



Operations, Maintenance & Installation Guide



 Call our Expert Sales Team for more information.

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Introduction

Welcome to your purchase of the EnviroProtect® Railing and gate range. If you're the purchaser, installer, site owner or operator of your new system, this Operations, Maintenance and Installation manual will serve as a guide on recommended installation practice and maintenance required to ensure compliance to the LPS 1175 SR1 (A1) certification.

Product Ranges Included:

- EnviroProtect® 1.8m to 3.0m High - 2.9m Wide Fencing Kit
- EnviroProtect® 1.8m to 3.0m High - 1.0m to 5.0m Wide Single Leaf Gate Kit
- EnviroProtect® 1.8m to 3.0m High - 2.0m to 10.0m Wide Double Leaf Gate Kit

- EnviroProtect® Anti-Climb 1.8m to 3.0m High - 2.9m Wide Fencing Kit
- EnviroProtect® Anti-Climb 1.8m to 3.0m High - 1.0m to 5.0m Wide Single Leaf Gate Kit
- EnviroProtect® Anti-Climb 1.8m to 3.0m High - 2.0m to 10.0m Wide Double Leaf Gate Kit

Disclaimer: This guide is for informational purposes only. The installer is responsible for ensuring the installation complies with all relevant British Standards, including but not limited to BS 1722 (Fences), local building regulations, codes of practice, and site-specific risk assessments. While every attempt has been made to verify the accuracy of the content in this guide upon its release, we cannot accept liability for any losses or damages resulting from inaccuracies. All tasks outlined must be carried out by certified professionals. Any deviation from these instructions nullifies any guaranteed entitlement or liability from the manufacturer.

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Contact: For enquiries regarding the installation, operation or contents of the guide in relation to this product please direct your questions to: The Product and Drawing Office Manager, First Fence Ltd, Off Kiln Way, Swadlincote, South Derbyshire DE11 8EA. Or email sales@firstfence.co.uk.

Competence: This product must be installed by a person of competence, defined as an individual who possesses the necessary knowledge, skill, and experience in the installation of fences and gates.

1.0 Safety & Tools

Personal Protective Equipment (PPE)

The following minimum PPE is required for installation:

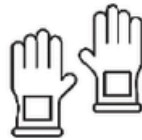
Hard Hat
Must be worn



Eye Protection
Must be worn



Safety Gloves
For all material handling



Foot Protection
Must be worn



Risk Assessment

Installers are responsible for completing a site-specific risk assessment and complying with all local risk assessments before starting work. This responsibility includes, but isn't limited to, the following:

Activity	Risk Assessment Requirements (and Not Limited to)
Breaking ground for excavations	Noise, Vibration, Manual Handling
Post Installation/Concrete Mixing	Hazardous Substances (COSHH), Manual Handling
Installation of Fixings	Noise, Vibration
Handling Panels & Gates	Manual Handling, Crush Injuries

Tools & Equipment

Safety Gloves

Required for all material handling.
Required for any COSHH tasks
including post mix. Required for any
installation tasks.



Spanner/Torque Wrench/Drill

Required for nuts and bolts
(drill for bolt-down system)



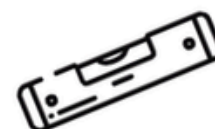
Time

Required for post
mix curing.



Spirit Level

For plumb (vertical) and
level installation



Shovel/Excavation

For excavation of holes to
suit post foundations



Cable Avoidance Tool

To identify hidden services
embedded in the wall



Need Help Sourcing the Right Tools?

Give our friendly sales team a call today on 01283 512 111 who will happily help in providing a quote for all the tools and equipment you need to for the project.

2.0 Pre-Installation

Site Survey & Ground Condition

Thoroughly inspect the proposed fence line. Assess the ground's condition and structural integrity. Soft soil, waterlogged areas, or very rocky ground may require different installation methods. Ensure the entire path where the fence will run is clear of obstructions.

Underground Services

Before any digging or excavation for post holes, it is critical to establish and mark the locations of all underground services. Use a Cable Avoidance Tool (CAT) and consult utility plans to locate any buried electrical cables, water pipes, gas lines, or drainage systems to prevent dangerous and costly damage.

Materials Check

Unpack all fencing and gate components and verify that everything has been delivered and is undamaged. Check all parts against the Bill of Materials. Ensure all components are free from significant cracks, corrosion, or deformation.

3.0 Installation

EnviroProtect® Fence Installation

This guide covers the installation of both Dig-In and Bolt-Down fencing systems.

