

# FENCING TIMES

*XL Edition*

*2023, Issue 4*



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# Fencing Times

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1) In Belgium, Germany, France, the UK, Ireland, Luxembourg, the Netherlands, Austria and Switzerland.



# How long do you spend dealing with stupid customers?

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 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 nnnnever happens again. Because you're not going to stand for any more nonsense!







**A**nd 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?

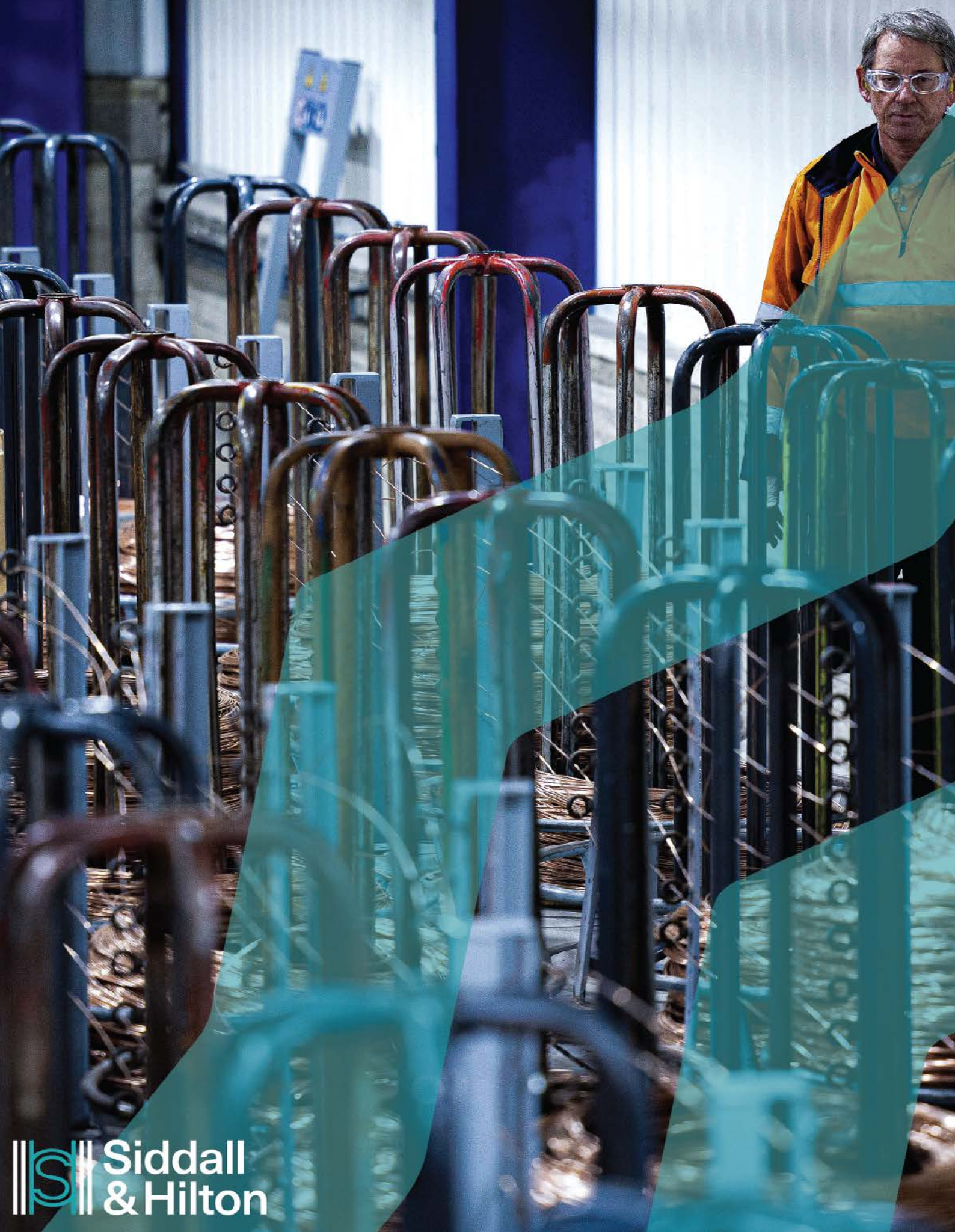
After all, negative energy is still energy. It's energy that's no longer there for applying to positive things. Of course, sometimes you have no choice. Money is money and if a customer doesn't pay all or part of the bill because of all sorts of invented scratches, it might help to take him to court.

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. ■





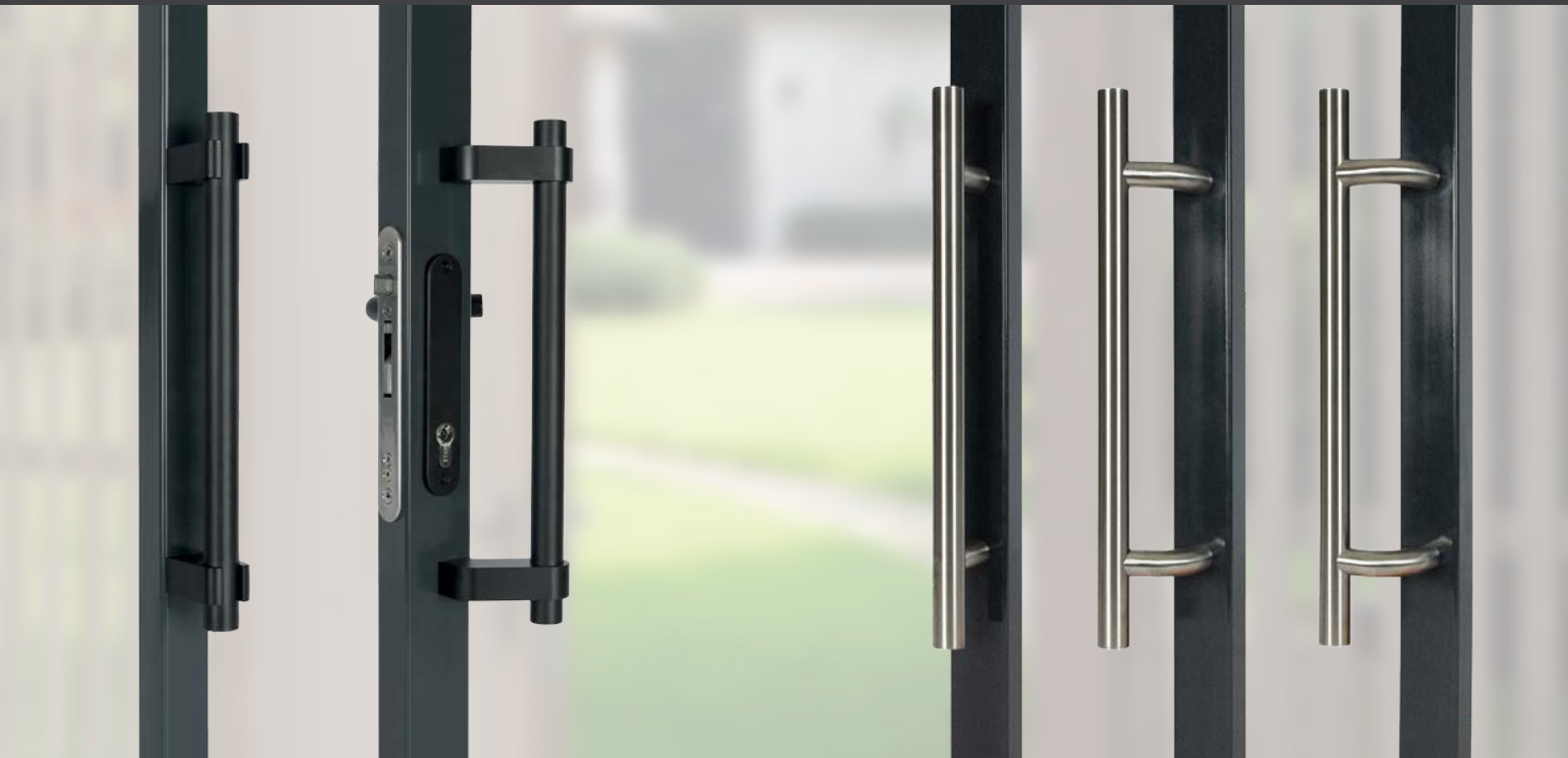


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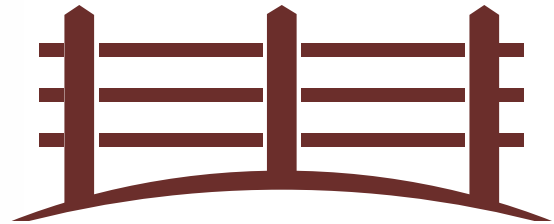
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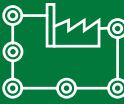
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# FENCE POST

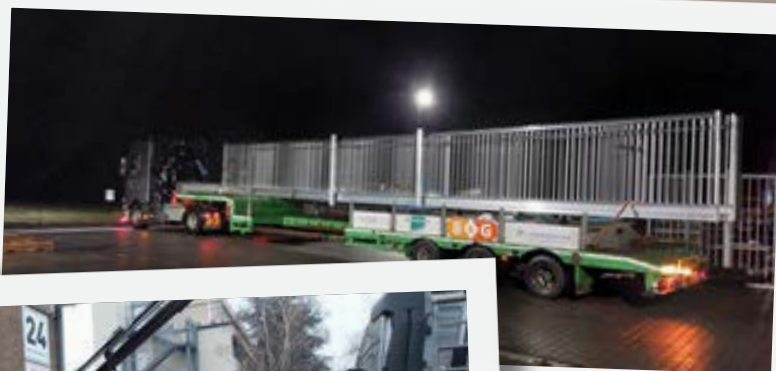


## Barry @ Masters in Motions

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 Hollywood (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](mailto: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.







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# 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 5<sup>th</sup> 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.





# Penny Pie Park

**A**lpha 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.”* ■

 A decorative black metal fence with a sign that says "PENNY". The fence features ornate scrollwork and leaf-like patterns. The sign is a dark rectangular plate with the word "PENNY" in white, sans-serif capital letters. The background shows a park with a path, trees, and a cloudy sky.
 

PENNY





PIE PARK



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









# Dirickx introduces large sliding gate Ulyx

French fencing manufacturer Dirickx launched a new cantilever sliding gate this winter. The Ulyx is a robust, standard motorised, heavy-duty steel gate for openings from 6 to 16 metres.

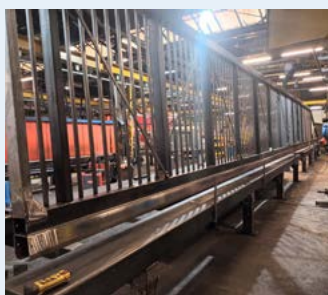
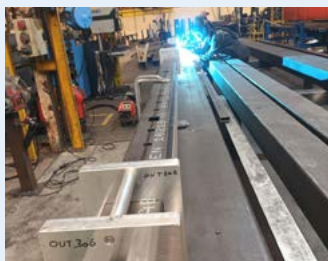
*“Our Espace gate series is an entry-level model, with simple, versatile gates for entrances with medium traffic,” explains product manager Delphine Billard. “But we didn’t have a solution for areas with high traffic in our standard catalogue previously. That’s why last year we developed a robust, reliable, powerful and at the same time competitive gate that can secure sites with large entrances. That became the Ulyx.”*





## LEAF

The leaf of the new Ulyx has a double lower beam. A 120 by 120 millimetre rectangular section is welded onto a 136 by 142 millimetre C section. "This ensures an extra-rigid construction that does not distort in the sun and can withstand a strong wind," says R&D manager Vincent Giraud. "For its production, we have invested in a welding robot, which can self-travel along the entire sections." The lower beam has intermediate reinforcements. The infill consists of 25 by 25 square bars. "The same infill is also available in the Espace and Allix gates, so you can combine the different gates on the same project." At the back of the leaf there are two braces, one of which is adjustable to allow the correct vertical tensioning of the leaf. For gates with an opening width of more than 12 metres, the leaf has diagonal braces for additional rigidity. The leaf can be fitted with a welded-on – and thus co-coated – sharks tooth top that is 48 millimetres in height.



## POSTS

Both the guide post and the closing post are made of rectangular sections. For opening widths up to 12 metres, these profiles are 120 by 120 millimetres, and for larger ones, profiles of 150 by 150 millimetres are used. As standard, the guide post is equipped with a technology column, which houses the drive, control unit and the components for access. The guide post is mounted on an extra-heavy baseplate, on which a set of carrier wheels is already pre-mounted on delivery. The second set of carrier wheels stands on its own baseplate and is height-adjustable.





## DRIVE

The new Ulyx is driven by a 3-phase motor. "This is a heavy-duty motor that we have a lot of good experience with," says Giraud. "It's quiet and can move the leaf reasonably fast at 16 metres per minute." The control unit and safety components are fitted in the column at standing height. "All components are pre-wired in the factory, so you don't have to do that on site. There is a separate box with connectors to which you can easily connect the accessories for access control." The control unit has a built-in receiver, which works with all the remotes in the Dirickx range. As standard, the gate is equipped with three sets of photocells, passage lighting and a double flashing light. The safety edges come from the German ASO. The edge at the front of the leaf is wireless.

## EASY TO INSTALL

"We've gone to a lot of effort to make on-site installation as easy as possible for the fencing contractor," says Giraud. "The gate is assembled in the factory and all components are tested before it is delivered. The connectors for the photocells and the passage lighting are combined in one cable, which you can connect to the column with a plug connector. The posts are delivered upright on a pallet, so you can easily lift them onto their anchors. The column is already attached to the

guide post." For gates with an opening width of 11 metres or more, the leaf is delivered in two parts, which means the gate is easier to handle and can be delivered on a standard truck. "We've also made connecting the leaves as easy as possible. We weld special X-profiles for that in the upper beam of one leaf section and in the lower beam of the other. This allows you to slide the leaves together. If you use a tension strap for that, very little force is required. You then bolt the leaves together."





