepoints you need in the borough and where to put them – through to funding, installing, billing, monitoring and maintaining."

FM Conway is offering flexible funding and revenue sharing options. And, through green electricity supplier Octopus, tariffs can be tailored to meet each client's requirements – for example lower tariffs for residents than visitors, or lower prices for charging overnight than during the day. Meanwhile, FM Conway monitors the chargepoints through internet-linked smart sensors and a helpline for users.

The first SureCharge chargepoints are being installed in the London boroughs of Hammersmith & Fulham, Hounslow, Kingston and Merton, in partnership with Joju Charging. Its technical director Dr Chris Jardine says: "Joju Charging is excited to be helping councils provide EV chargepoints on street lights for their residents, offering councils an affordable infrastructure for change, and we're looking forward to delivering an increasing number in the future, in partnership with FM Conway."



RUNNING REPAIRS

A WIDE RANGE OF SKILLS AND SOLUTIONS IS IN EVIDENCE IN THIS ROUND-UP OF STRUCTURES WORK IN WESTMINSTER

FM Conway has an eight-year contract with Westminster City Council for bridge and structures maintenance management and improvement. This includes both planned and reactive maintenance of a vast range of structures – from repairs to iconic bridges over the River Thames to erecting hoardings to prevent unwanted access. Here is a snapshot of some of the work undertaken by the team in the last 12 months.

01

WESTBOURNE TERRACE AND WARWICK AVENUE BRIDGES

These two bridges cross the Grand Union Canal near Paddington, an area with a very active community of canal users. Using Community Infrastructure Levy funding, FM Conway undertook a programme of repairs to the two heritage structures that included refurbishing pillars and railings, installing pigeon deterrents on the soffits and pillars, anti-corrosion works to the railings and soffits, electrical upgrade work, deep cleaning and applying anti-graffiti coverings. All materials had to be approved by heritage bodies and, as the team was working over and on the canal, they had to ensure that no contaminants entered the water.



02

HEADFORT ARCH

This Grade II-listed brick and stone arch sits at the entrance to a narrow street in Belgravia. FM Conway was called in to carry out repairs when the structure was damaged after being hit by a heavy vehicle. The original bricks were made using a special mix and in non-standard sizes, so any damaged bricks had to be replaced with the same mix. The new bricks were cut to size on site to match the originals. The team has now installed a temporary protective hoarding around the arch, which will stay there until work has finished on a nearby construction project. Work was carried out during a weekend road closure, helped by the company's traffic management division.

03

THAMES TIDE GAUGE HUT

The Thames Tide Gauge Hut is a unique Grade II-listed heritage structure on the river wall near Westminster Bridge, housing equipment used by the Environment Agency to monitor river levels. "It is completely a one-off as far as we're aware, because it is built in copper," says FM Conway's structures supervisor Jason Critchell. The structure had become worn over time, and covered in fly-posters and graffiti. Remediation involved repairing the copper cladding by sanding down to remove any damage, and only replacing if it was absolutely necessary. "In some areas the copper was down to 1mm, but we only replaced the door and one minor section," says Jason. "Anything that was replaced had to be like for like, including replicating the patina of the copper." A new wax coating was also applied to make maintenance easier in future.

03



04



04

GOLDEN JUBILEE BRIDGE STAIRCASE

FM Conway is working on a five-year upgrade to the Golden Jubilee Bridge between Waterloo and Charing Cross. The latest phase, carried out in summer 2020, involved replacing the anti-slip treads on all the staircases, refurbishing the staircase stringers, installing new balustrading and adding a solar shield glass protective film. The north end of the bridge sits above Embankment tube station; to avoid impinging on the station roof, the team designed a cantilevered scaffold that was far more economical than the original design.

