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Home Economics: Semi-Legal Catalysts for Regional City Regeneration

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The Post War expansion of onshore manufacturing created nationally significant industrial precincts in regional Australia, each surrounded by large swathes of suburban housing to accommodate their blue-collar workforces. However, a shift towards offshore manufacturing over the past decade led to the closure of many Australian manufacturing precincts and the substantial economic decline of many regional cities. Knowledge and creative economy means of recovery are typically only possible in contexts privy to other means of economic stimulation. Thus, in regional contexts, where this often is not the case, strategies that deal with the distinct realities, conditions and opportunities of regional cities are necessary to facilitate regeneration. A study of two emerging initiatives in the former nationally significant industrial cities of Newcastle, New South Wales and Hobart, Tasmania suggest an alternative catalyst to trigger regeneration in regional cities. Facilitated by clever manipulation of ambiguous aspects of planning and building regulation, minimal start-up costs and low overheads, networks of smaller service and civic operations appeared in underused domestic and commercial properties adjacent to industrial precincts. To further understand the relationship between planning, built space and small-scale economic activity suggested by the alternative configurations in the case studies, and to test their broader applicability, design research-based methodologies were adopted in the speculative application of the identified semi-legal, bottom-up approach to Corio, Geelong the former home of nationally significant car manufacturing plants. By studying the manoeuvring tactics deployed in Newcastle and Hobart, and applying the lessons learnt to the design of mixed-use typologies in Corio, this paper demonstrates that distinct urban strategies, that may enable appropriate stimulus in similar contexts, exist in regional cities.

Keywords — *Regional cities; urban regeneration; hacking; design research.*

INTRODUCTION

The economic realities of Australia's regional cities create distinct post-industrial regeneration challenges when compared to their metropolitan counterparts. As regional cities have relied primarily on manufacturing industries and their workforces, when such operations cease the predominantly working-class populations, who typically have lower household and disposable incomes and levels of education and training, are ill-equipped to support or staff new industries immediately. Further, the economic instability, lower profit margins and the expense, red-tape and slow pace of undertaking medium to large-scale construction projects in regional cities make it difficult to attract development investment that is typically relied on to trigger urban regeneration. Combined, the lack of sufficient skilled workers and private investment make it difficult to realise the replacement of manufacturing activities with knowledge or creative industries (Hack,

2009). Consequently, strategic regeneration ambitions for regional cities are often ineffectual and unrealised, resulting in a vacuum of activity that exacerbates decline and further exposes vulnerable working-class communities.

The failure to take into account or appropriately address distinct regional conditions is due to the primary focus of developing strategic planning approaches for major cities such as Melbourne, Sydney and Brisbane (Budge and Chesterfield, 2011). In 2016, major cities collectively housed 50% of Australia's population, up from 48.5% in 2006 (ABS, 2017). However, West claims the majority of the Australian population live in built fabric that is more akin to the suburban character of Hobart than inner-city Melbourne, particularly relative to social, cultural, economic and physical conditions (West, 2013). Consequently, contextually distinct case studies, policy and design approaches tailored to the conditions of Australia's most commonly occupied built environment are absent.

In response, this paper aims to rectify the gap in analysis and strategic planning of regional cities by exploring contextually appropriate alternative catalysts for the remaking of Australian post-industrial regional settlements. It examines the broader potential of existing emerging regeneration strategies in two regional cities with once-booming industrial manufacturing centres. First, Newcastle, New South Wales, whose primary industrial company, BHP steelwork, closed in 1999 (New South Wales Government, 2011), and has since experienced revival through the Renew Newcastle initiative (Westbury, 2015). Secondly, Hobart, Tasmania, a city with a post-industrial decline that has attracted an influx of tourist dollars associated with MONA, the Museum of Old and New Art (Pascoe, 2016).

After examining the two cities, to identify the strengths and weaknesses of their respective regeneration activities, a new approach to triggering regeneration is formulated and speculatively applied to Corio in Geelong, Victoria, a city facing decline following the 2016 closure of its primary car manufacturing plants (Dowling, 2015). Although regeneration is a macro level policy issue, to explore the spatial consequences and potential opportunities in the configurations and operation of the built fabric of regional cities, and how they may trigger and support alternative approaches to regeneration, speculative projections are undertaken using the plot scaled application of design-research based methodologies.

