Protecting Crowded Places from Terrorism: An analysis of the current considerations and barriers inhibiting the adoption of counter terrorism protective security measures

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Abstract

Whilst much of the literature concerning counter terrorism focuses upon policies and strategies aimed at removing either the terrorist environment and/ or the groups or individuals willing to utilize political violence to achieve their goal(s), there is a much smaller body of work concerned with anti-terrorism, namely those defensive measures, which are designed to prevent or deter terrorist attacks. Increasingly, crowded places have become popular targets for terrorists and the research presented in this paper connects the planning, design and development of real estate with respect to the adoption of protective counter terrorism measures. It seeks to develop new understandings of the considerations that real estate developments have towards terrorism, as well as the barriers that may inhibit counter terrorism protective security measures in future development projects. The analysis is based on qualitative research, namely semi-structured interviews conducted in the United Kingdom, United States and Australia with professionals involved in all core strands of the real estate development process. The findings suggest that considerations towards terrorism vary considerably as a consequence of a range of factors and that while expected factors such as cost and aesthetics are important determinants for decision making, a range of other barriers exist.

Keywords: counter terrorism, anti-terrorism, real estate development, planning, resilience

Introduction

Within the literature, efforts to reduce terrorism can be divided into two broad categories, namely counter terrorism and anti-terrorism.[1] Counter terrorism is generally taken to include

those approaches designed to remove either the terrorist environment and/ or those groups or individuals willing to employ terrorism in the pursuit of their goals.[2] Such approaches can be furthered divided into hard-line and soft-line responses. The former would include the use of the military (e.g. Operation Enduring Freedom in Afghanistan) and repressive measures (e.g. Operation Demetrius in Northern Ireland) to eliminate the threat of terrorism.[3]

In contrast, soft-line responses involve those measures aimed at reducing the terrorist environment and include the addressing of grievances through social reform (e.g. land reform in Peru) and the use of diplomacy or negotiation (e.g. Northern Ireland peace process).[4] The second broad category, that of anti-terrorism[5] or as it is more commonly known in the United Kingdom (UK), counter terrorism protective security, has in contrast received less coverage in the literature.[6] This has resulted in a reduced knowledge base for those tasked with protecting crowded places, including cities from the threat, risk and harm of terrorism. Equally, real estate developers bringing developments forward in sectors of crowded places[7] that have been a central focus for terrorist targeting have limited access to supportive research.[8] Crowded places will continue to be a significant attractor for terrorist attention, and as such, it is essential that new crowded places developments recognize the importance of, and incorporate counter terrorism in the planning, design, development, delivery and operations of all investments. A central focus of this research is to develop an understanding of the current considerations of terrorism and counter terrorism protective security in the decision making process of investments, specifically related to the development of, and in, crowded places, and to identify any barriers that may be acting as impediments to the adoption of such measures.

From our review of the literature, we have not identified any empirical studies focusing on the potentiality of the real estate development process as a construct for enhancing counter terrorism protective security within crowded places. Indeed, we have also not found any

substantive scholarly research specifically developed from significant engagement with the practitioners involved in developing crowded places at the international level. Using the real estate development process as a framework for counter terrorism is we argue both new and original and forms the basis of this study.

This paper reports on the research as follows. First, it presents an overview of the evolution of counter terrorism protective security over the course of the last 50 years with particular emphasis on the emergence of crowded places as a policy consideration.[9] Second, it details the methodological framework used, including the research data requirements, justification of study areas, selection of participants, and data saturation. It then brings forward the results of the study based on the central considerations discussed earlier, with the final section drawing conclusions.

Overview of Counter Terrorism Protective Security

The targeting of crowded places by those inspired by international related terrorism has become prominent in the current threat landscape with significant events in recent times necessitating a change in the current thinking of how cities, in particular, prepare and respond to attacks. Examples would include the attacks in Paris in November 2015, which saw gunmen and suicide bombers target restaurants and bars, a football stadium and a concert hall near simultaneously[10], the 2016 truck attacks targeting pedestrians in Nice on Bastille Day[11] and at a Berlin Christmas market.[12] As a consequence, there has been growing attention in existing literature towards understanding, managing, and mitigating terrorism, particularly in the context of resilience. Much of this focus has built on principles including 'defensible space'[13] which attempt to 'design out terrorism'[14] through concepts such as 'rings of steel'[15] and more recently, advanced approaches including CCTV and hostile vehicle mitigation.[16] While the attacks on September

11th 2001 (9/11) are viewed as a defining moment in the evolution of counter terrorism measures, countries such as the UK had significant experience of deploying physical protective security measures in response to domestic terrorism prior to this. Northern Ireland experienced a period of protracted low-intensity conflict from the late 1960s onwards, known as 'the Troubles'. During this 30-year period some 3,600 individuals lost their lives and some 10,000 bombs exploded.[17] For example in July 1972, the Provisional IRA (PIRA) planted 23 bombs across Belfast, which went off in an eighty minute time period resulting in nine deaths and 130 injuries and became known as Bloody Friday.[18] Thus, in the context of the UK, early counter terrorism protective security measures in the 1970s, 1980s and early 1990s were highly visible, borrowed from Cold War blast resistant design, fortress like in nature, and were effective in restricting access to the central business and shopping district in Belfast - first by barbed wire and then latterly through the implementation of a network of high metal gates and search amenities.[19] While these served to reduce the opportunity for terrorist attacks to occur, they also negatively impacted on the attractiveness of Belfast City centre as a safe place to live, work, socialise, learn, visit and invest.

Terrorism in the UK during this period was however not restricted to the geographical extent of Northern Ireland. A renewed bombing campaign by the PIRA throughout the period of 'The Troubles' targeted cities such as Birmingham, Manchester, and London, and more specifically sites of business, judiciary, government, and military.[20] The impact of these events created a cultural change for counter terrorism policy in Great Britain and saw the introduction of London's 'Ring of Steel' after successive bombings in the City of London and Canary Wharf.[21] While this approach drew heavily on the experiences of counter terrorism protective security measures in Belfast, it established a more technologically advanced and concealed security posture that appeared more concerned with traffic management, environmental considerations,

and petty crime to the general public, than it did about terrorist threat.[22] Indeed, a renewed terrorist threat landscape in the London Docklands and Canary Wharf throughout the 1990s resulted in a 'mini-ring of steel'[23] and 'Iron Collar'[24] that were much more overt in their approach and were designed to provide reassurances to large financial institutions that London was a safe place to locate for business.

In the United States (US), the Alfred P. Murrah Building bombing in 1995, led to a concerted focus on the protection of buildings and general efforts to design out terrorism with the passing of Executive Order 12977 in October 1995 aimed at increasing the security of federal buildings and introducing innovative design features such as shatter-proof glazing and reinforced plates, the latter predominantly used in the ceilings of underground and multi-storey parking garages.[25] While these measures sought to counter and mitigate the impact of future terrorist attacks, they were mainly deployed at sites of federal interest, with little attention paid towards other critical infrastructure or locations where mass gatherings took place.

