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ONR GUIDE			
<b>NUCLEAR CONSTRUCTION SITES</b>			
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**TABLE OF CONTENTS**

1. INTRODUCTION .....	2
2. PURPOSE AND SCOPE .....	2
3. RELATIONSHIP TO RELEVANT LEGISLATION .....	2
4. RELATIONSHIP TO IAEA DOCUMENTATION AND GUIDANCE .....	2
5. RELATIONSHIP TO NATIONAL POLICY DOCUMENTS .....	3
6. DEFINITION OF A NUCLEAR CONSTRUCTION SITE .....	3
7. ADVICE TO INSPECTORS .....	4
8. NUCLEAR CONSTRUCTION SITES – GENERAL .....	5
9. SECURITY ARRANGEMENTS FOR A NUCLEAR CONSTRUCTION SITE .....	6
10. LICENSED NUCLEAR SITE UNDER CONSTRUCTION .....	8
11. MULTIPLE UNIT SITES .....	10
12. REFERENCES .....	11
13. GLOSSARY AND ABBREVIATIONS .....	12
APPENDIX 1 – SUMMARY OF INDICATIVE MEASURES FOR NUCLEAR CONSTRUCTION SITES .....	13
APPENDIX 2 – SUMMARY OF INDICATIVE MEASURES FOR CIVIL LICENSED NUCLEAR SITES UNDER CONSTRUCTION SITES .....	15

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**OFFICIAL****1. INTRODUCTION**

- 1.1 The Office for Nuclear Regulation (ONR) has established a set of Security Assessment Principles (SyAPs) (Reference 7). This document contains Fundamental Security Principles (FSyPs) that dutyholders must demonstrate have been fully taken into account in developing their security arrangements to meet relevant legal obligations. The security regime for meeting these principles is described in security plans prepared by the dutyholders, which are approved by ONR under the Nuclear Industries Security Regulations (NISR) 2003 (Reference 1).
- 1.2 The term 'security plan' is used to cover all dutyholder submissions such as nuclear site security plans, temporary security plans and transport security statements. NISR Regulation 22 dutyholders may also use the SyAPs as the basis for Cyber Security and Information Assurance documentation that helps them demonstrate ongoing legal compliance for the protection of Sensitive Nuclear Information (SNI). The SyAPs are supported by a suite of guides to assist ONR inspectors in their assessment and inspection work, and in making regulatory judgements and decisions. This Technical Assessment Guidance (TAG) is such a guide.

**2. PURPOSE AND SCOPE**

- 2.1 This TAG contains guidance to advise and inform ONR inspectors in the exercise of their regulatory judgement during intervention activities relating to assessment of physical protection at nuclear construction sites. It aims to provide general advice and guidance to ONR inspectors on how this aspect of security should be assessed. It does not set out how ONR regulates the dutyholder's arrangements. It does not prescribe the detail or methodologies for dutyholders to follow to demonstrate they have addressed the SyAPs. It is the dutyholders responsibility to determine and describe this detail within their submission and for ONR to assess whether the arrangements are adequate.

**3. RELATIONSHIP TO RELEVANT LEGISLATION**

- 3.1 The term 'dutyholder' mentioned throughout this guide is used to define 'responsible persons' on civil nuclear licensed sites and other nuclear premises subject to security regulation, a 'developer' carrying out work on a nuclear construction site and approved carriers, as defined in NISR. It is also used to refer to those holding SNI.
- 3.2 NISR defines a 'nuclear premises' and requires 'the responsible person' as defined to have an approved security plan in accordance with Regulation 4. It further defines approved carriers and requires them to have an approved Transport Security Statement in accordance with Regulation 16. Persons to whom Regulation 22 applies are required to protect SNI. ONR considers Physical Protection Systems (PPS) to be an important component of a dutyholder's arrangements in demonstrating compliance with relevant legislation.