RENEW NEWCASTLE

In 2009, 151 of the 349 retail and hospitality premises in Newcastle's central business district (CBD) were vacant (Page, 2009). While post-industrial downturn was the primary cause of the CBD's economic decline, Westbury argues that one contributing factor was development controls that encouraged speculation, which rendered properties more valuable vacant than occupied, reducing the availability and affordability of leasable space in the CBD (Westbury, 2015).

As an experimental counteraction, artist and festival director Marcus Westbury established the initiative Renew Newcastle: a network of artists and small creative businesses facilitated by a call out and selection process. The program has been celebrated for its win-win approach of relocating creatives from domestic spaces into free of cost shopfronts in exchange for repairing and maintaining previously dilapidated retail property. However, guiding projects was the provision of advice as to how to manoeuvre through restrictive commercial zoning use standards that enabled the key innovation within the project, the shifting of the retail precinct into a cultural hub despite zoning regulation. For example, as Westbury explains "there are several different definitions of a 'gallery' for planning purposes: one is a shop that sells art, and the other is a public institution and place of assembly with all the extra issues involved. All our galleries were shops that sold artwork, and never allowed a planner or regulatory authority to assume otherwise." (Westbury, 2015, p. 111). By 2016, 80 properties had been activated, and 15% of the temporary occupancies converted into permanently paid leases (Flanagan and Mitchell, 2016). As a result, the Newcastle CBD experienced a resurgence of visitation, creating an increase in foot traffic and spending that has supported the return of larger chain stores.

Munzner and Shaw have criticised Renew Newcastle's revival of the retail economy for its association with, and encouragement of, middle-class retail consumerism (Munzner and Shaw, 2015). However, a 2016 study found that the

improved branding of the city, lead by the desirability of the distinctive cultural experience, has resulted in a 2.6% and 3.5% per annum increase in domestic and international overnight visitors respectfully. The flow on effect within the accommodation and hospitality sectors has resulted in \$2.3 million in jobs and skills creation and \$55,000 in increased business confidence (Flanagan and Mitchell, 2016), which has subsequently expanded the offerings in the cafe and restaurant scene. While there has been a revival of shopping activity, which accounts for 19.1% of primary visitor attraction to the region, this is outweighed by the 49.8% of current visitation for eating and dining out (New South Wales Department of Innovation, 2017).

In summary, the creative activity of Newcastle's citizens has triggered broader economic regeneration in the region via tourism, facilitated by Renew Newcastle subversion of the regulatory conditions and vacant retail space.

MONA

Tourists also assisted in the revival of Hobart following the 2011 decline and eventual collapse of Tasmania's primary industry of forestry. While eco-tourism had previously been a significant source of income for the state, the opening of the Museum of Old and New Art (MONA) in 2011 rapidly attracted a whole new demographic of art and culture seeking visitors.

The city was initially ill-equipped to appropriately cater for the new breed of tourists, with higher disposable incomes and service expectations, particularly when it came to accommodation (Pascoe, 2016). However, some informal bed and breakfast and self-contained accommodation, supported by online and app-based peer to peer platforms for the leasing of short-term rentals like Airbnb and Stayz, quickly appeared in and around the CBD. While most residential zones in Hobart prohibited dual occupancy, the temporary nature of the accommodation and the strategic duplication of bedrooms, bathrooms, living spaces, circulation paths and doors within single dwellings, exploited ambiguities and gaps within the Residential Zone Use Standards of the planning schemes of the municipalities within Greater Hobart. Locals and tourists alike benefitted from the activity as it addressed the accommodation shortage quickly, provided income for homeowners and encouraged tourists to stay longer and support a range of new small retail, service and hospitality businesses (Pascoe, 2016).

As is the case with many cities around the world, the popularity of Airbnb in Hobart has also drawn critique due to the displacement of long term rental tenants to higher paying visitors (Pascoe, 2016). Airbnb has incentivised many homeowners to covertly convert their dwellings into quasi-dual occupancies, despite the single occupancy stipulations of residential zoning regulation. For example, the back-doors, porches, ensuites or bedrooms are standard additions to single-family dwellings. But if strategically organised the simple renovations can facilitate independent secondary circulation routes and spaces to allow multiple independent occupations of a single dwelling (see Figure 1).

However, the initial round of Airbnb listings within existing homes demonstrated viability of demand via an initial round of Airbnb listings within existing homes, triggering waves of formal accommodation development. Starting with small-scale boutique accommodation (including purpose-built Airbnbs) from 2013 (Bennett and Norrie, 2013), 2017 saw the competition of medium scaled Sullivan's Cove hotels and proposals for towers in the CBD and at the site of MONA itself. With hotels now in place to meet the tourist demand, if short-term accommodation regulation and financial incentives were introduced, it may be possible to convert holiday listings into longer-term rental properties to address the lack of small and affordable dwellings on offer within the Hobart rental market.

