



Submission by Mallard Pass Action Group (MPAG)  
– unique ID ref. 20036230

**Deadline 4:  
Any further information  
requested by the ExA**

## **MPAG to provide details of the solar farm where security fencing was installed after the application had been approved with deer fencing.**

The reason MPAG are raising their concern about fencing specification is because there is a conflict between policy direction and practicalities at the coal face.

Paragraphs 3.10.31, 3.10.74, 3.10.90 and 3.10.123 of [NPS EN-3 - Renewable energy infrastructure \(publishing.service.gov.uk\)](#) discusses minimising the use and height of security fencing for solar farms to minimise landscape, visual and ecological impacts which MPAG agree with. But this is in stark contrast to feedback from the police forces and insurance companies, who encourage high security fencing at such sites due to the exponential increase in criminal activity at solar farms as outlined in many articles online and also in DeterTech's recent report.

MPAG are part of the national Solar Campaign Alliance Group (SCA) which represents over 90 action groups around the country. Information is gathered and shared. There is increasing concern that applications may be approved initially with deer fencing as there is no requirement to consult local police forces, but down track when it comes to construct a site that the level of solar crime has risen so high the developer realises they need to improve security and/or the insurance company will only provide insurance if the site has fencing. This in turn may lead to retrospective changes to the application design without the impacts being properly assessed. MPAG urge that the worst case scenario is assessed in the Examination given the likelihood that the Applicant may have to install security fencing at some point. This would have an even worse adverse impact on the landscape & visual character than the current proposed development with deer fencing.

The below in this document gives some background on solar crime and recommendations:

- DeterTech report – Theft from Solar Farms 20<sup>th</sup> Feb 2023
- BRE Planning Guidance for the development of Ground Mounted Solar PV systems
- Extract from Carly Tinkler's Landscape & Visual Report (REP2-075) in relation to security fencing
- Crime Prevention Design Advisor South Gloucestershire
- Allan Brown Designing Out Crime Officer (DOCO), Northumbria Police
- Extract from Roundhill Wood Farm Solar website
- Extract from CPRE Cambridgeshire
- Nottinghamshire DOCO statement
- DOCO Cambridgeshire constabulary
- Marsh Commercial Insurance application form – they state security fencing is required
- Say No to Sunnica's D7 Post Hearing Submission on fencing ([REP7-084](#)) Appendix D p57-67 raises similar concerns to MPAG.

The following example is for an application through Babergh District Council in Suffolk - Search for application DC/19/01601. The upgrade was for "security purposes" and was handled as a non-material change after approval under delegated officer powers during construction. You will see that no one was consulted on the change, and no impacts such as landscape or ecology (gaps for larger wildlife can't be installed in this type of fence) were assessed.

[//planning.baberghmidsuffolk.gov.uk/online-applications/search.do?action=simple&searchType=Application](http://planning.baberghmidsuffolk.gov.uk/online-applications/search.do?action=simple&searchType=Application) (There is no hyperlink)

## INTRODUCTION

Reported thefts from solar farms have almost doubled comparing 2021 to 2022. Whilst some of this increase can be attributed to better reporting and the ongoing impact of covid restrictions reducing 2021 figures, this still shows a startling increase. Please also note that many forces have not yet reported Q4 data, so it is possible that this increase is actually much higher.

Government planning recommendations suggest that Solar farms should not be overlooked by domestic properties and that lighting and fencing should have no impact on the environment or aesthetics of the area. This of course makes a solar farm a soft, attractive target for thieves. As Solar farms are usually in secluded locations, offenders, can often work undisturbed for a number of hours through the night.

Offenders who target solar farms can either be Organised Crime Groups or lower level offenders, however both groups are aware of the vast amount of valuable copper cabling or If the site security can be breached, then a huge amount of both physical and financial damage can be caused in a matter of hours.

In recent years, solar cable has been the item that has been targeted most frequently, and in the last year the rate of cable thefts has shown an increase of 48% from 2021 to 2022 (though remains lower than the reported rate in 2020.) However, thefts of solar panels have quadrupled from 2021 to 2022. This increase in the last year has been driven in particular by the Worcestershire area, which has been heavily targeted by panel thieves.

Given the context of the cost of living crisis, projected copper prices (which drives the rate of cable thefts) and an ambition of the UK government to potentially triple solar capacity by 2030, it is highly likely that thefts from solar farms will become increasingly frequent. It is therefore imperative that our understanding of crime on solar farms improves.

This report aims to provide some detail behind this increase, discussing which areas of the country have suffered the most, who the victims and offenders are, and why and how they are targeting solar farms. This report also provides some recommendations for how this growing issue can start to be tackled.

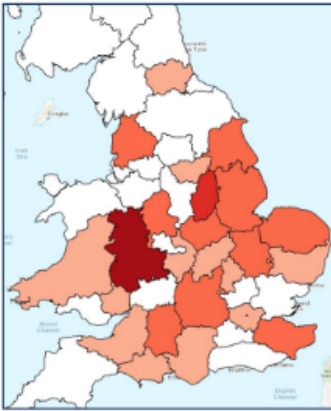
**Please note that the information provided in this report is limited by the extent of the data reported to Crime Intelligence.** It should be understood that Crime Intelligence do not have a complete dataset due to lack of reporting by the police and industry; as reporting improves, so will the accuracy of the analysis that can be provided.