05/06/07/08

HOARDINGS

The FM Conway team has installed hoardings at various locations across Westminster. These include Charing Cross Station, where hoardings went in at four locations in the pedestrian subway to reduce the subway footprint during the COVID-19 pandemic and make it safer and less prone to antisocial behaviour. At Horseferry Road the team installed hoardings at the Grade II-listed Westminster Mortuary to provide protection against unauthorised access. And at Waterloo Bridge, they erected 3m high ballast box hoardings with anti-climb top panels, including a tie-in over the existing river wall. Hoardings were also installed at Howick Place in Victoria to help with COVID-19 spacing and reduce antisocial behaviour.

STRONG AND SURE

TECHNICAL KNOW-HOW WAS KEY
TO RESURFACING ONE OF LONDON'S
BUSIEST AND BEST KNOWN ROADS
IN THE MIDDLE OF WINTER



London's Whitehall is one of the most recognisable thoroughfares in the world. With Trafalgar Square at one end and the Houses of Parliament at the other - and the Prime Minister's home in Downing Street between the two - Whitehall is central to any tourist's visit to the capital.

It is also a busy working street, with hundreds of civil servants and government officials working in the ministries that line the road, and buses carrying thousands of people a day to the West End and beyond. Added to all this activity is a busy schedule of events, including the Remembrance ceremony at the Cenotaph.

So, when the road surface needs replacing, there is never a good time. That is, until COVID-19 and the resulting lockdown dramatically reduced the number of people using Whitehall, giving FM Conway's Westminster surfacing team the opportunity to do the work.

"The carriageway was last resurfaced in 2010, but because such a high number of buses use the road, it was identified as being in

FACTS

Project
**Whitehall
resurfacing**

Client
**Westminster
City Council**

Date
January 2021

FM Conway
divisions
**- Surfacing
- Aggregates
& Asphalt
- Term
Maintenance**

need of refurbishment," explains FM Conway's surfacing contracts manager Ian Neville.

Each year, the team works on a rolling programme of planned preventative maintenance (PPM) on Westminster City Council's road network, using information from condition surveys and highway inspectors to decide the priorities, as well as from FM Conway's Map 16 and RoadBotics systems. However, it is always difficult to decide when to do the work - especially when roads are so heavily used.

FM Conway wanted to take advantage of the reduced traffic and fewer pedestrians during lockdown, but Westminster City Council was understandably concerned about laying new surfacing in the winter. This would be an issue if the team wanted to use traditional hot rolled asphalt (HRA), which has to be laid in temperatures above 5°C, but their plan was to use innovative materials that can be laid at lower temperatures.

"We assessed the road and decided on a 50mm warm mix binder course, and a 50mm



LOCATION



SureLane surface course," explains FM Conway head of technical Mark Flint.

Warm mix asphalt is produced at temperatures up to 40°C lower than HRA, resulting in huge savings in both energy and carbon. "Westminster have their own carbon reduction targets," says Mark. "Using warm mixed asphalt helps them to achieve those targets."

SureLane is a polymer-modified stone mastic asphalt designed for very heavy traffic. "We have used this material for airport runways and taxiways," Mark explains. "It is hard-wearing and durable and has much better wheel tracking and fatigue properties than HRA. It is also easier to lay and is completely recyclable."

The 560m long, 17.5m wide street was planned out and resurfaced in 20 shifts over 10 days and nights in January 2021. The binder course was laid at night and the surface course during the day, with the Heathrow asphalt plant supplying the day shifts and receiving all the planings, and the Erith plant supplying the night shifts.

WHITEHALL IN NUMBERS

1,200t
warm mix
binder course

1,200t
SureLane
surface course

560m
length

17.5m
width

5
phases

20
shifts

10
consecutive day
and night shifts

"We had to maintain access at all times for emergency services and VIPs, and there was a particular day in the programme when we could go past Downing Street," Ian says. "We used our own teams for all the lining and traffic management, so everything was in our control."

Due to the complexity of the work and the volume of people it affected, fortnightly meetings were organised by FM Conway's PPM manager Thomas Diamantis to ensure all stakeholders were aware of the programme and updated on any changes. These meetings, which started in the autumn, contributed greatly to the project's success.

