



NSG Security Consultants  
**SECURE ARCHITECTURAL & ENVIRONMENTAL  
DESIGN CONSULTANCY  
INFORMATION PACK**

*SPECIALIST SECURITY CONSULTANCY FOR  
ARCHITECTS, DESIGNERS, PLANNERS & DEVELOPERS*

*February 2017 (Rev.8.0)*

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## 1.0 Introduction

This information pack provides information about:

- what secure architectural and environmental design is;
- who NSG Security Consultants are;
- how NSG Security Consultants work in providing secure architectural and environmental design consultancy services; and
- how NSG Security Consultants can help architects, designers, planners and developers in overcoming development problems

## 2.0 Background – What is Secure Architectural & Environmental Design

In simple terms ‘Secure Architectural and Environmental Design’ is the application of a number of different but linked concepts and applications when put together produce an environment in which crime and associated anti-social behaviour cannot and does not occur; or its likelihood is significantly reduced.

At its core is the realisation that there is no ‘easy fix’ to the development, construction and occupation of a secure environment. The traditional ‘target hardening’ (reliance upon locks, bars and grilles) approach to security has largely been discredited due to its ineffectiveness and the security countermeasures installed retrospectively tend to affect aesthetic building design and functionality.

Secure architectural and environmental design takes a more holistic approach to resolving the problem of crime and the associated problems resulting from the environment we develop, and in which we live, work and visit. At its core is the acknowledgment that there are three inextricably linked elements that work together to create a secure environment:

- (a) the way in which the built environment is designed and constructed;
- (b) the systems installed both physical and electronic which contribute to the management of the built environment created; and
- (c) the management response and process to manage risk.

The reliance of one over the others ultimately fails to deliver a secure built environment. For developers and planners it is essential to consider how the built environment will be used, from the outset and before construction commences, and in that regard, probably the most important elements are the practical application of the concepts of CPTED (Crime Prevention Through Environmental Design) and the effective management of the space created.

The five principle CPTED strategies, involve:

- (1) Natural surveillance – increasing the threat of apprehension by taking steps to increase the perception that people can be seen
- (2) Natural access control – limiting the opportunity for crime by taking steps to clearly differentiate between public space and private space



- (3) Natural territorial reinforcement – promoting social control through increased definition of space and proprietary concern
- (4) Maintenance – reinforcing the sense of ownership and care about the environment
- (5) Target Hardening – the use of locks, bars, grilles and other security measures to ‘harden the target’

In order to ensure that CPTED can deliver, each of these five strategies must be considered equally. But the reality is they hardly ever are. All security practitioners understand Target Hardening and electronic security systems, but few understand the natural strategic elements never mind incorporate them into the advice provided to architects, planners and developers. The truth is that it is the natural elements that are more effective, and moreover they build upon good architectural design practice enhancing the quality of the built environment. Furthermore the application of these concepts is cost effective.

**It is a myth that a secure environment costs more; by adopting the NSG approach it is possible to develop secure buildings in which people choose to live, work and visit without incurring additional cost, it is the case that the NSG approach reduces cost**

### 3.0 Who are NSG Security Consultants?

NSG Security Consultants is a multi-faceted independent security consultancy, free of any commercial interest with the security industry. NSG Security Consultants do not install any security systems or provide any security services, other than management consultancy in the specialist area of security and risk, and secure architectural and environmental design.

NSG Security Consultants were established by Nick Saunders, Director and Principal Consultant, following a career spanning 19 years with the Greater Manchester Police, the last three years as Crime Prevention Officer for a large metropolitan borough in south Manchester. During his time as Crime Prevention Officer, Nick was responsible for advising businesses how to protect themselves from the effect of crime, and the local authority planning department on secure architectural and environmental design matters relating to new and refurbishment developments. It was during this time that Nick realised there was a problem with the advice on offer to both businesses and property developers insofar as it only addressed the frequency with which crime occurred and not the consequences of criminal victimisation (the real cost). Furthermore the advice provided was reactive based upon what was happening (requiring frequent reassessment in light of new threats), rather than predictive based on a much wider range of considerations.

NSG Security Consultants were established to fill this void in the provision of crime reduction and community safety advice, one that would provide a more holistic, realistic and more effective solution. A solution which developers and building occupiers can understand and embrace. Today NSG Security Consultants continues to challenge the establishment view on security and in doing so has shown that there is an alternative – one which can create a truly secure and safe environment.

Having an unswerving belief that he was right and there was an alternative, Nick resigned from the police service to provide that alternative and has undertaken more than 200 separate assignments for more than 70 companies and organisations in both the private and public sectors.