1.0 Post Installation (Dig In)

- Excavate holes at approximately 2960mm centres.
- The minimum foundation size is 700mm (L) x 300mm (W) x 300mm (D)
- Posts should be embedded into the ground according to the height of the fencing system, as detailed in the table below.
- Secure posts using Grade C20/25 concrete and ensure they are perfectly vertical using a spirit level.

System Height (Above Ground Level)	Foundation Size (Minimum)	In Ground Post Depth	Concrete / Post Mix Qty & Grade
1.8m High	700x300x300mm	700mm	3qty 25kg Bags (C20/25)
2.0m High	700x300x300mm	700mm	3qty 25kg Bags (C20/25)
2.4m High	800x300x300mm	800mm	3qty 25kg Bags (C20/25)
3.0m High	800x300x300mm	800mm	3qty 25kg Bags (C20/25)

2. Post Installation (Bolt-Down)

- No excavation is required. Posts are fixed onto a level, solid concrete base.
- The base plate size is a minimum of 150mm x 150mm with four holes designed for anchoring to the ground.
- Secure each post using four M16 x 125mm ground anchors as supplied with the kit. To install, simply using an SDS Drill and concrete masonry drill bit and ensure a depth of 125mm is achieved, then hammer each bolt into position ensuring the threads align with the holes in the base plate.



Warning

Before breaking ground, you must ensure the area is clear of underground utilities that are likely to be struck once drilling commences. Always make sure to install on a solid base, such as concrete, rather than on a surface prone to movement in varying climates, such as asphalt or debris.



Top Tip

Use the post base plate as a guide by drilling through the base plates hole with an M16 concrete drill bit and install the first ground anchor before drilling the remaining three holes. This will prevent any misalignment.

3.0 Installation

2.0 Attaching Panels

- 1. Attach the EnviroProtect® angled cleats inside the 50mm x 30mm horizontal rails of the panel.**
 - Note: The angled face of the cleat should be inserted into the end of the rail. For the top and middle rails, the return leg of the cleat points downward; for the bottom rail, it points upward.

- 2. Secure the cleats to the rails using the supplied M10 x 45 mm cup head bolts and finger-tighten the shear nuts.**
 - Important: Do not shear the nuts at this stage.

- 3. Repeat this process on the opposite side of the panel before positioning it against the post.**

- 4. Align the cleat legs with the corresponding holes on the post.**
 - Note: If holes do not align, use a 50 mm block beneath the panel to maintain ground clearance and aid hole alignment.

- 5. Once aligned, insert the supplied M10 x 80 mm cup head bolts through the cleats and post.**
 - For intermediate posts, feed the bolt through the adjacent panel's cleat as well. Finger-tighten the M10 shear nuts.

- 6. When the panel is securely positioned against the posts as per the EnviroProtect® certified railing drawings, fully tighten and shear the M10 shear nuts using a 17 mm socket and buzz gun.**
 - Repeat for all bolts to ensure full compliance and security.



Warning

Railing panels must be installed in accordance with the supplied drawing, and a 50mm ground clearance must be maintained to ensure complete LPS 1175 SR1 (A1) compliance.

2.1 End Post Installation Guidance

The process for an end post is the same as the above. Feed the M10 x 80mm Cup Head bolt through the outer post hole and through the rail cleat on the other face post of the post. Secure with an M10 shear nut and 17mm socket with buzz gun.

- Note: ensure this process is done before setting the end post into the foundation and concrete as posts installed against walls will prevent access with the bolts.

2.2 Narrower Railing Bays

If a railing panel needs to be less than 2900mm, then the installer must cut the panel to the desired length by making vertical cuts through the rails (and mesh if applicable), and drilling a 12mm hole 25mm from the end of the cut rails to ensure compliance with LPS 1175 SR1 (A1) is maintained.

2.3 Stepping and Gradients

The EnviroProtect® panels are not designed to be raked for gradients. When installing on a gradient, the bays must be cut down to achieve 50mm ground clearance and stepping the panels in shorter runs to maintain the 1.8m minimum effective certified height as specified in the LPS 1175 Revision 8.



Warning

To ensure LPS 1175 SR1 (A1) compliance, the end post shall be installed against solid substrates such as solid walls with a minimum height of 1800mm. The post should be installed as close as possible to the wall with a maximum gap of 75mm.

3.0 Installation

2.2 Corner Post Installation

The supplied intermediate post also works as a corner post with minimal modification. Following the same process as section 2.0, before the M10 x 80mm bolts are fed through, drill a 12mm hole through the post at a maximum of 25mm above or below the existing hole. The cleat should then be installed on the adjacent face using the supplied M10 shear nut and 17mm socket.



Top Tip

If access is a problem when shearing off the shear nuts, use a 17mm socket elbow to achieve the angle needed to shear off M10 shear nuts.