Ian describes the contract as "FM Conway at our absolute best – everything was planned, everything went really well, and we had very few problems".

Alan Kraven, FM Conway's service development manager, adds: "We have been able to demonstrate our technical know-how behind the new material and provided evidence that we can do resurfacing work in these temperatures."



TUNNEL

CAREFUL PLANNING WAS NEEDED TO CARRY OUT CIVIL ENGINEERING AND SURFACING WORK FOR EUROTUNNEL UNDER TIGHT SECURITY CONDITIONS

One result of the post-Brexit trade deal between the UK and European Union is that trucks may spend more time at customs having paperwork checked before they leave the country. Eurotunnel, which runs trains carrying trucks and cars through the Channel Tunnel, started preparing well before the deal was signed, employing FM Conway's civil engineering division to create extra space at its terminal near Folkestone in Kent.

Eurotunnel is building a steel-framed canopy so paperwork can be checked in the dry, and adding extra approach lanes to accommodate lorries while they wait.

FACTS

Project
Terminal works

Client
Eurotunnel

Contract period
November 2020-March 2021

FM Conway divisions
**- Civil Engineering
- Surfacing
- Consultancy
- Aggregates & Asphalt**

FM Conway's contract involved constructing 33 large reinforced concrete bases and plinths to support the new 50m x 46m canopy, widening the approach lanes and building a new staff car park. The contract was awarded on the basis of cost and quality, including experience of working in high security environments.

"All staff had to be security vetted and issued with security passes to enable them to work within the secure environment," explains FM Conway senior manager Michael Moore. "The security level is the same as working airside at an airport."

This high level of security extended to site deliveries: they had to be booked in advance, and lorries could only arrive within their given timeslot. "Around 90% of the job was self-delivery, which made it a bit easier, but we did have some materials like concrete and rebar coming from other suppliers," says Michael.



EUROTUNNEL IN NUMBERS

33

new bases built

221

loads of muck
away

35.6t

of steel rebar

490m³

of concrete

571.5t

of paving
material laid

VISION

In December 2020, when a new COVID variant was identified, France temporarily stopped any lorries entering the country, so the UK government initiated the Operation Brock traffic management system, resulting in thousands of trucks being parked on the nearby M20 and A20.

“We still had a live site that we had to get to,” says Michael. “We had to work outside the box to make sure we could get all our people and materials there.”

Another challenge was ensuring everyone remained safe from COVID-19. Operatives were segregated into work gangs, each with their own welfare facilities.

Constructing the bases involved digging 2.5m deep excavations, predominantly in soft sand, requiring substantial temporary works, which were designed in-house. The bases sit within the existing check-in lanes, which remained operational throughout the work.

LOCATION



“Eurotunnel’s business is taking passengers and freight to and fro. It’s a 24/7 operation, and we had to maintain that,” says Michael. “We shut lanes down while we built each base, but we did everything we could to open them back up as quickly as possible.”

FM Conway’s consultancy division worked with concrete supplier Brett Concrete to design a self-compacting and fast-curing concrete mix, so the check-in lanes could be reopened quickly.

The surfacing division has also been involved on the project, laying a total of 571.5t of material to build the new staff car park, surface the approach lanes and build a new footpath. All the material was supplied by the company’s Erith plant.

Throughout the project, 90% of material that was excavated or broken out went for recycling at FM Conway’s plants, including 1,560t of concrete.

GO WITH THE FLOW

THE DECISION TO CARRY OUT WORK UNDER CONTRAFLOW SAVED TIME AND MONEY ON A MAJOR TRUNK ROAD CONTRACT

FACTS

Project
**A30 Fingle
Glen Junction
to Woodleigh
Junction**

Client
**Highways
England**

Value
£1.2 million

Contract period
**January-
February 2021**

FM Conway
division
Surfacing

FM Conway continues to bring innovation to Highways England's Pavement Framework in the Southwest. The latest example is a £1.2 million carriageway resurfacing project on a 5.5km stretch of the A30 west of Exeter.