**4. RELATIONSHIP TO IAEA DOCUMENTATION AND GUIDANCE**

- 4.1 The essential elements of a national nuclear security regime are set out in the Convention on the Physical Protection of Nuclear Material (CPPNM) (Reference 4) and the IAEA Nuclear Security Fundamentals (Reference 3). Further guidance is available within IAEA Technical Guidance and Implementing Guides.

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- 4.2 Fundamental Principle C of the CPPNM refers to the legislative and regulatory framework should provide for the establishment of applicable physical protection requirements and include a system of evaluation and licensing or other procedures to grant authorisation. The importance of issues relating to authorisation reiterated in the Nuclear Security Fundamentals, specifically:
- Essential Element 3: Legislative and Regulatory Framework – 3.3 The legislative and regulatory framework, and associated administrative measures, to govern the nuclear security regime provides for the establishment of nuclear security regulations and requirements, and associated procedures for evaluating applications and granting authorisations or licences.
- 4.3 A more detailed description of issues relating to legislative and regulatory frameworks is provided in Recommendations level guidance, specifically paragraphs 3.8 to 3.17 of Nuclear Security Series (NSS) 13, Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5) (Reference 2). This document recommends that the State should licence activities or grant authorisation only when such activities comply with its physical protection regulations.
- 4.4 The IAEA also publish Implementing Guide NSS No. 19 ‘Establishing the Nuclear Security Infrastructure for a Nuclear Power Programme’ (Reference 8) where further relevant information can be found on legislative and regulatory frameworks at paragraphs 3.1 to 3.12.

**5. RELATIONSHIP TO NATIONAL POLICY DOCUMENTS**

- 5.1 The SyAPs provide ONR inspectors with a framework for making consistent regulatory judgements on the effectiveness of a dutyholder’s security arrangements. This TAG provides guidance to ONR inspectors when assessing a dutyholder’s submission demonstrating they have effective processes in place to achieve SyDP 6.6 – Nuclear Construction Sites, in support of FSyP 6 – Physical Protection Systems. The TAG is consistent with other TAGs and associated guidance and policy documentation.
- 5.2 The HMG Security Policy Framework (SPF) (Reference 5) describes the Cabinet Secretary’s expectations of how HMG organisations and third parties handling HMG information and other assets will apply protective security to ensure HMG can function effectively, efficiently and securely. The security outcomes and requirements detailed in the SPF have been incorporated within the SyAPs. This ensures that dutyholders are presented with a coherent set of expectations for the protection of nuclear premises, SNI and the employment of appropriate personnel security controls both on and off nuclear premises.
- 5.3 The Classification Policy (Reference 6) indicates those categories of SNI, which require protection and the level of security classification to be applied.

**6. DEFINITION OF A NUCLEAR CONSTRUCTION SITE**

- 6.1 Section 77 of the Anti-Terrorism, Crime and Security Act 2001 (Reference 9), defines the term ‘Nuclear Construction Site’ as a site on which works are being carried out with a view to it becoming a nuclear site wholly or mainly for purposes other than defence purposes, which is situated within 5 kilometres of an existing nuclear site. NISR 2003

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further defines a 'Nuclear Construction Site' as one which works are being carried out by a developer pursuant to the grant or issue of a planning or development consent order.

