# The creative suburb: building and urban designs for suburban innovators

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Exegesis

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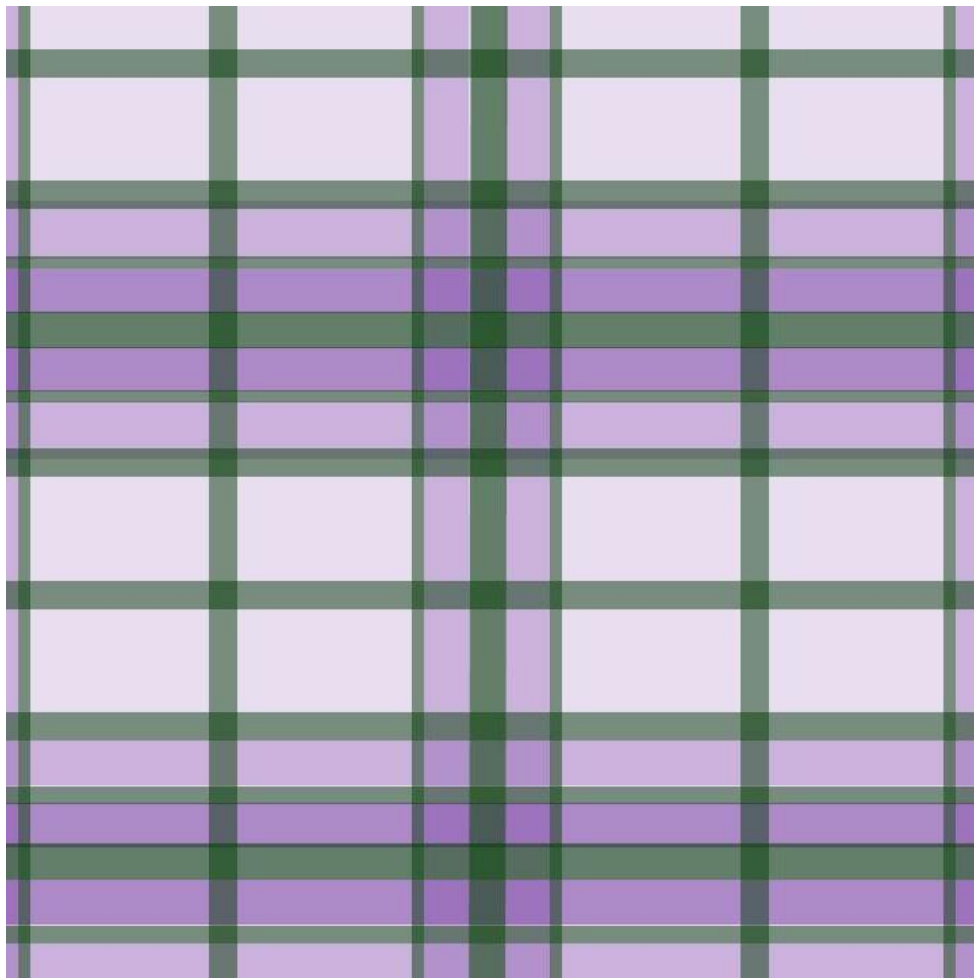
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Preliminaries

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Acknowledgements

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Statement of Original Authorship

The work contained in this document has not been previously submitted to meet requirements of an award at this or any other higher education establishment. To the best of my knowledge or belief, this document contains no material previously published or written by another person except where due reference is made.

QUT Verified Signature

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Definitions

Arcade	A rear lane or laneway with a reservation width of seven metres servicing the rear of a "learning lot" (a lot which otherwise has frontage to a "performance park" or "sage street") – "arcade" also implies an avenue of shops which are walkable and have some critical mass.
Ba block	The concept of "ba" was originally proposed by Japanese philosopher Kitaro Nishida. "Ba" can be considered as a shared space that serves as a foundation for knowledge creation (Nonaka & Konno, 1998) – a block is an area bounded by "sage streets" and/or a "performance park" and includes "learning lots".
Boulevard	A "sage street" with a reserve width of twenty metres – the widest and largest "sage street" referred to in this research, a boulevard provides for through-vehicular traffic as well as encourages pedestrian and cyclist movement along wide footpaths and cycleways.
Castle criteria	Measures established to assess the outputs of this research project and program – "Castle" is an acronym of key reflective and creative factors used – commercial-creative, affordable-adorable, sustainable-spiritual, titleable-tenable, liveable-lovable, experimental-essential.
CIW/s	Creative industries worker/s are workers in creative industries, the target community in this research. The Creative Industries are not only the Cultural Industries, although they include many widely recognised cultural activities. In more specific terms, CIWs exploit symbolic knowledge and skills, often through adding value, commercialisation, distribution and marketing (Higgs et al., 2007:4).
Creative industries	Creative Industries comprise a set of interlocking sectors of the economy focused on extending and exploiting symbolic cultural products to the public such as the arts, films, interactive games, or providing business-to-business symbolic or information services in areas such as architecture, advertising and marketing, design, as well as web, multimedia and software development. Most often creative production delivers unique or customised products from incomplete or abstract specifications received either from a client or derived from a desire for personal, artistic exploration. (Higgs et al., 2007:5) .
Creative quarter	An aspiration for what quarters in a "creative suburb" should deliver + a "creative quarter" comprises 560 "learning lots" with a central "performance park" – a "creative quarter" is one quarter of a "knowledge neighbourhood".
Creative suburb	An aspiration for what a suburb should deliver – a creative suburb comprises a number of "knowledge neighbourhoods".
Creative suburbanist	A scholar, researcher, planner, designer, developer and/or builder with an interest and involvement in suburban creativity.
dawn	An acronym used in defining the dreams, aspirations, wants, needs of creative industries workers.
DSDIP	Queensland Department of State Development Infrastructure and Planning.
Dwelling house	A detached house occupied by a household.
dw/ha	Dwelling units per hectare.
ecHo	Term adopted by the Queensland Development Authority to describe a new housing product for the Fitzgibbon Chase neighbourhood centre – an acronym for "enterprising creative homeworkhouse".
EDQ	Economic Development Queensland – part of the Department of State Development Infrastructure and Planning.
fats	An acronym used in defining the form, arrangement, type and style of building design in this research project and program.
FCNC	Fitzgibbon Chase Neighbourhood Centre.
ha	Hectare – an area comprising 10,000 square metres.
Homeworkhouse	General descriptor of a live-work dwelling where home-based business and/or creative activity is carried out.
hw/ha	Homeworkhouses per hectare.
Knowledge neighbourhood	An aspiration for what a neighbourhood in a "creative suburb" should deliver – a "knowledge neighbourhood" comprises four "creative quarters".
Learning lot	An aspiration for what a lot in a "creative suburb" should deliver – a lot is a site on which a dwelling house and "homeworkhouse" can be built.
Live-work	General term used for a dwelling designed to accommodate both living and working spaces.
Neighbourhood centre	A destination servicing a "knowledge neighbourhood" – typically includes a range of retail, commercial, and service industry uses, in particular servicing the day to day needs (baker, coffee shop, convenience store) of residents within a 5 minute 400 metre walk.
Parade	A "sage street" with a reserve width of sixteen metres – a street which gives priority to pedestrian and cycle movement (parading) along generous footpaths.
Penny Lane	A rear lane or "arcade" – a laneway with a reservation width of seven metres servicing the rear of a "learning lot" (which otherwise has frontage to a "performance park" or "sage street") – derived from the term "penny arcade" being a gallery or area that contains coin-operated entertainment devices, originally costing a penny a play. "Penny Lane" is also a well-known song. "Arcade" also implies an avenue of shops which are walkable and have some critical mass.
Performance park	A neighbourhood park of about 4,000 square metres in area, designed for a variety of recreational activities, including trees, seating, kick about areas, barbeques, gardens, and in the context of this research, outdoor performances such as music and drama.
Promenade	A "sage street" with a reserve width of ten metres – a promenade is used in this research in the sense of a walk for pleasure, that is, a street designed to encourage pedestrian and cyclist movement rather than in a car – a promenade is a very narrow street attractive to calm and slow moving things, where it is possible to walk on the street as well as the footpath.
Sage street	An aspiration for what a street in a "creative suburb" should deliver – a street has a reservation width of between ten and twenty metres, in order, a "promenade, "parade" and "boulevard" – "sage" also refers to a learned person implying that a sage street could contribute to the learning experience of a creative industries worker.
Showcasestudy	A blend of "showcase "as in demonstration or pilot and "case study" as in an up-close, in-depth, and detailed examination of a subject of study, which in this case is the homeworkhouse built at 88 East Street, Clifton.
Soho	Small office home office (sometimes referred to as the live-work houses found "south of Houston Street", Soho, New York City) – typically refers to a live-work dwelling where commercial, office-based business is undertaken.
SPA	Queensland Sustainable Planning Act 2009
sqkm	Square kilometre – comprises an area of 100 hectares
sqm	Square metres
ULDA	Queensland Urban Land Development Authority (now Economic Development Queensland)

Introduction

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A practice-led, industry-embedded, action-research project

The creative suburb is a practice-led, industry-embedded, action-research project emerging from the author's 30 years of professional practice in the planning, design, and delivery of urban and suburban development in south-east Queensland, Australia.

The creative suburb research is based on simple suppositions that: (1) as long as population growth continues, (2) policies for urban consolidation closer to city centres fail to deliver on desired dwelling and jobs densities, and (3) there is land available, Australians will continue to build in new greenfield suburbs. However, the 50-year legacy of the homogenous, low-density, one-size-fits-all approach to suburbia, sometimes hours away from where one can find a job, is coming under increasing and intensifying inquiry (Giles-Corti et al., 2014): the commute alone a significant contributor to greenhouse gas emissions across the globe (Newman & Kenworthy, 2011).

New urbanists such as Katz (1996), Calthorpe (2010), and Duany (2012) have for many years called for an end to unsustainable suburban sprawl. The Australian Council for New Urbanism has been in existence for over 25 years; and this research is in many ways an extension of the new urbanist work which has been going on in Australia during that time. But it seems to take a small catastrophe for attention to shift to a candid, critical consideration of the ecological as well as economic and social costs of living in the suburbs, as in Australia they have come under scrutiny for decades; lambasted in *The Australian Ugliness* (Boyd, 1960), criticised in *A Mansion or No House* (Paterson et al., 1976), and satirised in the Australian movie *The Castle* (1997) and television series *Kath and Kim* (Turnbull, 2008).

The spectre of repossession from failure to meet housing mortgage repayments struck hard during and after the global financial crisis of 2008/9 as a result of sub-prime lending on repetitively large houses – so-called 'McMansions' – in the United States. In western nations where home ownership accounts for a large proportion of residents' wealth, the talk around the dinner table is no longer how big one's house is, rather how small one's debt is.

Creative city

The 'creative class' (Florida, 2002) has known of the benefits of living in or close to a major centre in the city for as long as the suburbs have been set on; the search for cheaper living and working conditions, close to cafés, culture and other creative people, is what drove artists and writers of the Beat Generation – such as Allen Ginsberg – to move into disused warehouses in

San Francisco during the 1950s. It is what similar creative industries workers (CIWs) continue to do in living and working in inner-city locations such as The Valley and West End in Brisbane, Queensland, today.

Florida (2012) confirmed the creative class' preference to live and work in funky, diverse, inner-city areas. Landry (2008) expanded Florida's (2002) original notion into a city and policy -orientated toolkit for urban innovators. Evans (2009) and Bell and Jayne (2004) outlined rationales for cultural and creative industry 'quarters', ostensibly in the city. Evans argues that these creative clusters are a key contributor to a knowledge-based (creative) economy. Bell and Jayne (2004) note that "in urban villages, the symbolic framing of culture becomes a powerful tool as capital and cultural symbolism intertwine; the symbolic and cultural assets of the city are vigorously promoted – but also contested – as cities are branded as attractive places to live, work and play in" (Bell & Jayne 2004:1). Could similar marketing of suburban places as creative quarters attract CIWs to live, work and play there?

For CIWs involved in the interlocking and often interdependent fields of art, film, and interactive gaming, or providing business-to-business services in areas such as architecture, advertising and marketing, design, as well as web, multimedia and software development (Higgs et al., 2007), the inner city is an obvious choice. But what if you happen to be an artist or designer (part of the 'super-creative core' identified by Florida, 2002) who cannot find an affordable place in the highly sought after 'urban quarters', a location also attractive to management or legal experts (the 'creative professionals' identified by Florida, 2002) who may have driven the price of purchase or renting a place out of reach of even the most commercially successful of the super creative core? What if you happen to be a CIW who does not like the frenetic energy of urban centres, what if you prefer the space and serenity of the suburb to stimulate creative activity (Felton & Collis, 2012: 181), what if your work relies on a brief or commission which can be received and worked on remotely (Drake, 2003: 519)?

Creative suburb

These questions have spawned a 'creative suburbanist' movement. Indeed it was around the time that Florida (2002) was making a big global splash, that other (predominantly Australian) researchers were commencing a backlash, principally against what was viewed as an emergent city centre -centric approach to policy, planning, and investment in creative and cultural industries (Gibson (Ed), 2011).

Energised by federal-level political comments that Penrith was a 'pram city' undeserving of further investment in the local university, Gibson and Brennan-Horley (2006) galvanised the issues, positing and proving the presence of a strong knowledge and creative economy in Penrith, and as it turned out, throughout most of Sydney's outer suburbs. Further comprehensive research followed (Brennan-Horley & Gibson, 2009; Edensor et al., 2009; Collis et al., 2010; Gibson C et al., 2010b, Brennan-Horley, 2010, 2011) culminating in Gibson (Ed) (2011) in *Creativity in Peripheral Places: Redefining the Creative Industries*. This was supported by additional outcomes of the QUT Australian Research Council (ARC) sponsored *creative suburbia*[1] research (Flew, 2012; Felton & Collis, 2012; Felton, 2013).

In *Locating Cultural Work*, Luckman (2012) built on the above to research the poetics and politics of creativity beyond the suburbs, in rural, regional, and remote areas of Australia and the UK. And – also "inspired" by Australian researchers – Bain (2013:4) took creative suburbanist concepts to Canada, producing *Creative Margins: Cultural Production in Canadian Suburbs* (Bain 2013) which similarly demonstrated the existence of creative activity and industry occurring in suburbs outside Vancouver and Toronto.

The creative suburbanist researchers established the presence of creative work, activity, and CIWs throughout all quarters of the city-region[2]. The suburbs, in particular, comprise a full creative complement; from formal, professional and commercial, to informal, personal, and artistic. On the one hand, the creative suburbanists showed that not all of the creative class are choosing the city centre in which to live and work, and on the other, that the suburbs are not entirely full of desperate housewives. But the creative suburbanist research focused on existing suburbs and other places well removed from the city centre; the creative suburb is about similarly situated new suburbs.

The creative suburb is aspirational in the sense that the building and urban designs presented are postulations and possibilities, to create new, creative, innovative, and entrepreneurial suburbs; suburbs which are more self-sufficient and self-contained than the product

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[1] Creative suburbia is an ARC Discovery program which evaluates the scope for development of new enterprises in creative industries sectors in Australia's new suburban and peri-urban communities; in particular response to the tendency in the research literature towards an 'inner-urban' bias in understanding well-springs of creativity in cities.

[2] Worldwide modern cities can be considered or understood by including their surrounding metropolitan area with both the number and populations of large metropolitan regions worldwide having increased dramatically during the last century (Heywood 2006). 'City-region' refers to such regional metropolises, including suburbs.

perpetuated down under even today.   However, in a practice-led research context, and in the spirit of research for the 'real world', the building and urban designs are also responsive to some of the most progressive planning provisions in the country, including those in the current Toowoomba Regional Planning Scheme.

The Toowoomba region, in the state of Queensland, Australia, is the place-focus of this research.   The product-focus is defined by the correlation between the spatial focus and level of originality of the intended output. The creative suburb research is expansive in that the designs presented range from the building to the suburb. However, the research did not set out to create new knowledge at the suburban scale. The primary focus is the design of the buildings, notably appropriate for the Toowoomba region. Hence, the building designs and the prototype building are submitted as the most original products of the research.

Nevertheless, the buildings all sit within a lot, block, street/park, neighbourhood and suburban context, and there are many urban planning, design and development industry standard dimensions which apply. As detailed later however, the main variation from these standards is in the unusual lot widths, required to accommodate the distinctive building dimensions ultimately adopted. The research therefore also provocatively proposes the outcome if an entire neighbourhood and then suburb were to be created using only the creative suburb series of building designs. This provocation follows one of the principal possibilities inspired during the research process; micro-small mixed-use everywhere.

Homeworkhouse

The concept of a 'homeworkhouse' emerged to uniquely define the building design typology. There are 'dark ' sides to the term; 'homework' may not be palatable to the school pupil, and the 'workhouse' is an infamous exploitation of poverty-stricken British during the late 1880s and early 1900s. Nonetheless, homeworkhouse has been adopted to differentiate the creative suburb series of building designs: a combination of three components – home, work, and house.   Put simply: 'home' is where the heart is: 'work' is the creative activity, and 'house' holds the space/s in which dwelling – including creative activity – is/are capable of occurring. In this regard, homeworkhouse is meant to cover all home-based work, whether at-home, in-the-home, or from-home.

Homeworkhouses are basically small-scale mixed-use buildings which are otherwise known as 'live-work buildings' (Duany et al., 2010; Dolan, 2012), 'workhomes' (Holliss, 2012), or 'sohos',

a small office home office or mixed use building found south of Houston Street in New York (Zukin 1982).   In statutory planning terms, a homeworkhouse accommodates 'home-based business' as defined in related Queensland statutory planning instruments (DSDIP, 2010a; SPA, 2009), and may also be defined as a 'mixed use development' albeit of a micro-small scale in terms of both the building and commercial scale of operation.

Common to all related definitions, the homeworkhouse is a dwelling/house in which home-based work is done.

The creative suburb research and innovations

To create the building designs, a series of interviews of CIWs and developers of home-based business and micro-small mixed use in Queensland were carried out. The interviews were designed to confirm (or otherwise) the findings of the creative suburbanist research (especially Collis et al., 2010; Felton & Collis, 2012; Felton, 2013), which considered the spatial aspects and aspirations underpinning a live-work situation in existing, often old, outer suburbs.   My creative suburb research asked whether there could be an opportunity for CIWs to find a homeworkhouse suited to their dreams, aspirations, wants and needs ('dawning') in newly developing suburbs.

The building designs were additionally informed through a succession of collaborative workshops involving specialists employed to give detail to the building planning and design concepts developed, using what turned out to be both creative and reflective methods in the process.

The creative suburb research is representative of these emergent research innovations. The products of this research are a book, building, and exegesis:

- the book is entitled *The creative suburb: building and urban designs for suburban innovators*;

- the building, *12 Blues Bar*, is a built prototype showcasestudy homeworkhouse of one of the building designs featured in the book: *12 Blues Bar* is also introduced in an accompanying video entitled *The creative suburb: building and urban designs for suburban innovators*;

- the exegesis, this document, frames and explains the research, its products and outputs.

In this context, the book and building are creative outputs, the exegesis the critical output (see Stock, 2011).   As a package, all three products of the creative suburb research outputs 'speak' to each other, although different 'voices' are used in each.

As a creative output – designed to attract a market – the book is largely aspirational, conversational, and for those interested, technical. The building – i.e. construction of a 1:1 scale model of one of the designs featured in the book – is aligned with the processes of trialling and prototyping common in applied commercial research (Haseman, 2006). This exegesis frames both the book and building and includes reflection and contextualisation of the project in terms of how research aims and objectives were achieved and the methodological approach undertaken.

The final 'thesis' is the combination of these three outputs into one package; in essence an expression, on the one hand, of a breakdown of the historic binary split between practice and theory, and, on the other, to celebrate a burgeoning blend of creativity and criticality in research practice underpinned and informed by reflection. 'Creative reflective practice' defines the approach prevalent in the creative suburb research.

The building

A feature of the work – notably to put money where one's mouth is – is the prototype ('showcasestudy') homeworkhouse built in Clifton by HOLZink Pty Ltd (the company which supported the research effort) as a major output of the research. The property at 88 East Street, Clifton, chosen from 20 design studies of sites in Toowoomba, proved to be the most appropriate and affordable option in the search for a suitable site to demonstrate and test the outcomes of the creative suburb research.

It is important to note from the outset that whilst this building is situated in a Major Centre zone in an inner suburb of a small country town in the Toowoomba region, the design is based on those appropriate for a new suburb in greenfield areas such as Yarrabilba, Ripley Valley, Caboolture West and Caloundra South in the states south east. Each of these greenfield suburbs is intended to provide 50 or more years of dwelling supply in the localities they serve; some include employment targets and desired densities of around 35 jobs and people per hectare, a threshold, when, as Newman and Kenworthy (2006) suggest, dependence on the car is dramatically reduced.

The diminutive if not underwhelming scale of *12 Blues Bar* at 88 East Street, Clifton is suitable for a lot as small as 157 square metres (sqm) in area. Lots of this size are important in the typical mix of lot sizes required to achieve the people densities suggested by Newman and Kenworthy (2006). In the Toowoomba region, almost two-thirds of all households comprise only one or two people (ABS, 2011); an average of approximately 2.5 people per household. At this rate only 14 dwellings per hectare (dw/ha) are required to achieve people densities of 35 per hectare. One point of the creative suburb research was to see if similar job densities could be achieved, most importantly to facilitate employment for CIWs outside centres; centres, historically, where most job opportunities are located. This became a notable challenge considering that CIWs comprise only 6.5% of the working population (see Appendix 5).

As the research revealed however, sometimes a specific focus can extrapolate to something universal, as was the case with *12 Blues Bar*. *12 Blues Bar*, the smallest of the creative suburb building designs, provides for flexible spatial use in at least three distinct spaces (see pages 53-57 of the book). Along with the quintessentially Queensland front veranda, and a fully wheelchair accessible bathroom, the design includes – from front to back – performance + exhibition, workshop + storage, and writers + residential spaces. These spaces are meant for the CIW, however they might also suit home-based workers in other industries, such as the motorcycle mechanic needing a small showroom as shown on page 57 of the book.

The book

It should also be noted that not all the 50 building designs generated through this work are included in the research outputs. This is primarily due to the fact that concept testing with local large-scale building and development companies has revealed keen interest in the building designs and as such there could be a commercial market for the outcomes.   A selection of building designs is included in the book – pages 33-39 – to demonstrate the diversity of the creative suburb series, including small-large, one and two-storey and street-accessed 'front-loaded' and lane-accessed 'rear-loaded' configurations.

It is therefore intended that the book be published and marketed through creativesuburb.com – a domain registered in the name of HOLZink Pty Ltd. A longer term aspiration is that the designs are built with a royalty on construction of each building.

The Castle criteria
Certainly the showcasestudy homeworkhouse built at 88 East Street, Clifton meets most of the criteria established to assess the research outcomes. Assessment against the 'Castle criteria' shows that the building designs have potential to be not only *commercially* attractive, but *affordable*, *sustainable*, *titleable*, *liveable*, as well as *experimental*, at least in the Queensland context. In addition to this quantitative assessment outlined in Appendix 6, an expanded assessment of the sustainability – the 's'-word in the left side of the Castle acronym – of *12 Blues Bar* has been done in relation to the relevant provisions of the Queensland government's *Smart and Sustainable Homes: Designing for Queensland's Climate* (DPW, 2008) publication.

Phenomenology and the vernacular
In this research, special attention is given to phenomenology and the vernacular as essential connections between contextual analysis, literature review, primary research, creative-reflective practice, and the creative products. Concepts of 'poetics', 'dwelling' and 'place' provide philosophical and theoretical foundations – towards a phenomenology – of the homeworkhouse and creative suburb and thereby the potential to influence their research, planning, design, and development universally, as well as in Queensland. In being indigenous to a particular place – and popular among the people – the 'vernacular' (Fisher and Crozier, 1994) is also an underlying theme of and constant in the creative suburb, notably in terms of building, creativity, and the research itself.

With respect to building – and dwelling – Harries (1983) in Seamon (1991) makes an important link between vernacular environments and phenomenology; "in relation to environmental design, phenomenological study of vernacular environments offers clues to 'an architecture that would give full justice to the requirements of human dwelling' (Harries, 1983:14)" in (Seamon, 1991:201). In relation to creativity, amongst other things, the creative suburbanists, especially Edensor et al. (2009), have argued for a rethinking of what constitutes creativity, and advocated the need to consider the often marginal and everyday spaces in which creative industries work takes place; giving rise to the notion of 'vernacular creativity'. And above all, the pragmatic, practice-led, industry-embedded, and action-research nature of this research project – in particular the focus on a select site in Clifton – is also, arguably, a work in the vernacular.

Context and literatures

Site and focus of practice

Extending on the findings of the creative suburbanist research, which has determined that home-based CIWs work beyond the inner cities, and that there is a need to look outside the inner cities to help ensure the economic and social benefits of creative industries are equitably geographically distributed (Gibson & Brennan-Horley, 2006; Brennan-Horley & Gibson, 2009; Edensor et al., 2009; Collis et al., 2010; Gibson C et al., 2010b, Brennan-Horley, 2010, 2011; Flew, 2012; Felton & Collis, 2012; Luckman, 2012; Bain, 2013; Felton, 2013), this project focused on one of Queensland's most suburbanised regions (figures 1, 2).

The suburbs of Toowoomba and the towns within the Toowoomba Regional Council (TRC) local government area provided the physical spatial context for this project; the TRC planning scheme (hereafter referred to as planning scheme or scheme) (TRC, 2012a) provided the project's statutory context. The areas around the University of Southern Queensland, Toowoomba campus (figures 3 and 4) provided the location and sites for the design workshop undertaken as part of the data collection.

The Toowoomba region is located in south-east Queensland, about 125 kilometres west of Brisbane. It encompasses a total land area of about 13,000 square kilometres. The main urban centre is Toowoomba, with smaller urban areas in the townships of Clifton, Crows Nest, Goombungee, Millmerran, Oakey, Pittsworth and Yarraman, and numerous villages. According to the 2011 Australian census, the region's estimated population is around 155,000 people, a population density of around 0.11 persons per hectare.
62% of all households in the region comprise only one or two people (ABS, 2011)
(TRC, 2012a) – downloaded 25/11/12
http://profile.id.com.au/toowoomba/home

Figure 1 – Toowoomba Regional Council local government area in Queensland
(LGAQ 2012 – downloaded 16/09/12)

https://www.nearmap.com - downloaded 25/11/12

Figure 2 – Kearneys Spring, Toowoomba
Kearneys Spring is a suburb on the southern outskirts of Toowoomba – current development in these and other outer suburbs in the Toowoomba region largely caters (only) for a large house on a large lot, and yet the 2011 Australian census reveals that 62% of all households in the Toowoomba region comprise only one or two people – a demographic which suggests a smaller house on a smaller lot for residential and home-based business may be a viable alternative to typical suburban development in Toowoomba. (TRC, 2012b)

Google Earth image - downloaded 27/11/12

Emma Drive, Kearneys Spring *is typical of low density development in the outer suburbs of Toowoomba, even near the University of Southern Queensland, Toowoomba campus.*

Google Earth image - downloaded 27/11/12

West Street, Kearneys Spring *is typical of enclave medium density development near the University of Southern Queensland, Toowoomba campus. To deliver this form of development in a suburban situation typically required a rezoning under the old TRC planning scheme. (TRC, 2012a)*

Figure 3 – University of Southern Queensland and surrounds – zoning
The areas around the University of Southern Queensland (USQ) Toowoomba campus (yellow) are predominantly zoned Low to Medium Density Residential (pink) – enabling higher density housing and home-based business on lots of no prescribed minimum lot size.

Figure 4 – University of Southern Queensland and surrounds – aerial
The aerial photo above indicates that development next to the USQ has been predominantly low density residential or large scale medium density residential development.

The current TRC planning scheme came into effect on 1 July 2012. It is the first scheme to be introduced and gazetted under the *Queensland Sustainable Planning Act 2009* (SPA, 2009) and includes unprecedented planning provisions designed to facilitate development of a greater diversity of more affordable housing and home-based business in the region (including the house on top of the shop), rather than impede their development, the latter the case historically in Queensland and in particular in Toowoomba.

The traditional zoning approach in Queensland, evidenced in the old Toowoomba region planning scheme (TRC, 2012a), separates land uses. In the same way McMansions may have a separate room for every use (e.g. dining room, drawing room, media room), so the traditional zoning approach has a zone for every land use (e.g. detached housing, attached housing, retail, commercial, industrial). The economy and vibrancy coming from the dwelling place being close to, connected, or coincident with the work place has eroded, and in most instances been eradicated over time by the application of these zoning approaches.

Whilst only a couple of examples of these typically small houses on tops of shops have been observed in the Toowoomba region, remnants remain in the towns and suburbs in other locations in south-east Queensland, for example: The Old Bakery, Eumundi on Queensland's Sunshine Coast (Figure 5); and in Brisbane, Queensland's capital city, Grandmother Martin's general store, corner Annerley Road and Tillot Street, Dutton Park (Figure 6), corner Grafton Street and Lutwyche Road, Lutwyche (Figure 7), and 48 Enoggera Terrace, Red Hill (Figure 8).

Figure 5 – The Old Bakery, Eumundi
(Google earth image captured 25/11/12)

Figure 6 – Grandmother Martin's Store, Annerley Road, Dutton Park
(State Library of Queensland + Google earth image captured 25/11/12)

Figure 7 – Corner Grafton Street and Lutwyche Road, Lutwyche
(Google earth image captured 25/11/12)

Figure 8 – 48 Enoggera Terrace, Red Hill
(Google earth image captured 25/11/12)

Partly due to draconian planning laws and the general conservatism of the development industry, the majority of new development in the outer suburbs of Toowoomba and the towns in the region have traditionally been large (600 to 800 square metre) lots for large (four bedroom, two bathroom, plus double lock-up garage) homes. New 'infill' development in the inner suburbs and in the small towns and villages throughout the region has been sporadic, mainly as a result of costly, complicated and lengthy development approval processes, but also due to old, and to some extent, new scheme requirements to preserve existing heritage and neighbourhood character buildings in some suburbs of Toowoomba (city).

In contrast to the limitations of the old planning scheme, the new scheme allows smaller houses to be built on lots of no prescribed minimum size, and encourages 'home-based business' of no maximum floor area in areas zoned for 'low to medium density residential' and 'mixed use' development in the majority of inner and outer suburbs of Toowoomba and towns throughout the region (TRC, 2012b). Appendix 8 includes the scheme's home-based business code.

The possibility to deliver mixed use in a home-based business setting without the need to obtain a planning or building permit is one of the features of the scheme. As a result, some of the best prospects to plan, design, and build a new homeworkhouse are to be found in the suburbs in the small towns throughout the Toowoomba region. Indeed, the small country town arose as an idea to balance and bridge the city-country contradiction evident in some suburban-dwelling CIWs interviewed; those CIWs who may desire not only city centre-like vibrancy, intensity and community, but, as well, demand country-like space and serenity for effective creative activity (see Felton & Collis, 2012).

This realisation resulted in HOLZink Pty Ltd purchasing a property at 88 East Street, Clifton, in May 2013 (Figures 9 & 10). The property included an existing residence, is zoned appropriately for home-based business and mixed use development, and has a depth of 20 metres which is useful in response to typical block (area surrounded by streets) dimensions revealed in review of development industry best-practice literature (notably DSDIP, 2010a, 2011a).

(TRC 2012a)

Google Earth image – downloaded 27/11/12

Figure 9 – 88 East Street, Clifton – zoning
88 East Street is zoned Major Centre (blue) but is close to land zoned Low to Medium Density Residential (previously zoned Residential Choice, in pink). This zoning enables development of small homeworkhouses on lots of no prescribed minimum lot size, thus fulfilling the new schemes aspiration for higher density, mixed use development in the small towns throughout the Toowoomba region.

Figure 10 – 88 East Street, Clifton – aerial
The aerial photo above shows the mix of uses which have developed over time in proximity to the 88 East Street, Clifton site. Immediately to the west (left of site) is an existing engineering business, and immediately to the north (up the page) are existing townhouses. To the east is an existing unused garage with workshop.

The recency of the TRC scheme means that the development industry has not had the opportunity to fully deliver on its promising provisions; built examples for lived experience and/or evaluation are not yet available. It is also highly unlikely that the community and/or customers considering an investment are aware of the live-work and/or home-based business opportunities that may be available under the scheme. New designs and interventions are required to demonstrate these opportunities.

A key aim of this research was therefore to present and demonstrate ideas that may be taken up by the planning, design and development industries and help deliver more mixed use neighbourhoods and a more creative suburbia in the Toowoomba region. These exemplars may in turn stimulate adoption and adaption throughout the rest of the state, where SPA (2009) schemes are in preparation.

To make these interventions is a challenge in the Toowoomba region where momentum for large-lot, mono-cultural, outer-suburbia prevails, infill development in inner suburbs needs to accommodate existing character buildings, and there remains a focus for the city centre to take the lion's share of density and diversity.

Origins and focus of research

Originally written in the 1950s, Heidegger's words are prophetic in relation to the focus of the creative suburb research.

> We attain to dwelling, so it seems, only by means of building. The latter, building, has the former, dwelling as its goal. Still not every building is a dwelling. Bridges and hangars, stadiums and power stations are buildings, but not dwellings; railway stations and highways, dams and market halls are built, but they are not dwelling places. Even so, these buildings are in the domain of our dwelling. That domain extends over these buildings and yet it is not limited to the dwelling place. The truck driver is at home on the highway, but he does not have his shelter there; the working woman is at home in the spinning mill, but does not have her dwelling place there; the chief engineer is at home in the power station, but he does not dwell there. These buildings house man. He inhabits them and yet does not dwell in them, when to dwell means merely that we make shelter in them. In today's housing shortage even this much is reassuring and to the good; residential buildings do indeed provide shelter; today's houses may even be well planned, easy to keep, attractively cheap, open to air, light, and sun, but – do the houses in themselves hold any guarantee that *dwelling* occurs in them? (Heidegger, 1975:145-6)

Heidegger goes on to reveal an etymological relationship between the words 'building' and 'dwelling', in that the High German word for building, *buan*, means to dwell, to stay in place[3].

> When we speak of dwelling we usually think of an activity that man performs alongside many other activities. We work here and dwell there. We do not merely dwell – that would be virtual inactivity – we practice a profession, we do business, we travel and lodge on the way, now here, now there. (Heidegger, 1975:147)

'Here' and 'there' are at the heart of the contemporary creative suburban mire.

With reference to influential 20th century scholars and writers including Mumford (1973), Habermas (1989), and Benjamin (1999), McQuire (2008) traces the history of the separation of (1) the place of living and place of working and (2) uses within the house.

