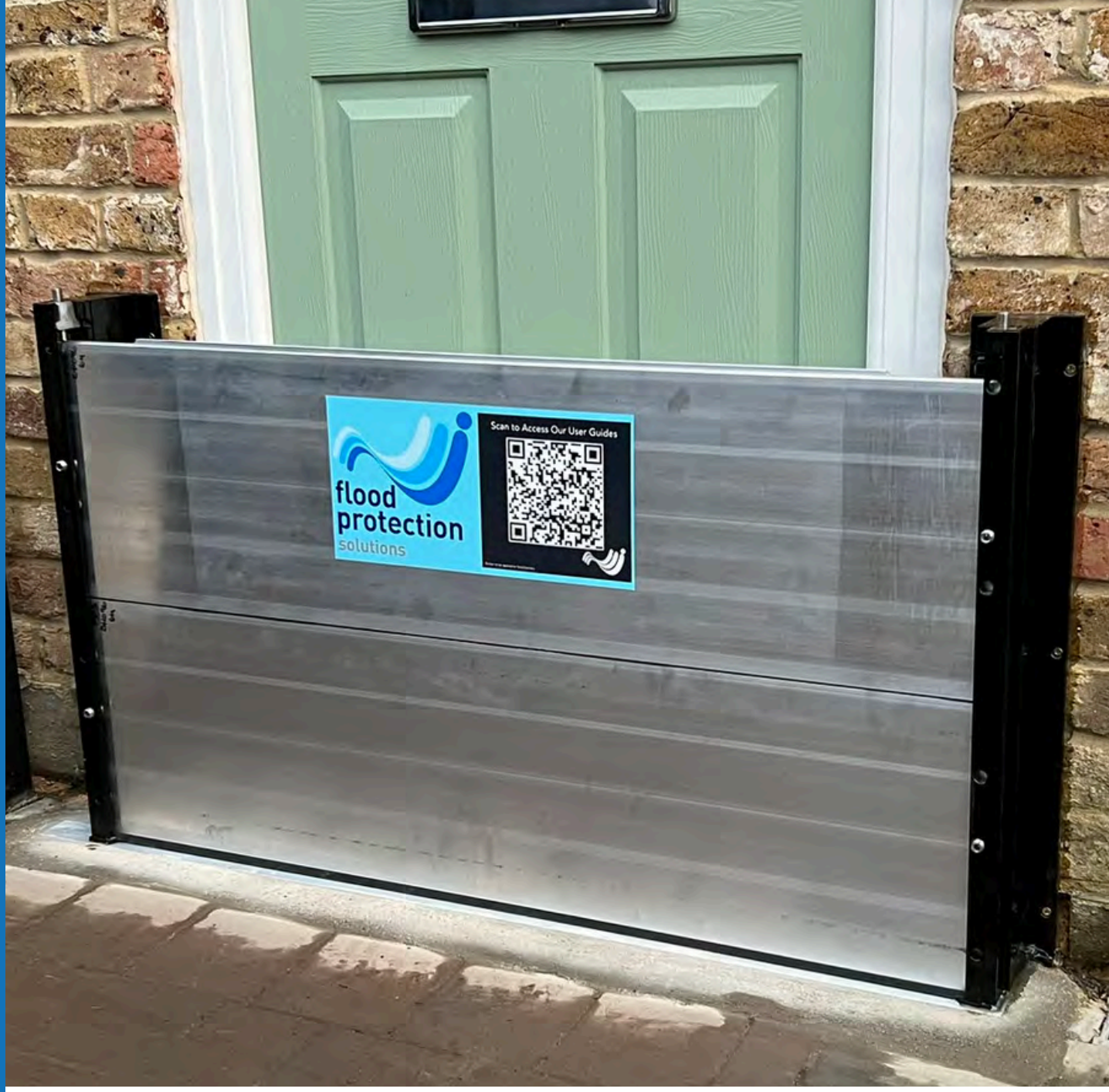
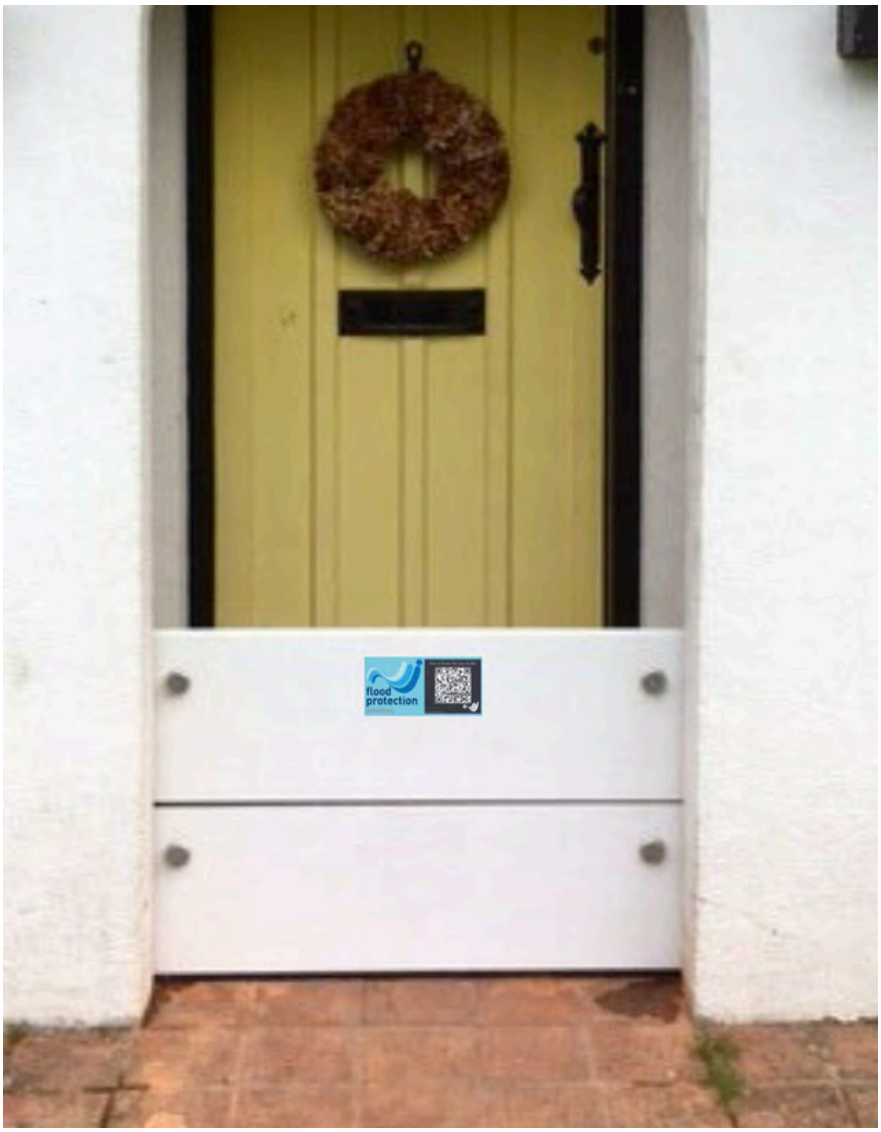