"The scheme was originally programmed to be completed under lane closures, but we demonstrated that, by carrying out the works under contraflow, we could save costs by reducing the programme, and also create a safer working environment," explains FM Conway's contracts manager for the Southwest, Darren Holmes.

Highways England typically asks contractors to carry out projects like this during night-time lane closures, with the carriageway reopening to traffic every morning. However, FM Conway's Pavement Framework team demonstrated that installing contraflow would enable them to work night and day, reducing the contract period from a month to just two weeks.

"We wanted to show Highways England how efficient it is to do it this way," says key

accounts project manager Andy Weymouth. The team strengthened parts of the central reservation so that crossing points could be created, then installed contraflow to move all traffic onto one carriageway. This freed up the other carriageway, allowing the planers to take off the old surfacing over the entire length before resurfacing started.

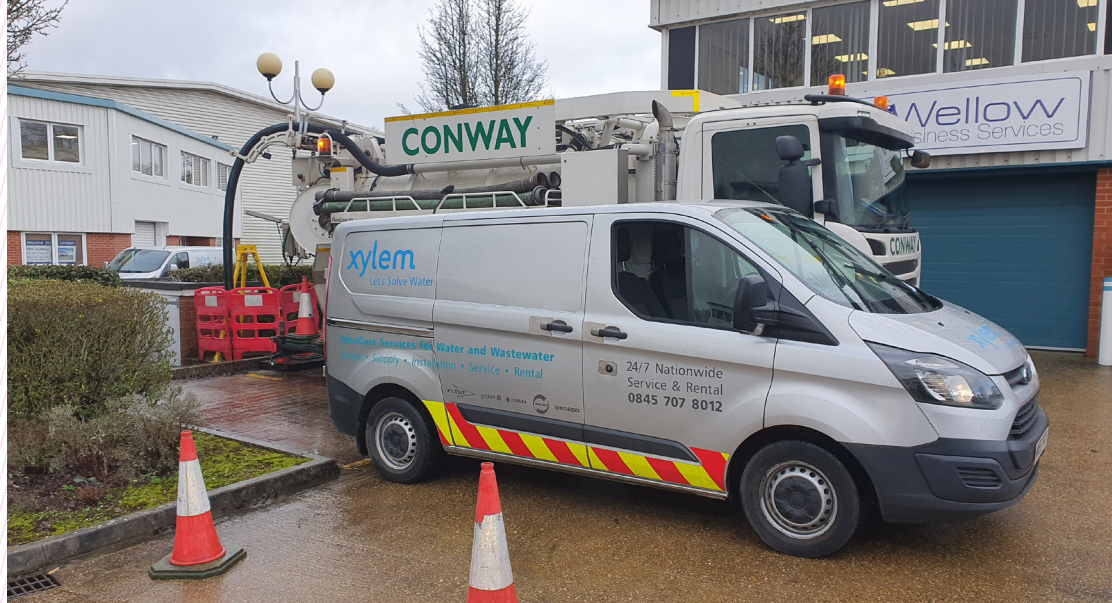
By separating the planing from the surfacing, the working environment was less congested and far safer. And, with the full carriageway to work on, the surfacing team could achieve high levels of productivity, laying 800t of material a day.

Highways England project manager Raymond Li says: "We make every effort to ensure that the impact on the local community and road users is kept to an absolute minimum and we were delighted that this scheme met Highways England's imperatives of safety, delivery and customer focus.

"The resurfacing project was well planned and executed efficiently and delivered an exceptionally high quality end product."

LOCATION





GOING NATIONAL

FM Conway's water and drainage management (WDM) division has won its first national contract, delivering tankerage support and cleaning services for water technology giant Xylem. The deal will deliver an instant 50% increase in workload.

"We have been working with Xylem in London and the Southeast for four years," says WDM contracts manager Simon Ongley. "On the back of that relationship, we first won an extension to the original contract and now have a five-year contract nationwide."

