Fencing Times

UK & Ireland

2023, Issue 4

What is LPS 1175?

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Delivering 50 metres of twin wire fencing, completed and ready, within half an hour's time – sound impossible? At a Zaunteam event, three installers and one Speedpiler showed that it can be done. We've got videos to prove it. We admit, the circumstances were ideal. But installing between 200 and 300 metres in a day with a single crew is business as usual with the Speedpiler. Give us a call, we'd love to tell you more.

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FROM THE PUBLISHER

How long do you spend dealing with stupid customers?

rembrandt@fencingtimes.com

Installing fences is a nice profession. You get to be outdoors a lot and you make great fences, which at times last for decades. You enjoy a lot of variety and you can put all your creativity into it. There are times when you have to keep your head together and others when the solution is more a question of crude force and brute strength. Truly a really satisfying job for a person. If only you didn't have to deal with customers. Grrr. Customers really are the dumbest creatures on earth.

As an example, we recently heard a story of a fencing installer who received a request from the architect of a planning firm, which had to devise a special solution somewhere for the city council. The fencing installer conducted extensive research, talked to a construction company and a blacksmith, visited the architect three times and then offered the architect a wonderful solution. The architect was extremely pleased and said that the fence would blend in nicely with the newly developed urban area. It looked like getting the order signed off would just be a formality – but then all of a sudden a public tender dropped through the letterbox, a tender which all fencing installers in the region could bid for. And what was worst: the specifications had been copied word for word from the quotation's text.

We also know a story of a fencing installer, who received a request for an 8 metre long fence by 1 metre high plus a walkway gate of 1 metre by 1 metre. A relatively small job. He wanted to give the customer a price over the phone but the customer didn't want that. The fencing installer ought to come by and really would have to come by to measure everything because the customer had to be really sure that the fence would look good. So moving on, the fencing installer gives another sigh and schedules an appointment for a day when he needs to be in the area anyway. Instead of the planned 10 minute session, he is then kept busy by the customer for almost an hour. Each and every detail is discussed, down to the millimetre. As he finally walks off to his car promising to send a quote during the next week, the customer says coolly: *"You'd better sharpen your pencil because altogether I've asked thirty fencing installers and whoever is cheapest gets the job."*

That last story is actually familiar to us in a hundred and one variants because every fencing installer regularly encounters customers who see the professional as some kind of swindler. Customers who are so afraid they are paying too much that they always keep moaning about the price. You could give them the material at purchase price and do the assembly for free and they would still feel like they were being ripped off.

Then there are the customers who first come to you for comprehensive advice. Yes, they want the best quality. Robust materials, a thick, anti-corrosion layer of zinc, stainless steel fixings and beautiful aluminium covering caps. Then, once you've done your quote, they come back with a printout from some website or other where they found a fence that looks roughly the same but for half the price.

And then, of course, you have the other customers who generally act very friendly. Who sign the contract with a generous gesture, already knowing that they will haggle something off the price when the project is finished. These are the customers who keep finding scratches and dents until you, with tears in your eyes, let them deduct 5 or 10 per cent from the bill.

The next time you have to deal with such a &#§ß! customer, your initial reaction is often to go on the offensive. You feel like putting the most expensive lawyer in the region onto him, or visiting him at home with your friends from the motorbike club. And then you start to draw up a list of things you can do to make sure something like this nnnnnever happens again. Because you're not going to stand for any more nonsense!

And there are things you consider doing to prevent customers from taking advantage of you. For example, you can charge for your advice. At professional opticians, customers also have to pay to get their eyes measured – so you too can do this in future.

You can write a bible's worth of terms and conditions for quotations, sales and supply. Which you get your customers to sign before making even the slightest effort for them. These will of course include the fact that you own the copyright on your quotation texts and that they cannot be used by anyone else.

But the first question, which you should really ask yourself in this context, is: How angry do I really want to make myself? How much negative energy do I want to expend on a customer I'm so angry with that I no longer want to work for them anyway?

After all, negative energy is still energy. It's energy that's no longer there for applying to positive things. Of course, sometimes you have no choice. Money is money and if a customer doesn't pay all or part of the bill because of all sorts of invented scratches, it might help to take him to court.

But even then, it's smart to think calmly first to see if it would be worthwhile. A court case can cost more money than it delivers. Even when you win it. *"That doesn't matter, for me it was the principle,"* we then hear. But in that case they were rather expensive principles.

It's often a better idea to just forget about a negative customer as soon as you can. Write off the time, effort or money it has cost you as a business loss. Running a business has its ups and downs, with small losses being part of it. Then you can focus all the sooner again on clients that are pleasant to work for. These are sometimes overlooked, but they do indeed exist. Some just get the barbecue going and grill sausages for your crews. Others come out with some cake.

The less time you spend on irritating customers, the more customers you can help and the more chance of there being another among them who does appreciate your work. ■

Fencing Times

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Are you a fencing installer, but don't receive the Fencing Times? Call or email us and we'll put it right. You can also call or email us to sign up for a digital subscription; we'll be happy to add you to our mailing list.

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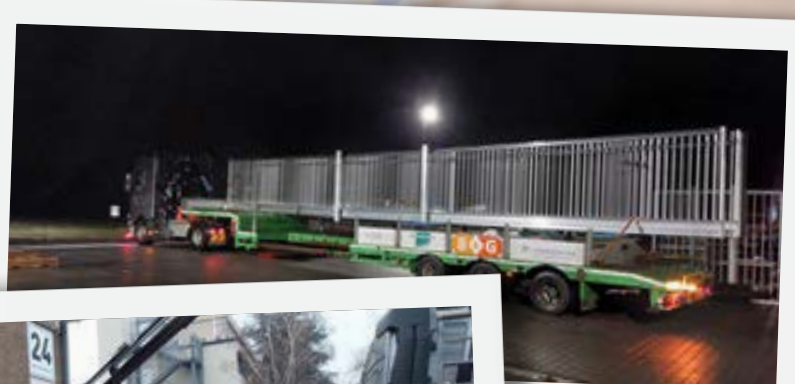
Fence Post

Barry @ Masters in Motions

Barry van Breukelen of Masters in Motions Toegangstechniek from Utrecht, the Netherlands, came across this unusual fence when he accompanied a friend to the latter's chicken run. The posts are young willow saplings, with boards and mesh screwed to them. We'd like to know what's going to happen to the fence when the saplings become big trees. Until then, it certainly looks at home with nature. Thanks, Barry!



Theo @ B&G

Theo Mulders who works for the Dutch-based company B&G Hekwerk from Veldhoven was en route with this 16 metre sliding gate for a project in Duisburg. "*With the trailer fully extended and the indicators on, it was nearly but not quite illegal*," he laughs. The total combination was 22 metres long (Standard EU truck combinations must not exceed 18.75 metres in length). Thanks, Theo!

Basti @ Breitmeyer

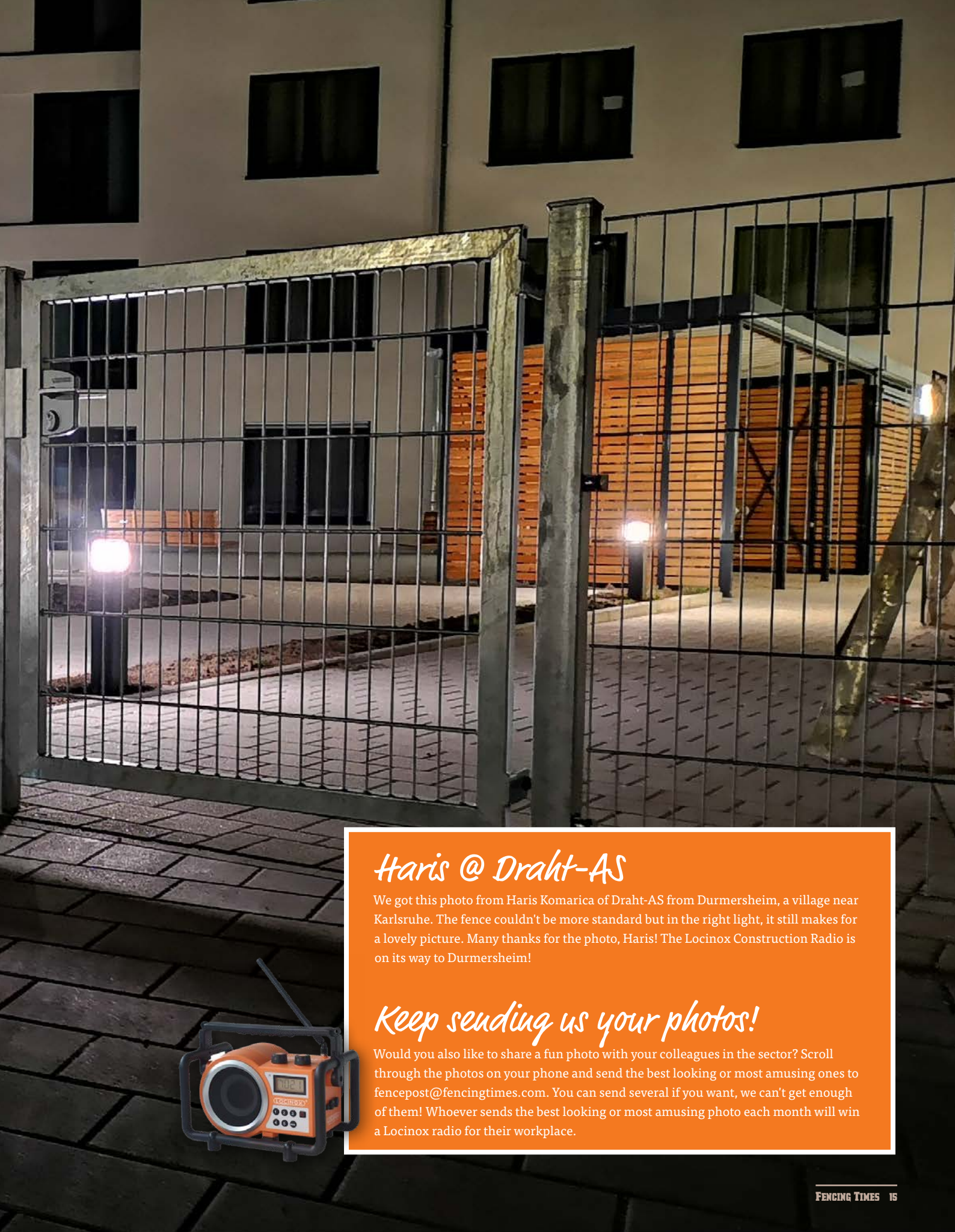
From Bastian Münch of Breitmeyer Zaunbau in Dormagen, near Düsseldorf, we received these two photos in the category 'Two neighbours got together to have a fence installed and you simply won't believe what happened next'. They chose a railing fence that has the infill bars welded to the horizontal supports on one side. But they couldn't agree about who should have the horizontal sections on their side. After a lot of back-and-forth, the fence was finally installed with the bars all facing one neighbour, but within a week of being supplied the other neighbour phoned to say it wasn't acceptable like that. Check out the end result here: half of the railing panels now face one way, while the other half face the other way. Many thanks for the photo, Basti.

Peter @ Anderson

Peter Pagan of Anderson Fencing from Moffat, a town in southern Scotland, sent us this picture of a 450 metre fence he installed near Holywood (just one l, in Dumfriesshire) to keep cattle from straying. *"The owner of this particular estate wanted a fence so that he could plant saplings for the future without them being trampled by cattle. He believes that these trees will form his legacy when he is no longer with us. We've built in some steps so that he can check how the saplings are doing during his daily walk with his Labrador."* Nice story, Peter! Many thanks for the photo!

Pierre @ Heras

Pierre Verharen of Dutch Heras came across this picture on Facebook and liked it so much he just had to submit it. As for us, we liked it too much not to post it, even though we've no idea where the fence is. Thank you, Pierre!



Haris @ Draht-AS

We got this photo from Haris Komarica of Draht-AS from Durmersheim, a village near Karlsruhe. The fence couldn't be more standard but in the right light, it still makes for a lovely picture. Many thanks for the photo, Haris! The Locinox Construction Radio is on its way to Durmersheim!

Keep sending us your photos!

Would you also like to share a fun photo with your colleagues in the sector? Scroll through the photos on your phone and send the best looking or most amusing ones to fencepost@fencingtimes.com. You can send several if you want, we can't get enough of them! Whoever sends the best looking or most amusing photo each month will win a Locinox radio for their workplace.