**7. ADVICE TO INSPECTORS**

- 7.1 Nuclear construction sites present unique challenges to security, not least the scale of some projects, extent of activity and numbers of personnel involved. All SyAPs and their associated TAGs will be relevant to nuclear construction site security at some stage and this TAG does not intend to reproduce the content of those TAGs. The aim of this TAG is to highlight to inspectors the differences a construction site has to an operational site to allow for proportionate assessment. It is a key principle that security measures are effective and proportionate to the threat, and inspectors should recognise that dutyholders need flexibility to manage changes to the construction process. Inspectors should be open to innovative proposals whilst ensuring risks are appropriately mitigated.
- 7.2 The following list of TAGs whilst not exhaustive, are particularly relevant to this TAG:
- Governance and Leadership
  - Maintenance of a Robust Security Culture
  - Commissioning of Security Systems
  - Oversight of Suppliers of Items of Services of nuclear Security
  - Categorisation for Theft
  - Categorisation for Sabotage
  - Physical Protection Design
  - Adjacent and Enclave Sites
  - Guidance on the Purpose, Scope and Quality of a Nuclear Site Security Plan
- 7.3 The purpose of the assessment is to determine whether the security arrangements on a Nuclear Construction Site are adequate to address three specific risks:
- The threat a Construction Site may pose to a neighbouring nuclear site
  - The threat a Construction Site may pose to an existing operating nuclear site where a facility is being constructed
  - The risk of sabotage through introducing defects into the new nuclear facility while it is under construction that could compromise the safety or security of the nuclear facility once it starts operations
- 7.4 The assessment should also provide a level of confidence that the facility is being constructed to meet the arrangements that will be detailed in the security plan once the facility becomes operational using 'secure by design' principles.
- 7.5 This document is not intended to provide guidance on the detailed design of security arrangements for the operating facility. It is produced to highlight areas for assessment consideration throughout the construction phase.

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**OFFICIAL****Regulatory Expectation**

- 7.6 The regulatory expectation is that dutyholders demonstrate within their security plan how their physical protection system is phased according to sensitivity of the site as construction develops in order to provide ongoing assurance that its activities cannot be exploited by an adversary.

<b>FSyP 6 – Physical Protection System</b>	<b>Nuclear Construction Sites</b>	<b>SyDP 6.6</b>
Dutyholders should ensure that they implement a physical protection system designed to ensure its activities cannot be exploited by an adversary to incorporate a latent defect or to pose a threat to an adjacent site.		

**8. NUCLEAR CONSTRUCTION SITES – GENERAL****Phased Approach**

- 8.1 In order to provide for effective and proportionate security arrangements throughout the lifetime of the construction project, it is important that a phased approach is adopted. The phases should identify key points during the construction process when it is necessary to make incremental security enhancements to reflect the rise in the level of risk as the project progresses. Each phase should be documented in the Construction Site Security Plan (CSSP) together with the associated security arrangements clearly articulated. Security 'hold points' should be identified before progressing from one phase to the next to provide time to assess and/or approve amended or new versions of the security plan, and allow time for those revised arrangements to become embedded and operational with proven reliability prior to an increase in site sensitivity or categorisation. Examples of phases will be dependent on the function of the new facility, but may include:
- Ground Investigations.
  - Preparatory Groundworks.
  - First Nuclear Concrete.
  - Introduction of Nuclear or Other Radioactive Material.
  - First Criticality.
- 8.2 Consideration should also be given to the proportionate arrangements for Temporary Security Plans (TSPs) during the transitional period without them placing an unnecessary burden on both dutyholder and regulator. This may be achieved by defining in the security plan the type of activity and bounding cases where TSPs are required.

**Coordination with Licence Application and Licence Grant**

- 8.3 The ONR publication 'Licensing Nuclear Installations' requires appropriate measures to be in place to manage all aspects of security before a site licence is granted. Inspectors will be required to assess the security measures in place and confirm they are appropriate. The dutyholder should submit a draft security plan at licence application and engage with ONR inspectors during its development to ensure it can

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be approved. The approval in principle of the security plan prior to Site Licence Grant can be regarded as acceptance that ONR is satisfied with the security arrangements in place and a Site Licence can be granted.

- 8.4 The submission must include detail of the security architecture for end state operations. This provides assurance to ONR that there is a defined end state for the security regime and allows ONR to check that progress during the transitional period aligns with regulatory expectations and in accordance with agreed timescale. Changes to the end state security architecture will require submission of an amended or new issue of the plan for approval.

**Inspectors should consider:**

- Is the security phased in its approach to reflect the level of risk as the project progresses?
- Are there appropriate hold points identified between the phases?
- Are there appropriate provisions in place for engagement with the regulator to support achieving approval in principle of the security plan?
- Does the security plan include detail of the security architecture for site end state operations?

