

# RESEARCH, DEVELOPMENT AND INNOVATION: THE CASE OF SOCIAL HOUSING IN MT DRUITT, NSW.

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## INTRODUCTION

Government and other community-oriented public and private organisations are increasingly pursuing more integrated ways of working to create innovative solutions to complex and concurrent urban challenges. Challenges in areas such as crime prevention, housing and community services require multiple and comprehensive approaches for the implementation of initiatives. As a result, the development of partnerships to improve service delivery is an increasingly common approach in a multitude of organisations.

This paper explains some of the activities and processes related to the Community and Environment Project (CEP), a partnership between Housing NSW's Building Stronger Communities Program at Mt Drutt, the Designing Out Crime (DOC) Research Centre at UTS, and the School of Social Work at UWS. The main aim of the partnership is to develop design explorations and community development initiatives that address crime issues. One of the ways this is being achieved is through the Winter School, a UTS course where final year design students undertake design explorations that address crime issues, particularly antisocial behaviours, in the social housing estates of Mt Drutt. The themes for these design explorations emerge from the analysis of crime statistics, and the day-to-day engagement and communication between the housing authority employees, social housing tenants and community groups. Students undertake their design explorations from a perspective that acknowledges the positive role of community identity, sense of belonging and placemaking in encouraging good uses in public spaces and reducing antisocial behaviour.

This paper shows that apart from the expected outcomes of the partnership (e.g. design concepts), the CEP brings a novel way of thinking, understanding and working on crime prevention issues drawn from the design disciplines. Particularly, the partnership component of the CEP adds design thinking as well as methods and tools from design processes to crime prevention initiatives that traditionally have been addressed from disciplinary perspectives such as criminology and social sciences.

The benefit of bringing a design perspective to crime prevention is that it generates an environment that fosters lateral thinking among stakeholders, exploration of diverse scenarios and new adaptations of traditional crime prevention frameworks. This paper illustrates the advantages of this approach through examples of projects that have been developed during the Winter School.

I argue in this paper that using design processes and pedagogies to support community renewal is an innovative way to bridge the gap between academia and organisations working on community programs. This paper presents the above argument through the description and analysis of the Winter School component of the CEP. The structure of the paper is as follows: first, I present a background of DOC, the Winter School and the CEP. Second, I present a general background of the Mt Drutt area and its urban design. Third, I provide a brief survey of the conceptual frameworks that play a role in the CEP in the areas of social housing, partnerships, crime prevention and design processes. Fourth, I present the methodology used to develop this paper. Fifth, I analyse projects developed during past Winter School sessions. I also outline the contribution and limitations associated with these projects. Finally, I conclude with ideas on how the CEP can improve its outreach and effectiveness in the three years of the partnership and beyond.

## THE CEP PARTNERSHIP AND WINTER SCHOOL

The Designing Out Crime research centre began operating at UTS in 2007, following a competitive tender process initiated by the then New South Wales Department of Justice and Attorney General (DJAG). DOC is part of the Faculty of Design, Architecture and the Built Environment at UTS. The work of DOC fosters an environment in which designers, students and partner organisations can experiment with different

conceptualisations and solutions to crime problems. Design explorations developed at the centre range from product design to buildings and urban spaces. This work is done in partnership with a wide range of public and private organisations.

The Winter School is a collaborative design studio involving students, academics and external partners. It is an intensive course conducted during the Australian winter break in July. The design concepts developed at the Winter School emerge from engaging relevant stakeholders and exploring and testing their views on particular aspects related to crime prevention. The design concepts resulting from the course are often taken to a further level of development, either by DOC designers or the partner organisations. Therefore, students are encouraged to work on ideas that are viable, clever, subtle, sustainable, long-lasting and user-centred or informed by people working in housing as well as tenants.

The Community and Environment Project is a partnership created within Housing NSW's Community Regeneration Partnership Plan, the mandate of which is to develop programs for the urban renewal of the Mt Druitt area. This plan is part of the Building Stronger Communities strategy for Mt Druitt. In 2006 Housing NSW injected \$66 million into this program to fund the urban and community regeneration of Mt Druitt as well as other five social housing areas in NSW (NSW Department of Housing, 2007). The Community Regeneration Plan aims to: improve housing and local environment; increase access to education and employment opportunities; encourage tenant participation and engagement; and achieve more stable communities (NSW Department of Housing, 2007).