Counter Terrorism Protective Security Post 9/11

The events of 9/11 provided a catalyst for counter terrorism policy to be rethought, particularly in western contexts, with much greater emphasis placed on protecting critical infrastructure assets from terrorism. An immediate response to those attacks was the deployment of crude counter terrorism protective security features, such as jersey barriers, in Washington DC and New York City, as measures of both reassurance and prevention.[26] These reactive measures were seen as a stop gap in the security fabric in the US in advance of the formulation of specific legislative and policy frameworks that were designed to minimise the exposure and exploitation of vulnerabilities related to terrorism. Up until then, the primary threat emerged from improvised explosive devices, however, the events of 9/11 signalled a dramatic shift in

the tactics and methodologies employed by terrorists, as well as set the foundation for a new 'form of terrorism' that evolved from domestic threats, towards events inspired by international related terrorism.[27]

An initial response to these changes in the US was the establishment of the *National Strategy for Homeland Security*[28] in 2002, which set out a framework for (1) preventing terrorist attacks within the US, (2) reducing America's vulnerability to terrorism, and (3) minimising the damage, and recovering from the attacks that do occur. In delivering this *Strategy*, an outcome was the development of the *National Strategy for the Physical Protection of Critical Infrastructures and Key Assets*[29] that placed much greater emphasis on protective security considerations across all sectors. At the same time, the UK mobilized in response to the events of 9/11 and in 2003, developed the first iteration of the *UK Counter Terrorism Strategy (CONTEST)*,[30] which was designed to enable the UK Government to better understand, counter, and mitigate the emerging international related terrorist threat, as well as refocus protective security from Northern Ireland related terrorism through its Protect strand.[31]

Other western jurisdictions followed suit with Australia publishing its first terrorism white paper '*Transnational Terrorism - The Threat to Australia*[32] in 2004 against a backdrop of terrorist bombings in Bali (2002) and Jakarta (2003, 2004)[33], and the European Union in 2005 agreeing the *EU Counter Terrorism Strategy*[34]. Neither, however, placed similar or adequate emphasis on protection per se, with the Australian white paper only paying very limited attention to the protective security requirements of counter terrorism. In contrast, the EU strategy did include a specific policy strand on safeguarding citizens from terrorism, understanding and reducing vulnerabilities, and protecting critical infrastructure.

Protecting Crowded Places from Terrorism

Since these initial publications were formulated, the terrorist attack trajectory has shifted away from disruptive attacks on critical infrastructure assets towards crowded places which have become a national security concern worldwide. As such, these strategies have undergone review on numerous occasions with each iteration becoming more focused on the concept of protecting crowded places from terrorist attack with concerted efforts to provide advice and guidance on protection and preparation well documented. This has resulted in many guidance documents emerging from government taskforces that are designed to help organizations mitigate risk associated with an attack. Examples such as the *Crowded Places Guidance 2017* from the UK National Counter Terrorism Security Office (NaCTSO)[35] and *Australia's Strategy for Protecting Crowded Places from Terrorism*[36] also published in 2017, highlight the importance of protection in light of many impactful attacks throughout the world. This is not to say that protecting crowded places has only become a policy consideration in recent times.

In 2008, the US Government highlighted many challenges of protecting mass gatherings[37] (similar to crowded places in other jurisdictions worldwide) post 9/11, and has produced sector specific advice iteratively over the course of the past ten years in response to the threat. The Australian Strategy has also evolved in response to the threat in recent times.[38] The UK Government through NaCTSO has placed much emphasis on protecting crowded places using the vehicle of the Protect[39] strand of the UK CONTEST strategy and has delivered many projects since its inception. Project Argus,[40] a testing and exercising initiative that aims to enhance resilience from terrorism in crowded places, was launched in 2007 and was designed to engage mostly private sector organizations through mechanisms such as the Counter Terrorism Security Advisor (CTSA) network. Other initiatives such as Project GRIFFIN[41]

sought to increase awareness of terrorist threats and provide information to businesses on what to do in the event of a threat or an attack.

While these programs were mostly designed to inform the business communities of already established crowded places, emphasis was also placed on the need to inform those developing new crowded places in the future. In 2010, the Royal Institute of British Architects (RIBA) released guidance on designing for counter terrorism[42] and collaboration between the Home Office and the Department for Communities and Local Government resulted in the publication of *Crowded Places: The Planning System and Counter Terrorism*[43] in 2012, which was designed to provide guidance to those involved in the planning, design and development of crowded places. Despite this focus from governments, there is a significant gap in the current scholarly literature base concerning the introduction of counter terrorism features in to new crowded places developments. In particular, there is a lack of discussion around the role that real estate development plays in the counter terrorism process, and the barriers that may exist in its use to enhance counter terrorism protective security measures.

The impact of filling this gap will be an informed understanding of the current considerations of terrorism within real estate development decision making and adds to the current knowledge base by presenting a comprehensive empirical underpinning that has the potential to inform future counter terrorism policy.

Research Design and Methodology

The research underpinning this paper is based on a qualitative methodological framework and set in three international jurisdictions, namely, the UK, US, and Australia. The study was conducted between February and November of 2017 and focused on two key research

enquiries: 1) understanding current considerations of counter terrorism within the real estate development process and 2) identifying what barriers inhibited the implementation of counter terrorism protective security measures in the development of crowded places. It was focused in cities including, Belfast and London in the UK; New York City, Oklahoma City, and Atlanta in the US; and Sydney, Melbourne and Canberra in Australia. The research is based on a sample of 134 interviews. The research aimed to answer two core research questions. The first question asked whether practitioners involved with developing crowded places currently consider counter terrorism protective security during the real estate development process. If yes, what types of measures are included in the decision-making process and during what stage of the planning, design and development process. The second question was aimed at understanding what barriers may potentially inhibit the adoption of counter terrorism protective security in the development of crowded places. Two secondary objectives also emerged during the research. The first was to ascertain whether built environment practitioners, for example planners, developers and architects, generally, are more mindful of terrorism in cities where attacks have previously occurred, and whether this awareness substantively influenced decision making in the development process. The second objective was to understand whether countries with longer histories of responding to and mitigating potential terror attacks, such as the UK, which has developed specific strategies for protecting crowded places, are influencing decision making in countries more recently experiencing an increased terror threat level, such as Australia.

Research Data

The research utilised in-depth, semi-structured interviews with practitioners in the architecture, urban design, engineering (structural, civil, electrical and mechanical), planning, project management, local government representatives, real estate development and investment sectors

in the cities mentioned previously. A snowball sampling method was used, with the first group of practitioners identified through the project team's existing professional networks. Additional participants were identified through interviewee recommendations; the research team researched the recommendations and included relevant practitioners that were currently or had been previously actively involved in the development of crowded places. Participants were selected based on their expertise in the built environment related to crowded places development, and taking into consideration their professional knowledge on project diversity, including: size (number of end users and size of developments), typology (type of project), and project role (relating to the development of crowded places, as mentioned above).

The purpose and rationale for using interviews was to gain both breadth of information and a depth of understanding into the perceptions of practitioners to develop a contemporary understanding of counter terrorism protective security in each of the different professional disciplines within the three jurisdictions. The UK, US and Australia (and the cities where the interviews were conducted), were selected as the research study areas as a consequence of three underpinning determinants. Each of the cities has either 1) been the focus of international related terrorism in recent times; 2) has developed distinct policies focusing on protecting crowded places; or 3) is a global city attracting significant numbers of visitors each year to their diverse network of crowded places.