Xylem supplies and maintains pumps for domestic and commercial customers. Regular maintenance of the pumps is part of the service, with FM Conway providing tankers and personnel to pump out and clean the sumps.

"Thanks to guaranteed work from Xylem, we will be able to develop a strong footing in the regions and have the potential to find extra work to build up our national capability," Simon says. "We are hoping to do 3,500 jobs this year, up from 2,000."

MAJOR CONTRACT WIN TAKES FM CONWAY'S WATER AND DRAINAGE MANAGEMENT EXPERTISE NATIONWIDE

We will be able to develop a strong footing in the regions

FM Conway's good relationship with the Xylem team in London and the Southeast meant the company was given forward sight of the preventative maintenance visit timetable, which allowed Simon to come up with efficiency savings.

"Rather than being called in for one-off jobs, we could create milk rounds of work in one area," he explains. "So, instead of 12 individual visits in a month, we can do three jobs a day over four days."

FM Conway is also doing other work for Xylem, including CCTV drainage surveys and civils work.

Xylem strategic buyer Carley Woolley says: "We are looking forward to building upon our relationship with FM Conway."

ON MEETING CARBON TARGETS

5 MINUTES



VANESSA HILTON
HEAD OF CARBON AND
THE ENVIRONMENT

Q What is your background?

A I've always had a passion for being outside and for the natural environment. I studied marine biology at the University of Plymouth, and really got to understand the delicate balance of the natural environment - for example how any change in the pH of water has an impact on the habitat and consequently on the flora and fauna.

From university I went to Morgan Sindall, where I worked on the Lee Tunnel. I found I could galvanise people into caring about the environment by linking it to their own hobbies and interests.

Most people have something about the environment that is meaningful to them: walking their dog, cycling, bird watching, fishing. Once you understand people's passions, you can talk to them about it, and help them to see why the environment is so important.

Q What does your job involve?

A Last year the business committed to being carbon neutral by 2045. I was brought in as Head of Carbon and the Environment to work with everyone in the business, and our clients and supply chain, to help make sure we meet this challenging target.

Since I got here, I have found that everyone is already on board with it. I can see that people understand the challenge, and have lots of brilliant ideas about how we can get there, but they don't have the time to deliver new ideas and initiatives, or to work out the carbon savings these ideas may provide.

My job is to support and provide advice to the rest of the business to deliver their goals and to pull these ideas together and develop mechanisms for delivery.



Q What is first on your list?

A My immediate task is to develop a Carbon Strategy for the business. Carbon is the driving focus for all construction companies now. That's a real step change for the industry, and it is not going to go away. The first task is to quantify where we can make carbon savings.

But writing a strategy now is a really difficult task because technologies are changing at such a rapid pace, and we are going to need new technologies to help us reach our goal.

At the moment, the road to carbon zero has quite a few different routes depending on technology, cost and national infrastructure to name a few. If you think back to how things were in 2000, any strategy written then wouldn't even be relevant today. For example, no one was driving electric cars 20 years ago.

Q What are the biggest challenges?

A There are two big carbon focuses for our business: transport and asphalt production. Diesel accounts for 34% of our carbon footprint, and the natural gas used in heating and drying accounts for 35%.

These are both areas where we need technology to develop so that we can change the way we work. The plant and transport divisions are already replacing diesel vehicles with electric, but this is only possible at the smaller end. There is still no practical alternative to diesel for HGVs.

And, at the moment, we don't know how we're going to get off natural gas, which is the most economical way of drying and heating aggregate. We are always looking for new technologies and working hard with suppliers to find the zero-emission solution.

Q How will FM Conway meet the challenge?

A FM Conway is different from other construction and maintenance companies. We own our plant and equipment; we manufacture and supply most of the materials we use; and we employ our own people. Also, business decisions can be made quickly and money invested in innovative solutions and new products.