Despite trading successfully since May 1996 NSG Security Consultants has remained true to its principles of:

- Independence - A consultancy free of any commercial association with the private security industry
- Impartiality - A consultancy that always focuses on the best interests of the Client
- Integrity - A consultancy that works to the highest ethical standards
- Innovation - A consultancy that is constantly redefining the boundaries of the sectors in which it operates.

It is the consultancy’s experience, depth of expertise, commitment and competence that has helped to successfully deliver secure construction projects such as the Trafford Centre in Manchester.

#### 4.0 How Does the NSG Approach Work?

NSG Security Consultant’s approach is best shown in the following table, which correlates the consultancy’s approach with the RIBA work stages. An approach which embraces all sectors, industrial, commercial, residential, education, health care, manufacturing, retail and refurbishment, including:

- Shopping Centres
- Schools, Colleges, Universities, Halls of Residence
- Hospitals, Health Care Facilities
- Banks
- Critical Infrastructure
- Manufacturing
- Housing developments
- Major regeneration projects
- Museums, Libraries, Galleries
- Airport and Ferry Terminals
- Office developments
- Hotels

RIBA Work Stages		NSG Security Consultants Works
0	Strategic Definition	It is not usual for security consultants to be appointed this early in the process, but where they are NSG Security Consultants will assist the development team with identifying the client’s security needs and obligations, together with an assessment of security implications arising from the development, typically referred to as a ‘Risk Assessment’. This allows the Development (Design) Team to be better informed of the principle security issues to be considered. And from a security perspective ensure that the business case and strategic brief have been properly considered



1	Preparation & Brief	<p>An often overlooked aspect of the construction process, NSG Security Consultants will work with the intended building occupier and development team to identify security requirements that will enhance building operation and not as is so often the case inhibit those operations. These requirements can be documented in BSRIA (Building Service Research &amp; Information Association) Design Brief format, with security being addressed under each of the BSRIA Design Brief headings as applicable, or in any other format the Development Team prefers.</p>
2	Concept Design	<p>At this stage (more commonly the stage at which security consultants become involved in a construction project) Consultants will prepare a security concept document in support of an outline planning application. The concept document can be produced in the format as prescribed by CAGE as a Design and Access Statement, a security report on the plans produced at this stage, BREEAM Security Needs Assessment Report or dependent upon the complexity of the development it may incorporate a Life (Fire) Safety and Security Strategy. Examples of the contents of recent reports prepared by Consultants at this stage are appended at Appendix A and B.</p>
3	Developed Design	<p>Following Client and Development Team 'sign-off' of the documentation prepared at Stage 2/3, NSG Security Consultants can prepare detailed technical design information with regards to all the security arrangements relating to the project, including where necessary physical arrangements (all aspects of the construction), including but not necessarily limited to:</p> <ul style="list-style-type: none"> <li>▪ Walls</li> <li>▪ Doors</li> <li>▪ Glazing, etc</li> </ul> <p>as well as technical system design, including but not necessarily limited to:</p> <ul style="list-style-type: none"> <li>▪ Fire Alarm &amp; Detection System</li> <li>▪ Intruder Alarm &amp; Detection System</li> <li>▪ Electronic Access Control System</li> <li>▪ CCTV (Closed Circuit Television) System</li> </ul>
4	Technical Design	<p>No Technical or Developed Design can be complete without the inclusion of product information to enable accurate budget costs to be prepared, agreed, and the correct products to be procured. NSG Security Consultants can provide specific product information to meet every project's requirements with regards to compliance with statutory requirements (including British Standards and Best Practice), aesthetic, whole life performance costing principles and budget requirements.</p> <p>In addition, NSG Security Consultants can assist the Development Team with:</p> <ul style="list-style-type: none"> <li>▪ Application for statutory approvals (including Secured by Design &amp; BREEAM)</li> </ul>