Attributing the process to a rise in capitalism, "the family dwelling's compendium of medieval functions, such as workplace and guest-house, were increasingly displaced by specialized structures such as workshops and factories, inns and hotels" (McQuire 2008:165). Quoting Benjamin (1999), "for the private individual, the place of dwelling is for the first time opposed to the place of work" (McQuire 2008:168), a phenomenon taken to extremes in the current Queensland property development context.

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[3] Living, working and therefore 'dwelling' in one place may be a prerequisite for a more self-contained, self-sufficient and sustainable suburbia.

In support of McQuire (2008), Holliss (2012) attested:

> As ubiquitous as the "house", the building type that combines dwelling and workplace has existed for hundreds – even thousands – of years. Examples can be found worldwide.
>
> They range from the Japanese machiya to Malaysian shop-house; Iranian courtyard house to Vietnamese tube house; medieval English longhouse to contemporary live/work unit. Taking different forms according to culture and climate, these buildings are often so familiar that we do not notice them.
>
> Before the industrial revolution, it was called "house", with sub-sets of bake-house, bath-house, ale-house and so on. But through the 20th century, the term "house" came to refer to a building type in which people cook, eat, bathe, sleep and watch TV, and nothing else. So the building that combines dwelling and workplace lost its name.
>
> In order to be able to gather knowledge about it, this building type needs a name. So I have coined the generic term "workhome" to refer to all buildings that combine dwelling and workplace. (Holliss, 2012)

McQuire (2008) suggests that functional differentiation of the home began similarly as home-work separation as early as the 13th century with the development of private bedrooms, and then private toilets, for the wealthy, and that by the 17th century, innovations in heating and lighting enabled further separation of functions e.g. a separate kitchen and parlour. By the 18th century, the specialised drawing room came into existence – an identifiable room specifically for receiving guests and holding public discourse within what was otherwise regarded as private space – which in turn led to the creation of a new type of interior space – the corridor – dedicated to circulation to service the increase in functionally differentiated rooms (McQuire 2008: 168).

"Possessing a house with a range of specialized rooms became a sign of social distinction…the self-contained universe of the private home assumed a compensatory function in the context of the maturing capitalist economy" (McQuire 2008:165-168). This basically meant agglomeration of the labour market into industrial areas and other centres of work, often far removed from the place of dwelling. McQuire suggests that "it is from this perspective that avant-garde proposals to 'open up' the home can assume a radical character" (McQuire 2008: 168).

In a new creative suburb, 'opening-up' means much more than simply opening the family home to the street, or removing walls from rooms dedicated to a single purpose; in the creative suburb, opening-up also means being open to ideas that the dwelling place returns to medieval times when the dwelling place and work place were contiguous, when houses were smaller and uses overlapped in the same spaces at different times, and, moreover, that the house is designed and used for a wide variety of creative activity including working and living.

These are huge challenges when considering the juggernaut of production of new houses in new greenfield suburbs in Queensland. Alexander (1985) sums up the situation:

> Like all systems, the system of housing production is always recognizable by its products; that is to say, by the form of housing which it produces. For example, the housing production system currently most widespread in the United States is the one which is called "tract development": it can be recognized, exactly, by the tracts which it produces. Within this system, developers buy land, develop roads, and then build houses, more or less identical, in quantities of hundreds at a time. These houses are owned by the families; they have private lots; and the process is based on the existence of federally insured bank programs which lend money for these kinds of houses, on the tax incentives which encourage families to make these kinds of purchases, on zoning laws which prescribe density and land use, and so on. The houses are designed, ahead of time, as "model homes," on the drawing board. The model houses are then built, many times over, by contractors, working with specialized labor, themselves most often working as subcontractors...The construction techniques emphasize speed; many of the construction workers are novices, working especially for the money, not for the love of what they build...All this, ramified throughout society in a million details – in what can be bought in a hardware store, in what a subcontractor can legally do, in the forms of management approved by the state licensing board for contractors and architects – all this together forms the system of production which produces some 400,000 houses per year in the United States alone.
> (Alexander 1985:27)

Alexander's (1985) commentary reflects the current case for the production of houses in suburban Queensland. Alexander's comments are of particular relevance to CIWs who exhibit a need to customise the house for creative work (Felton, 2013). They also mirror Ingold (2000) who notes that the essence of current building practice is "that worlds are made before they are lived in; or in other words that acts of dwelling are preceded by acts of world making" (Ingold 2000:179), in other words, that people are making their place in the world after they have moved in to a product designed and delivered by others.

A practice-led inquiry demands attention to the dichotomies of these processes if any effective intervention is to be made, particularly if dwelling – living and working in the one place – is the

ultimate aim. The dichotomies are (1) location in the city-region, (2) nature of conditions suitable for living and working, and (3) building design.

Location, location

The first foray is to gain an appreciation of where CIWs might prefer and choose to dwell: according to some, certainly not in the suburbs, and definitely not separated from the workplace. Creative city advocates such as Florida (2012), Landry (2008) and Evans (2009) certainly support this notion.

In a similar vein to Evans (2009) and Bain (2013), Ebert and Kunzmann (2008) said that "creative low-income groups seek to live and work in urban quarters: places which offer cheap rents, liberal environments and good accessibility by public transport"; that "the vast majority of freelancers, independent contractors or small-sized businesses prefer inner-city locations, not only for personal reasons, and irrespective of sub-markets"; and that inner-city spaces "facilitate networking and exchange processes by informal interactions, say during lunch" (Ebert & Kunzmann, 2008: 14).   Ebert and Kunzmann conclude that the working and living spaces of city-centre CIWs are typically functionally interlinked (Ebert & Kunzmann, 2008: 18).

Kim (2008) describes the "Phoenix metropolitan experience" and – similarly to Ebert and Kunzmann – cites affordable living costs (housing, entertainment, food, schools), the importance of the presence of a major university in the region, and places with a distinct local identity as factors required for a creative economy (Kim, 2008: 51).

Drawing on interviews with CIWs in the north-east region of England – in "rethinking the creative city" – Comunian (2011) argues however that "the cultural development of a city is a complex adaptive system" (Comunian, 2011:1157), and "emphasises the importance of micro interactions and networks between creative practitioners" (Comunian, 2011:1157) as keys to the cultural infrastructure of the city as a whole (i.e. potentially including the suburbs).

As already outlined, rethinking is also being done by Australian creative suburbanist researchers (notably Collis et al., 2010; Gibson (Ed), 2011) who are challenging research into the creative economy which has tended to assume that city centres are the cores of creativity. Echoing Comunian (2011), Gibson C et al. (2012) draw three conclusions from their studies into the creative economy of the city of Wollongong, in New South Wales, that: "'creativity' is

relationally situated and linked across all parts of the city"; "decentralized forms of small-scale cultural infrastructure provision are vital for vernacular cultural pursuits"; and "'creativity' is a polysemic and contested category – only ever partially revealing the contours of cultural vitality in the suburbs" (Gibson C et al., 2012:287).

This research confirmed earlier work by Waitt and Gibson (2009) which revealed that "regardless of the numerical population size of a city, creativity is embedded in various complex, competing and intersecting place narratives fashioned by discourses of size, proximity and inherited class legacies" (Waitt & Gibson, 2009:1223). Waitt and Gibson also suggest that "only when the creative economy is conceptualised qualitatively *in place* is it possible to reveal how urban regeneration can operate in uncertain and sometimes surprising ways" (Waitt & Gibson, 2009:1223); Gibson C et al. (2010b) for example, identified unusual creative industries such as tattooing and whip-making in the suburbs of Darwin, in the Northern Territory of Australia.

Live, work
The second foray into the creative suburban challenge is to gain an understanding of the suburban conditions under which CIWs might prefer and choose to live and work.

In contrast with studies into the creative economy of regional cities in Darwin and Wollongong, another Australian researcher Johnson (2012), in a study of commuting trends in Melbourne, suggests that the inner-city areas are an employment sink; while a little over 10,000 people commute to work outside of Melbourne, more than 40,000 commute in. Indeed, Johnson's work reveals that it is the high-income, high-skill, white-collar worker who seems to be doing the commute from the suburbs into the city centre, and this, despite acknowledgement that the Knowledge Economy[4] is an industry sector in which people can and do work outside of established employment nodes, including, for example, working at home (Johnson, 2012:279).

Johnson's (2012) research confirmed the findings of the Griffith University Urban Research Program (Baum et al., 2007), which concluded that certain types of knowledge workers prefer an eclectic, diverse, urban environment, where living and working is within walking distance. Johnson cites Baum et al.'s (2007) findings to advocate however, that "the Knowledge Economy

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[4] The Knowledge Economy is a broad categorisation, similar to the Creative Economy. In this project, creative industries workers fit both these general categories. Johnson (2012) and Baum et al. (2007) conclude there are certain types of knowledge workers – the CIWs referred to by Ebert and Kunzmann (2008) and Kim (2008) – who prefer eclectic, diverse urban(like) environments.

is *not necessarily spatially tied to the inner-urban area.* Instead it is more likely associated with a set of conditions attractive to Knowledge Economy workers" (Johnson, 2012:284). These conditions, Johnson says, are more often than not found in the central city. "Economic development strategies that target components of the Knowledge Economy may, therefore, have substantial scope to attract these jobs to other parts of the city *if these conditions can be replicated*" (Johnson, 2012:284 author's italics). Johnson goes on to say that "in fact, there are several small clusters of Knowledge Economy jobs in outer suburban areas of Melbourne" (Johnson, 2012:284).

Could it be that CIWs and other industry workers might be enticed to live and work in the suburbs if they were planned, designed, and delivered more in line with city centre or inner city suburban conditions? Indeed, in terms of the buildings; is it in complete contradiction to 1950-70s Heidegger, that the dwelling house and work place may no longer be "here" and "there", but rather, potentially and poetically, coincident, in the suburbs, where typically (paraphrasing Heidegger, 1975:145-6) "houses" might still be the cheapest, well planned, easy to keep, open to air, light, and sun, but, almost inevitably, are not designed to facilitate home-based business nor creative industries?

Planning, design

The third charge towards a creative suburb is to work out how the building might be planned and designed; this means considering who the building is for, and determining desired spatial areas and functional arrangements.

Felton and Collis (2012) identified two distinct categories of CIW: "'commercial creatives' – those people who either worked in, and/or ran a small to medium commercial enterprise (SME) – or 'artisans' – those involved in generally individual creative endeavours such as visual art, music or writing" (Felton & Collis, 2012: 180-181).

Brennan-Horley and Gibson (2009) broaden this scope of users and uses in stating "that while within creative industries there are clearly identifiable careers and exploitable intellectual property products (e.g. film production, architecture, design), there are prevalent forms of work that move between mere pastime and formality; between incidental experimentation and commercial exploitation...in addition to commercial, professional and full-time employed CIWs, creativity is also the sphere of freelancers, radical artists, the temporarily employed, and barely viable micro- businesses" (Brennan-Horley & Gibson 2009:2597).

Similarly, Holliss' (2012) research – which literally built on the design work carried out by North American architects Penny Gurstein and Thomas Dolan – set out to identify some (ideally universal) design 'truths' for workhomes, which culminated in the identification of eight different user-groups, two types of dominant functions, and three degrees of spatial separation, as listed below (Holliss, 2012).

User-groups

- juggling parents
- backbone of the community
- professionals
- 24/7 artists
- top-up
- craft-worker
- live-in
- start-up

Dominant functions

- Home-dominated
- Work-dominated

Spatial separation

- no separation: live-with
- some separation: live-adjacent
- more separation: live-nearby

The range of users, uses, and their relationships put forward by Brennan-Horley and Gibson (2009) and Holliss (2012) provide a complex matrix of factors to be considered in the planning and design of the buildings: the creative suburb buildings need to cater for users and uses which range from the formal, professional, and commercial, to the informal, personal, and artistic.

Dolan's work provides a comprehensive, contemporary reference for the design of 'live-work' buildings in north America, however, little has been done in this space in Australia.

Live-work buildings in Australia

In a study of sohos and soho workers in Australia, Williams et al. (2009) reveal a number of positives and negatives of the soho form of home-based business, notably when located in the suburbs. Whilst the soho provides for a better demarcation between office and home activities there are issues of suburban social isolation with a correspondent need to connect to the local community and physical environment. This connectivity includes the need for organised business networking opportunities that can lead to new business opportunities. Williams et al. (2009) also raised concerns about surrounding road and parking infrastructure which cater to residential needs but not to the needs of collocated businesses.

In addition, as its name implies, the soho is primarily designed for commercial and, possibly, some retail/wholesale activities. Whilst popular in some mixed-use centre developments such as Varsity Lakes on Queensland's Gold Coast (Figure 11), the office-orientation of the soho does not cater for CIWs who may require or prefer a studio or workshop space in which to do noisier and dirtier work.

Figure 11 – Soho, Lake Street, Varsity Lakes, Gold Coast
Google Earth image - downloaded 27/11/12

Figure 12 illustrates the most recently built soho at Fitzgibbon Chase, Brisbane.

Figure 12 – Soho at Fitzgibbon Chase, Brisbane

Figure 13 shows the floor plans of the above.
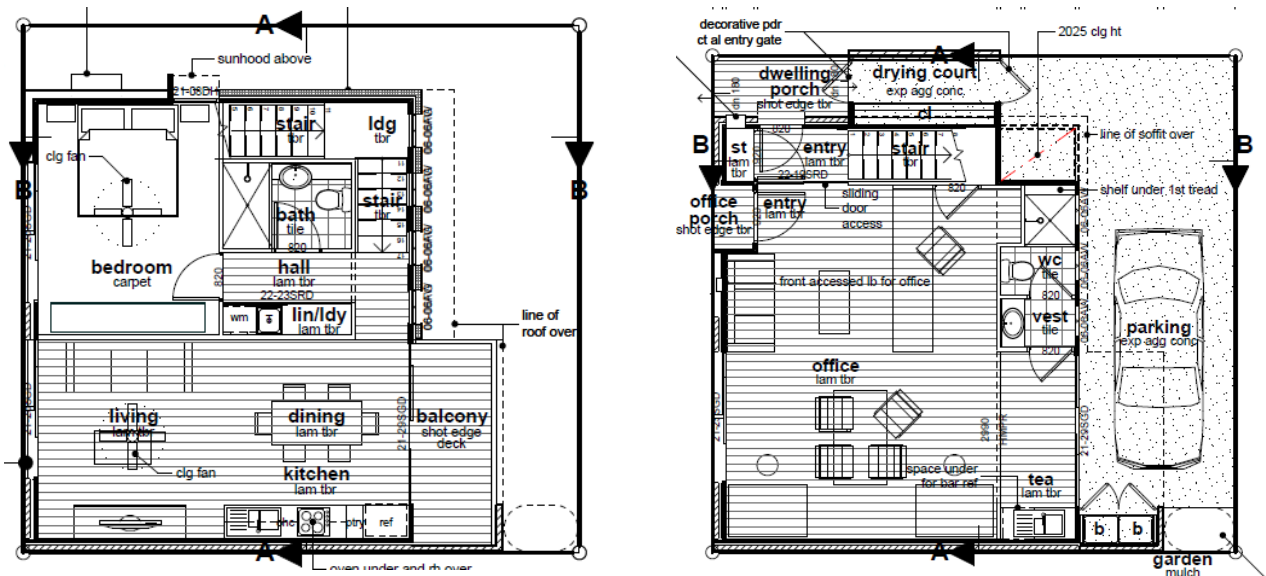
Figure 13 – Floor plans of Soho built at Fitzgibbon Chase, Brisbane

Further developments on this concept are found in development approval documents for the Fitzgibbon Chase neighbourhood centre (DSDIP, 2012b). The 'ecHo' (originally called an enterprising-entrepreneurial, creative-industry, Homework opportunity/office) is an extension of the soho into a micro-small mixed-use concept based on the Economic Development Queensland (EDQs) 'Nano', an 'apartment on the ground' which fits a 5 x 11m lot and is the

culmination of a product development process which began with the laneway-accessed 'Fonzie flat' (a Dual occupancy or Multiple dwelling in most planning schemes in Queensland) .

In EDQ projects a 'medium density' outcome of around 30 dwelling units per hectare (duha) net is being achieved with a mix of (just) dwelling houses on lots of no prescribed minimum size and frontages down to 4.5m. Such narrower lots can result in a fine-grained development outcome which achieves desired densities of dwelling houses subject to domestic rather than commercial construction. Terrace or row housing (Dwelling houses) can deliver up to 50duha (including local streets and parks).

Figure 14 illustrates the progression to delivery of medium density dwelling houses on lots of no prescribed minimum size at Fitzgibbon Chase, Brisbane. Figure 15 shows the resultant smallest of the ecHo designs. All of these designs are precursors to the homeworkhouse as the preferred generic descriptor of the primary product subject of this research.

*EDQ first generation **'Loft' apartment** ('Fonzie flat') – **laneway** accessed and typically delivered on a building format lot subject to a community title arrangement – this is a Class 2 building in accordance with the Building Code of Australia, as part of one building is built over part of another.*

*EDQ second generation **'Loft' house** – **laneway** accessed and delivered on a freehold 'Torrens' title – no body corporate – a Class 1 building in accordance with the Building Code of Australia. In Queensland infrastructure services such as power and water are traditionally serviced from a street, not a lane. Embedding a separate lot in a lane means that infrastructure service lines need to be located in the rear lane, complicating the process and adding cost to delivery.*

*EDQ third generation **'Urban' house** – **street** accessed and delivered on a freehold 'Torrens' title – no body corporate – a Class 1 building in accordance with the Building Code of Australia. A street-accessed house is the simplest method of delivering houses on their own lot, regardless of the lot size – this is normal industry practice in Queensland. Rear lanes are being increasingly used to achieve higher densities. However it should be noted that introducing runs of narrow lots into a streetscape increases the number of driveways potentially interrupting pedestrian and cycle movement in the street.*

Figure 14 – Evolution of the EDQ Urban
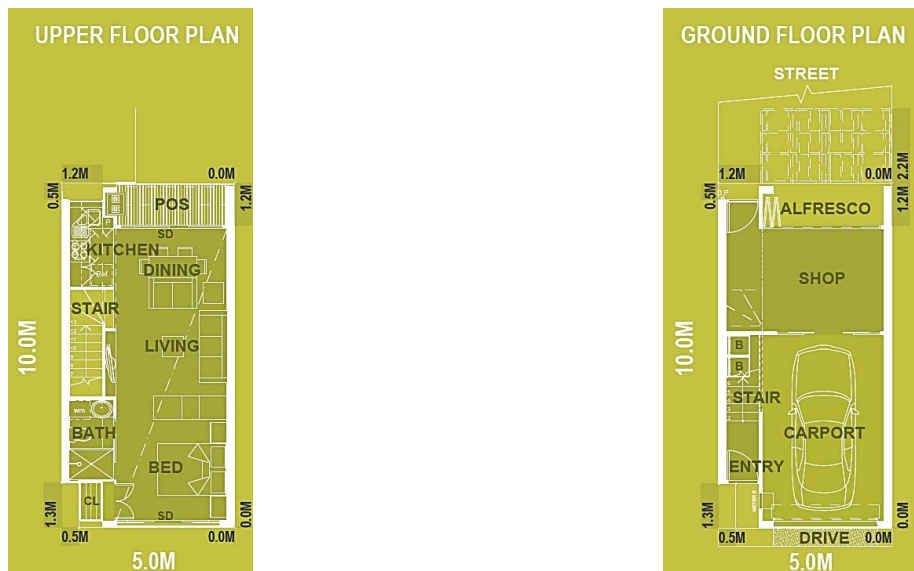
Figure 15 – Floor plans of the smallest ecHo approved for construction at Fitzgibbon Chase, Brisbane

The homeworkhouse – finding a place in Queensland

The concept of a 'homeworkhouse' was devised to describe the wide variety of micro-small home-based business and mixed use opportunities that the creative suburb building and urban designs might facilitate, that is, more than a small home office, and for the variety of work that might be done in a live-work building or workhome. For CIWs in particular the 'work' component of a homeworkhouse may comprise an 'office', 'service industry', 'shop', 'showroom' and/or 'theatre'.

A homeworkhouse embraces 'home-based business' as defined in related Queensland statutory planning instruments (e.g. in accord with DSDIP, 2013) and may also be defined as a 'mixed use development' albeit of a micro-small scale in terms of both the building and commercial scale of operation.

A homeworkhouse would generally be referred to as a 'home-based business' if it is to be established in conjunction with a 'dwelling house' or 'dwelling unit' in a Residential zone in Queensland. A 'home-based business' is also typically subordinate to the residential use of a house in a Residential zone, whereas in a Centre or Mixed Use zone it may be possible to have a variety of permutations and combinations of residential, office and retail space, certainly a 'home-based business' per se is permitted in a Centre or Mixed Use zone in the TRC scheme.

Usually the residential occupation of a building used for even light to heavy industry is limited to 'caretaker's accommodation' reflecting the predominant industrial uses preferred to be developed in an Industry zone.

It is a strange characteristic of the regulatory regime in Queensland however that it is easier to establish a 'home-based business' in a Residential zone than it is in a Centre or Mixed Use zone. This is largely a result of the requirement for 'home-based business' to be ancillary to the primary residential uses permitted in the Residential zone; if the building looks like a house, it is deemed a house, even though a sizeable portion of it may be being used for creative or other industry.

There are however, alternative planning regulations in place or in train to encourage more widespread mixed use development opportunities in Queensland. Development schemes by ULDA/EDQ in particular foreshadow the potential for mixed use to become commonplace. The Oonoonba Development Scheme (DSDIP, 2010b) includes significant areas zoned Mixed use, the intent of which is to cater for a range of Business, Retail, Residential, Sport Recreation and Entertainment, Industrial and Service and Community uses.

Similarly, in the Yarrabilba Development Scheme (DSDIP, 2011b) 'Urban living' is the prevalent zone. New and draft planning schemes made under SPA follow similar lines, especially the predominance of the 'Urban living precinct' as shown in the structure plan for the new greenfield suburb of Caboolture West in the Moreton Bay region (MBRC, 2014). Indeed, on closer scrutiny it appears that the purpose of the Urban living precinct in the Caboolture West local plan code is based on the intent of the Urban living zone as contained in the Yarrabilba development scheme, as follows:

> The Urban living precinct applies to most of the area intended for urban development in the Caboolture West local plan area. The precinct is to be developed as a series next generation suburban neighbourhoods, that are comprised of a mix of residential development types including detached dwellings on a variety of lot sizes, multiple residential dwellings and other residential and live work opportunities. Higher density development is predominately located within walking distance to centres, community facilities and high frequency public transport.
> (MBRC, 2014: 2701)

Both Caboolture West in the Moreton Bay Region and Yarrabilba in Logan City are greenfield developments catering for ultimate populations in excess of 50,000. People and jobs densities planned for Caboolture West in particular have been based on the outcomes of Newman and Kenworthy's (2006) research which suggests there is a threshold of around 35 people and jobs per hectare where dependency on the motor vehicle is dramatically reduced. Caboolture West provides a useful case study in the creative suburb research where similar targets for the number of homeworkhouses have been set, the aim being to achieve a zero commute.

In the Caboolture West local plan (MBRC, 2014) it is assumed that around 80% of the total required 17,000 jobs to be generated over the life of development will be in centres and major enterprise and employment areas, with 14% of jobs to be found in residential areas; one in ten dwellings comprising a home-based business. The difficulty with centres and dedicated enterprise areas, however, is that they take some time to develop as they are population driven. In new areas, demand for a typical local centre comprising a 5,000 – 7,000sqm supermarket + specialty retail and commercial uses is unlikely until there is sufficient population of around 12,000 – 15,000 people in the local area and there is substantial passing traffic including effective public transport. A neighbourhood centre comprising around 2,000sqm of mixed use may only be viable once it is serving around a third of this number of people. Significant development has to occur before even the smallest of centres will have any chance of being viable.

The focus on centres and large enterprise areas to deliver jobs is therefore fraught with challenges, hence the fundamental need for every homeworkhouse delivered in a creative suburb to have the capacity to provide for and potentially generate at least one job, including the relatively small percentage of CIWs in the working population. Achieving one job per homeworkhouse would be a remarkable achievement; it would delay the need for centres of any kind, indeed allowing a centre to emerge where there is a common interest or attraction, often at the 'crossroads'.

The concept of a creative suburb with micro-small mixed use in homeworkhouses everywhere therefore springs from a number of aspirations:

- Develop new suburban areas with at least 35 people and jobs per hectare (between 17 and 35 homeworkhouses per hectare – hw/ha – assuming between 2 residents per

homeworkhouse and 1 job per homeworkhouse, an average of 27hw/ha yielding 54 people per hectare if 2 residents per homeworkhouse and 35 jobs/ha assuming 1.3 jobs per homeworkhouse can be achieved);

- Implement a neighbourhood model which provides opportunities to deliver these people and jobs densities in the short term, that is, preferably at the time or within a couple of years of development commencement;

- Where possible work within current planning regulations and industry best practice approaches to enable ease of introduction to the community and market;

- Build in possibility to achieve widespread employment without having to build a larger format local or neighbourhood centre in the early stages;

- Implement a building and lot design approach which enables ease of adaption to a local or neighbourhood centre of more intense mixed use in the medium term.

These aspirations provide two related and significant questions:

- What form, type and arrangement of urban development could achieve the people and jobs densities given that new suburban greenfield areas are typically on the 'urban fringe' and not in a city such as San Francisco where at least densities of 27duha have been achieved?

- What type, scale and location of development may be attractive to and/or be capable of delivery in the short term?

In summary the answers are found in the employment of two strategies:

- Provision of mixed use and therefore employment opportunities throughout the neighbourhood from the outset; and

- Provision of a robust urban planning and design solution in the centres so that development may be catalysed in the short term and transformed in the medium term as community needs and market demands dictate.

The key underpinning value in both strategies is flexibility. It is an underlying assumption that centres, and where possible enterprise and employment areas, will provide the major share of jobs growth in new suburban development. However, this should not detract from trying to achieve a wide dispersal of employment opportunities, and this means the ability to establish mixed use and home-based business anywhere and early in the development.

The latter is a fundamental in the premises underpinning the development of the creative suburb building designs, that each homeworkhouse is capable of adaption to 'shop', 'workshop' and 'studio' uses, or for CIWs – as derived from the interviews – separate spaces and places for 'performance' + 'exhibition', 'workshop' + 'storage', and 'writer's' + 'residential' use.

Towards a creative suburb

The discussion so far suggests three possible policy positions and planning models for development of, and preferred location for CIWs in a creative city-region, from left to right: (1) city-centre-centric; (2) polycentric mix; and (3) suburban spread. Figure 16.

| City centre centric | Polycentric mix | Suburban spread |
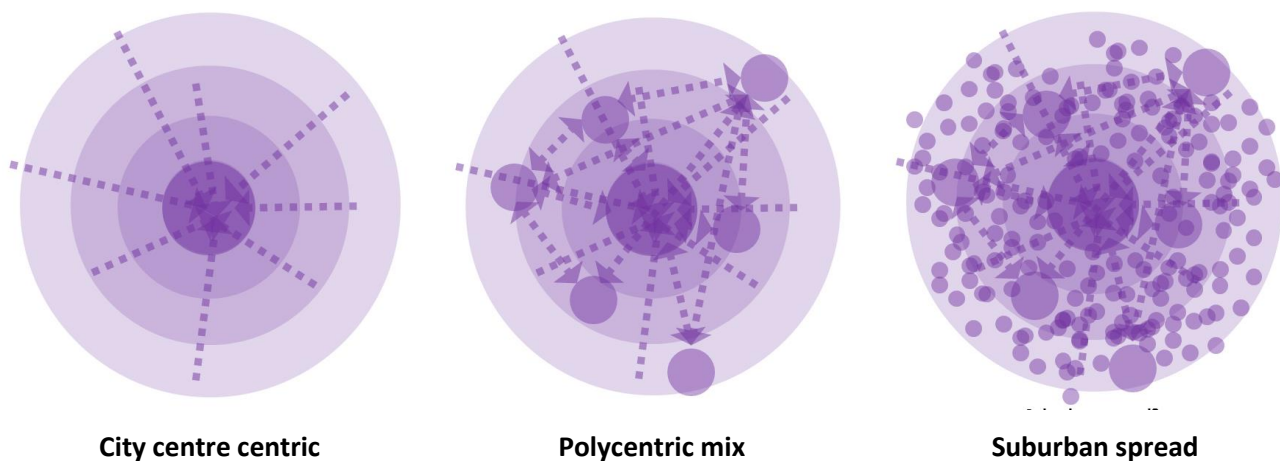
Figure 16 – Creative city-region: possible policy positions and planning models

The city-region encompasses an area with a diameter of 40 kilometres (km), made up of a series of concentric circles each with an increasing/reducing radius of 5km. The outer ring in all three diagrams indicates an outer suburb as well as an area representative of total population. The population that works (about half the total population) is in the next circle in,

often working in industrial areas well outside the city centre, whereas the creative class (Florida, 2009, 2012) is typically found in the inner circles. The arrows suggest the direction of both investment and vehicular traffic movement.

The diagram on the right reflects the results of the creative suburbanist research, in that CIWs are located throughout all areas of the city, including the outer areas. The diagram on the right also implies that a suburban spread of home-based business could go a long way to remove the home-to-work commute, thus making a place more sustainable: ecologically, socially and economically.

The creative suburb is about newly developing suburbs targeting and enticing CIWs to live and work in new homeworkhouses developed at an appropriate density to reduce the commute and therefore increase the sustainability and spread of creativity throughout the city-region.

Creative reflective research

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Action research and reflective research

The creative suburb research program involved two interconnecting and flowing research 'streams': (1) *creative practice* evidenced in two, related, year-long projects (action research); and (2) *reflective practice* evidenced in a related exegesis (reflective research). A significant amount of 'fishing' has been done in both these streams, springing from the work of Schön (1983), who coined the term "the reflective practitioner", through to Ulrich (2006) who goes to the extent of claiming that "no theoretical scheme of methodology choice can comprehensively supersede reflective practice" (Ulrich, 2006:14). A crucial facet of the creative suburb research was to develop confidence "about the parameters of reflection and the building blocks which make it what it is" (Ixer, 2010:90), which as Ixer (2010) also says "are needed, and until such time (as these have been developed) there is no such thing as reflection" (Ixer, 2010:90).

Writing an effective and structured reflective journal (e.g. Johns, 2000) is one highly recommended reflective research technique, and in my case, the (almost) daily discipline involved in producing a series of reflective journals has emerged as not only a key to reflective practice, but essential to creative practice.

Indeed, it is in my journals where the reflective and creative streams circled, cycled, collected and then settled, in what I call a 'reflective pond': the confluence and coincidence of the creative and reflective suggesting that there is (at least in the context of the creative suburb research) a theory and methodology of *creative reflective practice* involving a blend of concepts of what are typically referred to as 'reflective practice' and 'action research'.

Leading reflective practitioner and advocate Johns (2000) cites Gibbs's (1988) process to be utilised in and to structure journal entries, that a 'reflective cycle' involves: description (of what happened); feelings (what was thought and felt); evaluation (what was good and bad about the experience); analysis (what sense can be made of the situation); conclusion (what else could have been done); action plan (if the situation arose again, what to do?), which returns to description, and so on. (Johns, 2000: 47)

Similarly, McMahon (1999) identifies the major concordance between Kolb's learning 'cycle' and the action research 'spiral', in that they both emphasise the importance of reflection on action and experience. In both models the reflection is intended to be transformative. In the case of the learning cycle this transformation can be mainly internal (i.e. concerned with knowledge or attitude – 'inside'), whereas, in the case of the action research spiral, there is

always an explicit strategic attempt to improve practice (which is observable – on the 'outside'). In this project, the research is not only *performative* (e.g. Haseman, 2006), it tended to be *transformative*.

McMahon (1999) says that strategic action is a deliberate and planned attempt to solve a particular problem or set of problems using a coherent, systematic and rigorous method. McMahon reinforces this notion in saying that action research, by definition, always involves such strategic action, but, by contrast it is not integral to reflective practice. Reflective practice can lead to strategic action, but this is not inevitable. Reflective practice can be a useful precursor to action research. It is not identical to it (McMahon, 1999:163). McMahon concludes: "reflective practice can be used to identify problems; action research can seek to provide solutions" (McMahon, 1999:168). The 'reflective pond' materialised as a metaphor driving key outputs of this research, including expressions of reflection-before-action, -on-action, and significantly in a design development context, -in-action.

As Rolfe (1997) describes, reflection-in-action is reflection which takes place in the practice setting rather than retrospectively; it is a situation where each of the phases of the reflective cycle (e.g. Gibbs, 1988) is compressed into a live, real-time practice setting so quickly and seamlessly, as to become a single process. This is my experience of almost daily entries to a reflective journal, a repository of reflection before, on, and most significantly in, design practice – whether it is design being done by one's self or collaboratively in a workshop. This creative-plus-reflective process resonates as a form of real-time problem solving which Schön refers to as 'on-the-spot experimenting' (Rolfe, 1997: 95). I have come to view this process as an 'inside the moment' blend of creative and reflective practice, what Schinke et al. (2012) refer to as 'reflexive practice' involving 'reflex actions' which may be involuntary, instantaneous and unexpected. I am tempted to call this creative+reflective process 'refluxive praxis', a 'theory' informed and inspired by Gray (2007) who writes:

> I very much like the idea of 'encountering' theory. It suggests that, as a result of active exploration, we might come upon or discover unexpectedly relevant ideas. It is dynamic, moving. It suggests an event, possibly a serendipitous meeting, an experience that might surprise us or challenge us. On a darker note an encounter also suggests a meeting in battle or contest. We can evade or engage. Encounters can create tensions, and challenges can provoke creative responses.
> (Gray, 2007:6)

Gray goes on to say:

> If we take a 'practice-led' approach to research we acknowledge practice as a wellspring for inquiry. During the inquiry, practice encounters theory – or seeks it out – at appropriate points in the journey. We may consider using a river metaphor. The research proposition starts from a small source (of desire) and as it progresses encounters other sources that contribute at certain points to its flow and shape. These con-tributaries introduce new streams of thinking and practice into the argument, directing, re-shaping its course, expanding, increasing the speed of the flow, giving the thinking direction and context.
>
> Going deeper into the metaphor we might talk of cross currents and undercurrents. The word 'discourse' in Latin means 'running to and fro' – discussion that is in flow and flux. Similarly 'discursus' means argument, and discursive relates to dialogue, conversation – an exchange that is lively and engaged, participatory and connecting.
> (Gray, 2007:6)

Schinke et al. (2012) note that reflexivity is a nuanced form of reflective practice based upon an emerging innovation in qualitative methodology whereby researchers situate their own personal identities and biases to explore surprises and un-doings in the research process (i.e. unexpected turns in the research process).