Figure 1. The CEP in the context of the Building Stronger Communities Program

In particular, the CEP focuses on issues concerning crime prevention and antisocial behaviour; however stakeholders are aware that crime issues do not happen in a vacuum and are interconnected with other social and physical issues. Some of these problems are related to housing quality, access to education and employment, and quality of urban space, among others. The CEP is intended to address these aspects by integrating both the design and the community development perspectives. Ken Bone, General Manager of Greater Western Sydney Housing Services, Housing NSW, has said of the program:

*“The purpose of the Community and Environment Project is to research crime, anti-social behaviour and elements of disadvantage that are specific to Mt Druitt, to find innovative and sustainable ways in which these types of problems can be reduced through better design and management of public spaces and community facilities”. (Housing NSW 2011)*

This partnership was formalised in April 2011 through a Memorandum Of Understanding (MOU), which establishes the terms of operation of the partnership. The MOU provides guidelines to facilitate the collaboration between the equal partners in the CEP. These guidelines outline a governance structure in which projects develop from the community level and are endorsed at the senior management levels of the participating stakeholders. This way of operating aims to ensure efficient delivery of projects by linking different levels of management and decision making within and across partner organisations. To achieve this collaboration the governance model of the partnership has a three-tiered structure:

- *Partnership Steering Group* – setting and reviewing annual directions;

- *Partnership Coordination Group* – facilitating implementation and providing a link between the Steering Group and the Project Groups; and
- *Project Groups* – implementing agreed actions as set out by the Partnership Coordination Group. (Memorandum of Understanding, 2010-2013)

Project groups have an important role in identifying and shaping priority projects; these projects are then scaled up for further discussion and endorsement. The process of defining projects occurs by comparing top-down annual directions with bottom-up local community concerns. The three-tiered governance structure of the CEP aims to overcome potential difficulties in terms of coordination, planning and endorsement of projects as well as ensure more effective delivery backed by organisational support at senior levels. As the partnership is still in its first year, this governance structure has yet to be evaluated.

Apart from the CEP, there has been a myriad of partnerships and social policies endorsed by Housing NSW in the last four decades. They have produced some positive outcomes but have been unable to ensure long-lasting and sustainable change within this community. Among other issues, partnerships and inter-agency work is challenging because of the multiplicity of stakeholders, diverse relationships and interests, and funding limitations. Short-lived partnerships and programs create discontentment in the community because in some cases the expectations such programs produce are not fulfilled by the final outcomes. The latter issue is exacerbated by the fact that community development is resource-intensive and produces best results in the long-term. Funding periods and grant schemes that currently apply to partnerships do not cover long-term programs, and for that reason many positive initiatives tend to end before reaching their full potential.

## **MT DRUITT'S SOCIAL HOUSING**

The CEP aligns with Housing NSW's mission and values which are founded on providing housing solutions for people in need. However, in the great majority of cases housing is only one of the unfulfilled needs, and people accessing public housing are in need of other services related to education, employment and health. Mt Druitt is located in the Blacktown local government area (approximately 45 kilometres west of the Sydney CBD). Social housing forms a significant proportion of dwellings in this region.



**Figure 2. Mt Druitt and suburbs with high concentration of social housing**

The ten social housing areas commonly referred to as Mt Druitt, are located in the suburbs of: Bidwill, Blackett, Dharruk, Emerton, Hebersham, Lethbridge Park, Shalvey, Tregear, Whalan and Willmot. This area has a high concentration of social housing and high levels of socio-economic disadvantage. The Socio-Economic Indexes For Areas (SEIFA) of disadvantage is a scale based on combined census data; the SEIFA index for Mt Druitt and surrounding suburbs are ranges between 671.8 and 914.3, showing that this area is one of the most disadvantaged in NSW (Blacktown City Council 2011). According to Housing NSW, 50% of the population living in social housing are under 25 years of age; around 50% are single families. The unemployment rate among social housing tenants in Mt Druitt is between 29% and 35% and there is low educational attainment with 12% to 17% completing year 12 or equivalent (Mt Druitt Community Regeneration Partnership Plan, 2007). In addition, this area houses an Aboriginal population comprising 15% of the total social housing population, the highest in NSW (Mt Druitt Community Regeneration Partnership Plan, 2007).