		<ul style="list-style-type: none"> <li>Preparation of further information for construction required under the building contract (including design information concerning security elements for CDM documentation)</li> </ul>
5	Construction	<p>In this stage NSG Security Consultants can assist the Development Team with the preparation of additional information to be provided to the Contractor(s) during the mobilisation of the works.</p> <p>During construction NSG Security Consultants can assist the Development Team and the Contractor(s) by dealing with any queries concerning 'security works' arising during the construction phase and upon completion undertake tests on practical completion.</p> <p>If necessary during this phase NSG Security Consultants can manage Contractor(s) costs assisting with certifying interim payments and valuations.</p> <p>NSG Security Consultants can also provide advice about site security during construction to minimise loss.</p>
6	Handover & Close Out	<p>NSG Security Consultants will if required:</p> <ul style="list-style-type: none"> <li>oversee training</li> <li>ensure completion of O &amp; M (Operations &amp; Maintenance) Manuals</li> <li>work with building occupiers on developing the full range of operating procedures</li> <li>undertake tests and issue certificates upon completion (12 months from Practical Completion)</li> </ul>
7	In Use	<p>Provide feedback to the Development Team</p>
Task 2 – Procurement		<p>NSG Security Consultants are members of the Chartered Institute of Purchasing &amp; Supply and are well placed to prepare all tender documentation irrespective of the nature of the procurement – public or private sector. In the case of the former, NSG Security Consultants have a wealth of experience applying OJEU procurement methodologies. The underlying principles of our procurement methods are to secure the most economically advantageous tender taking into account Client requirements not least the initial contract cost, total cost of ownership and ongoing maintenance and support cost, including if necessary product manufacturer support.</p> <p>NSG Security Consultants can either in isolation (with regards to more specialist elements of the project, for example electronic security systems) or in full co-operation and partnership with the Development Team, support the entire procurement process as required, from the earliest stages of procurement (Pre-tender Qualification Questionnaire) to selection of a preferred contractor, including:</p> <ul style="list-style-type: none"> <li>identification and evaluation of potential contractors; and</li> <li>obtaining and independently appraising tenders and the preparation</li> </ul>



	of tender evaluation reports making recommendations to the Development Team and Client.
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## 5.0 Flexibility is the Key

NSG Security Consultants experience has involved work on projects procured by the following routes:

- Fully designed project – single tender
- Fully designed project – design by Contractor or Specialist
- Design and Build – single tender
- Partnering Contract
- Management Contract / Construction Management
- Public Private Partnerships / Private Finance Initiative

Key to our work has been the adoption of a flexible and project specific approach to each individual project.

The NSG Security Consultants resource can be used as a comprehensive ‘one-stop-shop’ security consultancy solution from initial concept to building occupation, or as a schedule of specialist elements which can be used independently, or any combination according to Client and project need.

Dependent upon the Client and project requirements, NSG Security Consultants can combine the RIBA stages, so for example at Stage 2/3 we can provide ‘concept design documentation’ which incorporates more detailed technical design which only requires minor modification to meet any subsequent design changes.

**It is NSG Security Consultants flexible approach that sets them apart from other security consultancies**

## 6.0 Why NSG Security Consultants?

Architects, Designers, Planners and Developers have many different sources of advice available to them when it comes to considering security requirements; often that advice is free; so why consider paying NSG Security Consultants for the same advice?

There are 7 compelling reasons to engage NSG Security Consultants:

- (i) NSG Security Consultants, Director & Principal Consultant was one of the first Home Office trained Architectural Liaison Officers in the United Kingdom, but unlike others that doesn't mean we rest on our laurels. NSG Security Consultants fully subscribes to the Association of Security Consultants CPD (Continuing Professional Development) Programme, meaning that we stay abreast of new and emerging concepts, including whole life performance costing and integrated security and safety risk management.
- (ii) NSG Security Consultants have no vested commercial interest, we do not supply goods, undertake installations, or provide security services – all we do is provide advice, impartial





advice in the best interest of the Client. Neither do we accept commissions from product endorsement. If we recommend products (and we do provide specific product and system specifications from time to time) it is because they offer the best balance between cost and effectiveness.

- (iii) NSG Security Consultants advice does not come with disclaimers – “Crime prevention advice is given freely without the intention of creating a contract”. When you engage NSG Security Consultants you engage consultants who provide the right advice and stand by that advice, if necessary taking full responsibility. Our services are supported by comprehensive insurance cover (Professional Indemnity and Public Liability) to give our Clients complete peace of mind.
- (iv) NSG Security Consultants have the resources, expertise and commitment to work through complex projects from inception to completion and occupation, and along the way helping to ensure that problems encountered are effectively resolved.
- (v) NSG Security Consultants understands that no two projects are the same and recognises that Clients are looking for advice that meets their expectations; it is not simply the case that ‘what worked on one project will work on another’. NSG Security Consultants are unique in applying a lateral and analytical problem solving approach to guarantee a successful outcome. One that achieves the best and most appropriate balance between the need for security and the needs of building occupants. All our work is bespoke.
- (vi) Most Secure Architectural and Environmental Design Consultancy work is undertaken ‘off plan’ at NSG Security Consultants Cheshire based offices. Thereby reducing consultancy costs and providing a ‘quick turnaround’.
- (vii) NSG Security Consultants, Director & Principal Consultant, is a Police Crime Prevention Initiatives Limited (formerly ACPO), Secured by Design Licensed Consultant and a BREEAM Suitably Qualified Security Specialist.