Map 1 - Crimes on solar farms 2022

# WHERE?

According to data reported to Crime Intelligence, West Mercia is the highest reporting police force in the country in 2022.



Map 2 — heatmap of solar crimes by police

During 2022, the West Mercia police area has been the highest reporting area of the country, followed by Nottinghamshire, Cambridgeshire and Kent force areas. West Mercia and Nottinghamshire have been most frequently targeted for theft of solar panels, however, all of the above police force areas have reported higher rates of cable thefts in 2022 than 2021.

Breaking this down further, thefts have tended to centre around 3 key areas: Worcestershire/Shropshire/Nottinghamshire north towards Sheffield and Oxfordshire north east towards Cambridgeshire. These hotspot areas are slightly further south than has been seen in previous years, where Derbyshire, Lincolnshire, Nottinghamshire and South Yorkshire were the most frequently targeted areas.

N.B. the vast majority of offences are extremely close to A roads and motorways, allowing quick access away from the scene. However gangs committing cable thefts have been known to travel the length of the country, and do not restrict themselves to a specific geographic area.

# WHAT IS BEING TARGETED?

## AND WHY?

In general, solar cable for the scrap price of copper and solar panels for their resale value

### CABLE

DC Cable is typically stolen in large quantities from the back of arrays. In general, cable can be easily lifted from its position on the structure, and once a gang is well practiced, kilometers of cable can be stolen in a short amount of time.

In addition, a solar farm in Kent has suffered repeated thefts of earthing cable in 2022. Earthing cable is attractive as cutting it poses no risk to the offender, but increases the danger to anyone on the solar farm going forward.

#### Examples of incidents where large amounts of cable has been stolen

- Thieves stole £100,000 worth of copper cable from a solar farm in Shropshire. CCTV shows 3 men wearing balaclavas cutting a padlock to gain access before bringing a white transit van on site and making off with the cable.
- Site was broken into via forcing the lock on the main gate. Offenders crawled under the beam security system. Cables were cut and removed and some of it was stripped on site.
- 300m cable stolen from Solar Farm in Cambridgeshire. The solar farm was left with live high voltage cables unsecured, and the estimated value of theft was £100,000.

The rate of theft of cable is intrinsically linked to the scrap price of copper, as the higher the scrap price, the more desirable it becomes to offenders. As can be seen on the adjacent graph, there is some correlation between the price of scrap copper and peaks in cable thefts, and this trend will continue to be monitored.



Graph 2

#### Disposal Route

The volume of cable that is stolen, along with the regularity of incidents, indicates that offenders are highly likely to have an established disposal route. It is assumed that stolen cable ends up at a Scrap Metal Dealer, either as the stripped cable, or broken down using a granulator in possession of the OCGs, and sold on to a Scrap Metal Dealer in its granulated form. It is also possible that cable is shipped abroad, however there has been no intelligence shared in this respect. In order to effectively reduce this crime type, deeper understanding of the disposal route (and how to close it down) is required (see the Recommendations section).

# EXECUTIVE SUMMARY

- According to data reported to Crime Intelligence so far, reported crimes on solar farms has increased by 93% comparing 2021 to 2022. This is driven by a 48% increase in thefts of cables, and thefts of solar panels has quadrupled, comparing 2021 to 2022.
- Cables on solar farms are usually copper, and are stolen for their scrap value. It is thought that disposal routes for stolen cable include selling it on to an unscrupulous Scrap Metal Dealer (SMD) either as cable, or is granulated down using a granulator owned by the OCGs, and then passed on to the SMD as pure copper. It is also possible that it is shipped abroad.
- Solar panels are usually stolen for their resale value. There have been at least 2 incidents in 2022 where stolen solar panels have been recovered after being sold via an online marketplace.
- The police force areas that have reported the most amount of crimes on solar farms in 2022 are West Mercia, Nottinghamshire, Cambridgeshire and Kent.
- There has been an increase in local offending noted. Historically, it has mainly been OCGs that would target solar farms, travelling the length of the country. However, in the last year, it is thought that c.25% of the reported offences on solar farms are due to local offenders who repeatedly target the same areas.
- There continues to be a high level of repeat victimisation; once a solar farm has been targeted once, it is likely to be targeted again. 61% of solar farms that reported a crime to Crime Intelligence in 2022 either suffered another offence in the same year, or a solar farm within 5 miles did.
- Offenders often carry out a reconnaissance exercise on a potential solar farm before they target it, to understand the security response/measures in place.
- Solar farms under construction are just as vulnerable to attack as functioning solar farms, due to the plant and machinery and drums of cable which attract offenders. There are likely to be many more solar farms under construction in the coming years.
- There has been one violent offence reported in the last year, which was an attack on a security guard who was monitoring a solar farm under construction. He was hit on the head and detained for a number of hours whilst offenders stole cable drums.
- Offenders usually gain access by cutting a hole in the fence; it is rare that they enter or exit via the main gate. They will use multiple vehicles (including quad bikes and trailers) which are usually stolen or on false plates, and will be bought onto site or parked very close by, and loaded with either cables or panels.
- Given the following factors, it is imperative that the solar industry is able to protect themselves from the potential increase in crime that could be faced in the near future:
  - The extra financial pressure caused by the cost of living crisis could cause more people to turn to criminality. It could also boost the use of unregulated online market places, such as those that have been used in the last year to buy and sell stolen solar panels.
  - The price of copper is set to remain consistent until the second half of 2023, when it is forecast to increase in to 2024. This will drive up the rate of cable theft across all industries, including solar.
  - Rural crime is increasing—the cost of rural crime in the UK rose over 40% in the first quarter of 2022.
  - The solar capacity of the UK could triple by 2030, giving offenders more opportunity to target solar farms, particularly those under construction.