**9. SECURITY ARRANGEMENTS FOR A NUCLEAR CONSTRUCTION SITE**

- 9.1 An approved security plan must be in place before a developer undertakes activities on a nuclear construction site to construct a new nuclear facility and for which Planning or Development Consent has been granted. The security plan for the construction phase should reflect the arrangements listed below.

**Security Appointments**

- 9.2 A Company Security Manager should be appointed at the early stages of the project to develop security arrangements and author the security plan. A member of the dutyholder's senior management team should be appointed to oversee the overall delivery of security.
- 9.3 A Site Security Manager or a Suitably Qualified and Experienced (SQEP) senior site manager should be appointed to act as a security focal point for liaison with the adjacent site and to oversee security force activity.
- 9.4 Once appointed, the Construction Site Director should have clear sight of security measures being adopted, a clear understanding of the risks and have clear responsibilities for security governance.

**Liaison with Adjacent Site**

- 9.5 Arrangements must be in place between the Security Manager and the adjacent nuclear site's security manager to ensure there is a flow of information including activity on site, any potential hazards and reporting of security incidents for more information.

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### Identification of Vulnerabilities and Hazards

- 9.6 Using the NIMCA as a basis, an evaluation of the vulnerabilities and hazards should be undertaken to ensure appropriate security arrangements are in place to mitigate the associated risks of construction projects. Examples of vulnerabilities may include heavy plant/vehicles, explosives and charges (used in geotechnical surveys), scaffolding, ladders, heavy tools, fuel and chemicals, and large mounds of spoil and earth. Example mitigation measures are at Appendix A.

### Access Control/Authorised Entry

- 9.7 The term Access Control is commonly used in relation to site or building access. It is likely that the initial stages of any development will be undertaken on open land where Public Rights of Way (PROW) are still in place and there may be no defined perimeter. In such cases, access to controllable areas and buildings should be strictly managed to mitigate any vulnerabilities that the dutyholder has identified.
- 9.8 Once PROW have been closed, a perimeter fence or barrier should be erected to delineate the boundary of the Nuclear Construction Site.
- 9.9 Only authorised personnel and essential vehicles should be permitted access. Non-essential vehicles should be parked off the construction site and away from any adjacent Nuclear Site or Facility.

### Security Control Point

- 9.10 A Security Control Point should be established on the site at the designated vehicle/pedestrian access point. It should be staffed by security personnel and used to control and account for pedestrians/vehicles accessing and exiting from the construction site. This can act as a base from which security patrols are carried out and security documentation/records held.

### Searches

- 9.11 A facility should be provided to carry out searches of personnel and vehicles to minimise the risk of the introduction of prohibited items.

### Contractors Security Arrangements

- 9.12 Contracts with third parties should clearly stipulate the security arrangements that are required. Contractors are required to adhere to the same security arrangements as the dutyholder's staff. Arrangements involving the submission of security plans by contractors to the dutyholder should be approved by the dutyholder's Security Manager and supported by comprehensive audit and assurance arrangements. The use of such plans does not absolve the dutyholders from being responsible or accountable for security, and statements to that effect should be clearly articulated in the security plan.

### Personnel Security

- 9.13 Large scale construction projects present unique challenges for dutyholders due to the large workforce on site, the majority of whom will probably be contractors and sub-contractors, both long term and transient, employing a mixture of backgrounds and

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nationalities. The level of vetting checks required for staff, contractors and visitors on a Nuclear Construction Site will depend on access requirements (e.g. to SNI, site plans and construction plant) and their roles, such as security and senior management positions. FSyP 8 requires dutyholders to deliver the appropriate combination of recruitment checks and vetting to satisfy themselves of the honesty and integrity of potential employees.

- 9.14 The dutyholder must have a clear personnel security strategy which reflects the phased approach where security arrangements are commensurate with the level of risk as the project progresses. Use of zones or compounds should be considered where access should be limited to those personnel with higher levels of vetting/security clearance.

**Security Culture**

- 9.15 There may be particular challenges to fostering a good security culture amongst workers on a construction site due to the large numbers of people involved, the often transient nature of contractors and the limited exposure many will have had to nuclear security. The dutyholder should consider implementing a robust nuclear security culture from project start or implement a phased approach as the site develops.