FLOOD BARRIER INSTALLATION

A Practical Guide and Key Considerations



The complexity of installing a flood barrier very much depends on the **type of barrier** and **where it is being installed**.

For example, a flood barrier that is face fixed or reveal fixed into good-quality masonry, with a flat and level threshold, can be quite simple. By contrast, installing a driveway flood barrier across a wide opening, particularly one with demountable posts, is more complex. These systems often require new foundations to be formed or ground inserts to be core drilled into the ground, all of which must be suitable for the intended site usage.

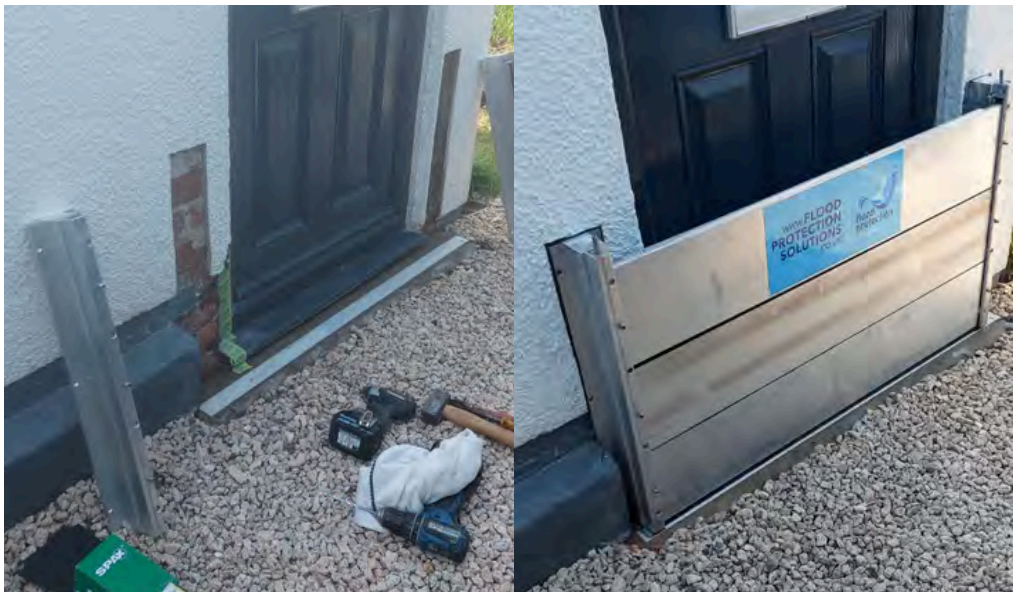
UNDERSTANDING THE BARRIER AND THE SUBSTRATE

Before any installation begins, it is **important to understand** both the **barrier system** and the **substrate** it will be fixed to.

A flood barrier may be capable of holding back water, but its performance is only as good as what it is fixed into.

Walls should be checked for condition and suitability. Uneven stonework, weak mortar, or poor-quality masonry may require remedial works such as repointing, localised flattening, removal of render, or in some cases the construction of new pillars or cast concrete sections to provide a flat and structurally sound fixing surface. These considerations should be identified early, ideally before the barrier is ordered, to ensure correct sizing and detailing.

For instance, the images below show where render was cut back to allow the barrier rails to be fitted to the brickwork:



The image below shows where repointing was undertaken to brickwork using a waterproof additive, prior to the installation of flood barrier across openings at the property:

Repointed with waterproof additive; curing in progress

GROUND CONDITIONS AND GROUNDWORKS

Ground conditions are **critical**. Both Nautilus and FPS Flood Barriers **require a flat and level ground** for the barrier to compress down and seal onto. This will also need to be **resistant to water ingress**.

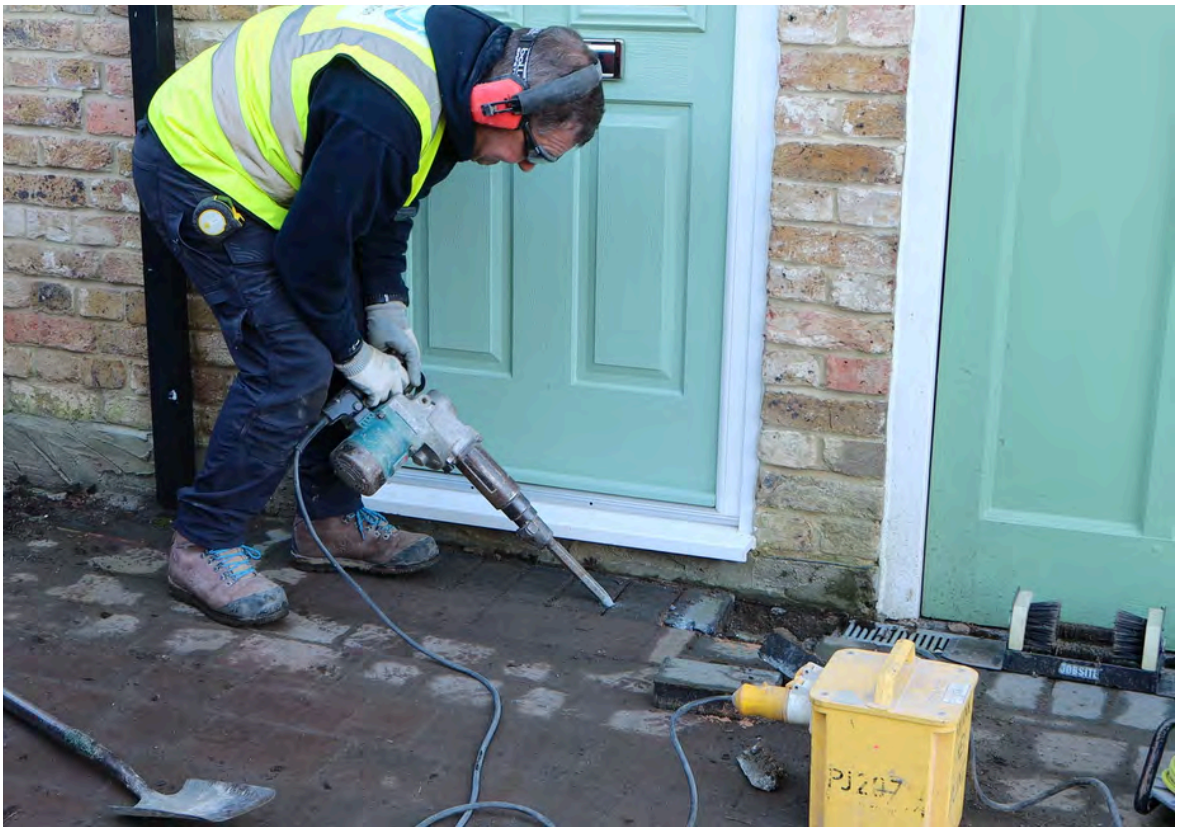
Note: Block Paving would not be a suitable substrate to compress onto without groundworks, the blocks are laid on sand, and gaps between will allow water to pass under the barrier.