But we're never going to be a carbon neutral business on our own; we have to work with our clients and suppliers, and engage our entire workforce. Our long history of recycling and innovation underpins our commitment and shows that we're genuinely committed to being a sustainable business.

Carbon reduction is firmly at the top of our agenda and I think we are uniquely placed to find symbiotic solutions to achieve our own and our clients' goals to deliver a net zero future.

KICKSTART SCHEME

FM Conway is proudly supporting the government's 'Kickstart Scheme' by creating job placements for 16 to 24-year-olds who are claiming Universal Credit and are at risk of long-term unemployment. The aim of the scheme is to give young people an insight into construction, while providing training and work experience to nurture their development. The company has taken on 15 new Kickstart employees. Here we meet four of them.



Christina Woolery
Marketing Assistant

I hope to gain knowledge about FM Conway and the construction industry, as I do not have any experience, and I know it is a vast and complex industry.

I struggled near the end of my degree, at the start of the pandemic, as a lot of things changed. My online lectures, seminars and exams were cancelled in place of coursework, which sounds like a positive, but not when you already have a lot of essays and a 10,000-word dissertation to do. So I am proud of the 2:1 I was able to achieve.



Paige Edmonton
Customer Liaison Assistant

I am hoping to expand upon my previous experience in customer service and learn more about the construction industry.

My greatest achievement is becoming a dementia champion for the Alzheimer's Society. I have had to learn to speak in front of groups of people that I do not know - something that used to be uncomfortable for me. However, more importantly, this is a subject close to my heart and now that I am able to raise awareness by creating dementia friends, it feels like a great achievement.



Nathan Reynard
Administration Support Assistant

I hope to gain first-hand experience of the construction industry and how FM Conway operate. I also hope to develop my skills in business administration, customer service and health and safety awareness. I have little experience with my job role and I therefore believe it could be both interesting and rewarding to experience something new.

Completing my degree in Biochemistry at the University of Sussex, I got to meet and work with people at the forefront of scientific advancement in the life sciences.



Victor Aforo
Data Analyst Assistant

I am hoping to develop skills that will help mould me into a better professional. I am also interested to learn more about the construction industry and the many different divisions and people that work together to form a well-run company.

My proudest achievement was competing in the Target 2.0 competition held by the Bank of England. We had to present our findings to staff from the Bank of England. I was always reluctant to participate in public speaking, but on this occasion I decided to step out of my comfort zone.

DRIVING INCLUSION

FM CONWAY IS DETERMINED TO BE A WELCOMING EMPLOYER THAT MIRRORS THE DIVERSE COMMUNITIES IN WHICH WE WORK

FM Conway’s equality, diversity and inclusion strategy, “All Great People”, was launched in November, committing the company to reflecting our diverse society and establishing a culture built on fairness, inclusion and respect.

It identifies eight ambitious goals, with the aim of delivering them all by 2024 (see box).

CEO Adam Green says: “I am committed to making sure that myself and the senior leaders work as ambassadors for change; by leading from the front to deliver our goals.”

But this is not just a top-down initiative, says FM Conway’s head of corporate social responsibility Sharon Field. “Directors can take the lead, but there has to be involvement from all levels within the business to achieve our goals”

Adam agrees. “By enlisting and embracing the support and action of our people, our suppliers and by working closely with our clients, we will ensure that we get there a lot faster,” he says.

Momentum is already building. The strategy is being communicated to the workforce through toolbox talks, which started in January. At each talk, people are invited



“There has to be involvement from all levels within the business”

Sharon Field, head of corporate social responsibility, FM Conway

to join one of the workstreams aimed at delivering the goals – or even identify new ones.

“We want to make sure everyone who wants to be part of the change has that opportunity,” says Sharon. “We are only in the early stages, but within one month our employees had suggested four new workstreams, and people have already started forums and discussion groups for each of the goals.”