## BRE Planning Guidance for the development of Ground Mounted Solar PV systems

### h) Security Fencing / Lighting

Applicants will be expected to direct considerable effort towards minimising the landscape/visual impact of solar PV arrays. Whilst there is an acknowledged need to ensure solar PV installations are adequately secured it would be unfortunate if such security measures resulted in an unacceptable landscape/visual impact. Applicants should:

- minimise the use and height of security fencing;
- utilise existing features, such as hedges or landscaping, to screen security fencing;
- use natural features, such as vegetation planting, to assist in site security;
- minimise the use of security lighting. Any lighting should utilise a passive infra-red (PIR) technology and should be designed and installed in a manner which minimises glare, light pollution and impacts on biodiversity, in particular bats (see ecology section).
- ensure that appropriate measures are in place to facilitate continued access by larger mammals, such as badgers and foxes.

In some instances specialist fencing may be necessary in order to prevent access by deer. Such deer fencing can be much less intrusive than other forms of fencing and should be considered where possible.

Planning applications should contain full details and specifications of all security and lighting installations in order to allow an accurate landscape / visual / ecological assessment of the proposal to be made.

Where pole mounted CCTV facilities are proposed the location of these facilities should be carefully considered in order to minimise visual / landscape impact. In exposed landscapes such structures should be avoided where possible.

## Advice to BRE from the Devon & Cornwall Police Authority - Perimeter Security and Access Control

### Perimeter Security and Access Control

If perimeter fencing is to be used then it should be a proven security fence. The recommendation would be to install fencing which has been tested and approved to current UK Government standards. Fencing which meets the SEAP (Security Equipment Approval Panel) class 1-3 may be the most appropriate. Fencing which is not of a specialist security type is likely to offer at best only token resistance to intruders.

Planting up and alongside any fencing will be acceptable providing there is no detrimental effect upon site surveillance that is available.

The standard for rating bollards, blockers and gates is PAS 68:2007 and PAS 68:2010.

Landscaping techniques such as ditches and berms (bunds) may also be appropriate in some instances. To be effective in stopping vehicles these need to be designed carefully. Police are able to provide further specific advice in relation to the design of such defences upon request. There should be a minimum number of vehicular access points onto site, ideally only one. Clearly such access points will present the most obvious means for the criminal also and therefore will require a robust and adequate defence.

Some thought should also be given to the wider issues of access around any site. If, for instance, the land surrounding the site is under the same ownership can this be made more secure by improving gates etc. Again this provides layers of difficulty for the criminal to overcome.

## Extract from Carly Tinkler's Landscape & Visual Report (REP2-075)

### Fencing

- 5.1.1 As mentioned in Section 4.2 above, deer-proof post-and-wire fencing is proposed throughout the development, as a security measure, and it would remain in place for the lifetime of the scheme (albeit perhaps with restoration / replacement at times). In order to allow the continued passage through the site of larger creatures such as badgers, hares and otter, once erected, either the fence would be modified to allow 'clearances above ground', or 'mammal gates' would be cut into the fence at strategic locations.
- 5.1.2 The landscape and visual (and ecological) effects assessments were carried out based on this assumption.
- 5.1.3 However, in my experience, **it is highly likely that the fencing would have to be far more robust than post-and-wire in order to deter thieves and satisfy insurance requirements.**
- 5.1.4 In February 2023, a document called *Theft From Solar Farms* was published. It was written by Crime Intelligence, and Opal, the latter being the 'Police unit for the United Kingdom developing intelligence to disrupt organised networks involved in acquisitive crime in partnership with the public / private sector'.
- 5.1.5 The report explains that '*In recent years, solar cable has been the item that has been targeted most frequently, and in the last year the rate of cable thefts has shown an increase of 48% from 2021 to 2022 (though remains lower than the reported rate in 2020.) However, **thefts of solar panels have quadrupled from 2021 to 2022**' (my emphasis).*
- 5.1.6 It goes on to say that '*The police force areas that have reported the most amount of crimes on solar farms in 2022 are West Mercia, Nottinghamshire, Cambridgeshire and Kent*'.
- 5.1.7 I have also read several documents produced by, and letters / consultation responses to solar development applications from, Design Out Crime Officers (DOCOs), and have spoken to some of them, about the issues faced by the Police due to 'solar crime'. This is apparently mainly panel and / or cable theft, but also vandalism – the wire netting is easily and quickly cut through. It occurs much more frequently in rural areas, as the activity often goes unnoticed, giving thieves more time to take what they want.
- 5.1.8 In recent responses to planning applications for solar development (and an appeal), several DOCOs have said that the use of deer-proof fencing should be avoided<sup>1</sup>, and have recommended the use of high-security fencing to a minimum of LPS 1175 level 3.
- 5.1.9 In an email dated 9<sup>th</sup> December 2022, the Northumbria Police DOCO commented on a solar development proposed in Northumberland (application ref. 22/03978/FUL), as follows (my emphases):