If the ground is already flat and level, and the barrier is a single width, it may be possible to install the barrier with no groundworks at all.

It is also essential that the position of the rails is established first, so that any ground strip or foundation is formed in the correct location.

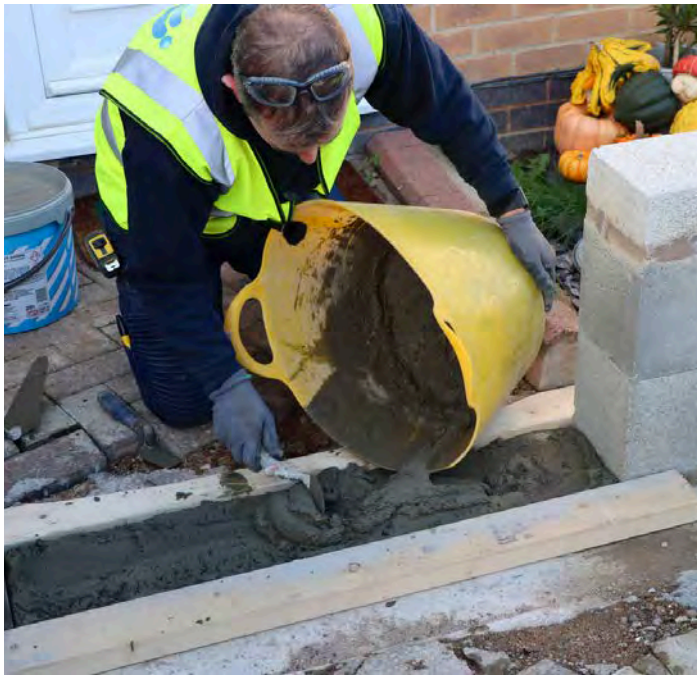
Where this is not the case, ground preparation will be required. Typical options include:

Cutting into existing slabs or breaking out ground to install a ground strip, as pictured:

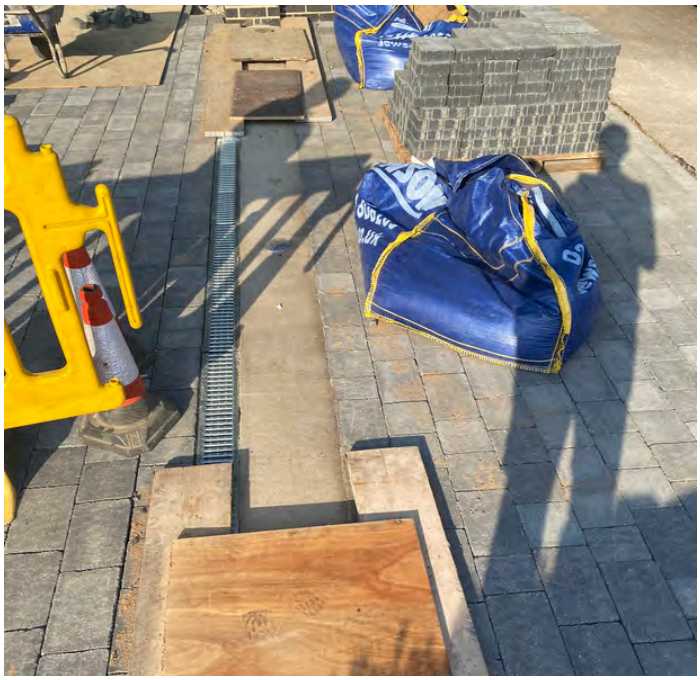


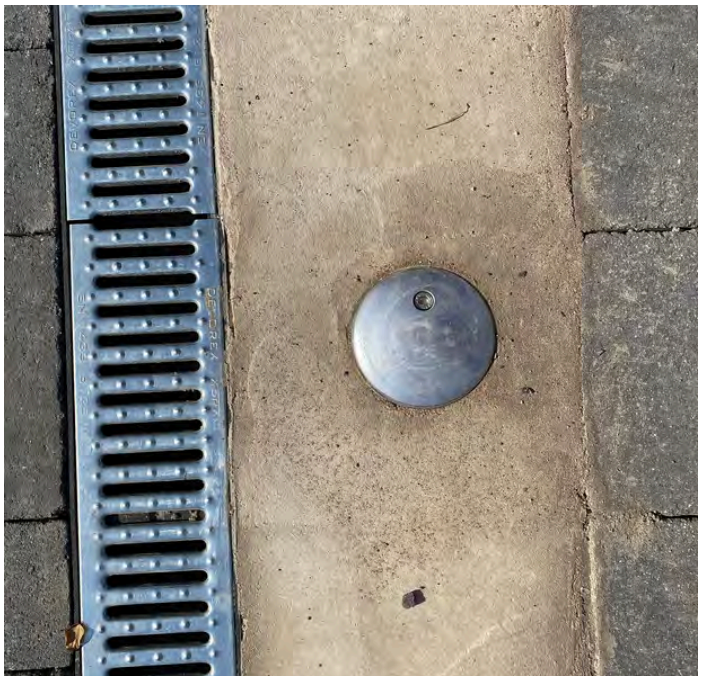
Pro tip: Falsework refers to temporary shuttering removed after the concrete has cured, whereas formwork remains in place. Both are shown below — timber shuttering in the first image, and a garden step used as permanent formwork in the second.