## DEVELOPMENT

According to Delphine Billard, the new Ulyx was developed in close collaboration with customers. "First, we got round the table with several customers who sell a lot of sliding gates and asked them about their wishes and requirements," she says. "During development, they installed several prototypes and reported back on them in detail, which enabled us to improve the gate further in several respects. The final version was then approved by the CSTB1 in November as conforming to European standard 13241. The gate has been available to order since January. We used the first orders to see how we could streamline production as much as possible and this is now highly efficient. If all goes well, we are able to dispatch orders that come in now within 5 weeks or so.

1) The Centre Scientifique et Technique du Bâtiment (Scientific and Technical Centre for Construction) CSTB is the French national organisation for research and innovation, consultancy, testing, training and certification services in the construction sector.

## VERSIONS

The Ulyx is produced at Dirickx's main facility in Congrier, Mayenne. It is available in opening widths from 6 to 16 metres, always in exact metre lengths, and in four heights from 1.8 to 2.5 metres. It can be finished in any RAL colour. For the dark colours such as green, grey and black, Dirickx uses a special powder during coating, one which reflects UV radiation. "This enables us to minimise the effect in which one side of the leaf heats up faster than the other when the sun is low in the sky," says Billard. For gates installed on the coast or in areas with an aggressive atmospheric composition, the gate can be coated with an additional epoxy layer before the polyester coating is applied. "All in all, the Ulyx is a versatile and heavy-duty sliding gate. The feedback from our customers is extremely positive." ■



Delphine Billard

Vincent Giraud







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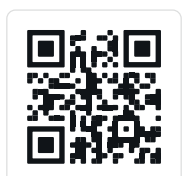
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# Qualis adds extra functions to gates using cameras

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.





**“W**hen installers order a gate with an electric drive,” says director and owner Guillaume Saily, “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.”

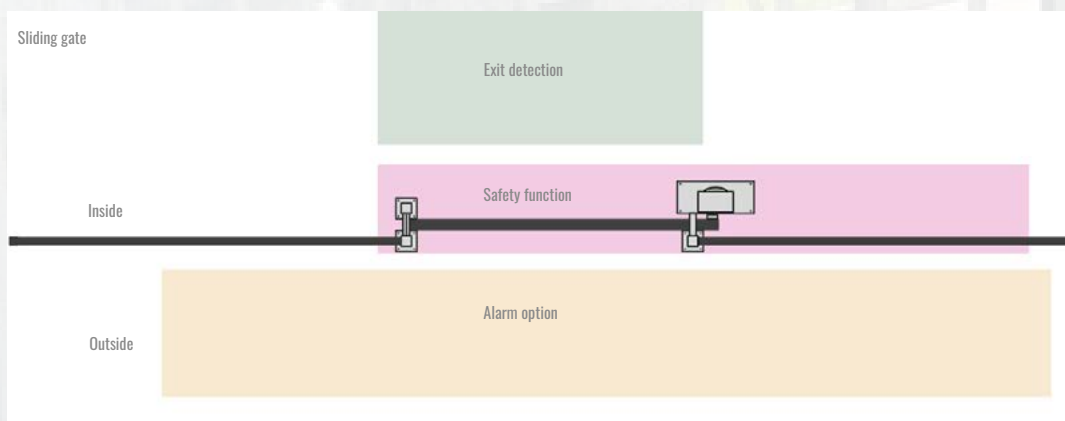
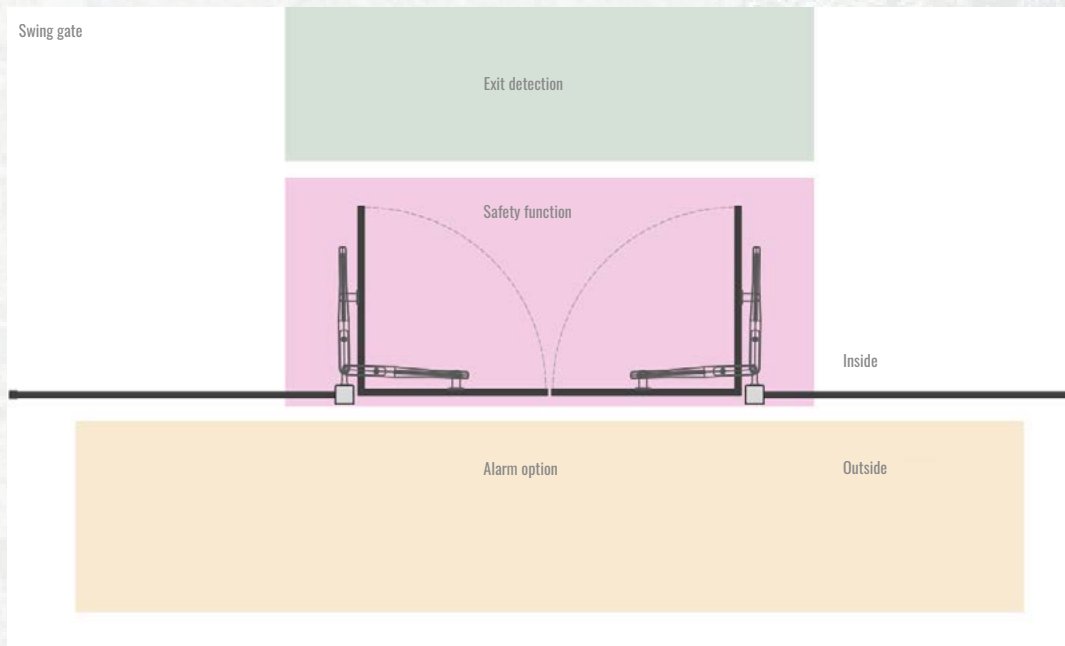
## SECURITY

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,” Saily 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 Saily





## 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," Saily 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 Saily, "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," Saily 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," Saily 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." Saily 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. ■













# 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.

**“F**olding 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. ■



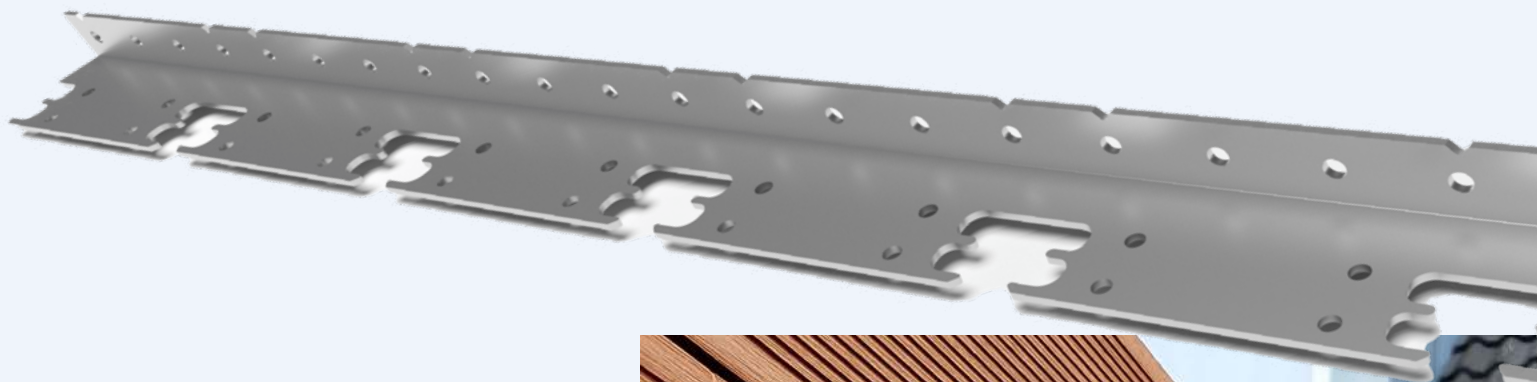


# BrigX makes L-Profile for solar fencing

BrigX is a manufacturer of fencing-cladding systems. This spring, the company is bringing out an aluminium profile that you can easily use to attach solar panels to a twin wire fence.







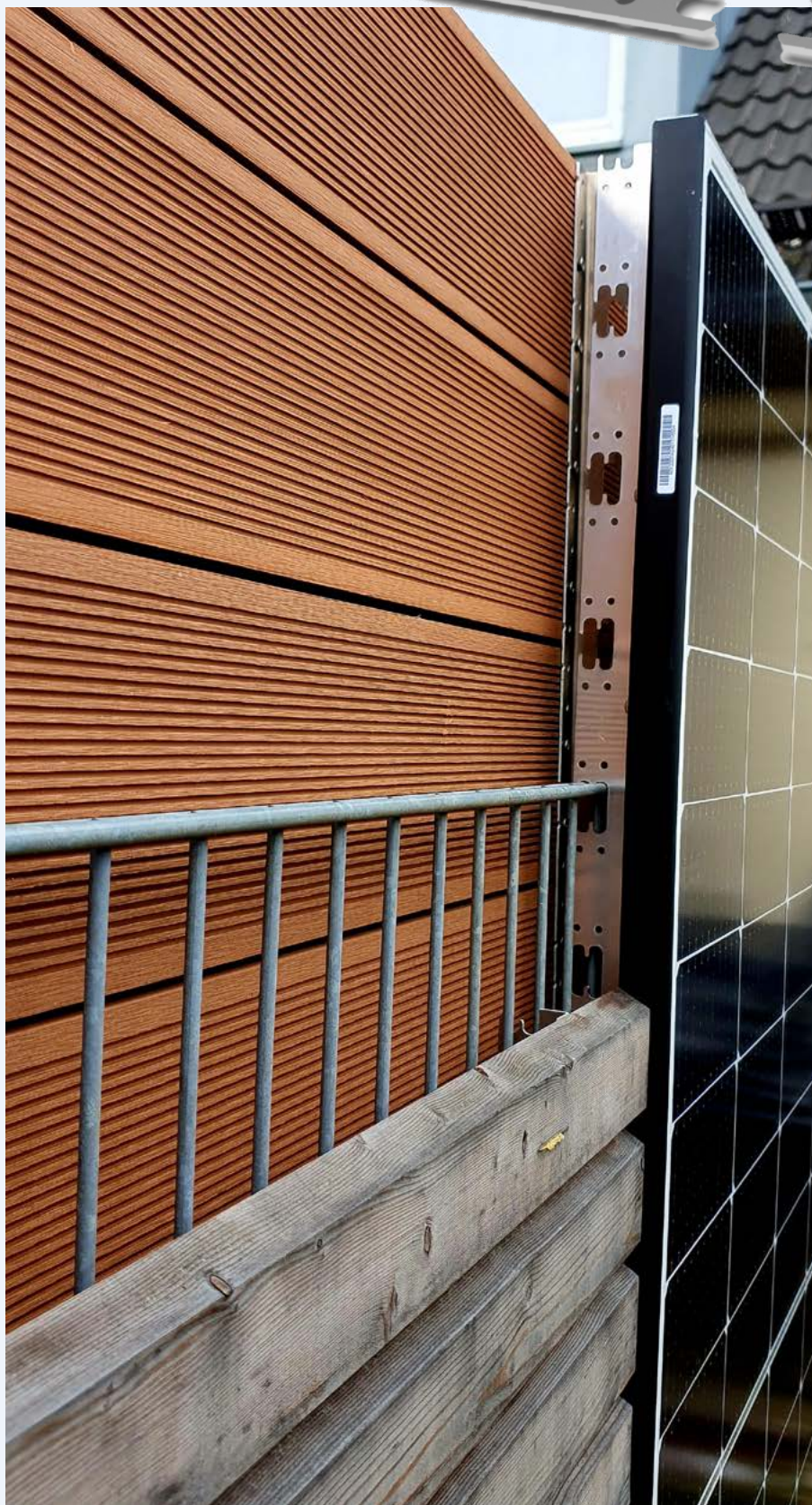
“Our first product for panelled fencing and wooden posts has been a great success,” says managing director and co-owner Eugen Borgardt. “We are selling it to DIY stores and fencing contractors throughout Germany. That’s why we wanted to keep adding to the line. The Solar L-profile for solar panels is the first of those additions.”

#### BRIGX

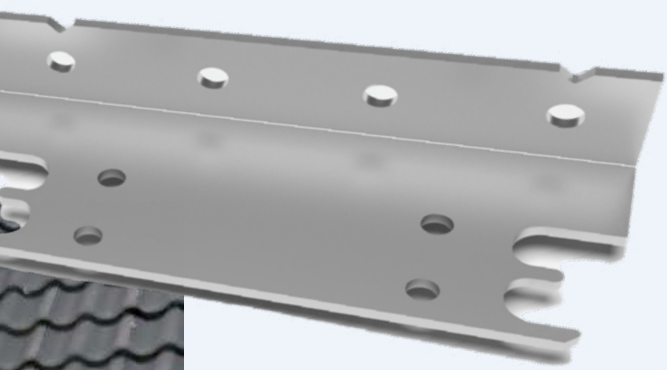
Launched 2 years ago, BrigX’s first product was an aluminium L-Profile, 60 centimetres in length, that allows you to mount all kinds of cladding on a twin wire fence. It’s called BrigX Winkel, after the L-profile from which it’s made. Winkel is German for ‘angle’. “We developed it in order to use it for making privacy modules from slats of wood, plastic or composite,” says Borgardt. “But you can also use it for attaching HPL sheets or virtually anything you want to your panelled fence. You screw our profiles to the back of whatever you want to attach to a fence. You then hang the element you want to be part of the fence, fix the lift-out guard and hey presto, the job is done. It’s a really simple principle.”

#### IDEA

The idea for the BrigX Winkel came from Borgardt’s own garden. “There was a 1.2 metre high rigid mesh fence around it,” he says. “I wanted a higher fence because the children’s ball kept sailing over it. And I also wanted it to be closed so I’d have more privacy. But removing the old fence and installing a new one would have cost a good deal of time, effort and money. In any case, apart from it being too low and too open, the old fence was still in great condition. I then sat down with my brother-in-law Johann Reis to think about a different solution. After various prototypes, the BrigX Winkel came into being. When neighbours and friends saw it, they also wanted to try it out.