Thankfully, this project involved more surprises than un-doings: the process was a continual flow of serendipitous connections and synchronistic collections forming, in particular, new patterns of design language which then informed the detailed design of the homeworkhouses and their siting on a lot, in a block, on a street, near a park, in a neighbourhood, in the suburb.

Phenomenology

Paramount in the concept of a creative reflective practice model/approach intuited during this research is that it gave new meaning and an unanticipated depth of support to the use of a range of design tools and techniques which I have developed over a life time, to support my professional practice, and, as it turns out, my personal life. On reflection, these tools and techniques have been derived from learnings that go back to 'doing' art at high school in the late 1970s , study in urban design in the late 1980s, and a concerted effort throughout an honours year 2010 to consider the use of phenomenology in urban planning design and development. In recent years, in particular relation to the reflective stream of this research, I discovered the leading and comprehensive work of Embree (2006) who posits that phenomenology is quintessentially 'reflective analysis'.

Embree (2006) states that "a phenomenological approach chiefly requires two things: (1) adopting a suitable attitude, which is fundamentally reflective and theoretical, and (2) engaging

in observation and what can be called analysis" (Embree, 2006:1), an assertion which echoes Ulrich (2006) and Ixer (2010).

The process of preparing the building and urban designs as well as the graphic design of the book thus drew on works in phenomenology (as philosophy/metaphysics, epistemology, ontology, theory, methodology, and methods): notably embedding the prolific works in the development of a *Poetic Pattern Language* by Alexander (1977, 1979, 2002, 2010). Indeed, the entire book is a reflection of my belief in the use of phenomenology and poetics in both the professional practice of urban planning, design and development, and in providing a philosophical foundation for personal creative and reflective practice – an account of which begins with Heidegger (1971), who states:

> Poetry is the founding naming of being and the founding naming of the essence of all things – not an old saying, but that through which everything, what we discuss and debate in common language, first steps into the open. Therefore poetry never takes up language as some raw material ready at hand, but rather, poetry itself first enables language. Poetry is the originary language. (Heidegger, 1971:41)

Heidegger presented and proffered ideas of 'poetic dwelling', indeed that when we choose to dwell, we inevitably "dwell poetically" (Heidegger, 1975: 145-161). Heidegger, who, interestingly, followed Husserl (arguably the founder of contemporary phenomenology) as Professor of Philosophy at the Freiburg University in Germany, provides the essential ingredient, or, as Embree puts it, the tendency of 'poeticizing' which occurs in any phenomenological inquiry or pursuit. (Embree, 1997:1)

> The nature of building is to let dwell. Building accomplishes its nature in the raising of locations by the joining of spaces. Only if we are capable of dwelling, only then can we build. (Heidegger, 1975: 160)

> To dwell, to be set at peace, means to remain at peace within the free, the preserve, the free sphere that safeguards each thing in its nature. The fundamental character of dwelling is this sparing and preserving. It pervades dwelling in its whole range. That range reveals itself to us as soon as we reflect that human being consists of dwelling and, indeed, dwelling in the sense of the stay of mortals on the earth. (Heidegger, 1975: 149)

Tuan (1977) in *Space and Place: the perspective of experience* makes connections between dwelling and place:

> Place is a special kind of object. It is the concretization of value, though not a valued thing that can be handled or carried around easily; it is an object in which one can dwell. Space,

we have noted, is given by the ability to move. Movements are often directed toward, or repulsed by, objects and places. Hence space can be variously experienced as the relative location of objects or places, and – more abstractly – as the area defined by a network of places. (Tuan 1977:12)

As Tuan (1977) summarises: "Place is an organised world of meaning" (Tuan, 1977:179). So too is a poem. In Heidegger's footsteps, it follows that places may be the most meaningful and open to dwelling if they are poetically expressed, and that a poetically expressed plan for a place is the first in creating a poetic place or a place that may be experienced and dwelt in poetically: words that enable and give "more than words", poetic places for poetic dwelling. This is what has been attempted in the production of every building and urban design illustrated in the book.

We might thank Aristotle (see Gadamer, 1995) for (his defence of) 'poetics' originally, but we also have to thank the likes of Norberg-Schulz (1971, 1980) who took up Heidegger's poetic concepts of "building, dwelling, thinking" and propelled phenomenology into the architectural (and eventually urban planning and design) world; intriguingly foreshadowing the significance of the 'vernacular' in the process. Seamon (1991) said: "in relation to environmental design, phenomenological study of vernacular environments offers clues to 'an architecture that would give full justice to the requirements of human dwelling' (Harries, 1983:14)" (Seamon, 1991:201).

In addition, Bachelard, in his "classic look at how we experience intimate spaces", outlines "the significance of the hut" in identifying "The Poetics Of Space" (Bachelard, 1994:3-37). The 'hut' was in turn comprehensively and poignantly explored, and expressed in Cline's seminal work in "Life Outside The Circle Of Architecture" in "A Hut of One's Own" (Cline, 1997)[5]; essentially about the intimate, the immediate, and the intensity gained from overlapping many layers of things and meanings in the smallest of dwellings/places, as one would do in composing a poem. This penchant is one reason for the generally small homeworkhouses which are featured in the book.

Prose, poetry, songs, and (short/sketch) stories have arisen as key ingredients/data in academic research pursuits. In particular, authors and researchers who have developed and/or advocate 'phenomenological' approaches include Morgan and Smircich (1980),

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[5] See also *Architecture without Architects* (Rudolfsky 1964)

Greenbaum (1993), Ehrich (2005); in particular relation to phenomenological research methods, Morgan (1998:292-315), Van Manen (2001), Webster and Mertova (2007:115); and in relation to poems, "creative writing as a research method" Cook (2004) and Boyd (2010). These players and their publications lend support to the poetic, prosaic, and neologistic nature of the language sometimes used in the research outputs.

If Husserl was the philosophical fountainhead of phenomenology, Norberg-Schulz is the architectural equivalent, notably through Norberg-Schulz's work into 'genius loci' ('spirit of place') (Norberg-Schulz, 1980), and the 'concept of dwelling' (Norberg-Schulz, 1985). Wallenstein (2003:80) notes that in the idea of genius loci we find a concept of space that emphasises the 'sacred origin'. Norberg-Schulz picks up the theme from Roman Mythology, where "the environment was understood as wholly permeated by spiritual forces that we have to adjust to, and the phenomenological theory of architecture, demanding that we re-establish strong modes of identification and orientation" (Norberg-Schulz, 1985:16).

> It is characteristic for modern man that for a long time he gave the role as a wanderer pride of place. He wanted to be "free" and conquer the world. Today we start to realise that true freedom presupposes belonging, and that "dwelling" means belonging to a concrete place. (Norberg-Schulz, 1980:22)

Norberg-Schulz (1985) develops on the notion of dwelling in terms of 'identification', that is relating meaningfully to a world of 'things' (Norberg-Schulz, 1985:16).[6] These postulations seem central to the idea of a creative suburbia where creative workers might be enticed to dwell, that is, live and work at home.

Identification is however, only one of Norberg-Schulz's two 'aspects' of dwelling, in that whilst we might identify with a world of (meaningful) things, in order to truly dwell we must have also orientated such things in space. It is the combination of identification (with things) and orientation (within space) which, in addition, gives rise to places. Norberg-Schulz (1985) states that we do this by structuring our environment into 'domains' by means of 'paths' and 'centres' – domains being potential places for action (Norberg-Schulz, 1985:20). Norberg-Schulz (1985) also introduces the work of Kevin Lynch (1960) in *The Image of the City*, to describe the importance of a clear image (of the environment) to ensure that orientation is able to occur. Lynch (1960) identifies five elements which a city will have if it is

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[6] Note here the reference to Husserl (1950), with regard to the emphasis on "the things themselves".

to have a clear image – landmarks, nodes, districts, edges, and paths. Norberg-Schulz's (1985) definitions however encompass Lynch's (1960) five elements in terms of 'centres' (landmarks and nodes), 'paths' (edges and paths), and 'domains' (districts).

Any place should therefore embody meaningful things (which may be identified), in terms of admitting certain actions to take place (in domains as defined by paths and centres). In urban planning and design, this in turn means that to get at the genius loci, one must be able to identify not only what is meaningful in a place, but how space is arranged in terms of paths and centres (giving rise to places).

A feature of this research was therefore to uncover what constitutes 'meaningful things', including a determination of how *dwelling* might be manifest in terms of paths, centres and domains with particular reference to CIWs in a south-east Queensland context. The prevalence of the grid in the city and towns in the Toowoomba region as it is in other creative cities such as Melbourne and San Francisco (see Florida, 2009) provided a useful starting point in the adoption and adaption of an appropriate suburban pattern from the many available for use in contemporary place making.

Norberg-Schulz (1985) develops on the aspects of dwelling, by defining dwelling in terms of a number of *modes* of dwelling:

1. Natural Dwelling – which is finding or establishing a foothold, that is 'settling' (it is something that we all do in basic understanding – it is natural);
2. Collective Dwelling – which is gathering or assembly of settlement, as occurs in urban space or places;
3. Public Dwelling – which is dwelling shared by those gathered, as occurs in an 'institution'; and
4. Private Dwelling – which is personal and occurs in the 'house' or 'home'. (Norberg-Schulz, 1985:13)

Accommodating these modes of dwelling in the one (conceived) place provided a constant tension in the building and urban design process in this project – a prevalent challenge also, to pinpoint a pertinent and concise collection of *poetic dwelling patterns* in the context of a possible creative suburb in the Toowoomba region. Thankfully, it is embeddedness and immersion in context

which delivers the particularity demanded in any design exercise: a concept also accounting for the distinctive language which developed during this research.

Prose in Place

Identifying the *prose in place* is fundamental to the use of phenomenology in design. This methodology is founded in six basic ways; what Spiegelberg (1975) describes as 'doing phenomenology:

1. 'description' – describing what is given; 'intuiting'; seeing.
2. 'essences' – identifying typical structures or principles in what is given, intuited or seen.
3. 'appearances' – looking for ways to 'depart' from the essences or description.
4. 'constitution' – being aware of personal/private subjective understandings or influences.
5. 'suspension' – suspending judgment about what is given, intuited, or seen, or what appears, or what is constituted; not judgmental; valueless.
6. 'hermeneutic' – being aware of concealed meanings (such as the 'red herring').
(Spiegelberg, 1975:54-69)

Van Manen (2001) states in relation to Spiegelberg's work that "'doing phenomenology' as a reflective method is the practice of bracketing, brushing away or "reduction" of what prevents us from making primitive contact with the concreteness of lived reality" (Van Manen, 2001: 14). So, wherever possible, this research was done holding this reflective orientation.

I have then concluded that phenomenology provides a substantive pathway to reflective practice, the holding of a holistic attitude to whatever the endeavour, a philosophical/spiritual sense that acknowledges and embraces the mixed sensory (synaesthetic) way in which sentient beings experience their environment. This is the foundation of my phenomenological method: in essence to discover, design and deliver *prose in place*: pattern development in the form of (poetic) images which express dwelling as a product of focusing through experience of place.

Research results and revelations

Metrics, mechanics, metaphor

The new building and urban design patterns generated through the phenomenology-inspired creative-reflective research process coalesced into three broad categories: (1) metrics (detailed measured drawings and mathematical analysis); (2) mechanics (detailed expressions of planning and process); and (3) metaphor (poetic/artistic expressions and resemblances). All three creative-reflective approaches are required in design, but it is in the metaphors where the inspiration (to design, to study, to reflect) were and are sustained. Schön (1983) acknowledges metaphor as being integral to architecture and design, and Casakin (2011) argues that it is essential in problem-solving tasks, where reasoning by metaphors has a significant influence in the development of innovative ideas (Casakin, 2011:333). The realisations of this research have thus been revealed through both creation and reflection, on information or data revealed through the following forms of creative reflective research/practice:

Self-oriented creative+reflective research/practice

This includes journal entries and reflection on journal entries – in the design field this includes 'on-the-spot experimenting' and in my case use of the 'metrics pages' (also 'mathematical pages') and 'mechanics pages' (inspired by Alexander, 1979), 'metaphormal pages' (inspired by Schön, 1983), and at times, 'morning pages' (inspired by Cameron, 1995).

Guided/other-oriented creative+reflective research/practice

This includes creative-reflective research with others (inspired by Johns, 2000) – such as supervisory team meetings via review, analysis and critique of progress via text, plans, images, diagrams; and collaborative design – such as generative workshops and product design-related mini-focus group work.

Results-oriented creative+reflective research/practice

This includes transcripts + textual analysis – including theme distillation and preliminary building and urban design 'patterns' – of interviews and design workshop outputs (inspired by Webster & Mertova, 2007), as well as analysis of data revealed through ongoing contextual and literature review.

Research focus and level of originality

This project had a broad aspiration: to determine and communicate new and innovative ideas of the preferred forms, types and arrangements of the suburban building, lot, street and neighbourhood suited to CIWs. However as illustrated in the following diagram (Figure 17), there is a sliding scale of variables in the focus, output and level of original work in the research and what spatial scale of design was informed by literature review, contextual review and primary research (interviews and workshops).

Research focus (y-axis)

Original
(e.g. design/create Toowoomba-specific building designs)
Informed by contextual and literature review and creative-reflective research

Standard
(e.g. adopt/adapt Economic Development Queensland Residential 30 guideline)
Informed by contextual review

Universal
(e.g. respect/reflect "Smart Growth Manual")
Informed by literature review

building lot block street park neighbourhood suburb

Spatial focus

Figure 17 – Research foci and data/information sources

As illustrated in the above, the main focus has been on the design of new buildings for the Toowoomba region. However, the process was also strongly influenced by emerging and current best practice in sub/urban planning, design and development in Queensland (contextual review) (see DSDIP, 2010a, 2011a), and accepted theory found in research literature, notably 'new urbanism' (see Katz, 1996; Duany et al., 2010).

The book thus reflects the main research focus in communicating new building designs suitable for CIWs in the Toowoomba region, but as building design is influenced by industry standards and best practice, the book also makes suggestions and communicates ideas for the way these buildings could/should sit within a lot, block, street/park, neighbourhood and suburban context beyond the Toowoomba region.

An extended narrative inquiry

At its heart this research involved an extended narrative inquiry (Webster & Mertova, 2007) due to the research being based on analysis of (1) people narrative gathered by interviewing and conducting workshops with CIWs (prose/content), notably in south-east Queensland, as well as (2) place narrative from what creative buildings and places say (place/context) ostensibly using geo-spatial analysis: the latter in south-east Queensland.

People narrative

The people narrative data was collected from 13 semi-structured interviews: six households of known CI homeworkers with home studio/workshop, and seven industry representatives involved in the design of a range of homeworkhouses (called 'ecHos' – enterprising-entrepreneurial, creative-industry home-based-business opportunity-office – at the time by the then Queensland Urban Land Development Authority) and a neighbourhood centre exemplar. It is important to note that two of the interviews (making up the total 13) involved participants who are both CI homeworkers and were involved in leading the design of the ULDAs Fitzgibbon Chase Neighbourhood Centre (FCNC), involving the first ecHo designs.

Place narrative

The place narrative/data was collected by analysis of the homeworkhouse and FCNC exemplar, as well as spatial analysis of interviewees' own homeworkhouses. One interview went for nearly two hours and involved the designers-developers and owner-occupants of an existing homeworkhouse, the third in a 25-year history of consciously pursuing and raising a family in a live-work situation, as well as being the designers of the abovementioned exemplar. This interview enabled in-depth probing of the various experiences of living and working in three different homeworkhouses, as well as opportunities to interrogate the efficacy of the metrics of the designs of both the exemplar and their own homeworkhouses. These architects and urban designers provided a pivotal point and vital source of information via lived experience of both product and process in the data collection.

People + Place narratives

The following section outlines the outcomes of the analysis of the interviews undertaken for this research. This revealed both people and place narratives, poetic patterns, used in the design process.

Details of the interviewees and interviews are listed in the following table:

#	Interviewee/s	Position/occupation	Location	Home work space
1	Male (mid 30s)	Senior development manager	Brisbane	NA
2	Male (early 30s)	Development assessment manager	Brisbane	NA
3	Male (early 50s)	Senior development manager	Brisbane	NA
4	Female (early 30s)	Development manager	Brisbane	Spare bedroom
5	Male (late 40s)	Director – Planning	Brisbane	NA
6	Male (early 50s)	CEO	Brisbane	4m x 10m (two persons)
7	Female & male (early 50s)	Architect & Architect/urban designer	Gold Coast	120sqm
8	Female (early 50s) & male (late 60s)	Singing teacher/yoga teacher & Land surveyor (retired)	Brisbane/ Sunshine Coast	Studio 4m x 4.5m Office 2.4m x 3m
9	Male (late 30s) & female (late 30s)	Music recorder/ producer & Singer (part time)	Sunshine Coast	2 x (2.4m x 6.0m) Shipping containers
10	Male (late 70s) & female (early 70s)	Architect & Artist	Toogoolawah Town Country	Gallery/office 4m x 6m Office 1.5m x 3.0m Studio 6m x 8m
11	Male (mid 60s) & female & male (mid 60s & early 20s)	Art teacher/life coach/artist & Business analyst & Graphic designer	Toowoomba	Studio/office 4m x 7m (two – three persons)

- 13 interview sessions in total (interviews 6 and 7 were broken into two – addressing user/developer in each part)
- 17 interview participants in total
- Location is where the interview was undertaken/principal place of residence in a suburban location
- Position/occupation is full time employment in a creative industry (unless otherwise noted)
- Where (names) are in brackets the interview participant was only present for part of the interview
- Interviewees 1-6 are 6 industry representatives
- Interviewees 6-11 are 6 representative CI homeworkers/occupants/users
- Interview 6 was done in the CEO's home office hence the overlap of industry and user
- Interviews 7-11 took place in the CIWs home and/or work space or both
- Participants who are both designers-developers and owner-occupants of existing homeworkhouses were a primary target in this part of the research, hence the longer interviews and focus on interviewees 6 and 7.

Interview questions of CIWs included:

- Why did you choose to live/work in this location?
- What is your experience of working from home?
- How do you feel about the size of your home and your creative/work space?
- How important is and how do you use your neighbourhood?

Interviewees involved in planning and designing homeworkhouses in south-east Queensland were asked questions such as:

- What inspired the idea/s?
- How effective was the planning, design and development approval process?
- How confident are you that the products will sell, and why?

Interview results

The key responses to these questions are summarised in the following tables.

Why did you choose to live/work in this location?

#	Summary/key response
1	NA
2	NA
3	NA
4	NA
5	NA
6	Close to parks and shops, short drive to work.
7	On 'main street', part of community, easy access to 'everything'.
8	Close to city centre, walk to parks and shops.
9	Convenient to establish studio in backyard of rental property, moved to country for space.
10	Place to stay in town if needed, part of retirement plan.
11	Move closer to centre of town, walk to shops if needed, studio space out the back, close to hospital and parks.

What is your experience of working from home?

#	Summary/key response
1	NA
2	NA
3	NA
4	NA
5	NA
6	Always considered need to be working from home. Separate entrance to home and home office essential.
7	Raised a family of three children in three separate custom-designed 'sohos' over 25 year period – it's the only way to live and work. Separation of living and working spaces is preferable. The ability for large and small groups of employees to work in a flexible living space is essential.
8	Always had a home office. Ability to 'shut the door' very important. Discipline from entering the work space. But music is part and parcel of the living space and the veranda is the waiting room.
9	Important to separate living and working space. Workaholic issues. Emphasis on client comfort in all areas of the recording studio. Better if there was a separate kitchen and places for artists to sleep overnight.
10	Love it. But opportunity to travel and stay in the city and on the coast is part of lifestyle to stay connected. Space is key.
11	Always had a studio and office space. Heating and cooling issues as the building was an old Queenslander. Veranda essential in Queensland. Issues around welding steel sculptures.

How do you feel about the size of your home and your creative/work space?

#	Summary/key response
1	NA
2	NA
3	NA
4	NA
5	NA
6	More than adequate.
7	Good. The ability to 'flex' and 'flux' within the same spaces as life and economic cycles demand is the most important consideration.
8	Wouldn't want it any larger.
9	Perfect (at the moment). Aspirations for a larger house made of containers with common area, sleepover space and separate kitchen and bathroom for artists.
10	All that we will ever need, as long as our health holds out.
11	More than we need, but needs a good clean out to make better use of available space. It's got that capacity to have multiple uses, it's as much a library, reading room, office, but I also paint in there too.

How important is and how do you use your neighbourhood?

#	Summary/key response
1	NA
2	NA
3	NA
4	NA
5	NA
6	Very important. I can meet clients at the local coffee shop only a few minutes' walk away.
7	Everything we need is right here. Kids could walk to school, the uni is next door, I can take a walk or run around the lake. Pub on the corner.
8	Great to be able to walk to the park or cycle to the city centre. Café just down the street.
9	Always wanted to move to the country. Flaxton was great, but we decided to move here for the space, wanted to bring up the kids in the country. Have to travel to do gigs in any case.
10	Good that we can take a short drive to have Sunday breakfast in Esk. Peace, quiet and space in the country are essential, and prefer to keep out of town except for weekly trip to the city and coast to stay connected – meet clients there if I need to.
11	We moved closer into town so that we could walk to the shops and parks. Nursing home nearby for ageing relative.

What inspired the idea/s?

#	Summary/key response
1	No-one interested in the entire site – for the right price. What I loved about the ecHo village – it could grow as Melbourne did. Always fall back to the residential.
2	Trying to innovate and test something that may not work and giving it a go to see if it would work.
3	Opportunity to try a new product – unlimited.
4	Not the right size for retailers to take up – or looking for the smaller niche type setting. People were looking for smaller spaces. Looking for something special and unique for people who want to live and work together.
5	Really had to find an opportunity not to just add in more houses. Need to avoid a 'soulless' community.
6	To allow maximum flexibility in development over time.
7	NA
8	NA
9	NA
10	NA
11	NA

How effective was the planning, design and development approval process?

#	Summary/key response
1	Got its own life because it was a good idea.
2	Depends on what you call it. It's a shop that looks like a house. Car parking is big issue. In the end we decided to call the uses 'home-based business', with some opportunity for small shops to take up the total 1,500sqm of retail permitted in the centre.
3	Importance of the vision document and someone to carry that through to completion. Images are so important. Some of the words were bullshit, but it opened up the thinking.
4	Still have reservations about it (the whole concept) – we need to be conscious about the people we need to get interested in it; target marketing.
5	It was a creative process not neatly fitting into a standard formula. It was reasonably collaborative, but someone had to drive it though.
6	No problems in getting an approval, once we worked out the car parking and what to call them.
7	NA
8	NA
9	NA
10	NA
11	NA

How confident are you that the products will sell, and why?

#	Summary/key response
1	Ideally if you could get the 5x10 - $220k or under, would be stampeded – even as a one bed offering – would walk out the door. Single storey could work, but visually two storey works better. "It works because it's flexible…"
2	The whole idea is not to have a Woollies or a Coles so if you have twenty little shops they can't possibly buy them all up and have them in each one.
3	I compare them to apartments, but they're on the ground and have their own title and you just don't want a body corporate. I don't think we're going to sell it to a lot of people to run home businesses; a lot of them have families, and kids; I think you might sell it to empty nesters. It was not a residential fall back – it was a residential initiation with a commercial fall back – we know we can sell residential.
4	'Urbans' coming out of the ground are giving all comfort – they are just like a unit on the ground, only double storey – get a lot more light and a little backyard area – I think they have come up fantastic and they will help this particular project along a lot.
5	Small stuff might have a niche market – maybe only for small retail crafty…not one size fits all, and the ecHo as a concept could be something that could be delivered on a 60sqm lot through to a 200sqm lot.
6	The challenge for the greenfield developers on the edge is to bring more urbanness into the suburbs, and the only way to do that is to bring in some elements of an inner city lifestyle, smallness and urbanness.
7	NA
8	NA
9	NA
10	NA
11	Very interested in a small building with an exhibition shop space at the front, a workshop out the back and a living space somewhere close by. Perfect.

Additional questions were stimulated through the interview process. Some industry representatives recalled their own 'working from home' experiences which elicited personal views of the building and urban designs which had been prepared by others and/or they were assessing, such as would the spaces created be suitable for their own hobbies, interests or creative pursuits? In general, the smaller size of these units appeared suitable for young singles and couples, but not for families.

Of note were the responses to whether an entire suburb could be created using these building and urban designs: generally, not really! But there was some consensus that building designs with 'space' and 'flexibility' of spatial use for a wide variety of creative pursuits in a suburban situation like Fitzgibbon Chase would be better than having to convert a garage or bedroom (a theme identified by Felton, 2013).

Whilst the development industry interviews revealed a number of conflicting opinions, the CIW interviewees revealed strongly similar views. The results of the interviews arrive as a suite of dichotomies: of positive and negative force and effect; of potentially divergent design directions; and/or paradoxical and conflicting requirements to be held and addressed in balance.

<u>Live work spatial relationships</u>

Three types of spatial relationship between the living and working space/s, were identified:

- Total separation ('contrasting') – where the working space is clearly and completely separate from the living space, including in separate buildings or spaces;
- Some overlap ('collected') – where there are 'common' areas typically providing a transition between the living and working space; and
- Total overlap ('coincident') – where there is little to no differentiation between the living and working space[7]

In terms of coincidence, some artists and musicians acknowledged that they are more than happy living and working in the same space, and moreover saw no need for division between the two. In the case of a household comprising a singing teacher and a land surveyor who both work out of a small "studio" and "office" in an inner suburb of Brisbane: the baby grand takes up most of the living room, and there is sheet music in piles everywhere, including on kitchen benches, difficult for the surveyor who does most of the cooking! The veranda is a "waiting room" for clients using either the studio or office in this example and "the music and the things to service that music is just part and parcel of the living space". (Interview 9 February 2012 – singing teacher and retired surveyor)

In relation to contrast, where CIW homeworkers live and work permanently in the one building or very close on the same lot, clear separation between living and working becomes an imperative: solid doors off a small vestibule enough to create the liminal space where one could either switch on or off, into recreational or creative modes, depending on which door one is enticed to enter.

I've got a really bad habit of not turning off from work…really bad…very important to keep the two separated… with some clients and close friends, (they) come and have lunch with us (but others)… don't not want them in the house…
(Interview 9 March 2013 – music recording producer)

(I) always needed the home office separate: first for privacy, second to keep the kids out, but third for my own discipline…because I could go into the office and that was a time for work, I come out of the office and that was a time to do other things…I needed to have that very

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[7]I'm reminded of Burt Munro's garage, the setting for part of the movie *The World's Fastest Indian* (motorcycle) http://caferacersunited.com/who-is-burt-munro-homage/

separate entity – within the house – but more or less to be able to shut the door, so I was now in a working environment and not tempted to go and listen to the radio, or go out and weed the back garden…

(Interview 9 February 2013 – retired surveyor)

However, in terms of collection:

If you're in creative industries, it's not a job, it's generally a passion, and it's not something you can stop, so the choices come down – if you are into doing the 70 hours a week, working Saturdays and Sundays – up to 3 or 4 in the morning – trying to structure time separately (this is my work, this is my family interaction) it's just impossible to do that. So you either give up your passion, basically, or what you do is just be around and it's the five minutes here the ten minutes there – you could be sitting here doing the drawings, the kids are sitting across the studio doing their homework on the computer or even playing games it doesn't really matter

(Interview 15 February 2013 – architect/urban designer)

In terms of the location of living and working areas on the lot, there are three basic combinations:

- Front of lot – where the work space is close to or fronts the street e.g. designed to service clients who typically enter the 'office', 'meeting room', or 'studio' without having to go through any other parts of the 'house';
- In-lot – where the work space is part of the house and typically services living functions when not in use for work or vice versa e.g. verandas are used as transitional spaces;
- Back of lot – where the work space is located in the backyard to ensure adequate separation from other living spaces, or is located on a lane to provide a separate entrance for a 'tenant' who may be unrelated to the primary occupants of the building.

Determining the uses and their optimum arrangement within the building and lot provided a significant challenge in reconciling the building designs. Having an ability to choose – between the living and working space (and place), the hours of work, and working separately or in groups – became a key factor in the building and urban design. Flexibility in spatial use of both living and working spaces, wherever located within the house or on the lot, was reinforced as fundamental. 'Flexibility' became a key word in the generation of the building designs in particular.

Live work spatial areas

In terms of the space given to living and working, areas range from the micro e.g. 2.4m wide, to the main e.g. 300sqm of mixed use over three levels. The average area of creative working space in most CIWs interviewees' homes is around 4.0 x 4.5m, dimensions tempered by the views of the architects interviewed.

I've used 3.6 metres as a module in my designs for the last 50 years....I'm using 3.6 metres internal for the latest designs I'm working up with Baz...we hope to build these for under $2,000 a metre....
(Interview 11 March 2013 – architect)

I remember the old Aberdeen tenements: they used to basically be room, room, and bathroom – four by four plus bathroom and another 20 sqm that's about your 55sqm...20+20+15... if you don't have a car, everyone wants to have a bedroom, everyone wants to have a bathroom, everyone wants a space outside of their commercial space – if this is a space that flexes, the old 55sqm for the old people's thing, a retail opportunity separate from that....which would be no more than a room, a bedroom....another 15sqm so you are probably looking at 70sqm total for everything, if it's to be a flexible space....as opposed to "this is going to be a retail space", "this is going to be a living space" – if you are looking at a space that could be flexible for both, I think you're looking at about that....
(Interview 15 February 2013 – architect/urban designer)

I needed a garage space as the other one was falling over...a space three car bays wide and one car length deep, with one for a car and the rest for a studio....36sqm in area 6x6...so the space I would have had for the studio was a square....now.... artwork is everywhere (like a gallery)...yeah, in every room, full of it, and I haven't got what I'd call a studio space, but I've got enough to do the small scale stuff I'm doing now...3.5x6 dining room...could become a studio space... 4x7 work space...needs a lot of work.....
(Interview 2 March 2013 – art teacher)

A minimum internal room dimension for a living and working space was set at 3.6 x 3.6m for testing in the workshops which followed the interviews and their analysis.

<u>Live work spaces</u>

In some instances, there is more than one type of work space either within the building or within the lot such as a workshop or office space in addition to a studio space – this is particularly the case where occupants are in different occupations. This once again supports the need for spaces which are generous enough in dimension to accommodate a variety of different uses over time. In this regard, all CIWs interviewed emphasised the importance of light and air and having a garden space in association with the living and working spaces.

We come in here and ceiling height is not the biggest issue…impossible to heat the Allora house, so when we moved to Toowoomba we said it's got to be brick, it's got to be efficient to heat, so we put in insulation in the ceiling, gone to gas heating,…and one of the things we were very fussy about, oddly enough, was the light fittings…and…you need to have an outlook, a courtyard …about as big as the one off here…does anyone need anything bigger than that….you can grow your pot of tomatoes and your bit of basil…
(Interview 2 March 2013 – art teacher + business analyst)

I spent so much time recording in other people's studios, and they always, always, were uninspirational…. they were black, they were dark, they smelt like cigarettes and bongs and damp and dark and no natural light, and it's the most uninspirational space to record, wet, horrible, typically in Brisbane, and some in Melbourne as well and usually in someone's basement… I knew I could do it better…
(Interview 9 March 2013 –music recording producer)

It's nice to be able to get out and do a bit of that (gardening) but not too much….the hardest thing was to find something that would grow in that microclimate….we have an orchard in the back!
(Interview 15 February 2013 – architect/urban designer)

The creation of 'positive' outdoor spaces in close association with indoor spaces became another important factor in the building designs. How to ensure light and ventilation throughout the relatively small room (3.6 x 3.6m) dimensions adopted for testing in the workshops also became a significant issue, accounting for the use of one-room wide buildings in many instances in the creative suburb series.

<u>Live work uses</u>

For CIWs there are three basic types of uses being made of the work spaces: 'shop' or retail/showroom; 'workshop' or industrial; and as may be expected a 'studio' which accounts for a multitude of uses including overlaps with shop and workshop such as in a 'gallery' or exhibition space as well as for practising performances (singing teaching). This spread of possibilities again supports the need for not only adequate but flexible dimensions in the building designs. .

Use definition was a particular issue for the industry representative interviewees, notably as it relates to calculation of on-site car parking for clients or visitors. As seemingly foretold by Williams et al. (2009) a fundamental concern raised by most interviewees was car parking; sometimes enough, other times not enough, and always dependent on the land use definition.

> *From a DA (development assessment) sense, (the) issue always gets back to carparking – the development evolved from shop houses to a home-based business (which is) different from the whole thing being a shop – (the design) made a home which looks like a shop – it looks like a shop but it's actually a house ….a different approach to making the development application could have yielded new parking arrangements.*
> (Interview 8 February 2013 – development assessment manager)

> *I think people overestimate car parking issues – one of the biggest things we have here is people complain about the amount of parking – not enough – it's like signage – for retailers, there's not enough parking and the signage isn't right and that's why we have to shift the retail environments we have today….because people add more parking and more signage…and still go out of business….*
> (Interview 15 February 2013 – architect/urban designer)

> *What we were really trying to do was challenge the standard parking regimes, the standard retail and commercial approach; look at this thing as something really intense, really urban, it's all ad-hoc, it's got cars parked everywhere and it's got that really delicious feel that something's different here.*
> (Interview 9 February 2013 – CEO)

These comments demanded a balanced approach in the provision of on-site and on-street car parking in the building and urban designs. Whilst a central concern in the development of a creative suburb is to reduce the commute, most development industry interviewees suggested that at least one on-site and one on-street parking space should be provided per homeworkhouse, with one additional on-site parking provided per 'tenancy' within the homeworkhouse. These parameters were adopted in all of the building and urban designs.

Whether a homeworkhouse is considered to be a 'home-based business' or a full-blown 'commercial', 'retail' or 'service-industrial' use plus 'caretaker's residence' or a genuine 'mixed use' comprising all of these uses, is also a critical factor in the lot/site planning and design. Appendix 9 includes the variations in the rates of on-street and on-site car parking that may be required, depending on the definition of use in the Toowoomba region.

A related factor in terms of meeting the 'commercial' and 'affordable' facets of the Castle criteria is the infrastructure charges which different uses attract. In a Centre zone, a mix of uses is permitted however the infrastructure charge could be as little as around $4,000 (no residential component), through to $22,000 if one dwelling unit is included.