Casting a ground strip into the ground using formwork or falsework.



Installing a new concrete foundation, with depth and material choice determined by ground conditions and intended usage.

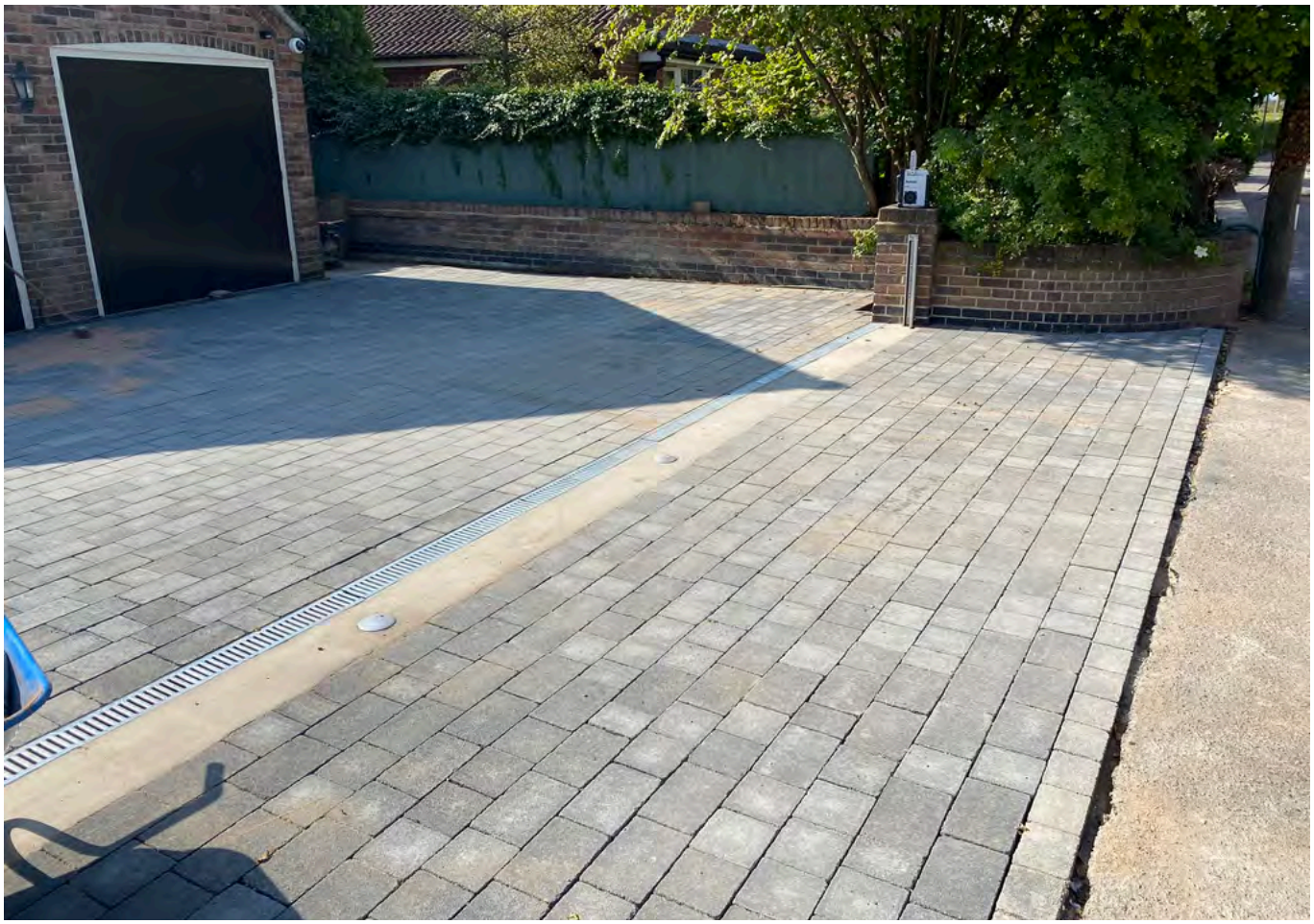




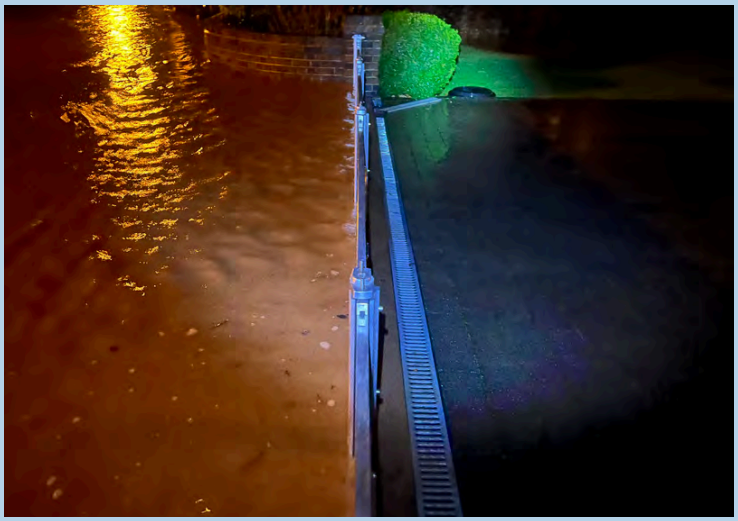
The images above show a new concrete foundation installed for a Nautilus Flood Barrier across a driveway. The works were carried out as part of the driveway reinstatement.