Penny Pie Park

Alpha Rail, an English fencing company from Huthwaite, between Nottingham and Sheffield in the Midlands, created an 800-metre-long decorative railing for Penny Pie Park in Dodworth, including two tall entrance arches. *"The client, Barnsley Metropolitan Borough Council, wanted to direct more pedestrian traffic through the park,"* project manager Gavin Thorne says, *"so the park was refurbished and a new road was built that divides the park into two. The main contractor asked us to provide the fencing."*

The landscape architect had drawn up a rough design for the fence's appearance. *"But the drawings couldn't be used for manufacturing,"* Thorne goes on. *"We used those drawings as a basis and then looked at the project to see exactly where the fence needed to be. We mapped all the slopes in the terrain and all the bends very precisely, then created our own drawings. When those were approved, we started the manufacturing process. We manufactured all 800 metres ourselves – we're equipped for that. First we cut all the steel components to size and bent them and then welded them. We also cut out the words 'Penny Pie Park' ourselves, with the laser."*

After the welding was complete, all the materials could go to the galvaniser and coating facility and the installation could start. This was done by a subcontractor. *"We have four subcontractors with whom we've had a great collaboration for many years,"* Thorne says. *"They put it in the ground exactly the way the architect wanted it."*

All in all the project took around five months. *"It was one of our favourite projects of those we've had lately,"* Thorne says. *"Both the main contractor and the end customer were very happy with the result. Last summer we submitted it to the Fencing Awards organised by the Association of Fencing Industries (AFI). We finished as a finalist and although we didn't win, the entire team is very proud that we were all involved in creating this stunning project."* ■

Gavin Thorne

Alpha Rail

The company name 'Alpha Rail' was created by the founding directors of the company back in 1985. The 'Rail' part of the name comes from the company being a manufacturer of pedestrian guardrail. It can cause confusion, as people sometimes assume that the company is active in the railway industry and manufactures train tracks.

Location:	Huthwaite
Owned by:	Phil Ball, Mark Sipson & Dean Briggs (since 2001)
Founded:	1985
Founded by:	David Moores & Mick Page
Staff:	46
Crews on the road:	4 subcontractors with around about 15 erectors
Active:	All over the UK

This year's AFI Fencing Awards to be held in Cardiff

In June the UK's Association of Fencing Industries (AFI) announced the venue for this year's UK Fencing Awards ceremony. It will be held at the Principality Stadium in Cardiff, Wales, on 5 October.

The UK Fencing Awards were introduced last year to start raising the profile of the fencing industry – and everyone involved in it. *"Fences are in everybody's life,"* AFI CEO Pete Clark says. *"But people seldom see the training and skills that come with it. With the Fencing Awards, we want to encourage fence installers to get the best out of themselves."*

The UK Fencing Awards will be presented in the categories Agricultural & Equine, Domestic, Security, Sports & Education, Highways & Railways, Industrial, Temporary & Hoarding, and Gates & Barriers. AFI members were able to submit their projects until 30 June. In addition there is the Project of the Year category, which is open to all British fencing installers.

"On Thursday 5th October 2023 we will welcome all finalists to the Principality to find out who has won," says Clark. "This is a great opportunity to enjoy a day with fellow fencers, meet new people, and celebrate everyone in the fencing industry. We'll have a tour of yet again a stadium before lunch, and celebratory drinks.

This year's awards will again be presented by a former rugby player. *"Andy Powell will be announcing the winners this year,"* says Clark, *"as well as telling a few interesting stories to keep everyone entertained. Andy has been a huge hit on the After Dinner Circuit since retiring from rugby, and with original stories about his adventures in the rugby world, including the famous 'golf buggy incident', he gives no second hand imitations! Original stories only!"* ■

Andy Powell

Andy Powell is a Welsh former international rugby union player, having played for both the Wales sevens team, and the Wales national rugby union team as well as touring with the British & Irish Lions. His regular rugby union position was either Number 8 or blindside flanker in the back row.

Powell joined London Wasps in 2010, Sale Sharks in 2011, Wigan Warriors in 2013, Newport Gwent Dragons in 2014, then moved to Merthyr RFC from 2016 until his retirement. Internationally, Powell played his first cap against South Africa for Wales in 2008. In 2009 he was named as one of the members of the British & Irish Lions for the tour to South Africa.

Cova expands range of crash-tested folding gates

Cova Security Gates, a gate manufacturer from the English town of Crawley, south of London, released a bigger version of its CSG 10640 speed gate this winter. The gate is now available with a passage width of up to 6 metres, while still being able to stop a 7.5-tonne truck travelling at 40 miles an hour.

"*The 10640 XL was the next step in our range of crash-rated speed gates,*" sales manager Mark Wood says. "*That range consists of gates that stop a truck that's travelling at 30, 40 or 50 miles per hour. Until now the maximum passage width for all our crash rated bi-folding gates has been 4.2 metres, but sometimes that's not enough – so we've now built a 6-metre version and had it tested as well.*"

CSG 10640 XL

The XL version of the CSG 10640, like the other gates in the range, is a trackless folding gate with a single leaf. That is, it's literally two leaves, but they pivot in one direction. The gate is 2.5 metres high as standard. *"It can also be produced in a taller version,"* Wood says, *"but not shorter. We need those 2.5 metres in order to stop vehicles – and to ensure no major pieces of debris penetrate in the event of an attack."* The gates in the range are supplied with tube infill as standard, but are also available with additional mesh panel or sheet infill. *"You can actually choose any type of additional infill, as long as the weight isn't higher than a certain maximum. It doesn't make any difference to the crash rating. There are also various anti-climb options available, such as shark tooth tops and protruding bars."*

VEHICLE MITIGATION

The speed gates' vehicle mitigation rating is achieved with webbing, which is tensioned across the entire width of the gate leaf in a special cabinet made of sheet steel. *"I can't tell you which material we use for that,"* Wood says. *"It's a trade secret. But you could think of it as being like the tie-down straps on a truck. When the gate is closed, the straps are stretched taut across the width of the entrance and they ensure that a vehicle can't break through the gate. The webbing is so strong that – contrary to what you might expect with such a heavy gate – the minimum foundation required to install the gate is only 280 millimetres. This is particularly useful in inner-city areas, where there are lots of pipes in the ground."*

DRIVE

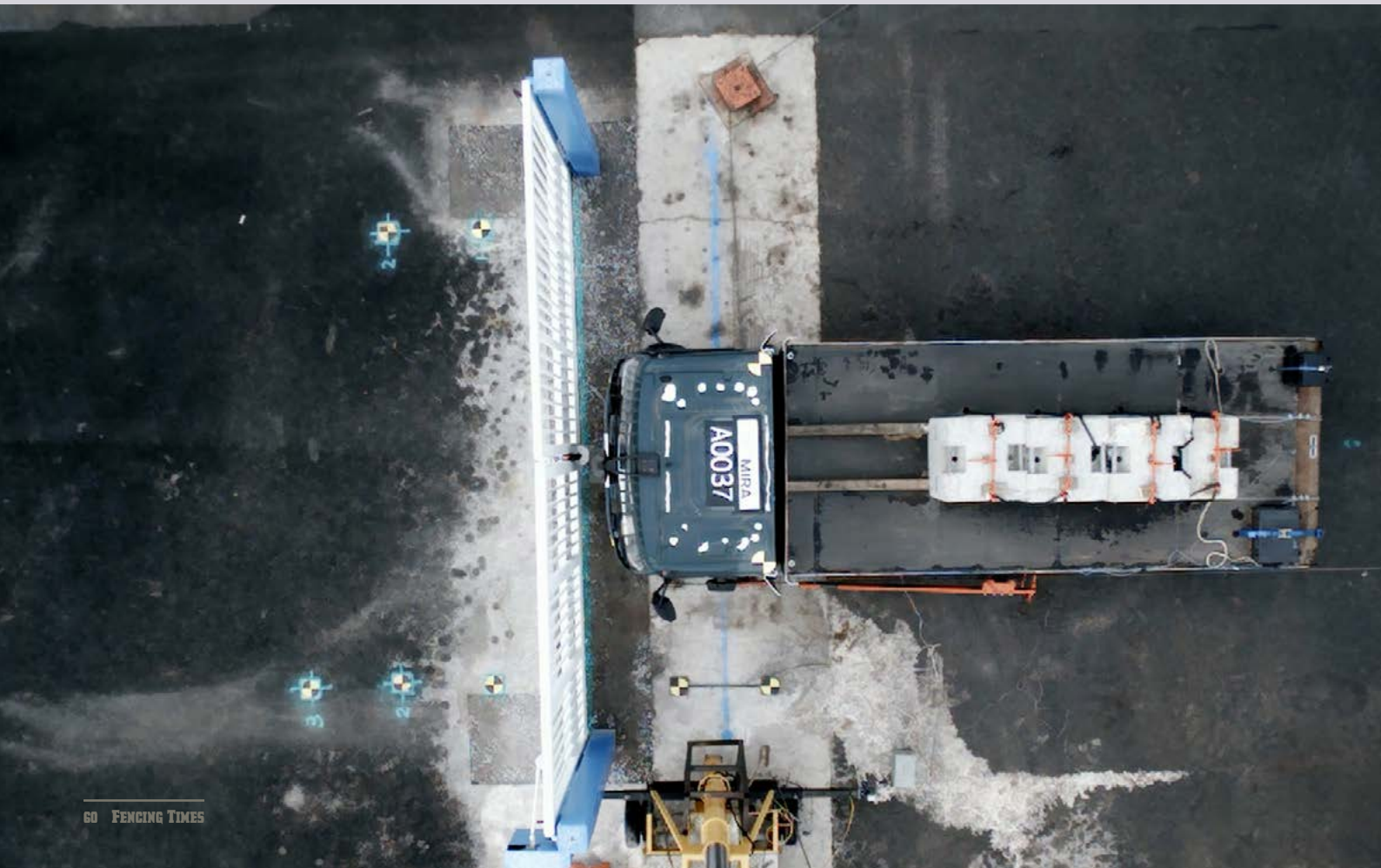
The speed gates are powered by a hydraulic motor, which Cova Security Gates developed in-house, mounted on the hinge post. The leaves fold into each other as the gate opens using a rack and pinion system. The leaves fold out again during closing operation. The webbing system is hydraulically locked as well. Once the gate is closed, a heavy pin on the closing post slides through eyes that are mounted on the webbing. Both the gate drive and the hardware deliver a 100 per cent duty cycle. A hand pump is supplied along with the gate so it can be manually opened and closed in the event of power failure.

SECURITY RATING B3 AND C5

In addition to keeping out hostile vehicles, the folding gates in the range can also be made suitable for stopping persons with malicious intentions. *"We're not called Cova Security Gates for nothing,"* Wood says, emphasising the word 'security'. *"The gates are secure in every respect. We can add upgrades, like an extra-strong prison mesh panel as the infill, to achieve Security Rating B3 or even C5 according to the LPS 1175 standard. B3 means that we stop intruders who are using hand tools like claw hammers, cordless drills and bolt cutters for at least 3 minutes. C5 means the intruders can use even bigger bolt cutters, or a hacksaws or scissor jack and even will be stopped for 5 minutes. We already have certifications for the existing 4.2-metre versions in the range."*

CRASH TEST

The new 10640 XL was tested by test and certification company Mira, which has a large test site on an old RAF airbase near Birmingham. On this site, a 7.5-tonne truck hit the gate head-on at 40 miles (64 kilometres) per hour. The gate withstood the test – the truck remained outside. *"The penetration value – how far the front of the truck's load bed is over the fence line following the crash – was 2.4 or 2.8 metres, depending on whether you're using the specifications for the PAS 68 standard or for IWA 14-1. For both standards, that was enough to pass the test. It means that we can now offer a bigger passage width to those customers who need an anti-vehicle gate – places like data centres, military bases or police stations."* ■



Qualis adds extra functions to gates using cameras

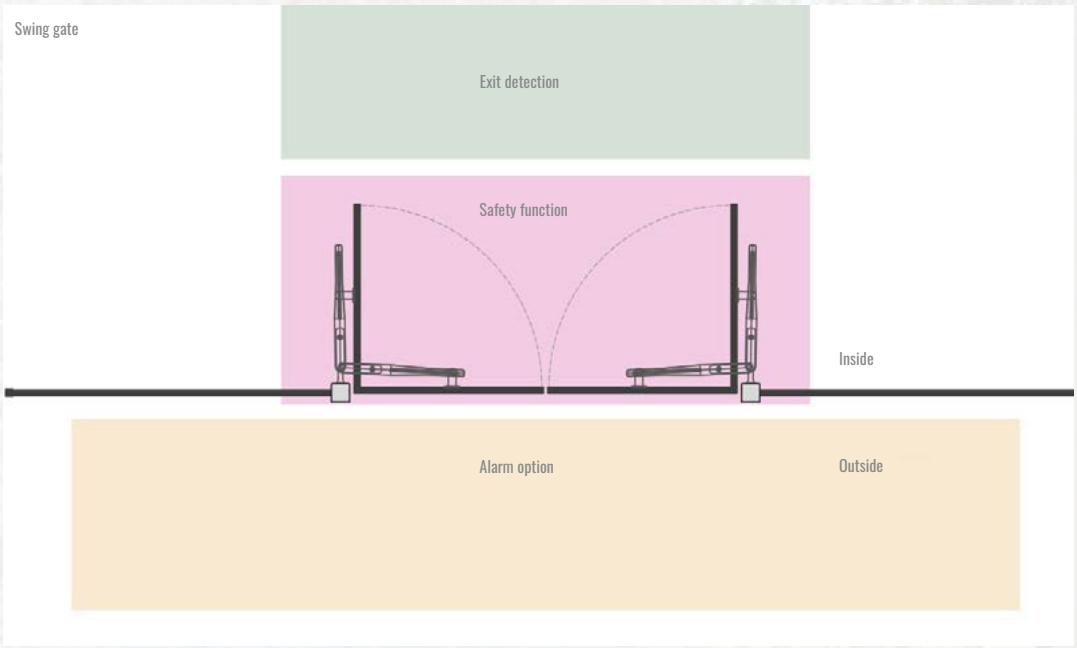
As of this spring Qualis, a French gate and fencing manufacturer from Breuillet, south of Paris, will be fitting smart cameras to its gates on request. The cameras are able to detect both obstacles and intruders, thus making a gate safer in two ways.