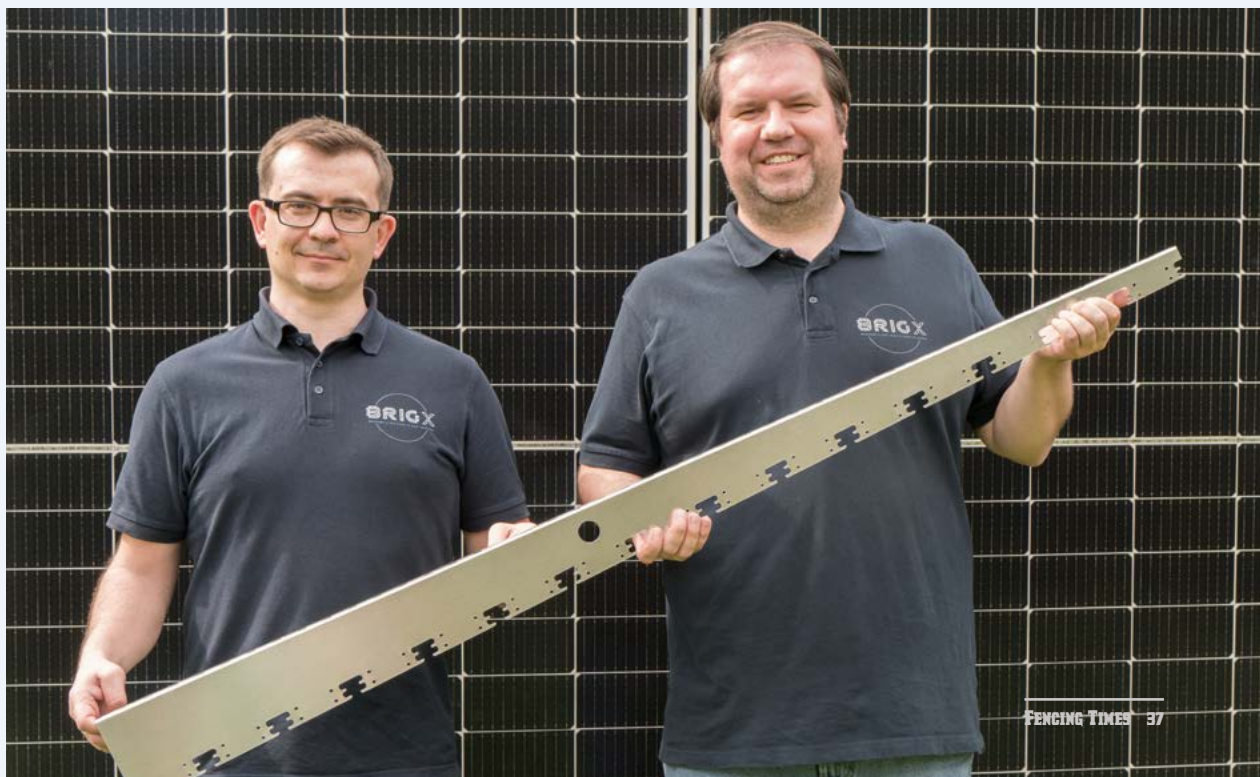
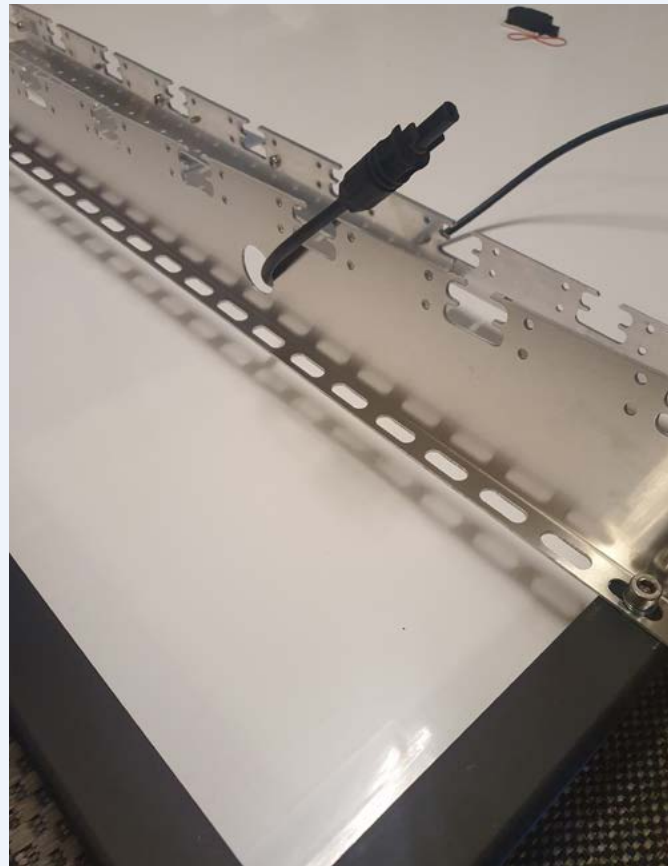




That immediately led us to conclude that there must be a lot more people facing the same problem. Since we had a lot of free time in 2020 on account of coronavirus, we seized the opportunity to start the BrigX business with its first product, the BrigX Winkel.

#### WINKEL

The BrigX Winkel is an extruded aluminium profile, with recesses cut out according to a sophisticated pattern. These make it easy to hang the profile from a twin wire panel. The other leg of the profile has a long row of round holes, enabling you to attach the profiles to all kinds of different materials. *“Thanks to the large number of suspension points, the profile, fence and the cladding form one strong unit,”* says Borgardt. *“You don’t hear it clapping in the wind. At the same time, fitting is really easy and you can use the profile almost anywhere. On the inside or outside of a fence, or even on gabions for example.”*



Eugen Borgardt  
and Johann Reis



## SOLARWINKEL

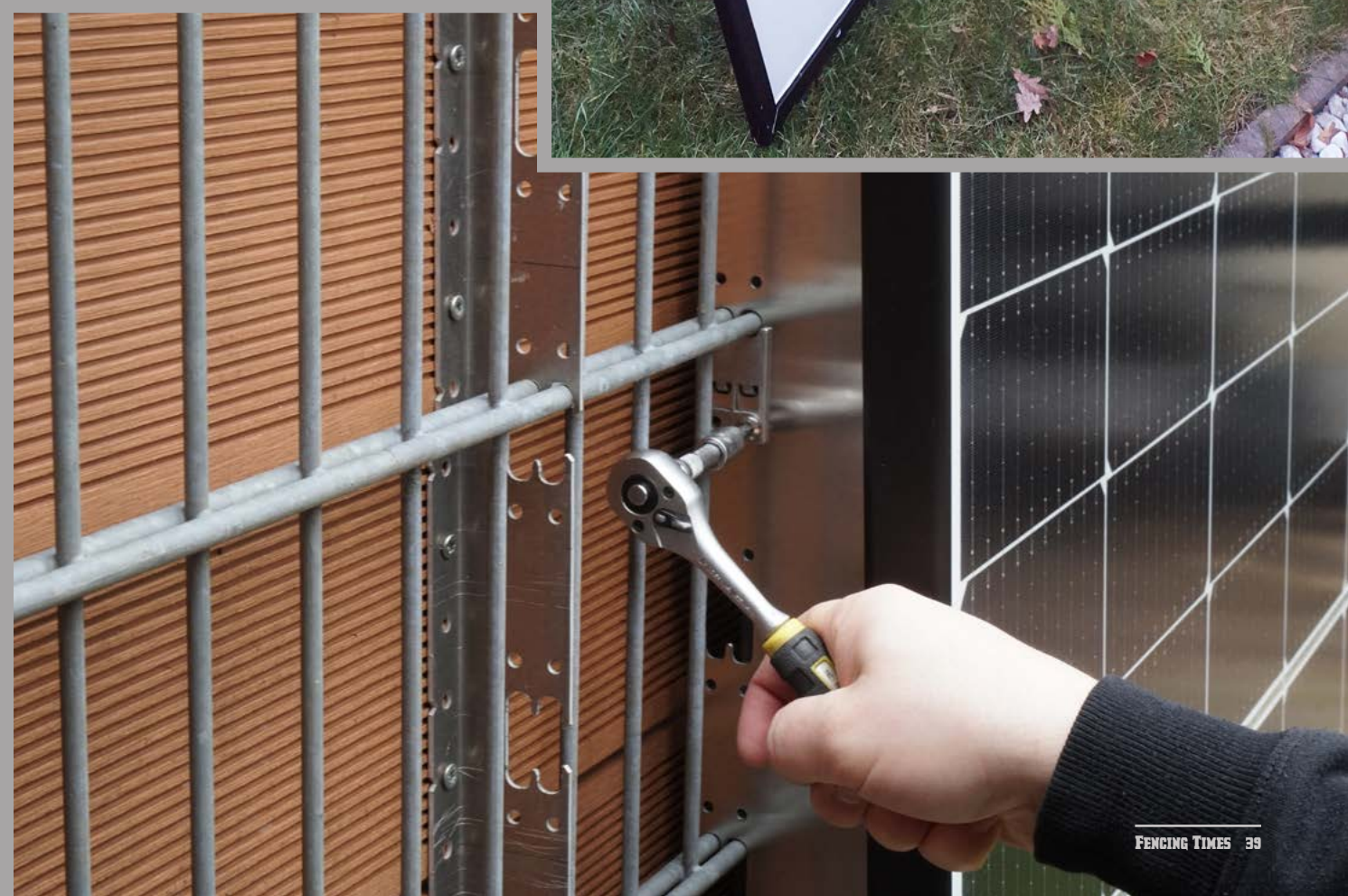
The Solarwinkel is based on the same principle. But this L-profile is tilted by 3 degrees, so that the solar panels have more yield. Moreover, the profile is 1.5 metres long and has slots instead of round holes on the short leg. "The rest is identical," says Borgardt. "You screw the L-profiles to the back of the solar panels and you can hang them on any panelled fence. The panels on the fence have a lot of advantages. This is particularly true in the winter months when the sun is low in the sky. Precisely when panels on the roof have less yield. Furthermore, you can hang larger modules on a fence. On the roof, 2 square metres is the maximum allowed because of the building standard that does not allow large sheets of glass on buildings. You can hang larger panels on a fence and they are cheaper per square metre. Panels also look very good on a fence. And finally, solar panels generate power that your customers can use themselves or sell to the grid. That way, the fence makes them money, instead of costing them money."





## SPECIFICATIONS

The Solarwinkel is a 2 millimetre thick by 1500 millimetre long L-profile made of extruded aluminium. As with the first Winkel, BrigX recommends that the panel should extend no more than 400 millimetres above an existing fence to maintain enough strength. "The profile has so many slots that you can always find a screw hole and you can fit it to any solar panel of any brand," says Borgardt. Also, just as with the first Winkel, it fits on both sides of the fence. "If the fence goes in a line from North to South, that can really pay off. In addition, you can combine the two Winkels. You could, for example, make wooden slats on the other side of the fence so you don't have to look at the white back of the solar panels." The Solarwinkel is already in production and available from stock in blank aluminium. ■





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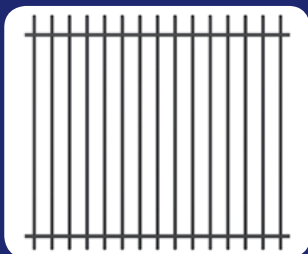
Single Leaf Gates



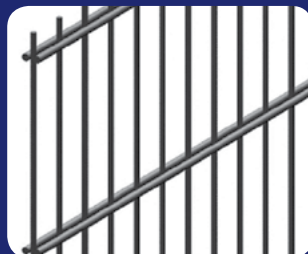
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# Ebbe und Flut expands its stainless steel range

Ebbe und Flut<sup>1</sup>, a manufacturer of Friesian fencing types from Sönnebüll, a town in Nordfriesland, has expanded its range of stainless steel models. There are now six different models.

**“E**ver since we set ourselves up, our motto has been ‘Do it once and for all time,’” says owner and managing director Jan Christiansen. “We place great value on high quality.

1) Ebbe und Flut means low and high tide. The company is located near the sea in the northernmost part of Germany

But some customers want more than just the best polymeres or the best aluminium fences. Which is why we launched our stainless steel Butendiek<sup>2</sup> gate range on the market a couple of years ago. It's proved a great success and we sell far more gates from this range than we were expecting. And that's why we've expanded the range with three additional models in recent months.”

2) Butendiek means 'outside the dikes'





## STAINLESS STEEL

The Butendiek gates are made entirely of stainless steel. "First we weld the gate from stainless steel sections," says Christiansen. "Then we powder coat it. The gate hardware, the hinges and locks, which we obtain from Locinox, is of course also made of stainless steel. For electric gates, we use a special controller, which we build into the post. It's simply not possible to better protect a gate from the weather."

## BUTENDIEK

The Butendiek series currently consists of six swing gate models. The first three to enter the market from Ebbe und Flut in 2018 all have vertical slats. You can get these in Classic-Design, Cross-Design or with a Friesian arch. These have now been joined by two models with so-called cassette filling. At the bottom these models have a cassette filling made from bent sheets, with typically Friesian vertical slats at the top. Finally, there is a model with a more prominent Friesian arch, above the standard vertical slats.





## SPECIFICATIONS

All the gates in the Butendiek range come in opening widths measuring from 3 up to 5 metres and in heights of 1 up to 1.5 metres. "Apart from swing gates, we do of course supply wicket gates and fixed fencing elements to go with them," says Christiansen. "We do that for all our gate ranges. This allows the customer to enclose his grounds completely with one and the same fencing model. Not only are all the gates weatherproof but they are also extra robust, because being weatherproof alone is obviously not much use if they blow over in the first storm." The gate posts are made from rectangular hollow sections, measuring 150 by 150 millimetres. The gate leaves in the range are made of 100 by 50 vertical rectangular hollow sections and 100 by 40 horizontal sections. The slat filling consists of 60 by 20 rectangular sections and the cassettes are of sheet steel with a thickness of 2 millimetres.

## COASTAL CLIMATE

"The Butendiek series works really well here in our region," says Christiansen. "Especially in the seaside resorts of Sankt Peter-Ording and the East Frisian Islands where the effects of the weather can be quite aggressive at times. That was certainly helpful in terms of the development of the line. But meanwhile we've been selling the first gates from the line throughout the whole of Germany. Customers who want premium products don't just live on the coast. This range is for them." ■





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# 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.

**“O**n 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." ■*









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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.