**Inspectors should consider:**

- Is there a company security manager and a member of the senior management team appointed to oversee the delivery of security?
- Is there a Site Security Manager or SQEP senior manager appointed to act as the security focal point for liaison with the adjacent site and to oversee security force activity?
- Does the Construction Site Manager have a clear understanding of the risks and have clear responsibilities for security governance?
- Are there effective liaison arrangements in place with any adjacent nuclear premises?
- Has NIMCA been used as a basis for an evaluation of the vulnerabilities and hazards to ensure appropriate security arrangements are in place to mitigate the associated risks of construction projects?
- Are access control arrangements effective, incorporating a security control point and searching?
- Is there adequate control of the supply chain?
- Is there a clear and effective personnel security strategy?
- Is there an effective strategy in place to foster a strong security culture?

**10. LICENSED NUCLEAR SITE UNDER CONSTRUCTION**

- 10.1 The term 'Licensed Nuclear Site Under Construction' is used to describe a new site on which construction activity is being carried out, from the point at which a Nuclear Site

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Licence is granted up to the time that the site is to become operational. A Licensed Nuclear Site Under Construction must have an approved NSSP in place. The NSSP is to build on the measures already detailed in the CSSP to address the threat to and from a neighbouring operating nuclear site. It is also required to address the risk of sabotage through maliciously introducing defects into the nuclear facility while it is being constructed that could compromise safety or security once operations start.

- 10.2 The dutyholder should submit a draft NSSP at licence application and engage with ONR inspectors during its development. The NSSP should reflect the phased approach to security arrangements throughout the project as described in para 8.1 above. The approval in principle of the NSSP prior to Site Licence Grant can be regarded as acceptance that ONR is satisfied with the security arrangements in place. The NSSP should also outline end state security requirements. These are the security standards, procedures and arrangements, including the location of buildings and barriers that must be in place before the site is formally categorised to the highest category for the prevention of theft or sabotage (refer to the PPS outcomes).

**Introduction of defects**

- 10.3 The dutyholder should clearly identify the point at which the site is sufficiently developed to be vulnerable to the introduction of defects which may compromise the safety or security of the facility once it starts operating. Vulnerabilities should be clearly identified and appropriate security arrangements put in place to mitigate the risks.

**Introduction of Nuclear or Other Radioactive Material**

- 10.4 As the project progresses there may be a requirement to introduce Nuclear Material (NM) and Other Radioactive Material (ORM) such as radioactive sources and new nuclear fuel before the facility becomes operational. The security arrangements to protect this material must achieve the required PPS outcome as detailed in the PPS Outcome Definition Table.

**Site Boundary**

- 10.5 A permanent fence should be in place which delineates the site boundary and excludes any public rights of way.

**Serious Organised Crime and Police Act (SOCPA)**

- 10.6 Once a Licence has been granted the site becomes a 'designated site' subject to the Serious Organised Crime and Police Act (SOCPA) 2005 s128 (Reference 10). Dutyholders are to demonstrate that enforcement of SOCPA can be implemented whenever necessary (e.g. the provision of a defined boundary, access control and clear signage).

**Inspectors should consider:**

- Does the security plan adopt the phased approach?
- Does the security plan outline the end-state security arrangements?

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- Does the security plan identify the point at which the site is sufficiently developed to be vulnerable to the introduction of defects which may compromise the safety or security of the facility once it starts operating?
- Does the security plan demonstrate the required security outcome is achieved at all stages of project development, particularly as NM and ORM is brought on and the categorisation for theft and sabotage increases?
- Is there an appropriate site boundary in place that allows in enforcement of SOCPA once the licence is granted?

### 11. MULTIPLE UNIT SITES

- 11.1 New Nuclear Power Stations may consist of two or more operating reactors in close proximity to one another. The timeframe for operations may mean one or more units operating whilst others are still under construction. Security arrangements during this period must still achieve the appropriate PPS outcome for the operating reactor(s). Inspectors should be flexible and engage with dutyholders to ensure that security arrangements, some of which may be temporary, continue to achieve the appropriate PPS outcome.