3.0 Gate Installation Guide

Applies to both Single and Double Leaf EnviroProtect® Anti-Climb Gates

1.0 Identifying Post Centres

Refer to the certified range drawing provided with your gate kit to identify the correct post centres:

- *Single Leaf Gate: Hinge post and catch post centre positions.*
- *Double Leaf Gate: Hinge post to hinge post centre positions.*



Warning

Ensure to follow the total width size as reflected on the range drawing. Excavating for leaf or opening size will result in offset foundations.

2.0 Installing Posts

Dig-In Installation:

- Confirm the area is clear of below-ground utilities before excavation.
- Follow the specified foundation depth and width as detailed in the approved drawing for your gate size.
- Ensure concrete is mixed and poured to the correct specification for stability and certification compliance.

Bolt-Down Installation:

- Position each post base plate on the concrete surface.
- Using an SDS drill with a suitable concrete masonry bit, drill four holes to a depth of 125 mm.
- Insert the M16 x 125 mm ground anchors (supplied) and hammer into place, ensuring alignment with the base plate holes.
- Tighten securely to stabilise the posts.



Top Tip

All fixing bolts for rails and cleats are treated in a 20mm patch fixing (pink paint on the bolt), which requires 24 hours to cure once the shear nut has been installed. Should a nut need to be removed, the bolt must be replaced and not reused. Patched fixings are essential in maintaining LPS 1175 SR1 (A1) certification for this range.

3.1 Hanging the Gate Leaves

Each gate kit includes either three (single leaf) or six (double leaf) SR1-rated Eyebolts, identifiable by a through-hole at the threaded end.

Fitting Procedure:

1. Hang the eyebolts on the hinge post and feed the threaded ends through the boss holes on the gate hanging stile.
2. Ensure one M24 nut is already fitted to the thread before insertion.
3. After feeding through the stile, secure a second nut on the inside of the gate frame.
4. Adjust all eyebolts to achieve 50mm ground clearance, ensuring the gate is plumb and swings.

Note: The integrated slider must engage cleanly into the catch post or second leaf baffle. If resistance is felt, re-adjust the hinge positions to ensure correct alignment.

3.2 Securing the Eyebolts (Anti-Tamper Feature)

1. Insert the supplied M8 x 40 mm saddle bolt through the end hole of each eyebolt.
2. Fit the M8 shear nut and tighten by hand or using a buzz gun until the hex head shears off.



Warning

Anti-removal Saddle bolts ensure LPS 1175 SR1 (A1) compliance as they prevent unauthorised removal of gate hinges.



Top Tip

To avoid tampering with the gate posts, any adjacent railings should be installed with an intermediate post immediately next to the gate post.

4.0 Installation Sign-Off Checklist

Action	Description	Pass/Fail
Services Check	A Cable Avoidance Tool (CAT) was used to check for underground services before any excavation.	
Foundations	All posts are installed in correctly sized foundations with the specified concrete grade and depth.	
Fixing Security	All M10 Snap-Off Nuts have been correctly sheared off for a tamper-resistant finish.	
Panel/Gate Security	Panels and gates are securely attached to the posts and aligned correctly with a 50mm ground clearance.	
Gate Operation	Gate(s) swing freely without obstruction. The locking mechanism and drop bolts function correctly.	
Site Clean Up	The installation area is clear of surplus materials, tools, and debris.	

Sign Off Declaration:

I hereby confirm this product has been assembled and installed in accordance with the above requirements and any remedial works have been carried out before the final sign off.

Site Supervisor:

Signature:

Sign Off Date:

5.0 Maintenance Schedule

Regular inspection and maintenance are crucial to ensure the system remains safe, secure, and effective. The person responsible for site safety should ensure these checks are carried out.

Check Area	Recommended Action	Frequency
General Fence & Gate Line	Visually inspect the entire line for signs of damage, post movement, or deterioration. Ensure no unauthorised modifications have occurred.	Monthly & After Adverse Weather
Structural Integrity	Check all posts for bending or displacement. Verify that panels and gate leaves are securely fixed to the posts.	Monthly
Fixings & Bolts	Physically check a sample of M10 security bolts and M16 ground anchors (where accessible) to ensure they remain tight. Visually inspect all fittings for signs of loosening or tampering.	Quarterly
Steel Condition	Inspect steel components for signs of significant corrosion or damage to the galvanised/powder-coated finish. Clean off any corrosive matter or debris.	Monthly
Gate Hinges & Lock	Check that hinges are correctly adjusted and lubricate if necessary. Ensure the sliding lock and padlock operate smoothly.	Quarterly
Plastic Inserts	Check that the post-top inserts are still in place and undamaged to prevent water ingress.	Monthly