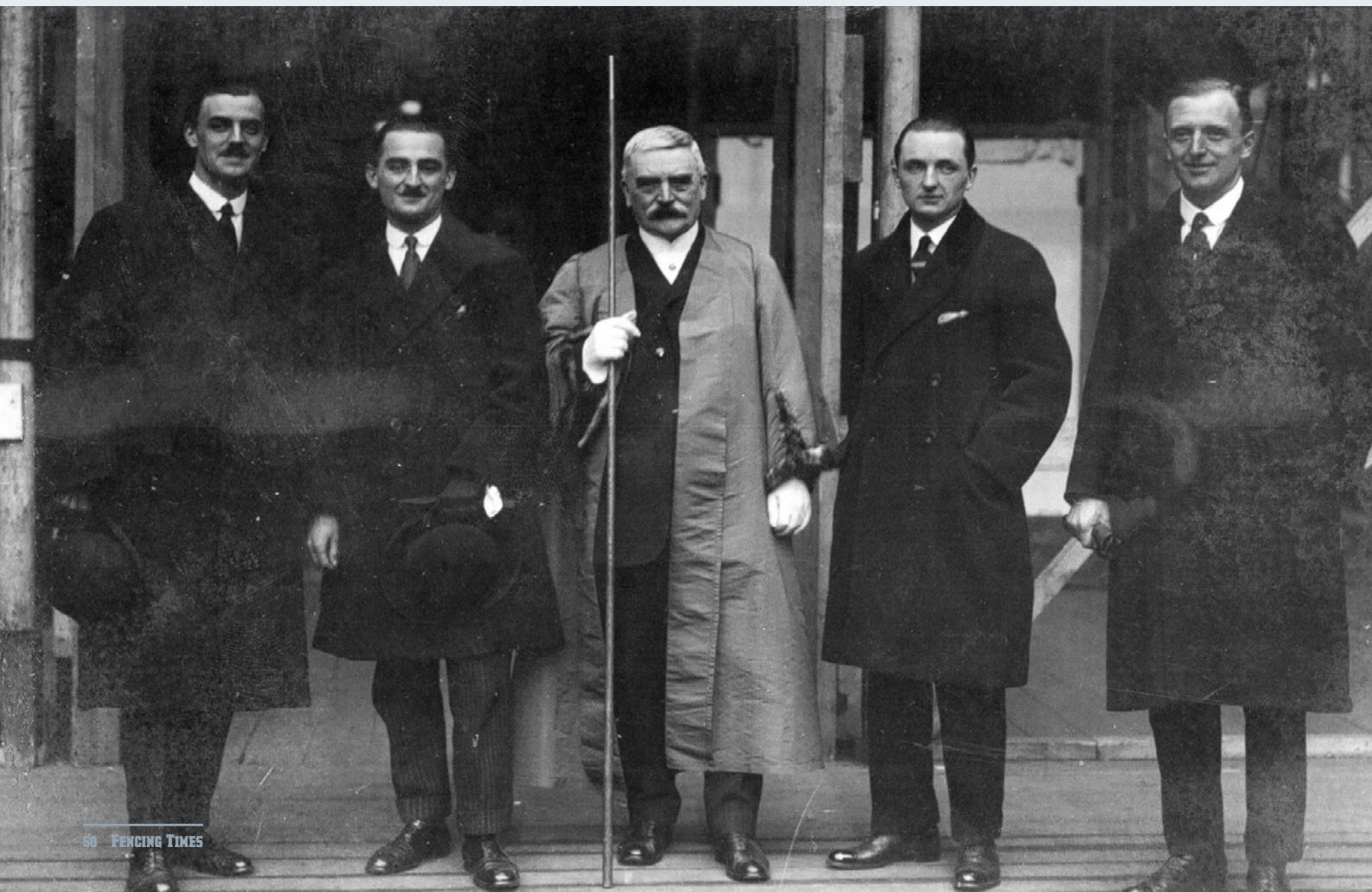
# Horseshoes, bomb shelters and balustrades

**B**uilding 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 20<sup>th</sup> century, the company found itself in more challenging circumstances.

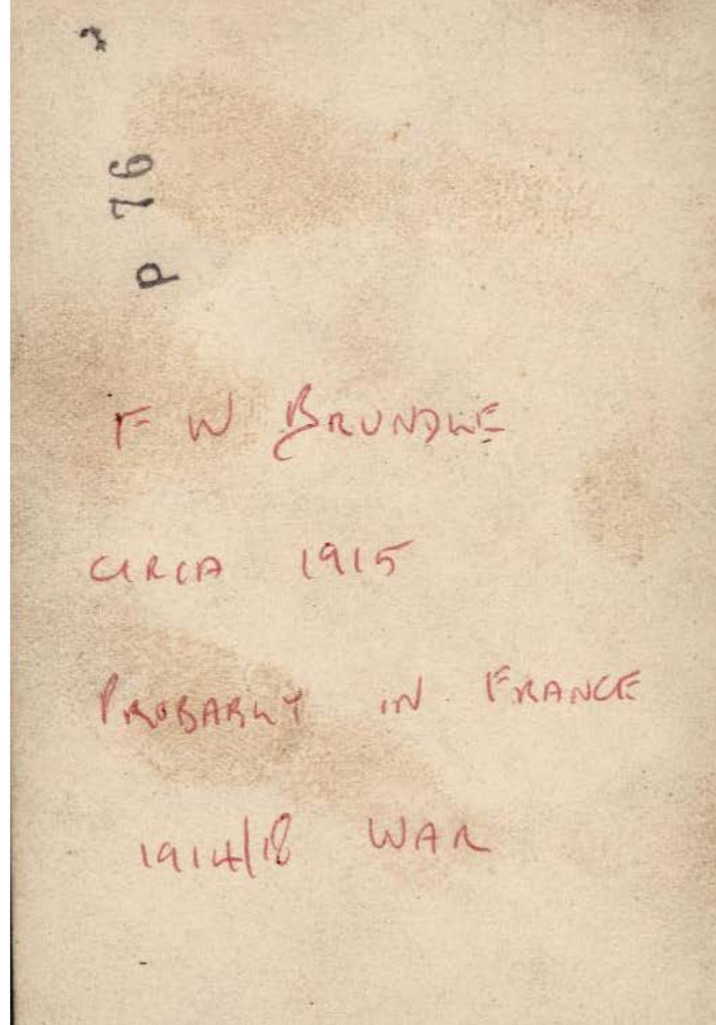
Company founder Frederick Henry (the original F.H.) Brundle, Michael's great-great-grandfather (centre).







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.



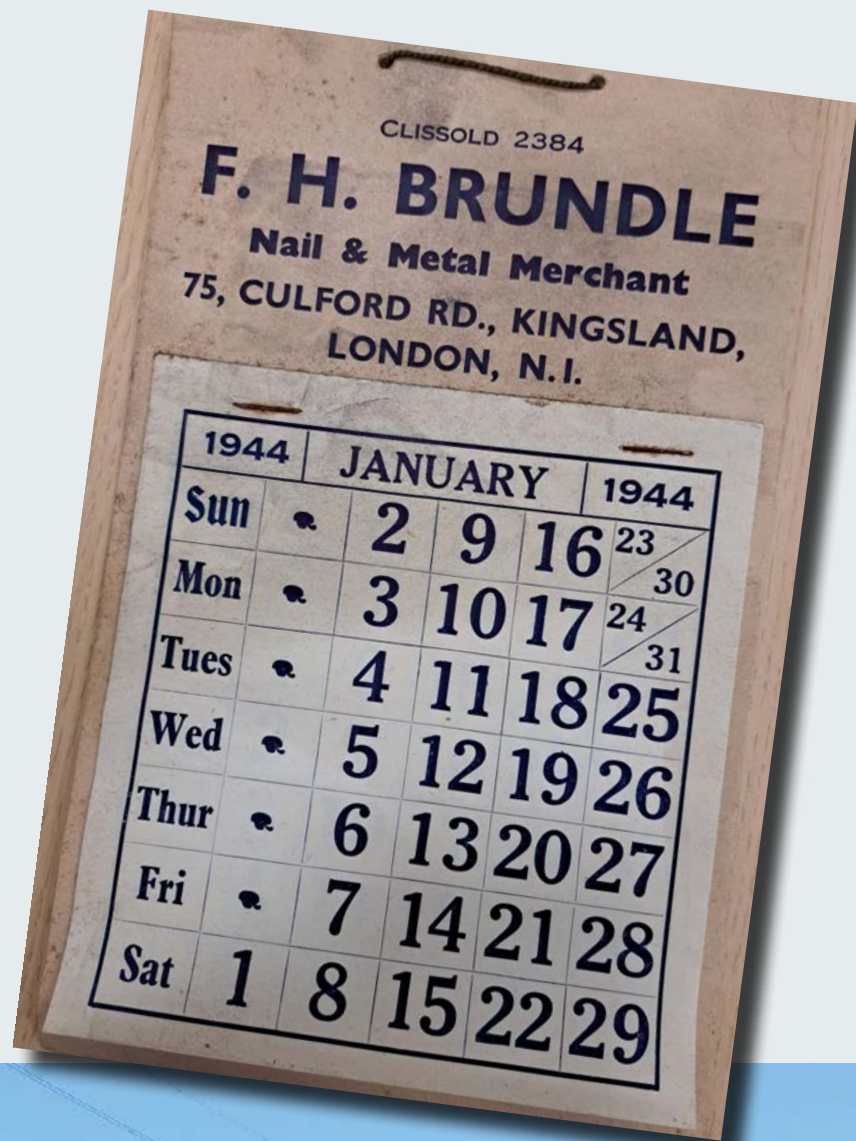
Frank Brundle during the Second World War, meeting an air raid warden in London



## 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

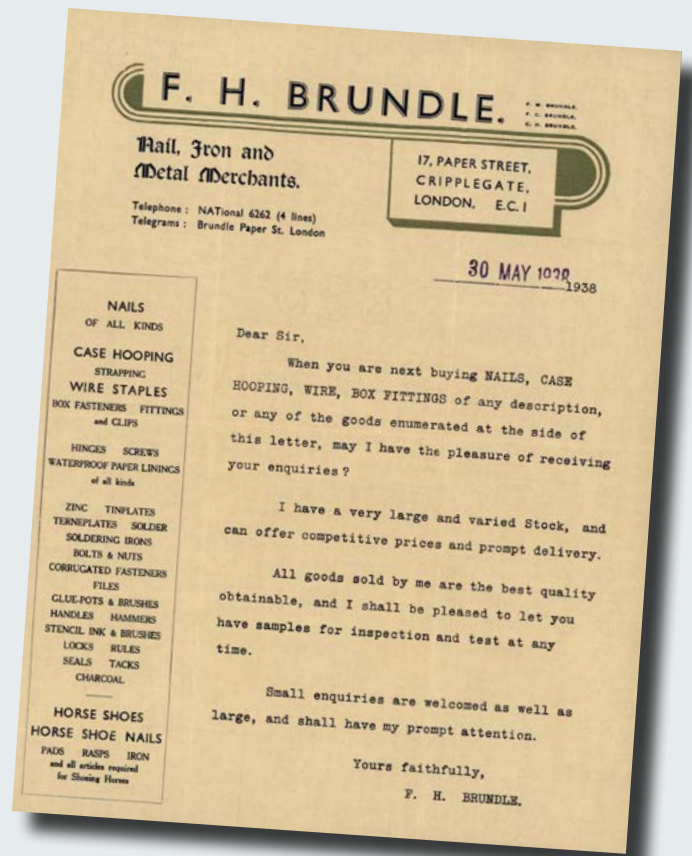


Brundle's current HQ in Rainham, Essex

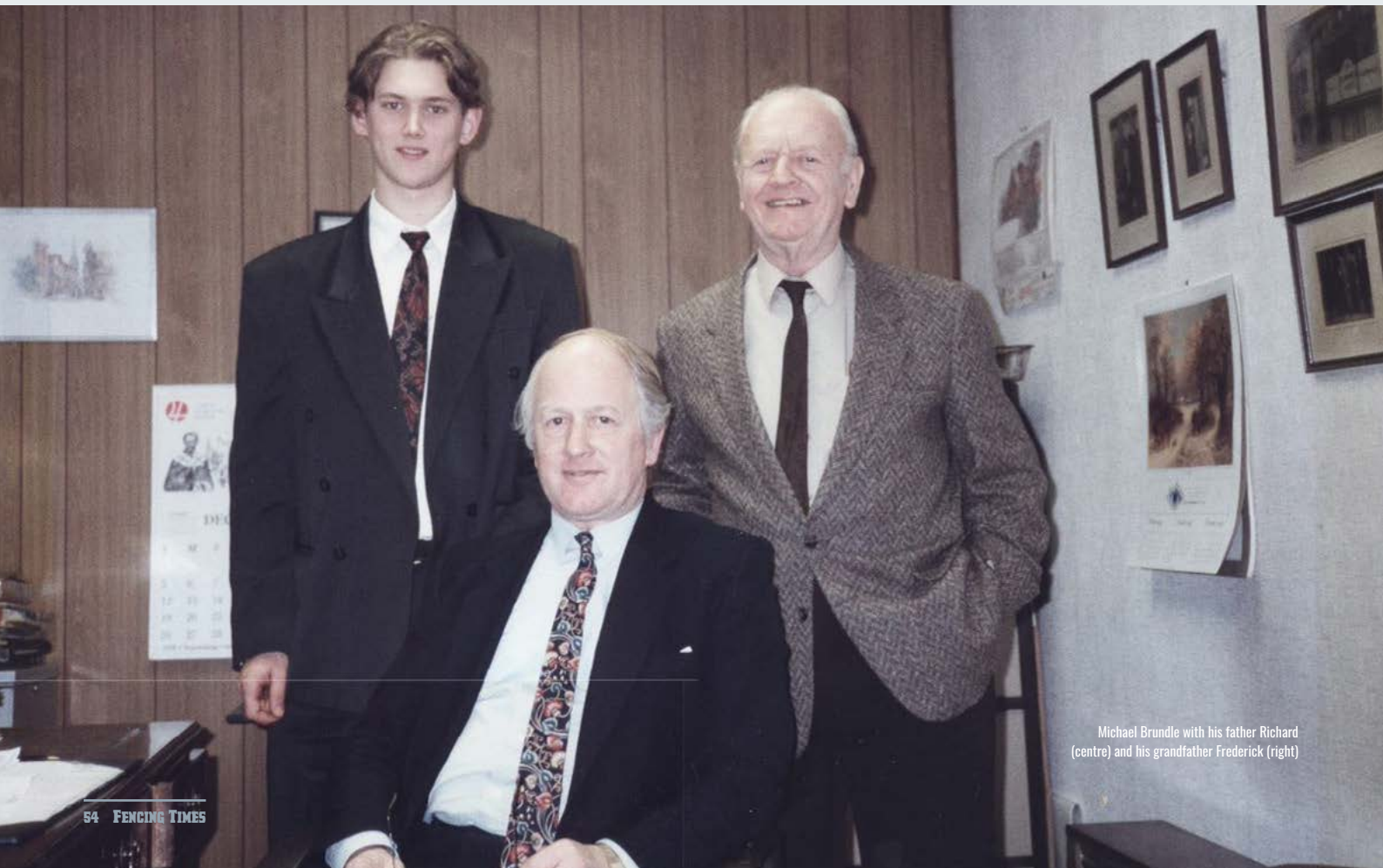


## A PROUD LEGACY

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. ■



A sales letter from 1938



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



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# 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.