The interviews were primarily conducted at the offices of the participants in organisations from the following cities: Belfast, Manchester and London in the UK; New York City, Oklahoma City, and Atlanta in the US; and Sydney, Melbourne, and Canberra in Australia. Interviews were conducted within each country until saturation of information was reached within each professional sector.[44] This required 56 interviews to be conducted in the US, 54 interviews in

the UK, and 32 interviews in Australia – resulting in a total sample of 142 interviews. Australia has a smaller property market with fewer organizations involved in the development of crowded places, with most of these organizations having a designated group responsible for risk assessment and mitigation coordination across projects in multiple cities. This resulted in a lower number of interviews being conducted to reach saturation. In contrast, the US and UK have a larger sample of organizations working on crowded places development, with many of these having multiple offices located in cities across the country resulting in a larger sample in these countries before saturation was reached.

Semi-Structured Interview Questions

The interview questions used in the research were constructed to empirically test the two core research questions using a structured interview format. The interview questions were tested and refined through a piloting process, which included 10 semi-structured interviews with experts in the UK representing both practitioners involved in the development of crowded places and in counter terrorism. This process helped ensure that the rationality, clarity, and logical flow of questions were appropriate for our intended stakeholder groups. The process also provided an understanding of the length of time that each interview would take and, more importantly, ensured that the research data collected would contribute to the filling of the critical gap identified in the existing knowledge base. After refining the process from the piloting stage, all subsequent interviews were conducted using the same set and order of questions to ensure comparability of the results of the research.

Results and Findings

The results obtained were based on two core themes, specifically, the identification of the current considerations of counter terrorism within the real estate development process; and the

analysis of barriers inhibiting the adoption of counter terrorism protective security in the development of crowded places. This section is therefore structured accordingly.

Current Considerations of Counter Terrorism Protective Security in the Real Estate Development Process

Terrorist attacks on crowded places have become the normal approach for international related terrorism and domestic extremism inspired by international related terrorist incidents in recent times. This trend has resulted in the publication of explicit guidance on mitigating the impact of terrorism on crowded places by many western governments, as well as enhancing the attention of some professional bodies related to the real estate profession to the issue.[45] That being said, it was identified that there was a lack of specific legislative requirement to build counter terrorism protective security measures in to new private sector developments in the majority of countries worldwide. Consequently, it is important to ascertain the real estate development professions' (all of those involved in the development process) considerations of terrorism within their decision making process. This is to improve the integration of counter terrorism protective security considerations during the planning, design and pre-development stages of crowded place development.

Consideration of Threats in the Real Estate Development Process

In order to achieve this understanding, we first asked respondents about the specific threats that they consider in the development of real estate assets directly associated with the different crowded places sectors discussed previously. It emerged that while some worked on the basis of an all-threats/hazards approach to their developments, this was mainly as a consequence of the location of the development, type of development (government, transport hub, stadia, shopping malls, health care) utilization of a security consultant (either in-house, or external) in

the early stages of the development, or a mature organizational security culture being evident on the part of the developer.

Most of those interviewed however, were only concerned with the threats that they were being mandated to consider, such as those that building codes in specific locales stipulated. From the interviews, a series of common threats were identified across the stakeholder grouping which, when aggregated, related to four core themes (see Figure 1.). These themes included:

1. Development Risk: Directly related to finance, planning, potential contributions required for development, return on investment from development, securing debt finance

2. Development Location/Site Selection: Concerned with the physical layout and location of the site, Ownership Profile in Area, and Local Amenities

3. Natural Phenomena: Extreme weather events such as hurricanes, tornadoes, other storms; flooding, and climate change

4. Human-Induced Issues: Petty crime, fire, cyber, insider threat, and terrorism

Figure 1.   Main Threats Considered in the Real Estate Development Process
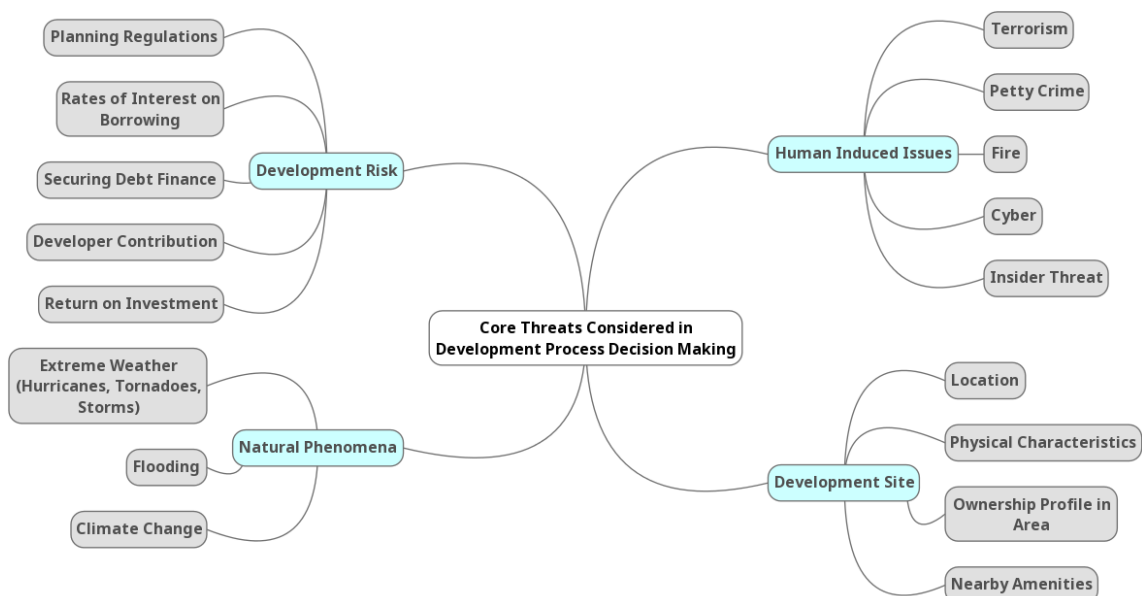
Terrorism was not identified as a major threat considered in the development process by those interviewed with the majority of respondents suggesting that the inclusion of terrorism as a

consideration was mainly as a consequence of (a) size of the contracting agencies (major multi-national development company with in-house security specialists had greater considerations), (b) the location and type of development (major city and related to critical infrastructure and critical national infrastructure, stadia, or mass transit), or (c) if the client/ development brief clearly articulated the need. While there was general acceptance that attention will likely increase towards countering terrorism in the development process in the future, it is not currently a core consideration in real estate development decision making, particularly within small-medium sized practices. What did emerge from the findings was that there is an imbalance in the consideration and inclusion of counter terrorism protective security measures with the current threat landscape and this was evidenced by numerous respondents:

> "If you look back at the terrorist events that have happened, there have been limited attacks on public sector assets with the private sector mostly taking the hit. This is then ironic when you realise that most of the public sector developments that we work on are mindful of anti-terrorism, but the majority of our private sector developments that host groups of people, do not. There is something not quite right about this"

and

> "We have a lot less worry about terrorism in the US from what is perhaps much higher up the agenda of countries in other places like Europe. We have offices in both the UK and US and considerations in our UK developments are much higher, however, it is seldom discussed at the outset of private sector developments but it is when we are working for public sector clients. We find this hard to believe as the private sector are the predominant owners and operators of critical infrastructure and large mass gatherings venues. Our biggest considerations in developments though are probably more related to general crime and there is a lot of help that we get in relation to secure by design that we don't get for terrorism."