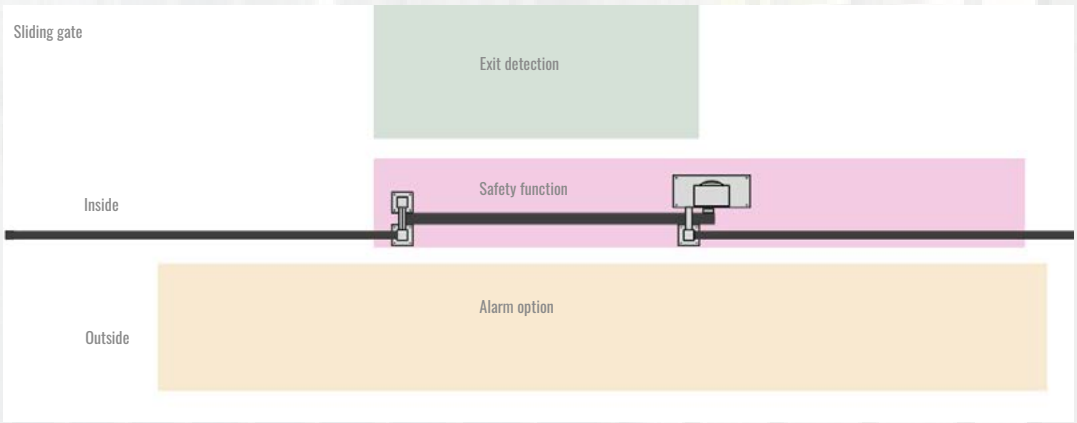
"When installers order a gate with an electric drive," says director and owner Guillaume Sailly, *"we deliver it plug-and-play, with the drive, access control and safety accessories pre-installed. We call this our 'MIA' concept, which stands for Motorisations Intégrées en Atelier. But technology is progressing and we felt that there were more features that we could add to our gates. That's why we're now equipping the gates with cameras – we call it MIA 3.0."*

SECURITY

The primary function of the cameras is safety. The software that analyses the images from the cameras is able to recognise obstacles, which prevents anything coming into contact with a moving gate leaf. *"Whether it's a person or a vehicle,"* Sailly explains, *"the gate leaf stops immediately if the camera sees something or someone in the predefined zones. This gives it a major advantage over safety contact strips, which need to make contact with the obstacle in order to detect it. The cameras monitor not only the gateway but also the gate clearance area, so there is no need to protect these separately with a fence or contact strips on the back of the leaf. With the cameras, we completely eliminate the risk of entrapment or cut-off, without any physical contact."*

Guillaume Sailly





VIGILANT

The second MIA 3.0 function is optional, and turns the gate into one of the site's primary security elements. *"The software behind the cameras is constantly analysing the area around the gate and can identify the presence of any people,"* Sailly says. *"This presents all sorts of different options. We can trigger a silent alarm that notifies security guards or the police. Those security guards can review the camera images and immediately see what's going on. Was it an intruder? Or just the postie trying to find the letterbox? We can also trigger an acoustic signal on the gate, or a flashing light, so the intruder knows they've been spotted. Or we can send an email to the owner of the gate. Each gate has its own unique number. On sites that have more than one entrance, the security post knows immediately which gate is involved."*

EXIT LOOP

The cameras on the gate can also perform a third function: as an exit loop. *"Naturally we're also able to use the presence detection to our advantage,"* says Sailly, *"and use it to detect vehicles exiting. Previously you needed an induction loop for that, and then the asphalt had to be cut open, or part of the paving removed. Then paving can subside if too many trucks drive over it, meaning that the loop no longer works. None of that is an issue for a camera. They're much faster and easier to install, and on top of that, you can't 'trick' them using a metal strip. With the MIA 3.0 gates you can use the controls to programme in a time schedule so the gate will only open at certain times, when it detects someone."*

INSTALLATION

The MIA 3.0 ports are able to operate independently or as part of a company network. *"We can connect the gates to the customer's network,"* Sailly says. *"The advantage of this is that the video footage can be streamed to, for example, the security control room. But if there's no network nearby, the gate can also operate autonomously. In that case a GSM module transmits the alarm signals via the mobile network. The advantage of this is that there's no need to lay any cable to the building, other than for power."* The 3.0 gates are plug-and-play, just like the original MIA gates. *"We install the cameras in the factory and we programme the zones. The installer or user is still able to fine-tune the zones on site, but it's not usually necessary."*

CERTIFIED

"For now we're offering the cameras as an additional option, alongside the existing photocells and security strips," Sailly says. *"But we're in the process of getting a camera-equipped gate EN 13241-certified, working with an independent testing institute. I'm hopeful that we'll achieve this, because the system is much safer."* Sailly introduced the new gates to its customers at an open day on 15 June. *"And we'll obviously take it to Paysalia in Lyon this December. With a bit of luck the certification will have been completed by then."* Both the swing and sliding gates from the Qualis range are available as MIA 3.0 gates. ■


QUALIS

FAC presents kit for 180-degree folding gate

This spring, Italian gate hardware manufacturer FAC launched a kit that enables folding gates to open 180 degrees. With the Bi-Folding 180 kit, customers now have even more free space available than with a standard folding gate.

"*Folding gates have a big advantage,*" CEO Maria De Marchi says. "*They only need a very little amount of space and fit almost everywhere. Until now, the gate leaves were only able to open to a 90-degree angle. That's why we're launching a Bi-Folding kit that opens the leaves 180 degrees. So the passage of the gate is also expanded laterally and installers have even more flexibility to adapt the gate to the customer's situation.*"

BI-FOLDING RANGE

The new 180-degree kit is the third kit in FAC's Bi-Folding range. In addition to the standard version, which can be used for double gates with a passage width of up to 10 metres, FAC developed a Heavy Duty version that opens double gates with a passage width of up to 16 metres. All kits in the series are cantilevered, which means they don't need a ground rail and they can also be used in a single configuration, opening two gate leaves to one side. Their operation is purely mechanical. The system uses push and pull rods, which move the second leaf along with the first thanks to a sophisticated design. "*You can install a standard swing gate drive on it,*" De Marchi says. "*You'll build that on the outer leaf. We have a special joint accessory for that. The movement of the outer leaf then causes the inner leaf to automatically hinge against the outer leaf.*"

KITS

FAC supplies all the parts you need to make a folding gate together in a single kit. The kit contains the column and leaf joint between the gate post and the leaf, the actual folding system, with special aluminium hinges between the inner and outer leaves, upper and lower hinges to fix the gate on the hinge post or column and also a protective carter. *"All the gate builder needs to do is to specify the passage width he needs,"* De Marchi says, *"and then we make sure that all the components are aligned with each other. The kits come with clear drawings and tables, so you know exactly which part to install in which part of the gate leaf or the post. It's really easy; with these kits, any gate-builder who can make swing gates can make folding gates too."*

BI-FOLDING 180

"To change the design of the special folding accessories, so they could turn 180 degrees, posed quite a challenge for our engineers, though," De Marchi says. *"But they did it: the column joint allows the movement of the first leaf to 180 degrees. Both leaves disappear from the opening passage and allow to use the full width between the columns as passage width. The gate turns very smoothly, too. We're really proud of it."* The Bi-Folding 180 kits are available for single swing gates of up to 4 metres: two leaves of 2 metres, so with two sets you can make double gates of 8 metres in total. The kits are universal for both left- and right-opening gates, and they can be attached to both gate posts and masonry pillars. They were released this spring. ■

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It's noise to be silent

Capra produces mobile high-security fencing suitable for video surveillance

Capra, a German manufacturer of mobile security fencing, has expanded its range to include fencing components with integrated cable ducting. The company also now supplies a video mast with integrated cable ducting.

"On the construction sites where we supply our Capra fencing, we came into contact with Secontec," says director Jurgen Schroyen. *"They supply mobile video surveillance for construction sites and event venues. Apparently, they were being plagued by sabotage. To counter that, we modified our mobile fencing blocks so that the cables could be routed to the video masts out of intruders' reach. In collaboration with them, we also developed a video mast with integrated cable routing."*

CAPRA

Capra fencing elements consist of concrete foundation blocks on which are mounted two fence posts and a rigid mesh panel. The blocks have recesses for a forklift thus making them easy to transport. *"Capra is designed for construction sites or event venues where an ordinary construction fence does not offer sufficient security,"* says Schroyen. *"Capra brings the stability and security of a permanent fence to your construction site, without sacrificing the flexibility and speed of a mobile fence. If you have just a bit of experience plus a forklift with a side-shift, it's even faster to put up than a traditional mobile fence."*

SECONTEC

Secontec's range consists of video cameras, GSM modules and an alarm centre. *"Anyone wanting to guard their premises won't then need to hire their own security personnel,"* says Schroyen. *"Secontec will erect one or more video masts on the premises and the images from these will be sent to the alarm centre via the LTE network. As soon as the software detects motion, an employee will get the images on his screen and can call the police. But problems with those images were a regular event issue because intruders often cut the cables. The police would then be called immediately of course and although they would usually arrive in time, you still ended up with a broken video mast that needed to be exchanged and repaired."*

IBOOM

"That's why we've now produced fencing elements with integrated cable ducting," explains Schroyen *"Secontec can now route the cables through that ducting to the video masts. In addition, we developed the iBoom in collaboration with them. This is an extremely robust video mast made of 120 by 120 millimetre rectangular section, which also conducts the cables upward. The iBoom stands on a Capra foundation block, which can be integrated into the fence line. This enables the cables to go directly from the mast to the fence without being anywhere accessible to intruders."*

COLLABORATION

Fencing installers who need to temporarily close off and monitor a construction site or event venue can use Capra and Secontec to provide a complete security package. *"The combination of our extremely robust mobile fencing with Secontec's detection and monitoring programme provides a class of security that is in no way inferior to that of permanent fencing,"* says Schroyen *"On the mechanical side, we provide fencing in various security classes – you can get it with prison mesh panels or with Y-extensions and rolls of razor wire. On the electronic side, we have a detection system and Secontec's video surveillance ensures that intruders are detected even before they get beyond the fence. They can even address such intruders from the alarm centre. Together, the two programmes are truly a complete package."* ■


SECONTEC

According to a survey of 100 installers:

84% reported unsafe design to be the most common cause for automated gate accidents in the last 10 years

Overwhelming majority advised that well over half of gates checked / maintained were 'unsafe by design'

62% believed the design errors are the responsibility of inappropriately trained installers

Do you understand the design requirements to deliver a safe gate?

GATE SAFE

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Mike Brundle looks back on 134 years of F.H. Brundle

F.H. Brundle is a British trading firm that primarily supplies fencing and railing materials. The company has six sales offices across the UK, as well as a distribution centre in Birmingham. It supplies products from major brands such as Betafence, Came, Comunello and Locinox, in addition to a wide range of own-model fences and gates. An endless list of components, fixings, steel and aluminium profiles, ornamental fence elements, and tools complete the range.