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## 12. REFERENCES

1. **Nuclear Industries Security Regulations 2003.** Statutory Instrument 2003 No. 403
2. **IAEA Nuclear Security Series No. 13.** Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (**INFCIRC/225/Revision 5**). January 2011. [www-pub.iaea.org/MTCD/Publications/PDF/Pub1481\\_web.pdf](http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1481_web.pdf).
3. **IAEA Nuclear Security Series No. 20.** Objective and Essential Elements of a State's Nuclear Security Regime. [http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1590\\_web.pdf](http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1590_web.pdf)
4. **Convention on the Physical Protection of Nuclear Material (CPPNM)**  
<https://ola.iaea.org/ola/treaties/documents/FullText.pdf>
5. **HMG Security Policy Framework.** Cabinet Office.  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/316182/Security\\_Policy\\_Framework\\_-\\_web\\_-\\_April\\_2014.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/316182/Security_Policy_Framework_-_web_-_April_2014.pdf)
6. **NISR 2003 Classification Policy** – Trim Ref. 2012/243357.
7. **Security Assessment Principles** – Trim Ref. 2017/121036
8. **IAEA Nuclear Security Series No. 14.** Nuclear Security Recommendations on Radioactive Material and Associated Facilities. [http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1488\\_web.pdf](http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1488_web.pdf)
9. **The Anti-Terrorism, Crime and Security Act 2001.**  
[http://www.legislation.gov.uk/ukpga/2001/24/pdfs/ukpga\\_20010024\\_en.pdf](http://www.legislation.gov.uk/ukpga/2001/24/pdfs/ukpga_20010024_en.pdf)
10. **The Serious Organised Crime and Policing Act 2005.**  
[http://www.legislation.gov.uk/ukpga/2005/15/pdfs/ukpga\\_20050015\\_en.pdf](http://www.legislation.gov.uk/ukpga/2005/15/pdfs/ukpga_20050015_en.pdf)

*Note: ONR staff should access the above internal ONR references via the How2 Business Management System.*

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**OFFICIAL****13. GLOSSARY AND ABBREVIATIONS**

CPPNM	Convention on the Physical Protection of Nuclear Material
CSSP	Construction Site Security Plan
FSyP	Fundamental Security Principle
IAEA	International Atomic Energy Agency
NIMCA	Nuclear Industries Malicious Capabilities Planning Assumptions
NISR	Nuclear Industries Security Regulations
NM	Nuclear Material
NSS	Nuclear Security Series
NSSP	Nuclear Site Security Plan
ONR	Office for Nuclear Regulation
ORM	Other Radioactive Material
PPS	Physical Protection System
PROW	Public Right of Way
SIA	Security Industry Association
SNI	Sensitive Nuclear Information
SOCPA	Serious Organised Crime and Policing Act
SPF	Security Policy Framework
SQEP	Suitably Qualified and Experienced
SyDP	Security Delivery Principle
TAG	Technical Assessment Guide

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**APPENDIX 1 – SUMMARY OF INDICATIVE MEASURES FOR NUCLEAR CONSTRUCTION SITES**

1. The table below provides details on the most commonly deployed measures and processes to achieve the required security for a nuclear construction site. It is not an exhaustive list and dutyholders may consider other measures that achieve the required outcome.
2. Each measure or process should be applied in a graduated manner according to the threat or risk being mitigated as the site develops.