A genuine *homework*house will therefore be considered a 'home-based business' (typically appropriate for residential zoned areas) or a 'mixed use' development (fitting into the Mixed Use and Centre zones in play in the TRC scheme). Here again, some flexibility in interpretation is required, to not only ease the possible financial impost, but to embrace the unpredicted:

> *(I was) amazed by the number of plaques…the architects, with their front door open and you could see them working on their easels…and these are the things which were designed for residential – these aren't the ones with the office off one part and one part of the other….these are the ones with the access off the lanes, and I thought how delightful – could I go in and talk to them, and I thought no, they look too busy…*
> (Interview 9 February 2013 – CEO)

<u>A creative suburb and centre</u>

Williams et al. (2009) raised issues of the need for a community 'centre' to address issues of potential suburban social isolation. In this regard, all interviewees were asked about the potential for an entire suburb to be built with homeworkhouses, and in the case of the industry representatives in the context of the Fitzgibbon Chase Neighbourhood Centre (FCNC) building and urban designs.

There are four basic building types in the FCNC, with the 7.5 x 10.0 metre lot model considered by the industry representatives interviewed to become the best seller in the range, as it has two bedrooms and a good mix of potential revenue-producing spaces on the ground floor. There was some doubt about the sales potential of the smallest house designed for a 50sqm lot; all interviewees concluding that the ground floor flexi space should be marketed as a second bedroom to gain market interest. Nonetheless, the flexibility to turn the working space into a residential space and vice versa became a major influence in building planning and design direction: the live-work-live fall-back – depending on the location (be it in a centre or throughout the suburb), a key conclusion of all the industry interviewees. The resultant urban design of the FCNC includes a single-storey component of retail, considered by most of the industry interviewees as necessary to create a destination for the surrounding suburban dwellers and a commercial anchor for the development.

In support of a centre, it is worthy to note that the majority of the industry representatives interviewed could not envision an entire suburb of homeworkhouses, with one suggesting, "I reckon if you did an experiment and spread these out, you'd come back in ten years and find them together – that's where the high street came from – the best place to set up a butcher shop is next door to another butcher shop!" (Interview 15 February 2013). The conclusion of another, "people want to walk to buy milk, bread, a paper... and a coffee shop....in behind you could have those home-based businesses – the journalist and artist want to have a coffee shop close by .....they're tapping away on their laptop close to the bus stop" (interview 8 February 2013); sentiments echoed by most:

> *The more opportunities to have things together, the more opportunity you have for the averages to work...and working at home in the suburbs, alone, and especially as a woman, I would be frightened to see clients day in day out without a community around me...*
> (Interview 15 February 2013 – architect)

The importance of the neighbourhood community resounded in the following:

I know the sessions that are going to be a bit noisier or a bit more off key, and they're the ones I get on my bike or go to the gym or do the shopping I need to do, or the maintenance....lover can be flexible with his commitments and his timings...
(Interview 9 February 2013 – retired surveyor + singing teacher)

In line with the fundamental principle in this research to consider how the living and working closer might be brought closer together if not coincident, so is there an apparent need for proximity to other 'services' within the broader community context. Being able to walk to a local café or shops, or cycle to a park was mentioned by all interviewees as desirable if not required. However with an opportunity to establish a café, small shop, or a small school or 'family day care' within each building within a suburb, there is a distinct possibility that the need for a local or neighbourhood centre with large-format retail spaces and specialty shops and offices – as we have come to know them in traditional suburbia – may never be required.

People want a nice environment, and quiet. I work from home a lot and the suburban environment's great – better if you could walk across the road and get a cup of coffee – or meet someone – I think that's important – a meeting place...If you're doing that sort of creative work and you need to show them in your studio – but if you want the creative people to mix, you need a hub –you don't need a pub, you need a bar – and something that serves food, even if it's just one on the corner – everyone goes there after work and they'll congregate and communicate...
(Interview 8 February 2013 – senior development manager)

If this interviewee is correct, then even the smallest 'hole in the wall' operation could suffice as a community collective point and focus. It is not difficult to see how even the smallest but most effective business operators might become the 'centres of attraction', in a suburb nonetheless full of creative workers, including 'vernacular creatives'.

A rural retreat

It is important to note that two of the CIW households interviewed had 'weekenders' – a place in a rural setting where they preferred to dwell, rather than in the inner suburbs or in town. One artist suggested that she could spend all of her time at home in the bush; whilst her husband, an architect, spends three days away, travelling to Brisbane and the Sunshine Coast – staying overnight at business colleagues' homes. He argues that this is required to sustain a connection with the city and 'the coast' and get a weekly dose of the city and coastal energy in contrast to the calmness and quiet of their home in the country. However, the architects' passion for his work extends to the only 'bedroom' in the house, a drawing board permanently set up behind the bedhead, with a desk facing open countryside. "I often wake up (during the night) and have a look over what I've been working on". (Interview 11 March 2013 – architect)

The singing teacher has her studio (part of a large living room) overlooking a creek, and the surveyor maintains an office in a separate building as part of their community-titled 'hamlet' (the country dwelling comprises four separate buildings, including a yoga 'shala' reflecting the re-creative dedication of the teacher). (Interview 9 February 2013 – singing teacher)

The retreat to/in the country suggested that the 'small country town' could provide the best of both city and suburban creative places and spaces, and to a large degree, that dwelling in this situation could balance the dichotomies revealed through this research.

This is how a real estate agent describes the locational advantages and features of Clifton in the sale of a classic colonial Queenslander in Fisher Street (which otherwise bounds the block containing 88 East Street) (Figure 18) :

> "Location-Location
> Walk to the shops, schools, hotel and medical centre from this address in Fisher Street. Polished floors and open fire place would suit a renovator looking for an original home to freshen up to sell or to live in. The large 1292m2 block has lots of room to build a man shed or extend the existing home as others have done in Fisher Street. Central to both Primary and Secondary schools with a short walk to the local lawn bowls club also. Clifton has a Food Works store, Hardware, Coffee Shops, Quality Butcher, 3 Hotels, Nursing Home, golf club and a lot of friendly country people. Easy access to Warwick and Toowoomba."

Figure 18 – Classic Queenslander, Fisher Street, Clifton
http://www.realestate.com.au/property-house-qld-clifton-113267919
downloaded 06/09/13

My own experience in the existing 'hut' at 88 East Street (see Figure 19), suggested that living and working in a small country town such as Clifton – close to a major regional centre (Toowoomba is a 35 minute drive) and a major city (Brisbane is a one and a half to two hour drive, or two and a half hour bus trip) – is precisely the creative-reflective balance demanded for a fully commercial and artistic life. It also seems perfect for a CIW who can only afford a relatively small homeworkhouse which otherwise meets the Castle criteria in a south-east Queensland context.

This conclusion created a significant challenge in the creative suburb output; the 88 East Street, Clifton showcasestudy homeworkhouse, which is situated in a small town, is a slight variation on a number of the building designs in the creative suburb series which are applicable in a typical greenfield suburb.
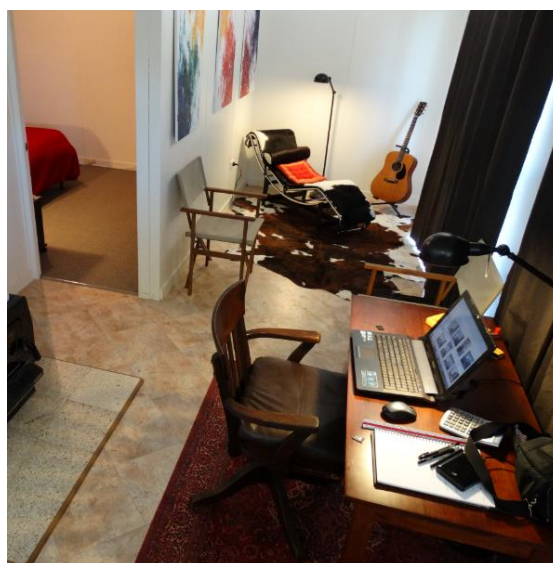

Figure 19 – interior view of living and working space in existing building at 88 East Street, Clifton

Design workshop outcomes

In addition to ongoing context and literature review and data collected via regular entries to reflective journals, the place narrative/data was also derived during a day-long design workshop involving 20 CIWs, including designers, who collaboratively considered the building and urban design of the USQ surrounds, Toowoomba. To stimulate involvement in the workshop, all participants were presented with the building and urban design of the Fitzgibbon Chase neighbourhood centre site as illustrated in a development proposal lodged with the ULDA in September 2012 (DSDIP, 2012b) – the exemplar outlined above. The workshop agenda is included in Appendix 2. An assessment of this workshop is included in Appendix 3. A sample of the building and urban designs generated during the workshop is included in Appendix 4. Notes of discussions taken during the workshop also reveal the dichotomies present when considering live-work relationships. For example, a young civil engineer exclaimed that when he got home from work, he wanted to switch off, and that is what home is for, certainly separate from the workplace. He wanted no hint of the work life within the home. However he did acknowledge, when asked about his life outside of work, that he would love a dance studio in his backyard as he is a keen 'rapper'.

Follow-up design workshops

Five follow-up mini design workshops were also undertaken to focus on the detailed building design of the homeworkhouses, in particular the design for 88 East Street, Clifton. In addition to the researcher, these follow-up workshops involved the following:

#	Participants	Focus	Type + Duration
1	Two architects and interior designer	Building planning and critical dimensions – workshop analysed draft designs presented in ArchiCad	Face-to-face + two hours
2	Interior designer	Workshop established detailed design brief for internal and external building furnishing, fit out, and features – based on draft designs presented in ArchiCad	Face-to-face + four hours
3	Architect, student architect	Building presentation – workshop analysed preferred way to present the building designs, including perspectives – based on draft designs	Conference call + two hours
4	Architect, student architect	Urban design presentation – workshop analysed proposed allocation of building designs into a block and their presentation including streetscapes presented using native ArchiCad	Conference call + two hours
5	3D visualisation consultant, interior designer	Workshop to finalise the external and interior design of a sample homeworkhouse for high resolution rendering	Face-to-face + eight hours

People + place narratives – early planning and design conclusions

The spatial requirements addressed in all of the interviews and brought to a head at the design workshop and follow up mini design workshops – involving architects and interior designers appointed to assist and give form and detail to the building designs – determined that the minimum internal spatial area for these working spaces should be 3.6m x 3.6m with ceiling height preferably over 3.0m.

A 3.6m minimum internal room dimension was fundamentally founded on the required width of a fully wheelchair accessible bathroom (2400mm recommended), plus internal wall thickness (typically 70-90mm) and a wheelchair accessible hallway (minimum 1000mm).

3600mm also accommodates:

- a 600mm wide kitchen or work bench along one side with 3000mm for a dining, 'board room' or work table comfortably seating up to 8 people, whilst also providing limited through-access between, say, a table and bench on one side and a table and wall on the other;
- a 600mm wide storage or display cabinet, 1500mm minimum required turning circle for a wheelchair, plus 1500mm for lounge chairs; and
- the length of a double bed of around 2000mm allowing a 1500mm minimum required turning circle for a wheelchair at the bed end; width-wise a typical double bed is 1600-1800mm wide, for able bodied individuals, this provides around 900mm down each side of a bed located centrally within the 3600 x 3600mm space, and if moved off-centre to accommodate a wheelchair to one side of the bed, access to the other side of the bed would be reduced to 300-500mm.

As shown in Figure 32, 3600 x 3600mm can readily accommodate a baby grand piano, pianist/teacher and a small choir in a typical singing lesson configuration. 3600mm is also a multiple of a typical industry-standard 1200mm wide plywood and plasterboard sheet.

Spaces or rooms with these dimensions can easily be arranged to reflect the very clear consensus between interviewees, industry practitioners and others, on some key architectural planning and design principles/requirements: CIWs want light and air, at least a courtyard outlook, a veranda, and if at all possible a garden; and they also want to be able to walk or cycle around a neighbourhood and be close to parks, shops and other services.

The latter are factors which flow through the creative city literature (Landry, 2008; Ebert & Kunzmann, 2008; Kim, 2008; Florida, 2009, 2012); whilst the former figure large in the creative suburb literature (Felton & Collis, 2012; Felton, 2013).

So whilst the smallest creative working space was determined at 3.6 x 3.6 metres, say for CIWs only needing a small commercial/office space or a computer/desk in which to carry out their home-based business (e.g. CIWs involved in advertising and marketing, architecture and design, software development and creative writing), building designs would also need to be generated for CIWs possibly needing larger spaces (e.g. dancers, musicians' performance and recording, visual artists and sculptors).

In all designs, however, the ability to have choice in spatial use via flexible open spaces within the building or in a separate building within the lot became fundamental considerations. The call to flexibility in response to the 'flex' and 'flux' of life and work for CIW homeworkers and to reflect the immense variety of creative industries work which could therefore be undertaken generating a series of special spatial CIW use definitions.

The interviews and workshops yielded three possible building typologies (and topologies on the lot/site):

- "studio" (this includes a small, typically one room self-contained apartment, as well as a space for arts, crafts, etc. – could be anywhere on the lot);
- "shop" (e.g. a gallery, office or retail outlet which is typically at the front of the lot and close to the street); and
- "workshop" (for noisy or dirty work e.g. music recording, metal sculpture, which might be typically at the rear of a lot and accessed via a rear lane say, to make it easy for the roadie).

It was ultimately concluded however, that such general definitions – whilst possibly attractive to a wider community or market of creative workers – were not adequately reflective of the uses for the target market or community of CIWs.

The following terms[8] thus became a necessary lexicon, indeed a poetic pattern language (see Alexander, 1979) in the building designs:

- **Residential space** – a living and/or dwelling space – *"recreational" homework*
- **Exhibition space** – a display space for installations, artworks (e.g. gallery), projections and/or functions as well as a place where wares/goods are offered for retail/sale to customers (shop/store) – *"retail" homework*
- **Performance space** – a space for presentations, concerts, recitals, and shows including music, aerial circus, lectures, and workshops in the sense of a space for a group of people working on a creative project, discussing a topic, or studying a subject – includes space for an audience as in a theatre (which may also overlap with showing of a movie or other projection as part of an exhibition) – *"expressive" homework*
- **Storage space** – a space to store, stock and/or hold something for safekeeping including a "warehouse", as against a "store" where stuff is stored/kept for sale – *"contained" homework*
- **Workshop space** – a space where wo/manual work is done, especially manufacturing or repairing and/or sculpting – can include a 'garage' in the sense of motorcycle maintenance or simply storing a precious motor vehicle or two (note overlap with storage space) – *"service-industrial" homework*
- **Writer's space** – a space where any type of written work is done, including an office, study, library, or retreat – typically a space or room, a curio or bureau – which can include for the creative writer a plethora of "ritualistic paraphernalia", but at the very least; "a chair, a table, silence, and a little awe" (Maisel, 2008:5) – *"commercial" homework*

It was further determined that the preferred location and likely expression of each of the above uses and spaces led naturally to the coupling of residential + writer's, workshop + storage, and performance + exhibition spaces, which in turn meant that each building design in the creative suburb series would need to include at least one each of these combinations. These three categories of spatial use opportunities have two opportunities for focus, a total of 36 different use options which could be accommodated within each building. For example, a visual artist

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[8] It is important to note however, that these terms or labels are never used in the plans, elevations, nor other design expressions in the book; they are simply listed in the book as a series of ways in which otherwise ambiguously defined spaces and rooms may be used.

may require a separate workshop/storage area for the production of paintings, as well as an exhibition space and a small desk in the residential/writing area for administration and marketing; a writer may not need workshop/storage nor performance/exhibition spaces, but might be content with a writing space in the bedroom.

Design process and product innovations

Design practice and information and communication technology was heavily tested during the building design development phase, with new techniques invented as required to cope with a project with a scope stretching back and forth between the lot, through the block, into the street, to a park, neighbourhood and suburban scale, with each design decision in the process needing to be informed by creative-reflective research into the spatial implications of a possible design solution in all scale directions. For example, a building design solution may have had impacts on the lot dimensions, which in turn need to fit into given block dimensions, generating considerations of the nature of the street onto which the building fronts, and so on; in the same way an urban design solution at neighbourhood scale has impacts on the block and street dimensions which in turn flows through to the lot and building designs.

Design process innovations to manage the scope and scale of the project included developing and/or determining: a system of highly simplified, practically abstract, plans/diagrams on which the initial building designs were generated in 3D; the most cost-effective way to communicate designs in 3D from concept to completion – using native architectural computer aided design programs wherever possible; and the closest to seamless integration of 3D architectural designs into 3D visualisation programs.

The tartan grid

The imperative to innovate in the building design space meant that decisions about the optimal neighbourhood, street, and block dimensions had to be made early.

There are three key publications which are capable of directly influencing suburban design in Queensland: DSDIP *Guideline No 1 Residential 30* (DSDIP, 2010a); the *Next Generation Planning Handbook* (DSDIP, 2011a) and DSDIP *Guideline No 6 Low Rise Buildings* (DSDIP, 2012a).

It is to be noted that the Toowoomba Regional planning scheme includes verbatim extracts from the Residential 30 guideline.

These examples of best design practice have however, not been developed in a vacuum (of innocence, ignorance or isolation) in Queensland, let alone Australia, although I do claim that the 'tartan grid' – on which the pattern of the creative suburb design is based – was possibly *re*discovered in a creative-reflective moment during the 2012 Christmas holiday break, when I realised that from a bird's-eye view (Google Earth), the plan of many cities and towns resemble a gridded tartan patchwork.

There are very few references to the tartan grid in scholarly and industry literature. Of note, Laseau and Tice (1992) suggest that world famous architect Frank Lloyd Wright adopted a 'tartan' planning grid in much of his work. Marshall (2005) is another exception, eloquently highlighting the infinite ways in which a tartan town could be laid out in the same way a tartan textile could be woven – the play on 'patterns' not to be missed – although the tartan in this instance is more of a 'code', as in a program or process, rather than a pattern per se (Marshall 2005:239).

"The flexibility of the tartan grid points us to the realisation that the term 'tartan' is effectively a mark of a constitution – independent of configuration or composition." (Marshall, 2005:239) But (in true colours) a tartan grid nonetheless comprises a weft and warp – of streets and lanes – which cross each other at right angles.

> Where a thread in the warp crosses a thread of the same colour in the weft they produce a solid colour on the tartan, while a thread crossing another of a different colour produces an equal mixture of the two colours. Thus, a sett of two base colours produces three different colours including one mixture. The total number of colours, including mixtures, increases quadratically with the number of base colours so a sett of six base colours produces fifteen mixtures and a total of twenty-one different colours. This means that the more stripes and colours used, the more blurred and subdued the tartan's pattern becomes. (Wikipedia)

The same thread of argument applies in urban design, the lesser the types of streets and lanes required the more clear the pattern becomes: a street-based code that builds frontage function into street type thereby ties the land use pattern into the transport pattern (Marshall, 2005:239) – the integration of land use and transport planning key to contemporary industry literature and legislation currently operating in Queensland (e.g. DSDIP, 2011a).

> A tartan grid can generate a diversity of mixed-use land use blocks. The number of block types generated will depend on the number of street types present, the kinds of allowable connection, and how distinct block types are recognised in relation to these street types and connections. A system of three street types generates a maximum of six types of intersection and 21 types of block. (Marshall, 2005:239)

This street pattern is possibly the most important factor in achieving the walkability and density imperatives of a creative suburb.

> A major goal of urban design, especially in centres, is to reduce automobile dependence in order to address issues of viability and sustainability. Long-term data from cities around the world appear to show that there is a fundamental threshold of urban intensity (residents and jobs) of around 35 per hectare where automobile dependence is significantly reduced. It (the data) suggests that below the threshold intensity of urban activity, the physical constraints of distance and time enforce car use as the norm. (Newman & Kenworthy, 2006:35)

An interconnected grid provides greater choice in moving throughout a suburb. Newman and Kenworthy's analysis provides important points in the urban design in this regard. Using a critical threshold of 35 people and jobs per hectare, the following can be assumed:

- If there are 2.5 people per household, this equates to 14 duha
- If there are 2 residents capable of driving per household, this equates to 18 duha
- If there is only one working resident, then this equates to 35 jobs per hectare

However, it is counter-intuitive to believe there might be at least one person per household working at home in any situation, let alone the suburbs. The residential density is readily achievable (DSDIP, 2010a), but the jobs density is highly unlikely, reinforcing the need for centres where jobs will be most prevalent (a point driven home by Newman & Kenworthy (2006)).

To test these numbers, a geo-spatial and population correlation was undertaken of:
(1) San Francisco, one of the most creative cities in the world according to Florida (2009);
(2) an Australian example of a creative city – mentioned by every interviewee – Melbourne; and
(3) the site of the research, Toowoomba.

This analysis is tabulated as follows in Figure 20 – each circle representing an increase or decrease in radius of approximately five kilometres.
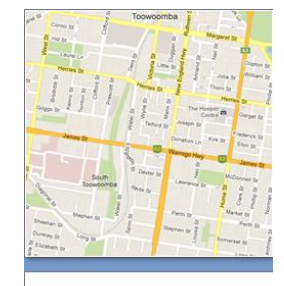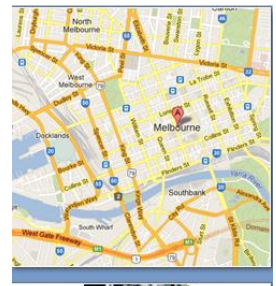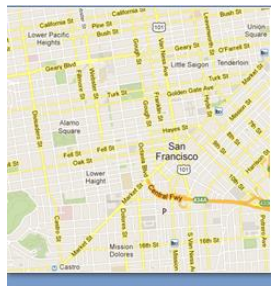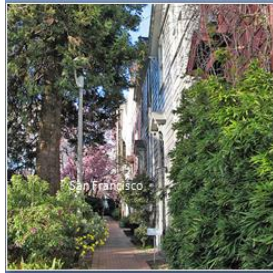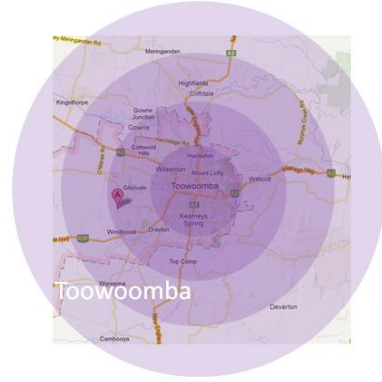
Google Earth   *Google Earth*   *Google Earth*

City of San Francisco	City of Melbourne	City of Toowoomba
2012 population of 825,863	2011 population of 93,625	2011 population of 151,000
121sqkm or 12100ha	36sqkm or 3600ha	116.5sqkm or 11650ha
68 people per hectare	26 people per hectare	13 people per hectare
If two people per dwelling, then dwelling density is around 34duha	If two people per dwelling, then dwelling density is around 13duha	If two people per dwelling, then dwelling density is around 7duha
If 2.5 people per dwelling, then dwelling density is around 27duha	If 2.5 people per dwelling, then dwelling density is around 10duha	If 2.5 people per dwelling, then dwelling density is around 5duha

Figure 20 – Spatial and density analysis – San Francisco, Melbourne and Toowoomba

This investigation indicated:

- Significant portions of the entire Toowoomba region are taken up in the same area covered by San Francisco and Melbourne cities (metropolitan/centre);
- The grid block pattern has very similar dimensions across all three locations;
- Population density in San Francisco supports walkability;
- Melbourne has an urban pattern which supports walkability and increased density;
- Toowoomba (city) has an urban pattern which supports increased density, requiring additional streets through blocks to support increased walkability.

Early density analysis for the creative suburb suggested that around 27duha can be achieved using 'traditional' low-set building construction techniques for detached houses on smaller lots (DSDIP, 2012c): acknowledging a 'vernacular creativity' catering for the possible proliferation of home-based CIWs throughout the (inner and outer) suburbs of Australian settlements and cities. This population density is what San Francisco is currently at, assuming 2.5 people per dwelling.

Jobs density was very difficult to study; there appears to be no definitive resource which considers the likely number of CIW and other homeworkers as against the total working population, or a total – and correlation between the – number of micro-small home-based business and CIWs working at home.   An economist was commissioned to see if this information could be gleaned from the Australian Bureau of Statistics 2011 census data: with creative industry and occupation selected using (Higgs et al., 2007) definitions[9]. The numbers of people living and working was assessed over the spatial areas of Australia, Queensland and Toowoomba (old city area – includes all suburbs of Toowoomba), with the number of CIWs as a percentage of the (1) working and (2) residential population in each of these Australian localities.

Scrutiny of the 2011 census data showed that just under half the population works (ABS, 2011). CIWs (by industry and/or occupation) account for roughly between 4.5% and 6.5% of

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[9] *Creative Industries* comprise a set of interlocking sectors of the economy focused on extending and exploiting symbolic cultural products to the public such as the arts, films, interactive games, or providing business-to-business symbolic or information services in areas such as architecture, advertising and marketing, design, as well as web, multimedia and software development. Most often *Creative* production delivers unique or customised products from incomplete or abstract specifications received either from a client or derived from a desire for personal, artistic exploration. (Higgs et al., 2007:5)

the working population or between 2% and 3% of the total population (Toowoomba –
Queensland – Australia). Further analysis of the 2011 census data was done to determine the
possible number of micro-businesses operating in the Toowoomba suburban area, assuming a
sole operator is the business person most likely to be working at or from home. This analysis
suggests that about 10% of all the businesses registered in Toowoomba are operated by one
person, arguably, therefore, in a home-based situation.

This brief inquiry revealed that the number of CIWs likely to be working at home is therefore
very small when compared to the total working population: a builder/developer would be
operating in a tiny niche space if targeting the occupations/industries selected for this analysis
(see Appendix 5).

These relatively insignificant numbers therefore generated a need to consider the 'vernacular
creatives' – as well as the 'commercial creatives' and 'artisans' identified by Felton and Collis
(2012) – those informally working in or desiring a creative space. This orientation supports
one of the prevalent considerations in the building design – flexibility – and the ability to easily
adapt spaces for different uses, in particular for those involved informally in 'creative' work
and hobbies which take up room/s and space rarely considered to be usable for anything other
than, say, sleeping, dining or car parking, as well as having the option to make a mess and do
whatever one has to do in order to just live as comfortably and easily as possible (a theme
present throughout Edensor et al., 2009).

The urban designs

As previously outlined, the building and urban designs are inextricably linked; the very nature
of this research demanded that possible design solutions be analysed in all scale directions.
The common ground benchmark assumption was set according to the dimensions of a typical
block (an area surrounded by streets or park) at 57 x 130m. The width of the lots (the
properties making up a block on which buildings are constructed) was determined by domestic
building construction details and assumed building setbacks from the lot/property boundary.
The lot depth was determined on the basis of typical industry-accepted lot dimensions. The
block plus typical street dimensions (street reserve widths of 16 and 20m) make up the basic
planning elements in the creative suburban urban designs.

When grouped around a more-or-less central park, these 'building blocks' combine in what I call a "creative quarter". Figures 21, 22 and 23 are early analytical sketches describing the basic dimensions of the creative quarter, with an off-centre park, which in relation to the CIW-focus I refer to as a "performance park".

The reference to "ba block" was inspired by the Japanese concept of "ba", originally proposed by Japanese philosopher Kitaro Nishida. "Ba" can be considered as a shared space that serves as a foundation for knowledge creation (Nonaka & Konno, 1998); it follows that a ba block is referred to as an area bounded by knowledge economy-driven "sage streets" (and/or a "performance park") and includes "learning lots".

Figure 21 – "Creative quarter" analysis
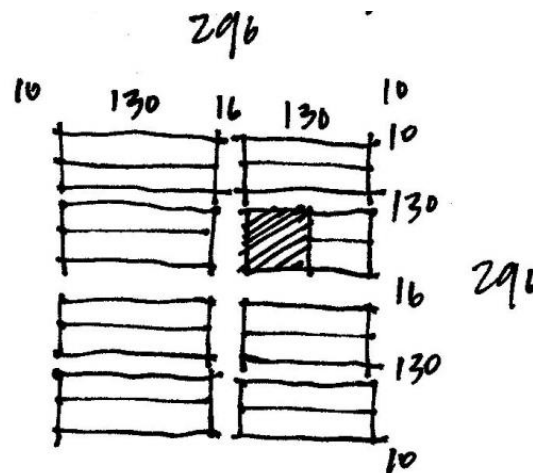*The above is an early analytical sketch of a creative quarter. The 10 metre dimension above is half the reserve width of a 20 metre wide surrounding street. The 20 metre wide street reservations I refer to as a "boulevard" or "parade", and the 16 metre streets are what I came to call "promenades". The names selected for the streets tend to the pedestrian and cyclist rather than the car.*
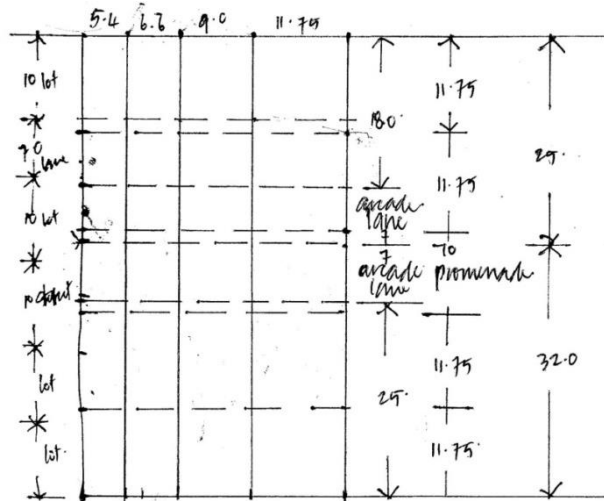
Figure 22 – "Learning lot" and "Ba block" analysis
The above is an early analytical sketch from which the creative suburb standard "learning lot" and thence "ba block" dimensions were derived. The "arcade' referred to in the above is a rear lane or laneway with a reservation width of seven metres servicing the rear of a "learning lot" (a lot which otherwise has frontage to a "performance park" or "sage street") – "arcade" also implies an avenue of shops which are walkable and have some critical mass.
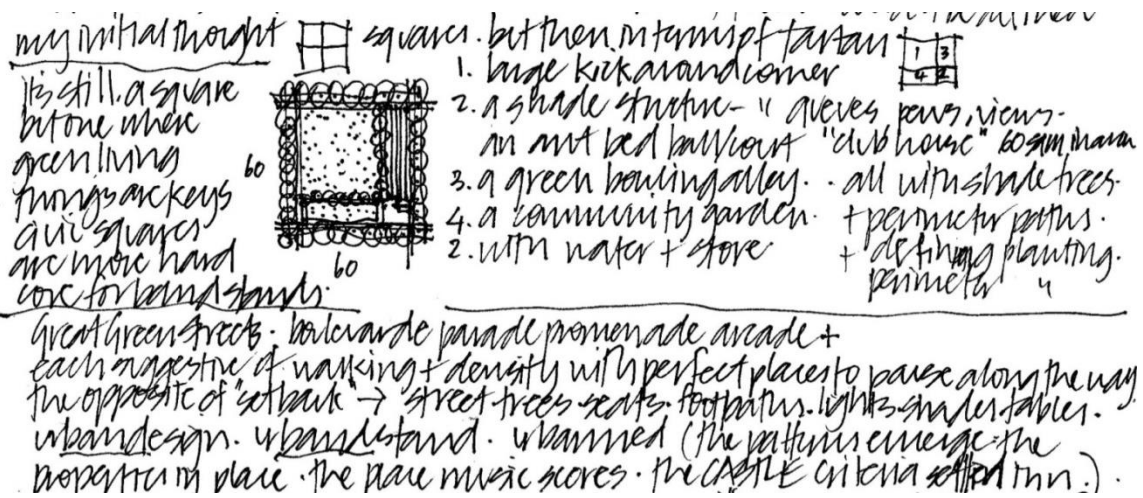

Figure 23 – "Performance park" and "Sage street" analysis
The above is an early sketch and notes explaining the design intent for the "performance park" and introducing the "sage streets" – originally referred to as "great green streets" (above) – in hierarchical order from widest to narrowest, "boulevard", "parade", "promenade", "arcade".

The ba block and sage streets

The 'creative quarter' is derived from a typical, industry-standard block with dimensions of 57 x 130m, an interweaving street with a 16 metre road reservation width, and an internal lane with a 7 metre road reservation width.

Figure 24 shows the sage street cross sections used in the creative suburb urban designs.