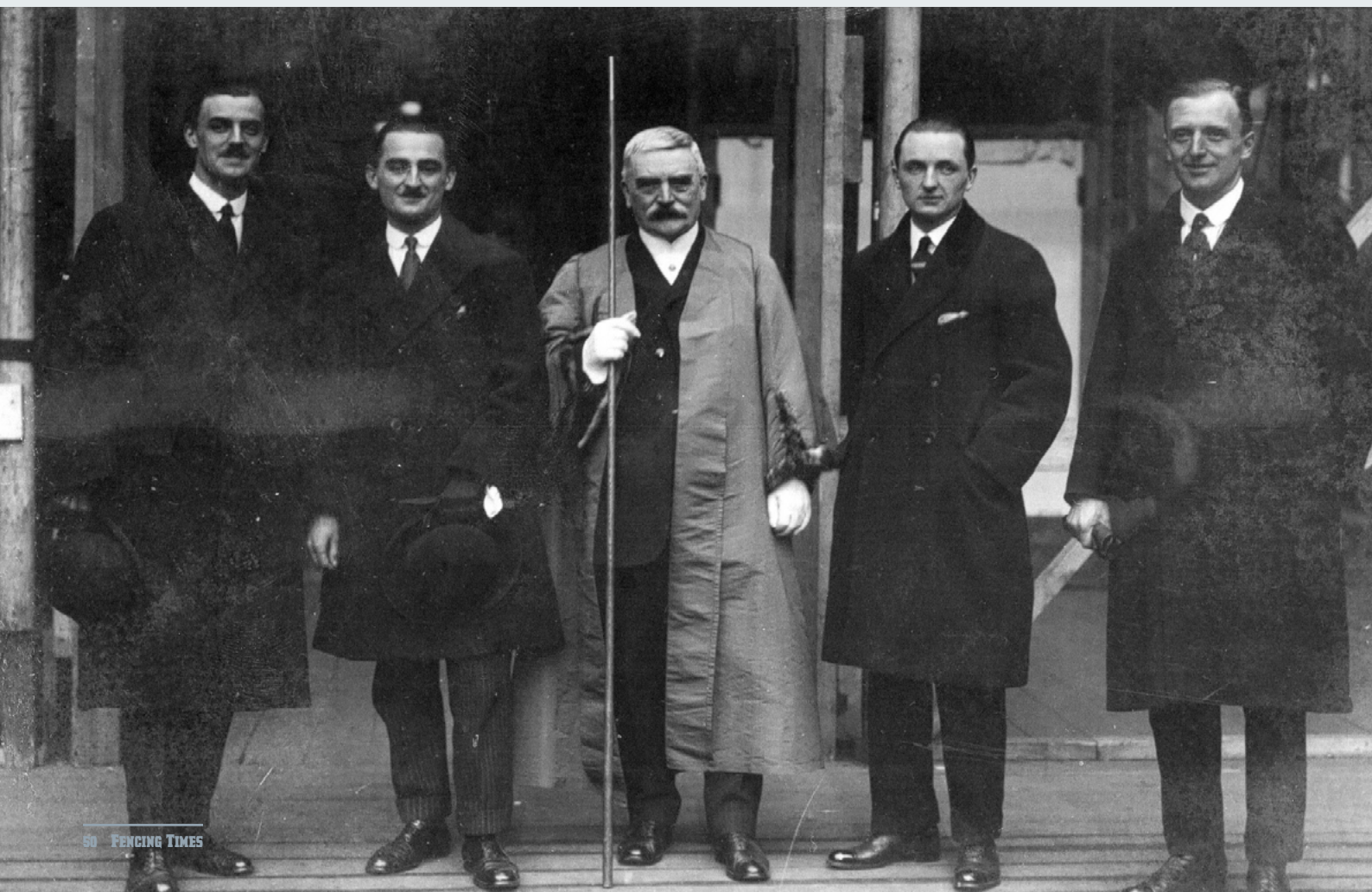
F.H. Brundle was established in 1889 by Frederick Henry Brundle. Michael (usually Mike) Frank Brundle, the current CEO who is the fifth generation to head the business, celebrates 25 years with the company this year. Last winter he recovered a pallet of archive material that had been lost for over 10 years. *"I'd given up hope of ever finding that pallet again,"* he says. *"But at a certain point a forklift driver, who'd actually been looking for something else entirely, uncovered it. I was incredibly happy."* Michael immediately started digging through the boxes and folders – and wrote a summary of them.

Horseshoes, bomb shelters and balustrades

Building a business is hard. Building one that lasts – and that retains something of the values that inspired its founders in the first place – is much harder. For F.H. Brundle, the story began in 1889 – the year the Eiffel Tower opened, Charlie Chaplin was born, and my great-great-grandfather, 32-year-old Frederick Henry Brundle, went into business for the first time.

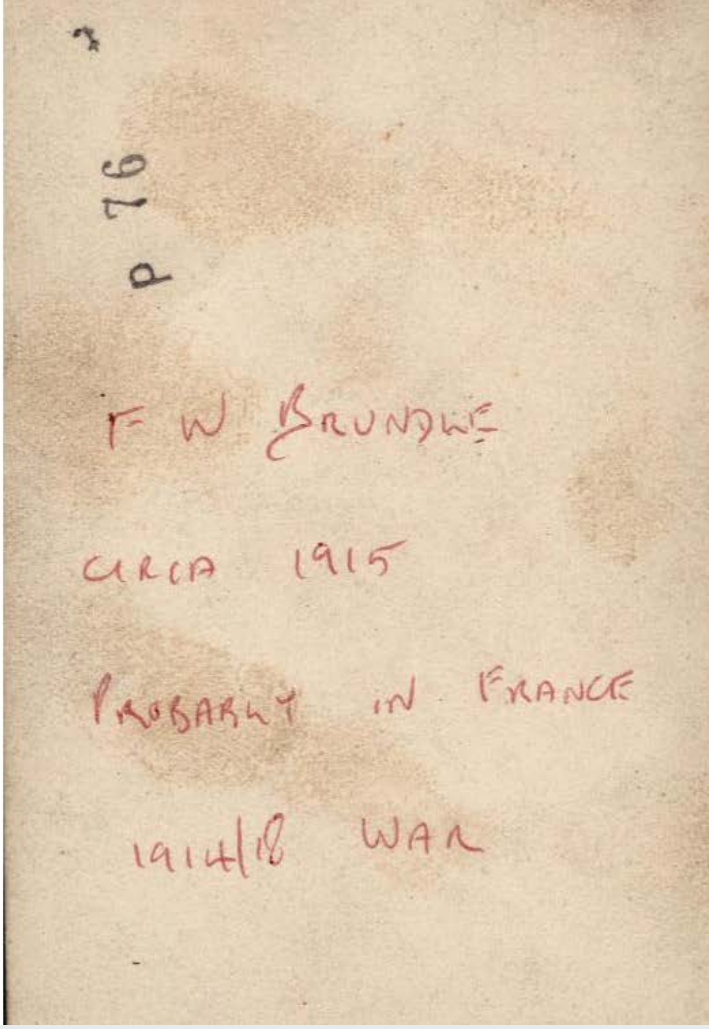
Having borrowed 500 pound sterling from his father, Frederick acquired premises on Paper Street in the City of London, close to the city's bustling docklands. At the time, British trade was booming and British ships were transporting goods all around the world. Those goods had to be stored in something – and companies like the newly-minted F.H. Brundle supplied the packing crate fittings.

Frederick was entrepreneurial, no doubt, but he was anything but cutthroat. Throughout London, he quickly won a reputation for his generosity. When valued customers found themselves in financial difficulty, he was known to offer them large interest-free loans and help them reorganise. For decades F.H. Brundle grew steadily, trading on a mix of product quality and compassion. But in the 20th century, the company found itself in more challenging circumstances.



Company founder Frederick Henry (the original F.H.) Brundle, Michael's great-great-grandfather (centre).

Frank Walter Brundle, Frederick's son and Michael's great-grandfather, during the First World War



THE WORLD WARS

In 1914, the First World War began. Two of Frederick's eight children were called up to serve – my great-grandfather Frank Walter Brundle, who would eventually succeed his father as sole proprietor, fought in Belgium. I still have a picture of him in his uniform from 1915. Thirty years later Britain was at war again, but this time the action was much closer to home. By the 1930s my great-grandfather was head of the family firm, and had become a well-respected local dignitary. He was a very active member of the Corporation of the City of London – the body that governs the capital's historic centre. He'd also become Chair of the Civil Defence Committee – the group responsible for helping local residents and businesses withstand German air raids. During the Blitz, the German Air Force dropped 45,000 bombs on London. During the war Frank oversaw the construction of the city's largest underground bomb shelter. In 1942 he was featured on the front page of the *City Press*, praising the builders for their 'inexhaustible energy and patience, as well as a keen sense of humour and faith in human nature.'

The bombed headquarters in 1942

Brundle wagons

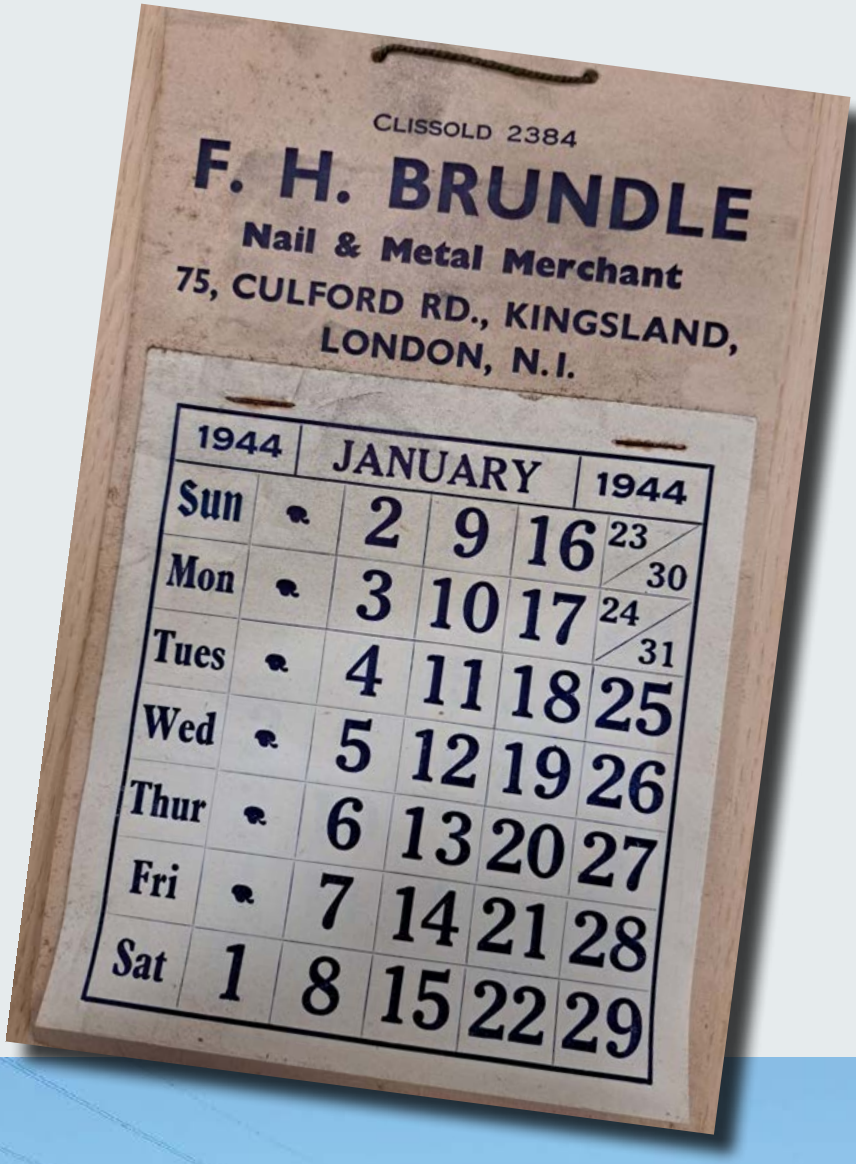
BEATING THE BOMBS

However, Brundle didn't escape the war unscathed. During one late-night raid, a German bomber scored a direct hit on Brundle HQ. That could have been devastating, even spelled the end of the business, but the Brundles' years of generosity paid off. In a huge testament to the fondness many in the sector had for Frank – and Frederick before him – a number of key competitors banded together to help him re-establish himself in the months that followed, even letting him use space in their own premises. With their help, F.H. Brundle survived the war. But its next adversary was one it was never going to beat – progress.

