

Trends & issues

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Foreword | *Current town planning and housing policies suggest that in the very near future, housing density in major Australian cities will be much higher than current levels. To date, little attention has been paid to how these policy shifts will impact levels of crime and fear of crime. The aim of this research is to contribute to the development of strategic policy for the secure management of high-density housing. By analysing actual rates and types of crime, guardianship levels, building management styles and perceptions of fear of crime, the research will reveal how planning policies and high-rise building management styles can coalesce to create safer vertical communities. The research focuses on high-rise apartments and touristic buildings on the Gold Coast (specifically Surfers Paradise) and identifies the disproportionate concentration of crimes among a handful of buildings. Results may help state and local governments in Australia to avoid repeating the housing policy mistakes experienced by other countries.*

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Risky facilities: Analysis of crime concentration in high-rise buildings

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In recent years, local and state governments have implemented changes to planning legislation and regulations, signalling a shift towards high-density housing, or vertical communities, in order to ease the strain of maintaining a sprawling infrastructure base (Healy & Birrell 2006; Newman & Kenworthy 1989). However, little consideration has been given to how these policies might impact on levels of crime and fear of crime within vertical communities. To inform evidence-based housing and planning policies, this paper explores how the levels of place management and guardianship relate to the volume and mix of crimes occurring in high-rise apartment buildings.

Background

It is fairly well established that crime concentrates with respect to space (hotspots), victims (repeat victimisation) and offenders (prolific offenders). These patterns offer law enforcement and allied criminal justice agencies considerable guidance for effective crime prevention resource allocation. Recently, a new form of crime concentration, known as *risky facilities*, has emerged that complements and enhances existing crime prevention efforts.

Eck, Clark and Guerette (2007) use risky facilities to describe the uneven distribution of offences across facilities of the same type. One surprising finding is that even within a set of homogenous locations (hotels, train stations, licensed venues), only a small number of locations often account for a disproportionately large number of crimes. This is commonly referred to as the 80–20 rule, where 80 percent of outcomes are caused by only 20 percent of a population. The risky facilities pattern has been demonstrated in schools, banks, bars and clubs, bus stop shelters, various types of small businesses, construction sites, convenience stores, petrol stations, hotels and motels, and a few other facility types (Eck, Clark & Guerette 2007).

Risky facilities have clear implications for prevention strategies and techniques. Through identifying those facilities responsible for the greatest proportion of crimes, resources can be allocated effectively to realise maximum prevention benefit, while focusing on relatively few facilities (Eck, Clark & Guerette 2007; Eck & Eck 2012; Madensen & Eck 2008; Wilcox & Eck 2011). The risky facilities concept places a great deal of emphasis on the role of place managers and how their practices influence the differences observed between facilities (Homel & Clark 1994; Madensen & Eck 2008). In addition, crime prevention can be triggered by the presence of guardians, individuals who provide natural, informal surveillance for a potential crime target (Hollis-Peel et al. 2011). Identifying facilities that account for the most and least crime, researchers are able to identify some of the key factors influencing this and what management practices are the most effective at preventing crime. This information can be used to reduce crime at other facilities, as well as informing best practice.

Aims

The aim of this project was to inform housing and planning policy development and policing practice by identifying and examining risky facilities within high-density communities. Specifically the following research questions were explored:

- Are there certain buildings that host a disproportionate volume of crime for different crime types? If so, what distinguishes these buildings from others that do not?
- What is the relationship between building management style and the volume and nature of crime? Does physical security play a role in the observed differences between buildings? What is the relationship between guardianship offered by fellow residents and the volume and nature of crime?
- Do management style and security measures influence the perception of safety and incidences of crime within high-rise buildings?

Data

Study region

The Gold Coast suburb of Surfers Paradise was the focus of the research. It has one of the highest population densities in Australia at 3,279 persons per square kilometre and over 70 percent of the Surfers Paradise residential population live in buildings classed as high density (ABS 2011). In addition, Surfers Paradise is a premier tourist destination, attracting more than 4.3 million international and domestic overnight visitors annually (Tourism and Events Queensland 2012). The combination of residential and tourist population in a commercial area provides a unique and fascinating dynamic.