While the introduction of MONA has triggered Hobart's economic regeneration, it was the citizen's opportunistic response to an increased, yet un-catered, accommodation demand that lead to the expansion of Hobart's tourism infrastructure.

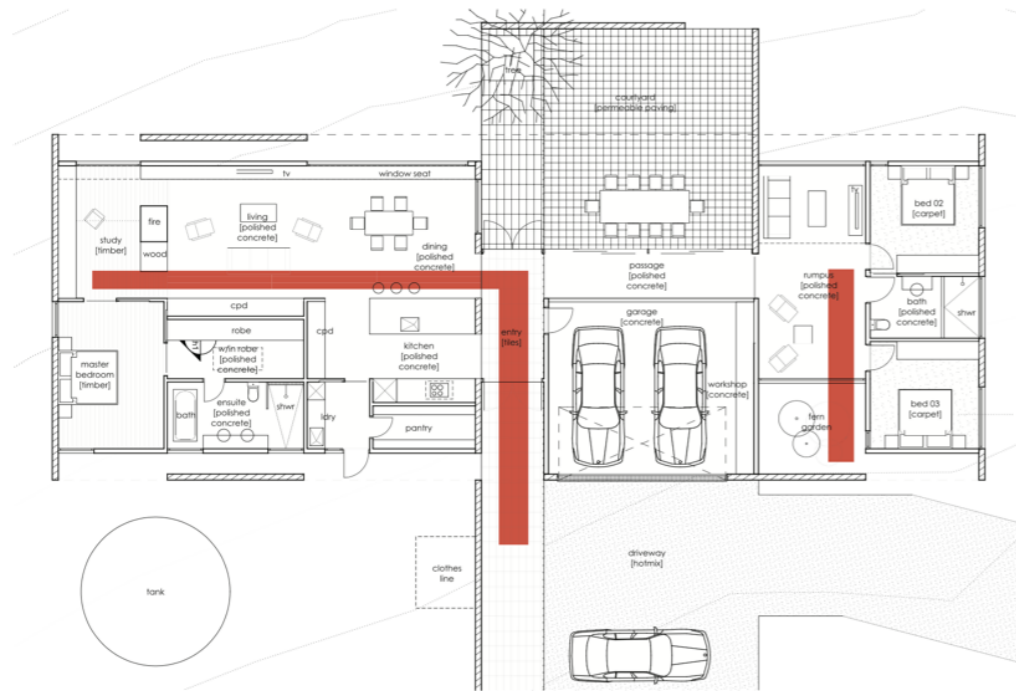


Figure 1 The floor plan of a dwelling purposefully designed for dual occupation through duplicate, independent circulation paths, bathroom amenities, living areas and bedrooms.

A SEMI-LEGAL, NETWORKED APPROACH TO TRIGGERING REGENERATION IN REGIONAL CITIES

Analysing the recent regeneration of Hobart and Newcastle revealed four common attributes. Firstly, the leveraging of externally sourced income, in this instance through tourism, overcomes the typical stasis created by regional cities' inability to attract new investment from development or permanent residents (Hack, 2009). Further, the low value of land and property in regional cities typically acts as a disincentive for developers, due to the financial risk associated with the low return on investment.

However, for small-scale operations, cheap premises create low-risk opportunities for experimentation, due to their reduced upfront and operational costs which are able to convert back to residential and paid commercial use as needed. Thus, the second and third identified pattern in the two case studies: the exploitation of vacant retail and under-utilised domestic spaces, and the shifting of the catalytic agent from large developers to a network of small, nimble and less risk prone operators. Finally, the activities relied on the ability of citizens to negotiate restrictive planning codes. Renew Newcastle interrogated and translated regulation, advising program participants how to alter the presentation and configuration of business proposals to fit the path of least resistance through the planning process; an ability typically only available for those with extensive development experience or sufficient means and resources to engage informed parties (Westbury, 2015).