Mt Druitt housing estates were built in the 1960s and, at the time of their construction, were the largest ever built, with capacity to house 32,000 people in 8000 dwellings (Housing NSW, 2010). The design of Mt Druitt's housing estates was based on the American Radburn model, the main features of which include:

- aligning houses with the rear facing the street while the front faces communal areas;
- incorporating into the urban layout a network of laneways for bicycle and pedestrian use;
- separation of the pedestrian circulation from the vehicular (Weatherburn et al., 1999; Arthurson, 2002).

Radburn planning and design principles were developed under the assumption that people would behave in a determined way. These designs assumed that people would want to share open spaces and that this would stimulate a sense of community and belonging. However, these characteristics when combined with low urban density, location on the outskirts of cities and poor connection to major community facilities have created housing estates that isolate communities and enable negative uses. Radburn designs are not only unresponsive to people's needs, they also generate further needs. Literature on social housing shows consensus in that neighbourhoods that are poorly designed and house disadvantaged communities have cumulative social problems (Randolph & Holloway, 2005; Aitkinson and Jacobs, 2008). By contrast, socially responsive design that is grounded at the level of the local community may contribute to improving social and urban landscapes of public housing estates going through a process of urban and social regeneration. Research also shows that despite the stigma of public housing, residents take pride in their homes and neighbourhoods and have a different perception to the publicly portrayed images of the areas in which they live (Palmer et al., 2004).

## **CONCEPTUAL FRAMEWORKS AND THE CEP**

The conceptual framework underpinning the Community and Environment Project spans three core academic areas: environmental criminology, social work and design research. Literature in each field provides tools and approaches useful in understanding the nature of crime prevention in social housing estates.

Within environmental criminology, frameworks such as Crime Prevention Through Environmental Design (CPTED) and Safer By Design guidelines are well recognised in the practitioners' world. These frameworks based on classic works such as Newman's (1972) Defensible Space have been synthesised to present basic and simple guidelines for the design of safer public spaces. However, these frameworks applied to neighbourhoods with cumulative and chronic social problems do not seem to generate the expected outcomes.

CPTED, for example, has strong links with criminology and the built environment disciplines and is primarily concerned with how the design of the environment influences offenders' opportunities to commit crime in specific situations (Cozens, Saville & Hillier 2005; Crowe 2000; Gunman & Pascoe, 2004). Contemporary CPTED practice generally prescribes a linear, structured design process. It revolves around preventing crime through assessing locations based primarily on the CPTED principles of:

- Natural surveillance, which refers to design features that maximise visibility and foster positive social interactions;
- Territorial reinforcement is created by design features that define the boundaries between public and private spaces;
- Access control, is defined by design elements that allow access and circulation of people in a particular space; and
- Activity support encompasses all activities that increase the presence of legitimate users of spaces and encourages positive uses and behaviours (Casteel and Peek-Asa, 2000).

CPTED's key contribution has been the incorporation of safety criteria into design interventions (Atlas 2008). While it is useful for assessment purposes, however, this framework's linear and prescriptive nature creates limitations for potential design explorations and interventions. Combined with the social complexity and

urban challenges common to social housing estates, CPTED principles are useful design guidelines but ultimately are not a framework strong enough to improve the physical environment of social housing estates.