<b>MEASURES AND PROCESS TABLE – NUCLEAR CONSTRUCTION SITES</b>	
<b>Measure or Process</b>	<b>Description</b>
<b>Prevent Unauthorised Access to equipment</b>	<p><b>Initial stages - Site will not have a perimeter.</b></p> <ul style="list-style-type: none"> <li>• Account for all personnel on site.</li> <li>• Remove or secure all equipment and plant which pose a threat to the adjoining site(s) when not in use such as ladders, scaffolding, hazardous material in compounds, stores or ISO Containers.</li> <li>• Ensure keys are adequately secured and controlled</li> <li>• Clearly define any trespass policy and how the company will deal with trespass and protest action</li> <li>• An inventory of equipment should be kept and frequent checks carried out</li> <li>• When Public Rights of Way are closed/re-routed, install a suitable fence to define the perimeter and provide for a defined site access/exit point(s)</li> </ul>
<b>Plant and Vehicles</b>	<ul style="list-style-type: none"> <li>• Construction sites should not be used as storage areas when plant is not in use and the amount of plant on site should be minimised.</li> <li>• Designated compounds or parking areas, away from the adjacent site, should be used when plant is not in use.</li> <li>• Plant and vehicles should be immobilized when not in use.</li> <li>• Keys should be controlled and drawn on ly by authorised persons</li> </ul>

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MEASURES AND PROCESS TABLE – NUCLEAR CONSTRUCTION SITES	
Measure or Process	Description
<b>Spoil</b>	<ul style="list-style-type: none"> <li>Extensive excavation work will result in large quantities of spoil. A plan should be in place to address the impact of spoil mounds on security measures facilitating an attack or the conduct of hostile reconnaissance on an adjacent operating facility, or circumvent security measures</li> </ul>
<b>Liaison with other adjacent Site</b>	<ul style="list-style-type: none"> <li>Ensure formal liaison takes place with security staff from adjacent sites and stakeholders such as CNC and Home Office Police force CTSA's.</li> <li>Appropriate arrangements should be in place to report security incidents to the company security manager and adjacent nuclear site's security staff on a 24/7 basis</li> </ul>
<b>Maintain Clear Zones</b>	<ul style="list-style-type: none"> <li>Ensure clear zones are maintained around site and adjacent sites</li> <li>Ensure non-essential vehicles are parked off-site and well away from any adjoining nuclear facility.</li> </ul>
<b>Guarding/Security Force</b>	<ul style="list-style-type: none"> <li>A SQEP security force should be in place. Duties should be clearly documented. Where CGF are employed, contracts should include a set of key performance indicators.</li> <li>Contract guards must be SIA Licence holders.</li> <li>A Security Control Point should be located by the access point.</li> </ul>
<b>Prevent prohibited items being introduced to site</b>	<ul style="list-style-type: none"> <li>Random searches of personnel/vehicles entering site should be carried out to achieve the specified security outcome.</li> </ul>
<b>Contingency Plans</b>	<ul style="list-style-type: none"> <li>Contingency plans should document actions to be taken if a security event, including protest, action takes place. This should include communication with CNC, local police and adjacent sites</li> </ul>
<b>Personnel Security</b>	<ul style="list-style-type: none"> <li>Clear policy should document the requirements for background checks</li> </ul>

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**APPENDIX 2 – SUMMARY OF INDICATIVE MEASURES FOR CIVIL LICENSED NUCLEAR SITES UNDER CONSTRUCTION SITES**

1. A Civil Licensed Nuclear Site Under Construction must have an approved Nuclear Site Security Plan. The plan may be a simple transition from the Construction Site Security Plan, but a phased approach should be adopted. The NSSP relating to the operational site should reflect the appropriate PPS outcome and the relevant TAGs should be referred to. Similarly, the relevant PPS outcomes must be achieved from the point at which NM and/or ORM is introduced to the licensed site.