Frank Brundle during the Second World War, meeting an air raid warden in London

CHANGING WITH THE TIMES

By the '50s, the company had become one of the leading suppliers of steel products to the city's farriers – the smiths who shod horses. But the number of horses on London's streets was in drastic decline. When reliable sources of custom like the city's milkmen started to swap their carts for motorised vehicles, the company knew it had to diversify. However, while it was a big blow at the time, it was that need to adapt that set F.H. Brundle on the trajectory that made it what it is today – a market-leading trade supplier of steel sections, handrailing and fencing with a vast, comprehensive range. It also continued a company tradition of seeing challenges as opportunities. Decades later in 2007 – by which stage the company was helmed by my father Richard and I – we received a letter. The good news was that London had just won its bid to host the 2012 Olympics. The bad news was they wanted to put the Olympic Park right where F.H. Brundle HQ was. That meant the third move in 118 years for the company – to its biggest premises yet, in Rainham, Essex.

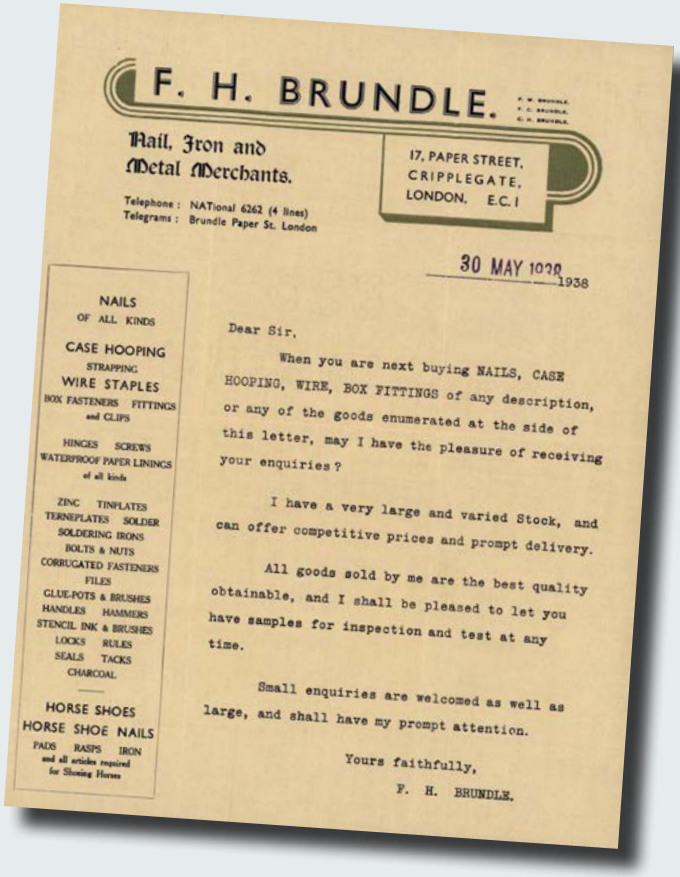


Calendar 1944

Brundle's current HQ in Rainham, Essex

A PROUD LEGACY

It is here – a large site in Rainham in Essex – that F.H. Brundle has grown to become Britain's biggest suppliers of mesh, wrought iron components, gate hardware, and innovative fencing and handrailing solutions. Today we stock over nine thousand products, encompassing everything from wire mesh and railheads to decking and high-end balustrades, spread across six locations that total 500,000 square feet (4.6 hectares) – all supplied from a distribution hub in the Midlands. A fleet of over 70 F.H. Brundle-branded vehicles move that stock around the country, and all deliveries over 150 pound sterling are made free of charge. It's these resources, and the sheer scale of this offering, that ranks F.H. Brundle among the best businesses of its kind – but it's the friendly, dedicated, good old-fashioned service that makes it one that tens of thousands of customers around the country genuinely enjoy dealing with. I hope it'd make my great-great-grandfather proud. ■



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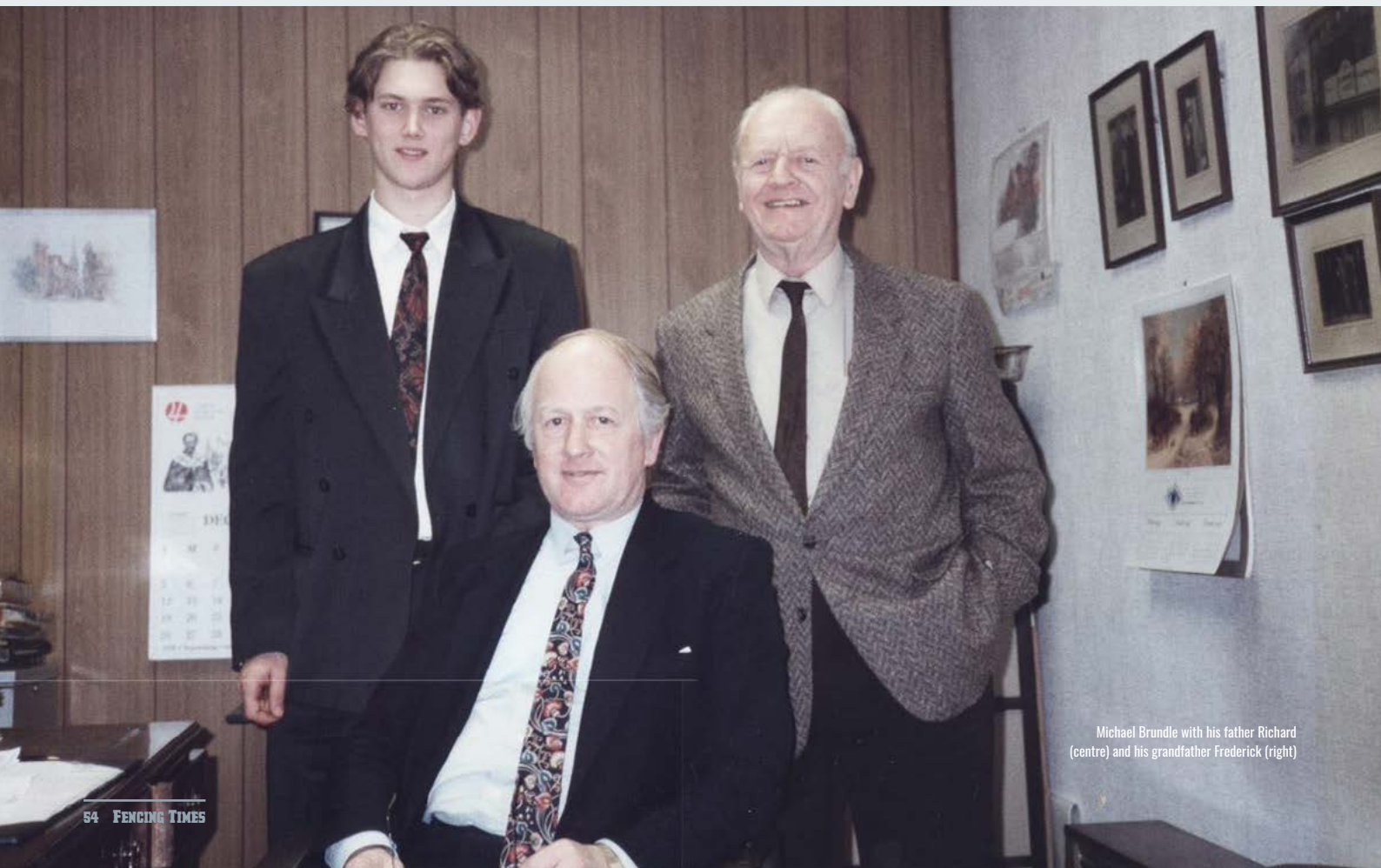
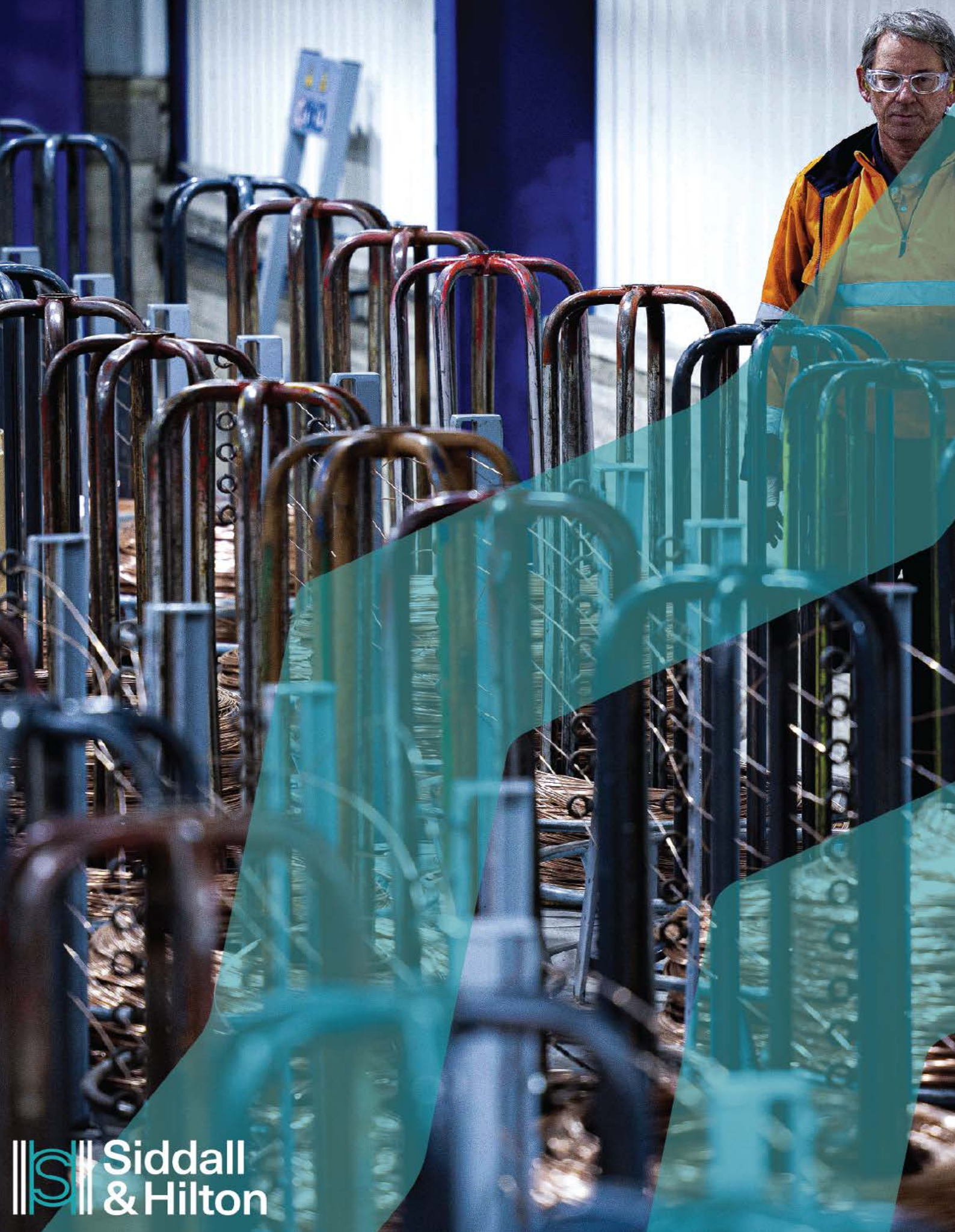
A sales letter from 1938



Michael Brundle with his father Richard (centre) and his grandfather Frederick (right)



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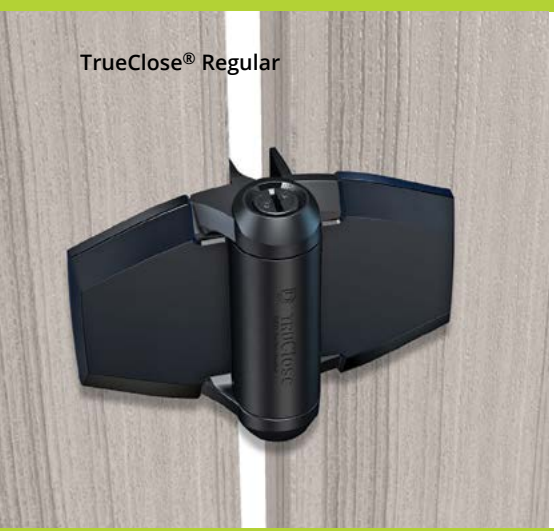

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See full Warranty details and limitations on D&D Technologies' website.

Sonomuro makes Floodgate version of Sonowall sound wall

This spring, Sonomuro, a Belgian manufacturer of acoustic fencing from Kontich, near Antwerp, launched a sound fence that can also be used in areas where flooding occurs. The fence stops noise and intruders, but allows water to pass through.