Promenade 1
- Driveway access on one side
- 1.5m wide footpath on one side (where lots with rear lane access or where footpath adjoins park)
- Power + water in reserve

Parkway
- Australia Post and emergency vehicle access
- 1.5m wide footpath
- Power + water in 4-5 metre strip of road reserve

Promenade 2
- No driveway access (rear lane)
- Limited driveway access (park frontage)
- 1.5m wide footpath on both sides
- Power and water in reserve

Arcade
- 7.0m reserve (5.5m carriageway)
- No parking (yellow line may be required)
- Stormwater + sewer in lane
- Garage door setback and width to suit swept path
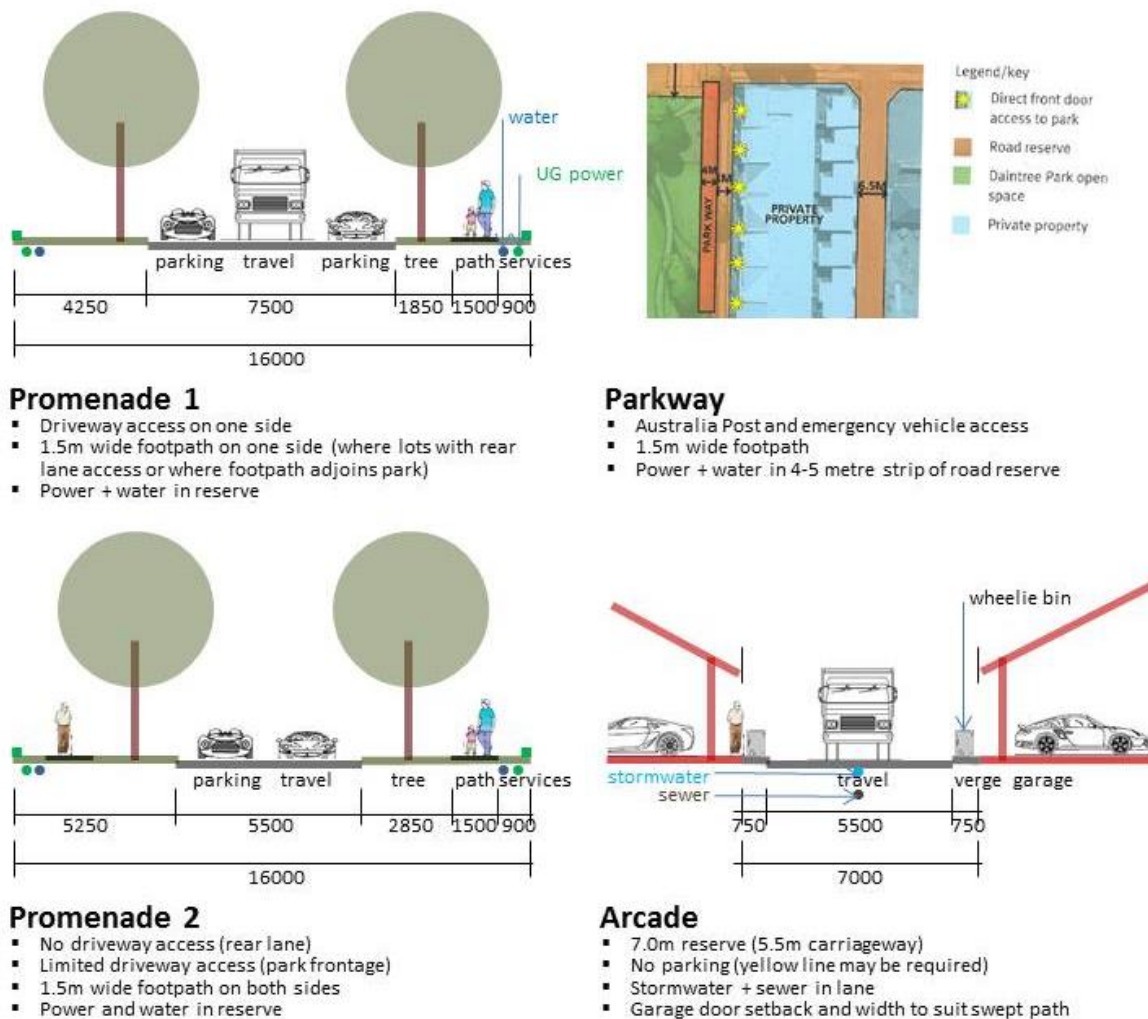
Figure 24 – "Sage streets" (boulevard, parade, promenade), "penny lanes" (arcade)

A block width of 57 metres can be delivered as follows:

32m lot depth + 25m lot depth = 57 metres

25m lot depth + 7m lane width + 25m lot depth = 57 metres

32m lot depth + 7m lane width + 18m lot depth = 57 metres

Figure 25 shows how these block and street dimensions work in a 'ba block' model.
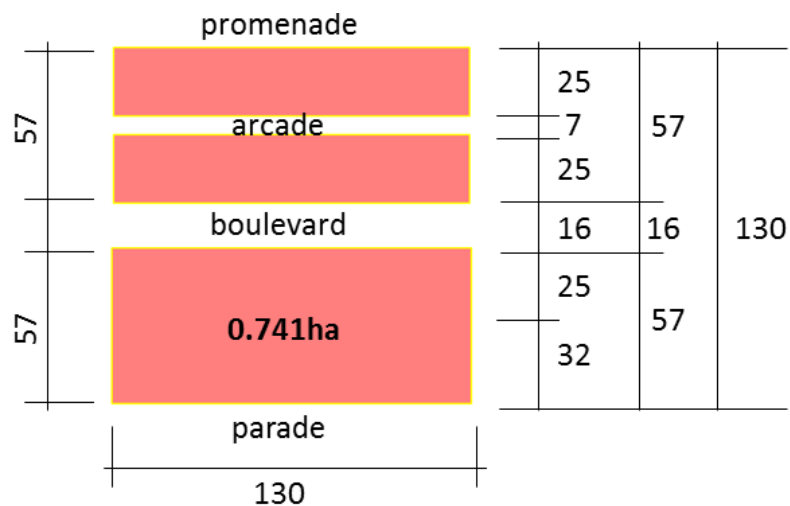
Figure 25 – "Ba block" model
The ba block model can be turned 90 degrees to minimise the number of four-way intersections in what is typically called a 'modified grid'

A typical ba block (area surrounded by streets or parks) is 57 x 130m = 7,410sqm. If this is assumed to be the 'site' (70%), then 'net' density relates to an area of close to 1 hectare (i.e. 100% divided by 70%, times 0.741 ha = 1.06ha). If a typical block included 30 dwellings ('site' density of around 41duha) then the 'net' density is accordingly ~28duha (1.06 divided into 30). In practice the widespread use of a typical 57 x 130m block generates 35% local streets and parks in a neighbourhood including one local neighbourhood recreation park of around 3,000-5,000sqm in area.

The iterative analysis between building and block design yielded a unique set of learning lot dimensions (Figure 26) achieving 32 learning lots per ba block. When applied to the creative quarter, including a central performance park (Figure 27), a net density of 28.7hw/ha is achieved. At this density, to achieve the ideal 35 jobs per hectare in the creative suburb would demand an average 1.2 jobs to be generated in every homeworkhouse. As shown later, the analysis of one of the creative suburb series of building designs illustrates how 3 or 4 jobs for CIWs might be available from within one homeworkhouse on a 225sqm lot, however CIWs account for only around 6.5% of the working population and information supporting the preparation of the Moreton Bay Regional Planning Scheme (MBRC, 2014) is suggesting that at a stretch around 14% of all the jobs to be created in the new suburb of Caboolture West will be home-based business.

Learning lots

Each ba block provided the basis for subdivision into learning lots. The learning lot depths of 18.0, 25.0, and 32.0 metres were adopted from current urban design and development industry standard practice. However learning lot widths were informed by a range of factors including, primarily, a new building system suited to:

- the conservative Toowoomba building industry – the system is based on 'traditional' building methods, with buildings 1.5 to 2 storeys in height and setback from boundaries where appropriate to provide ease of construction and/or maintenance in the long term;

- the 'neighbourhood character' and heritage imperatives of the Toowoomba Regional Planning Scheme (as driven by the community);

- standard building 'module' widths (primarily dimensions required for wheelchair accessibility);

- typical and/or required building setbacks from side boundaries (e.g. under the Building Code of Australia, Queensland Development Code and other progressive publications such as the DSDIP Guideline No 6 Low Rise Buildings); and

- delivering buildings at a density of around 30 duha – the main reason for the narrowness and repetition of the lot widths adopted – around 14duha is required to meet the target population of 35 people per hectare, at least 1.3 jobs per homeworkhouse is required to be generated if the ambitious target of 35 jobs per hectare is to be achieved.

The learning lot widths are also required to fit neatly in multiples within the adopted length of the ba block, in this case 130 metres (made up of two ba block depths of 57 metres, plus a 16 metre wide sage street reserve) – the learning lot widths ultimately adopted: 6.3; 9.0; and 11.7 metres, with slightly wider lots on corners of 9.6 and 10.5 metres depending on the ba block arrangement (i.e. whether the ba block includes an arcade).

The standard widths of learning lots were thus determined by a combination of required building setbacks, adopted room widths, and the width of walls using typical construction methods, a 230mm wide fire-rated block wall built within 900mm of the boundary and 90 timber framed internal and other walls setback at least 900mm from a boundary. Other than where a wall was proposed or required to be built up to the property boundary a preferred

1200mm minimum building setback was adopted, primarily to provide for external wheelchair accessibility and ladder safety when maintenance access to a roof is required, that is, a 1200mm side setback to a roof over 3000mm high can provide a suitable angle for a ladder. The adoption of these dimensions as preferred standards determined a suite of lots with widths of 6.3m, 9.0m, and 11.7m for convenience rounded to the first decimal place, thus giving lot width intervals of 2700mm.

The 11700mm wide lot is made up of:

25mm setback to gutter
100mm wide gutter
230mm wide fire rated block wall
3600mm internal room width
90mm internal wall width
3600mm internal room width
90mm internal wall width
3600mm internal wall width
230mm wide fire rated block wall
100mm gutter
25mm setback to gutter
10mm tolerance

The 9000mm wide lot is made up of:

25mm setback to gutter
100mm wide gutter
230mm wide fire rated block wall
3600mm internal room width
90mm internal wall width
3600mm internal room width
100mm external non-fire rated wall
1200mm setback to wall
55mm tolerance

The 6300mm wide lot is made up of:

1200mm setback to wall
100mm external non-fire rated wall
3600mm internal room width
100mm external non-fire rated wall
1200mm setback to wall
100mm tolerance

The typical industry-standard lot depths of 18, 25, and 32 metres were used for the majority of the learning lots; 14.5 metres on ba block ends.

Figure 26 shows the learning lots in ba blocks which were used to generate the creative quarter model urban design shown in Figure 27.
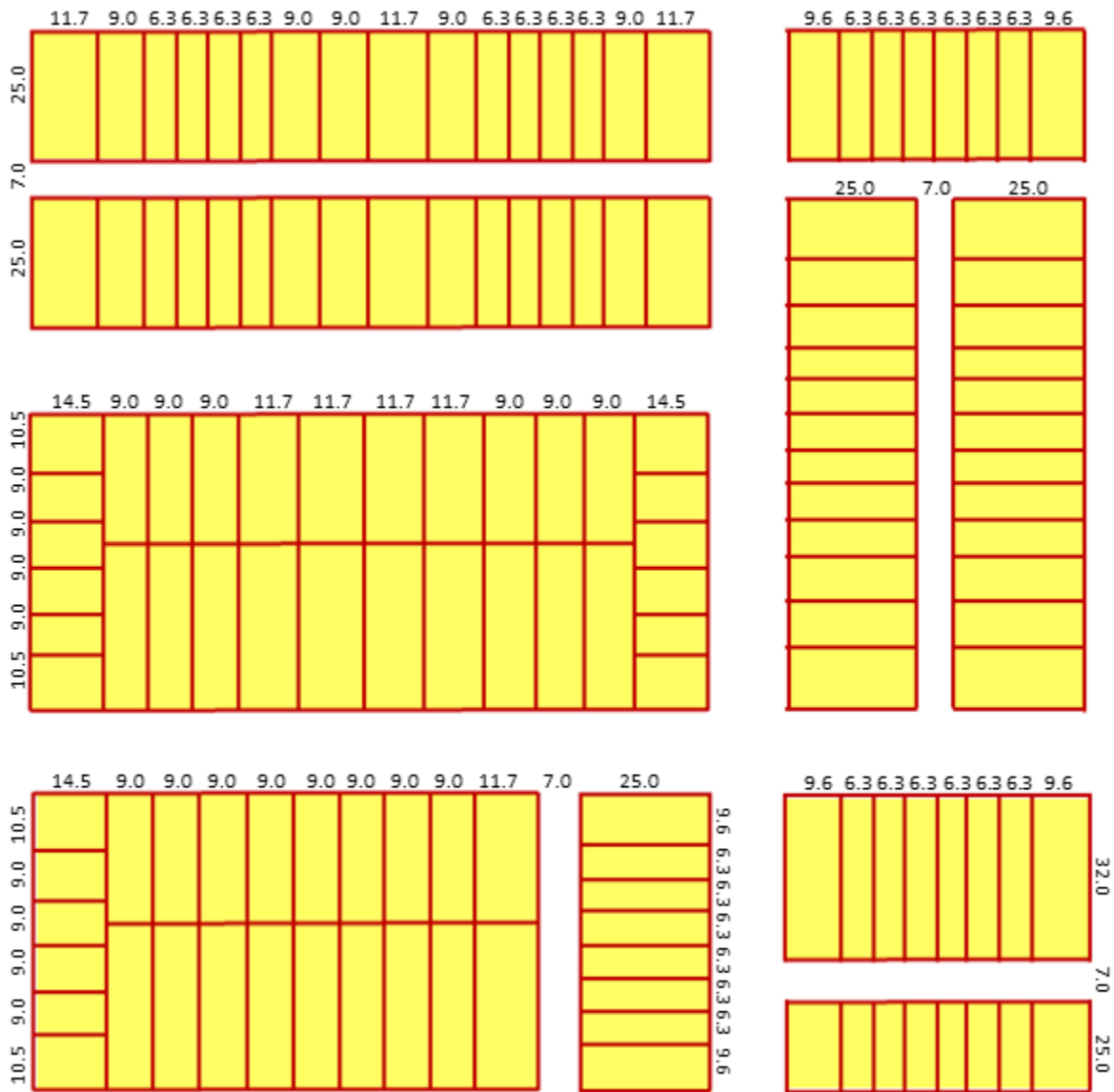

Figure 26 – Typical learning lots in ba blocks

The creative quarter

Figure 27 illustrates how the ba blocks might be arranged in a 'creative quarter'.

boulevard

arcade

promenade

performance
park

parade

422/432/442
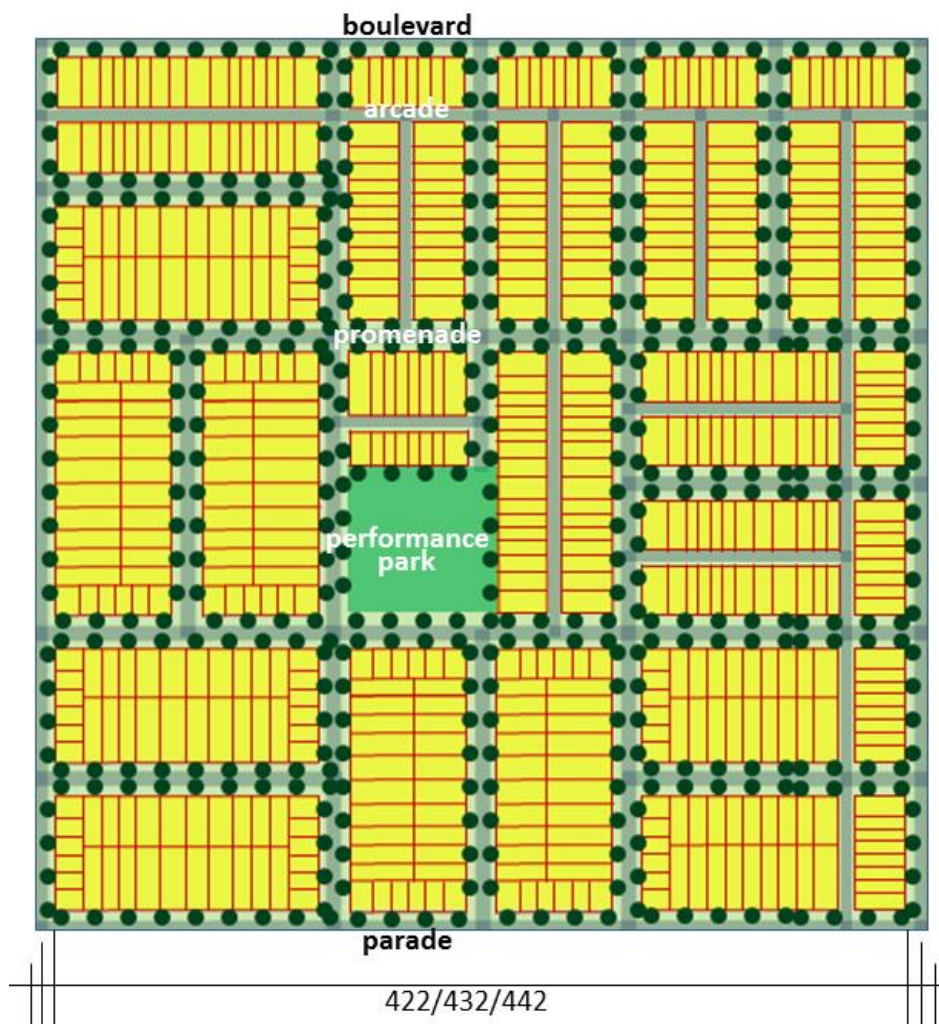
Figure 27 – The creative quarter model

The 'creative quarter' is defined by a local park roughly at the centre of the quarter; the idea being that some open space relief from creative 'cabin fever' can be gained within a very short distance – around two minutes' walk – from every residence within the quarter. In this sense, 'quarter' is a construct, similar to the traditional meaning of 'quarter' being an area which is subordinate to that of the city, town or other urban area, or has some distinctive character e.g. Bohemian quarters.

In the creative suburb, 'quarters' comprise the four quarters of a 'knowledge neighbourhood' (Figure 28).

The knowledge neighbourhood

A plan of the knowledge neighbourhood is shown in Figure 28.
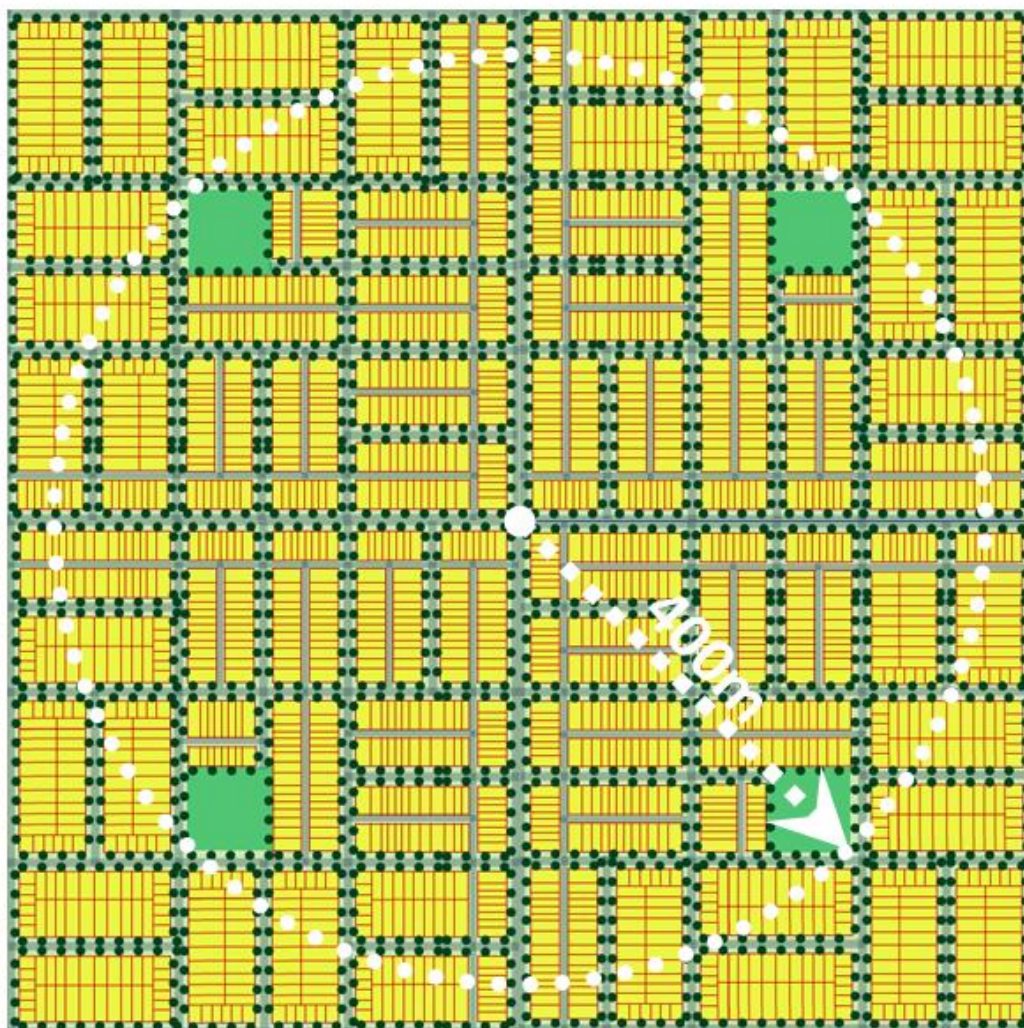
Figure 28 – A "knowledge neighbourhood"

The knowledge neighbourhood is based on the neighbourhood defined by new urbanists Duany et al. (2010) in the *Smart Growth Manual* and adopted in the Queensland government's *Next Generation Planning Handbook* (DSDIP, 2011a); the neighbourhood being an area comprised within a circle with a radius of 400m, about a five minute walk from the outermost areas to the neighbourhoods' centre.

Tuan (1977) cautions:

> The street where one lives is part of one's intimate experience. The larger unit, neighbourhood, is a concept. The sentiment one has for the local street corner does not automatically expand in the course of time to cover the entire neighbourhood. Concept depends on experience, but it is not an inevitable consequence of experience.

> The larger unit acquires visibility through an effort of the mind. The entire neighbourhood then becomes a place. It is however, a conceptual place and does not involve the emotions. Emotion begins to tinge the whole neighbourhood – drawing on, and extrapolating from, the direct experience of its particular parts – when the neighbourhood is perceived to have rivals and to be threatened in some way, real or imagined. (Tuan 1977:170-171)

The knowledge neighbourhood is a construct in the same way a creative quarter is created, and will of course change as a result of the constraints and opportunities present in any given place. The knowledge neighbourhood is nonetheless design-based, in that it is based on industry-standard/accepted dimensions for lots, blocks, and streets.

In the knowledge neighbourhood model there are 17 blocks each containing 32 lots plus the small block overlooking the performance park which contains 16 lots. Therefore there are 560 lots in this model; it is 442 x 442m square, an area of 19.53ha (assumes half of 20.0m wide perimeter road – boulevard or parade reserve) with 560 lots = 28.7hw/ha. Note this is different to the related model in the book (see page 61), where an application of actual building designs yielded only 12 lots in the half-ba block adjoining the performance park.

There are many ways in which the creative quarter could be arranged in groups of four to create the knowledge neighbourhood model. In Figure 28, the model is based on a 90 degree rotation of the creative quarter model bottom left through top left, then similarly, top right to bottom right. Apart from pursuit of a 'purity' in the plan, the ninety degree rotation of the creative quarter has the effect of limiting the number of four-way vehicular intersections along the boulevards or parades present in the central 'crossroads'.

The centre of this model is at the intersection of two non-vehicular access boulevards or parades, in that the learning lots which front these streets are 'rear-loaded' with vehicular access gained from a rear arcade.

Four creative quarters (560 lots x 2.5 people per homeworkhouse = 5,600 residents) will serve a small neighbourhood centre of between 1,000 and 2,000sqm mixed use, including a small supermarket. However, this is not to say that the 'centre' will be located in the physical/spatial centre of this model.

As revealed through the interviews, CIWs desire if not demand proximity to services and amenities such as a corner store, coffee shop, bar, and local parks and sporting fields, preferably accessed by dedicated footpaths and cycleways. In contemporary town planning, the location of large scale facilities – such as sports ovals – would be subject of broader analysis and planning, but smaller-scale facilities such as a coffee shop and bar would typically be located if not limited to develop in a centre. However, in line with the 'fine-grained' approach and assumptions that creative activity and work can occur anywhere and everywhere, the creative suburb construct accordingly assumes that centres will be left to emerge rather than be predicted or planned: centres may grow 'naturally' within the footprints of the flexible homeworkhouses in much the same way as a 'main street' of shop top houses was typical of early suburban development in Queensland. As one interviewee put it in relation to homeworkhouses everywhere: "I reckon if you did an experiment and spread these out, you'd come back in ten years and find them together".

The policy framework should therefore allow the centre to emerge where the community determines and this will be where there is an opportunity for a natural collection, connection and/or collaboration, as determined by the home-based business which grow in place over time. A builder/developer may seed this by suggesting where a centre might emerge, but this should not be to the detriment of a centre emerging organically, responding to the specific dynamics of a growing creative community.

A responsive environmental approach

Responsive Environments: a manual for designers (Bentley et al. 1995) has become almost canonical in the fields of urban planning, design and development. There are seven principles which Bentley et al. (1995) detail are to be met if a design is to be 'responsive', that is, sensitive and appropriate to its place. The urban designs presented thus far are assessed according to these seven 'responsive environmental' principles in the following:

- **Permeability** – the urban designs are based on a modified grid, enabling a wide variety of choice in way-finding from the lot to the park, through to the main streets, and centres, wherever they may emerge. There are few culs-de-sac and then only to vehicles; pedestrians and cyclists are able to penetrate throughout.

- **Variety** – the urban designs include a variety of lot types as defined by: differences in lot widths and depths (four of each); whether the lot has vehicular access from a street and/or lane; and whether the buildings are one or two storeys in height. Variety is everywhere in each block and along each street, although aggregations of similar lot types are present where the lots are serviced either by a street or lane. The variety in lot types is a function of different lot widths as a result of providing for different building sizes. Each building is intended to be based on the possibility of a variety of uses and therefore experiences in the dwelling.

- **Legibility** – the urban designs arguably lack legibility in the plan e.g. there are no landmarks evident within the knowledge neighbourhood plan, however the boulevards and parades could be differently expressed e.g. through use of a particular species of tree to assist in way-finding. Signposting via branding of each business on the building would also provide some legibility in the urban design.

- **Robustness** – the buildings throughout are based on this principle, that they are designed for many different purposes; mixed use everywhere.

- **Visual appropriateness** – the meaning and possible purpose of each homeworkhouse can be conveyed through signs and other external treatments e.g. artwork integrated into screens expressing the nature of the business or creative activity being undertaken.

- **Richness** – as previously outlined, the form of each building is likely to be based on the use of a limited pallet of design features e.g. high pitched roof over main pavilions, skillion roof over sometimes enclosed 'veranda's'. Within these basic forms, a wide variety of expression in terms of materials, colours, details, signage, and climate responsiveness is available.

- **Personalisation** – there is nothing in the urban designs to prevent a community from personalising the streets and park within the creative quarter e.g. a community garden to provide a community-wide food source. The flexibility flagged in the building planning and design is fundamental to personalisation, in that the use and its notification is – or should be – left up to the residents and business owners, to put their own stamp on the building.

The building designs

<u>Design process management</u>

The homeworkhouse building designs were generated within the parameters adopted in the determination of the learning lots, and the range of required designs tabulated as follows.

depth/width	6300	9000	9600	10500	11710
14500*	x	F	x	F	x
18000	R+	R	R	x	R
25000	R+	RF	R	x	RF
32000	R+	RF	R	x	RF

Key
*block end only
F front loaded (from a street)
R rear loaded (from a lane)
Where R and F are coloured the same, then it is the same model applied to a different, typically corner lot
R+ indicates that it is the same model with a loft: the low set model is required for price leadership

This table focused the building design exercise, notably generating the following suppositions:

- Loft is typically available from within the dedicated residential spaces within each model

- Loft may include a bathroom and two bedroom areas – depending on the extent of dedicated residential spaces in each model

The 6300 wide lot models each have an alternative 'front' (although vehicles are accessed from rear lane). The front on these models is either built to both or to neither of the side boundaries. The option built to both side boundaries has the length of the veranda running parallel with a pavilion (see design for 18000x6300 featured on page 33 of the book). The option not built to either side boundary has the pavilion running through to the veranda, creating a gable end wall to the pavilion, with the veranda roof being a skillion running up to the same relative pitch height (see page 35 of the book).

Each of the designs produced were coded for siting in the urban design.

<u>Building setbacks and siting</u>

A fundamental in relation to building setbacks within each of the models' siting on the lot is that few models have large lengths of built to side boundary walls, and there are fewer where the building is built to both side boundaries. The adoption of these building setbacks meant that regardless of the lots' orientation, all buildings have good amounts of solar access into garden areas and spaces/rooms within the buildings, particularly in colder months when the

sun is at its lowest angle. The other characteristic of the adopted planning of the buildings is that most designs are one-room wide, helping to facilitate cross-ventilation, required in hotter months. Tandem car spaces are generally left open reflecting their potential for a diversity and flexibility of spatial use.

Other adopted parameters include a zero front setback to all models: the veranda, and in some instances other parts of the building such as a carport under a veranda roof, are located on the front boundary.

All the CIWs interviewed emphasised the importance of a front garden and/or a building setback from the front boundary. Two interviewees noted hedges which defined front and side property boundaries. Most of the buildings on the larger lots throughout the Toowoomba region are setback from all boundaries, although some closer to the city centre are built closer principally to the front property boundary (see Figure 29).

Figure 29 – Vernacular buildings built close to the front property boundary – Toowoomba

It is, however, very difficult to achieve anything close to a natural density without the flexibility and ability to build close to boundaries, especially the front boundary (a major contributing factor in the appearance of the terrace house in the southern cities and towns of Australia). Brisbane and the rest of Queensland are still reeling from the 1885 decision of parliament to limit the size of new lots to 400sqm, typically 10 x 40m: the *Undue Subdivision of Land Prevention Act 1885* accounts for the general lack of historical terrace and row housing in Queensland. However, the veranda built close to the front property boundary prevailed in rare terraces built in Brisbane before 1885. Figure 30.

Figure 30 – Inspiring vernacular suburbanism – Rogers, Union, and Water Streets, and St Pauls Terrace, Spring Hill, Brisbane

The net density in the examples shown in Figure 30 is around 40duha with variations in lot dimensions similar to that adopted for the creative suburb series of building designs; the block is approximately 57 metres wide.

The main variance from the indications of the CIW interviews is the adoption of a front veranda right on the front boundary in all the homeworkhouse designs, interestingly a given in the ULDA ecHo designs deliberated by the industry interviewees.

A vernacular approach

Timber and Iron (Bell 1984) is an early scholarly examination of the 'Queenslander'. Bell relates his study of the North Queensland house to the 'vernacular':

> It has become commonplace in accounts of buildings such as those described in this study to make use of the word *vernacular*. The term has been avoided here because its meaning is at present in a state of flux, and because the most commonly adopted meaning has very little relevance in North Queensland. In Britain, where the word does have relevance, most writers now rely on R.W. Brunskill's definition:
>
>> ...designed by an amateur, probably the occupier of the intended building, and one without any training in design; he will have been guided by a series of conventions built up in his locality, paying little attention to what may be fashionable on an international scale. The function of his building would be the dominant factor, aesthetic considerations, though present to some small degree, being quite minimal; tradition would guide constructional as well as aesthetic choice, and local materials would be used as a matter of course, other materials being chosen are imported quite exceptionally. (Bell 1984:8)

In contrast, Fisher and Crozier (1994) suggest:

> Queensland does not have one particular type of housing, but a dominant tradition of timber building which evolved continuously from the rude timber hut of early settlement to the multi-gabled bungalow of the 1930s and beyond. Though influenced by architectural design and industrial technology, this may be termed the Queensland vernacular tradition; 'vernacular' because it was indigenous to this particular place, popular among the people and typified by timber as the local building material. (Fisher & Crozier 1994:32).

In particular Fisher and Crozier (1994) note that:

> Any acceptable checklist of attributes of the typical Queensland house is likely to include the following:
>
> ▪ timber and galvanised iron (tin) materials
> ▪ light timber frame with exposed studs on two or more walls
> ▪ weather/chamferboard exterior walls
> ▪ singleskin tongue-and-groove boards for internal walls
> ▪ tongue-and-groove boarded ceiling, flooring and walling
> ▪ steeply pitched roof of some standard shape
> ▪ verandahs with decorative timber and/or cast-iron trim
> ▪ highset on round timber stumps with batten infill
> ▪ traditional garden setting
> ▪ timber fencing
> (Fisher & Crozier 1994:vii)

These are important factors for consideration if the creative suburb building designs are to be considered vernacular 'architecture'.

The veranda house

Several of the creative suburb building designs approximate the classic Colonial or Victorian Queenslander – built between 1824 and 1890 (see Fisher and Crozier 1994: 52-53) (similar to the buildings shown in Figures 29-30)– which, from the front or street, reveal the typical break in the line between the steeply pitched and low-pitched roof lines e.g. pages 33, 34, 37, 38 of the book. In addition, however, most designs are also arranged in a series of one-room-wide pavilions; aligned perpendicularly or parallel with the side boundaries of the lot.

The primary difference between the creative suburban and traditional Queenslander is therefore in the floor plan arrangement.

As Rechner (1998) demonstrates, the floor plan of a typical Rockhampton 'worker's dwelling' – the Colonial Pyramid/Short-ridge or Hip Queenslander with a four room core under the main roof and built between the 1880s and 1905 – was based on contiguous rooms for different uses, with formal and more public rooms characteristically accessed off the front veranda via a central hallway, which in turn lead to the service rooms such as kitchen and bathroom to the rear (Figures 29-30). Even in this arrangement, economies seemed to encourage removal of the hallway from the larger more private spaces towards the rear, with bedrooms opening directly into what may have been a dining or 'family' room. (see Rechner 1998:9)

Drew (1992) articulates how pioneering Australian architect, Glenn Murcutt, abandoned this arrangement:

> Glenn Murcutt developed the veranda form of house (a long thin house type) by modifying the modern pavilion with its glass walls so it shared a number of features with the traditional veranda. This genesis can be traced to his rejection of the English house form with its core surrounded by verandas as unsuitable in this country.
>
> Murcutt reasoned that the veranda had failed to protect the house adequately from low angle sunlight in the afternoon and morning, moreover the physical shield of the veranda canopy, as Malouf observed, left the house inside dark and depressing, while the large main roof stored heat during the day only to release it at night when its occupants were asleep.
>
> It was this defect of the traditional farmhouse which had previously led people to abandon the interior of the house and move out onto the veranda. Murcutt's response was beautifully simple; he amputated the veranda from the house along the front and sides, straightened it out, and discarded the core of the house – the rectangular enclosed portion grouped around the central hallway.
> Drew (1992:213)

In support of the use of 'pavilions' as the primary building planning system in the creative suburb series, Drew (1992) goes on to say:

> What Murcutt was left with was a long unobstructed gallery of shallow space, 25 to 35 metres (75 to 105 feet) long, in effect, a linear sequence of spaces. This became the new veranda-house. Murcutt enclosed this independent veranda with wall-to-ceiling glass louvres. These were protected on the outside by adjustable venetian blinds and mesh insect screens. The front façade of the original house survived as a back to the interior to strengthen the sense of security in much the same way that Russell Drysdale represented the veranda in his paintings as a frame around his figures.
>
> The shallowness of the gallery was exploited to ensure effective cross-ventilation of the living space since the louvre wall design enabled almost 100 per cent of the wall facing the north to be left open on the hottest summer days during torrential downpours.
> Drew (1992:213-214)

The one-room wide pavilion is therefore prevalent in most of the creative suburb series. This is due in part to achieving a narrow building – on what becomes a narrow lot – which is open on both sides and setback from side boundaries.

Even with enclosure of the adjoining 'veranda' – spaces under the skillion roof in the wider designs – all rooms are open on at least two sides. This is one of the many trade-offs which are

made when designing a 'series', notably in response to a highly industrialised, systemised, and fast-track means of production of lots and buildings.

The creative suburb series

Within these constraints and considerations, 15 base model building (homeworkhouse) designs were produced. With variations to enable flexibility in siting and to entrench diversity in design outputs, 50 individual building designs were generated from these 15 base models.