“**T**he 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

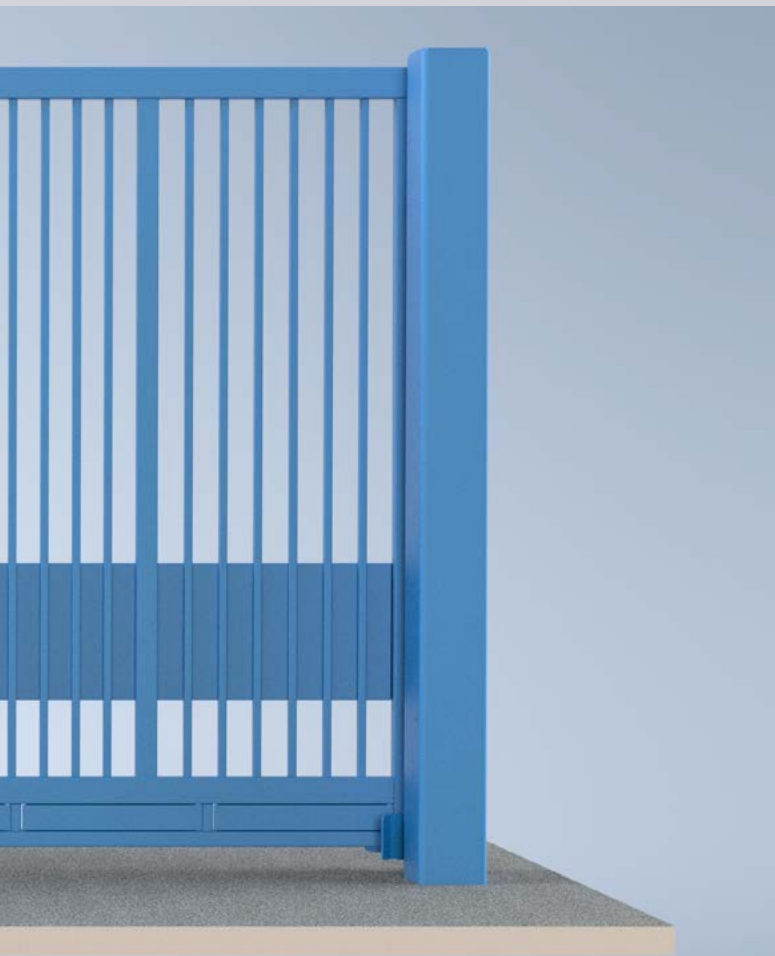
The XL version of the CSG 10640, like the other gates in the range, is a trackless folding gate with a single leaf. That is, it's literally two leaves, but they pivot in one direction. The gate is 2.5 metres high as standard. "It can also be produced in a taller version," Wood says, "but not shorter. 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.

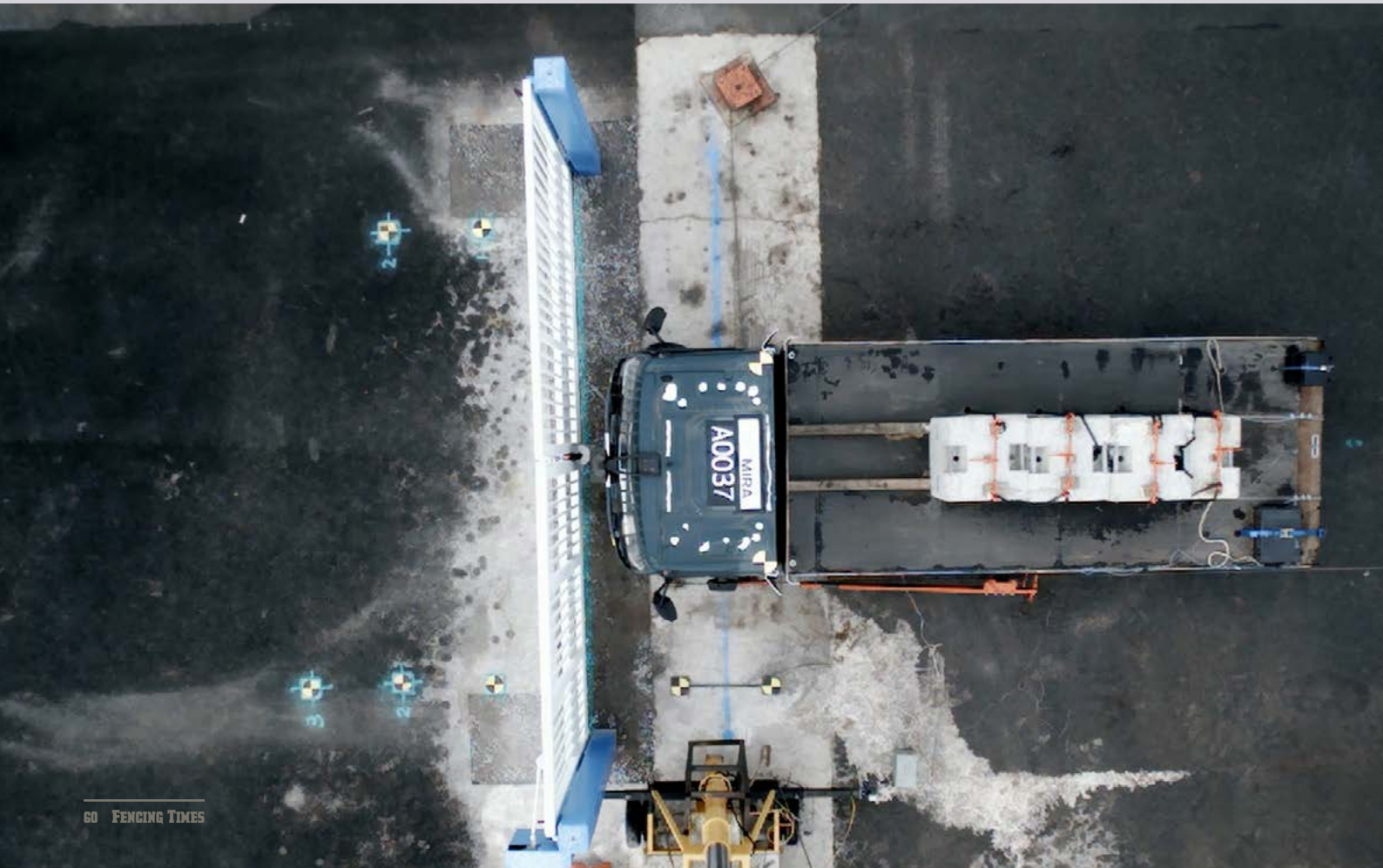
## SECURITY RATING B3 AND C5

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.” ■





# Sonomuro makes Floodgate version of Sonowall sound wall

**T**his 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.” ■*





# New fence types from Deutsche Zauntechnik

Deutsche Zauntechnik, a brand of fencing manufacturer AOS-Stahl from Wetter in the Ruhr region, is expanding its range. At the Perimeter Protection exhibition in Nuremberg, the company presented a line of several new fencing models.







**“S**ince our establishment, we have done all in our power to offer our customers the biggest possible selection,” says sales director Samuel Adolph. “The bigger the selection, the more chance your customer will find a product to his liking. With that in mind, we try to add one or more models to the range every year. During the coronavirus crisis, new product development was put on the backburner but we are making up for that now with four new models all at once.”

### FENCE FOR AN INCLINE

The Basel model is the first of the new models. Its special feature: sloping assembly. “With ornamental fence models, the appearance is often slightly off if you have to install them stepped,” says Adolph. “This is actually true for all fencing models with horizontal wires or sections, simply because those horizontal wires don’t line up properly any more, and you sense that something is not right. But with ornamental fencing, it’s more prominent and we wanted to provide a solution for that. That became the Basel incline fence.”

### BASEL

The infill bars of the Basel model are not welded between the horizontal support sections, but screwed to them. The supports are therefore fitted with threaded blind rivets every 112 millimetre. “If you don’t immediately tighten the bolts right up,” Adolph explains, “you still have some free play in the element. You can use that free play to make the supports incline with the landscape. Once you mount the supports to the posts, a rigid element is created and you can tighten the bolts on the bars. We will shortly be supplying socket screws to match the colour of the fence, so they will be barely noticeable.”









## RESIDENZEN SELECT PLUS

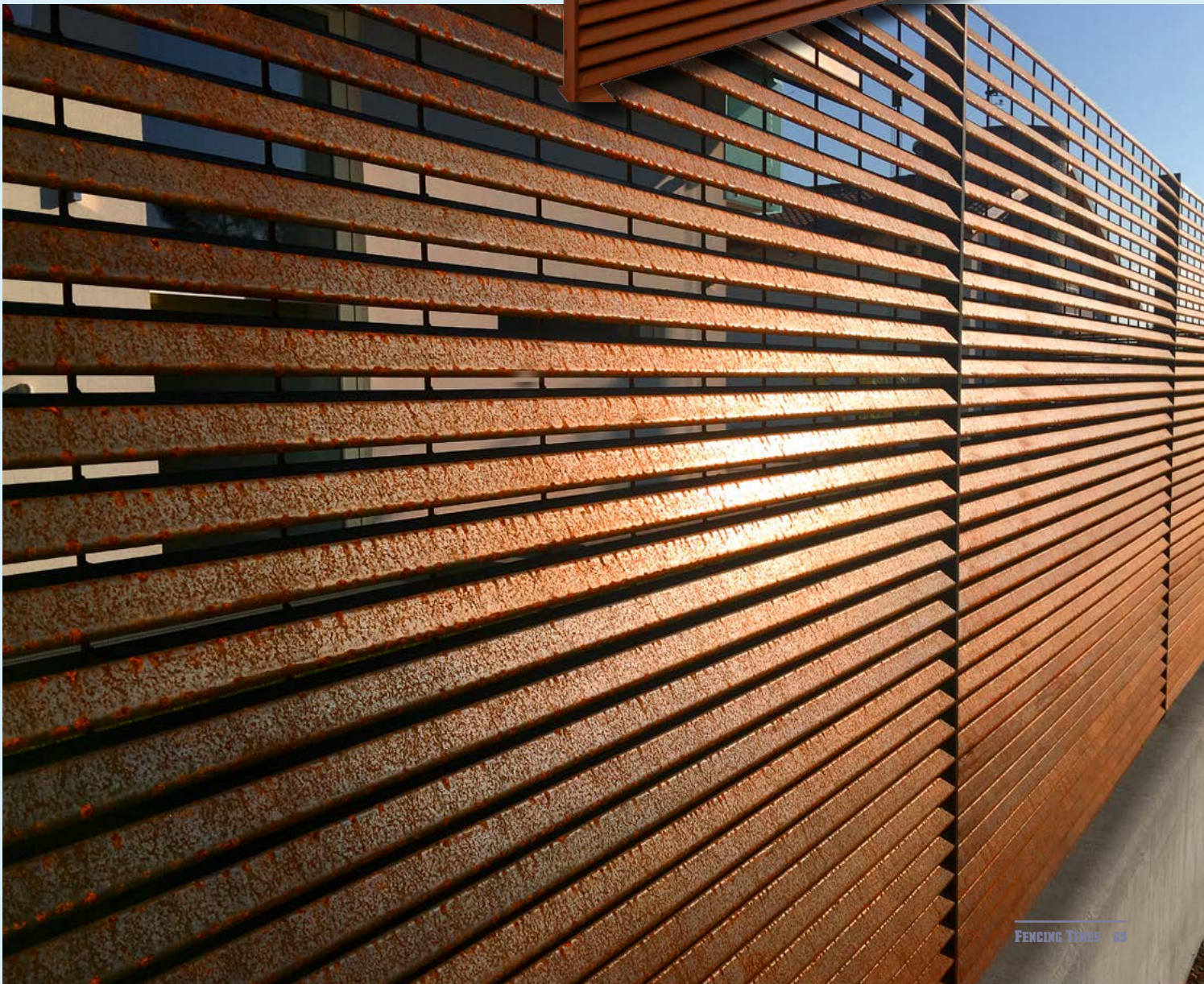
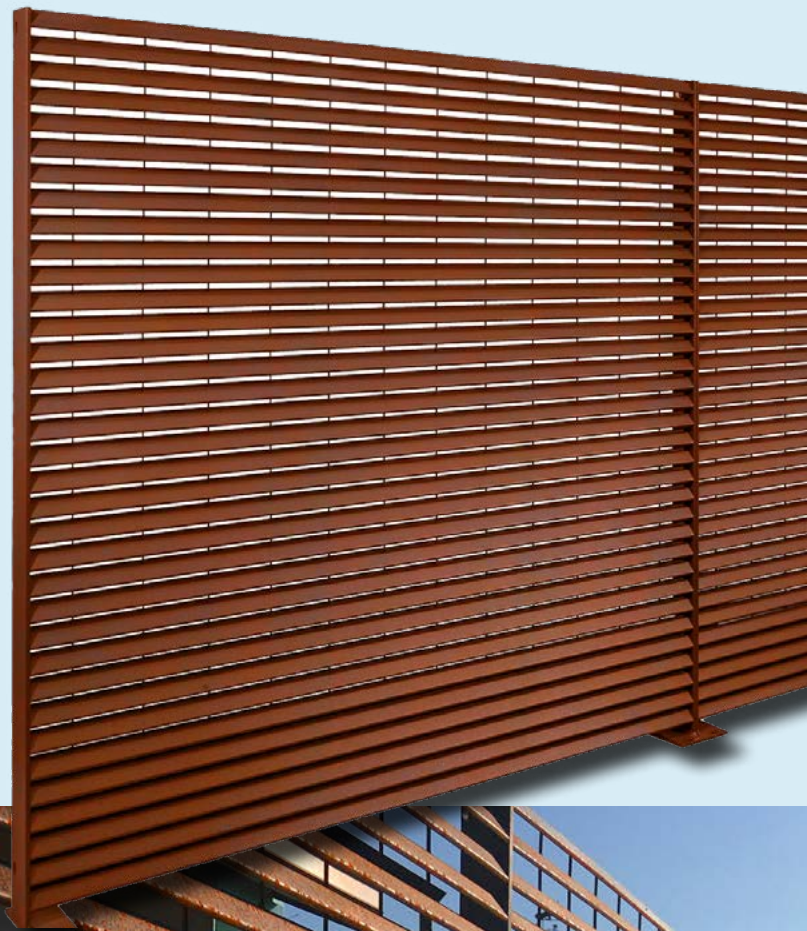
The Basel model is part of the ornamental bar fencing series Residenzen Select. The fencing elements in this series consist of horizontal supports of 25 x 25 mm, with welded-in bars of 15 x 15 mm. At the top the bars feature a decorative tip, a ball, an ornamental cap or simply a plastic cap. Depending on the finish, the models are named after different Swiss cities: Brienz, Davos, Zermatt and Zürich. Adolph: *"Because we are seeing increasing demand, we now stock all models as standard in 2-metre widths and four heights in the colour DB 703, with metallic effect."*