The analysis focused on buildings with at least three storeys, in order to avoid information privacy concerns. Building use was measured using a categorical variable encompassing the common activities at each location—commercial, holiday apartments, hotel/resort, motel, offices, retail, residential or any combination of the above. As the purpose of this research was to explore crime patterns in high-rise residential settings, buildings were further classified according to residential tenure:

- *Long-term residential*. This category refers to buildings that are inhabited only by owner-occupiers or long-term renters.
- *Short-term residential*. This category includes all buildings that house exclusively short-term occupants, typically holidaymakers or inhabitants of a transient nature. The types of buildings included in this category include hotels, resorts, motels and holiday lets.
- *Mixed residential*. Buildings that contain a mix of both long and short-term residents. Some buildings are primarily owner-occupied but reserve a number of units for short-term holiday letting, or hotels that have several floors dedicated to long-term residents.

Recorded crime

In total, 290 residential properties were identified with three or more storeys. All criminal matters recorded by the Queensland Police Service located in the

Surfers Paradise Police Division between 2005 and 2012 were extracted from the QPRIME database. Of these, there were 11,055 unique criminal matters associated with the buildings of interest.

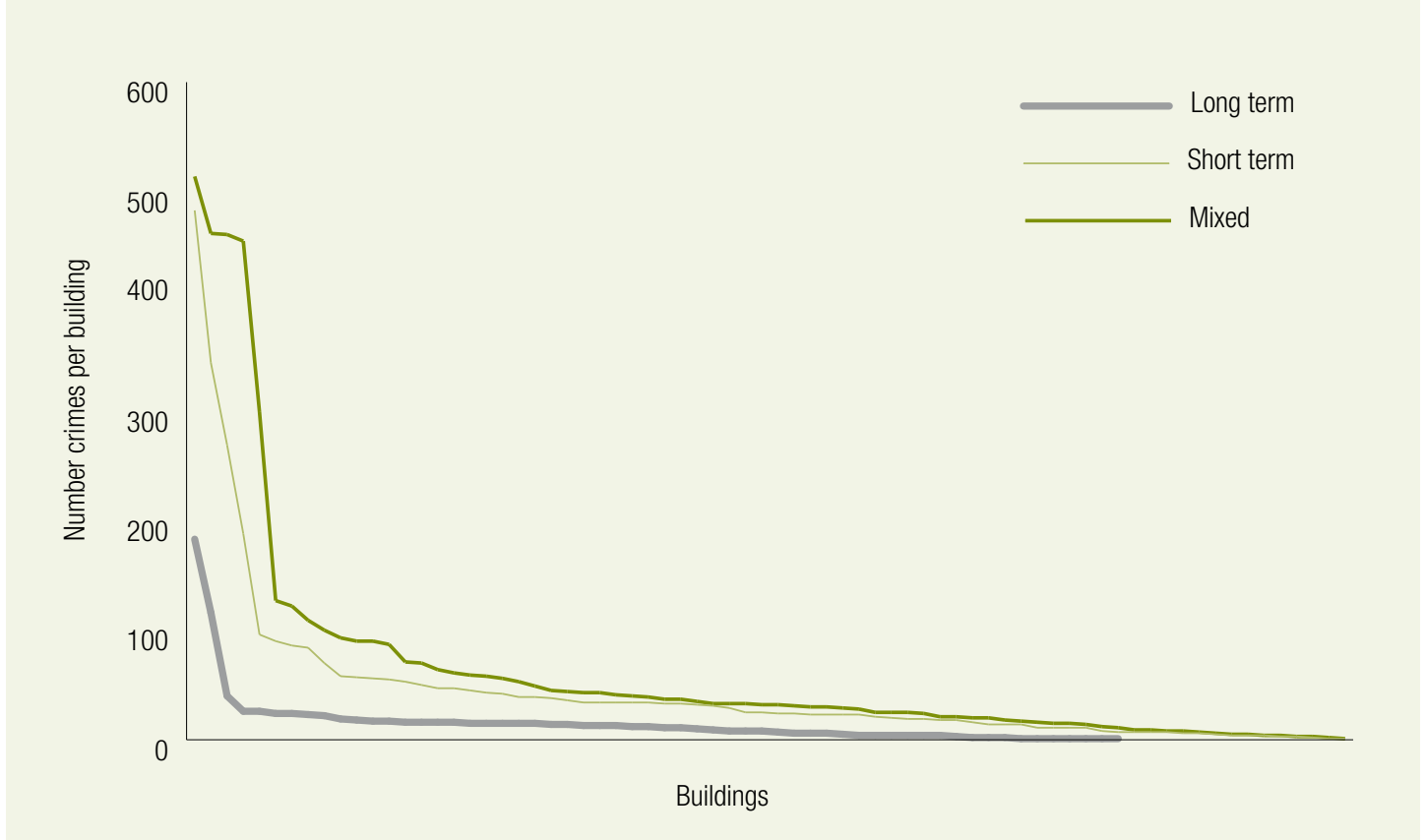
Observations

Observations were conducted at 125 high-rises apartment buildings (43% of the sample). An observational instrument was derived by combining various measures from two existing instruments that have been validated in previous studies—the Guardianship In Action instrument (Hollis-Peel et al. 2011; Hollis-Peel & Welsh 2013; Reynald 2011, 2009) and the place management at apartment building instrument (Eck et al. 2010). The instrument was designed to measure the intensity of guardianship provided by residents, the intensity of place management available at the buildings and aspects of the physical environment that previous research has shown to be related to guardianship, place management and crime levels at residential places.

Specific observational measures included the visible presence of residents and building managers on site, natural surveillance by residents and intervention by residents and onsite managers when necessary. The physical environment measures included image/maintenance (eg broken lights/windows, litter, graffiti), territoriality measures (eg presence of barriers and signs) and surveillance measures (eg lighting and CCTV).

The team of observers consisted of six people who underwent observational training for two days before the field observations were conducted. Thirty-six percent of the observation facilities were rated by pairs of observers (independently) in order to test the reliability of the observational instrument. Inter-rater reliability was assessed using Cohen's κ and results revealed strong reliability of the observational measures, with κ greater than .70 recorded for all variables used in the analyses. These results indicate that the observational instrument yielded acceptable levels of consistency across various observers.