Michel Corbett

"We got the idea through a campsite in France," says director Michel Corbett. *"This campsite is on Île de Ré, in southern Brittany, along the only access road to that island. If the island gets flooded, something which does happen from time to time, that access road should not end up under water, because then the island cannot be evacuated. For that reason, the local authority didn't allow the owner of the campsite to install a fully enclosed fence along the road. So we designed a variant of our Sonowall that lets water through."*

In the same way as the standard Sonowall, the Floodgate variant of the Sonowall is made from wooden panels with an acoustic inner core of recycled polyurethane. But where it actually differs is in having the bottom panel hinged to the panel above it. It's held in place by wooden blocks on the inside of the fence

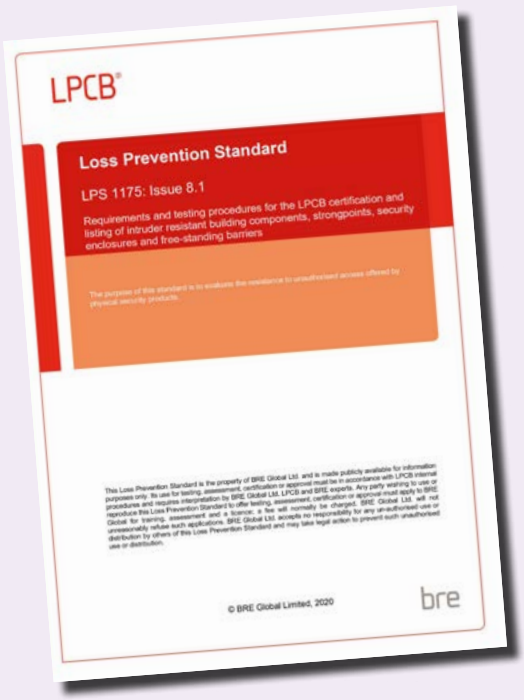
and these prevent the panel from flapping in the wind. If the water pressure becomes too great, the blocks break away. A wire panel that prevents the hinged panels from being pushed open from outside is fitted to the exterior, thus preserving perimeter security.

"Initially, we thought the Floodgate would be a bespoke solution for this project alone," says Corbett. *"But meanwhile we're getting more requests. The Île de Ré problem is apparently not unique but occurs elsewhere too, especially at campsites. And in other countries. Campsites are often in outlying areas on the coast or next to rivers – places where flooding happens – and at the same time they need to have peace and quiet. For them, the Sonowall Floodgate is a great solution."* ■

So what is LPS 1175 exactly?

Everything you need to know about the LPS 1175 standard

In the European fencing sector, we're more and more often coming across fences and gates that are certified according to the LPS 1175 standard, or demand for it, in terms of specifications. Then people request fencing with an LPS 1175 Security Rating. But what is LPS 1175 exactly? And what do these Security Ratings mean? We wanted to know exactly how it worked, so we called the Building Research Establishment (BRE), which publishes and certifies the standard.



SECURITY RATINGS

Let's get straight to the point: what does a Security Rating mean? *"The Security Ratings you see in the market now are the Ratings from Issue 7 and Issue 8 of the standard,"* says Richard Flint, Technical and Commercial Lead for Physical Security at BRE, and chief editor of LPS 1175 for over 20 years. *"Issue 8 is the current version, from 2019, and is the successor to Issue 7. However, because we've certified many types of fencing under Issue 7, you still encounter that one a lot too. What it comes down to is that the longer a fence can stop an intruder and the more effective the tools that intruder has with them, the higher the security rating the fence receives. In Issue 7 we had eight classes, from SR1 to SR8. In Issue 8 we use a table that goes from SR A1 through to SR H20."*

TOOLKITS

"In order to be able to measure by weight and impact the tools that are carried by an intruder, we've categorised them into different toolkits," Flint goes on. *"The lightest of these is Toolkit A, and it includes tools like knives and screwdrivers. The heaviest is Toolkit H, which includes cutting torches, a concrete chainsaw and a hydraulic spreader. All the tools in the standard are hand tools, which an intruder can carry with them. For a different kind of attack, such as one using a vehicle, you might need to protect a property from that in a different way, for example with bollards and blockers achieving appropriate performance classifications defined in standards such as IWA 14-1, PAS 68 and ASTM F2656."*

Issue 8

20 MINUTES	A20	B20	C20	D20	E20	F20	G20	H20
15 MINUTES	A15	B15	C15	D15	E15	F15	G15	H15
10 MINUTES	A10	B10	C10	D10	E10	F10	G10	H10
5 MINUTES	A5	B5	C5	D5	E5	F5	G5	H5
3 MINUTES	A3	B3	C3	D3	E3	F3	G3	H3
1 MINUTE	A1	B1	C1	D1	E1	F1	G1	H1
DELAY / TOOLKIT	A	B	C	D	E	F	G	H

Richard Flint

Issue 7

SECURITY RATING	TOOLS AND DELAY
1	TOOLKIT A, 1 MINUTE
2	TOOLKIT B, 3 MINUTES
3	TOOLKIT C, 5 MINUTES
4	TOOLKIT D, 10 MINUTES
5	TOOLKIT D+, 10 MINUTES
6	TOOLKIT E, 10 MINUTES
7	TOOLKIT F, 10 MINUTES
8	TOOLKIT G, 20 MINUTES

BRE, LPS and LPCB

For those getting confused by the abbreviations: BRE stands for Building Research Establishment[2]. There are numerous Loss Prevention Standards, or LPS, which are produced to help ensure that a product or service meets the needs of users. All Loss Prevention Standards are the property of BRE Global Ltd, and LPS 1175 is only one of these standards. The LPCB is the Loss Prevention Certification Board, the certification body.

2) The Building Research Establishment (BRE) is a UK centre of building science, owned by the non-profit organisation the BRE Trust. It's a former British Government national laboratory, it was privatised in 1997. BRE provides research, advice, training, testing, certification and standards for both public and private sector organisations in the UK and abroad. With its headquarters in Watford, near London, it has regional offices across Great Britain, the US, India, the Middle East and China.

APPLICATIONS

So what's this standard intended for, exactly? *"LPS 1175 is focused on the threat of violent forced entry by individuals,"* Flint explains, *"in which hand tools are used, and where it doesn't matter how much noise, smoke or other signs of use these tools create. As the standard has become increasingly recognised and valued worldwide, we have seen that specifying LPS 1175 certified products has become a requirement on projects in numerous sectors including retail, education, healthcare, manufacturing, and public sector. From data centres, to schools, to listed buildings, LPS 1175 certified products are being used more and more in situations and locations where intruders have little regard to the noise that they make during their attempts to achieve unauthorised access to assets, property, and people."*

DECISIONS

"The standard has been designed to support the decision making process for relevant stakeholders," Flint adds. *"Within the standard, there are numerous different ratings, associated to the level of security provided by the certified products, systems, or solutions. Products certified to LPS 1175 suit environments ranging from those in which an intruder may be willing to spend up to one minute using easily concealed hand tools (Security Rating A1), through to sustained professional attacks lasting 20 minutes using a wide range of manual, electrical and thermal attack tools (Security Rating H20). The standard, and associated ratings, support specifiers, asset owners, insurers, and end users in making better informed decisions regarding the products being used and whether they will perform as expected."*

OPEN ACCESS

According to Flint, one of the big advantages of the Loss Prevention Standards is that they're open access. *"That's immediately a big difference from the standards of the CEN[1] and all its national subsidiaries,"* he says. *"If you want to know what's in a DIN standard in Germany, you need to start by buying that standard from a specialist publisher. But LPS 1175 is publicly accessible online in the BRE's Red Book. Anyone can look it up: not only the client, who wants to protect their property, but also the manufacturer, who wants to produce a fence that complies with the standard. On top of that, we publish a list of the products that have passed the test and hold the certification. It means that potential clients can easily search for a product with the Security Rating they require."*

1) CEN stands for Comité Européen de Normalisation (the European Committee for Standardization). The CEN publishes the European Standards (EN) and is the European umbrella organisation for various national standardisation institutes such as the DIN (Deutsche Industrie Norm), the Afnor (Association française de normalisation), the NEN (Nederlandse Norm) and the BSI (British Standards Institution).

The history of LPS 1175

LPS 1175 was first published in the early nineties. At that time the Loss Prevention Council and the Loss Prevention Certification Board were owned by the Association of British Insurers. UK insurers requested a standard that would enable them to prescribe the specifications according to which a building or site should be secured.

Issue 3 of LPS 1175 was published in December 1994. At that time, PAS24 (the British standard for residential doors and windows) had not yet been published. EN 1627 was published in 1999 as a draft standard and wasn't published again as a complete European standard until 2011.

In the nineties LPS 1175 was primarily used to certify hinged doors, roller shutters and collapsible grilles. Although the standard had a broad scope even then, it didn't include any perimeter products – these only came into view with the publication of Issue 6 in May 2007.

LPS 1175 became one of the first internationally recognised standards for intrusion protection with the introduction of Issue 6, specifying delay measures in different layers of security. These included perimeter security measures, facades, secondary facade protection, and compartmentalisation within buildings right down to rooms and cupboards.

LPS 1175 included six Security Ratings (SR1 to SR6) in each issue through to Issue 5. In Issue 6 the rating system expanded to include eight Security Ratings. This remained largely unchanged in Issue 7, but in Issue 8 the rating system underwent a complete overhaul when a new matrix-style classification system was introduced. There are still eight threat levels, increasing as intruders are prepared to and have the know-how to invest in better and heavier tools, but the toolkits have been adjusted in line with the constantly increasing quality of battery- and petrol-powered tools. For the highest ratings, the number of active attackers was increased to two and the minimum delay time was changed.

CONFIDENCE

"But naturally the standard's biggest success is due to the way in which we test," Flint says. *"During testing, more than 95 percent of products fail to achieve the delay that the manufacturers initially intended. So our testing is really tough. We conduct it both with brute force and with a scientific approach, in which every material used is assessed according to its properties. And it doesn't stop at testing: when we certify, we assess the production process as well and we conduct regular audits to check that products continue to meet the performance standards for which they've been certified. This means that certificates themselves are very detailed. They specify the precise conditions and configuration in which the product must be produced and used in order to achieve the assigned Security Rating. All of this put together gives enormous confidence to those who write specifications, and everyone else involved in securing a property."*

INDEPENDENT

"Another thing that helps," Flint adds, *"is that we're independent. LPS 1175 was first issued in the nineties. At the time, the LPC was owned by the Association of British Insurers. The standard was developed at the request of UK insurers, so that they could set down the specifications to which a building or site would need to be secured in order to be covered by insurance. It's a completely private standard; BRE has no connection to the CEN or the BSI. We're now owned by the BRE Group, which in turn is owned by the BRE Trust, a non-profit organisation that aims to improve the built environment. We do this by 'developing science-led solutions to built environment challenges.' One of those challenges is safety, and with LPS 1175 we provide additional safety."*

INTERNATIONAL

BRE Group happens to be based in the UK, but Flint emphasises that LPS 1175 is not a British standard. *"Anyone, anywhere in the world, can have us test their products. You can load the materials onto a truck and come to us, but you can do it the other way round too. Then we'll come to you with a toolbox and a stopwatch. When our testing teams travel, we always try to plan things as efficiently as possible and not impose unnecessary additional costs to the customer. The standard is now used around the world. Whether it's a data centre in California or an oil refinery in the Middle East, you come across it everywhere."* ■

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In addition to being a fencing installer, Livia Graf is a photographer. Whenever her guys finish off a project, she drives to it and takes stunning fencing photos. This is one of them.

Gate Safe launches Safety by Design campaign

Gate Safe, a UK charity that works to promote gate safety, is launching a new campaign to ensure that gates are made safer beginning at the design stage: Gate Safety by Design.