*'Northumbria Police support the drive toward renewable energy sources but nationally there has been an increase in serious attacks directed at solar arrays, only last week there were three attacks on sites in four days in Nottinghamshire and Cambridgeshire, and in the former a security guard on a solar farm under construction was violently attacked. The National Infrastructure Crime Reduction Partnership (NICRP) and Opal, the national taskforce set up to combat Serious Organised Acquisitive Crime called on solar farm operators to review their security arrangements<sup>[2]</sup>, so **it is worrying that this application doesn't consider the crime risks.***

*'We have considered the risk profile of a number of solar arrays planned for the Northumbria Police Area and have determined that remote sites should be protected by perimeter security fencing*

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<sup>1</sup> See for example Nottinghamshire Police's response to 22/02241/FUL, and West Mercia Police's response to APP/C3240/W/22/3308481

<sup>2</sup> See for example [REDACTED]

specified to **LPS 1175 issue 8.1 D15 fencing** [explained further in the DOCO's email; see also below].

*'The rationale for this, particularly important for remoter sites, is that a standard fence may deter the casual more opportunistic criminal, but not an organised attacker, and detection by remote CCTV or Perimeter Intrusion Detection Systems might inform a monitoring station that an attack is in progress, but a response still has to travel to the site, so we need to delay an attack as long as possible'.*

- 5.1.10 I was not familiar with the security fencing specified by the DOCO, and couldn't find much information about it online, so called a few security fencing manufacturers and suppliers, who told me that this type of fence was not yet manufactured or supplied in the UK. When I mentioned this to the DOCO, he said he was aware, but in his opinion, that level of security was necessary for solar developments, and therefore eventually, demand would be created.
- 5.1.11 However, I did discover that one could probably achieve the D15 security rating by putting a D10 and a D5 fence together.
- 5.1.12 I also discovered that some of the insurance companies which cover solar developments are now stating that they will **not accept stock-proof fencing**.
- 5.1.13 Recently, a colleague of mine spoke to a 'leading renewable energy insurance broker', and in an email, said they were told that *"unless a new insurer is willing to risk deer fencing so as to gain market share, the trend now is for a deer fencing solar site to be refused insurance, or to be hit with an excess such as £100,000 if the deer fencing is breached by criminals. Instead of deer fencing, most insurers now request the security fencing the DOCO recommends because of the increasing crime risk. The bigger and more 'porous' the site, the bigger the risk, she said"*.
- 5.1.14 Another colleague spoke to a different insurance company, and in an email, said, *"He confirmed that **there are a decreasing number of companies who are willing to insure sites and no one will be allowed to just use deer fencing**- even a small domestic site with a few ground mounted panels. They will need secure locked gates with bollards that sink into the ground. 24/7/365 CCTV monitoring... He was telling me about a theft from a site he dealt with where the whole infrastructure was found in the Ukraine"* (my emphasis).
- 5.1.15 **This matter must be clarified**, not least because certainly, in terms of levels of landscape and visual effects, there is a **significant difference** between deer-proof fencing and D10 / D15 / other appropriate high-security fencing, as shown in the following photographs:

*Deer-proof post-and-wire fencing at solar site in Worcestershire*



*Example of LPS 1175 level 3 security fencing from catalogue*





*Examples of D10 – D15 security fencing from catalogues*



5.1.16 It is very difficult to calculate the length of fencing that would be required in this case, but it is likely to be **many linear kilometres**, given the extent of the main site (almost 8km from west to east, and at its widest point c. 5.5km from north to south), the complexity of the site boundaries,

and the number of roads and other PRoWs around / within the Order limits (the footpaths / bridleways crossing the site would be fenced along both sides of the corridor).