Figure 1 Risky facilities for all recorded crimes by building tenure type. Buildings are rank ordered from highest crime to lowest crime counts



Additionally, 19 in-depth interviews were conducted with residents, police, body corporate and strata title experts. The semi-structured interviews explored these individuals' perceptions of safety and fear of crime, as well as building design and security measures.

Analysis

Figure 1 displays the observed concentration of recorded crime in high-rise buildings by tenure. The results demonstrate a clustering within each building tenure type, with the bulk of crimes hosted by a relatively small group of buildings. For short-term and mixed tenure buildings, about 10 percent of buildings host 50 percent of recorded crime. For long-term tenure, this proportion was about 15 percent of buildings.

There are quite clear differences in the volume of crimes at the different types of buildings. Buildings with mixed tenure residents record the most crime, followed by short-term tenure buildings. Buildings with long-term tenure recorded considerably

lower amount of crime. In order to establish this pattern more generally, for each of the top 10 crime categories, the average number of crimes recorded per building for each tenure type was computed. Using a negative binomial regression model, the average difference in crimes for the typical building by tenure type was estimated. Table 1 shows the results. Long-term residential tenure was used as reference category, so observed differences reflect the average increase or decrease in recorded offences from the typical long-term tenure building. For example, a building with mixed tenure has an average 2.09 additional recorded *Other Theft* offences (excludes unlawful entry), compared with a building with long-term tenure. A building with short-term tenure would have on average an extra 1.4 *Other Theft* offences, compared with a building with long-term tenure, all other things being equal.

The results reported here are for all offences combined. When the 10 most common offence types were examined individually, similar results were observed. That is, for

each individual offence, a small group of buildings were responsible for recording the bulk of crimes.

The next phase of the research involved focusing on a representative subsample of high-rise buildings and conducting systematic observations on the observable social, physical and spatial characteristics of residential properties, facilities and their surrounding environments. This allowed important situational variables such as place management and guardianship intensity to be measured for each property observed.

The relationships between place management, guardianship by residents and recorded crime were explored focusing on the subsample of high-rise buildings subject to the systematic observations. Figures 2 and 3 show the relationships between place management and guardianship by residents (respectively) and all offences by tenure type. Overall, higher levels of place management and guardianship are generally associated with lower recorded crime counts, although anomalies can be observed.