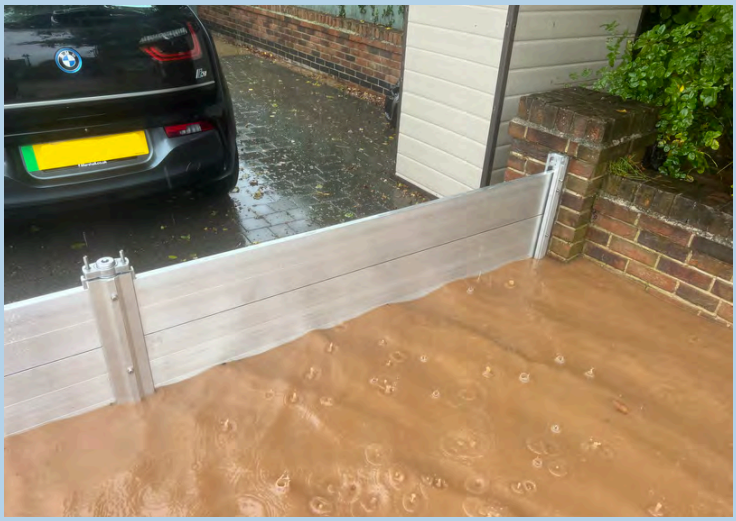
While the barrier foundation itself was designed to withstand vehicular loading and limit water ingress beneath the barrier, flood risk was also addressed in the wider driveway design. The block paving in front of the barrier was bedded into mortar rather than sand, preventing displacement during flowing floodwater and making post-flood cleaning easier. This detail also helps reduce water passing beneath the barrier foundation.

Behind the barrier, the block paving was laid on sand in the conventional manner. A channel drain was installed and connected to a soakaway, supplemented with an automatic pump to operate during flood conditions.

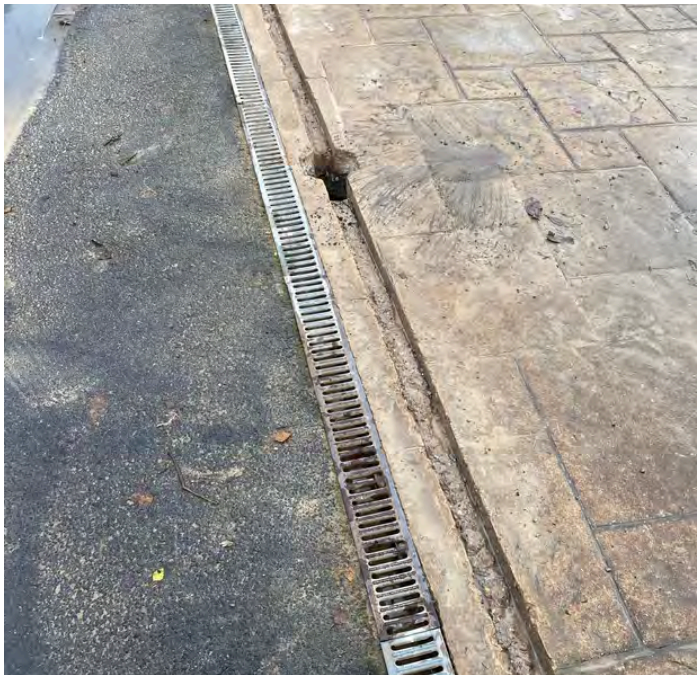


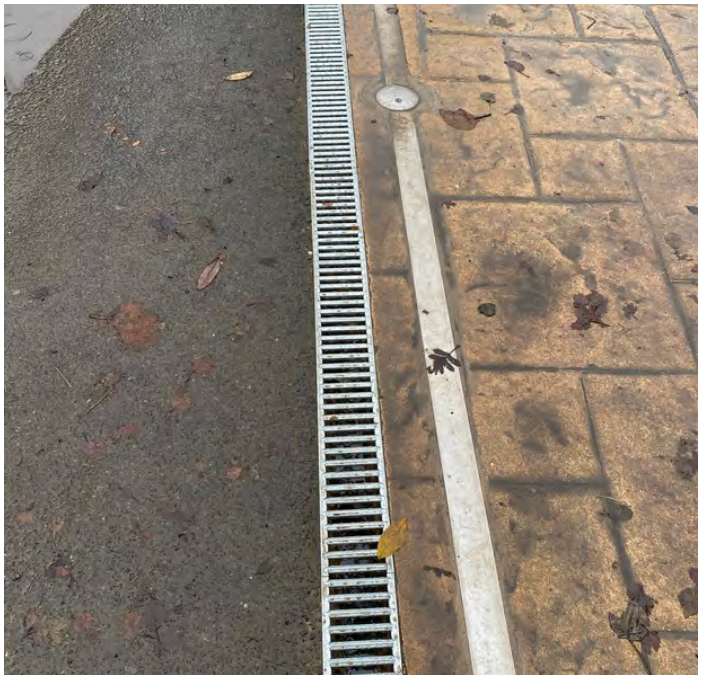
The images below show the barrier system deployed and performing as intended:





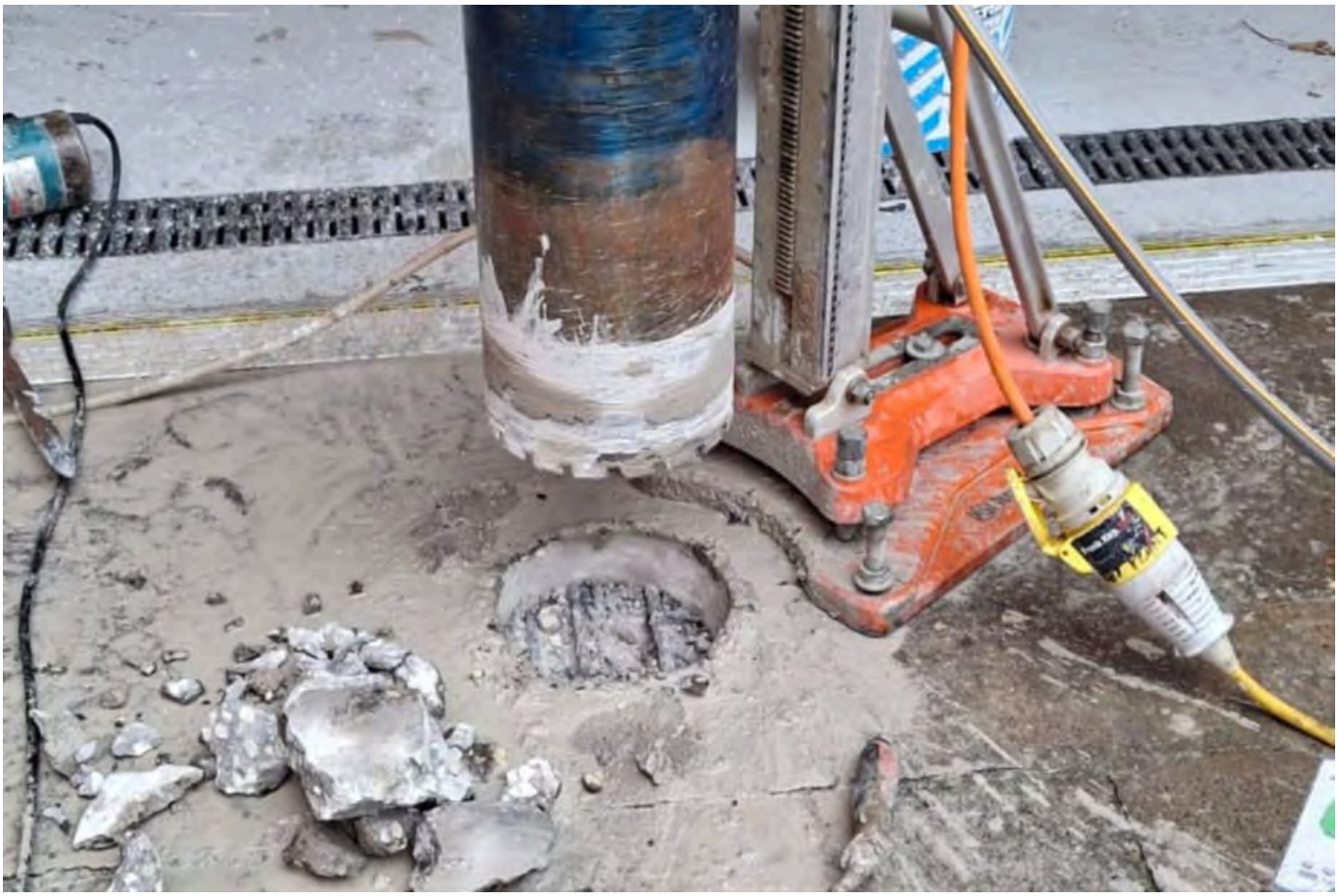
Core drilling or excavating to install ground inserts for demountable posts.





Where demountable posts are used, these must be set plumb, level in both axes, and flush with the surrounding ground to minimise the risk of leakage.

Care should be taken when core drilling, as reinforcement may be present within concrete slabs.

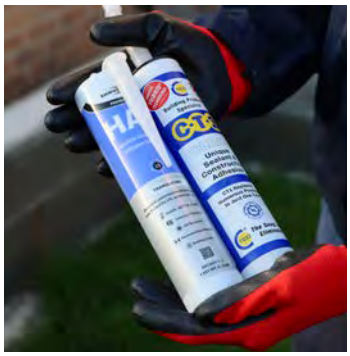
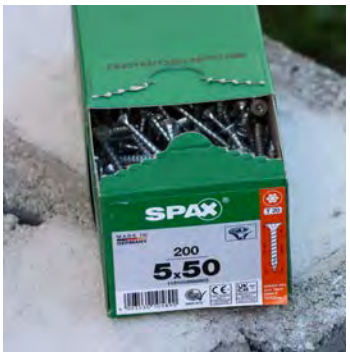


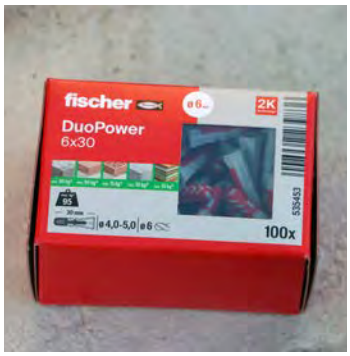
MATERIALS COMMONLY USED

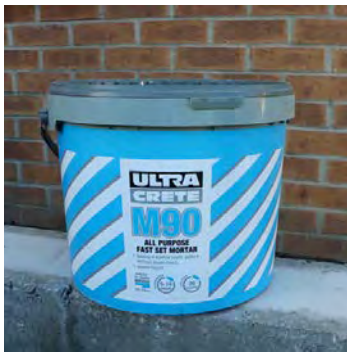
The materials used will **depend on the installation** and **substrate**, but typical considerations include:

Sealants
CT1 is commonly used as a hybrid mastic providing sealing capability and adhesion. HA6 may be suitable depending on the substrate and detail.

Screws
At FPS we tend to use WIROX-coated SPAX screws to reduce the risk of corrosion. Screws are not interchangeable; some stainless steel can be brittle, while other fixings may be too soft. For a single-door installation, either face fix or reveal fix, a 5 × 50 screw is commonly used. Where packing is required, longer fixings may be necessary. Final selection is always site-specific.

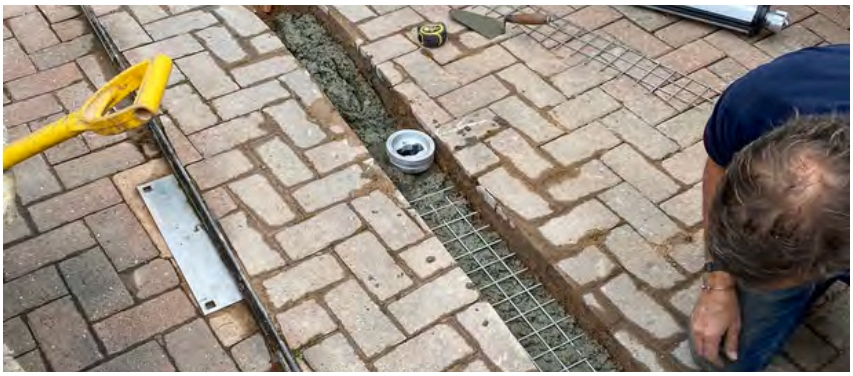







Wall Plugs
Plug choice depends on the substrate, but the Fischer Duopower 6 × 30 is a popular and reliable option for many installations.

Concrete and Mortar
Where ground strips or foundations are required, fast-setting concretes such as M60 or M90 are commonly used due to their strength and rapid set. Alternatively, a mortar mix with an SBR additive may be suitable.



Demountable post installations and larger foundations will require concrete, which, may require reinforcement depending on loading, depth, ground conditions and intended usage.