- 5.1.17 In my opinion, there is no doubt that **if this type of security fencing was installed, it would give rise to significant adverse landscape and visual effects, which could not be satisfactorily mitigated.**
- 5.1.18 The change from deer-proof to high-security fencing would also have **adverse implications for wildlife.** Para. 7.2.2 of ES Volume 1 Ch 7: Ecology and Biodiversity (November 2022) states that *'fragmentation of badger foraging habitat will be avoided with measures intended to keep the Proposed Development permeable by creating gaps accessible by badgers in security fencing, such as mammal gates as set out in the OLEMP'*.
- 5.1.19 At para. 3.1.14, under the heading *Installation of gaps for mammals*, the oLEMP explains that *'The ground underneath the PV Array will provide suitable habitat for a range of mammal species and as such access for these under/through the security fencing will be provided to allow badger, brown hare, polecat and hedgehog to move through the Order limits and forage over the grassland beneath the PV Arrays. Gaps measuring 30cm x 30cm will be created at ground level in all fenced PV Array perimeters, with access point provided at several locations in each fence alignment, as appropriate to the surrounding habitats'*.
- 5.1.20 However, according to the manufacturers, not only would it be **very difficult, time-consuming and costly to create mammal passes in the high-security fences**, it also would almost certainly **render the security rating invalid.**

If it was concluded that the high security fencing should take priority over the proposed ecological mitigation measures in the form of mammal passes, then **the ecological effects of the development without the mammal passes would have to be reassessed accordingly**

Consultee Comments for Planning Application

P22/02401/RVC

Application Summary

Application Number: P22/02401/RVC

Address: Land North And West Of Iron Acton Substation Iron Acton South Gloucestershire BS379TX

Proposal: Variation of condition 11 attached to P20/13909/F to extend the operational life of Larks Green Solar Farm to a period of 40 years following first commercial export of electricity.

Case Officer: David Stockdale

Consultee Details

**Name: Mr Kevin Wilkinson**

**Address: Avon and Somerset Police**, Concorde House,, Harlequin Office Park, Fieldfare, Emersons Green BS16 7FN

Detailed Response:

I am a Crime Prevention Design Advisor (CPDA) with a responsibility for Crime Prevention Through Environmental Design projects within South Gloucestershire area. As a Constabulary we offer advice and guidance on how the built environment can influence crime and disorder. Paragraphs 92, 97 and 130 of the National Planning Policy Framework July 2021 require crime and disorder and fear of crime to be considered in the design stage of a development. Other paragraphs such as 8, 106 108, 112, and 119 also require the creation of safe environments within the context of the appropriate section.

Whilst there are no reason from a crime and disorder perspective to object to the variation, i.e. extension of operation the applicant is advised that advice in relation to this type of application has been updated.

At the time of application the applicant was advised the crime generated due the high cost of precious metals was very prevalent in the rural setting and the attraction to a solar farm situated in an isolated position will add to this problem. The risks to the sites are not only the theft of the panels but also thefts of metals and criminal damage. Estimates of copper alone in such sites are approximately 4-5 tonnes per MW of electricity generated.

These risks are now being seen on a more and more frequent basis. Recently several solar farms were targeted over a two-month period, some on more than one occasion resulting in some 17 offences. The below are examples of property taken or damage caused.

Five offences where solar panels were stolen, in one case 140 panels were taken.

Seven offences where cable was stolen, in one case 11 pallets of cable were removed, in another 43km of cable was stolen.

One offence involved the removal of 10 inverters.

In the remaining four offences persons had entered the site and prepared to remove items but were either seen or disturbed.

In addition to the loss of property there were high additional costs of damage with one incident resulting in £150k in damage and another £80K.

The predominant method of entry was via holes cut in the fences.

The applicant is advised to review their security on the site in light of the above offences and if required further advice can be obtained from me via the below contact details.

Kevin Wilkinson - Crime Prevention Design Advisor South Gloucestershire

0800-1600hrs Monday to Wednesday

Concorde House, Harlequin Office Park, Fieldfare, Emersons Green, BS16 7FN

Good Morning,

Thank you for the opportunity to comment on the above planning matter.

23/01717/FUL: Land At Whittonstall Consett Northumberland

**Northumbria Police** have concerns regarding the security of solar farms and would like to make the following observations and recommendations:

1. According to national data reported so far, reported crimes on solar farms has increased by 93% comparing 2021 to 2022. This is driven by a 48% increase in thefts of cables, and thefts of solar panels has quadrupled, comparing 2021 to 2022.
2. Cables on solar farms are usually copper, and are stolen for their scrap value.
3. Solar panels are usually stolen for their resale value.
4. Historically, it has mainly been Organised Crime Gangs that would target solar farms, travelling the length of the country. However, in the last year, it is thought that around 25% of the reported offences on solar farms are due to local offenders who repeatedly target the same areas.
5. There continues to be a high level of repeat victimisation; once a solar farm has been targeted once, it is likely to be targeted again. 61% of solar farms that reported a crime in 2022 either suffered another offence in the same year, or a solar farm within 5 miles did.
6. The price of copper is set to remain consistent until the second half of 2023, when it is forecast to increase in to 2024. This will drive up the rate of cable theft across all industries, including solar.
7. Rural crime is increasing—the cost of rural crime in the UK rose over 40% in the first quarter of 2022.
8. The proposal for this installation is a 2.4 m high stock proof boundary treatment which will provide little deterrence value at all.
9. Northumbria Police have considered the issue of security of Solar Farms, most of which are sited in rural areas and can perhaps expect at best a response taking up to 15-20 minutes and have formulated an appropriate recommendation based on that expectation.
10. Security fencing, rather than post and rail is the minimum requirement for a Solar Farm. The purpose of security fencing is to Deter, Delay and Detect. LPS 1175 Issue 8 Security fencing is tested to withstand attack over certain periods of time against a progressive and more inclusive array of tools.

