

National Centre for Nuclear Security and Non-Proliferation

CASE STUDY: NUCLEAR SECURITY

One Team, One Dream

Designing a facility that has security as a core concept ensures that from the foundations the ethos of safe and secure storage and operation of nuclear facilities is present.

Retrospectively applying security

In the past security has been applied to facilities retrospectively which usually involved significant on-going costs providing the security staff and additional requirements to protect the sensitive facility. Where security is retrospectively added, in most cases the only method to mitigate the remaining threats is by using the guarding or policing function to staff control rooms where video surveillance systems with intruder detection systems have been incorporated. These security functions thereby ensure safe and secure operational use. In this case the extant threats usually remain for the whole lifespan of the activity and need a gargantuan effort to convince the regulatory bodies enough has been done to mitigate the risks

Secure by design

If a facility is built with security at its core and secure by design principles are used the build costs may slightly more but the overall long term operating expenditure will be less due to the risks posed have been mitigated or treated so far that the remaining where guarding or policing functions are used these will be as a last resort due to the hefty ongoing costs to treat the remaining threats posed. This is the approach at one such project.

Unusually this project is being built adjacent to a high category operational facility that must continue to operate throughout the project lifecycle. The solution found was to embed part of NNLS security function into the project, with an intention to deliver project related security requirements directly into the project detailed design team. Furthermore, to keep the existing facility compliant a 2nd line assurance capability was made part of the team that would focus on the existing NSSPs owner's needs.

Essentially the embedded team are able to interject early where issues arise, with dedicated points of contact within the project. this reduces any lag or delay in decision making. The team is also responsible for mitigating any change due to the project, ensuring relevant deviations from the extant NSSP are in place. the intent is to try to understand the changes early, advise the NSSPs owner and ensure any delays are mitigated as far as reasonably practicable.

A lack of qualified persons

One challenge faced in this area is the lack of Suitably Qualified and Experienced People (SQEP) therefore, the Security Framework has been relied upon to provide this resource. With the resurgence of nuclear in the UK this is likely to be exacerbated not only in the security space but across all the associated disciplines for such a major construction project

Having a major construction project adjacent to an existing sensitive facility that must remain operational presents significant challenges, including but not limited to, how to protect the facility when heavy plant is in use within the facility and its environs. The increase in cleared construction staff entering the facility alongside the additional safety requirements and muster concerns have all presented themselves.

A wider role

Members of the team often need to be the mediator across the project including construction /detailed design, operations and NSSP owner/ compliance functions; ensuring all get what is needed. Due to the project being delivered by the landlord through a 3rd party, ensuring the 3rd party feels a level of engagement also becomes critical. The respective assurance function needs to become embedded/ have clear points of contact within the wider project team and delivery partners. Finally, making sure the executive functions are aligned all becomes more complicated due to the unique delivery strategy i.e. via a 3rd party.