



Security Fencing & Gates


Protecting The Future
of Energy

 Challenges

 Guidelines

 Specification

 Technical

 Solutions

EXCEPTIONAL



4.7 OUT OF 5

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Always Safeguarding Your Reputation



When you take on a job, or give a customer your word, you put your most valuable asset on the line - your credibility.

For 38 years our customers have placed their reputations in our hands.

At Alexandra we understand the challenges that contractors face every day (many years ago we were once contractors ourselves) and we're committed to supporting you every step of the way, by making your life easier and eliminating uncertainty.

- **A personal team that makes you feel connected and valued**
- **Special requests or technical queries? No problem for us**
- **Working around your needs and time-scales**

We are guided by our mission statement:

- **Providing quality products**
- **Delivered on time, in-full**
- **With zero defects or damage**

Our Guarantee

TO GIVE THE
CUSTOMER THE
PERFECT EXPERIENCE



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The Rise of Thefts from Solar Farms

Solar farm theft is a growing concern, with data showing a significant increase in reported incidents over the past few years. This trend highlights the need for enhanced security measures as solar farms become increasingly targeted by organised crime.

- ✂️ Reported thefts from solar farms nearly doubled from 2021 to 2022, with a further 24% increase from 2022 to 2023.
- 🔧 The south of England has been particularly hard-hit, with thefts involving massive quantities of cable, up to 50 km in some cases.
- 💰 The financial impact on victims is severe, including the cost of replacing stolen materials and lost revenue during the downtime required for repairs. Higher insurance premiums often follow these incidents.
- 🏗️ Solar farms under construction are especially vulnerable due to the large quantities of easily accessible materials, such as panels on pallets and cables on drums.
- 🔄 Repeat victimisation is prevalent; 50% of solar farms in the UK that experience thefts or intrusions twice are likely to face further incidents. This rises to 61% in mainland Europe.
- 🌐 In Europe, solar thefts cause an average of €60,000 (\$63,900) in damage, with organised crime groups seeing rural solar farms as an easy target.

Sources:

<https://securityjournaluk.com/a-spotlight-on-intrusion-in-solar/>

<https://www.pv-magazine.com/2023/04/15/weekend-read-solar-crime-on-the-rise/>



Selecting the Ideal Fencing System for Solar Farm Developments



Since 1986, Alexandra has been a leader in consulting, designing, and manufacturing perimeter security solutions across various industries. As the number of solar farm installations continues to grow in the UK, selecting the right perimeter fencing is more crucial than ever. Our extensive expertise ensures that your solar farm is protected with the most effective and reliable fencing solutions.

Key Considerations for Solar Farm Perimeter Fencing



Effective Perimeter Demarcation: Ensure the fencing clearly defines the boundaries of the solar farm.



Security Solutions: If security is a priority, the fence should offer robust protection against unauthorised access.



Adaptability to Terrain: The system must be suitable for installation on uneven or sloped ground and withstand high winds and harsh weather.



Environmental Integration: The fencing should blend seamlessly with the natural surroundings to minimise visual impact.



Wildlife-Friendly Design: Choose a system that deters larger animals while allowing smaller creatures and insects to pass through.



Durability and Maintenance: The fence should last the entire lifespan of the solar farm, be easy to repair if needed, and have low ongoing maintenance costs.



Compliance with British Standards: Ensure the fencing meets all relevant British Standards and accreditations.



Secure Access Points: Access points should complement the fence system and maintain overall site security.



Scalability: The system should be easily expandable to accommodate any future growth of the solar farm.



Cost: Consider the initial investment relative to the security level provided, along with the long-term maintenance expenses.






Deer Fencing & Weld Mesh Fencing

Specifying fencing for solar farms typically involves choosing between two primary options: the traditional deer fencing, which provides effective perimeter demarcation while being wildlife-friendly, and the modern weld-mesh security fencing, which offers significantly enhanced protection against intruders.



Deer Fencing





Traditional solution: Galvanised steel wire on rolls that is normally attached to wooden posts.