The Hobart and Newcastle citizen's spatial manipulation and ability to manoeuvre through a series of rules and regulations is akin to hacking: a term typically associated with information technology, which describes actions enabled through familiarity and fluency with a system's language, attributes and limits to exploiting structural weaknesses for multiple ends (Coleman, 2013). Although hacking has devious origins, it can produce positive outcomes when used to identify and operate within the cracks of a dominant, rigid and unproductive system as a means of evasion (Certeau, 1984). Despite the citizen's subversive methods of operation, the semi-legal activities of Newcastle and Hobart provide appropriate, resilient, and viable modes of economic stimulus, especially when such individual subversions are collectively viewed.

Combined, the analysis of citizen-led activities in Newcastle and Hobart reveal a potential new catalyst for contextually appropriate regeneration in regional cities: the citizen's hacking of planning regulation and existing fabric to facilitate a network of small economic and civic operators that trigger large-scale economic shifts.

SPECULATIVE TESTING: STEALTH INTENSITY CORIO

To understand whether the notion of hacking could be applied to other regional settlements experiencing or facing post-industrial decline, the concept was used as a brief for a third-year architecture design studio at Monash University's Department of Architecture in 2014. The studio focused on Corio, an established residential working-class suburb in Victoria's regional city of Geelong, which sits adjacent to an extensive industrial precinct, including the Shell Geelong Refinery and Geelong Ford Factory, then earmarked to close in 2017 (Dowling, 2015).

The studio brief sought to explore the urban potential of a collective of architectural interventions, which specifically exploited regulation and spatial latency, on single private plots. As Corio was flagged by the government as a future commuter hub, due to its rail link to Melbourne, the equivalent of Hobart and Newcastle's tourist dollar stimulus was the potential increase in apartment development and new residents. While government adjusted zoning to entice investment, little consideration was made for amenities to support the expanding community in what was already a severely under-served suburb. Thus, students were required to design a building that could operate as a multi-residential property and a civic function or service based business, either in tandem or alternating in use, that had to be a demonstrated need. A key focus was how the mixed-use activity was facilitated: the proposed design had to be achievable within the regulatory context, specifically the planning scheme's zoning ordinance and use standards.

METHODS

Studio participants interrogated the regulatory and strategic frameworks of Corio to identify opportunities for introducing home economics (including businesses, services and accommodation) appropriate to the physical fabric and socio-economic realities of the context, using two methods.

TRANSLATION

Planning scheme loopholes were made visible by translating regulatory text into drawings that explicitly illustrated what the code allowed, as shown in Figure 2. Adopting a process of interrogating and visualising regulatory conditions, a technique developed by Knight and Williams in a Summer School studio at the Architecture Association (AA), allowed studio participants to shift their compliance approach to focus on possible outcomes rather than what was prohibited (Knight and Williams, 2009). Students could see beyond the prescribed and assumed intention of the regulations, to reveal the spatial consequences of ambiguities latent in mistranslation and contradicting clauses.

Additionally, step-by-step processes were devised to facilitate outcomes that did not comply with a single clause treated in isolation but were allowable where considered in the context of other requirements and definitions. While Williams and Knight's ambition was to highlight the implications of ambiguous policy, the studio instead adopted the analysis of planning code to identify loopholes opportunities to insert economic and civic amenities.

Residential Growth Zone

Local Building Requirements:

Maximum site coverage 70%

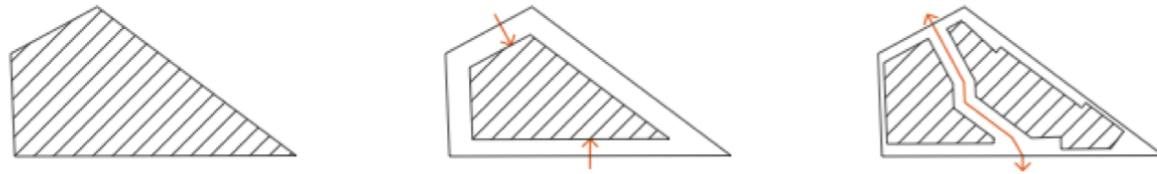


Figure 2 Diagram produced by Corio studio participant Ryan Bate illustrating 100%, 70% and 70% site coverage. The latter two diagrams allow for minimum side setbacks and indicate site entry points including a version with a thoroughfare linking the two.

CONTEXTUAL ANALYSIS

Given the economic constraints of operating within the regional context, the Corio studio sought to leverage potential opportunities within the existing fabric. Like the observational techniques adopted by the Smithsons (1984), studio participants were encouraged to study the patterns, both social and aesthetic, of existing built environments to identify underused spaces and create architecture “with a capacity for growth and change” (Castillo, 2000, p. 104). However, the intent of the local character studies in Corio differed from the objectives of the Smithsons in that the studio analysis sought to study existing patterns to discern systems and spaces to exploitatively operate within.