The findings suggest that enhancing the cognizance of terrorist threat within private sector development projects contemporaneously would be a key challenge. This was considered a consequence of the low frequency of attacks that occur in comparison to high frequency threats such as petty crime, that have specified guidance and are much easier to counter and mitigate.

Impact of Recent High Profile Terrorist Events on the Adoption of Counter Terrorism Protective Security Measures within Crowded Places

Understanding how the threat landscape impacts on the consideration and adoption of counter terrorism protective security measures within real estate development is fundamental for those tasked with protective security advice and guidance in law enforcement, government and the private sector. It is important to know this in order to ensure that vulnerabilities that may have been exposed and exploited by recent attacks are not present, or are at least considered, in the development of new crowded places. The research as a consequence explored the impact that events, such as those in Paris (2015), Tunisia (2015), San Bernardino (2015), Brussels (2016), Nice (2016), London (2017) and Manchester (2017), have had on the decision making of those involved in the development of crowded places.

The results present a scale issue in terms of impact. Respondents working in practices in large cities and working on large-scale real estate and infrastructure development schemes indicated that these events have raised their awareness of the possible challenges that terrorism may derive. In the context of those engaged in development in smaller cities and working on smaller projects, this was not always found to be the case. Results also found that the majority of respondents indicated that these events have not prompted them to think differently or changed their decision making in relation to new developments or the retrofitting of existing crowded places. This has been motivated by a number of factors, including:

• Frequency of Attacks: the relatively low frequency of attacks in comparison to other issues, such as petty crime, have contributed to this phenomenon.

• Distance from Attack: narrative suggested that distance from attack impacted on the influence of the attacks on developments. The findings also show that this influence diminished with time. Greater proximity to crowded places has a tendency to result in an increased impact on localised decision making. This can have significant effect on the proportionality of the response to countering and mitigating the impact on the targeted area relative to other previously unaffected, but potentially vulnerable, areas positioned in close proximity.

- Client Driven: even when the practitioner community are mindful of the terrorist threat, the ultimate decision to include/exclude counter terrorism protective security measures resides with the client. Indeed, if the development was to be leased, counter terrorism protective security measures would need to be stipulated by the leasee, the client, in order to influence decision making, particularly around cost and making the development equation work.

- Mentality: there was a strong belief that the 'it won't happen to us' viewpoint was a major influence in decision making. In this context, some respondents were of the opinion that developments in smaller cities were less attractive targets and, consequently, the risk of a terrorist attack was reduced. Others considered the current threat landscape to mainly be an external community issue and not an individual asset responsibility.

Interestingly, the client aspect emerged as the most prominent component in the decision-making process concerning whether recent terror events influenced how decisions were made. If the client does not stipulate in the brief, even after these events happen, or they cannot be influenced by those in the design and build teams, then it is less likely to be included or prioritised according to responses. As one respondent explained:

> "Such events haven't really influenced things. It's the talk around the coffee pot, but engineers, and other contractors, are heavily devoted to meeting the needs of their clients while adhering to the laws set by the code. The community are so accustomed to the traditional system of doing business, they have not taken a step back to invest time and energy in to creative and innovative solutions to problems. Our moves are depicted by the client."

The consensus among respondents was that developments are built to code and fulfil the client requirements, and that mitigation features beyond these requirements are less likely to have been accounted for in the project budget. Therefore, if developments have been started, it is difficult, and costly (from a design and legal perspective- in relation to aspects such as planning permissions), to revisit the development design and finance models. It was suggested that an increased risk awareness across the real estate investor and developer groupings is needed to ensure that terror events have some influence in decision making during the early planning and

design phase of the project. Comments from the interviewees clearly reflected the need for a thorough assessment at design and pre-construction phases demonstrating the need for pro-active rather re-active decision making.

Other respondents indicated that these events had more of an impact on their leasers, property managers or buyers than on the development themselves, as business continuity and relatedly, insurance, would be more of a factor for countering and mitigating the threat, risk and harm of terrorism. This was evident in a number of cases, including:

> "The UK recent events have prompted us to look at things differently. I think if you look historically when companies look at things like disaster recovery and business continuity and crisis management, it's always been how to protect the product and how to protect the building, and probably the resilience of the person has come last. I think with this focus we need to actually purposely consider the human continuity as part of that."

Consideration of Counter Terrorism Protective Security Measures at Organizational Level

Significant attention in the research has been given to the considerations of counter terrorism protective security in the overall development process, which has provided insight in to the current modus operandi of the development sector. What is perhaps equally as critical, is knowledge of the considerations of counter terrorism at the organizational level within the sectors that contribute to the development process. There is a need to understand this to ascertain whether any positive/negative influences on developments are a consequence of contractor considerations of counter terrorism.

It was recognized across the stakeholder spectrum that counter terrorism measures will likely become more prominent within the decision making process in response to a growing terrorist threat. The majority of those interviewed believed they already appropriately consider counter terrorism protective security as relevant to their role in the development process; however, most

expressed that their ability to integrate such measures was solely enabled or inhibited through the specification requirements outlined in the developer's brief. For example,

> "At a strategic level, yes, we consider it. But it doesn't always get integrated in to every design as the client has to want it. If they don't, it's very hard to convince that it needs to be there and consequently, itemized in the budget."

In the context of the core considerations integral to the development process, some respondents were of the opinion that the public sector/ private sector client issue constitutes a fundamental challenge for implementing counter terrorism protective security measures. Evidence from the interviews show that attempts have been made in the past to factor in such measures, however on the downside, clients from the private sector in some instances were only concerned with getting the best building for the most cost effective price. The implications of this position, is that some respondents consider that the private sector needs to more open to the inclusion of protective security, as is the case in the public sector.

Many respondents demonstrated their opinion that security was becoming a core facet of their offering. As a consequence, many organizations either had in-house security specialists or security consultants advising on measures such as counter terrorism and general criminality. Discussions with the developer community suggest that architectural and other design professionals located outside of major global practices, were not sufficiently trained or skilled in innovative and integrated design practices related to mitigating terrorist attacks. As a result, the proposed designs would often have resulted in significant additional costs, which the development budget could not sustain. This would therefore impact on the organizational acceptance of such measures, especially if they were not being required by law.