The first design was created for 3 Kirk Street, Toowoomba, one of twenty building and subdivision studies undertaken in determining a potential showcasestudy homeworkhouse site in the Toowoomba region. This design was generated with respect to the ULDA ecHo designs albeit contextualised into a 'neighbourhood character' area of the inner-city suburbs of Toowoomba. This design was used as stimulus in the first design workshop (and in other presentations given and critiqued as part of work with the Toowoomba Regional Council between August 2012 and April 2014). However, the unusual dimensions of the block between Kirk and Bracker Streets, Toowoomba, do not neatly fit the lot dimensions adopted for the creative suburb. (See Figure 31.)
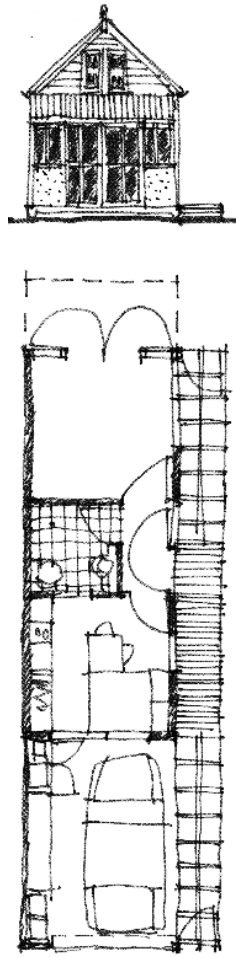
Figure 31 – Early concept design for Kirk Street, Toowoomba

Nor did 121 Mort Street, Toowoomba fit the standard lot dimensions adopted for the creative suburb. Figures 32-38 however show some of the detailed conceptual studies and interviewee creative spaces which informed the concept design for this property using the smallest spatial dimensions determined during the interviews and design workshops – 3.6 metres a desired minimum for the various working spaces within the dwelling. This exercise was to see how far micro-small space design could be taken to deliver micro-small scale business.

Figure 32 shows how a baby grand piano can fit into a space 3600mm x 3600mm with sufficient surrounding area for teaching groups of 10 or more standing singers. 3600mm is the recommended minimum width for a wheelchair accessible room, including a car parking space with side access. 3600mm is a standard room width that one interviewee has "always used". 3600mm minimum internal clear width was adopted as the minimum standard dimension for all living and working rooms in the series.
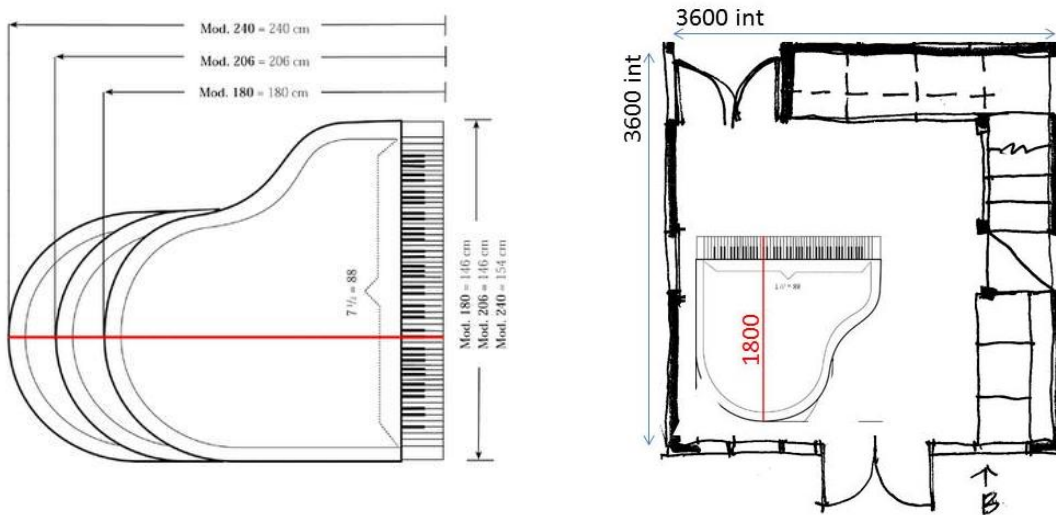
Figure 32 – Design study – a baby grand piano fits in a room with 3600 x 3600mm internal clear dimensions

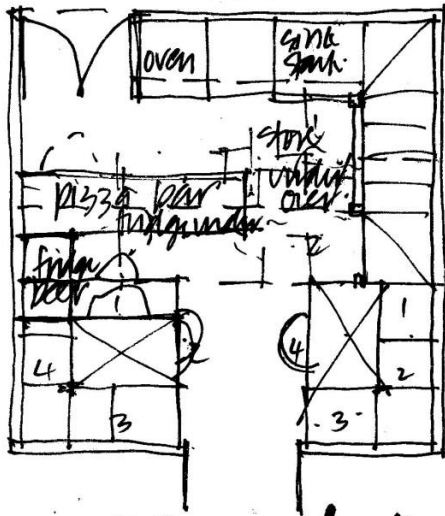**Figure 33 – Design study – this space for piano and singers is about 3.7mx4.2m**

Figure 34 – 'Waiting room' – 2.4m wide and about 6.6m long

Figure 35 – Design study – high ceilings, light and air are musts in creative suburb spaces
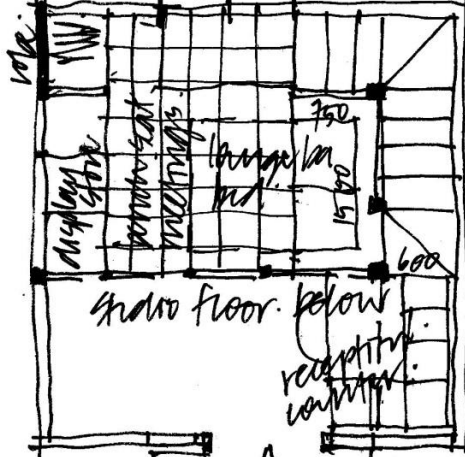
Figure 36 – Concept building designs for 121 Mort Street, Toowoomba

MORT STREET DISPLAY. 270113.
1:500.
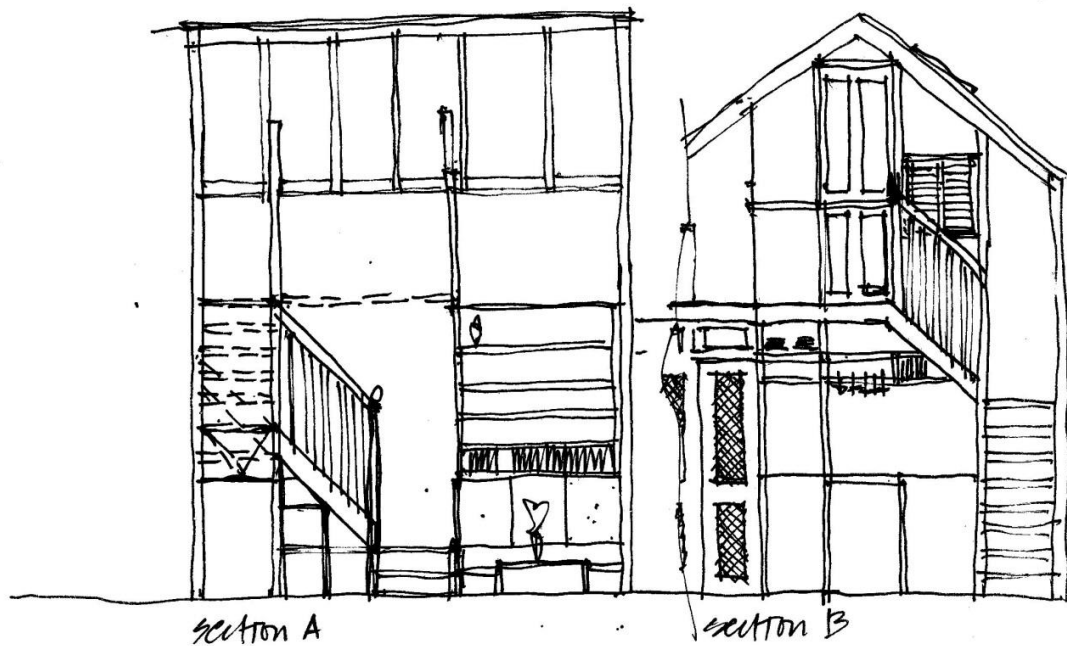
section A   section B

ground   first.

A →

↑
B

↑
B
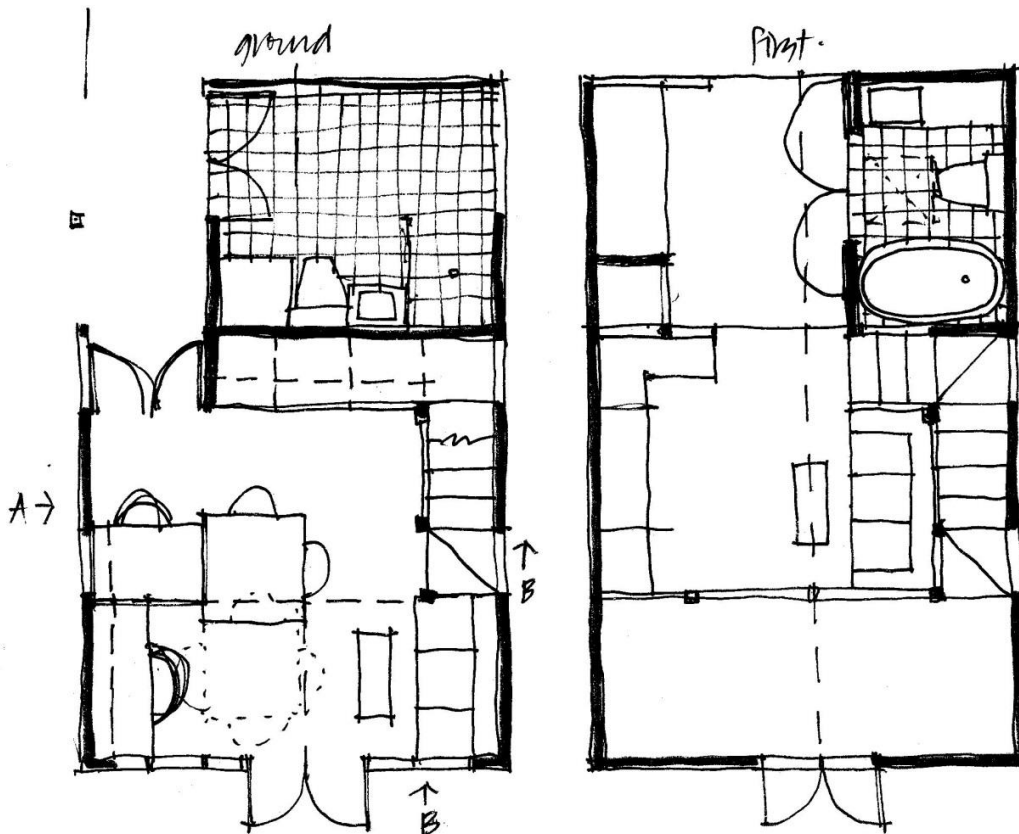
Figure 37 – Building design analysis of 121 Mort Street, Toowoomba
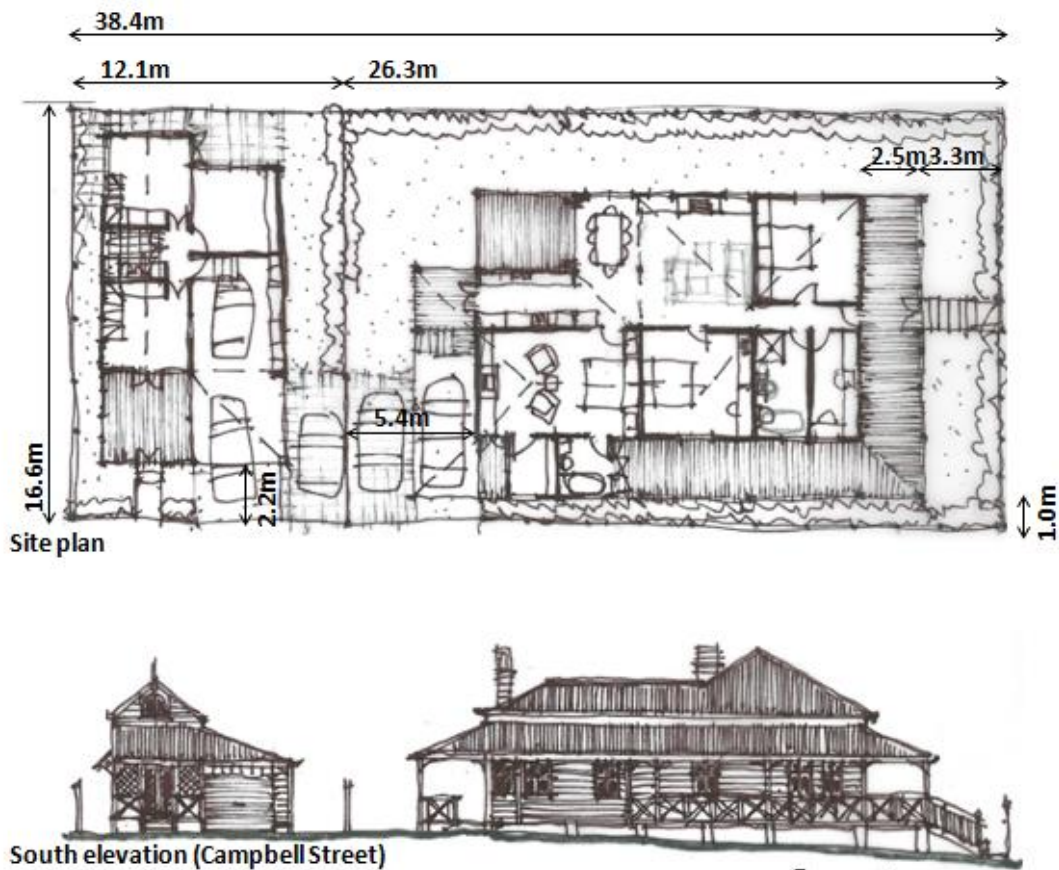
Figure 38 – Site and streetscape analysis of 121 Mort Street, Toowoomba[10]

The internal planning and room arrangement of each of the building designs in the creative suburb series was then based on an assumption of what uses would ideally require street exposure and what uses could theoretically be located anywhere on a lot. Performance and exhibition (retail and office-type) uses typically benefit from being readily viewable and accessible from a street whereas workshop and storage (industrial and warehouse-style) uses might benefit from being screened from view, albeit with direct access to a car parking space capable of accommodating a small van to service bulky items that may be required, for example heavy equipment such as amplifiers.

A typical 5400mm minimum car parking length conveniently created one possible standard internal room length of 5400mm. A minimum 2400mm wide veranda was inspired by the width of the veranda 'waiting room' for the singing teacher's studio and the surveyors separate office both accessible from the front veranda clearly visible from the footpath. See Figure 34.

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[10] The designs for 121 Mort Street, Toowoomba received a 10/10 by the Council's heritage architect (pers comms) for its integration into the neighbourhood streetscape character – existing right, new left.

A case study homeworkhouse

The following concept homeworkhouse design was then developed. This design was selected
on the basis of its potential to deliver a wide variety of tenancies in the one building on one
relatively small lot. Along with flexibility, variety became an important concept, in this case
study to test the capacity of at least one of the creative suburb series to fit a typical planning
scheme using standard land use definitions, zones and/or precincts (DSDIP, 2013). The terms
used in the following analysis have been generalised as zones and precinct designations vary
across planning schemes. To clarify: in line with the creative suburb spatial definitions, 'shop'
could be a performative + exhibition space, 'workshop' could be a workshop + storage space,
and 'dwelling' includes residential + writer's space. The general nature of the descriptions
used in the following nonetheless support the potentially wider appeal of the various uses
which could be made of most of the building designs featured in the book.

The case study concept building design shown in Figure 39:

- is for a 9 x 25m rear-loaded lot;
- facilitates a live-work situation for a small household (singles or close couples, empty
  nester/retirees, single parent with young kids);
- has a veranda built on the front boundary establishing a desired 'main street' character;
- includes a 39sqm 'dwelling', 30sqm 'shop'/'office', and 29sqm 'workshop';
- locates a 'shop' (or 'office') along the street frontage for maximum exposure for retail
  sales;
- locates the 'workshop' for ease of materials/service delivery (short term parking only in
  lane);
- allows for one on-site parking space per (relatively small) 'tenancy' e.g. one on-site
  parking space is typically required per 50sqm of gross floor area (GFA typically includes
  all usable areas of a building, excluding areas required for services) for 'shop', tandem
  okay when under one ownership;
- enables 1.5 on-street parallel parking spaces along the street frontage of the building.

Figure 39 – Case study homeworkhouse for typical land use definitions and zoning provisions

If this building was built in a 'centre' zone or precinct the 'workshop' would be available for 'service industry' uses and any form of 'home-based business'; the 'shop' would be available for uses such as a corner store, coffee shop, hairdresser, mini supermarket, club, restaurant, office, small showroom, or a church; and 'dwelling' would be considered a dwelling house/ unit.

If this building was built in a 'general residential' zone or precinct: the 'workshop' would be available for any form of 'home-based business'; the 'shop' would be available for any form of 'home-based business'; and 'dwelling' would be considered a (detached or semi-detached) 'dwelling house'. In this instance part of 'dwelling' could be added to 'workshop' and be

converted to 'secondary dwelling' – with the likelihood that 'shop' would then become part of the primary dwelling.

The zero front setback in this model would typically only be available for development within a 'centre' zone or precinct.

In line with the findings of the interviews, an all-residential situation may be the most appealing in the short term, but with the flexibility to establish and grow a business in the same building footprint in the short-medium term could be the key to catalysing development in a greenfield creative suburb. Note the 'power of flexibility' enabling separate 'tenancies' including direct rear access from shop car space to shop. Figures 40 – 44 illustrate this potency.
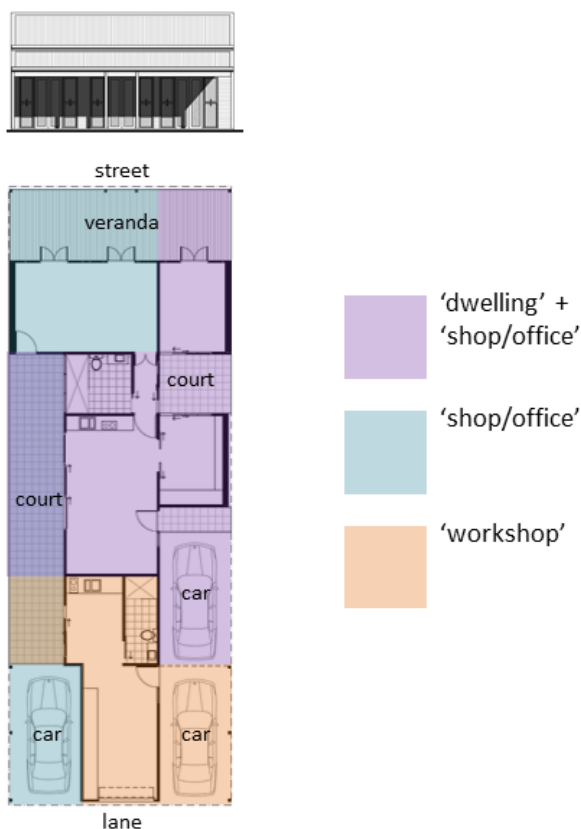
This arrangement assumes that the occupants of the 'dwelling' + 'shop/office' would be working at home, thus enabling other tenants to drive to their workplace and have an on-site space to park their car if required. In a creative suburb possible tenants may be within walking distance. The design assumes that the 'dwelling' bathroom would be shared by users of the 'shop/office'.

The arrangement therefore relies on some contractual or other relationship to be established between users of the spaces, some of which are 'common' e.g. access from the car space to the front 'shop/office' is via a court which provides for the 'private open space' needs of the occupants of the 'dwelling'.

A formal relationship between users also means that tandem parking for visiting tenants is acceptable. In this situation it is likely that the tandem space and the space for the 'shop/office' will be vacant outside of normal 'working' hours.

The point of this study is to demonstrate that between 3 and 6 'jobs' could be accommodated in this relatively small homeworkhouse – thus making a substantial contribution to achieving the desired targets of 35 jobs per hectare where the commute is reduced.

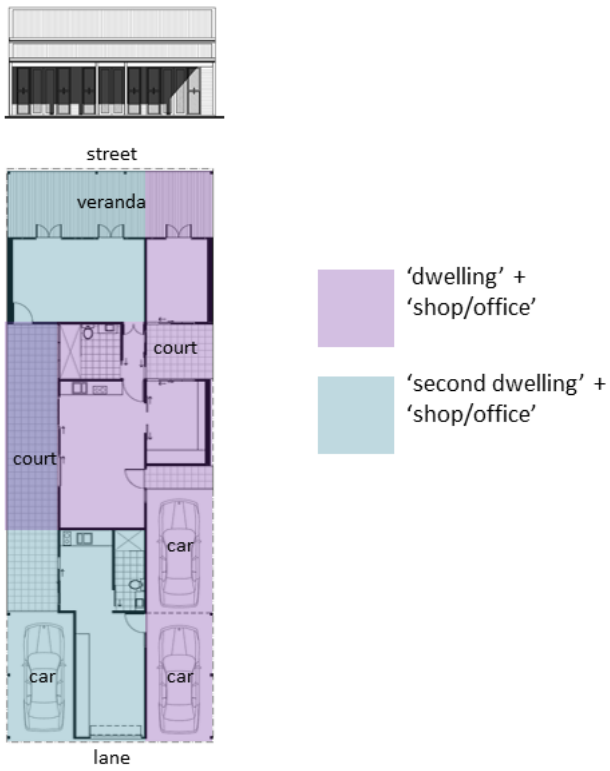**Figure 40 – Case study homeworkhouse – three possible tenancies**

Figure 41 – Case study homeworkhouse – two possible tenancies

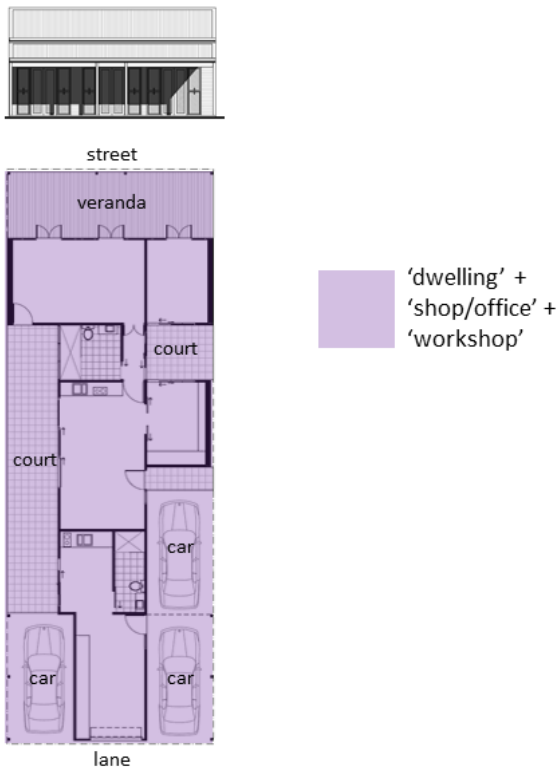**Figure 42 – Case study homeworkhouse – two possible tenancies residential + writers at rear**

Figure 43 – Case study homeworkhouse – a fall-back (or- up) option
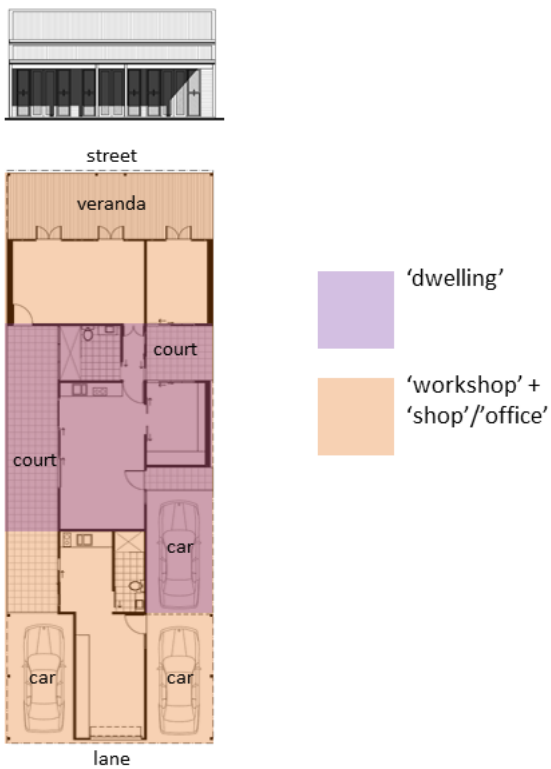
Figure 44 – Case study homeworkhouse – an industrial option

88 East Street: Clifton – early concept

Based on the 121 Mort Street, Toowoomba case study, a concept homeworkhouse design was prepared for 88 East Street, Clifton (Figure 45). The design was prepared with the following imperatives:

- Compliance with the Toowoomba Regional Planning Scheme provisions for development in the Major Centre zone in the regional towns (this includes a requirement for the building to be constructed to the front boundary, and to have ceiling heights – serendipitously in terms of the interview findings – within the main part of the building of at least 3.0m)

- Consideration for 'neighbourhood character' and heritage streetscape – e.g. the impression of a colonial cottage with a high ceiling and surrounding verandas

- Incorporation of a more 'industrial/commercial' feel in the building expression, including the pop-up roof and surrounding clerestory windows as a feature of what was deemed could be the 'premium' range of designs (e.g. the main idea of this bank of windows is to enable high light and ventilation throughout all rooms in the design)

- The building is front-loaded from the street – no rear lane access (although rear lanes are important in the urban design where flexibility is a design driver)

- The lot is 20.0m deep (not to standard, but generous when applied to a standard 25.0m front-loaded, street-accessed lot)

- The design includes an exhibition/performance space, a writer's/residential space, a storage/workshop space, and an all-residential space, each of which could be adapted for the full gamut of creative industries work or for all-residential purposes (intergenerational homework and residential design). For example:

    o The storage/workshop space could easily be converted to a sound-proof music practice studio (one could keep the drums set up and mates could come over with their stuff for quick and easy set up via access from the workshop car space).
    o The performance space could be a dance studio including aerial/acrobatic practice.

- o The writer's space could easily be converted to a bedroom for a creative desiring a view over a "zen" garden.
- o The entire building could be conceived as a creative collaborative space for designers, even for a couple of couples.
- o The entire building could also be set up as a performance space for say, house concerts (e.g. workshop for storage of mats, trapeze, ropes, gear; performance space for same; residential space for 'green room'; writer's space and part of the residential space for guests/patrons; veranda for pre-performance refreshments).
- o Equally however: the exhibition/performance space could be a residential space, the writer's space could be used as a master bedroom, the workshop a tandem garage, the loft space for a couple of young kids, the car court a play area, and so on, for all-residential purposes.
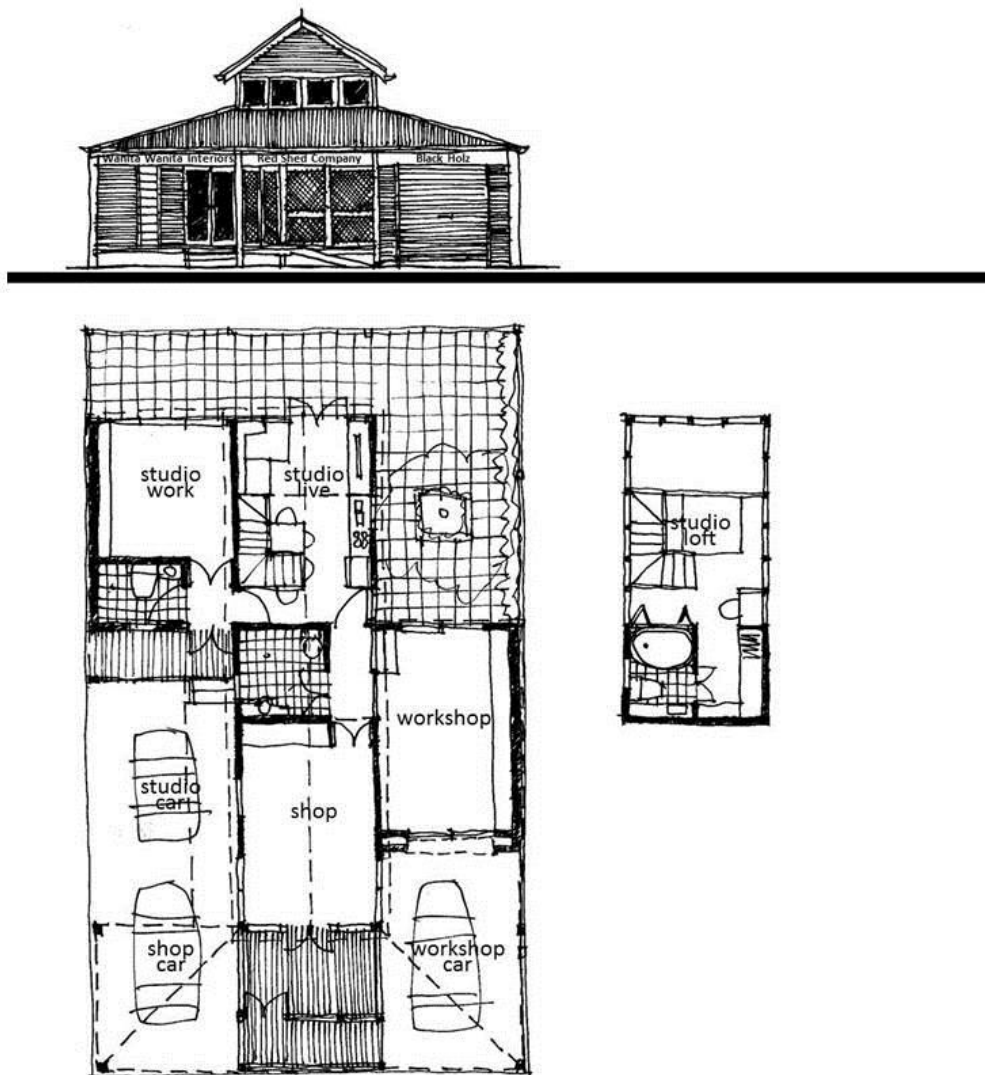
Figure 45 – Preliminary concept building and site plan – 88 East Street, Clifton

This concept was conceived when it was considered every homeworkhouse design should include a shop, workshop and studio. This was done to assist the draftsperson and 3D visualisation technician in understanding the peculiar arrangement and detailing of spaces, including the split of on-site car parking areas. As shown in Figure 45, there is one on-site parking space dedicated to each of the three types of work areas. The kerb-side area between the two driveways on this lot provides for an on-street parking space for a small vehicle, however, as the on-site spaces are required for on-site users, visitors could easily park across driveways during typical daytime business/operating hours. The tandem car space for the studio at the rear assumes that the residents are also working at home during the day, and are able to walk to a corner coffee shop or neighbourhood park if required.
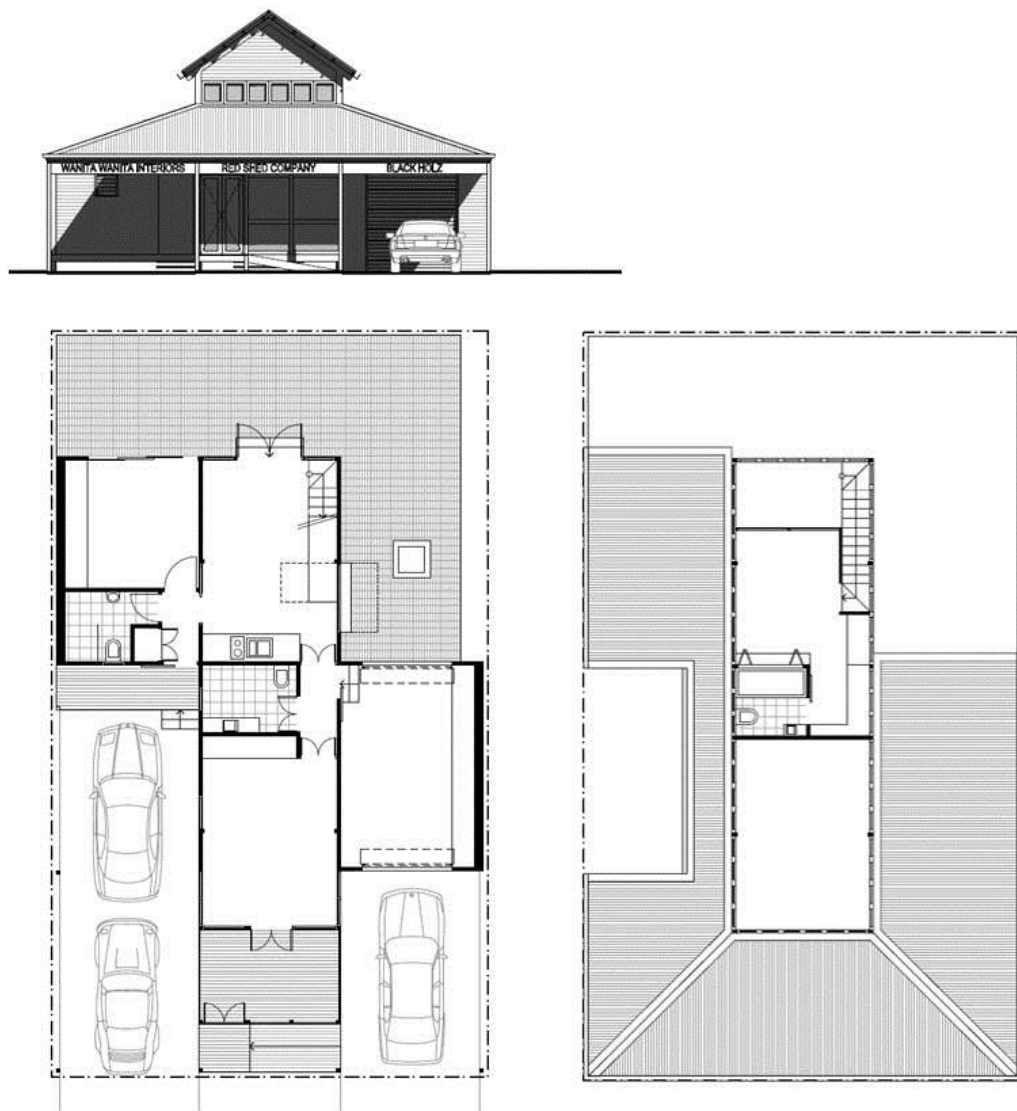
Figure 46 – Detailed concept building and site plan – 88 East Street, Clifton