Alternative programs have attempted to cover areas beyond crime prevention by focusing on community development, sometimes in combination with design initiatives. For instance, the Community Development Project is a partnership between Housing NSW and the School of Social Work at UNSW that started in 1995 with design and community development interventions in the Redfern and Waterloo areas. This program, still running after 16 years, addresses social, physical and environmental concerns mainly in social housing estates of central and south Sydney. Their community development approach is founded on the idea of working in collaboration with communities to foster their strengths instead of imposing solutions (Judd, Baldry and Corkery, 2007). The community development approach has antecedents in the community design and the service learning movements, both of which focus on community participation and engaged scholarship (McCarthy and Tucker 2002; Boyer, 1996; Bringle and Hatcher, 2002). This practice-oriented area of research that is an area that I want to explore further as the CEP partnership evolves and generates more community development outcomes in Mt Druitt. Recent research into public housing has also emphasised the importance of producing interventions that reduce the stigma of public housing and increase image and perception (Palmer et al, 2004; Atkinson and Jacobs, 2008)

Partnerships involving universities, service providers and communities continue to emerge, in the hope of achieving objectives in innovative ways. However, these partnerships face various governance and operational challenges. Jacobs (2010) studied housing partnerships in Victoria and Tasmania and identified some challenges encountered in these partnerships. The challenges included: complex organisational contexts; unrealistic performance expectations; and objective dissipation. Jacobs' research acknowledges the intensive efforts required for successful partnerships. The conflicting interests of the organisations involved and the operational efforts may dissipate the work of partnerships before reaching their goals (Jacobs, 2010).

While the CEP's approach is based on community strengths, its primary focus is the generation of design concepts and enabling organisational openness to address crime issues in innovative ways. Design thinking and design processes can contribute a fresh perspective to complex crime prevention issues. One of the core concepts in this novel approach to crime prevention is known as reframing. Reframing refers to the cognitive process of shifting semantic perspectives to see things in a new way (Schön 1995, Schön & Rein 1994). Reframing situates the issue in a different context; it requires a 'fresh eyes' view to explore new associations and alternative focus for analysis. Dorst (2011) describes this process as '*the intimate engagement of the designer with the 'themes' of key stakeholders*'. He further suggests that '*the designers identify these themes in the periphery of the problem situation*'.

## **METHODOLOGY**

The data presented in this paper was collected through desktop research and analysed using document analysis. Documentation stored at DOC which related to housing projects, the Winter School and the CEP was searched, collected, and analysed. This document analysis aimed to understand stakeholders' motivations, contributions and interpretations of the design concepts and projects. This method was supported by members' checks via personal communications with relevant stakeholders. Personal communications helped to clarify and verify information from the documentation, assisted with the interpretation of ideas that emerged in the analysis and aided reliability.

The documentation available included: posters, reports and presentations from past Winter School programs; minutes from planning meetings; emails revealing the exchange of ideas and providing overviews of the activities of the partnership; and other tables and handouts. Personal communications also revealed rich anecdotal information and tacit knowledge, data which is out of the scope of this paper but is nonetheless worthy of future exploration.

## **WINTER SCHOOL PROJECT ANALYSIS**

Four main issues emerged from the data analysis. First, the Radburn design layout has created chronic and increasing problems in relation to safety and crime prevention. Second, the application of traditional crime

prevention frameworks such as CPTED has proven insufficient to solve issues in the context of Mt Druitt. Third, the implementation of community development initiatives combined with responsive design explorations seems like an option with significant potential. Fourth, design explorations that are community responsive offer clever design solutions but also contribute to embedding design processes into the organisational processes common to partnerships. The following Winter School projects illustrate the way these four issues played before and during the establishment of the CEP.

### **Shalvey community centre, 2009**

The brief for this community centre was:

*“to promote community engagement and enhance the role of the centre by redesigning the centre’s exterior environment. The redesign should reduce opportunities for vandalism and anti-social behaviour and encourage unity, respect and collaboration”.* (K Williams, 2011 pers. comm. 20 May)

This brief was fairly specific owing to the recent history of the centre. Having decided to fund and manage the Shalvey community centre, Housing NSW provided the property, funds and resources required for its operations. However, within weeks of opening, the place had been broken into, vandalised and defaced by graffiti. The housing authority responded with counter measures including CCTV cameras and a barbed-wire fence around the perimeter, making the centre appear harsh and unfriendly. These measures succeeded to some extent in repelling vandalism and theft; however, they also repelled and alienated the local community for whom the centre’s services were intended.

