NOTTINGHAMSHIRE POLICE
DESIGNING OUT CRIME OFFICER
PLANNING CONSULTATION RESPONSE

Application number	24/00161/FUL
Proposal	Construction, operation and subsequent decommissioning of a renewable energy park comprising ground mounted Solar PV with co-located battery energy storage system (BESS) at the point of connection, together with associated infrastructure, access, landscaping and cabling.
Address	Land West Of Bradmore Road And North Of Wysall Road Land West Of Wysall Wysall
Date	15/03/2024
Consultee	Neil Bellamy | Designing Out Crime Officer 17691 (DOCO) Prevention Hub Nottinghamshire Police Force Headquarters, Sherwood Lodge, Arnold Nottingham Nottinghamshire NG5 8PP

Dear Sir or Madam,

Thank you for providing the opportunity to comment on this application.

It is the responsibility of the Designing Out Crime Officer to provide specialist advice and guidance regarding the built environment at every stage of architectural design, from pre-planning to the full development control process (to minimise crime, fear of crime, disorder, and anti-social behaviour).

This does not, however, preclude subsequent recommendations from other specialist departments within Nottinghamshire Police if required.

All consultations, where relevant, reflect the importance of reducing the harm caused by violence against women and girls.

We have also considered this application in the context of current planning legislation.

Nottinghamshire Police have **no holding objections** with regards to this application, however, we would request that an informative note be added to the decision notice which includes the text contained within the comments section of this letter.

Comments:

This application relates to: Construction, operation and subsequent decommissioning of a renewable energy park comprising ground mounted Solar PV with co-located battery energy storage system (BESS) at the point of connection, together with associated infrastructure, access, landscaping and cabling.

We note the references to security in the Design and Access Statement,

“
• Permeable access tracks and vehicle parking within fenced and gated compounds. Fencing around the solar farm will comprise 2.5m high deer fencing (wooden post and wire mesh appearance) whilst fencing around the BESS and POC compounds would comprise painted (dark green or other colour specified by the Council) palisade fence to a height of 2.4 m;
• Pole mounted infrared CCTV cameras will be installed at a height of 4m around the perimeter of the solar farm enclosures facing inwards, whilst columns circa 4m in height will also be installed within the inside edge of the BESS and substation compounds within the Southern Parcel;
• Timer motion sensor activated security lighting to be installed on proposed electrical housing and buildings, enabling the visibility for any unscheduled maintenance. Any installed lighting will be downwards facing to limit any light emittance when lit.
“

And,

“
Security Requirements
Taking into account the low level of recorded crime for the locality, the following security measures are considered to be appropriate to combat potential criminal activity and unauthorised access into the separate development parcels:
• A 2.4 m high palisade security fence will encompass the proposed BESS and POC compounds.
• 4m high pole mounted CCTV cameras will be positioned at intervals around the periphery of the BESS and POC compounds.
• A 2.5 m high deer fence will be installed to enclose the separate solar farm elements of the Development.
• 4m high pole mounted CCTV cameras will be positioned at intervals around the inside edge of the solar farm fencing, facing into the site.
• Downwards facing timer motion sensor activated security lighting, enabling the security company to have a visual at night. January 2024 | JE | P21-2533 27 6.5.
The above security provisions are typical of other similar developments implemented and operating across the County and are widely accepted as necessary provisions for the operational safety and security or electrical equipment.
“

Nottinghamshire has small, medium, and large solar parks / farms which have over the past 10 years been subject to theft, criminal damage and other crime types, and these have included the theft of solar panels, removal of cabling and the infrastructure which has proved costly with replacement amounts generally in excess of £50,000 to the various developers and management companies that operate such facilities.

The National Infrastructure Crime Reduction Partnership in their most recent report states, “Cable continues to be the primary property targeted by thieves, likely due to ease of disposal via scrap metal dealers. The estimated national loss from solar farm theft across Jan-Feb 2024 is in excess of £1m, the highest loss recorded for a single theft was £150,000 in the Wiltshire force area.”

Combine this with the continuing rise in the costs of metals typically used in the provision of sites such as this, and which is saleable by the criminal as scrap metal, has seen a consistent increase in the number of solar sites being targeted.

The low recorded crime for the locality referred to in the Design and Access Statement is somewhat misleading as low crime would be reasonably expected in a predominantly rural environment, however, conversely, due to the isolated nature of this site, its minimal security in terms of deer fencing, would expose it to greater risk of costly theft and damage far more than that experienced in a higher crime environment.

We note that the Design and Access Statement describes, "Fencing around the solar farm will comprise 2.5m high deer fencing (wooden post and wire mesh appearance) whilst fencing around the BESS and POC compounds would comprise painted (dark green or other colour specified by the Council) palisade fence to a height of 2.4 m".

We would strongly advise the avoidance and use of deer fencing which does not provide any difficulty or deterrent to the criminal in a rural and isolated environment.

This combined with the remote and permeable nature of this particular site could increase the vulnerability of the facility to criminal focus.

We would therefore advise the following:

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 solar 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 effectively and can provide an instant alert in some form.

Physical security of panels

It has been identified that individual panels have 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.

Crime prevention advice is given free of charge without the intention of creating a contract. Neither the Home Office nor the Police Service takes any legal responsibility for the advice given. However, if the advice is implemented it will reduce the opportunity for crimes to be committed.

Regards,

Neil Bellamy
Designing Out Crime Officer 17691
Nottinghamshire Police

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PROUD TO SERVE