Table 1 Differences in average number of recorded offences per building by building tenure type

	Short-term tenure	Mixed tenure
Other theft (excluding unlawful entry)	1.4	2.09
Drug offences	0.76	0.98
Good order offences	-0.6	0.08
Unlawful entry	0.79	0.58
Other property damage	0.3	0.59
Unlawful entry with intent – dwelling	0.52	0.16
Assault	-0.77	0.27
Liquor (excluding drunkenness)	-1.79	-0.04
Unlawful use of motor vehicle	-0.88	-0.92
Unlawful entry with intent – other	-0.85	-0.9

Figure 2 shows crime levels were only marginally lower at long-term residential buildings where place management was observed to be very high, compared with those buildings where it was very low. In mixed residential buildings, crime levels were lowest when place management was highest, but these (low) crime levels remained some of the highest compared with the other type of buildings. In short-term residential buildings, crime was lowest when place management levels were lower and was highest when place management was fairly high. These results suggest no clear-cut trend in the observed availability of place managers onsite and the average number of recorded offences at the buildings. Data from semi-structured interviews conducted with residents, building managers, body corporate managers and Queensland Police officers who live and work at some of these buildings in Surfers Paradise helps demonstrate why this may be the case. One respondent explained why a place manager who is available onsite may not necessarily serve as a capable agent of crime control:

I think because the onsite manager is very familiar with the building. He or she is here generally 24/7 and can usually attend to most matters very quickly if needed and has usually a finger on the pulse and—both good and bad—can attend to certain aspects of life in the building. It would be a deterrent as such

but the thief doesn't know that there's a resident manager in place. I guess, from a comfort point of view, the owner of the unit or even the guest may feel some comfort in knowing that there's a resident manager there—not that he or she is going to go out and chase the culprit or do the security rounds like some of them think the managers should [Interviewee 3].

Figure 3 shows very high levels of guardianship were only observed at long-term residential buildings, but were not observed in any mixed or short-term tenure buildings. Recorded offences were very low at long-term residential buildings on average, but they were lowest at those buildings where guardianship was highest. In mixed residential buildings, average recorded offences were highest at those buildings where the lowest levels of guardianship were observed. Offences were considerably lower at those mixed buildings with higher observed guardianship by residents. These results were supported by data from semi-structured interviews. Respondents explained the importance of tenure in developing social bonds and a sense of community among residents as a way of facilitating guardianship and discouraging crime:

...the fact that people have got to know each other in this building is very helpful. As I was saying...for the last three years we have a monthly social, sometimes two monthly, and through that people

have formed friendships and bonded and know each other and will look after each other and each other's properties when necessary and I think it's very successful [Interviewee 11].

While we see some evidence of a downward trend in crime as guardianship intensifies at long-term and mixed residential buildings, in short-term buildings this relationship between guardianship and crime is not so straightforward. In these buildings, crime was equally high when guardianship was observed at its lowest and when guardianship was observed to be fairly high; crime was also considerably lower at moderate guardianship levels.