TOOLS REQUIRED

Tool requirements will vary by installation, but for most installs you will need:
- **A drill (230V is suitable for domestic work; FPS installers typically use 110V or battery tools)**
- **SDS drilling capability for masonry**
- **A spirit level to check alignment in all axes (a laser level may be helpful)**
- **Wipes for sealant application**
- **Suitable PPE**

More complex installations may also require concrete mixing equipment, breakers, saws, grinders, formwork tools, polishing pads for ground strips, and general hand tools.

INSTALLING THE RAILS

It is highly advisable to allow any **concrete to fully** set before installing the rails.

When installing the rails, locate them in position with the neoprene pad underneath, ensuring the pad will be compressed. Mark the fixing holes using a pen, a marker such as a MarXman, or by creating pilot holes. Use a spirit level (or a laser level) to ensure the rail is straight in all axes. Then drill the holes, and install the wall plugs.

On straight masonry walls this is relatively straightforward. On uneven or stone walls, additional work may be required, including packing, localised mortar work, or creating a flat fixing surface. The neoprene pad is supplied oversized and can be trimmed to suit, as shown in our installation videos.

Following drilling, it is advisable to vacuum up any dust, and wipe down surfaces to ensure they are clean prior to using any adhesive or silicone.

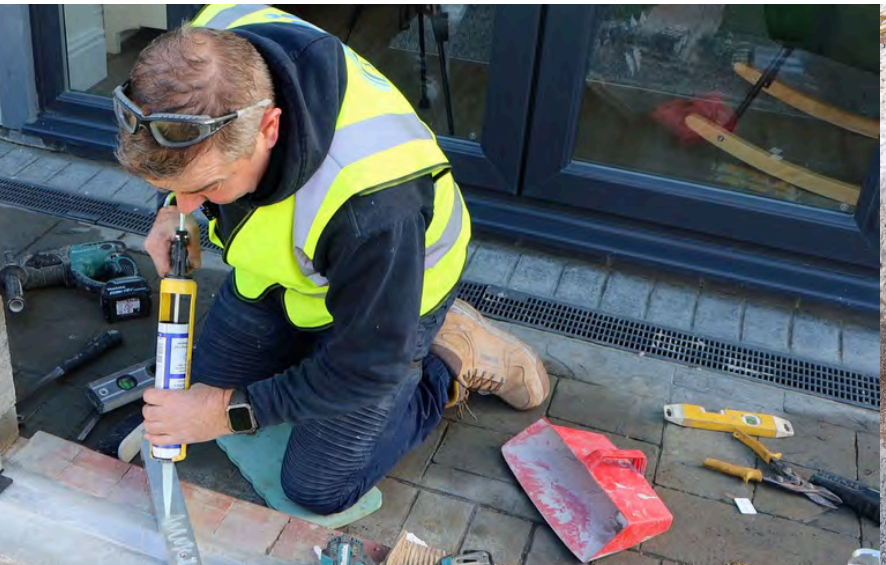
Apply a small amount of silicone beneath the neoprene pad to hold it in place before positioning.