-  **Protection from Larger Animals:** Deer fencing is specifically designed to prevent deer and other large animals from entering the solar farm, protecting equipment from damage caused by wildlife.
-  **Environmental Sensitivity:** Deer fencing is often seen as a more environmentally friendly option, as it allows smaller animals to pass through, minimising disruption to the local ecosystem.
-  **Lower Initial Cost:** Deer fencing typically has a lower initial cost compared to high-security options like weld-mesh fencing, making it an attractive choice for projects with tight budgets.



Weld-Mesh Fencing

Modern solution: Galvanised and powder-coated weld-mesh panels attached to metal posts and fixings.

-  **Anti-Climb Design:** The tight mesh design of weld-mesh fencing is difficult to climb, adding an extra layer of protection against intruders.
-  **High Strength:** Weld-mesh fencing is made from thicker galvanised steel wires, with added powder coat protection, providing long-lasting resistance to wind and corrosion.
-  **Easy to Replace in Event of Damage:** Individual panels can be swapped out quickly, without having to re-install large runs of fencing.
-  **Meets Security Requirements:** Weld-mesh fencing can meet higher security standards and accreditations, which may be required for certain solar farm installations.

National Guidelines For Solar Farm Fencing

BRE (Building Research Establishment) Guidelines For Solar Farm Perimeters



Minimise the use and height of security fencing to reduce visual impact.



Utilise existing features like hedges or landscaping to screen security fencing.



Minimise security lighting and use PIR technology to reduce glare, light pollution, and impacts on biodiversity.



Ensure measures are in place to allow continued access by larger mammals, like badgers and foxes. It is advised that large buffer strips (at least 4-5m) are left between perimeter fencing and hedges.



Include full details and specifications of security and lighting installations in planning applications for accurate assessments.



Carefully consider the location of pole-mounted CCTV facilities to minimise visual and landscape impact, avoiding exposed landscapes when possible.



BRE national guidance provides best practice planning guidance in respect of how large ground mounted arrays are developed setting out planning considerations and requirements.



Police Guidelines For Solar Farm Security



A risk assessment should be carried out if placing large number of photovoltaic panels in an isolated location.



If perimeter fencing is to be used then it should be a proven security fence.



It is recommended that the chosen fencing system has been tested and approved to current UK Government standards.



The fencing should meet a security rating standard.



There should be a minimum number of vehicular access points onto site, ideally only one.



The boundary protection of the site should be an appropriate distance from the actual panels to discourage parking a vehicle against the site boundary.

Solar Farm Security Guidelines from Insurers

Insurers offering coverage for solar farms have outlined specific security requirements that must be met for a policy to be issued.

Here are the key factors insurers will assess:



Access Control: How is access to the site managed and secured?



Perimeter Security: Is the site perimeter secured with fencing? If so, what type, height, and security ratings does it meet?



Compliance Standards: Does the perimeter fencing meet BS1722-14 standards?

These factors do not just apply to new solar developments. If during an assessment the insurer considers the perimeter security inadequate, then additional security measures may be required, such as monitored CCTV with infrared lighting, which can be expensive to install or retro-fit to existing fencing, and also come with extra ongoing costs.

Installing robust perimeter security fencing and access gates that meet insurer standards can help fulfil security requirements, potentially avoid higher premiums, and reduce the risk of scrutiny in the event of a claim.



*Guidelines provided by Lycetts Insurance Brokers & Financial Services.



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British Standards For Steel Mesh Fencing (BS1722 Part 14)

BS1722 Part 14 sets minimum performance standards for various types of weld-mesh fencing.

The standard covers four main fence categories:

General Purpose Fences: Up to 2.4m in height.

Boundary/Perimeter Fences: Minimum height of 2.4m.

Security Fences: Minimum height of 3.0m, including topping.

Higher Security Fences: Minimum height of 3.0m, excluding topping.