Beyond analysis, the studio exercises explored the relationship between existing fabric, planning regulation and the physical and operational capacity for economic or civic functions in domestic space. In undertaking a detailed design process at the architectural level, the studio sought to identify patterns of spatial configurations and mixed-use activities that may occupy such space.

FINDINGS: FACILITATIVE LEGISLATIVE AND SPATIAL HACKS

After an initial study of the suburb revealed a significant shortage of community facilities, eleven projects focused on domestic properties that could support civic functions, including a drug rehabilitation centre, literacy centre and Meals on Wheels facility. The remaining eleven projects sought to diversify the retail and service offerings of the suburb by introducing businesses such as a fruit and vegetable market, second hand clothing store and dog grooming. Three primary categories classify the spatial approaches adopted by participants of the Corio studio: increasing and exploiting physical capacity, facilitating multiplicity, and sequencing. The three methods are detailed below with their relationships to specific civic and commercial functions discussed relative to project examples.

INCREASING AND EXPLOITING PHYSICAL CAPACITY

The first tactic focused on exploring regulation to maximise the total floor area of dwellings. The technique of contorting forms to fill every available square metre of an allowable building area is common practice for commercial development in Australia. For example, in Melbourne, Victoria, ResCode has created a series of distinct shaped buildings as developers have manipulated the building envelope to maximise the building area (Victorian Government, 2015). Similarly, the Corio

studio’s exploitations often result in inflated gable like forms that both ensure neighbouring plots have adequate access to light and corroborate the domestic, pitched roof aesthetic of the suburban neighbourhoods with the intent of disguising their non-compliant, non-residential functional capacity.

Another technique that students adopted was to gain additional usable floor area for non-residential use through converting ‘raw space’, a term that Brand uses to describe garages, attics, basements, sheds and other undefined residential property, into productive areas (Brand, 1995). Such spaces fall under the less constrained Class 10a of the Building Code of Australia and are deemed non-habitable detached buildings, able to be inserted in and around existing dwellings (Australian Building Codes Board, 2017). The ‘raw space’ loophole was heavily exploited in Chimera, a women’s refuge centre designed by Jessica Patane. Patane’s project primarily comprised of a series of non-habitable sheds around small habitable granny flats, protected from the street by a row of garages intended to operate as a Salvation Army Opportunity Shop (see Figure 4).



Figure 3: Plan of Patane’s Chimera scheme. Illustrated here in mixed use mode, the garages along the street edge are converted into a Salvation Army Opportunity Shop, providing income and employment opportunities for occupants whilst simultaneously screening the refuge behind. Living quarters are broken up into functions with un-habitable spaces occupying small sheds around habitable granny flats. Not to scale.

FACILITATING MULTIPLICITY

The second spatial tactic explored the intersection of domestic and non-domestic activities within dwellings. The expectation that spaces should perform a single function only has been criticised by Robert Venturi in *Complexity and Contradiction* (1977) where he claims that Modernism's need for clarity and control through zoning, the pursuit of an 'either-or' condition, disconnects architecture from its context and restricts the experience and meaning for the user. Instead, Venturi argues that architecture, and by extension the city, should be messy, ambiguous and pluralistic, an outcome that he describes as 'both-and' (Venturi, 1977, 16). In the context of the Corio studio, a 'both-and' outcome can facilitate functional plurality by creating forms that are not singularly residential or commercial, but are capable of accommodating residential, commercial and a plethora of additional uses, the need and configuration for which may not be known at the point of design and construction.

Thus, some Corio projects chose to explore the possibility of wholly and partially overlapping domestic and non-domestic functions, over configurations based on adjacencies, either side by side or stacked. Typically, amalgamated designs focused on sharing common, high-cost amenities, such as a bathrooms or kitchens, to reduce the overheads of each function. The plurality was made possible by exploiting instances of non-concurrent cyclical alternation of uses, either diurnal, split into weekday and weekend functions or even seasonal. A project that explored this delicate program was Corio Kitchen Garden by Ricki-Lee Van Het Wout. The design carefully curates the distribution of a series of garages, courtyards, kitchens and operable walls to one communal space that can operate as a Meals on Wheels production space during the day and six individual apartments at night (see Figure 4).