## TEXAS

The second new model presented by Deutsche Zauntechnik in Nuremberg is called Texas. Made from corten steel, it consists of thin slats welded into a frame at an angle of 45 degrees and held in place with thin, vertical wires. Texas comes in heights of 1.6 and 2 metres. The elements are also 1.6 or 2 metres in length, with a thickness of 170 millimetres. Each element has two welded-on base plates, allowing you to mount them flush together without posts. "Texas is simply something totally different for once," says Adolph. "For customers who want something out of the ordinary. It looks particularly good when combined with gabions but even as a standalone fence, the customer still has something very special. The corten steel panels are complemented by corten steel sheets that come in two widths. And there is a corten steel corner plate. This allows you to build a beautiful and easy-to-assemble corner solution. If the customer wants, we can also provide the sheets with laser-cut motifs."





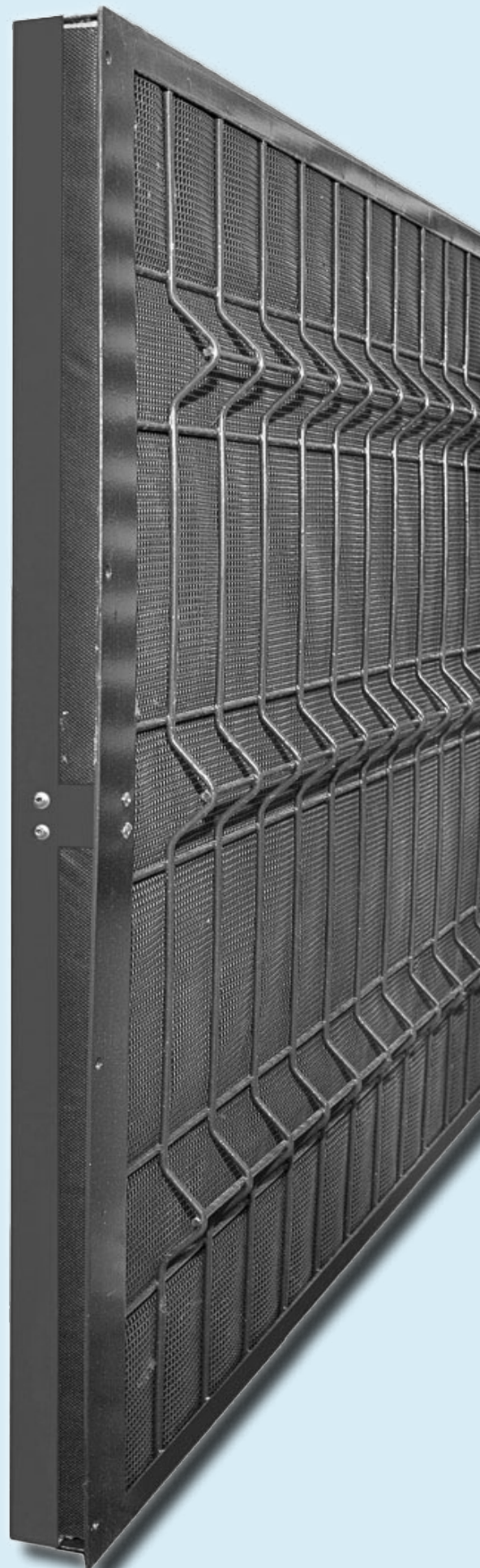


### **ECO SOUNDPROOF FENCE**

Another new item in the range is a soundproof fence. It's called Schallschutz Eco and is proof against up to 18 decibels of noise. "People are increasingly disturbed by each other," says Adolph. "For that reason, we see a growing demand for soundproofing solutions. It's a definite trend, especially in urban areas. But most of the currently available sound walls are those ugly concrete things, like the ones you see next to the autobahn. So we wanted a pretty solution that looks like a fence." The new soundproof fence consists of steel frames filled with mineral wool. The mineral wool is retained in the frame by mesh panels to the inside of which a polypropylene fabric is tensioned. The frames are 2.5 metres long, 80 or 100 centimetres high and 60 millimetres wide. They are flanged and this allows you to fit them to 80 by 60 millimetre posts. "The frames and posts are coated in anthracite, so for the majority of gardens they can be combined with existing fencing. Furthermore, we opted for a profiled mesh panel on the inside so that climbing plants get a better grip on it."

### **APPLICATION**

"Of course, the main target for the new soundproof fences are residential customers," says Adolph. "For people who don't want to be bothered by their neighbours' children at play or barking dogs, or the busy road that runs past their house. But we also see a market beyond them. For schools, day nurseries or shopping centres that want to reduce nuisance in the vicinity. And for businesses that want to protect local residents – or their own office staff – from the noise emitted by their production or roaring truck engines."











## MANHATTAN

A fourth new model in Deutsche Zauntechnik's range is called Manhattan. It's a so-called stele fence, one made of closely spaced vertical pillars. The elements consist of vertical square sections of 50 by 50 millimetre, welded to a horizontal square section of 80 by 80 mm, which is screwed to a foundation with two base plates. The stele fence is available in heights from 1010 to 1810 millimetre. "If you put several elements one after the other, you get a fence that looks the same along its entire length," says Adolph. "Moreover, the beauty of a stele fence is that you can only see through it when you stand directly in front of it. In terms of visibility, this makes it – just like the Texas model incidentally – a fence that is neither open nor closed. For customers who want to give themselves some protection from people looking in but don't want to feel too enclosed, these types of fences are just the job. And what's more, it's extremely minimalist in appearance, a popular look these days. The elements are 990 millimetre in length and are thus easy to transport on a pallet."

## STOCK

Just like the Basel model, the new Manhattan, Texas and Schallschutz Eco models are available from stock. "Customers are becoming increasingly impatient," says Adolph.

*"If they decide today that they want a fence, they would prefer it to be already in place tomorrow. That's why we built a distribution centre in Olpe three years ago. There we stock all standard materials such as panels, posts and swing gates in large quantities. For the same reason, we are now building a new production site in Wetter, 500 metres from our head office. This will free up space in the existing buildings for storage. Thus, our customers almost never have to sell on a 'not today' basis but can supply immediately. That earns them – and consequently us as well – additional orders." ■*





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**I**n 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

**G**ate 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









So what is  
**LPS 1175**  
exactly?

*Everything you need to know  
about the LPS 1175 standard*



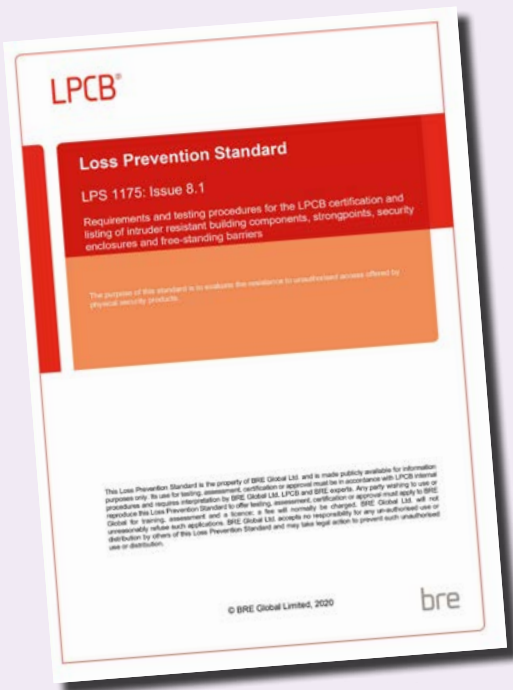
In the European fencing sector, we're more and more often coming across fences and gates that are certified according to the LPS 1175 standard, or demand for it, in terms of specifications. Then people request fencing with an LPS 1175 Security Rating. But what is LPS 1175 exactly? And what do these Security 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<sup>2</sup>. 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.

<sup>2</sup> 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<sup>1</sup> 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).





A person wearing a dark grey hoodie and a black helmet with a clear visor is working on a green metal grille. The person's hands are visible, wearing black work gloves. The background is a bright, slightly overexposed area, possibly outdoors.

## *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.”

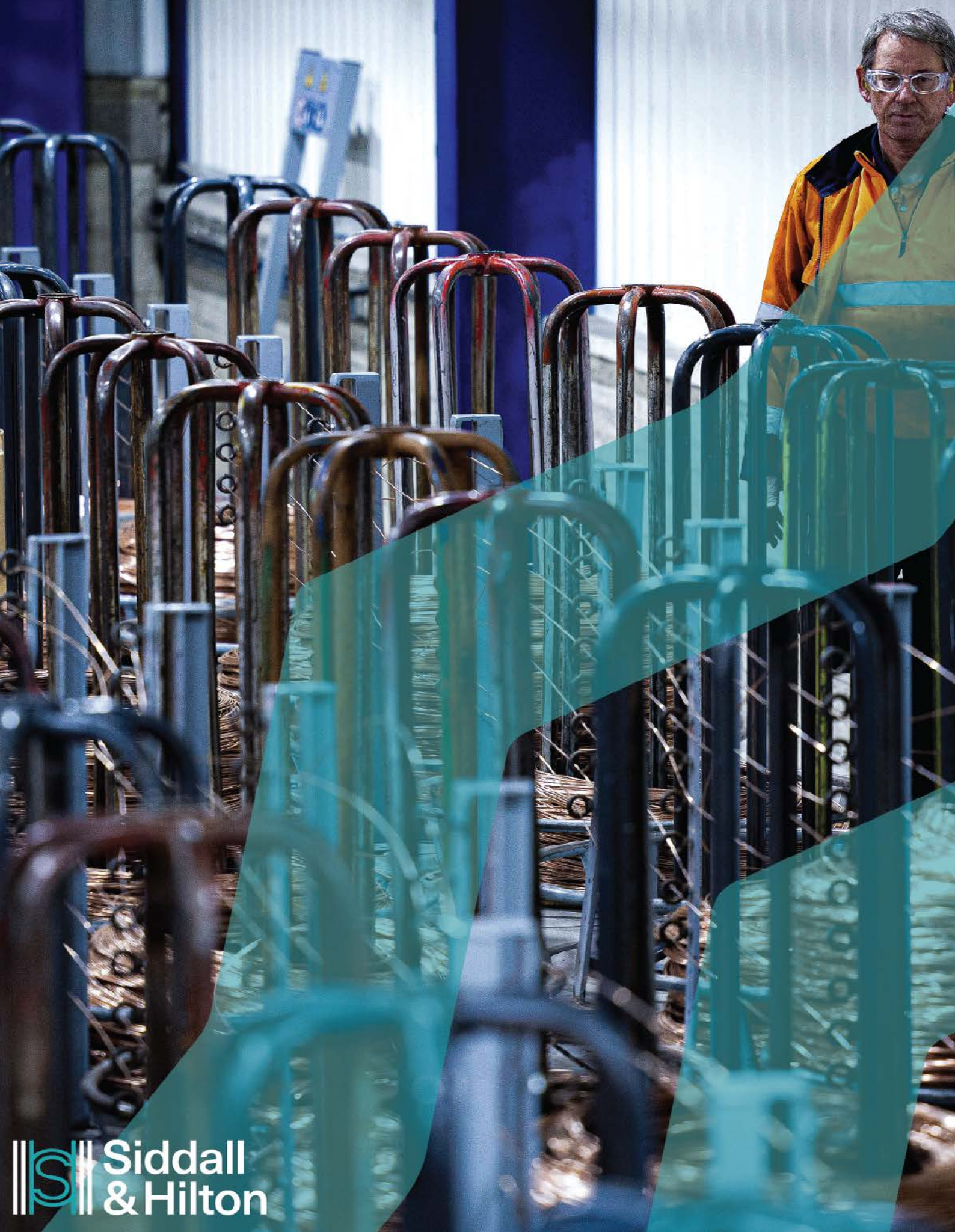
### INDEPENDENT

“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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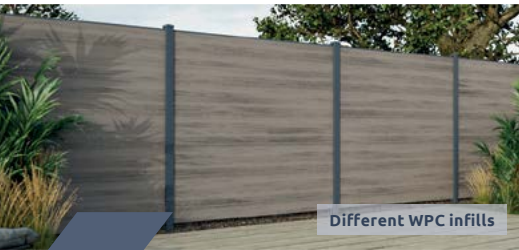


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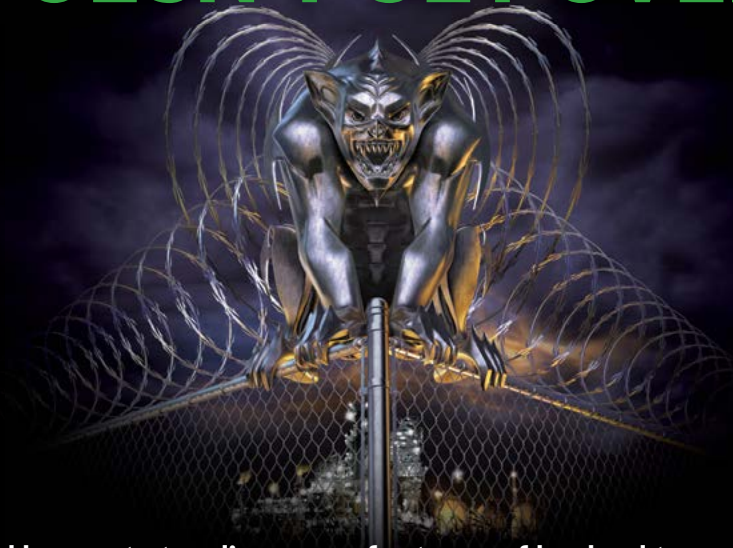


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# The invisible fence

*Everything you need to know about perimeter detection: field detection*



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## *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](mailto:raijmond@fencingtimes.com)

At Frankfurt Airport, three flyovers across the A3 Autobahn are secured with thermal imaging cameras (observant readers will recognise the detection fence in the background from an article in issue 52 of FOBS Magazine). Fraport, the manager of the airport, faces the challenge that regular passing traffic on the highway should not trigger an alarm. However, as soon as a lorry stops on the hard shoulder and someone climbs onto the roof, the airport police will, of course, want to know immediately. Because the thermal imaging cameras regularly trigger false alarms, Fraport has experimented with microwave detection here.