The drawings in Figure 46 gave detailed dimensions to the preliminary concept. However, it was determined early in the drafting stage that the building concept plans would be presented in the book without explanatory text and dimensions, showing only built-in fittings and furniture and predominantly hard stand and paved areas and cars, to give scale to the drawings. This approach was adopted to leave the reader to decide what the spaces may be used for, thus reflecting and respecting the flexibility and adaptability of the designs. (See figures 47 – 52.)
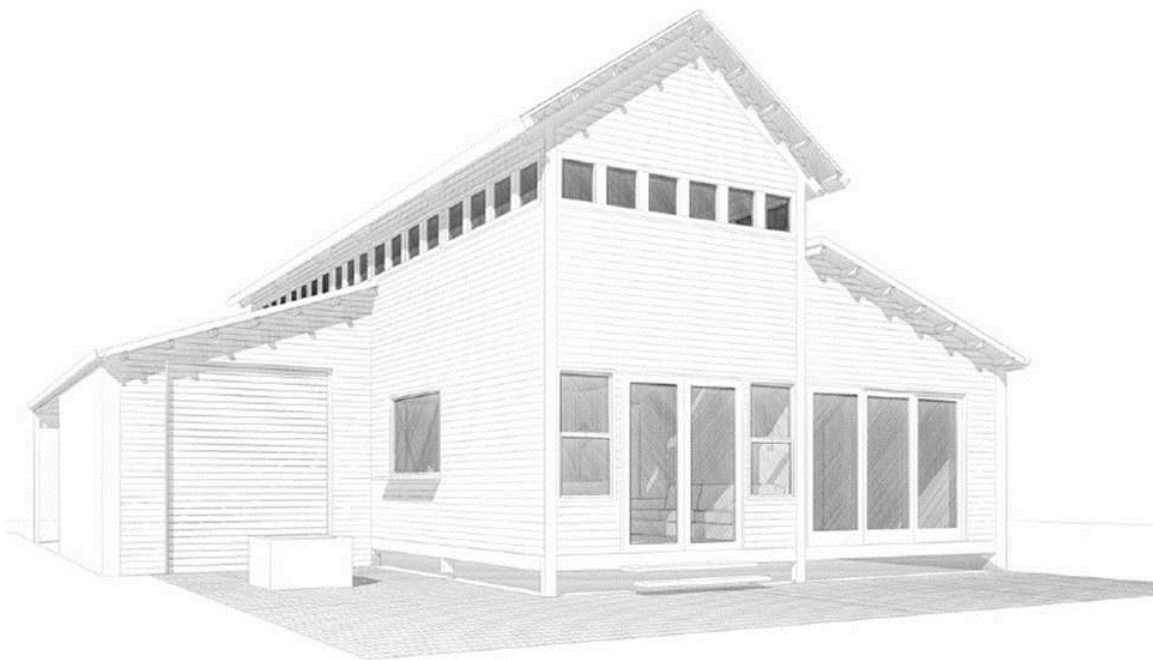
Figure 47 – Perspective – 88 East Street, Clifton

Figure 48 – Raw interior – 88 East Street, Clifton

Figure 49 – 'Residential space' – 88 East Street, Clifton

Figure 50 – 'Writer's space' – 88 East Street, Clifton
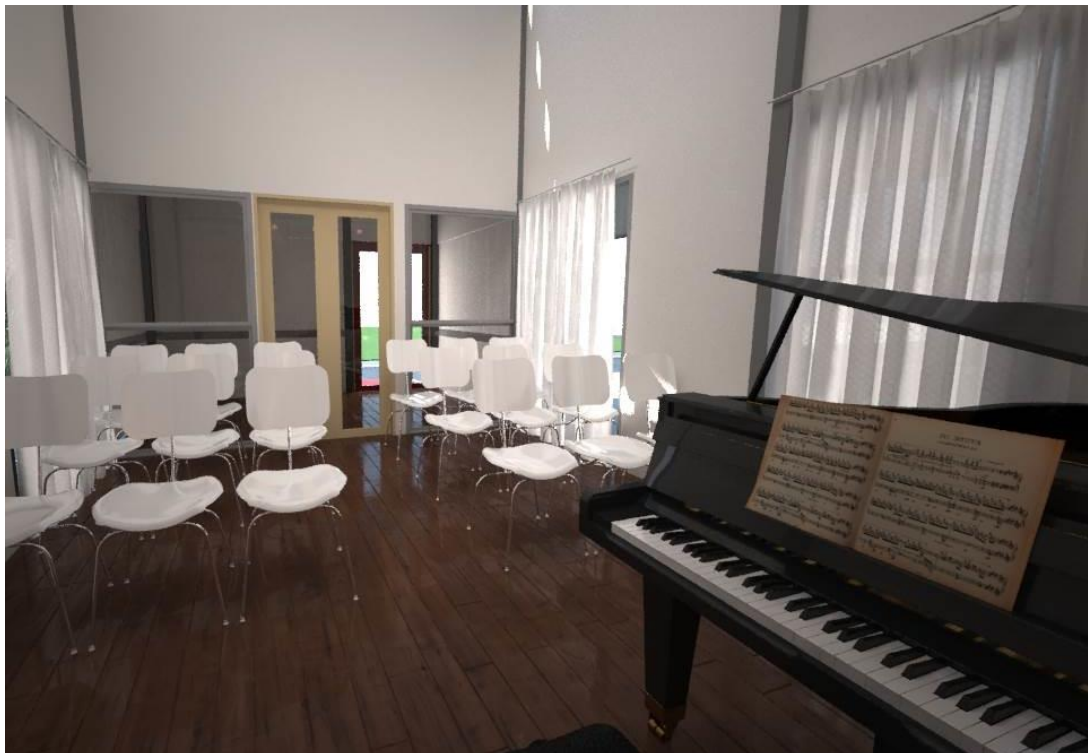
Figure 51 – 'Performance space'– 88 East Street, Clifton

Figure 52 – 'Exhibition space' – 88 East Street, Clifton

The commercial concept for 88 East Street was to have the ability to separately lease at least the exhibition/performance space, the workshop/storage space, and the (rear) residential space.

The opportunity to personalise and adapt each space in the building design flowed into the possible landscape design – reflecting very personal penchants and requirements – however as the following shows, the landscape may also point directly to the outcomes of analysis of the interviews of CIWs and related literature (e.g. Felton, 2013). In the early considerations of the connection between indoors and outdoors for this design, a concerted effort was made to connect the landscape elements with one of the metaphors driving both the creative and reflective streams in the research: 'the reflective pond'.

In relation to the outdoors: the ideal was/is to have at least the following:
- Zen garden (minimalist courtyard for contemplation and food production)
- Breakfast bar (a food and beverage servery – after practice or performance)
- Pizza parlour (talk around the wood-fired pizza oven – next generation backyard barbeque)

The premium design may also contain a:

- Reflective pond (in the minimalist courtyard for reflective pondering – with consideration and care)
- Hot tub (a massage table and bath – on or off a veranda for and after play, practice or performance)
- Plunge pool (a pool for cooling off – a conversation piece for and after play, practice or performance)

In this early design it was considered that the hot tub, plunge pool, and reflective pond could be combined in one location, just off the residential space to the north. The general location of the zen garden, breakfast bar, and pizza parlour is defined where the bar opens from the residential space into the courtyard, north of the workshop/storage space.

However this design was never pursued; a 'Castle criteria' analysis of the Clifton context generating the need to build the smallest homeworkhouse in the creative suburb series.

The Castle criteria

The professional industry orientation of this research project demanded a set of criteria by which the creative-reflective and critical-analytical work could be filtered and the quality of its artefacts assessed. The 'Castle criteria' were used to assess both quantitative and qualitative outcomes of the research, acronymically speaking, to assess how *commercial-creative, affordable-adorable, sustainable-spiritual, titleable-tenable, liveable-lovable*, and *experimental-essential* are the ideas generated through the research and expressed in the book, in the context of the building and property development industries in Toowoomba.

Appendix 6 is a tabulation of the assessment of the 88 East Street concept building and lot design against the quantitative column of the Castle criteria; assessment against the qualitative column will occur post-publication of the book and/or further to post-occupancy analysis of the constructed showcasestudy homeworkhouse.

Building cost-v-size of houses built at Fitzgibbon Chase 2010-2013 was referred to in a report commissioned by Toowoomba Regional Council (TRC, 2013). This report revealed that a build price of $1,200/sqm occurs when the house is around 150sqm in area. A house of this size

requires a lot around 200sqm assuming 75% site cover (250sqm is the norm in one of the graphs in this report, but that is due to the 250sqm lot being a standard in ULDA/EDQ projects, Fitzgibbon Chase studied in this example). A 100sqm house is being built at around $1,500/sqm and one could assume a corresponding lot size of around say 130sqm.

Based on these figures, the most cost effective homeworkhouse designs in the creative suburb series could be a design for a 100sqm lowset house (which could be built for under $1,500/sqm) for a front loaded lot 9.0m wide by 14.5m deep. Anything smaller and rear lanes and/or two-storey construction are required; or unusual lot dimensions which do not correspond neatly to room dimensions required for on-site carparking, wheelchair accessibility and general useability, need to be introduced. As it worked out the 60sqm showcasestudy homeworkhouse ultimately constructed at 88 East Street, Clifton cost just over $1,600/sqm.

It was determined that standard building techniques, simple construction, and low administration and supervision are essential to keep costs down on the small lots in order to achieve the commercial, affordable, titleable, and liveable facets of the Castle criteria.

It was in this context that the initial design for 88 East Street, Clifton was revisited.

<u>88 East Street revisited</u>

Figure 53 shows a pared down version of the initial design for 88 East Street. However as was the case in the initial design, this concept also proved to be commercially challenging if not unviable to deliver in the Clifton context.
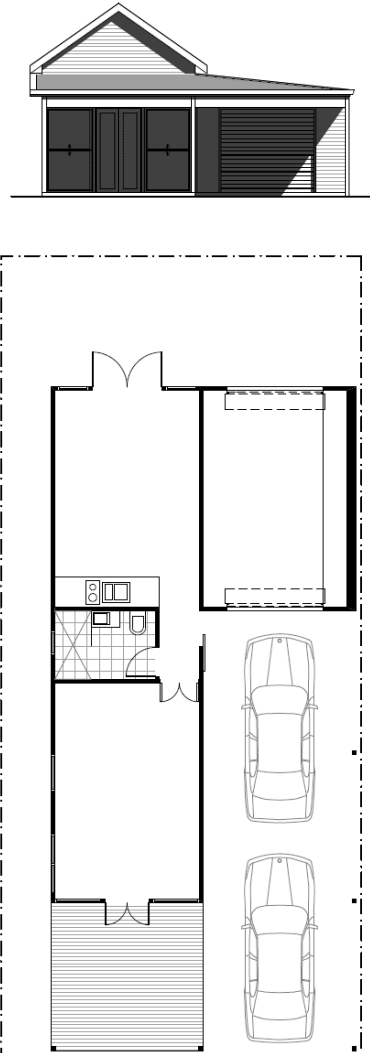
Figure 53 – 88 East Street revisited design

Arguably the smallest in the creative suburb series of building designs was then generated. (See Figure 54.)

The building

_____

The showcasestudy homeworkhouse

Figure 54 shows the front (southern) elevation and floor plan of *12 Blues Bar*, the building constructed at 88 East Street, Clifton. *12 Blues Bar* is the showcasestudy homeworkhouse – a built prototype –demonstrating one of the three products of the creative suburb research.
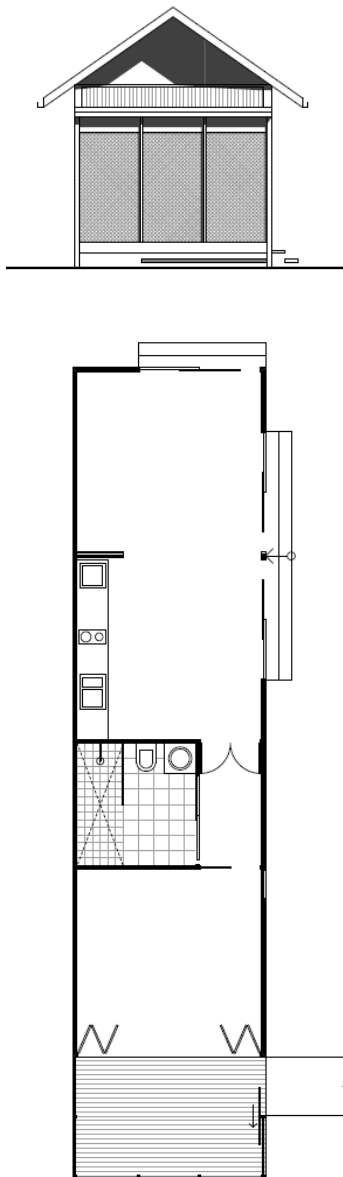
Figure 54 – 88 East Street – the concept constructed

The concept shown in Figure 54 was the building subject of the development application for the combined approval of the subdivision of the existing dwelling onto its own separate title as well as the 'material change of use' required to establish the building as a 'service industry' in the Major Centre zone. Figure 55 shows the siting of the building on the new lot created pursuant to the development approval.

Appendix 6 includes details of the cost of the land development and building process from finding a site, to the final fit-out and display of the completed building. Appendix 7 is a copy of the development application report. Appendix 8 is an analysis of the different land use options and related requirements which determined opting for the building to be called a 'service industry' and classified as a Class 8 building under the Building Code of Australia.

The development and building approval process revealed some of the greatest challenges in the research process. Whilst the TRC scheme is progressive, it still bears the hangover of most local government planning schemes in Queensland: different zones attract different infrastructure charges for the same or similar uses; different building siting and design provisions apply depending on the zone; and different building classifications and construction requirements apply depending on the extent and nature of occupancy of the different uses within the building.

In the case of the showcasestudy homeworkhouse built at 88 East Street, Clifton, the introduction of a 'dwelling unit' (the 'home' in home-based business) in the Major Centre zone attracts a flat-rate infrastructure charge of around $22,000 (even just for a bed to sleep in), whereas a 'service industry' use of the entire 60sqm building attracts around only $5,000. In contrast, a zero front setback is not readily available in the Low to Medium Density Residential zone but it is required in the Major Centre zone. And depending on whether the use is considered to be partly or predominantly residential, retail, commercial, and/or industrial, different construction requirements for fire-rating, wheelchair accessibility, and exit signage apply. Development and construction of a service industry was the path of least administrative resistance and cost at 88 East Street, Clifton[11].

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[11] A 'glitch' in the TRC infrastructure charges calculator accounted for a small challenge – if the initial charges of over $65,000 for the subdivision of the new lot were to be applied, the construction of the showcasestudy homeworkhouse at Clifton would never have happened. That East Street is a 'main road' required vehicles to enter and leave the site in a forward gear, accounting for the unusual access and parking arrangements shown in Figure 55.
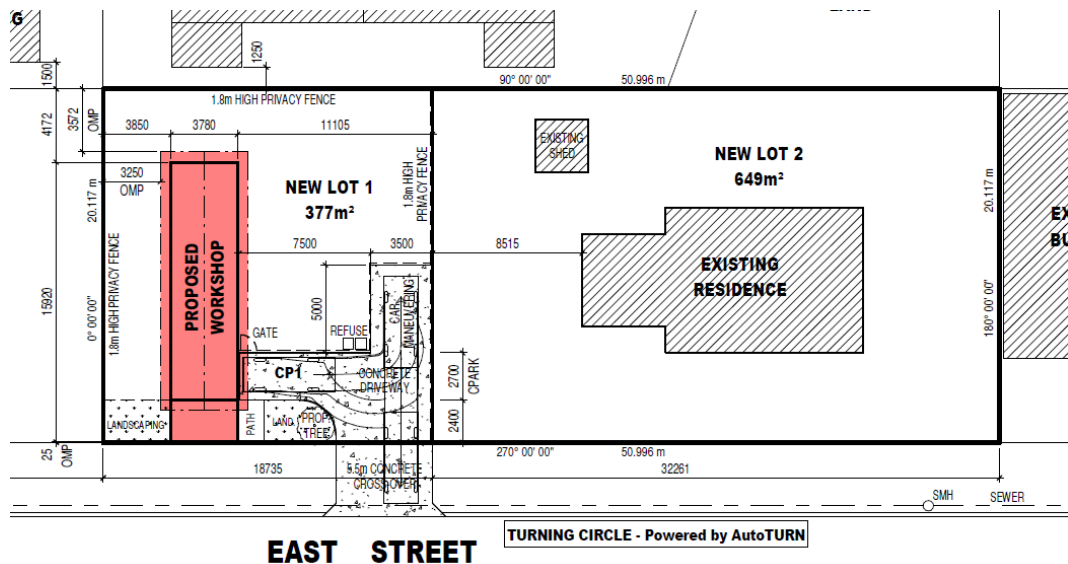
Figure 55 – Site plan for construction of showcasestudy homeworkhouse, "12 Blues Bar" at 88 East Street, Clifton

Finding form

12 Blues Bar at 88 East Street is one expression of the essence of experience for a homeworkhouse using a vernacular pattern language derived for the place of Clifton, Queensland, Australia.

With reference to Fisher and Crozier's (1994) checklist of attributes of *The Queensland House*, *12 Blues Bar* exhibits primary differences in the use of:

- galvanised iron (tin) materials as external wall cladding;
- plywood timber panels as internal wall cladding and ceiling lining; and
- lowset slab-on-ground construction (primarily to ensure ease of wheelchair accessibility)

Despite these variations, the direct reference to the original blacksmith's shop on the adjoining property, means that, in context, *12 Blues Bar* is arguably vernacular, in particular in the use of galvanised iron (tin) materials in its expression; in this regard *12 Blues Bar* is also more 'shed-like' and typical of other rudimentary buildings which prevail throughout the Toowoomba region. (See page 44 of the book).

Sustainability assessment

<u>Compliance with building regulations</u>

12 Blues Bar complied with all statutory requirements for ecological sustainability and green building design. The energy efficiency rating of the building could be improved however, with the installation of electricity generating solar panels and a solar hot water system.

<u>Smart and Sustainable Homes</u>

12 Blues Bar has also been assessed in accordance with the Castle Criteria – see Appendix 6. 'Sustainability' is the 's'-word in the quantitative side of the Castle acronym. An expanded sustainability assessment has been done in relation to the relevant provisions of the Queensland government's *Smart and Sustainable Homes: Designing for Queensland's Climate* (DPW 2008) publication, as follows.

Climate zone

Clifton is in the warm temperate climate zone (DPW 2008:3). The following assessment of *12 Blues Bar* has been done in relation to Queensland-wide provisions with refinements as required for building in the warm temperate climate zone.

Building plan

Building shape

As recommended for the warm temperate climate zone, a long thin plan has been adopted, to allow easy cross ventilation in warmer months. The building can be closed to slow air movement. Cold south-westerly winds can be blocked by closing the doors/windows to the southern veranda and western walls.

Orientation

The ideal orientation of *12 Blues Bar* is to have the long axis of the building face north. This was a trade-off in the siting of the building, largely as a result of the planning scheme requirement to front East Street. Nonetheless, the rear spaces receive good solar access particularly during the colder months when the sun is relatively low in the sky. Generous eaves ensure that the walls are shaded during the warmer months. Internal curtains also provide necessary shading of internal spaces in the early and late hours of the day.

Ventilation

The long-narrow one-room wide building provides for good cross flow ventilation which can be controlled by which windows are open in each room. The building can be closed to retain internal heat, including thermal mass in the concrete floor, which is released at night.

Solar access

See orientation above.

Building material

Construction

The building is lightweight, with insulation in the roof and walls. The concrete floor, when heated by the sun during colder months, radiates heat back during the night. All windows and glass doors are tinted.

Colour and texture

Clifton experiences extremes in temperature: normally from -5 degrees Celsius through to 40+ degrees Celsius. A balance in the external colour and texture of the building has been struck in this regard by the use of muted grey corrugated iron for the roof and all external walls. Internally, there is a sense of warmth and cool in the unfinished plywood walls and polished concrete floor, accentuated when the building is either opened up (typical in warmer months) and closed (typical in cooler months).

Insulation

Insulation has been provided to the ceiling and walls, adding to the ability to moderate the internal temperature of the building.

Social sustainability

Human comfort

Consideration of the above factors demonstrate that the building is thermally, visually and acoustically comfortable.

Human health

The building is light and airy. No toxins are present in the building materials nor used in the construction process.

Safety

The building has been planned, designed and fitted with features to ensure safe access throughout, including seamless movement from the pathway to the front of the building. Threshold mats to enable ease of wheelchair access, have been installed at each main entry/exit to the building.

Security

All reasonable fixtures and fittings such as lockable doors and windows have been installed to protect the building from intruders. Informal surveillance of the yard, street, and neighbouring properties is ensured through strategically located windows and doors.

Universal design

Design for access

The rooms and hallway in the building are wide enough for people to move around to avoid accidents and collisions. The bathroom has been specially designed for wheelchair accessibility.

Design for flexibility and the future

Flexibility is fundamental to the design. The rooms in the building are capable of conversion to a wide range of uses over time, and according to the wants and needs of occupants. The building has been sited to allow extension to the east, west and north as required. Features in this regard include the relatively high pitching point of the roof over the main building; extensions under skillions or gable rooves are possible whilst ensuring ceiling heights meet minimum required dimensions. Rooms are big enough, doors are wide enough, and taps and handles are easy to use for a variety of living and working conditions. Reinforcing has been made to the bathroom walls to enable mobility aids to be installed if required.

Sense of community

The building is built up to the front boundary of the site. The veranda provides an important public interface which addresses the street and adds to what may be called a 'gift' to the community in terms of helping create the mixed use character of the East Street streetscape. The potential multiple use of the building is also a community benefit, in particular providing the opportunity for living and working close to the main street of the town centre.

Poetic dwelling
<u>Climate change</u>

Through limited lived and working experience, the building has performed well even in the extreme climatic variations which occur in Clifton. One winter evening the temperature plunged to minus 5 degrees Celsius; all that was required to heat the building for a comfortable night's sleep were two 'eco-column', air-based (not oil) heaters – one each in the front and rear spaces – and a towel rail heater in the bathroom. In contrast, in summer, when daytime temperatures were close to 40 degrees Celsius, the screened southern veranda proved to be the space of choice; the one-room wide configuration also enabled cooling cross flow breezes during the summer nights.

<u>Material change of use</u>

The interior treatment of *12 Blues Bar* respects and reflects the results and realisation of the research. The vernacular is present in the polished concrete floor, the unfinished plywood panelled walls, and the unfinished exposed rafters and collar ties. A mild 'steam punk' appears in the lighting fixtures and appliances to reflect the underlying hard-working ethos of the building. A black-painted chalkboard provides opportunities to list the days' or nights' jobs or menu.

'Black' is also in the bathroom walls and tiles, and the 'black-out' roller blinds fitted to all floor-to-ceiling windows and sliding glass doors. Improvements in the performance of slow-combustion wood-burning stoves means that the black fire-box can be placed very close to the wall, which in this instance also enables a view of the back yard, complete with silky oak tree, protected throughout the building phase.

In setting up the building to demonstrate the variety of uses to which the building could be put, (see pages 53-57 in the book) it became apparent – notably from enquiring locals – that in Clifton, *12 Blues Bar* would be ideal for the start-up creative wanting (as I was wont to say) "a small, sustainable, affordable place in which to live, work, learn, invest, innovate and play, in the suburbs"!

As also described in the script to the video: "The veranda is screened and cool. Folding doors open the veranda to the first of the flexible spaces: ideal as a living room, office, shop, or

performance or exhibition space. Past the universal bathroom is the bar with a bedroom and writer's space overlooking the small back yard."

Of note is that unfurnished, the spatial ambiguity in the design challenges the user to creatively determine what each of the spaces could be used for. The owners of "Clifton Garage" – kind suppliers of the vintage motorcycles featured on page 57 of the book – were especially impressed with the idea, only their building would have to be bigger. As enquiries from promotion of the sale of the building have proven, the building would suit a single person or close couples who might choose to live in the spaces to the rear and lease the front for a business.

Pondering performance

Impromptu musical performances have proved the performance of the performance + exhibition space which opens naturally onto the veranda for larger audiences. As suggested above, some motorcycle maintenance has also been achieved. Beer, wine and pizza have been consumed at the bar.

Cooling breezes flow naturally through the one-room wide building, perfect for comfortable sleeping on a hot summers night. Very little heating has been required even when outside temperatures have dropped to minus 5 degrees Celsius.

The writer's space has a zen view of the small courtyard, where we have sat drinking in the sunset. The veranda, however, is where we have spent most of our time, pondering the next steps in the creative suburb adventure.

The book

Selected building designs

Throughout the research process a range of generic and poetic building design patterns appeared. These were recorded in a work-in-progress list, primarily to prescribe a possible range of design *forms*, *arrangements*, *types* and *styles* ('fats') to suit the diversity of vernacular/creative industry and occupation revealed even in the small sample of CIWs interviewed. In a tilt to turning the tide and taking away the title of having the fattest houses in the world, these Toowoomba-tailored 'fats' are:

- **Water shed** – all Australian boys and girls need one – a cool, refreshing place in which to relax, restore and replenish – a central purpose in life

- **Work shop** – quintessential Australian place to make and sell wares

- **Art hearth** – a warm embracing place to inspire creative activity

- **Curio studio** – from a small bureau/cabinet to a studio where creatives spend most of their time

- **Light house** – an open well lit space for enlightened activity and illumination

- **Air craft** – an open airy space for creatives and sparks that fly

- **Ware house** – a space to store and work on wares

- **Echo chamber** – an enterprising creative homework opportunity for musicians and others who love (or need) to hear themselves think

- **Storage cell** – a sturdy sound proof storage space for experiments, inventions, and dirty or dangerous deeds

These metaphorical titles became the names for the selected range of the concept homeworkhouse designs featured in the book, one of the two creative outputs of the creative suburb research. The second creative output, the building, "12 Blues Bar" at 88 East Street, Clifton is featured in the book and the related video *The creative suburb: building and urban designs for suburban innovators.*

The design, content and communication of the book of the same title is rationalised in the following sections.

The book cover graphic – the Malcolm John Wood tartan

The idea of a 'tartan grid' inspired the design of a unique urban pattern: called (and branded) the "Malcolm John Wood" tartan, as it relates to my European ancestry, including that my surname "Holz" means "Wood", and with respect to the possibly more politically correct reference to the Scottish origins of the tartan cloth.

The Malcolm John Wood Tartan is shown in Figure 56. The warp is north-south (up the page) and the weft is east-west; there is also the selvedge where the threads are tighter together at the edges, running with the warp. "Pocket" parks can be generally randomly woven into the lighter centres (parks not shown in Figure 56). The web is based on the metrics of a real urban design grid, meaning that one could design an entire town out of this pattern.

Purple and dark green symbolise micro mixed use and streets/lanes respectively: it is to scale and based on a 57m x 130m block in a creative quarter of eight blocks interwoven with and/or bounded by four different – wide to narrow – scales of sage streets: boulevard (20 metres wide), parade (16 metres wide), promenade (10 metres wide), arcade (7 metres wide). [12]

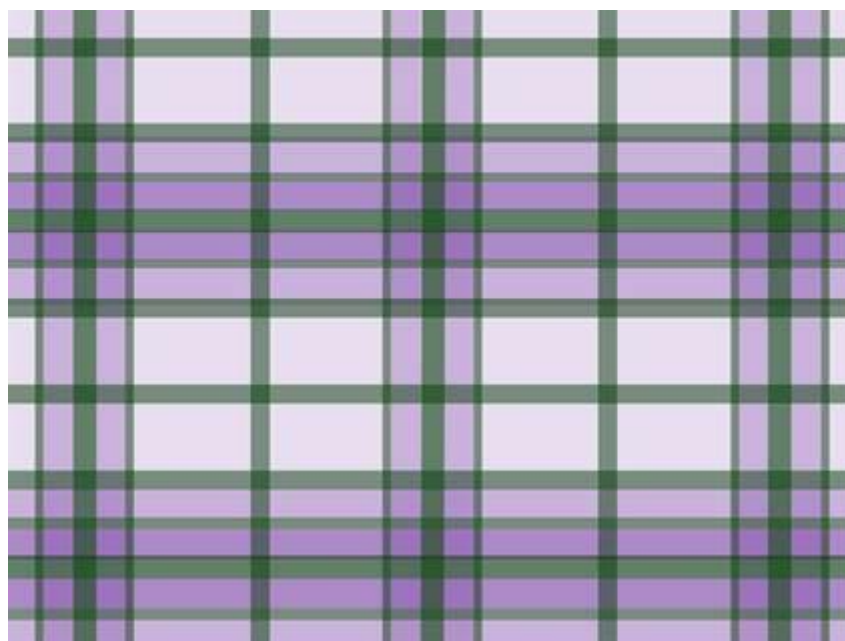*Figure 56 – Malcolm John Wood tartan*

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[12] In a tilt to buttering my bread and spreading the jam, my design patterns are meant to have rhyme, rhythm, reason amongst other musical concepts: generating through what I refer to as "place music" theory

The book structure

Clarity in how the book should be structured came very late in the process. In true phenomenological and creative-reflective research style, the essence of the experience was only revealed in a creative-reflective instant, following concentrated work in writing the personal story which I felt necessary to ground, illuminate and support the otherwise 'objective' facets of the research (to be evidenced in the/this exegetical work).

The approach and structure was highlighted in correspondence to a couple of critical colleagues (email 20 August 2013):

> For the exegesis I'm going 1.5 line spacing and 12pt font, as this is the explanatory analytical stuff that the academy is used to, and as I think I mentioned on fb, I have minimised the first person in this production. However the book is an entirely different matter: I'm going for square format, generally small font, lots of images, and an interwoven and very personal and somewhat prosaic sub-text to support the line of "argument" or points being made.
>
> I've discovered that I cannot work just in one document, so presentation, exegesis, and book have been generating together; inevitably I'm copying and pasting between all three, and it's fascinating (to me) to see how effective and productive this process is. Last Friday I had stuff everywhere, and as a result of a small epiphany around lunch time, I realised I had everything I needed to commence the presentation and exegesis almost already done. In the last four days, in amongst other "work", I've amassed 20,000 reasonably good words for the exegesis, and have a draft presentation including quotes and a written speech…. The content of the book is also there, but it needs to be collected and formatted. My point is that I've been fortunate to be able to work my arse off over the last six months, including almost daily entries to my reflective journal/s and the content has emerged, it just needed me to see how it could be pulled together: once over that conceptual hurdle, I was away, and it is actually enjoyable…

These moments of creative-reflective insight have been welcome, comforting, critical, and genuinely inspiring products of this research project, legitimising (at least in my mind and lived experience) the essentials in and of my phenomenological approach. This dedication resulted in text which materialised, felt and falling in a flurry one bitterly cold evening in the hut at 88 East Street, Clifton (on or about 13 July 2013). This text became the guide for structuring the expression of the book, and as it turned out the first draft of the PowerPoint presentation of the research.

The original expression of this reflection-on-action included a chapter entitled "the reflective pond", including an articulation of the phenomenological tools which I have developed and

used in practice over the last 20 years or so. However, it was not deemed essential enough for even the first draft of the book. The personal story which led to 88 East Street, Clifton however was retained to give important context for the specific building design approach and design models developed.

Other variations to the structure of the second and additional drafts emerged through subsequent reflective analysis of the order in which the book might be read. Special attention was given to determining what:

- needed to be stated to give context and rationale to the building and urban designs presented; as well as
- what was not needed to be said allowing the reader to come to their own conclusions about the efficacy of the product and process as well as letting the images and illustrations tell the story in 'a thousand words' each.

One of the major changes from the first to the last draft was the exclusion of the chapter entitled 'a work in the vernacular', although the vernacular was retained as a common and important theme: the word 'vernacular' connects the words' common use in architecture (without architects) with the outcomes of leading research into a creative suburbia and vernacular creativity (respectfully challenging creative city and creative class concepts), and provides a theoretical springboard for the development of a (new) 'vernacular suburbanism' which is a feature of the book, a tryst in the tale of new urbanism as it continues to unfold in Australia.

The book was ultimately structured as follows:

A LIFE'S WORK IN QUEENSLAND

This chapter provides important background into the experience of living, working and building in Queensland including discussion supporting: the inclusion of the quintessential veranda and importance of a vernacular approach; the traditional and contemporary origins of the homeworkhouse in Queensland; and a summary of the emerging and arguably highly progressive regimes regulating development of live-work buildings and operation of home-based business notably in the Toowoomba region. All points to the possibility of micro-small mixed use everywhere.

THE HOMEWORKHOUSE

This chapter outlines the background and process involved in the ideation and development of the homeworkhouse building designs. The chapter features discussion on the form, arrangement, type and style of the building designs, rationalised with regard to the typical dimensions of domestic buildings and their siting on a 'learning lot'.

A PLACE OF ONE'S OWN

This chapter connects the creative and reflective streams in the research which underpins this work, through the telling of a personal story and journey to the site where the showcasestudy homeworkhouse was built in my home town of Clifton, Queensland. This chapter includes an outline of the options considered in arriving at the built design, a brief analysis of its commercial viability, and a series of images of the fully furnished and fitted out building demonstrating the flexibility of the spaces in what is the smallest in the creative suburb series.

THE CREATIVE SUBURB

This chapter explains how the aggregation of learning lots fit in relation to their situation in a ba block and sage street and their location in relation to performance parks; all of which leads to the making of some suggestions for a (new) creative quarter and knowledge neighbourhood design/s for CIWs, to establish how micro-small mixed use or home-based business may lead to mixed use everywhere in new greenfield suburbs in Queensland.

THE DEEP END

The penultimate purpose of the work is to encourage if not inspire creatives (including those in property development) to consider building and suburban designs that are more aligned and supportive of the dawning of a new creative suburb; building and urban designs that might just help all of us on and along a creative road (less travelled). The deep end includes a short prosaic piece to wrap the book, as well as resource references and definitions of the new creative suburban terms used.

The book style

There is a plethora of publications collected throughout my career and through this research program which reflect the style of language and graphics used in the book: the building and urban designs are modular and in squares; and to achieve the Castle criteria, the building and urban designs have tended to be micro-small. The result is a small square book, which uses the Malcolm John Wood tartan as a graphic theme for the cover.

There are, however, three key references which shed light on the style of the creative suburb book by way of comparison and contrast. These publications are: *Live-Work Planning and Design: Zero Commute Housing* (Dolan, 2012); *Live-Work: Working at home – living at work* (Dietsch, 2008); and *Spaces of Vernacular Creativity: Rethinking the Cultural Economy* (Edensor et al., 2009). In my readings and reflections I concluded there was a range of attractors and detractors at play in these books: Dolan is technical in style; Dietsch considers only relatively large buildings when it comes to the size and location of the live-work houses featured; and Edensor et al. are distinctly academic in their output. However, Dolan is essential in relation to the detailed design and regulation of homeworkhouses and provided a useful model for the technical facets of the book; Dietsch is easy to read and highly aspirational in its expression, and was therefore another useful model for those facets of the book; and the conversational style of most contributors to vernacular creativity was a relaxed contrast to the high-style prevalent in much of the academically-argumentative literature otherwise sourced in this research project.