The standard also specifies wire thickness and aperture spacing for each fence type:

General Purpose / Boundary / Perimeter Fences:

- 4.5mm horizontal / 3.75mm vertical wires
- 200 x 50mm apertures (e.g., V-mesh or twin-wire)

Security / Higher Security Fences:

- 4mm horizontal / 4mm vertical wires
- 12.7 x 76.4mm apertures (e.g., prison mesh)

Our recommendation:

It is essential that any weld-mesh fencing system meets the minimum wire thickness specified in BS1722:14. Certain systems on the market that are value engineered, do not meet the thickness requirement.

If a consultant, risk assessment or insurer specifies a 'security fence', two options meet the British Standard for this class: a 2.4m prison mesh with extended posts and a topper or a 3.0m prison mesh system.



V-Mesh or Twin-Wire: A Boundary or Perimeter Fencing System



Prison Mesh: A Security Fencing System



Cranked Posts With Fencing Toppers

Security Fencing For Solar Farms




SolarGard Orbit


Boundary Demarcation Fencing System

The SolarGard Orbit mesh fence system provides a perimeter security fence that is aesthetically pleasing with high through-visibility, helping it to blend into its surroundings.

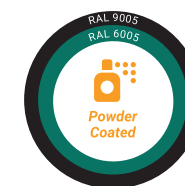
SolarGard Orbit provides a cost-effective boundary fencing system with an anti-climb deterrent.

Adjoining panels are held together with metal clips that are then pinned into posts using pre-drilled holes.

 Available in green or black powder-coated finish from stock.

 Hooked caps for easier installation.

 25 Year Guarantee.



Other RAL colours available as special order



We recommend this type of weld-mesh fencing as a demarcation fence, where security is not critical. The single-wire mesh with v-folds provides a system that is more durable than deer fencing, and can easily be stepped for uneven ground.

Security Fencing For Solar Farms




SolarGard Aurora


Security Rated Boundary Fencing System




SolarGard Aurora is an improved version of our SolarGard Orbit system that is approved to SR1 security standard by the LPCB (Loss Prevention Certification Board).

SR1 security fencing can withstand opportunistic attempts at forced entry using basic tools such as cable cutters, screwdrivers, knives and hammers, for a period of time. This, combined with SolarGard Aurora's stronger mesh panels and fixings, creates a security fence that is very hard to climb, cut through or force entry.

 Available in green from stock.

 Overlapping wires provide higher security.

 25 Year Guarantee.



Other RAL colours available as special order



We recommend this type of weld-mesh fencing is used where a security rating is important, but ensuring good sight lines is still important. The overlapping wires, stainless steel fixings and full-length clamp bars ensure a higher level of security over v-mesh.

Security Fencing For Solar Farms



SolarGard Titan


Security Rated Security Fencing System




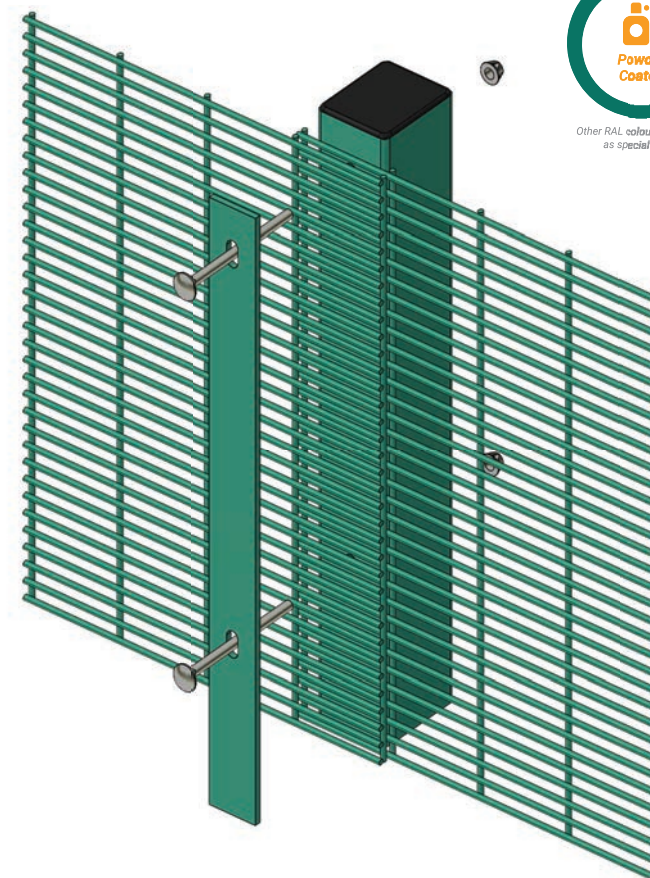
The SolarGard Titan system features high security panels that provides a single wire fencing system that is stronger than deer fencing and other standard mesh fencing.