We have considered the risk profile of a number of solar arrays planned for the Northumbria Police Area and have determined that remote sites should be protected by perimeter security fencing specified to LPS 1175 issue 8.1:D10 when the site is remotely situated. The rationale for this, particularly important for remoter sites, is that a standard fence may Deter the casual more opportunistic criminal, but not an organised attacker, and Detection by remote CCTV or Perimeter Intrusion Detection Systems might inform a monitoring station that an attack is in progress, but a response still has to travel to the site, so we need to Delay an attack as long as possible.

A review of national crime trends indicates that the criminal attacks tend to involve the use of portable power tools, and the LPS 1175 is security rated dependent on the delay a product provides in minutes, against a specific toolkit. These are indicated in the rating by a letter and a number. Therefore a D10 security rating is tested against A up to D toolkits that includes disc grinders etc (see fig 1 below) and will withstand attack for up to 10 minutes.

Fig 1

regards

**Allan Brown 5762**

**Designing Out Crime Officer**

Harm Reduction and Communities

## **Roundhill Wood Farm Solar website**

Residents concern about impact of high-security fencing at proposed solar power station - Roundhill Wood Solar Farm

Campaigners against the development of a huge solar power station in Inkberrow are concerned about the impact of high-security fencing on wildlife and biodiversity.

It comes after the Roundhill Wood Solar Farm (RWSF) opposition group discovered that more than 6 miles of security fencing is likely to be installed around the 285 acre site.

'Level 3' high-security fencing is increasingly required by insurance companies in order to protect solar panels.

Solar panel theft has become one of the fastest growing crimes in the UK.

West Mercia Police revealed that there have already been four thefts from the local solar facility currently under construction in nearby Bishampton since the start of the month.

In January of this year, £100,000 of panels were stolen from another solar power facility in Bretforton, and hundreds of panels were discovered in Evesham and Pershore.

This type of fencing is much more intrusive than the previous deer-proof fences and can severely disrupt the natural movement patterns of wildlife and limit their access to food and water sources.

Phil Coathup from the RWSF opposition group said:

"Our community values local wildlife and we are concerned that Level 3 fencing could lead to habitat fragmentation and negative impacts on biodiversity.

"Some wildlife species may be physically unable to climb or dig under the fence, preventing them from accessing important habitat areas.

"Of course, the adverse visual and other environmental effects of this type of security fencing are way higher than deer-proof and it appears that the Landscape and Visual Impact and other technical assessments submitted by the applicant have not taken this into account."

## CPRE Cambridgeshire

The organised theft of solar panels and equipment has become a significant rural crime, leading to the use of pole-mounted security cameras around such sites. This will be another source of damage to the landscape arising from this proposal.

We note that, to prevent cable and panel thefts, Cambridgeshire Police are requesting solar installers to take the following security measures:

- security rated weldmesh fencing/gating to meet LPS1175 SR2 is installed,
- installed CCTV is continuously monitored, and any recordings are stored should they be required for evidential purposes,
- a fully qualified lighting engineer is assigned as they will be able to design in the safety and security element as well as having the ecology and wildlife in mind.

We understand that other police forces are now taking a similar approach.

CPRE fear that the combination of 2 metre, high, security fencing, CCTV mounted on 2.5 metre poles and security lighting will have a major adverse effect upon the landscape. We are particularly concerned by the security lighting which will be disturbing to wildlife and residents.

CPRE considers that the use of CCTV in the manner being recommended by the police will be visually intrusive in this rural landscape and completely out of character with the surrounding countryside. It also represents a significant privacy intrusion and any such use must be in accordance with the GDPR and registered with the Information Commissioner, in accordance with the Information Commissioner's Office (ICO) document *"In the picture: A Data Protection Code of Practice for Surveillance Cameras and Personal Information."*

No level of tree planting in mitigation will hide the visual harm. Trees will take time to grow and, as usual, the author seems to conveniently forget that trees lose their leaves in Autumn and don't get them back until Spring.