**I**n my previous column, I talked about detection systems that are mounted on a fence. Although these systems use cables or sensors and are effective in principle, they do have a specific requirement: the fence must be high enough to prevent a burglar from jumping over it. Including if said burglar parks their van next to the fence and climbs on the roof. After all, if a burglar can make their way in without touching the fence, the detection system on the fence will not be able to trigger an alarm.

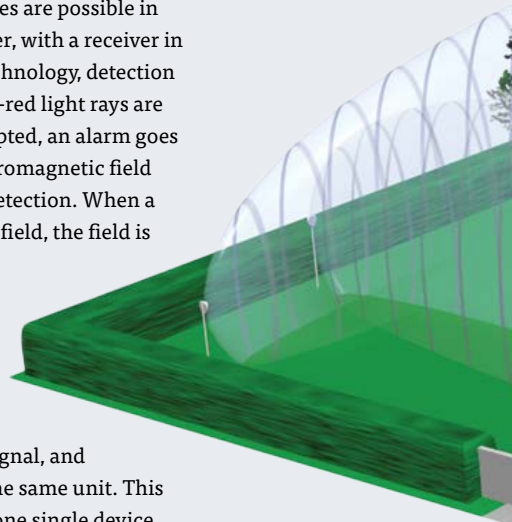
If the fence cannot or should not be high enough to effectively use a cable or motion sensor system, you will need a different type of detection system. The next option available to customers comes from the field detection systems category. Even with very high-risk properties, with a double fence with fence detection on the outer fence, the client often wants another form of security between the two fences as well. Here too, detection equipment from the field detection category is used.

Field detection is also known as line detection, because the systems often work in a straight line. These systems are positioned inside the fence, on the premises. If there are parked lorries or stocks of goods close to the fence, they will have to make a few metres' worth of room. Security with field detection requires space.

In practice, only two different technologies are possible in this category. Both consist of a transmitter, with a receiver in a straight line opposite it. For the first technology, detection takes place based on invisible light. Infra-red light rays are 'strung', as it were, and if they are interrupted, an alarm goes off. With the second technology, an electromagnetic field is created. This is known as microwave detection. When a mass of a certain size moves through the field, the field is disturbed and an alarm is triggered.

Over the years, variants on both technologies have emerged, in which the transmitter and receiver are included together in a single housing. Objects in the line of sight reflect the transmitted signal, and this reflected signal is then received by the same unit. This means you only need to install and wire one single device, which is obviously an advantage.

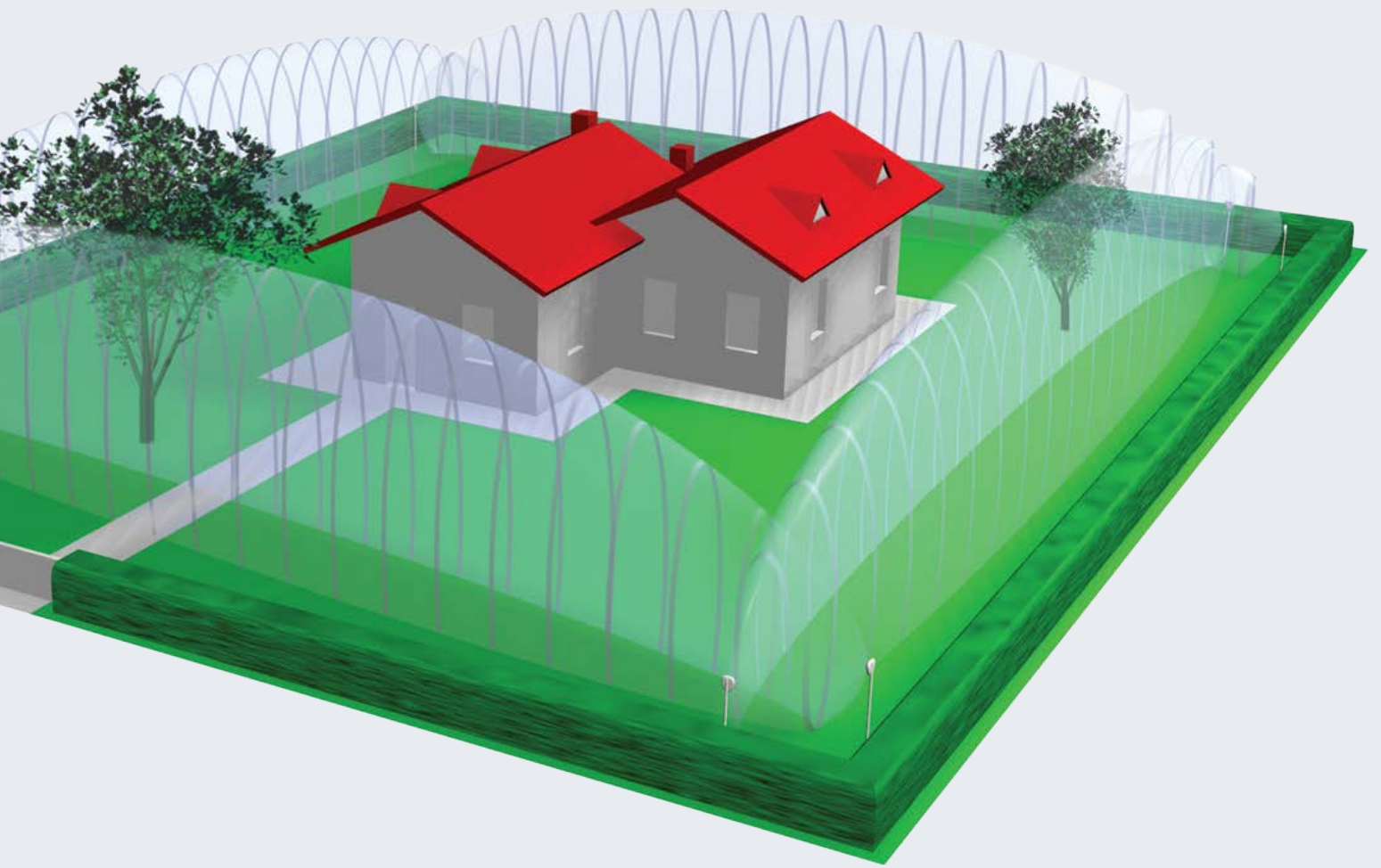
However, with this type of reflection system, the signal needs to travel twice the distance. As a result, you can only capture relatively short distances with it, meaning that a large part of the price advantage is lost. The reflection systems are also known as laser (for infra-red signal) and radar systems (for microwave technology). Given their limited added value, I will not further discuss the latter two in this article.



Here you can see three systems side by side: An infra-red column with eight beams, the head of a microwave system and a camera to verify the alarm notifications.







An infra-red column doesn't need much space to function. But if you position it too close the fence, it will be easier for intruders to jump over it.





Here, a microwave system protects the safety zone between the wall and the fence. The more kinks and corners, the more heads will be needed.



A third technology that could be classified as a field detection system is the modern video observation system. In the past, CCTV cameras actually only served to check any alarm notifications. The guard would receive an alarm from the fence detection or from the field detection system and could then check on the monitor whether it was a real alarm. If it was just a wild boar or a rabbit, the guard would not need to take any action.

These days, video cameras are equipped with ever smarter software. For example, you can now draw a virtual line through the area, with the software generating an alarm the moment someone or something crosses this line. What you have got, in fact, is a camera and a detector in the same device, which saves costs.

However, this is only possible with cameras with a fixed lens set-up; in other words, not with rotating cameras or ones that allow you to zoom in. This means that for proper perimeter security, if you want to work with cameras, you will need a camera every 30 to 50 metres. And you will also need a mast and power and data cables. All this makes things much more expensive, and so this system is generally not used in place of the previous two systems.

What's more, detection with a camera is very much dependent on the light situation. In poor lighting, you can use thermal cameras – but these are much more expensive. In addition, camera systems generally don't yet have the reliability that you get with proper field-detection systems.

That is why you often see traditional field detection systems, especially in larger premises, whether or not in combination with rotatable and zoomable cameras for verification.

After all, these systems all have one thing in common: they can cover great distances. These are active devices that can go up to 200 metres by using invisible light. And with microwave detection, you could even go up to 500 metres with a single device, if you wanted. Someone once told me that they use microwave detectors on the border between Mexico and the USA, each guarding a 500-metre length of border. A truly invisible wall.

Which means that President Trump's wall was, in fact, already there. Nevertheless, for a thorough job, there can't be any obstacles between the transmitter and the receiver. It doesn't matter if it is infra-red or microwave detection: the space between the transmitter and receiver must be, and stay, free. This means that when the system is switched on, no containers, lorries or other obstacles can be in the detection field, because if that happens, the system will not work.

Returning to the example of the transporter: if he parks his lorries 3 metres from the fence, he can use a field-detection system. In that case, he can secure his entire perimeter on that side with just one device. The transmitter is on one side and the receiver directly opposite. This means that the perimeter is covered, up to 200 metres long and it will only cost a third of the cost of a fence.



An infra-red column does not necessarily have to be combined with a fence; it can also stand alone.



So, does that customer no longer need a fence?

Well, to be honest, he does. Needless to say, you don't want every dog that pops in for a sniff around to run through your detection field. And it wouldn't be convenient either if everyone can get their hands on the equipment, in order to possibly sabotage it. In other words, you will nearly always need a fence as a physical barrier. But you will find that, compared with fence detection, the requirements that the customer must set for his fence have already been adjusted downwards. The only thing that is lost is some space on the property.

Nevertheless, there is one point worth noting. Field detection systems work in a straight line, and unfortunately, not many fields are perfectly square or rectangular. It's very rare that you can make do with four 200-metre devices. Every corner, bend or kink of the perimeter line means not only an extra detector, but also additional digging for data and power cables. Sadly, architects who take this into account when designing building plans are thin on the ground, unless you are lucky enough to find one who has already designed several prisons or nuclear power plants. In practice, you will often have an impressive array of corners, bends and recesses, which undo the economic benefits of field detection. But we have all had to deal with this type of hassle, as standard fences are no different. The thing is that a corner post comes with a different price tag than an infra-red column.

These columns are made of dark Plexiglas and are available with photocells that can bridge various lengths. For proper security results, it must be high, so that people cannot jump over it. In practice, this means a height of 2 to 2.4 metres. This column houses small transmitters. These transmit an infra-red light beam, invisible to the human eye, to the opposite column, which houses receivers.

This infra-red beam is also called a 'beam' and is often only a few centimetres wide and high. In other words, a single beam in a column of 2 metres high is not very useful. That is why the column houses several beams, so that there is a beam every 20 to 30 centimetres. This is also known as a light screen. Because the column is made of dark acrylic glass, intruders cannot see exactly where the rays are – so that, in principle, they won't be able to get past it. The risk of interrupting a beam is too high.

The main strength of this technology is actually the relative simplicity of operation and installation. If you can build a fence in a straight line, you can also place two columns in a line, facing each other. The columns need a foundation, and communication and power cables. The power supply is usually just 230 volts, with the transformer housed in the column and equipped with an emergency power battery. Heating is also often built into the columns to prevent condensation in cold weather.

The invisible rays of light do not extend further than the distance between columns. And there is your next advantage: the detection width is small, which means that the system is suitable for use where





space is limited. For example, at façade openings in front of a lorry docking platform, or between a fence and a row of parked lorries. A 50-centimetre opening is sufficient for the infra-red system to do its job.

You do need to make sure, however, that intruders cannot use the fence as a stepping stone to jump over the invisible rays. After all, there is one thing they know for sure: the units that create the invisible light are located in the column. In other words, there is nothing above the 2-metre column: no invisible rays and therefore no detection. If they can come up with a plan to get on top of the columns, they're in. So, it is actually better to position the column more than half a metre away from the fence. Again, field detection requires a certain amount of space.

As it happens, the preventative effect of this system is very impressive. Intruders will see two dark columns of 2 metres high, about 100 to 200 metres apart. The space in between is clearly left free and the vegetation between the columns is kept short. Any fool will understand that there is something there that has to do with security.

But they won't be able to see how many rays there really are in the column. In case you are wondering, those so-called James Bond glasses that help you see beams? There's no such thing (for now). Then again, maybe James's employer MI6 does indeed have 10.000-pound night vision goggles with which you can see the infra-red LEDs, but the binoculars, cameras and glasses of the average burglar won't be able to.