"Over the past 10 years, there have been far more accidents with falling gate leaves than with gates lacking safety features," founder Richard Jackson says. *"Although the need to incorporate safety mechanisms like photocells, light curtains or laser scanners, and pressure edges remains a priority, with this campaign we want to draw attention to the importance of safe design to reduce the risk of an accident occurring. We recently conducted a survey: 84 per cent of installers said that in their opinion, the most common cause of gate accidents in the past 10 years was unsafe design."*

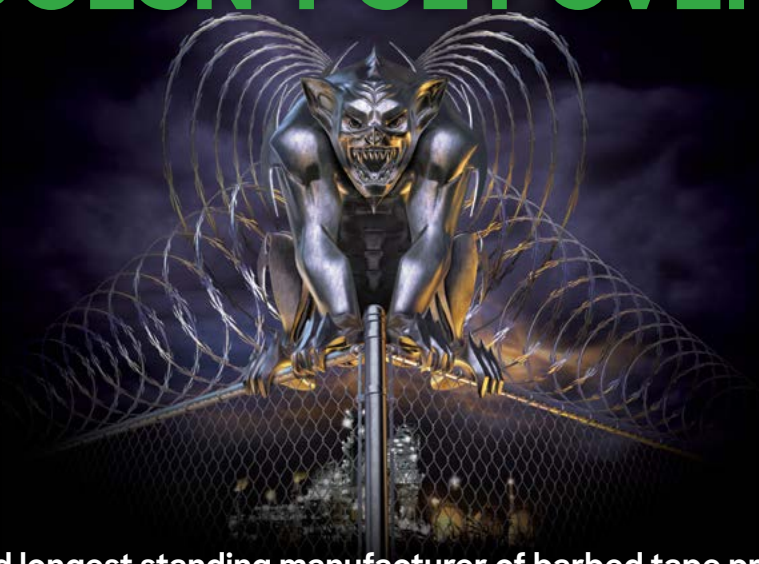
More than half of the survey respondents (58 per cent) cited the failure to prevent hinge crushing and the lack of finger guards as the most common design flaws. These were followed by a lack of protection against falling gates, usually as a result of installing just two rather than the required three hinges, and the lack of a fall prevention device, or – for sliding gates – the lack of suitable guide posts and end stops.

"An overwhelming majority of installers reported that more than half of all gates that they check or service have an unsafe design," Jackson says. *"Consequently, 90 per cent of installers agreed that there's a need for an awareness campaign to ensure that everyone in the supply chain knows about the essential role design plays in delivering a safe installation that complies with all requirements."*

The new Gate Safety by Design campaign will include activities to raise awareness of the importance of safe design, across a wide range of industry professionals. For example, Gate Safe intends to lobby gate manufacturers and develop a special Gate Safety by Design guide. *"We'll also be recording a podcast on the importance of single point failure, and will produce information sheets for installers,"* Jackson says. *"To create a safe gate, it's essential that there's an understanding of the importance of safe gate design right from the start. After more than 10 years of lobbying, we're seeing an improvement in general awareness of the need for photocells and pressure edges, but at the same time it's clear that not only are there still a large number of unsafe gates in the field, but also that there are still new gates being installed that feature a flawed design. The new campaign aims to place gate security at the top of the agenda right from the design phase."* ■


The Old
Rectory

WHAT GOES UP
DOESN'T GET OVER.



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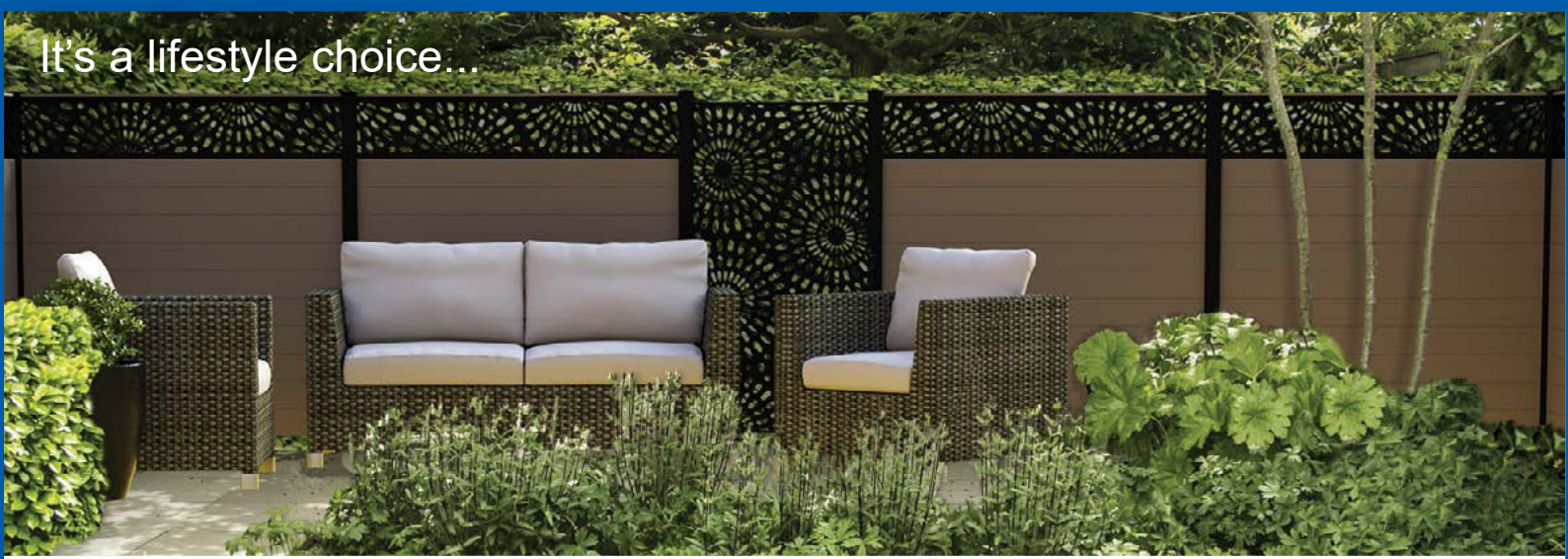

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LET'S GO HIGH-TECH

Securing a forensic clinic with perimeter detection

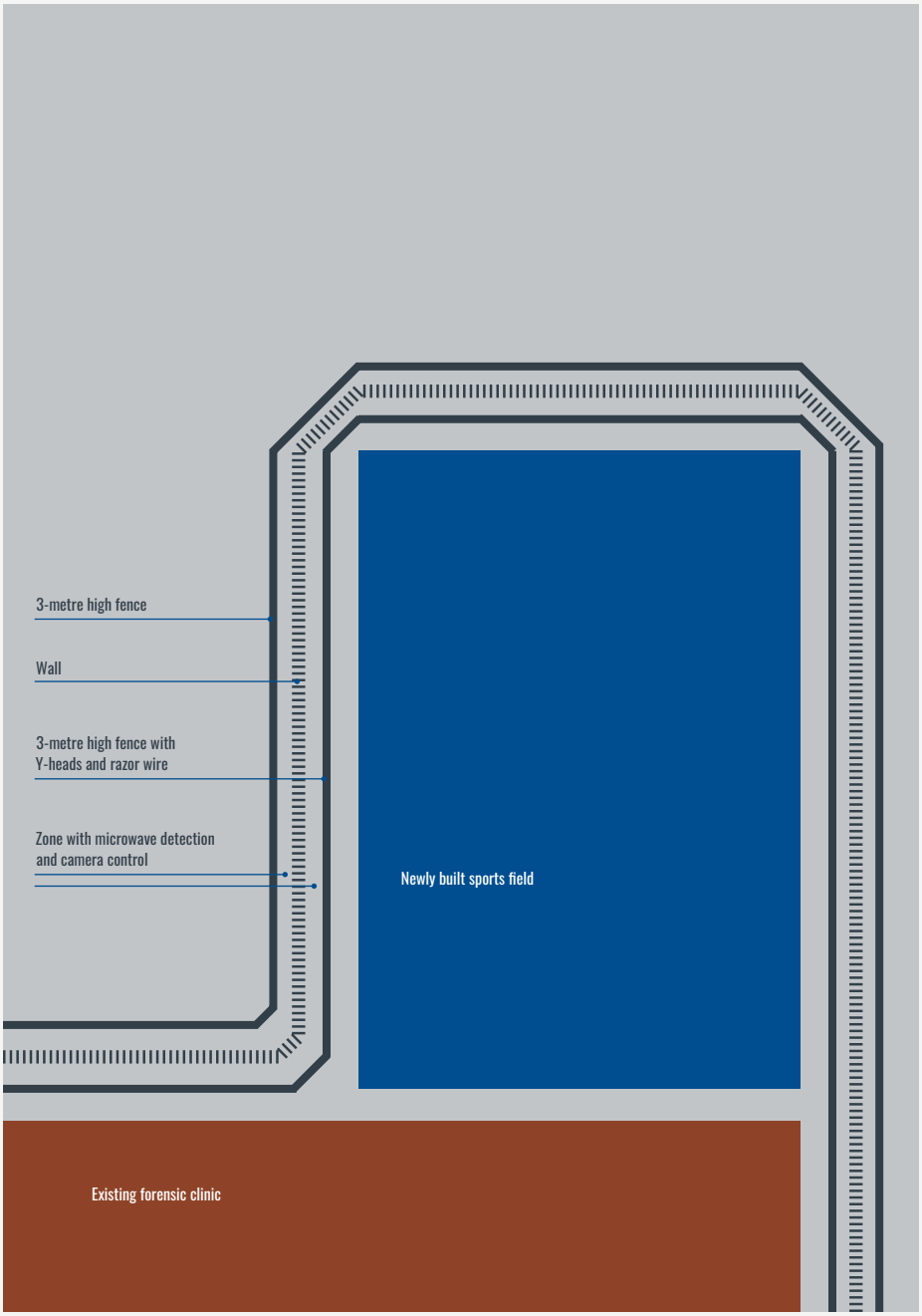
Part 3 in the series 'High-Tech Perimeter Security in Practice'

raijmond@fencingtimes.com

Raijmond Rondeel

Raijmond Rondeel has worked in perimeter security for many years. For Fencing Times, he writes about securing outdoor areas with detection systems. Do you have questions? Or a practical example - and are curious what Raijmond would have offered here? Send him an email at raijmond@fencingtimes.com

One of my first perimeter detection projects was a forensic clinic. At that location, the purpose was obviously to keep people in – so actually the opposite of what we in security are normally trying to do. At prisons and these types of clinics we're trying to detect as quickly as possible not that someone wants to get in, but the opposite. The residents, let's call them that, are not allowed to leave, and the security staff want to know right away if anyone tries to do so, so they have time to respond.



EMPTY BLADDER

Well, this clinic was apparently one where the 'worst type' were treated, so the risk was ultra-high. If someone was to escape this place, it would be sure to make the national news. As a result, the existing security measures were extremely extensive. Even just the entry procedure took a long time. During the quotation phase, we weren't left alone for a second. This is also something to keep in mind later on when carrying out the work: a lot of time is lost in signing in and out, procedures for handling tools, ladders, and all sorts of other things. Things that you initially think are completely harmless are still viewed as a potential weapon in these types of environments, or else they can create an opportunity that wouldn't occur to you as a free person. However, those who require lifelong treatment in this clinic take a very different view, and hence the security measures.

We had a guard with us all day. Even something as simple as visiting the loo could take an hour if you were in a secure zone, because this zone has an entry door every couple of hundred metres. On top of that, a guard needs to come and collect you and lock every door behind you again. In fact, all doors are operated by a controlled locking system and the second is only able to be opened when the first is closed, by guards who are monitoring camera images from their control room. So the first important advice for working in a prison: make sure you have an empty bladder when you go in. And if you, like myself, are diabetic: take enough sugar and some food with you. I've learned this by trial and error.

ESCAPEE

The forensic clinic in this example – in fact a sort of hospital – had been extended to add a football field, which meant a very long stretch of additional perimeter. Well, we didn't need to tell this organisation how security, and perimeter detection in particular, works. The architect had done a good job too, with no skimping on space and barriers. I'll give a brief outline of the situation, from the inside looking out. Any would-be escapee would first have to climb over a chain-link fence around four metres high, fitted with a double crank extension with rolls of razor wire in

between. That fence was already fitted with a fence detection system, probably an induction or a microphone cable system. If our escapee manages to get over – or through – this fence, he will find himself in a zone about 5 metres wide, with a mast with extra lights and cameras every 30 metres. After that he'll encounter a 5-metre-high wall, which apparently also goes a metre into the ground. The wall has a rounded top and is completely smooth. There's absolutely nothing to hold on to. If he somehow manages to get past this wall, then there's the same setup on the other side: first a 5-metre-wide zone with lights and cameras, and then the outer fence. This was a 'normal' fence, 3 metres high with no detection and no razor wire. So from the outside it all looked a bit 'friendlier', shall we say.