This community centre is located in a corner surrounded by laneways, empty and underused open space and parking areas. As such, it is isolated from spaces that encourage activity. For example, the laneway at the rear of the building is dark and empty and bounded by the high back fences of adjacent houses, making it a dangerous space at night. The building is located in a cul-de-sac that is used for parking, and the building’s entrance faces a large park with few amenities, meaning that is empty most of the time. These typically Radburn layout characteristics likely facilitated the vandalism and theft in the early days of the centre. The design of the premises following the addition of the CCTV and fencing did not achieve the intended aims of CPTED. There was no passive surveillance apart from three or four houses with a view to the Centre; access control and territorial reinforcement were taken to the extreme of counter measures, making the place unsuitable even for positive uses; and activity support was not possible since the image of the earlier fence discouraged positive uses.

The reframing that took place as part of the Winter School interlinked people, assets and activities as the main considerations for the centre. It became clear to the students that the centre needed to appear more friendly and accessible to the community and that the open grounds of the centre needed to showcase the activities offered in the centre. Creating a recognisable identity for the centre was a key part of the design strategy, as was inviting the community to participate in a ‘hands-on’ way thereby strengthening the bonds between the people and the place.

This reframing aimed at turning the disused centre into a fun place to play and learn, and to decrease animosity and mistrust among the community. The proposal included a secure play area for children, social barbecue area and seating and raised garden beds for community gardening. The proposal also included developing a logo, website and centre signage to promote the centre in the community. The community was involved in implementation, which was achieved using a NSW government grant (K Williams, 2011 pers. comm. 20 May). A metal paling security fence was installed which the community painted in a rainbow of colours. Maori and Australian Indigenous residents contributed sculptures.



Figure 3. Student's impression of Shalvey Community Centre

Two years on, it has been reported that this project has contributed to community building (G Furzer 2011, pers. comm., 22 July). The community feel welcome in the centre and have developed a sense of ownership over it. The colours used on the fence and the exterior walls of the centre brighten the place so that children and families feel safe there, and give the building a stronger identity as a community facility in Shalvey. Another initiative that has been successful regarding this project is that the appointed manager of the centre is a tenant of Shalvey and also a Housing NSW employee. The level of commitment of this person and her knowledge of the local community impacts positively in the delivery of services (G Furzer 2011, pers. comm., 22 July). The centre's staff has continued to encourage design input in the building – for example, young people have contributed graffiti art in one of the rooms of the Centre. Local artists facilitated this activity by teaching children mural painting while decorating some spaces in the interior of the Centre (C Dwyer 2011, pers. comm., 22 June).

Despite the success of this project, it is important to note that ensuring the sustainability of these types of initiatives is very important to their success. Concurrent, targeted and subtle design interventions may offer a positive way to continue building the strengths of the community and attract periodic public interest that invites further engagement, organisational commitment and funding.

### Lethbridge Park housing retrofit 2010

The brief for this project was to retrofit a cluster of three-story walk up residential blocks in Lethbridge Park adjacent to the community centre and the local shops. Students identified the main problems based on site visits and discussions with Housing NSW officers, mostly from the Mt Druitt's Community Regeneration staff. The majority of the problems they found were related to the shortcomings of area's Radburn-style planning. The students noted that:

*"In line with the original Radburn model of housing, the public housing estate has irregular facing unit blocks in large open areas with a lack of distinct territorial lines. This causes issues with natural surveillance and the separation between public and private boundaries. While open areas are sometimes seen as places for social interaction, in Lethbridge Park however, these isolated areas often function to encourage rather than deter crime". (Alexander et al 2010)*

There is no clear vehicular access to the buildings on these three blocks. Pedestrians can access the units through vacant land. The use of underpasses rather than road crossings has made the area a difficult and unsafe place to navigate. In combination with a cohort of tenants with other chronic needs, criminal acts occur frequently in the Lethbridge Park units and surrounds. A CPTED analysis of this area shows that the lack of activity around the blocks results in a lack of natural surveillance, territorial reinforcement or access control.