Need for Counter Terrorism to be a Core Consideration within the Development Process

There was a consensus amongst the entire respondent group indicating that counter terrorism should, and needs to be, elevated as a core consideration within the real estate development process. While this consensus was evident, some responses suggested that such a requirement would be difficult to initiate and sustain, and may negatively impact on the private sector bringing forward developments related to crowded places based on financial viability. Indeed, participants across the sectors noted that more specific guidance and frameworks should be productive to the functionality, design and operations of the buildings, and focus on responses that are proportional to the threats that a development may face. Many examples were given where the counter terrorism measures advised by consultants and counter terrorism protective security practitioners were significant and, consequently, the disproportionate response to perceived threats inhibited the likelihood of uptake of such measures in the design and build strategies:

> "We hear on so many occasions where developments are advised to put in the most holistic protection available. This never achieves agreement from the clients and discussions around security measures usually breaks down. Therefore, it must be done in a sensible and, perhaps, phased manner."

Indeed, the same was communicated about some police advice and those providing the advice. In this context, respondents suggested that police protective security advisors did not fully understand real estate development, its design elements or associated costs and, as a consequence, and on occasion, provided recommendations that were inappropriate and resulting in an inability for the site to both function as planned and provide a high quality design. This disconnect ultimately resulted in discussions around protective security measures breaking down, thereby creating barriers for the adoption and implementation of such measures in current and future development projects. Some respondents believed that counter terrorism security advisors should also have a background in design or engineering; this would enable

recommendation to not only create safe places, but also be more effective in meeting the professional complexities associated with the real estate development projects.

Further narrative suggested that future considerations must be based on an integrated security management approach; otherwise, additional vulnerabilities may be exposed and, potentially, exploited by those seeking to cause harm. It was considered fundamental that any counter terrorism considerations in the future must not be based solely on protecting against specific threats and methods of attack. This only results in a building that is well protected. However, if the people that they then employ to work in those buildings are not well-trained, educated and vetted, and policies and procedures around other security-related issues are not present, then the physical protective security methods become limited in their potentiality.

Moreover, if counter terrorism does become a core consideration in the development process then it must also be cognizant of the need to ensure that the crowded places maximize the use of space available and that the adopted counter terrorism measures do not inhibit effective use and design of space, any more than absolutely necessary. As one respondent explained:

> "In parallel, design must be balanced also. Measures must not be intrusive and need to work in the context of the layout of the site and how the site operates. Aesthetics of buildings and site is highly important. Understanding design requirements is crucial for understanding how to integrate security measures without anyone knowing or realizing that they are there. When a place looks nice, that is what is important to the people using the site. Place making is crucial."

Barriers to Adoption of Counter Terrorism Protective Security at the Earliest Stages of the Development Process

The analysis of the interview data identified the potential inhibitors or barriers to the adoption of counter terrorism protective security measures at the earliest stages of the development process of crowded places. While some of these would be considered obvious, new understandings of why such measures are not being introduced were achieved providing new

insights for government, law enforcement and the private sector. These barriers ranged from traditional concerns related to cost, to challenges relating to a lack of expertise/education among the various professions involved in the development process. The most common barriers identified are presented in Figure 2. This list is not exhaustive but aggregates the responses in to common themes with descriptive narrative detailing the rationale behind why these themes are considered barriers.

Figure 2.   Common Barriers impacting Adoption of Counter Terrorism Protective Security Measures
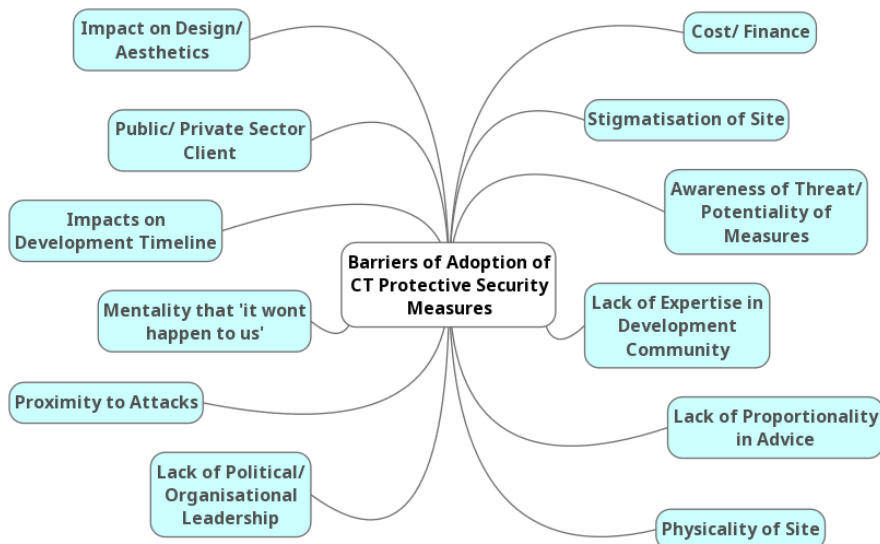
Awareness

A common theme emerging from the research was that there was a need to raise awareness across the development sector as this was acting as a major barrier to the inclusion of, and even consideration of, counter terrorism protective security measures. This assertion stems from a number of key observations that illustrated:

- There was a lack of awareness of the terrorist threat landscape at the developer level unless specific consultation had taken place with security professionals, and or, law enforcement. Narrative suggested that most awareness of the threat was through watching news media or when law enforcement had become aware of the development

and engaged with the design and build teams. It was the view of some respondents that if developers understand why counter terrorism measures are important, then opposition to inclusion could be reduced. It was pointed out that on many occasions, interaction with law enforcement was not at the early stages of the development and as a result the development requirements were not mindful of issues such as terrorism. This resulted in limited attention, by those responding to proposal requests/ development briefs, towards counter terrorism as the brief had not stipulated such requirements. It was expressed that this needed to change and that engagement was needed at the strategic definition and preparation and brief stages.

- Minimal awareness of terrorist threat and counter terrorism protective security measures exists at the site selection phase unless a security consultant is utilized. It was the view that this is not normally the case unless it was a major development. A lack of consideration at this stage could inhibit the type and placement of external security measures that could be implemented, as well as enhancing the vulnerability of the site, as a consequence of location and proximity.

- A lack of awareness of the potential design based mitigation was evident across the developer community and that greatly inhibited the consideration of counter terrorism protective security. Most were of the view that such measures would inhibit good quality design, substantially enhance cost and inhibit the functionality of the site.

Cost

The most prominent and perhaps most expected challenge for including counter terrorism protective security measures is the perceived increase in cost that incorporating such measures would generate. The cost component is however complex and numerous cost-related obstacles were identified. These included:

1. There are no mandatory regulations stipulating that counter terrorism must be considered in the development of crowded places and as a consequence, many developers are unprepared to meet the additional costs of counter terrorism protective security measures unless the client/ end-user stipulates that such measures should be included. It was demonstrated that these costs would then likely be residualized in to the sale price/ rental return which is passed on to the client/ tenant/ end-user of the development. As these measures will then enhance the overall cost, this can ultimately make the development non-viable from a financial perspective if not accounted for at the very beginning.

2. Too many competing interests already existed on aspects such as sustainability, fire, compliance with disability legislation, as well as other stipulated requirements. Costing in something that was not a regulatory requirement would be difficult to achieve unless directly stipulated by buyer or end-user/tenant.

3. Incorporating such measures may impede the development timeline, especially if the decision to incorporate such measures is made after the development budget has been agreed, and especially if the construction progress is mature.

4. There is a perception that many clients have a mentality that *'it will not happen to them'*. As a consequence, there was a view that developers will consider the level of investment required for counter terrorism protective security measures to be disproportionate to the likelihood of an attack.