SEQUENCING

The final approach explored the possibilities afforded by staged development and the ambiguous nature of regulatory conditions for temporary structures. Santiago Cirugeda, a Spanish architect, subverts legislation to reveal opportunities for the introduction of new community infrastructure and housing. One identified technique was to exploit a construction loophole which allowed scaffolding to remain in place indefinitely so long as a building demonstrated that an ongoing process of renovation was occurring (Awan et al., 2011). Scaffolding was attached around a window of an apartment, creating a semi-legal balcony which allowed the dwelling to have private outdoor space, facilitated by leaving the window frame only partially painted. Ryan Bate's project used a similar technique, *Complex Orange*, which created an educational facility on a small residential plot through including private outdoor space within site setbacks by attaching it to the back of billboards, a structure exempt from setback requirements with no definition of required configurations or limits on function. Further, the project exploited other time-based loopholes including the ability to house temporary structures on private land without a permit for a certain number of days a year. Achieved by rotating temporary teaching spaces across a network of sites in the area, the alternative approach generated the extra benefit of facilitating a greater distribution of services across the suburb.

Zachariah Dahdoule's project, Corio Literacy Centre explored another aspect of time and sequence as a facilitative device. A legislative loophole determined the allowable size of extensions based on a percentage of the footprint at the point of planning application assessment. Thus, successive extensions could be slightly bigger than its predecessor, consequently allowing the incremental inflation of the gross floor area of the dwelling (see Figure 5). Through the deliberate staging of a series of minor extensions, a development activity that was identified to be very common in Corio, a typical suburban house was able to be converted into a large language centre for new Australians living in Corio. Thus, the final studio tactic exploited existing definitions associated with temporality and circumstantially adaptive clauses, allowing existing buildings to evolve over a series of continuous alterations or staged moves.