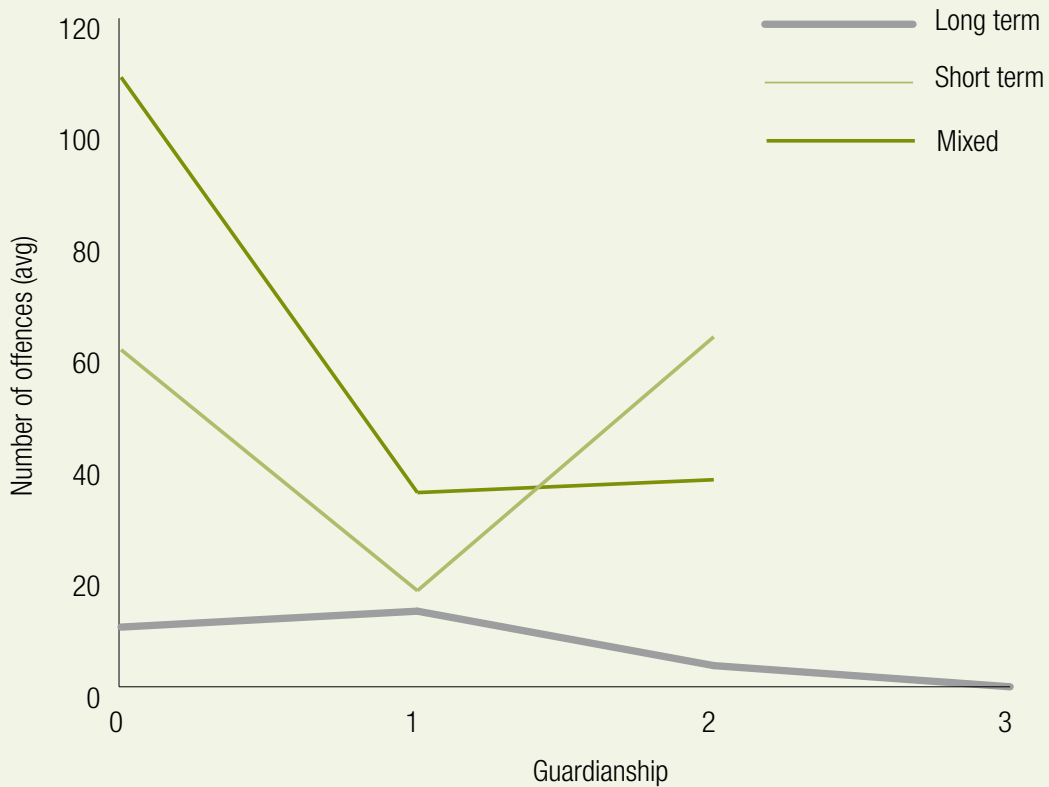
Discussion

The research reported in this project makes a unique contribution to criminology and housing policy by adding to knowledge of crime in high-density vertical communities. While previous research has investigated high-density public housing in an Australian context (Matka 1997; Weatherburn, Lind & Ku 1999), the unique blend of residents, tourists and businesses in this research sample provides fresh insights into a housing type predicted to experience rapid change over the next decade. The focus on residential crime in a tourist destination is unique. Crime prevention studies typically focus on crimes against tourists in public spaces (Brunt, Mawby & Hambly 2000; Lemieux & Felson 2011). The contribution of this research adds substantially to extant findings with its supplementary focus on a broader range of crimes. This feature of the research allows long-term residents greater capacity to consider real crime risks in a tourist hotspot. Not only does the current study examine crime risks, but it also takes a unique look at the interrelated dimension of crime control at tourist destinations in the form of direct observations of residential guardianship and place management. In doing so, it allows for the first-time comparison of crime risk, residential tenure and directly observed place management and residential guardianship.

Figure 2 Relationship between place management and all recorded crimes by building tenure type



Figure 3 Relationship between guardianship and all recorded crimes by building tenure type



Measuring place management and guardianship at the same facilities contributes to the literature by extending the conventional uni-dimensional approach. Accordingly, the findings reported here cast light on the previously unexplored relationship between these two controlling factors of routine activity theory. Moreover, the relationship appears to be less than straightforward. In some buildings, there is a relationship between place management and guardianship, whereas in others there is no relationship. This observation, if generalisable, may require scholars to rethink the relationship between these two important and central constructs of routine activity theory. In particular, the results of this study highlight that our understanding of what makes place managers at high-rise apartment complexes capable and effective crime controllers requires further development.

Policy implications

There are some obvious implications with respect to crime prevention arising from this research. A surprising finding was the highly consistent pattern of concentration, whereby a small group of buildings were responsible for the majority of crimes, regardless of crime type examined. While situational approaches suggest analysis and prevention efforts should be highly crime specific, the results of this study imply a buildings-based approach to prevention might be more effective. It appears that building managers of short-term and mixed tenure buildings are best placed to impact the opportunity structure of crimes. The results of this study point to the importance of understanding how place managers can encourage guardianship by residents at mixed and short-term residential buildings in particular and how guardianship and place management can better interact at these facilities to fortify crime control.

This study was not able to explore the temporal precedence of crime and levels of place management and guardianship. A longitudinal approach, where buildings are 'followed' over a long period of time to measure fluctuations in crime, place management and guardianship would avoid

this, but these studies are costly and take time. Having established that risky facilities are stable over time, future work should consider measuring these variables across a wider timeframe to establish the direction of causation.

While not the focus of this study, there are implications for the tourism industry arising from these findings. Surfers Paradise and the Gold Coast region are internationally recognised tourist destinations. Mainstream media coverage of crime problems can have a drastic effect on local economies underpinned by tourism. Improving place management at facilities likely to host crime (short-term and mixed-term tenure buildings) will have a significant impact on the reputation and enjoyment of tourists visiting Surfers Paradise. Tourism industry stakeholders need to work in collaboration with crime prevention and local council to assist in this endeavour.

Compounding this challenge is the education of tourists about safety and security. Due to the nature of their tenure and being in 'holiday mode', many individuals may be less conscious of their personal safety while in touristic locations, providing crime opportunities. The tourism industry, building managers and police need to work collaboratively in identifying solutions to educate and make short-term tourists aware of this issue.

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