While the cost of financing these measures was highlighted as a major barrier, others believed that the issue of cost was gradually diminishing as awareness of the threat was slightly improving, albeit slowly, and mostly as a result of coverage by mainstream news media items. Furthermore, there was a recognition that many mitigation measures could be done cost effectively, and in some cases, be cost-neutral, if thought about at the correct stage of the development process and if working with innovative design teams. As noted,

> "Awareness is a massive barrier. Cost can also be a component but a lot of things can be done freely, or relatively inexpensively, if done from the start….[of the development process]"

Respondents also indicated that the barrier of cost will be broken down when those proposing the consideration of counter terrorism protective security measures are able to demonstrate that there is added value and marketability in incorporating such measures for both the development community and also the end-user/ tenant. It was suggested that this could be achieved through potential award initiatives such as those used for Leadership in Energy and Environmental Design (LEED), Building Research Establishment Environmental Assessment Method (BREEAM) and Secure by Design (SBD).[46]

Public/ Private Sector Client

As has been discussed previously, the view was held that disparity existed in the considerations paid towards public sector developments in comparison to those brought forward by the private sector. It was felt that a more structured approach to countering security challenges, including terrorism, existed and that in many cases, it was a distinct stipulation from the outset of the

project. Unless the private sector site related to critical infrastructure, critical national infrastructure or attracted tens of thousands of people at any one time, it was likely that considerations would be limited in scope.

Physicality of Site

It was stated that some sites that are selected for development, and buildings that already exist, are situated in locations that are not conducive to the implementation of many protective security measures and as a consequence, the effectiveness of such measures are reduced. This related to developments where site lines extended to pavement/roadside or other infrastructure; multiple ownership existed; and where space did not permit inclusion of measures such as hostile vehicle mitigation.

Education and Expertise

Responses also indicated that concerns existed around the expertise of the real estate profession in the context of counter terrorism. It was emphasized in some quarters that "[there is…] a lack of expertise locally in relation to designing protective security" and as a consequence, " [the professions] struggle to find people who are real experts that can offer real suggestions."

Other responses indicated that expertise needed to be within the design and engineering professions as they were fully aware of how best to integrate protective measures in to the site both aesthetically and also functionally. It was considered that those best placed to provide such advice need to understand the concepts of the development and not just provide security advice as that added cost, as well as time.

Some respondents were of the opinion that this lack of expertise stemmed from an omission of counter terrorism considerations in the tertiary education sector, particularly in the context of architecture, landscape design, interior design, engineering, and core real estate curricula. If this barrier was to be overcome, then the education sector and the professional bodies, in response to the terrorist threat, needed to buy-in to teaching that encouraged issues such as terrorism to be considered. This would necessitate a closer engagement between academia, the professional bodies and the industry in developing and reviewing degree programs at both undergraduate and postgraduate levels. Specifically, this should entail a three-way exchange of information involving the theory, standards and good practice in the development process.

Mentality that it won't happen to us

Another clear barrier identified was the belief that terrorism 'wouldn't happen to us' and this was hindering uptake within many projects. It was felt that the developer on many occasions usually had a buyer or tenant in place before the development was constructed and that unless it was stipulated by the prospective buyer or tenant, counter terrorism protective security measures were unlikely to be considered. This was usually driven by either lack of consideration at all, or them considering the likelihood of an attack impacting them as being low. This conclusion was often supported with reference to the fact that they didn't believe that a terrorist would want to attack their developments as in their view, they were not iconic sites.

Lack of Political Considerations

Another significant barrier and one that is perhaps the most difficult to overcome, is a lack of government regulation. As it is not mandatory to include measures related to countering and mitigating the impact of terrorism within the real estate development process, it was identified that until regulation mandates its inclusion, there would continue to be opposition from the

development sector. This being said, there was a lack of appetite within the respondent cohort for such regulation to be developed and instead, the belief existed that a culture, based on informed and specific guidance, was needed in development organizations, before counter terrorism becomes a mainstream development consideration.

Proximity of Past Attacks and Impact on Decision Making

There was general agreement across the stakeholder grouping that an attack in proximity to developments would positively influence their decision making in relation to counter terrorism protective security measures. Despite this, the narrative suggests that this would be on a case-by-case basis, and until the frequency of these attacks increased and were more concentrated in geographies, then the industry would unlikely be influenced unless regulated to do so. Indeed, it was suggested that this impact would diminish over time. As one respondent commented:

> "Proximity does have an issue, but only for a period of time. You usually get much greater attention in the short term after the event, this then declines as time passes unless another attack happens. It also depends on the size and type of an attack. People remember attacks where large numbers of people are killed and big brands attacked, they usually don't remember the smaller events, or at least, these don't impact their decision making as much."

A number of respondents highlighted that a lot of this influence would be derived from issues such as reputational damage, particularly if their brand name, or development was brought into public view, through media coverage of an attack. As a follow on, the respondents suggested that they would reassess their consideration of counter terrorism and incorporate measures, where possible, in order to enhance their perception as a safe place to visit. An example of such a response noted:

> "Yes, it makes me more aware. I have an understanding to a degree [..of the impact of an attack in proximity] but things are constantly changing. I know reputationally that an attack has a massive impact, particularly on a big brand and a well-known area."

Conclusions

A key conclusion of this research is that the general expectation that terrorism would be included as a core consideration in the real estate development process is, particularly in areas that have experienced terrorist attacks in the past, much more complex and differs based on project scale, contracting authority, project team, and location of those crowded places. An original contribution of this research is detailing the significant range of threats, impacts of events, and organizational influences that exist, in informing the real estate development process. The study, by differentiating the current considerations that exist, provides an evidence base from which policy makers can seek to inform decisions, particularly those relating to the protection of crowded places.

This research extends the existing literature base on counter terrorism protective security, a distinctly under-researched component of the terrorism research discourse, by developing a baseline of factors that could inhibit the consideration and implementation of counter terrorism within the future development of crowded places. The findings show that factors such as cost and aesthetics, in reality, are not the sole determining factors in excluding counter terrorism protective security measures from developments, but instead, issues such as awareness, education and client, are equally influential in the decision making process.

The significance of the results extend beyond the current knowledge base on counter terrorism protective security and have the potential to reach decision informers in both the counter terrorism policy landscape, and those influential in developing standards for the planning, design, construction, and management of real estate assets. This significance is not restricted

geographically, instead, it has the potential to inform governments internationally who may wish to understand the barriers that they may need to overcome in their counter terrorism initiatives. Implicit in the findings are pointers to the ways in which small changes in approaches to policy, such as in education, and in the combined impact of some counter-terrorist design tactics for other health and safety considerations, could bring significant and positive change.

[1] See for example Ronald Crelinsten, *Counterterrorism* (Cambridge: Polity Press, 2009); Richard English, *Terrorism: How to respond* (Oxford: Oxford University Press, 2010); and Brigettw Narcos, *Terrorism and Counterterrorism* (New York: Routledge, 2016).