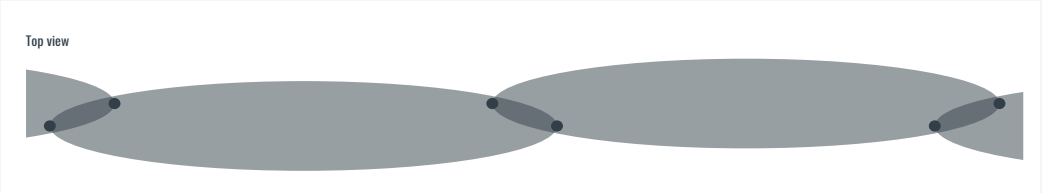
LAYMAN

A layman would say: if you're locked in here, you're never going to be able to get out. Well… actually you are. With or without assistance, there had been some successful escape attempts in previous years. One of those escapees had managed to climb onto a video mast in the first secure area, and from there jump to the wall 3 or 4 metres away. The top of the wall was higher than the mast, but he nonetheless managed to do it. Later on it turned out that he'd been training for it in the clinic's gym. That's why we were called in: the so-called security zones on either side of the wall needed additional protection, with bistatic microwave sensors. That system had to be duplicated, i.e. in such a way that it would detect any attempt at a leopard crawl, as well as any activity high above ground level – a leap, building a bridge, anything. This would give the guards access to various forms of detection: first fence detection, then the zone with microwave detection and cameras, and on both sides of the wall. This should mean guaranteed detection, regardless of the weather or the type of escape attempt. The cameras were mainly used for verification, so if the fence detection or microwave systems sounded an alarm, the guards could look at the camera images to see what was going on. Naturally if an alarm sounded, all the lights in that security zone were switched on as well.

A typical break-out artist

MICROWAVE

Bistatic microwave sensors were requested here. Why? In this situation, the advantages of this type of detection system come into their own. It can be used to cover long distances relatively simply and inexpensively. These types of sensors have a detection range of 50, 80 or 120 metres, or even 250 if necessary. On top of that, microwave sensors are completely unaffected by the weather. They work just as well in fog, hail and snow as they do in 30-degree sunshine. In addition, they are a so-called volumetric sensor. The field of detection is wide and high, and in this particular situation between the fence and the wall, you can assume that an escapee will be detected across the entire width of this zone. There's absolutely no way to get through unnoticed. With the upper sensor, the detection range is slightly higher than the top of the fence or wall so it's perfect for detecting someone building a bridge or placing a ladder there. The sensor can also adjusted very precisely: you can 'tell' it how big and how fast or slow a target needs to be in order to trigger an alarm, meaning that you can adjust it to a certain volume corresponding to the human body slowly crawling along the ground, or in the case of the upper sensor, a volume equivalent to a would-be Tarzan trying to swing from the fence to the wall.

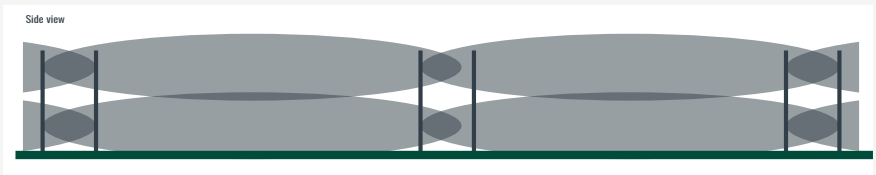


SPACE

Space is the only thing that microwave sensors need in order to do their job properly. They need a clear visibility zone of at least 3 metres wide between transmitter and receiver, but 5 metres is even better. This is often a disadvantage for a transport company or other industrial property, because they simply don't have the space. But here, on this high-risk project, the architect had very neatly created space for outdoor detection. A 5-metre zone on either side of the wall had been kept clear. This zone contains masts for lighting or cameras at regular intervals, but this is no problem for the microwave sensor; masts like that aren't seen as obstacles in the electromagnetic field.

In our situation, microwave detection sets with an 80-metre range were chosen, so there was a post every 80 metres with two transmitters or two receivers on it. This allowed for an overlap of 10 metres; a detection cone only reaches the ground after about 5 metres so, in order to ensure reliable crawl detection, you need to make sure the cones from the different sets overlap. So the next set wasn't installed on the same post, but on a post 10 metres back. The architect had divided the site's right angles into two 45-degree angles for the same reason: so that there was enough space for the cones to overlap here as well.

Why was 80 metres chosen? There were two reasons for this. The first is that the guards didn't want the alarm zones to be too big. The microwave sensors' alarm zones now more or less corresponded to the number of cameras, meaning that each alarm from the sensors was able to manage one or a maximum of two cameras from the respective zones. If we had used 120-metre sensors here then three cameras would be needed in the event of an alarm, meaning that the guards would not be able to tell where something was happening at a single glance. This wasn't desirable. The second reason was that with an 80-metre range and at average sensitivity, the microwave sensor's detection cone is about five metres wide; exactly the same width as the security zone. If we'd used a 120-metre set, then at average sensitivity the detection cone would be a good 8 metres, and we didn't have that space here.



INSTALLATION

So a post every 80 metres, preferably stainless steel. This is strongly recommended, and the same goes for the fixings, and the nuts and bolts used to install the microwave heads. It may well be that when carrying out testing before initial commissioning, or during preventive maintenance (which should be conducted at least four times a year here due to the high level of risk), that one of the heads needs to be adjusted slightly in order to send or receive an optimal signal. In that situation there's nothing worse than fixings that aren't made of stainless steel ... I don't need to explain it to you. Cutting corners on that really is a NO GO. That goes for swivels and other cable glands too. Use the accessories supplied by the manufacturer; these have been tested, and were intended or made for the purpose. Use them as described in the installation instructions. I've said it before: the biggest enemy of electronics is moisture. Microwave sensors don't have issues with bad weather in terms of their detection sensitivity, but the electronics contained in them are obviously sensitive to moisture.

Make sure everything is closed, and use the cable glands and washers to seal the top properly. This also needs to be done as part of the regular checks.

The system integrator we worked with on this project had chosen to install a field cabinet every 100 metres in the outdoor area. All the cabling, obviously installed in the form of ground cables, came together in these cabinets. All sensors were supplied with 24-volt power from there, and the emergency power supply was also situated in those cabinets. In addition, all communication cables converged there. Each sensor had one wire for the alarm, one in case of an outage or malfunction, and two wires to detect sabotage. So for each set consisting of a transmitter and a receiver there were 8 wires. It could also have been done with an RS485 connection and these days we would do it with Ethernet cable and an IP connection, but that wasn't an option back then.

FALSE ALARM

So a fair few pairs of leads came together in that cabinet, which became a bit of an issue later on. The integrator had used clamp connectors to connect all the leads to leads going to the guards' control room, where the alarms were displayed on a management system. One winter when there were harsh frosts, the system developed odd malfunctions and produced alerts that for (initially) inexplicable reasons then disappeared and couldn't be replicated. After a lot of searching and testing, it turned out that some of the cable connectors were unable to maintain good contact in extremely cold weather, and this was what was causing the strange malfunctions. Once all connections were soldered, the malfunctions disappeared like snowflakes in the sun.

And speaking of sun, there were also unnecessary alarms in summer.
Despite the fact that the landscape architect had had the security area planted with a slow-growing variety of grass, the area still wasn't mowed often enough and the weeds were knee-high in some places. This caused problems for the deliberately low-level microwave sensors. Over a distance of 80 metres, knee-high weeds can create enough volume and movement that the sensor triggers an alarm. When using microwave sensors, the surroundings need to be properly maintained at all times. Grass and weeds definitely need to be kept under 20 centimetres for the sensor to be considered reliable. It's actually better to fit this type of a security zone with ground cloth, and then cover it with gravel. You then won't get any molehills either, and it won't require constant mowing.

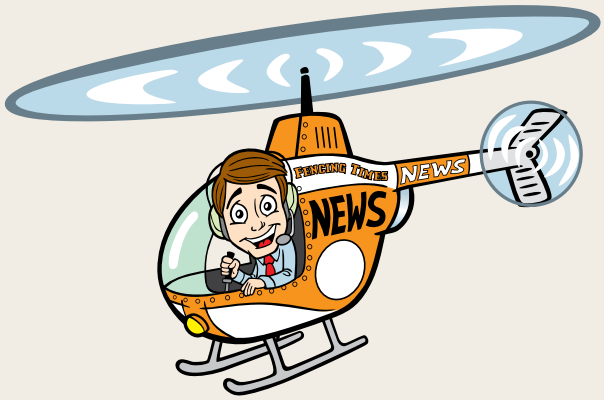
The ground is very important when it comes to microwave detection: the more stable, the better. So no potholes, mounds, or other changing conditions. Gravel is better than a green strip, which really must be kept mown. Any obstacles of more than 20 centimetres high can cause problems.

MODERN

The cabling in the clinic was later changed to so-called RS485 cabling, so instead of having the leads from all the sensors running back to the field cabinet (in a star shape), the sensors were wired in series (in a line, sensor to sensor, for a maximum of 1200 metres) and the status of the sensor was requested according to the RS485 protocol. The sensors were given addresses, so to speak, with software used to query each address, remotely, for its status: activated, alarm or malfunction. That saved a lot of cables. In addition, software enabled data to be sent to the sensor if necessary, and adjustments to the sensor could be performed remotely. For example, if you wanted to increase or decrease the sensor's sensitivity, you could do this remotely from the guards' control room. There was no need for someone with a laptop (and a guard) to go to the secure area, first triggering an alarm at all the sensors he passed on the way, and then eventually arriving at the sensor in question, connecting it to the laptop and making the adjustments. This saved a lot of time, but it was also a vast improvement from an organisational and security viewpoint. Obviously the less often you need to be in the security zone, the better. Then there was no need to turn systems off, which is something that always poses an additional security risk. Even so, physical checks and tests are conducted every three to six months for these types of high-risk properties. All low sensors are tested by crawling and the upper ones are tested with a ladder and an extendable panel the size of the diameter of an adult, to see if they actually trigger an alarm. If you should ever happen to be that 'test volunteer': make sure your bladder's empty, and bring knee pads. ■

Setting up a microwave in the security zone

FENCES IN THE NEWS



28 JUNE 2023

Members of Port Glasgow Bowling Club in shock after vandals wreck new fence

In Greenock, a rural village not far from Glasgow in Scotland, a fence has been destroyed. And not just any fence but one that goes around the sacred turf of the local bowls club. Bowls is the English (or rather Scottish in this case) version of France's petanque and Italy's boccia: participants must try to get large balls close to a small ball. Not exactly an adrenalin-filled sport but with not much else to do in the Scottish countryside, a game of Bowls may well be the highlight of the week. The fact that there's little to do in Greenock apparently goes for local vandals as well. Repeated destruction of the same old bus shelter does get boring, of course. That's presumably why a fence recently erected around the turf by club volunteers to stop foxes from getting in at night was demolished. Nice work, young vandals of Greenock. We hope you are proud of yourselves. Luckily, the damage was not that extensive – the fence has since been repaired and calm reigns once more in Greenock – although this incident will surely be the subject of discussion for some time to come. ■

Cycle lane in Berlin blocked by fence

Since last winter, a twin wire fence in Berlin-Reinickendorf has forced cyclists to make a one-and-a-half kilometre detour. What's going on? Due to road works, a bridge over the Berlin-Spandauer-Schifffahrts Canal is out of service.

This bridge was popular with cyclists for getting from Berlin Reinickendorf to Berlin Spandau. And back, of course. What did the local authority do? Instead of constructing a temporary bridge for cyclists, a detour route was devised. But this included a particular private road, the Straße R. Residents along that road had granted permission for this initially but withdrew it when they realised just how many cyclists there were – and just how fast those cyclists were travelling along the narrow road.

The local authority then adjusted the detour route, but the new detour was one-and-a-half kilometres longer so regular users of the route, having now become familiar with using Straße R, continued to go that way.

Then, when a woman got knocked over and another resident's cat lost its tail, the residents' association lost its patience. They had a double swing gate installed that blocked all traffic. Only pedestrians can pass through a slalom lock, but this isn't big enough for cyclists.

Nor is it big enough for pushchairs or wheelchairs. Local politicians and the German cyclists' union are now condemning the residents' association, which no longer wants to open the road to through cycle traffic, but the residents' association has the law on its side and it's not giving in.

A private road is a private road after all and it's up to the owners to decide who travels over it. ■

Here stands a fence

On Twitter we came across this notice that reads *"Hier steht ein Zaun,"* with no further explanation. If your German is a bit rusty, it translates as: Here stands a fence.

Wow. As a rule it's Americans and Brits, who – often from fear of damage claims – litter their environment with pointless signs. But Germans are no strangers to them either. If anyone understands what the point of this sign is, please let us know. ■

Uninvited White House visitor

For a long time, the fence around the White House was a regular scene of entertainment for fencing installers, as people, who usually had one or more screws loose, often wanted to make an unannounced visit to the President of the United States. They would do this by climbing over the fence at 1600 Pennsylvania Avenue and then running fast toward the main entrance. Sometimes clothed, sometimes naked, sometimes in a Pokémon suit and sometimes with only a folded-over American flag. The unending run of people climbing over came to a halt when the old, 2-metre-high fence was replaced a few years ago with one almost 4 metres high. But then in April, someone still managed to get in: a toddler forced his way between the bars of the new fence. The Secret Service immediately leapt into action and managed to quickly reunite the little man with his parents. ■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