For more information on the strategy or to join one of the groups delivering the goals, contact the equality, diversity and inclusion team at great.people@fmconway.co.uk

THE GOALS

- Maintaining an inclusive organisational culture
- Increasing diversity through the BAME community
- Increasing diversity through the LGBTQ+ community
- Increasing diversity through the disabled community
- Increasing diversity through the female community
- Developing inclusion & respect
- Increasing diversity in our supply chain
- Communicating our performance, impact and sharing best practice

GOLDEN TICKETS



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:

Lee Day

Small tools fitter, Plant & Workshops

Lee, who won a camera with his Golden Ticket, has been with FM Conway for three years and likes to look through Construct to find out what's going on within the business. He is looking forward to using his new camera with his family and is delighted to have been one of the first Golden Ticket winners. "It's nice to know that anyone within the business can win," he said.

Terry Whybrow

Bulker driver, Transport

Terry won a cash prize of £60, which he plans to use to treat his wife to a lovely meal as soon as he is able to. Terry has been with FM Conway for six and a half years and always reads Construct to learn about his colleagues and what the business is achieving.

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

Vasile Lucut

Mason, Term Maintenance

Vasile won one of the cameras on offer. He has been with the business since 2007, and says he feels incredibly valued to be one of the lucky winners just from reading his issue of Construct. Vasile's favourite thing about Construct is "seeing achievements that myself and other colleagues have been working on and being proud of jobs that have been completed well".

James Hollowday

Apprentice estimator, Civil Engineering

James, who bagged £60 from his Golden Ticket, said he was very surprised by the unexpected win, and found the extra cash particularly useful for present buying in the run-up to Christmas. As a regular reader of Construct, James loves seeing updates on ongoing jobs around the business.

Michael Devenney

Longstanding employee Michael was another Golden Ticket winner who received a camera. Michael, a much loved member of the FM Conway family for 17 years, suffered a stroke last year that dramatically changed his life. The business has tried to ensure Michael has the support he needs and wishes him all the best for his recovery. "[Winning this prize is] heart-warming and I feel appreciated," Michael said.

Harry Broster

Marketing assistant, Marketing

Harry Broster won the Golden Ticket top prize of £600. "I honestly can't believe it," he said. "At first, I thought I hadn't won anything until I realised that my Golden Ticket had fallen out and my dog had picked it up and run off with it! My wife and I are expecting our first baby, so it will go towards decorating and furnishing their bedroom."



BBA AUDIT

FM Conway's UKAS-accredited laboratory has been accepted onto the British Board of Agrément's (BBA's) External Risk Register, which means the laboratory is now accredited for a specialist suite of testing that the current UKAS accreditation does not cover. The business has also got BBA approval to increase its materials portfolio to include sustainable solutions to address the climate emergency and to offer more Highway Authorities Product Approval Scheme (HAPAS) approved materials.



STIC CONTRACT

FM Conway has been appointed as one of three Core Contractors for Transport for London's (TfL) Surface Transport Infrastructure Construction (STIC) framework. The six-year framework, worth an estimated £800 million, will be the primary route for delivering TfL's surface transport capital projects, including roads, bridges, tunnels, river infrastructure, and walking and cycling schemes. FM Conway will work in an integrated team with strategic partners Arcadis and Osborne.



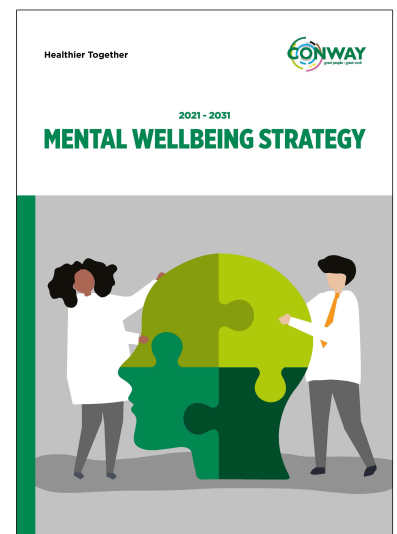
BIG TEN IN 10

The Big Ten in 10 is FM Conway's 10-year strategy for eliminating the potential of the 10 biggest risks that cause life-changing harm in the construction industry. To help raise awareness of this transformational approach to health and safety, the company has unveiled a suite of animations detailing how the Big Ten in 10 will ensure that all people go home safe every day.