The tight mesh spacing of these panels creates a security fence that is very hard to climb, cut through or force entry. Combined with SR1 rating, this system can withstand opportunistic attempts at forced entry using basic tools such as cable cutters, screwdrivers, knives and hammers, for a period of time.

 Available in green from stock.

 Tightly spaced wires provide very higher security.

 25 Year Guarantee.



Other RAL colours available as special order



We recommend this type of weld-mesh is used where security is the top priority. The narrow apertures of the mesh panel make climbing almost impossible, while the fixings are hard to tamper with.





Wildlife Gates

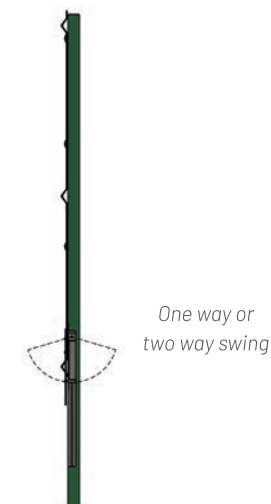
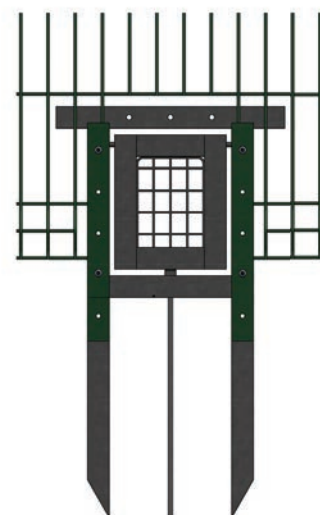
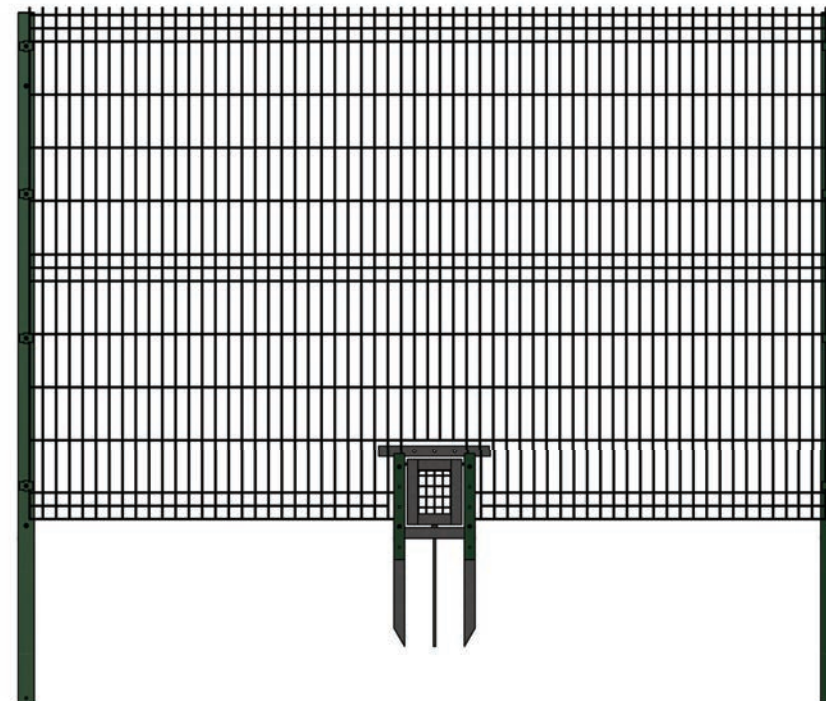