[2] The Joint Chiefs of Staff define counter terrorism as "actions taken directly against terrorist networks and indirectly to influence and render global and regional environments inhospitable to terrorist networks". See Joint Chiefs of Staff, *1998 Joint Publication 3.07.02 Antiterrorism.* Available at http://www.bits.de/NRANEU/others/jp-doctrine/JP3_07.2(10).pdf

[3] Following the events of 9/11, Operation Enduring Freedom saw the United States and a number of its allies invade Afghanistan as part of the global war on terrorism. Operation Demetrius was a British Army operation in Northern Ireland in 1971, which saw the mass arrest and internment without trial of individuals suspected of being members of the Provisional Irish Republican Army. For more information, see Gus Martin, *Understanding Terrorism* (London: Sage, 2013); Rachel Monaghan, "Have global efforts to reduce terrorism and political violence been effective in the past decade?". In *Contemporary Debates on Terrorism* eds. Richard Jackson and Daniela Pisoiu (Abingdon, Oxon: Routledge, 2018), pp. 247-253; and Martin McCleery, *Operation Demetrius and its aftermath* (Manchester: Manchester University Press, 2015).

[4] The Peruvian government introduced a number of social reforms including land reform, political rights and rural improvements in its efforts to reduce support for Sendero Luminoso (Shining Path). The Northern Ireland peace process saw the major terrorist groups agree to non-violence and inclusion in multi-party talks, which ultimately resulted in the Good Friday/Belfast Agreement, which brought some 30 years of political violence largely to an end. For more information see Martin, *Understanding Terrorism*; Wyn Rees and Richard J. Aldrich, "Contending cultures of counterterrorism: Transatlantic divergence or convergence?," *International Affairs* 81, no.5 (2005), pp. 905-923; Ronald H. Berg, "Peasant responses to Shining Path in Andahuaylas ." In *Shining Path of Peru* ed. David Scott Palmer (New York: Palgrave Macmillan, 1994), pp. 101-122; and Chris Gilligan and Jon Tonge, *Peace and war? Understanding the Peace Process in Northern Ireland* (Farnham: Ashgate, 1997).

[5] The Joint Chiefs of Staff define anti-terrorism as "defensive measures used to reduce the vulnerability of individuals and property to terrorist acts". See Joint Chiefs of Staff, *1998 Joint Publication 3.07.02 Antiterrorism.* Available at http://www.bits.de/NRANEU/others/jp-doctrine/JP3_07.2(10).pdf

[6] Noteable exceptions include Ashton B. Carter, "The architecture of government in the face of terrorism," *International Security* 26, no.3 (2001), pp. 5-23; and the work of Jon Coaffee including "Protecting the Urban: The dangers of planning for terrorism," *Theory, Culture & Society* 26, no.7-8 (2009), pp. 343-355.

[7] In the context of this research, crowded places include entertainment complexes, stadia, bars, pubs, nightclubs, hotels, shopping malls, places of worship, iconic sites, urban spaces and educational institutes.

[8] A considerable body of literature exists with respect to emergency management in the US but much of this deals with responses to natural disasters and to a lesser extent the response to a terrorist attack. See William L. Waugh Jr. and Gregory Streib, "Collaboration and leadership for effective emergency management," *Public Administration Review* 66 (2006), pp. 131-140; William L. Waugh Jr., "The political costs of failure in the Katrina and Rita disasters," *American Academy of Political and Social Science* 604 (2006), pp. 10-25; and Naim Kapucu, Tolga Arslan and Faith Demiroz, "Collaborative emergency management and national emergency management network," *Disaster Prevention and Management* 19, no. 4 (2010), pp. 452-468. For a more pro-active response to terrorism from the business community see Bruno S. Frey, "How can business cope with terrorism?," *Journal of Policy Modeling* 31 (2009), pp. 779-787.

[9] The last 50 years saw a shift in terrorist targeting with more emphasis on attacks in urbanareas and on critical infrastructure assets. This was particularly evident during the period known as 'The Troubles' in Northern Ireland between 1969 and 1998 and the associated UK mainland attacks that occurred.

[10] BBC News, "Paris attacks: What happened on the night," 9 December 2015. Available at: https://www.bbc.co.uk/news/world-europe-34818994 (accessed 18 June 2018).

[11] Alan Yuhas, Matthew Weaver, Bonnie Malkin and Kevin Rawlinson, "Nice attack," *The Guardian*, 15 July 2016. Available at https://www.theguardian.com/world/live/2016/jul/14/nice-bastille-day-france-attack-promenade-des-anglais-vehicle (accessed 18 June 2018).

[12] BBC News, "Berlin lorry attack," 24 December 2016. Available at https://www.bbc.co.uk/news/world-europe-38377428 (accessed 18 June 2018).

[13] Oscar Newman, *Defensible Space* (New York: Macmillan, 1972).

[14] Jon Coaffee, "Rings of steel, rings of concrete and rings of confidence: designing out terrorism in Central London pre and post 9/11," *International Journal of Urban and Regional Research* 28, no.1 (2004), pp. 201–211.

[15] Stephen Brown, "Central Belfast's security segment - an urban phenomenon," *Area* 17, no.1 (1985), pp. 1-8; and Neil Jarman, "Intersecting Belfast." In *Landscape, politics and perspectives*, ed. Barbara Bender (Oxford: Berg, 1993), pp. 107-138.

[16] Centre for the Potection of National Infrastructure. *Integrated Security: A Public Realm Guide for Hostile Vehicle Mitigation*. Second Edition. (Crown Copyright, 2014). Available at: https://www.cpni.gov.uk/system/files/documents/40/20/Integrated%20Security%20Guide.pdf

[17] BBC History, "Violence in the Troubles." Available at http://www.bbc.co.uk/history/topics/troubles_violence (accessed18 June 2018); CAIN, "Security and Defence." Available at http://cain.ulst.ac.uk/ni/security.htm#06 (accessed 18 June 2018).

[18] BBC History, "Bloody Friday." Available at http://www.bbc.co.uk/history/events/bloody_friday_belfast (accessed 18 June 2018). Of the 23 bombs, 19 exploded, 2 were defused and 2 did not detonate.

[19] Rachel Briggs, "'Invisible Security': The Impact of Counter Terrorism on the Built Environment." In *Joining Forces: From National Security to Networked Security*, ed. Rachel Briggs (London: Demos, 2005), pp. 68-90; Jon Coaffee and Peter Lee, *Urban Resilience: Planning for risk crisis and uncertainty* (London: Palgrave, 2016).

[20] Coaffee, "Rings of steel, rings of concrete and rings of confidence."

[21] Coaffee and Lee, *Urban Resilience.*

[22] Coaffee, "Rings of steel, rings of concrete and rings of confidence."

[23] Jon Coaffee, "Fortification, fragmentation and the threat of terrorism in the City of London." In *Landscapes of Defence*, eds. John R. Gold and George E. Revill (London: Addison Wesley Longman, 2000), pp. 114-129.

[24] Coaffee, "Rings of steel, rings of concrete and rings of confidence."

[25] Coaffee and Lee, *Urban Resilience.*

[26] Trevor Boddy, "Architecture Emblematic: Hardened Sites and Softened Symbols." In *Indefensible Space*, ed. Michael Sorkin (Abingdon: Routledge, 2007), pp. 277-304.