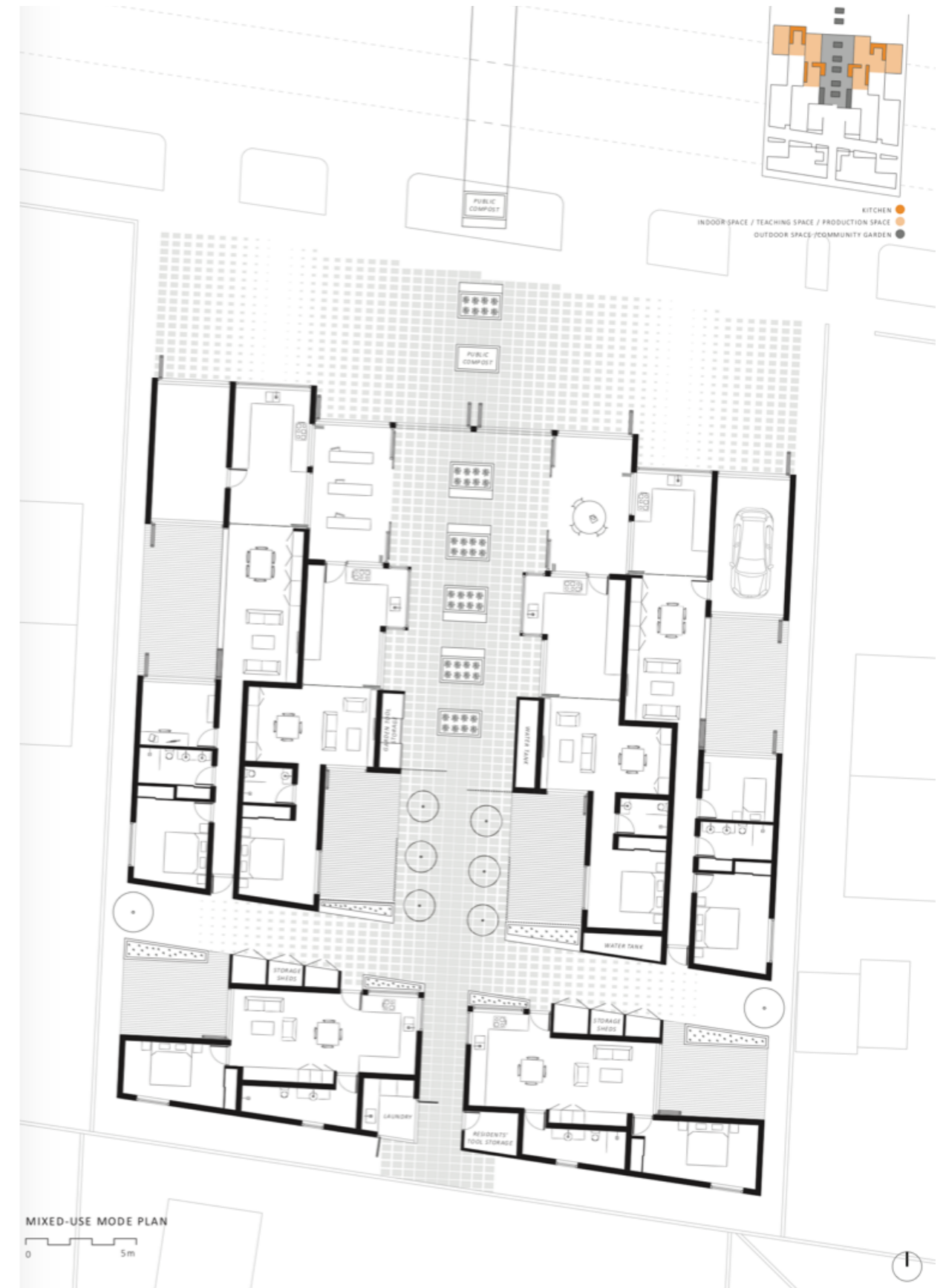


Figure 4 Ricki-Lee Van Het Wout's Kitchen Garden scheme in mixed use mode. Like Patane's scheme, the garages switch to a productive mode, in this example pairing with strategically located kitchens, gardens and circulation to allow the block to switch to a Meals on Wheels facility. Not to scale.

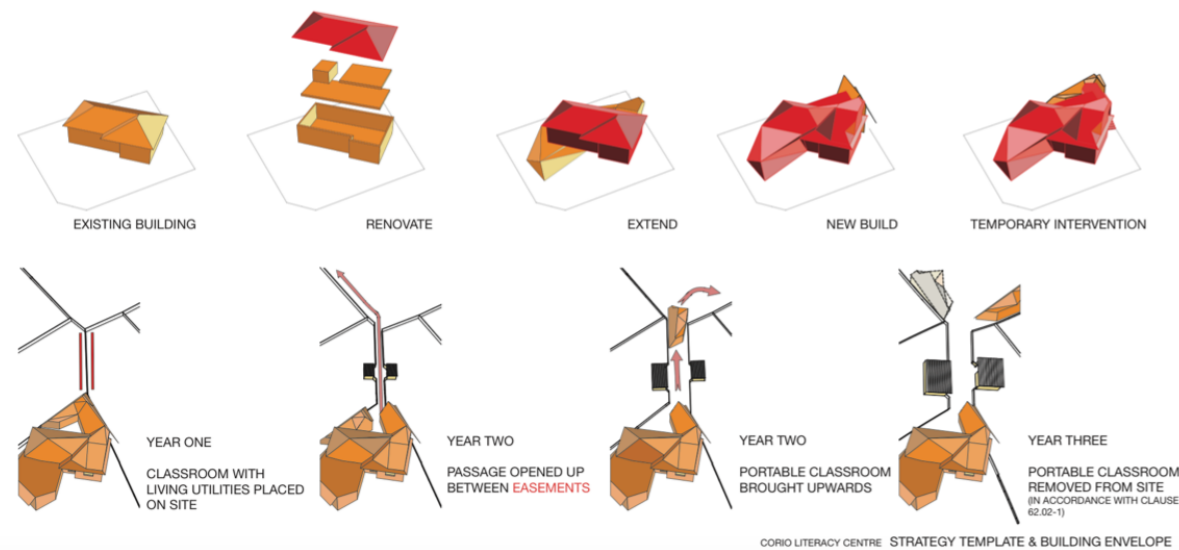


Figure 5 The strategic staging of extensions, subdivisions and new builds, within Zachariah Dahdoule's suburban plot, and on adjacent sites, enabled the creation of a multi-residential apartment block that could partially or fully switch to an educational facility.

DISCUSSION

The speculative Corio studio work and studies of existing remaking strategies in Newcastle and Hobart identified that zoning and use standards within planning schemes, which may limit the absorption of more productive configurations and uses of suburban residential fabric, can be negotiated. Specifically, the studio projects demonstrated that the intersection of semi-legal regulatory compliance and the built environment (its layout, configuration, modes of occupation and the representation of spaces within planning assessment documentation) could allow a residential building to operate with an increased economic or civic capacity. Thus, the student design tests demonstrate that the proposition of hacking, first identified in Hobart and Newcastle, can be used to overcoming regulatory barriers that otherwise limit economic and civic capacity of single zoned residential suburbs in regional cities.