<b>MEASURES AND PROCESS TABLE – CIVIL LICENSED NUCLEAR CONSTRUCTION SITES</b>	
<b>Measure or Process</b>	<b>Description</b>
<b>Prevent Unauthorised access to Site</b>	<ul style="list-style-type: none"> <li>• Ensure a site perimeter is in place, all PROW are closed and clear zones are in place around perimeter.</li> <li>• All personnel entering site are authorised through checks by guard force or use of AACS</li> <li>• Vehicle access limited to essential vehicles and minimised with the use of off-site delivery points.</li> <li>• Vehicles are searched on entry</li> </ul>
<b>Contingency Plans</b>	<ul style="list-style-type: none"> <li>• The dutyholder is to ensure appropriate contingency plans are in place to assist in countering relevant malicious capabilities. These should be consistent with emergency arrangements. In particular, dutyholders should recognise the potential increase in threat from protestor action.</li> </ul>
<b>Prevent unauthorised access/use of equipment</b>	<ul style="list-style-type: none"> <li>• Plant/vehicles should be immobilised and cabs should be secured when unoccupied.</li> <li>• Use of PIN protected control systems should be considered.</li> <li>• Vehicles should be parked in designated positions away from adjacent or sensitive areas.</li> <li>• Consider use of Vehicle alarms/tracking systems</li> <li>• Secure Compounds/ISO Containers used for ladders, scaffolds, hazardous materials etc.</li> <li>• Ensure there is an inventory of plant, equipment, volatile materials and that random checks are carried out on them.</li> <li>• Keys should be held securely and accounted for at all times.</li> <li>• Access controls should prevent unauthorised persons accessing equipment or plant.</li> </ul>

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<p style="text-align: center;"><b>SOCPA Provisions</b></p>	<p>SOCPA is very specific on what parts of a licensed site are covered as detailed below:</p> <ul style="list-style-type: none"> <li>• all ground inside the outer perimeter of the protection required for any premises, defined as the line of the outermost fences, walls or other obstacles provided or relied upon for protecting those premises from intruders; and</li> <li>• that line shall be determined on the assumption that every gate, door or other barrier across a way through a fence, wall or other obstacle is closed.</li> </ul> <p>How this is managed is a matter for dutyholders, however as a minimum the following is to be achieved:</p> <ul style="list-style-type: none"> <li>• warning signs are displayed around the outer perimeter to ensure all possible approach routes are adequately covered, especially those that adjoin public property and rights of way;</li> <li>• wherever possible, signs are located so they can also be read during the hours of darkness;</li> <li>• signs are made and, where practicable, positioned in such a way that reduces the possibility of them being used as climbing aids, but ensures that they are securely attached to a fence;</li> <li>• signs are positioned so that, wherever possible, lines of sight/vision through a fence are kept clear;</li> <li>• sufficient spare signs are held to replace any lost or damaged; and,</li> <li>• procedures are in place to liaise with civil police.</li> </ul>
<p style="text-align: center;"><b>Tower Cranes</b></p>	<ul style="list-style-type: none"> <li>• Arrangements should be in place to secure the base of a Tower Crane effectively.</li> <li>• The span of the crane should not compromise security of an adjacent site or operating reactor's perimeter.</li> <li>• On a multi-unit NPS, construction requiring tower cranes should be completed before any adjacent unit operations commence.</li> </ul>
<p style="text-align: center;"><b>Void Management</b></p>	<ul style="list-style-type: none"> <li>• As the build progresses, the complexity of structures will increase. To minimise the risk of unauthorised items being introduced, dutyholders should have a plan that covers the security of voids in structures. This should include a means of searching then securing voids.</li> <li>• Zoning of sites to protect critical infrastructure.</li> </ul>

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<b>Technical Security Measures</b>	<p>Construction sites may cover a wide area several times the size of the eventual operating site. Electronic security arrangements such as PIDS, CCTV, AACS and lighting should be considered and deployed as is practicable. When identifying vulnerabilities, dutyholders should have prioritised where the deployment of such systems will be most effective. The following should be taken into account:</p> <ul style="list-style-type: none"><li>• Sites may not have an electricity supply, therefore equipment with self-contained power sources – diesel generators, battery supplies, solar and wind powered should be considered.</li><li>• The continuous development of the site should be taken into account and portable security systems may need to be considered.</li><li>• Site activities should be taken into account with regard to cable laying, particularly when heavy plant is moving and excavations are underway. Consideration may be given to alternative transmission systems such as wireless technology.</li><li>• Where PIDS/IDS are used, there should be a suitable means of verification/assessment in place.</li><li>• An OR1 and OR2 should be completed to determine what security measures are needed and to what effect.</li></ul>
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