## **Nottinghamshire DOCO**

*Nottinghamshire has small, medium, and large solar parks or farms which have over the past 10 years been subject to theft, criminal damage and other crime types, including theft of solar panels, and removal of cabling and infrastructure which has proved costly to the various developers and management companies that operate such facilities therefore the security and safety of the sites should be an important feature of the planning and design of the sites.*

*I would make the following comments and recommendations in relation to this application.*

*Solar Farms or Solar Parks have in recent years been subject of some significant thefts of the installed solar panels with replacement costs more than £40,000.*

*I would strongly avoid the use of what is described as 'Deer Fencing' as this does not provide any difficulty or deterrent to the criminal.*

*Fencing and Boundary Treatment.*

*Land selected should aim to avoid affecting the visual aspect of landscapes, maintain the natural beauty and should be predominantly flat, well screened by hedges, tree lines, etc. and not cause undue impact to nearby domestic properties or roads. (BRE. Planning guidance for the large-scale ground mounted solar PV systems)*

*I would recommend that the boundary fence is to a minimum of LPS 1175 level 3 and to a height of 2.4 metres or to the current UK Government standard, SEAP (Security Equipment Approval Panel) class 1-3.*

*The use of 2.4 metre welded mesh fencing (in green) would be the most unobtrusive method of providing a secure perimeter border. All gated entrances should be secured with appropriate access systems.*

*The NFU Mutual recommends good perimeter security fencing for all solar installations along with CCTV, motion sensors and infrared beams, depending on location. It also recommends panels are secured to frames with unique fastenings, requiring special tools – much like alloy wheel bolts?*

*Monitored CCTV System.*

*Whilst considering the often-isolated locations that Solar Farms are to be established the installation of a remotely monitored with motion detection CCTV system is an effective deterrent and is most likely to provide effective evidence should a crime occur.*

*Installers of remotely monitored detector activated CCTV systems will comply with all the following standards and guidelines:*

- NPCC Security Systems Policy*
- BS 8418 Installation and remote monitoring of detector activated CCTV systems – Code of Practice*
- BS EN 50132-7: CCTV Application guidelines*

*RVRCS monitoring detector activated CCTV systems will conform to all the following standards:*

- BS 5979 (Cat II):*
- BS 8418: Installation and remote monitoring of detector activated CCTV systems – Code of Practice*

*There will probably be little reward in deploying CCTV or other defence unless it is monitored in some way or can provide an instant alert in some form.*

*Physical security of panels.*

*It has been identified that individual panels can be easily removed from the aluminium frames which are usually secured by a small bracket which is in turn secured by an alum key. Whilst aluminium can itself be easily forced the use of an additional security bracket may help reduce the ease by which panels can be removed adding to the time that a criminal would need to remove panels increasing the risk to offenders.*

*Whilst not intending to draw attention to a solar farm the effective use of signage to act as an informative deterrent may also be considered.*

*I would ask that the applicant considers a perimeter alarm system now we are aware that these sites are attracting criminal interest.*

*There have been several instances where offenders have been able to access sites quite easily with large vehicles enabling the large-scale removal of panels and equipment. Due to the poor planning and design (particularly across fields and tracks in dry weather) they spent some considerable time undetected.*

*There have also seen several incidents where crimes have been committed on power transmission sites with some offenders risking their lives after targeting live cabling.*

*Use of Defensive Ditches and Berms (Bunds)*

*Landscaping techniques such as ditches and berms (bunds) may also be appropriate in some instances. To be effective in stopping vehicles these need to be designed carefully.*

*Use of Natural Features and Vegetation.*

*The development will need to have regard in both its design layout, and future maintenance plans for the retention of growth of vegetation on these important boundaries, including the opportunity for trees within the boundaries to grow on to maturity.*

*The use of natural vegetation as a feature should not compromise the benefit of clear and unobstructed natural and formal (CCTV System) surveillance.*

*Existing hedges and established vegetation, including mature trees, should be retained wherever possible as described in the DAS.*

*“*

I have meetings this morning, but will call you after 1400hrs today to discuss your concerns.

Regards,

Neil

**Neil Bellamy**  
**Designing Out Crime Officer**  
**Neighbourhood Policing Hub**  
Mansfield Police Station



An additional email from Neil Bellamy:

In my haste, I forgot to attach also an email from the Notts DOCO which advises against deer fencing for security reasons in response to increasing thefts from solar 'farms'.

I'm expecting the DOCO to publish his advice on the RBC portal later this week. DOCOs are not yet on the LPA's list of Consultees for solar 'farms'.

This advice puts in conflict the need for security because of increasing solar 'farm' crime, against the need to protect the visual amenity of the Green Belt. Another reason why 00319 is in the wrong location.

I have subsequently spoken with a leading renewable energy insurance broker. Claire Humphreys, a Director at Naturesave, has told me that unless a new insurer is willing to risk deer fencing so as to gain market share, the trend now is for a deer fencing solar site to be refused insurance, or to be hit with an excess such as £100,000 if the deer fencing is breached by criminals. Instead of deer fencing, most insurers now request the security fencing the DOCO recommends because of the increasing crime risk. The bigger and more 'porous' the site, the bigger the risk, she said.

Neil Bellamy [REDACTED]@Notts.Police.uk>

**From:** DARBYSHIRE, Clare 3853 <[REDACTED]@cambs.police.uk>  
**Sent:** 21 July 2022 14:33  
**To:** DevelopmentControl  
**Cc:** CPDT (Cambs)  
**Subject:** 22/00668/FUL - Land North East Of Bates Lodge Peterborough  
Road Haddon

Good afternoon,

**Our reference:** CPDT/411/2022

**Your reference:** 22/00668/FUL

**Proposal:** Installation of a solar park to export up to 22 MW (AC) electricity, comprising up to 65,000 photovoltaic panels, 10 inverter/transformer cabins, a single control building and associated works

**Location:** Land North East Of Bates Lodge Peterborough Road Haddon

Thank you for the opportunity to comment on this application. I have viewed the documents in relation to crime, disorder, and the fear of crime, I have completed a search of the Constabulary crime and incident systems and have spoken to our Rural Crime Team. We have seen some cable & panel thefts from similar locations across Cambridgeshire, and with the cost of metal on the increase, it makes these types of developments vulnerable.