Hobart's Airbnb accommodation and Corio's studio projects also demonstrated that the physical fabric of residential suburbs is particularly well suited to a network of small businesses to support economic growth. Properties contain open space for residential expansion, paired with the segregated ownership of the suburban property, provides autonomy for building owners to make physical changes and without requiring approval from a body corporate or negotiation with other owners on the cost and extent of works. Further, the identified catalytic regeneration approach is inherently nimble; changes to a plot can work around and with the existing context and the small-scale shifts made can also be easily changed at a future date, or rectified if they've been unsuccessful or are no longer relevant to the household. New residential configurations can be tested at lower expense and disruption to the owner and community alike, and some of the minor adjustments can be undertaken by home renovators, which further lowers the upfront cost and risk of establishing a business.

Small adjustments to properties can increase their value and may encourage household investment in increased capacity for home businesses, particularly in a regional context with a low incentive for external private investment. Further, as part of the property can be subleased for income or sold off entirely, the long-term viability of homeownership in regional cities may be more affordable and stable. Collectively, the alignment of the alternative catalytic approach to social, economic and spatial realities of the Australian regional context allows an increase in local productivity to be appropriate, profitable and opportunistic, all of which contribute to the economic regeneration of post-industrial settlements.

CONCLUSION

Regional cities face distinct economic constraints and the application of regeneration strategies developed in metropolitan cities, especially those reliant on sizeable private investment, can leave communities vulnerable. This paper has explored a gap in current strategic planning around contextually appropriate catalysts for regeneration in Australia's post-industrial regional cities, explicitly concerning the intersection of planning regulation, built fabric and economic activity. It found that the identified semi-legal approach to triggering regeneration requires the ability to leverage the wealth of nearby metropolitan settlements, a sufficient number of households with collective direction to capitalise economic stimulus, the capacity of that network to opportunistically exploit spatial and regulatory loopholes and low-cost surplus built space. Specifically, the analysis of existing initiatives in Hobart and Newcastle, and Corio's speculative design propositions demonstrate that non-metropolitan cities are valuable sources of approaches to addressing specific economic challenges which can be extracted and reapplied to other regional settlements to generate further distinct and contextually appropriate urban strategies.

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Remaking Community

Building Principles of Communal Tenure into Contemporary Housing Developments

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Models of land administration often promote the formalisation of land under multiple ownership to a more individualised, Western style of tenure, such as the British system of land tenure imposed on a communal Māori society. However, the dangers for Māori land under multiple ownership are that Māori values might become diluted or even lost in this transition as social responsibilities become divorced from land rights. Recognising this, planners of some Māori land development projects have sought to reintroduce key communal or socially-based tenure principles to the planning equation. But what are those principles? Are they succeeding? Do some principles produce better outcomes than others? And why might they work in some instances but not others? This paper describes initial work on a project, due to run to the end of 2019, which sets out to identify principles of socially-based tenure which have been used to foster sustainable communities in Māori planning initiatives. Preliminary case studies include a kaumātua housing scheme and an urban papakāinga development, and demonstrate principles such as whanaungatanga (participation and membership) and rangatiratanga (self-determination). By understanding how these complex principles operate and interrelate, and by assessing the degree to which they are perceived to succeed, these cases point to the possibility of creating a measure of social capital potential. This could be used to leverage funding decisions through a system capable of demonstrating marked differences where particular principles are supported, incorporated and invested, and could conceivably produce a distinctive planning model based on social sustainability to inform decision making processes in urban environments and land development projects.

Keywords — *socially-based tenure; communal tenure; Māori values; land development.*

INTRODUCTION

Māori are still relatively close to their indigenous roots and, it could be argued, more sensible to the importance of communal values in harmonious survival. Māori probably arrived in New Zealand around 1300 AD (Wilmhurst et al 2008), only about 22 generations before the Treaty of Waitangi was signed in 1840. They are the tangata whenua – the original occupants of the land. In the intervening years, survival has never been straightforward. Māori were a bellicose people who, as numbers grew and competition for resources became more intense, could only survive by cooperating in offence and defence. Cooperation was important to success in hunting and agriculture, especially at higher latitudes and before Pākehā (Europeans) introduced potatoes which grew easily in New Zealand's climate compared with earlier crops Māori brought from Polynesia (Williams 2004a: 2). Precarious survival engendered a holistic attitude towards the environment, a recognition of the importance of extended family, sub-tribe and tribe, and a respect verging on reverence