Students reframed this problem by focusing their attention on the fact that the community had a strong desire to see their suburbs improved, and that their designs, therefore, needed first and foremost to address the stated needs of the residents in the area. Students' design explorations included new local roads to break up the 'super lots' and eliminate culs-de-sac wherever possible as well as giving priority to pedestrian circulation. They also proposed the closure of the underpasses and zoning of the open spaces to improve visibility and eliminate spaces that can be easily vandalised. The students also recommended the creation of a number of urban design elements that would help to create an individual identity for each residential building and improve the functionality of the shared outdoor areas, for example by installing bollards with the



street address, mailboxes and rubbish disposal systems and lighting the pedestrian paths. Other solutions included fencing the unit blocks to create private and semi-private courtyards to help define the undetermined open space around the blocks and provide residents with private outdoor space to enjoy. Some areas of the semi-private spaces were proposed to be used for community gardening and similar activities that are already happening in the area. Finally, students proposed 're-skinning' the buildings as a way to address the lack of thermal control in the units without interfering with the building structure:

*"Creating a new skin for the apartment blocks provides many benefits, namely a reduction in solar heat gain, increased natural ventilation, an updated aesthetic, balconies to increase natural surveillance, and opportunities for community involvement with the colour and design of the panels. By re-skinning the buildings, it is possible to create an identity for each building through a signature colour, providing a simple method for distinguishing between the buildings – necessary for general way-finding as well as emergency services". (Alexander et al, 2010)*

The design outcomes of this particular exploration were positively embraced by Housing NSW and the Community Regeneration staff. They saw that even in spite of the complex crime issues that arise from the combination of a dysfunctional urban design and housing tenants with special needs, there are design interventions that have potential and are viable for implementation.



Figure 4. Design explorations for Lethbridge Park Unit Blocks

When the Winter School finished and the above project was presented to the Community Regeneration team and other Housing NSW officials, a process of handover was initiated. This process required Housing NSW to investigate avenues to reach endorsement, funding, further design development and implementation of these explorations. These ideas were adopted by Housing NSW designers and have now been translated into projects that are currently being funded and developed. For example the Lethbridge Park Master Plan, launched in March 2010, incorporates the ideas for the new roads and closure of the underpasses. In addition this Master Plan requires the upgrade of part of the housing stock. The current upgrade does not incorporate the idea of re-skinning of the units. However, the upgrade has involved tenant participation in deciding colour boards and other aesthetic details of upgrade works (H Ten Brummelaar 2011, pers. comm., 21 June) What is interesting about this process is that the collaborating partners have embraced students' ideas and have worked to create the organisational environment that allows implementation of the proposed designs in the best possible way, according to the resources they have.

### **Local shops, Lethbridge Park, Hebersham and Shalvey 2011**

The brief for this project was to investigate how design interventions could address the physical disconnection between the local shops and the housing and facilities surrounding them, as well as encouraging social connection via the use of local shops.

The Radburn layout aimed originally to connect buildings by way of scattering them around a 'shared' open space. The result was that the lack of definition and functionality of open spaces exacerbated a sense of disconnection. Low density has also generated spaces that are difficult to access by foot, surrounded by large (and, in the case of Mt Druitt, almost empty) parking areas. The CEP partners had been investigating the connection between liquor outlets and antisocial behaviour in the proximity of retail precincts in various suburbs of Mt Druitt. Alcohol-related crime is complex and expands beyond the reach of what traditional



CPTED interventions can achieve. The CEP attempts to integrate design and community development approaches to produce more socially responsive outcomes for retail precincts. Local shops in the Mt Druitt area are different from retail precincts in other areas of Sydney. For example, liquor shops are the retailers that most commonly sell staple foods such as bread, milk, and limited amounts of fresh fruits and vegetables. Additionally, take-away and fried food stores are cheap and popular while fresh produce is scarce and expensive. This lack of variety means that the communities have little access to nutritious food and overexposure to alcohol. In addition, shopping areas are generally devoid of urban furniture to discourage loitering, which has the effect of making the places around the shops harsh and uninviting.

The reframing for this project focused on looking at the idea of reconnecting spaces and design elements that support new uses and enrich community engagement initiatives already in place. Students understood that Mt Druitt has a wealth of community-based organisations and associated community wellbeing programs, many of which are supported and funded by Housing NSW. However, the difficulties associated with coordination and funding of projects is still a major hurdle in the implementation of projects.