I actually once sold a few columns to a private individual who, to save costs, decided he only wanted a single beam installed at a height of about 100 centimetres. Apparently, there has never been an attempt to enter his premises and he never had any unnecessary alarms triggered because of dogs and cats.

The system comes with a few disadvantages, however. In practice, the lower beam is often set off by roaming rabbits, dogs and cats, unless the system is set up between two fences with game mesh. This is why the beam is often placed a little higher or programmed to set off an alarm only if it is interrupted at the same time as a higher beam. The downside here is that your slender burglar type may be able to crawl underneath it.

However, if you install the columns in such a way that the light beams run right in front of a façade, for example, with a docking platform or something similar, this will of course not work. You could also choose to just accept these unnecessary reports due to small game and have a camera installed for verification. This does mean that grass and weeds need to be mowed regularly. And in areas with lots of snowfall, that snow will need to be cleared. Also, because the infra-red beams run horizontally, the system is difficult to use on hilly or sloping terrain. This will often result in a large gap on one side with a risk of someone crawling under.

The infra-red light may be invisible to the human eye, but it is indeed light. This means that the acrylic glass has to be cleaned regularly.







Especially in coastal areas or in the vicinity of heavy industry, this means that the customer has to go outside with a bucket of soapy water every month. It also means that the system may struggle in bad weather, just like cameras. If there is fog, hail or snow, the light from the transmitter will stop reaching the receiver at some point. This will trigger an error message.

The greater the distance between transmitter and receiver, the more frequently interference will occur. Whether or not this is acceptable depends on the object that is being protected. The Netherlands, for example, sees around 2 to 5 days of dense fog per year, with visibility under 200 metres, and a similar number of days with very dense fog, with visibility up to 50 metres. The risk manager needs to do some probability maths here. This is the reason that this technology is used less often in areas with very high security risks, especially if the alarms also need to be verified with video camera systems. In that case, you are left exposed in bad weather: no detection and no image either.

The latter reasons in particular mean that bi-static microwave detectors are often deployed for really high-risk objects. These are also known as radar systems, although that is not actually technically correct. A radar system consists of a single device that houses the transmitter and receiver. These work with the so-called Doppler effect, which I will elaborate on another time. What I mean in this case are microwave detectors that consist of a separate transmitter and a receiver. Hence the word 'bi' in bi-static microwave detector.

A three-dimensional electromagnetic field is built up between the transmitter and receiver. We are actually talking about a detection field with no gaps here. The transmitter and receiver heads are mounted on mounting posts at a height of approximately 80 centimetres and, depending on the range, between 50 and 500 metres apart. Usually, parabolic antennas – dishes – are used that build up a detection field that looks like a cigar. This field can be up to 5 metres wide and high in the middle. It results in a wall that no one will get past unnoticed – well maybe with the exception of Spiderman.

Installing a microwave system is very simple: just put mounting posts in a foundation, and then you only have to put a power and a communication cable there. Aligning the transmitter and receiver works in about the same way as aligning a satellite dish on the roof, towards the satellite. You turn it back and forth until the signal is at its strongest, and you're done.

Well, almost. The sensitivity is often adjusted with software. But here is the beauty of this technology: it makes it possible to determine at what volume and movement speed of a detected object an alarm should be triggered. An example: humans have a relatively large volume compared with a rabbit or the neighbour's cat. We are also relatively slow, particularly if the system is located between two fences, as is often the case with high-risk objects.





To avoid blind spots, the transmitting and receiving heads are positioned so that the detection beams overlap.

If you adjust these two criteria – volume and speed – as the alarm threshold, you can create a highly reliable detector. Reliable means, in this case, a detector with a high sensitivity, but at the same time few unnecessary alarms. The detector will pick up any walking, jumping or crawling person, while two small rabbits, for example, don't have enough volume and mass to trigger an alarm. What's more, the system is completely insensitive to weather conditions. It will continue to do its job, even in fog or heavy snowfall, hail or rain. This makes for an effective system, which is a lot cheaper than employing a guard with a dog. Also, it may be a struggle to drag the dog out in bad weather.... and then it may go after the rabbits...!

So, is this technology the best field detection system?

It is certainly the most economical, given the distances that can be bridged with it. And it is also one of the most reliable systems, with the lowest number of unnecessary alarms. However, you have to know where and when to use it. A number of minimum requirements need to be met, the most important being space. Microwave detection needs space in order to work properly. The detection field is wide and high, so make sure that space is available.

Depending on the antenna used and the frequency at which the device works, you may easily need 3 metres in width and height, along distances of up to 100 metres. With greater distances of up to 200 metres, this quickly increases to 5 metres, and for 500 metres bridging distance, the detection beam is 10 metres wide.

That is why the security strip between two fences is always at least 3 metres wide in high risk situations.

If this space is not available, you can forget about using a microwave system. It often means trees and shrubs have to be cut down and containers put aside, or that you have to revisit the idea of the previously discussed infra-red columns or cameras. Speaking of trees, make sure that no branches or bushes blowing in the wind can enter into the detection field. After all, a shrub that is bare in winter may expand considerably in spring, and therefore have enough volume to set off the alarm in the detector.

The substrate is also important; the more stable and even this is, the better. Paving with asphalt or bricks is preferable. Gravel is also an option. If these options are not possible, make sure that the grass or weeds are mowed regularly and that it never grows higher than 20 centimetres. Otherwise, over a great distance, tall grass will still result in enough mass in motion to trigger an alarm. I see it all the time. *"Our radar system always sets off the alarm. And at the weirdest times,"* they tell me. When you go and take a look, it turns out that the weeds are at knee height. High enough for it to be pretty much impossible to connect with the receiver head that is 100 metres away at a height of 80 centimetres. No wonder that if this mass is moved by wind or heavy rain, an alarm is triggered.



So if you are going to use microwave or radar detection, create enough space and maintain the environment properly. If the customer manages to do this, it is the most effective form of field detection. There is a good reason why you see these systems used in almost all high-risk situations, such as at military bases, prisons, nuclear plants, industrial complexes and anywhere where large perimeter distances need to be monitored.

There is, however, an important fact to bear in mind when using this system. The transmitter builds up an electromagnetic field via a parabolic antenna, and this field only reaches the ground after about 3 metres. This means that there is no detection right below the detector, both on the transmitter and the receiver side. This is also known as the blind spot. An intruder could easily crawl under here undetected. In practice, you can solve this by allowing the different detection fields to overlap. This is easy to see in the corners, when two heads are positioned close together, with the detection fields intersecting a few metres away. A layperson might ask, "Why don't they put those heads together on a single post?" Well, that's because of that blind spot. (See picture).

You have to make sure that the transmitter does not transmit to the wrong receiver. The two devices close together in the picture, forming an angle, are either two transmitters or two receivers. They could not possibly be the sender on one side and the receiver on the other side, since they would interfere with each other, which you don't want.

This system, too, is difficult to apply in hilly terrain. You can tilt the heads slightly, but they have their limits. Smaller distances are often used, depending on the slope angle. For example, 50 metres or less. This does adversely affect the economic advantage, however. The microwave system really comes into its own on walls and roofs. Positioning them high on the inside of a wall with wall brackets creates the perfect climb-over detection. The detection field stays on the inside of the wall, but does protrude above it. Detection will be activated as soon as someone climbs on top of the wall.

These detectors also work perfectly inside two fences. That is, if they are at least 3 metres apart. Due to the physics of the Faraday Cage phenomenon, the detection field will stay within the fences. Even if someone walks right past the fence, as long as they are on the outside, there will be no detection. And dogs can do their business as well!

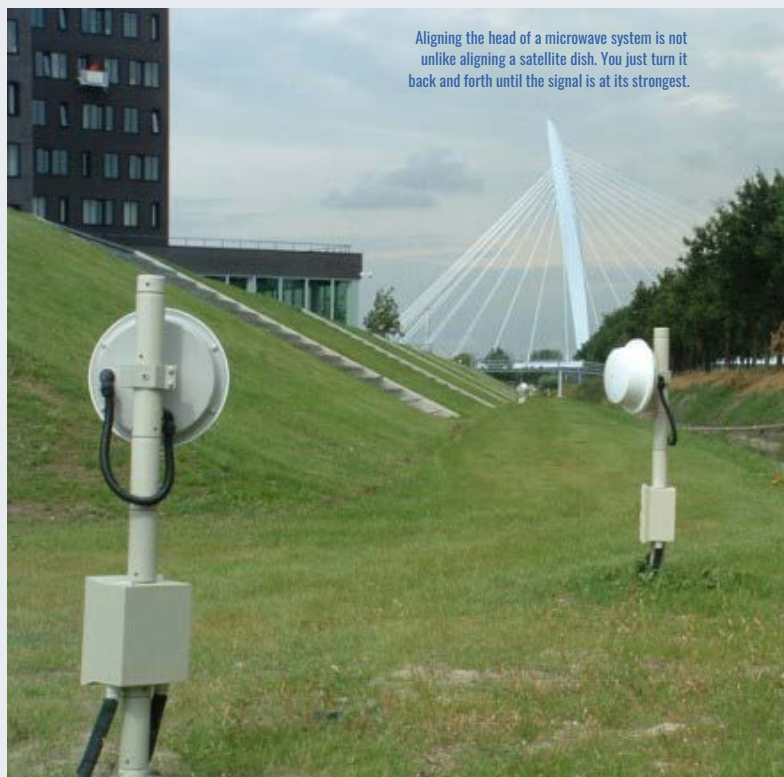
If the system is used between two fences or walls, the safety risk can be even further reduced with extended mounting posts and an extra set of heads. The lower set detects intruders crawling and walking. The upper set makes jumping, swinging or even building a bridge impossible.

The preventative effect of microwave systems is also very high. Burglars will see the units standing or hanging, but they won't know where the detection field begins or ends. In fact, the detection field is a lot higher and wider than people would expect. They are probably already right in the middle of it. In addition, the system requires little maintenance. The heads should not change direction, so you should check they are properly attached once a year. Stainless steel brackets and mounting hardware are highly recommended for this system. It's also a good idea to check the

interior for moisture, because moisture and electronics are not the best combination. Therefore, always use the sealing rings and the cable glands during installation, which any manufacturer worth his salt will supply. Finally, you may want to do a tiger crawl test just to be sure. And that's it, you're done. In the case of large perimeters, you may want to put on knee pads – trust me. And in winter, I would also bring some extra dry and warm clothes. Anyway, I'm rambling on. You are used to all this, I'm sure.

Oh, one last thing: very occasionally people want to know whether these electromagnetic fields are bad for your health. Especially if they are in operation twenty four seven in high-risk places. Once, when I was in a silly mood, I asked a man at a trade show if he already had children. He was quite taken aback. But in all seriousness, the field that is being built up is directed between the transmitter and receiver in a security zone where, in all probability, people aren't constantly around. The power radiated by the transmitter is usually only 1 milliwatt. Compare that with the power of your phone that you hold close to your head all day long which puts out 1 watt on average. As a result, microwave systems can be used without a transmitting license. It is possible, however, that different countries work with different frequencies. Most frequencies are around 10 gigahertz, but the systems that have to bridge large distances may also use the 24-gigahertz band.

But what do you do if your customer does not have enough space for field detection, or is not keen on unsightly columns in their garden? In that case, there is still the option of invisible ground detection. You can find out more about this in the next column. ■



Aligning the head of a microwave system is not unlike aligning a satellite dish. You just turn it back and forth until the signal is at its strongest.



Another great picture of the airplane flyover across the A3, to finish.



This picture from South West Microwave shows the cigar-shaped detection beam – and the blind spot under the head – of a microwave system



# According to a survey of 100 installers:

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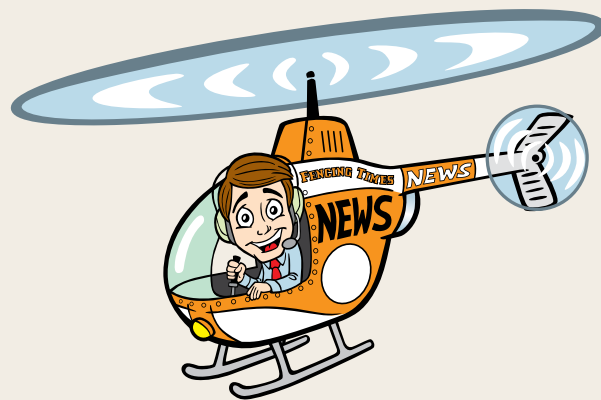
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# FENCES IN THE NEWS



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 bocchia:

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-Schiffahrts 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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to reinforce our editorial team.

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You will actively seek out information of interest to fence installers. You will contact producers, wholesalers, trade show organisers and industry associations on the phone. You will scour their websites, follow them on social media and look for them at trade shows and other events and quiz them about developments in their company or organisation. Then you will sieve this information for newsworthiness and write an article about it – or deliver the information to a copywriter.

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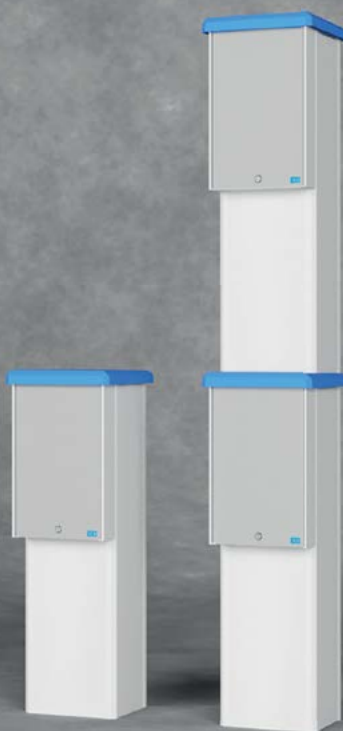




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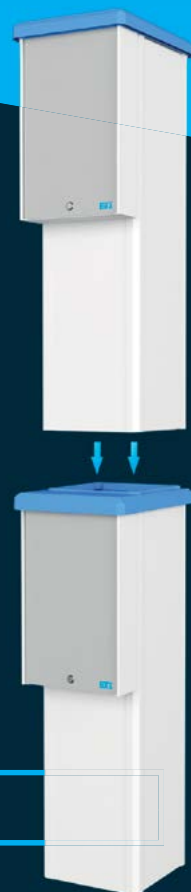
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