**When you engage the consultancy services of NSG Security Consultants you can be confident that we will provide the advice you are looking for.**

## **7.0 How Else Can NSG Security Consultants Help?**

In addition to the services outlined previously there are other occasions when NSG Security Consultants are approached by Architects, Designers, Planners and Developers to help resolve problems. The following is a small sample of more recent assignments completed by NSG Security Consultants.

### **Resolve Planning Disputes**

No matter how well a planning application is put together there are occasions (sometimes in the belief that the proposed development will lead to the creation of crime and disorder) when the application is refused by the planning authority. The following case study is one such example where NSG Security Consultants were able to help.



#### Case Study (1)

In June 2011 a Holdings Company was refused planning consent for the development of a KFC Restaurant with Drive Thru facility in a London Borough on the grounds of crime and disorder issues raised by the local police. NSG Security Consultants were commissioned by Planning Consultants acting on behalf of the Developer to independently review the planning application and building design for compliance with the concept of CPTED. The independent review showed, together with other consultant recommendations that the intended design and construction accorded well with CPTED. Later consultants represented the Developer at the Planning Appeals Tribunal. In October 2011 the refusal to grant planning consent for the development was overturned by the Planning Inspector, and building works commenced in 2012.

#### **Resolving Security Problems after Construction has been Completed**

Sometimes a lack of proper consideration with regards to security issues in the early design stages can lead to problems later, when the building is handed over and is occupied. The following is one such example where NSG Security Consultant were asked to help to resolve problems which after 12 months of occupation were proving difficult to live with.

#### Case Study (2)

A major Local Authority in the Midlands embarked upon an ambitious programme of redeveloping 20 existing secondary and college education establishments under the Governments Building Schools for the Future programme. Upon completion of the first phase security problems were encountered at one college culminating with the theft of £40,000 worth of computers and more than £80,000 worth of damage.

NSG Security Consultants were commissioned to identify the causes of the problems and make recommendations to ensure that the same problems would not happen on the latter phases. A review of the first phase buildings revealed a conflict between the security and fire arrangements, particularly with regards to poorly conceived and designed expensive electronic access control systems. In addition it was evident that the Authority's requirements had not been adequately articulated in the documentation prepared for the consortium responsible for the construction of the buildings and delivery of the programme. Consultants recommended the adoption of a joint Life (Fire) Safety and Security Strategy for the future phases.

Consultants worked with the building managers of the colleges completed in phase one and those due to manage the buildings in later phases. The resulting Strategy addresses the concerns of building occupants, overcomes the conflict between life (fire) safety and security arrangements and perhaps more importantly in these economically challenging times reduces construction cost.



## **Resolving Insurance Company and Police Architectural Liaison Officer Requirement Disputes**

Those responsible for the creation of the built environment have many sources of advice available often free, but what happens when the advice appears excessive or unnecessary and results in prohibitively high construction or implementation costs, or there is a question over the effectiveness of the security measures advised.

### Case Study (3)

In the summer of 2010 a Local Authority run special needs school in the North West was subject of a vicious arson attack when a large wooden summer house was set alight. In the aftermath of the incident the Local Authority's insurers compiled a report stipulating requirements to prevent a re-occurrence, including extensive site perimeter fencing and CCTV (Closed Circuit Television).

Once the required measures had been costed the Local Authority realised that it could not afford to implement the measures. NSG Security Consultants were commissioned to recommend alternatives measures at reduced cost that would achieve the same level of protection required by the insurance company. Consultants were able to make a number of more costs effective recommendations which when presented to the insurance company were deemed not only to meet requirements, but actually provide a greater level of protection.

## **8.0 The Next Stage**

To discuss your next project contact NSG Security Consultants Tel: 01829 262409 or email [info@nsgsecurity.co.uk](mailto:info@nsgsecurity.co.uk). Initial consultations are free and without obligation.



APPENDIX A  
TYPICAL RIBA STAGE 2/3 SECURITY REPORT CONTENTS



## TYPICAL RIBA STAGE 2/3 SECURITY REPORT CONTENTS

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APPENDIX B  
TYPICAL LIFE (FIRE) SAFETY AND SECURITY STRATEGY CONTENTS



## TYPICAL LIFE (FIRE) SAFETY AND SECURITY STRATEGY CONTENTS

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