[27] See Gus Martin, *Essentials of Terrorism: Concept and Controversies*, 2nd edition. (London: Sage, 2011); Kaye Marquis, "Did 9/11 Matter? Terrorism and Counterterrorism Trends:

Present, Past, and Future." In *Homeland Security and Terrorism*, eds. Russell Howard, James Forest and Joanne Moore (New York: McGraw Hill, 2006), pp. 19-30.

[28] Office of Homeland Security, *National Strategy for Homeland Security* (July 2002). Available at https://www.dhs.gov/sites/default/files/publications/nat-strat-hls-2002.pdf (accessed 12 October 2017).

[29] Department of Homeland Security, *The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets* (February 2003). Available at https://www.dhs.gov/xlibrary/assets/Physical_Strategy.pdf accessed on 12/10/2017.

[30] The first UK Counter Terrorism Strategy (CONTEST) adopted in 2003 was not a publicly available document, but was referenced by the House of Commons Home Affairs Committee, Project CONTEST: The Government's Counter-Terrorism Strategy, Ninth Report of Session 2008-09 (London: The Stationery Office, 2009).

[31] CONTEST involves the 4Ps, namely Pursue (i.e. to stop terror attacks from happening), Prevent (i.e. to stop individuals from either supporting or becoming terrorist), Protect (i.e. to increase protection from a terrorist attack) and Prepare (i.e. to mitigate the impact of a terrorist attack). For more details, see HM Government, *CONTEST: The UK's Strategy for Countering Terrorism*, July 2011. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/97994/contest-summary.pdf (accessed 18 June 2018). The PROTECT strand of CONTEST focuses on keeping people safe by strengthening protection against terrorist attacks in the UK and their interests overseas, thus reducing vulnerability. It is designed to work towards effective multi-layered defences against terrorist attacks, reducing illicit access to the material needed for an attack including increasing the timeliness of suspicious transaction reports, whilst also protecting the UK's public spaces,
transport and infrastructure that are most at risk of attack, and making full use of our powers and capabilities at the border.

[32] Australian Government, *Transnational Terrorism: The Threat to Australia* (Commonwealth of Australia, 2004). Available at http://pandora.nla.gov.au/pan/43449/20040726-0000/www.dfat.gov.au/publications/terrorism/transnational_terrorism.pdf (accessed 12 October 2017)

[33] In October 2002, two bombs exploded on the popular tourist island of Bali, killing 202 people including 88 Australians. A suicide bomber targeted the JW Marriott Hotel in Jakarta leaving 12 dead and 150 injured and the following year, a car bomb was left outside the Australia Embassy, which killed 9 and injured more than 150. See BBC News, "The 12 October 2002 Bali bombing plot", 11 October 2012. Available at https://www.bbc.co.uk/news/world-asia-19881138 (accessed 18 June 2018); Mark Rivett-Carnac, "These Are the Last Six Major Terrorist Attacks in Indonesia", Time, 14 January 2016. Available at http://time.com/4180220/indonesia-terrorist-attacks-history-jakarta/ (accessed 18 June 2018). For a more academic discussion of the impact of the Bali bombings on the Australian psyche see Jeff Lewis, "Paradise defiled: The Bali bombings and the terror of national identity," *European Journal of Cultural Studies* 9, no. 2 (2006), pp. 223-242.

[34] Council of the European Union, *The European Union Counter-Terrorism Strategy* (Brussels, November 2005). Available at https://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2014469%202005%20REV%204 (accessed 12 October 2017). This strategy was introduced in the wake of terrorist attacks in Madrid 2004 and London 2005.

[35] For more information, see National Counter Terrorism Security Office, *Crowded Places Guidance* (Crown copyright, 2017). Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/619411/170614_crowded-places-guidance_v1.pdf (accessed 12 January 2018).

[36] For more information, see Australia-New Zealand Counter-Terrorism Committee, *Australia's Strategy for Protecting Crowded Places from Terrorism* (Commonwealth of Australia, 2017). Available at: https://www.nationalsecurity.gov.au/Media-and-publications/Publications/Documents/Australias-Strategy-Protecting-Crowded-Places-Terrorism.pdf (accessed 12 January 2018).

[37] See Committee on Homeland Security House of Representatives, *The Challenge of Protecting Mass Gatherings on a Post-9/11 World*, 110th Congress, second session. Serial No. 110-124 (Washington: US Government Printing Office, 2008). Available at: https://www.hsdl.org/?view&did=233575 (accessed 12 January 2018).

[38] See previous strategy in 2011, National Counter-Terrorism Committee, *National Guidelines for the Protection of Places of Mass Gathering from Terrorism* (Commonwealth of Australia, 2011). Available at: https://www.nationalsecurity.gov.au/Media-and-

publications/Publications/Documents/national-guidelines-protection-places-mass-gatherings.pdf (accessed 12 January 2018).

[39] Protect involves those efforts designed to strengthen protection against a terrorist attack at home and against UK interests abroad. It includes work undertaken to secure the Critical National Infrastructure, assessing and reducing risks to crowded places through improved protective security and strengthening UK border security. For more details, see HM Government, *CONTEST*.

[40] For more information, see National Counter Terrorism Security Office, *Guidance: Project Argus* (March 2016). Available at https://www.gov.uk/government/publications/project-argus/project-argus (accessed 12 January 2018); and James A. Malcolm, "Project Argus and the Resilient Citizen," *Politics* 33, no.4 (2013), pp. 311-321.

[41] For more information, see National Counter Terrorism Security Office, *Guidance: Project Griffin* (March 2016). Available at: https://www.gov.uk/government/publications/project-griffin/project-griffin (accessed 12 January 2018).

[42] For more information, see Royal Institute of British Architects, *Guidance on designing for counter-terrorism* (RIBA, 2010). Available at: https://www.frontierpitts.com/wp-content/uploads/Documents/RIBAguidanceoncounterterrorism.pdf (accessed 12 January 2018)

[43] HM Government, *Crowded Places: The Planning System and Counter-Terrorism*, January 2012. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/375208/Crowded_Places-Planning_System-Jan_2012.pdf (accessed 12 January 2018).

[44] The saturation point was deemed to have been met after 134 interviews

[45] Examples would include the UK's HM Government, *Crowded Places* and RIBA, *Guidance on designing for counter-terrorism*. In Australia, the National Counter-Terrorism Committee, *National Guidelines for the Protection of Places of Mass Gathering from Terrorism* and in the US, the Department of Homeland Security, *National Protection and Programs Directorate Office of Infrastructure Protection Security of Soft Targets and Crowded Places–Resource Guide* (April 2018). Available at https://www.dhs.gov/sites/default/files/publications/Soft_Targets_Crowded%20Places_Resource_Guide_042018_508.pdf (accessed 18 June 2018).

[46] BREEAM is a global sustainability assessment method for masterplanning projects, infrastructure and buildings. This assessment is conducted through third party certification of

the assessment of an asset's environmental, social and economic sustainability performance in line with standards developed by BRE; Leadership in Energy and Environmental Design (LEED) is the most widely used green building rating system in the world; Secured by Design is a group of UK national police projects focusing on the design and security of new buildings.