**Fencing** - I note that you have proposed security fencing, our recommendation is that a security rated weldmesh fencing/gating to meet LPS1175 SR2 is installed.

CCTV - The Design and Access statement (page 3) suggests that the CCTV may be continuously monitored. Our recommendation is that it is monitored, and any recordings are stored should they be required for evidential purposes.

Lighting - I would like a lighting plan when available. Our recommendation is that a fully qualified lighting engineer is assigned as they will be able to design in the safety and security element as well as having the ecology and wildlife in mind.

I have no further comment at this stage.

Regards

Clare

Designing Out Crime Officer (formerly ALO/CPDA)  
Crime Prevention Design Team (Estates)

Office Email: [cpdt@cambs.pnn.police.uk](mailto:cpdt@cambs.pnn.police.uk)

Cambridgeshire Constabulary  
Police Headquarters.  
Hinchingsbrooke Park.  
HUNTINGDON  
PE29 3BN

## Solar Details

- Location of Array : - if multiple, provide all locations
- Panel manufacturer : (per site if multiple)
- Number of panels: (per site if multiple)
- Inverter Manufacturer : (per site if multiple)
- Number of Inverters: (per site if multiple)
- Inverters: – are these a standard inverter or Multi inverter / BESS?  
(Check manufacturer and known system)
- Roof or Ground Mounted:
- If Roof Mounted – provide full details of construction of the building / occupation and business / trade within:
- KW / MW Rating (Per Site) :
- Lightning Protection: Yes / No
- Dates Installed / per site:
- Date Commissioned : as above
- Warranty in Force : Yes / No
- Warranty Expiry Date : \_\_\_ / \_\_\_ / \_\_\_\_\_
- Normal/Poor Accessibility to site : Normal / Poor
- Maintenance Contract in force/Details : Yes / No
- Extent of Maintenance Contract (does the O&M provide agreed production levels and revenue if turbine does not meet them /Does the contract include parts and labour and to what extent?)
- Agreed response times and remote access – mitigation of losses
- Maintenance Provider (full details)
- System/s is/are in full working order: Yes / No
- Flood Checks Completed / EA Report Yes / No
- 

## System Inspection

- Have the system/s had a recent service with all aspects checked and reported with no issues?
- How often is the system /s checked in person -weekly or monthly?  
(Panels / Inverters / Cabling / Framework / Substation – all)
- Details of any unscheduled down time – reasons required
- Electrical Inspection completed Yes / No

## Security

- **Ground Mount - Fencing in place of at least 1.8 m to 2m in height:** Yes / No  
**Type of fence installed? (Note stock fence is not adequate).**  
**Security Standard BS EN 1722?**  
Gates / Access to site – What type of lock fitted / bollards /who has access and if visits are reported?

- What Additional Theft Protection is in force :
- CCTV - 24/07 – 365 to SSAIB/ Nacoss Accredited providers /Gold Standard/ 30 mins call out and site access?
- Guard Patrols / how often is the site visited? - if needed
- Motion Sensors Yes/No
- Remote Scada Monitoring: Yes/No
- Fencing to a minimum of 2m in height Yes/No
- Access to site / any Public Footpaths / farm stock allowed on site? Yes/No

### Sums Insured

- Total Replacement Cost of Project/s : £  
*(To include Equipment/ Materials/ Ground Works/Civils etc.)  
 Check the client has had the full installation cost reviewed by an installer (inflationary increases)  
 If multiple systems, provide splits per site*
  
- Does the client require the substation covered? £  
*(Check if substation is owned by client or adopted by grid  
 Decline cover if grid owned)*
  
- Total Projected Revenue (12 months & inc PPA's) : £  
 Check client provides up to date revenue, PPA's and FIT's have increased due to inflation  
 If multiple turbines, provide splits per turbine

### Claims/Other Information

- For existing Operational Turbines - Claims/Incidents :
  - Any Claims Reported to Insurers – if so amount paid/outstanding/date of incident/full circumstances
  - Breakdowns – Frequency of Breakdowns/ Any Major Breakdowns (more than 5 Days)
  - Any unscheduled outages – provide full details

### Public Liability

- Public Liability Cover Required : Yes / No

If Yes:

Are you a Limited Company? Yes / No

-if Yes, are there more than one Director/Employee? Yes / No

-If Yes, how many Directors/Employees are there?

Public Liability limit of indemnity: £2m / £5m/ £10m

Does the client require Employers Liability Yes/No

HSE regulations state where more than 1 director EL should be in place.

Check with the client and obtain full details.