The outcome of this design exploration was a suite of concepts that together addressed physical and social connectivity of each site. They included:

- A community collective, aimed at creating a number of multipurpose spaces that could be used by the already established community garden groups and the youth groups interested in computer training;
- A market place, aimed specifically at creating the infrastructure for those community activities that occur sporadically or periodically; for example, the market stalls are designed to be an urban design element for the open spaces when not being used for the purposes of the market;
- A supervised skate park area, aimed at offering a space for free entertainment for young people for after-school use only, and intended to be managed by a community organisation;
- Residential re-zoning, a longer-term idea to encourage medium density growth to make the shops more viable and attractive to future investors; and
- An identity strategy, involved lighting, flooring and urban design elements to improve wayfinding and image and perception of Mt Druitt.



**Figure 5. Design concepts for a retail precinct in Mt Druitt**

The CEP has focused on addressing projects for Mt Druitt to reframe crime scenarios. Partner organisations bring their wealth of knowledge on how tenants live, what their needs are, and the coordination and operational aspects of managing these housing estates. Design students bring in their creative minds, their design expertise and their 'fresh eyes' to chronic crime prevention problems experienced in these housing estates. DOC brings the resources to help communication, coordination, and research around these design explorations.

Despite the achievements in the development of the above projects, the limitations of the CEP and the Winter School in bringing change to the community are significant. First, consultative efforts with local communities are difficult to develop successfully, and there remains the risk of raising unrealistic expectations of the reach of the projects. Second, establishing partnerships and coordinating the collaboration is highly complex and requires particular mindsets and management efforts from different levels in the bureaucratic structures of the partner organisations. Third, varying funding periods and the difficulties of getting funding for social housing projects is a serious risk to the longevity and completion of projects. If design concepts proposed by students cannot be implemented, there will never be a way to evaluate the success of those ideas and how they stand up over time.

## CONCLUSION

The CEP has enriched the work of the Community Regeneration of Mt Druitt. Design concepts created and presented by students at different stages of development help stakeholders to consider alternative interventions. The design concepts emerge from various consultative forums with stakeholders, and as such represent their vision as closely as possible. Once a design concept has been accepted for further development, the clients look at the organisational constraints related to the implementation of the idea. Some ideas will take longer to be implemented; others, when they are subtle and relatively simple can be implemented more rapidly. Facilitating this dialogue and two-way learning contributes to the success of Housing NSW initiatives and UTS academic endeavour.

The pedagogic value for the students is that they get to work in an area that requires designers to be open-minded and sensitive to community issues. The crime prevention challenges in Mt Druitt are complex and at times students may find them overwhelming. However, these particular projects offer students the opportunity to think about human and social issues in a very unique way. This course provides them with a different role in which the designer supports other initiatives within community development programs. The reach of their contribution extend beyond functionality, aesthetics and sustainability. The rationale for the Winter School embraces and supports well-known and widely-used crime prevention frameworks like CPTED; however, it also adds to that existing knowledge the relatively new concept of reframing within design processes.

Design explorations are presented to the stakeholders as future visualisations that help stakeholders consider possible future scenarios. These ideas become part of the vision and strategy of the housing authority and in that sense they contribute to building bridges and connections between other organisations involved in the urban development of social housing estates. This way of approaching projects is beneficial in the context of shorter-term and funding-constrained initiatives because the ideas are generated rapidly and cheaply, which facilitates dialogue and relationship-building between partners and stakeholders. Current times require joint efforts to ensure that new public housing stock can provide better designs that respond to today's needs and are also future-proof, sustainable and adaptable.

Future research will focus on the role of design as a process but also as an outcome to support communities. Using design processes and frameworks to address crime prevention initiatives in an integrated way is one of the main objectives of the CEP in the coming years. Research associated with the CEP will also investigate how crime prevention initiatives can successfully encompass education, employment, and provision of high quality environments and services. Research on social housing from the design perspective will enhance the image and identity of these areas and perhaps reduce the wider social stigma these neighbourhoods currently experience.

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