Other RAL colours available
as special order

Access Gates For Small Animals

Maintaining the natural movement of wildlife, such as badgers or foxes, across solar farm perimeters is essential for environmental sustainability. Badgers establish well-defined pathways over time, and when these paths are blocked by fencing, it can lead to harmful outcomes, such as trapping, injury, or attempts to breach the fence.

-  Specialised wildlife access gates should be installed where these paths intersect with fence lines.
-  These gates allow small mammals like badgers to pass through while preventing larger animals from entering.
-  Our wildlife access gates seamlessly integrate with mesh fencing systems, including a custom gap and powder-coating for aesthetic consistency.
-  Gates can be configured to open in one direction or both, ensuring flexible wildlife access without compromising security.



Access Gates



The wire mesh gates that Alexandra Security manufactures are complementary to our range of security mesh fencing (matching mesh type and security ratings) and can be configured and finished in a number of different ways to ensure that the gates fit perfectly with any new or existing fencing.

All of our SolarGard Defender access gates are fabricated to a very high standard in our own workshops.

Many of twin-wire mesh gates are held in stock and can be ready for collection or delivery within a few days. Alternatively, we can manufacture any gate in our range to your exact size and design.



In-line lockable slide bolt



Optional anti-climb topper



Gate safety restrainer



Optional self-closer



In-line lockable drop-bolts



Optional anti-pinch hinges



Energy Storage Security Fencing



SolarGard Pulsar / Pulsar Plus

Weld-Mesh Clamp Bar System With Optional Timber Inserts

This mesh fencing system provides a strong security fence that is both aesthetically pleasing to the eye with high through-visibility, helping it to blend into its surroundings.

Adjoining panels are held together with a full vertical length clamp bar pinned into posts using pre-drilled holes. This makes the fixings vandal resistant and provides a higher level of security than traditional clip mesh fencing systems.

Timber inserts can be inserted within the mesh panels and are secured to the rear of the fence with a strong fixing baton. This creates a fencing surface that has no hand or foot ledges, significantly increasing the difficulty of climbing. This, combined with matching gates, makes it particularly well-suited for secure energy storage compounds.




Other RAL colours available as special order



We recommend this type of weld-mesh as a perimeter fencing system around battery storage compounds. This system provides a secure anti-climb deterrent, and with added timber inserts, the benefits of a privacy fencing system.

 Available in green from stock.

 Anti-climb / anti-tamper system.

 25 Year Guarantee.



Our Team & Product Range



Louise Pamphilon
Commercial



Ross Allen
Business Development



Sam Stolton
Business Development



Brendan Lewis
Sales



Roscoe Marriott
Sales



Liam Chivers
Sales



Dean Yasmine
Sales



Josh Smitherman
Technical Sales



Charlotte Eade
Customer Support



Gemma Pilcher
Customer Support

At Alexandra we can recommend a complete system for solar farm security installers. We also have a network of approved installers all across the UK, who are able to provide site surveys in areas near them. We can provide on-time delivery direct to site, or if you are in the south-east; collect directly from us.

Contact our team today for a competitive quote on any of the mesh security systems.



Mesh Fencing & Gates



Palisade Fencing & Gates



Spectator Rail



Sports Fencing & Gates



Armco Crash Barrier



Height Restrictors



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How To Find Us:

We are based just off the A228 near Paddock Wood in Kent. From J4 of the M20, follow signs for The Hop Farm. We are located past the Hop Farm roundabout, on the right.

What3Words: layered.comforted.baseballs



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Since 1986 Alexandra has worked hard to be your trusted provider of high-quality perimeter and security solutions that perfectly meet your expectations, delivering unrivalled expertise, efficiency and care across every market sector and application.



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