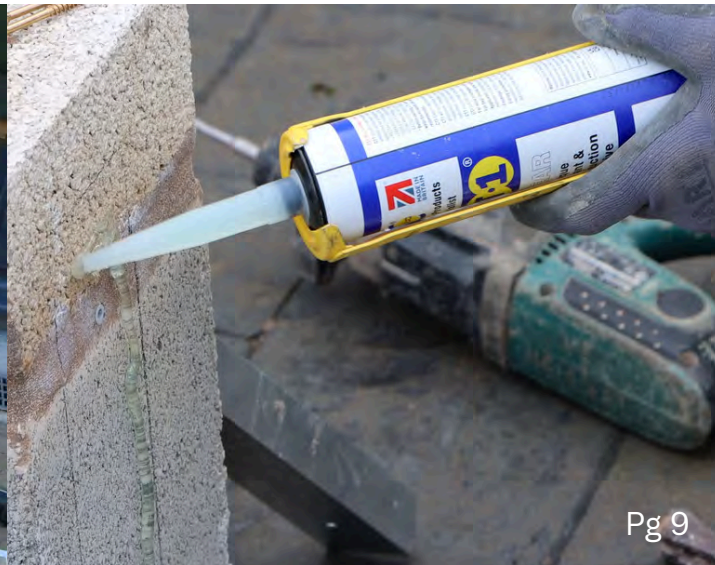
SEALING AND FINISHING

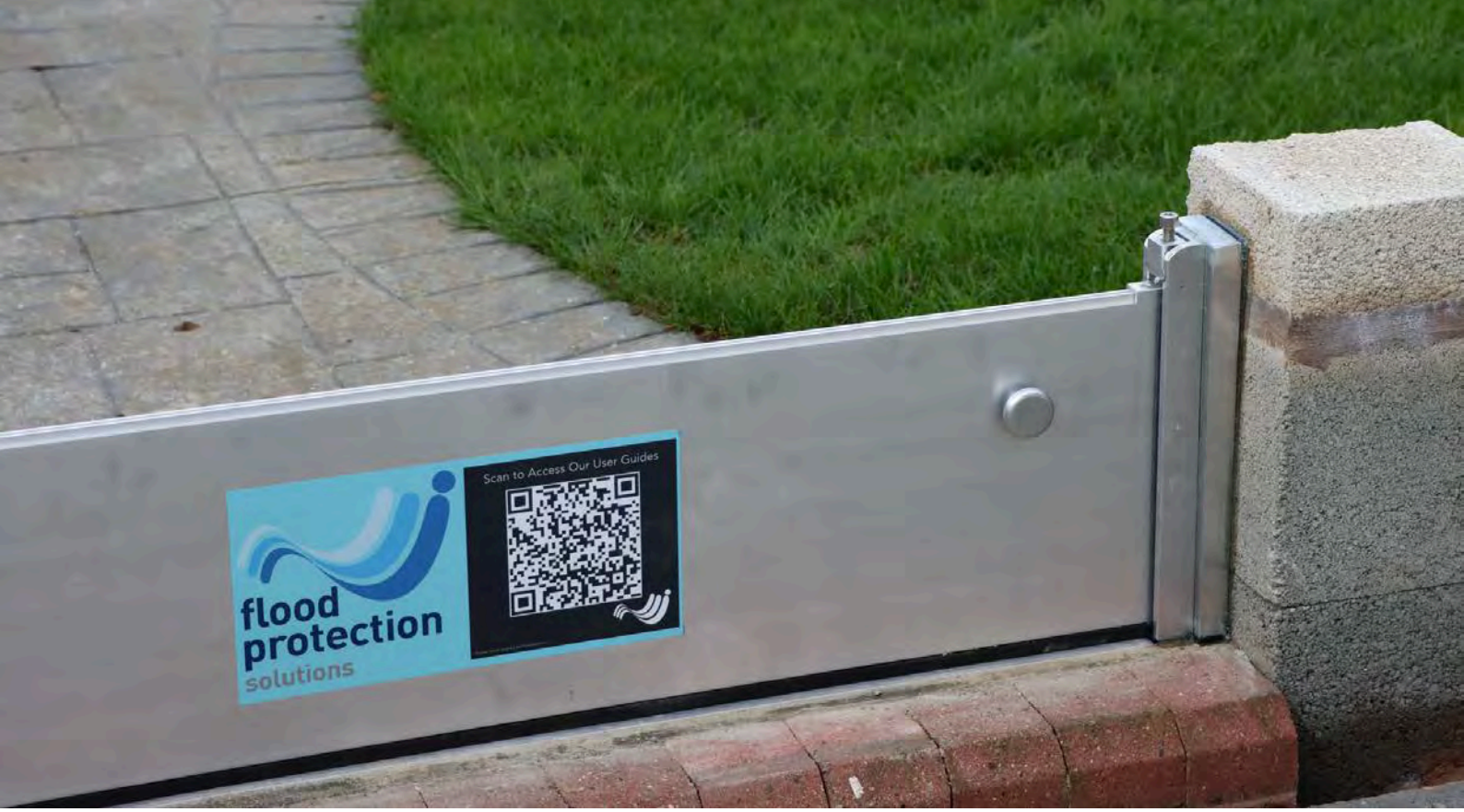
Before fixing the rails permanently, apply silicone to both the rail and the wall.

Once the rail is screwed in place, seal around it thoroughly, ensuring it remains straight, level, and fully sealed.

Ahead of deployment, and for maintenance, it is recommended to use silicone spray on the seals.





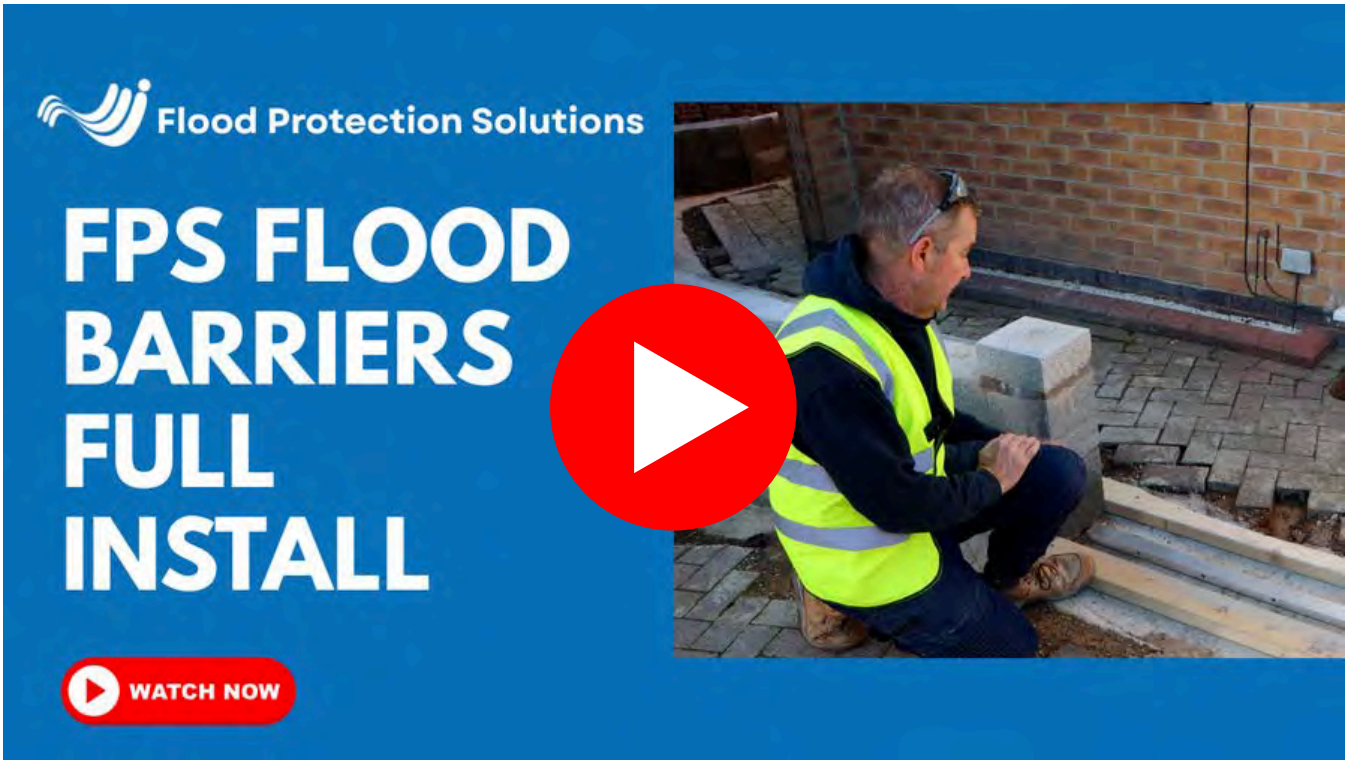


Many installs are quite simple and can be tackled by a competent DIYer, or suitably qualified tradesperson, however a flood barrier is only as effective as its installation.

Getting the basics right is what makes the difference when it matters and of course ensuring suitable materials and structures are used where the installation will be exposed to significant traffic, such as vehicles accessing a driveway.

We offer both supply-only and fully installed flood barrier solutions, depending on what is appropriate for your site.

FULL INSTALLATION VIDEO



flood protection solutions

CONTACT US

The FPS Barrier ® is a high-quality flood defence barrier system that provides an effective and easy-to-install solution to keep your property safe from flooding. This durable and watertight barrier is perfect for properties located in flood-prone areas, ensuring peace of mind during flood events.

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