MENTAL WELLBEING STRATEGY

— Valuing wellbeing

FM Conway has launched its new 10-year Mental Wellbeing Strategy, 'Healthier Together'. The strategy has been developed by the company's Healthier Together Steering Group to provide everyone with tools to take action in the name of mental health and wellbeing. It addresses mental health in the workplace, and will ensure that everyone has the opportunity to work in a culture where mental health and wellbeing is valued. By focusing on seven key goals, the strategy aims to improve understanding, help prevent suicide and combat stigma around mental health, and provide a practical approach to developing a mentally healthy workplace.



Awards

During the last year, the company has been successful in winning a variety of prestigious awards. They reflect our commitment to innovation, self-delivery and sustainability, as well as the value we place on our great people.

BETTER SOCIETY AWARDS

Award: Built Environment

FM Conway was a winner in the 'Built Environment' category at the Better Society Awards 2020 for our ground-breaking use of recycled materials.



BRITISH CONSTRUCTION INDUSTRY AWARDS (BCIA)

Award: Small Project of the Year

The Illuminated River project in London won the 'Small Project of the Year' at the 2020 British Construction Industry Awards.



CHARTERED INSTITUTION OF HIGHWAYS & TRANSPORTATION (CIHT)

Award: CIHT Ringway Climate Change Award

FM Conway, in collaboration with Connect Plus, Connect Plus Services, Skanska, Atkins and Toppesfield, won the 2020 CIHT Ringway Climate Change award for our project to lay asphalt containing 50% recycled material on the M25.



CHARTERED INSTITUTION OF HIGHWAYS & TRANSPORTATION (CIHT)

Award: CIHT National Apprentice of the Year 2020

Vickie Bathe, an apprentice civil engineer in the structures division, won the 2020 CIHT National Apprentice of the Year. Vickie has continually proved what an asset she is to FM Conway and we are delighted to see her recognised for her efforts.



A JOB WELL DONE

Dulwich Robin
@ex_cllr_rch

Delighted to see @FMConwayLtd doing a brilliant job repairing Goose Green Roundabout and setting up temporary traffic lights. The Conway guys were really friendly and reassured me that the works would be done by tomorrow. Fingers crossed, @lb_southwark @mcash



Sue Threader
@CivEngSue

Beautiful photo from @rrraahh who's been out on site this evening testing the lights on @RochesterBridge. It's so satisfying to see the vision for the space realised after all the planning and hard work that went into the refurbishment project. ❤️



Reported by
Member of the public

Location
Rochester Bridge

Division
Structures

"I just wanted to say, now the project is finished and looks superb, a thank you to all concerned with delivering this project to the residents of Medway. I have seen how hard the people have worked on the bridge, through all weathers and never once have I seen anyone neglecting their duties."

Reported by
Rowland Gordon, highway asset manager, London Borough of Croydon

Location
Croydon

Division
Term Maintenance

Operatives involved
Ian Casbon, Rob Polley, Ray Milner, Kwasi Mensah

"Thanks on behalf of Croydon staff and residents to the gritting crew, supervisors and management team for the excellent work in keeping our roads clear of snow and ice during the winter season. The team made a lot of sacrifices to ensure Croydon continues to function, and we are grateful for this. We also want to pass on our thanks to the families of the winter gritting team for their understanding of the important part the staff play in keeping our roads safe for all road users."

Reported by
Member of the public

Location
Shelton Road, Merton

Division
Surfacing

Operatives involved
Neil Smith, Mark Pitcher, Lee Wooler, Kevin Mitchell, Chris Madden

"I am a local resident and just reaching out to say thank you very much for our new pavement. It is a great improvement. Please pass on our gratitude to the team and recognition of their hard work during these challenging times."



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