The creative suburb: building and urban designs for suburban innovators is therefore pitched in-between, featuring a blend of these three styles – technical, aspirational, conversational – although with a slightly more 'popularist-playful' twist, to reflect the vernacular orientation of the work, including the idiosyncrasies of its author.

Conclusion

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The final questions

The conclusion to this research project is reflected in the answers to the following set of questions. The questions represent the research themes which emerged through the ebb and flow of the creative and critical work undertaken:

- What are the origins of the creative suburb research?

- Why are CIWs in particular choosing to live and work from home in the suburbs?

- What conditions might be required to entice CIWs to newly developing suburbs?

- What dreams, aspirations, wants and needs do CIWs present, particularly in terms of the house, but as well, the location in which they might want to live and work?

- What are the resultant spatial requirements for the building, and what important contextual features should be planned for?

- What home-based business opportunities are available in Queensland, and what has been the industry's response?

- What are the opportunities in the Toowoomba region?

- Could a suitable site be found to build a prototype or showcasestudy homeworkhouse in the Toowoomba region?

- Is the prototype viable with respect to the Castle criteria outlined in Appendix 1?

- Could the building designs be appropriate for other than CIWs?

- What broader relevance and contribution do the answers to the above have beyond the Toowoomba region, notably in relation to practice in the creative and property development industries?

Research origins

The creative suburb has its origins in three bodies of work. The first is in concepts of the creative class (Florida, 2002, 2012) and creative city (Landry, 2008). Both Florida and Landry have raised awareness of the importance creativity plays in making vibrant, healthy and prosperous cities. Following Florida's work, however, the creative class has become central to what has turned out to be city-centre-centric growth policies. The creative suburb research thus asked: what if you happen to be a CIW – part of the 'super creative core' – who can't afford

a place in the city centre? What if you don't like city centres? And what if your work relies on commissions which can be worked on remotely or anywhere there is a reasonable internet speed?

The second body of work is being led by the likes of Johnson (2012) who researched the distribution of employment and the geography of the knowledge economy throughout Melbourne. Johnson postulated on the potential for a suburb to attract jobs in the knowledge economy if a specified selection of inner-city suburban conditions could be replicated.

Density and diversity therefore became key aspirations for the creative suburb, especially to achieve at least 35 people and jobs per hectare which Newman and Kenworthy (2006) suggest is when dependence on the car is substantially reduced. Could this be achieved in a new suburban situation? It is interesting to note that Florida (in Dunham-Jones & Williamson 2011: vi, vii) acknowledges walkability and density as keys in attracting the creative class into a retrofitted suburb; presumably this is the case for a new suburb as well.

The third body of work is what I have called 'creative suburbanist' (Gibson & Brennan-Horley, 2006; Brennan-Horley & Gibson, 2009; Edensor et al., 2009; Collis et al., 2010; Gibson C et al., 2010b, Brennan-Horley, 2010, 2011; Flew, 2012; Felton & Collis, 2012; Luckman, 2012; Bain, 2013; Felton, 2013), which openly challenged creative city and centre-centric concepts. The creative suburbanist research revealed that a substantial cohort of CIWs in Australia is also working in the suburbs, often in their residential spaces. Under the house, in the shed, in the back room: creative industries work is happening, contributing to economic and cultural growth of the city-region as a whole. The creative suburbanist research confirmed there is a spread of creative culture throughout the city and in the suburbs. The problem is, of course, how well has a place been planned and designed in response to these findings?

So the research challenge became to determine what conditions would suit CIWs if they were to be enticed to live and work (dwell) in a greenfield suburb. The question: is it that the dwelling house and work place may no longer be 'here' and 'there', but rather closer, connected, or possibly coincident, and in a newly developing suburb?

Creative reflective practice + phenomenology

The research into reflective practice led me to conclude that there are three basic methods in reflective research, with revelations emerging as a result of reflection with: oneself (self-reflection) (see Schon, 1983); another (guided-reflection) (see Johns, 2000); and on other data (results-oriented –reflection) (see Webster & Mertova, 2007). In addition, the research into reflective practice rekindled a long-held interest in phenomenology, during which I discovered the leading and comprehensive work of Embree (2006), who posits that phenomenology is fundamentally (about) "reflective analysis".

The phenomenology connection lent significant support to the vernacular theme which runs through the creative suburb research; Seamon (1991) supports the link between the vernacular and what it means to dwell – to live and work – in basically the one place, the essence of the homeworkhouse and the creative suburb. In addition, in the pursuit of a phenomenology of reflective practice, I determined there were three broad categories of what I came to call 'creative reflective practice' in play in the creative suburb research: (1) metrics (detailed measured drawings and mathematical analysis); (2) mechanics (detailed expressions of planning and process); and (3) metaphor (poetic/artistic expressions and resemblances). All three creative-reflective approaches are required in design, but it is in the metaphors where the inspiration (to design, to study, to reflect) were sustained.

People and place narratives

The creative suburbanist research set the foundation for this work. The interviews confirmed the creative suburbanist research findings, and helped establish a set of poetic and other parameters and patterns which flowed, primarily through the building designs, and, to some extent, the urban designs. A very clear consensus emerged between interviewees, industry practitioners and others, on some basic design principles and requirements: CIWs want light and air, at least a courtyard outlook, a veranda, and if at all possible a garden; and they also want to be able to walk or cycle around a neighbourhood and be close to parks, shops and other services. The latter are factors which flow through the creative city literature (Landry, 2008; Ebert & Kunzmann, 2008; Kim, 2008; Florida, 2009, 2012); whilst the former figure large in the creative suburbanist literature (Felton & Collis, 2012; Felton, 2013).

The contextual and literature review worked in parallel with a geo-spatial and density analysis of one of the most creative cities in the world, San Francisco. If 2.5 people per dwelling,

dwelling density is around 27duha or 67 people per hectare. This became the target for the creative suburb; if the number of jobs could also be generated, about 1.3 jobs per dwelling at 27duha.

Melbourne was cited by most of the interviewees as possibly one of the most creative cities in Australia. If 2.5 people per dwelling, Melbourne's metropolitan areas' dwelling density is around 10duha or 25 people per hectare. By comparison, Toowoomba (city) takes up about the same area as the City of San Francisco peninsular, whilst the Toowoomba region takes up about the same as the entire Melbourne metropolitan area, the regional density is around 0.04 persons per hectare. As noted early in the research, to achieve 35 people per hectare is relatively easy – if 2.5 people per household, only 14duha is required – the Toowoomba challenge is that the most recent suburban residential development runs at only about 8duha.

The Toowoomba opportunity

On the face of it, the Toowoomba region held great promise for the creative suburb research; not only is the Toowoomba region one of the most suburbanised in Queensland – where a creative suburban intervention would be very obvious – the Toowoomba regional planning scheme comprises some of the most progressive regulatory provisions in the country.

However, as the research deepened in response to the numerous building and siting design studies undertaken over sites in Toowoomba (city), the real opportunity arose serendipitously in my hometown of Clifton. The primary opportunity was in the relative affordability of 88 East Street, Clifton. But, the small country town also arose as an idea to balance and bridge the city-country contradiction evident in some of the suburban-dwelling CIWs interviewed; those CIWs who may desire not only city centre-like vibrancy, intensity, and community, but, as well, demand country-like space and serenity for effective creative activity.

Research relevance

Prior to becoming aware of the creative suburbanist research, I had intuitively sensed from my own personal and professional quest that the property development industry and government policy in Queensland needed an overhaul, notably to overcome an ongoing obsession with delivering houses in suburbs solely for residential occupation for an ever-diminishing, if not mythological family of Mum, Dad, two kids, Commodore and labrador. Most of my family, friends and professional colleagues do not fit this demographic, and just about everyone I have asked through this research project – formally and anecdotally – has their own stories about

the desire to have not only a place of their own, but a creative space of their own, usually in the suburbs where space is typically more affordable than close to the city centre.

The continuing contextual review provided the basis of a suburban design approach which meets current best development industry practice and supports emerging and progressive planning and design regulations, particularly those evident in the Toowoomba regional planning scheme.

The ongoing literature review continually challenged yet guided the direction of the research, notably in contrast to – but at the same time acknowledging the significance of – the works of highly influential creative industries and creative place thinkers such as Florida (2002, 2012) and Landry (2008).

The Australian presence in the creative suburbanist research (e.g. Gibson et al., 2012) and the fact that the QUT ARC-sponsored creative suburbia research was driven by Queenslanders (e.g. Felton & Collis, 2012), proved an inspiration and support for extending the culture of innovation thriving in some quarters of this state.

This commitment to innovate is also a feature and fundamental in the manner in which the book was produced, ostensibly using creative reflective practice, which I feel courageous enough to proffer as another nuanced methodology which has the possibility to progress the professional practice of reflection also, arguably, being led out of the QUT (e.g. Haseman, 2006).

The building designs draw substantially on the adoption of a vernacular approach, which has the potential for application and inspiration beyond this state and country. Indeed, the practice-led and industry-embedded vernacular nature of the outputs of this research has the potential to avoid the criticisms typically – and quite rightly – aimed at architects who take a moral high-culture ground in the battle against suburban sprawl.

Early indications – notably via assessment of *12 Blues Bar* against the Castle and in particular recognised sustainability criteria relevant to Queensland conditions – are that the homeworkhouse designs could easily compete with and be a more attractive, robust and flexible proposition than mainstream, domestic and traditional suburban housing designs. The homeworkhouse designs also do more than tilt at taking away Australia's dubious title of

having the fattest houses in the world; in many ways they reflect a burgeoning micro-property movement, which nonetheless respect those of us with mobility and other physical challenges, who should find it easy to manoeuvre in what are small houses by current Australian trends.

In this regard, the percentage and number of CIWs as against other professions and workers is small, if not insignificant. This is an issue when the research is focused entirely on CIWs who make up such a small proportion of the working population. The focus of the creative suburb is however suggesting a universal need to change the way we think about planning and designing suburban houses, per se. Not only is this in increasing densities to a sustainable level (Newman & Kenworthy, 2006), but in the form type and arrangement of spaces within the house itself. The 'flex' and 'flux' of life is not restricted to the CIW. Flexibility is the new sustainability.

The relevance of this research may therefore be in the potential to inspire a dramatic change in the face of new suburbia in Australia, for not only those workers in creative industries (CIWs do not have a monopoly on creativity), but for all productive and creative people who may want a choice in how they live and work within their home; an accountant may love motorcycles. In essence, a performance exhibition space is a 'shop' by any other name, or it could be an office for any business requiring office space. A workshop storage space may be great for the motorcycle enthusiast, carpenter, or for those of us who are compulsive hoarders or collectors. A writer's residential space could very well be the home office for anyone involved in running a business and having to deal with the administrative side of things after hours and at home.

This brings the creative suburb into a far more expansive area of influence and relevance. Whilst the buildings (and resultant urban designs) have been done for CIWs, the spaces that could be created within them are suitable for anyone wanting to undertake a micro-small business from home. In all respects the buildings have a fall-back or –forward position, in that they include flexible spaces which can be simply used as a residence. It's this flip-flop opportunity to readily adapt the building for this variety of uses which is the penultimate advantage, something which would be highly attractive to the investor.

A crucial consideration, as revealed through the interviews, is their positioning; is it the particular vernacular style of the buildings, is it the flexibility, what is it that would be suitable

for the mass market, or should it be focused towards the creative of any persuasion? In addition, the context is greenfield suburban; the next phase of research would be to take the creative suburb concepts to retrofitting suburbs, and in a sense 88 East Street, Clifton is already a step in that direction.

I am acutely aware of the nostalgic undercurrents in both streams of this research; including the road trip which led to 88 East Street, Clifton. However, without this explication, exploration and explanation I doubt I would have been open to discovering what promises to be a genuinely commercial, affordable, sustainable, titleable, liveable and experimental opportunity; what *12 Blues Bar*, the showcasestudy homeworkhouse @ 88 East Street provided.

Final words, further research, commercial potential

The creative suburb research project set out to produce a book, a building, and exegesis: the scholarly credentials of the research are, hopefully, evident in this exegesis; the performative features of the research are readily evident in the building; and both critical and creative facets present themselves to varying degrees in the book.

But, as it seems typical in all scholarly research projects, there's more. In particular, the material commerciality of the building has not been tested. Time will tell whether *12 Blues Bar* will be sold or leased and for what price? How might it stack up in the longer term, including post-occupancy research of the lived and work experience of its occupants? Will it ever be used by CIWs, and for what purpose/s? There are, even at this late stage, temptations to take a few more steps, for example, to hold some micro-small musical performances in *12 Blues Bar* to genuinely test the performance of the performance + exhibition space. Needless to say that a 1:1 scale model should have some longevity and therefore provide opportunities for further research in whatever form this may take.

One of the distinct possibilities for further research relates to the relatively small scale of *12 Blues Bar.* At 60sqm, including the front veranda, this building qualifies as a small homeworkhouse; could the creative suburb building design concepts be taken into micro-small buildings for micro-small or perhaps big business?

The creative suburb research has also revealed that there are issues of building construction and classification and land use definition when the dwelling and the business are separately defined and/or occupied by someone who is unrelated to the primary occupant. These issues may impede the widespread establishment of homeworkhouses in greenfield suburbs, warranting further research into whether a new zone, land use definitions, and changes to building classifications could be introduced, and if so, what would these changes be?

And, of course, there's the book. The temptation is to distribute copies to critical colleagues and potential publishers for review in order to test its value in creative and commercial terms. This remains unchartered at the conclusion of this phase of the creative suburb research. Needless to say, one of the ancillary outcomes has been to purchase the intellectual property to a number of related domain names, including creativesuburb.org and creativesuburb.com. It is intended that regardless of the outcome of this research, a website will be launched to promote the sale of *The creative suburb: building and urban designs for suburban innovators* book. This website may also become a home for an ongoing expose of live-work buildings and creative suburban design at least in Australia and possibly worldwide.

In conclusion, it is therefore worthy to note that the concept of a creative suburb has already received some interest. A paper presented at the Sustainable City 2014 conference in Siena has been published in the Sustainable Development and Planning 2015 Conference Proceedings (Holz 2015). There are other papers in production, including for a number of refereed journals.

At the time of writing, *12 Blues Bar* has been shortlisted for possible publication as part of the *Lifestyle Home* channel *Tiny House World* television show as it fits under the 70sqm floor area limitation set for this production.

All of these are distinct, unexpected, opportunities.

I attribute these opportunities to the very nature of a practice-led, industry-embedded, action-research project.

Without the building, there would be no prototype to promote nor test the product of the research.

The book packages the promise, postulations, and possibilities of the research, including photographs of the built product, which, to me – and hopefully others – proves the plausibility of at least one of the designs in the creative suburb series. It is paramount and penultimate to note: the showcasestudy homeworkhouse was, after all, approved and built in accordance with all relevant planning and building regulations in force in the Toowoomba region!

The exegesis contextualises both the book and building in critical, yet simple terms, having potential appeal to the academy and an otherwise informed or interested audience.

I commend to you *The creative suburb: building and urban designs for suburban innovators*.

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Appendix 1

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Castle criteria

commercial	creative
House and land package meets typical industry hurdle rates (say 25% gross margin on land development and building cost)	Building and urban designs meet or create new or emerging best practice (e.g. innovative solutions adopted in guidelines, information sheets and state and local government policy)
affordable	**adorable**
House and land package is affordable to households on low to moderate income (household income between $44,000- $105,000)	Building and urban designs are favourably received by community/market and/or receive awards from planning, design, and/or development industries (e.g. Planning Institute of Australia research or best practice; Design Institute of Australia new ideas; Urban Development Industry of Australia small project)
sustainable	**spiritual**
Building meets relevant Building Code of Australia sustainability criteria.	Building and urban designs meet the dreams, aspirations, wants and needs of creative industry workers as developed and tested during design workshops and through post-occupancy evaluation of showcasestudy homeworkhouse.
titleable	**tenable**
Building is on its own freehold titled lot and is not subject to a body corporate under the Body Corporate and Community Management Act 1997	Buildings are an attractive option for investors (e.g. the benefits of flexible spaces are recognised by occupiers and visitors to the showcasestudy homeworkhouse at 88 East Street, Clifton).
liveable	**lovable**
Building meets, exceeds or establishes building and planning regulations relating to health, safety, amenity and crime prevention (e.g. innovative solution with respect to crime prevention through environmental design CPTED criteria)	Building and urban designs gain industry attention and are widely adopted or adapted and delivered in new suburban development throughout Queensland (e.g. builder/developers seek planning, design and development assistance from the author/researcher as a result of publication of the e-book and construction of the showcasestudy homeworkhouse at 88 East Street, Clifton)
experimental	**essential**
Building has unique features or solutions with evident potential to influence the field or industry practice (e.g. detached homeworkhouses on micro-small lots achieve similar density to medium density apartments)	Building and urban designs express the essence of the experience of living and working from home (e.g. designs exhibit flexible spaces to cater for a wide full range of creative industries including: commercial – office/administrative space; retail – sales; industrial – artwork manufacture/assembly, workshop; residential – house, day care; arts – music, painting, sculpture, dance, crafts – studio; science – design laboratory)

Appendix 2

Design workshop agenda

Toowoomba Regional Council and University of Southern Queensland present:

TRUDI Workshop 7 – Urban design and the CREATIVE SUBURB / KNOWLEDGE ECONOMY	
What will you do?	*Participate in a day long workshop with some of South East Queensland's leading urban designers and thinkers* *Prepare ideas for Toowoomba's city shape in 2050* *Prepare experimental urban and building design ideas for residential CHOICE zoned land near USQ's Toowoomba campus* *Use techniques including urban tissues, psycho-physical analysis, and designing at different scales* *Participate in a design workshop, work fast and have fun*
What will you gain by taking part in this workshop?	*Learn more about the Toowoomba Region Urban Design Initiative, council's programme to encourage urban design excellence and make better places* *Increased awareness and understanding of urban design in the context of Toowoomba, the regional city, and the regional city university* *Get exposed to leading edge thinking on:* *Future regional city forms, and the SEQ Place Model (Peter Richards)* *Urban planning and design for the knowledge economy (Michael Kane)* *The creative suburb: a tool kit for urban innovators (Malcolm Holz)* *Improve your design, thinking and drawings skills through practical design exercises* *Get to know each other - Grow a creative partnership between council, university and industry* *Influence and inspire future urban and building design trends for this region*
When, where etc	Friday 8th March 2013 USQ Toowoomba Campus (room to be advised to attendees week before workshop)
Invitees	- Approx 30 - Workshop leader – Michael McKeown - Design leaders include - architect (TBC) urban designer (Michael McKeown, Malcolm Holz), and planning/design academic (Paula Grant). 10 urban and regional planning students (1st year) 6-10 TRC (reps from strategic, DA, engineering, property, councillors) 4-5 industry e.g. architects, engineers, planners, builders 3 USQ academics
Prep	- Invitations - council and industry (Jeyan) - Invitations and Studydesk info – USQ students and staff (Paula) - Room – Books room(s), table setup, seating arrangement, use of walls/whiteboard, projector (Paula) - Access to photocopier - Drawing kits and tracing paper (Peter) - Catering (Jeyan) - Reminder a few days before. What to bring? What to think about? (Jeyan)

	- Presentations (Peter, Michael K, Malcolm) - Psycho-physical sheets and map (showing terrace houses) (Malcolm) - Tissues (?) - Base plans (Exercise 1 and 2) - Flipcharts/giant post-its

Workshop plan

8.45am	Registration	
9 am	WELCOME AND INTRODUCTION - Welcome from USQ - Introduce the participants - Introduce urban design - Introduce TRUDI - Instructions for the day	
9.45am	URBAN PLANNING AND DESIGN FOR THE KNOWLEDGE ECONOMY - Questions	Michael Kane
10.30 am	Morning tea (order for 10.15am)	
10.45 am	EXERCISE 1 – DESIGNING THE KNOWLEDGE CITY	Groups
11.30am	GROUP PRESENTATIONS & DISCUSSION	Group leaders
12 pm	Lunch (order for 11.30am)	
12.30pm	EXERCISE 2 - SITE VISIT & PSYCHO-PHYSICAL ANALYSIS	
1.30pm	THE CREATIVE SUBURB: A TOOL KIT FOR URBAN INNOVATORS - Questions	Malcolm Holz
2pm	EXERCISE 3 – DESIGNING THE CREATIVE SUBURB AND BUILDING	
3pm	Working afternoon tea	
3.45pm	GROUP PRESENTATIONS & FINAL REVIEW	All
4.15pm	WORKSHOP FEEDBACK	
4.30pm	CLOSE	

Appendix 3

Design workshop assessment

TOOWOOMBA REGION URBAN DESIGN INITIATIVE
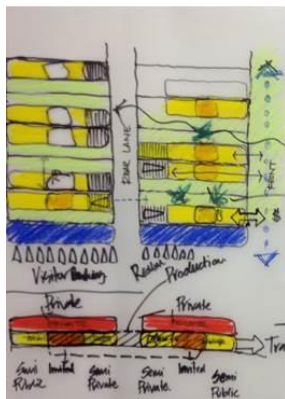
Thank you to everyone who attended Friday's (8th March 2013) workshop at USQ .

The range of experience and backgrounds in the room really contributed to making it a successful and dynamic day.

Special thanks to Michael Kane and Malcolm Holz for their thought provoking presentations – the significance of the words 'Knowledge Economy' will never again be underestimated!

The next milestone on the TRUDI agenda is the formation of an Urban Design and Placemaking Panel. Expressions of Interest are now closed so watch this space!
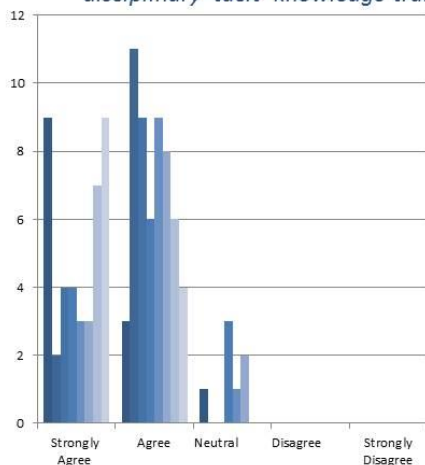

TOOWOOMBA REGION URBAN DESIGN INITIATIVE

"An interesting mix of participants from council, industry and USQ to cultivate cross-disciplinary 'tacit' knowledge transfer"

"...I haven't done this sort of design workshop before, I found it to be a great learning experience..."

"Great insight"

1. I found todays workshop enjoyable and stimulating
2. I have a good understanding of the Toowoomba Region Urban Design Initiative
3. The lecture sessions were informative and gave direction to the design sessions
4. The psycho-physical analysis is a great tool to understand how you feel about a site
5. The length of the workshop and breakdown of the sessions worked very well
6. The 'tissues' exercise was a great way to get a sense of scale and realise the potential of the site
7. Overall the design sessions were a great way to test ideas and skills
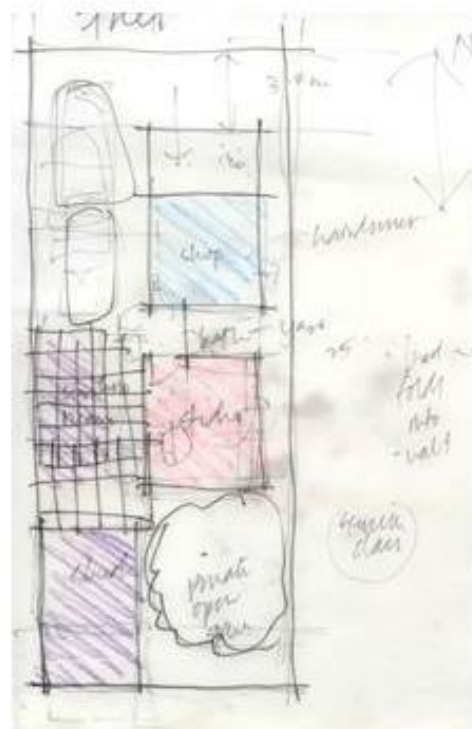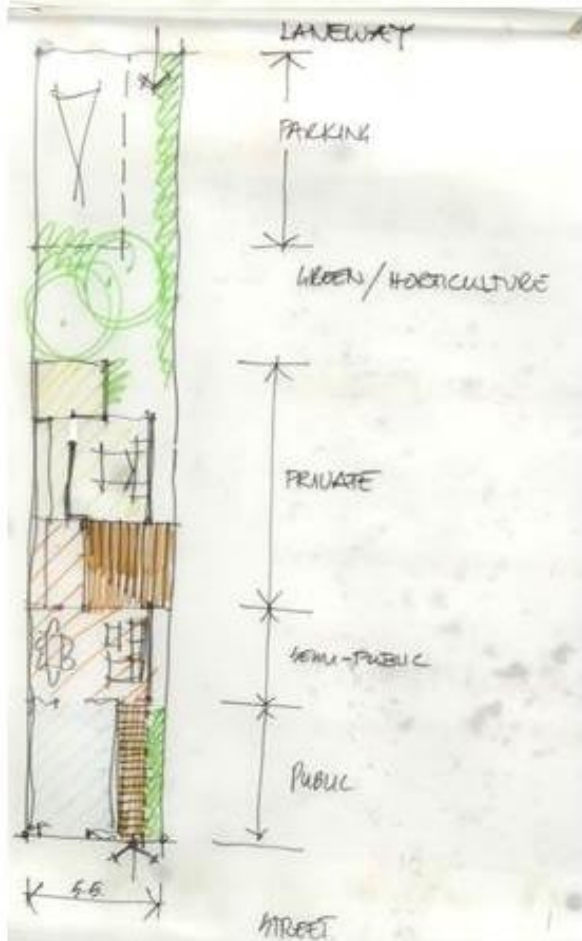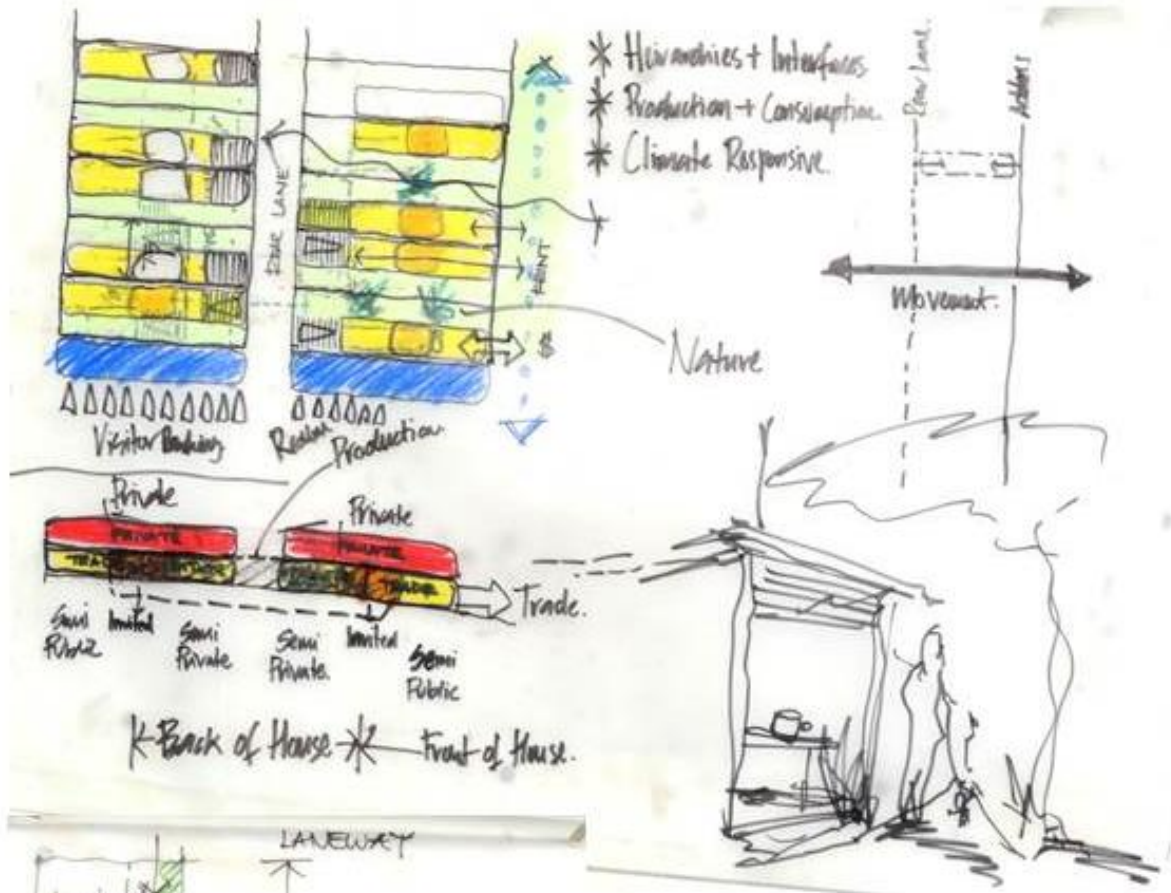8. I am supportive of the TRUDI program and look forward to participating in future events

Read the news release:

http://www.toowoombarc.qld.gov.au/about-council/newspublications/8606-trc-and-usq-team-up-to-shine-a-light-on-urban-design
http://www.usq.edu.au/news-events/News/2013/03/planning-workshop

Appendix 4

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Design workshop outcomes

Appendix 5

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Creative industries definitions – occupation/industry

The following lists of industry and occupation categories were selected by Malcolm Holz from data sourced from the Australian Bureau of Statistics by William Owen, Technical Director – Economics RPS Australia Asia Pacific Robina East Quay Corporate Park Suite 4, 34-36 Glenferrie Drive, Robina, QLD, Australia, 4226

13 August 2013

Industry Categories
Printing (including the Reproduction of Recorded Media)
Printing and Printing Support Services
Printing
Printing Support Services
Reproduction of Recorded Media
Photographic, Optical and Ophthalmic Equipment Manufacturing
Jewellery and Silverware Manufacturing
Entertainment Media Retailing
Toy and Game Retailing
Newspaper and Book Retailing
Clothing Retailing
Footwear Retailing
Watch and Jewellery Retailing
Other Personal Accessory Retailing
Stationery Goods Retailing
Information Media and Telecommunications,
Publishing (except Internet and Music Publishing),
Newspaper, Periodical, Book and Directory Publishing,
Newspaper Publishing
Magazine and Other Periodical Publishing
Book Publishing
Motion Picture and Sound Recording Activities,
Motion Picture and Video Activities,
Motion Picture and Video Production
Motion Picture and Video Distribution
Motion Picture Exhibition
Post-production Services and Other Motion Picture and Video Activities
Sound Recording and Music Publishing,
Music Publishing
Music and Other Sound Recording Activities
Broadcasting (except Internet),
Radio Broadcasting
Television Broadcasting,
Free-to-Air Television Broadcasting
Cable and Other Subscription Broadcasting

Internet Publishing and Broadcasting
Internet Service Providers, Web Search Portals and Data Processing Services,
Library and Other Information Services,
Libraries and Archives
Architectural, Engineering and Technical Services,
Architectural Services
Other Specialised Design Services
Advertising Services
Professional Photographic Services
Arts Education
Adult, Community and Other Education
Arts and Recreation Services,
Heritage Activities,
Museum Operation
Creative and Performing Arts Activities,
Performing Arts Operation
Creative Artists, Musicians, Writers and Performers
Performing Arts Venue Operation
Amusement and Other Recreation Activities,
Amusement Parks and Centres Operation
Amusement and Other Recreational Activities
Photographic Film Processing

Occupation Categories
Advertising, Public Relations and Sales Managers
Policy and Planning Managers
Research and Development Managers
Arts and Media Professionals
Arts Professionals
Actors, Dancers and Other Entertainers
Music Professionals
Photographers
Visual Arts and Crafts Professionals
Media Professionals
Artistic Directors, and Media Producers and Presenters
Authors, and Book and Script Editors
Film, Television, Radio and Stage Directors
Journalists and Other Writers
Archivists, Curators and Records Managers
Librarians
Sales, Marketing and Public Relations Professionals
Advertising and Marketing Professionals
ICT Sales Professionals
Public Relations Professionals
Architects, Designers, Planners and Surveyors
Architects and Landscape Architects
Fashion, Industrial and Jewellery Designers

Graphic and Web Designers, and Illustrators

Interior Designers

Urban and Regional Planners

Software and Applications Programmers

Welfare, Recreation and Community Arts Workers

Building and Engineering Technicians

Architectural, Building and Surveying Technicians

Printing Trades Workers

Print Finishers and Screen Printers

Graphic Pre-press Trades Workers

Printers

Textile, Clothing and Footwear Trades Workers

Canvas and Leather Goods Makers

Clothing Trades Workers

Upholsterers

Wood Trades Workers

Cabinetmakers

Wood Machinists and Other Wood Trades Workers

Gallery, Library and Museum Technicians

Jewellers

Performing Arts Technicians

Signwriters

Other Miscellaneous Technicians and Trades Workers

Gallery, Museum and Tour Guides

Library Assistants

Models and Sales Demonstrators

Visual Merchandisers

Photographic Developers and Printers

Printing Assistants and Table Workers

Appendix 6

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Quantitative Castle criteria evaluation

<u>Background notes</u>

The total rounded cost of the showcasestudy homeworkhouse at 88 East Street Clifton is summarised as follows:

- Land (estimated 2015 value of 377sqm lot) = $28,000
- Land development costs (including consultancy, development application, design, services and other fees) = $37,000
- Building (including fencing, landscaping and driveways) = $116,000
- Fit out and furnishing = $9,000
- Total cost = $190,000 plus 10% profit = $209,000 (principle and interest loan repayments if 100% financed with interest rate of 5.2% ~ $290.00 per week. The new property is estimated to rent for $180.00 - $200.00per week).

A detailed breakdown of the above costs is tabulated below:

Development	building design	6,300	
	dev't application TRC	4,863	
	civil engineer	7,425	
	mains water connect TRC	4,035	
	plumbing & drain TRC	1,355	
	sewer connection TRC	1,888	
	drafting	1,980	
	surveyor	2,757	
	surveyor	300	
	surveyor	110	
	titles reg'n DNRM	495	
	water pressure test	627	
	engineer	454	
	engineer	300	
	engineer	250	
	soiltech testing	530	
	building certifier	2,038	
	plan sealing app TRC	1,390	
Sub Total			36,997
Building	building & carpark	109,685	
	veranda screen	1,800	
	paving around slab	2,000	
	variations	2,100	
Sub Total			115,585
Fitout	plumbing fixtures	790	
	electrical fittings	1,100	

	bar stools	150	
	tower shelf	329	
	rug & manchester	359	
	blinds	600	
	work table	129	
	galvo top for work table	180	
	fridge	360	
	back rest bar stools	180	
	ikea kitchen fitout	200	
Sub Total			4,377
Other	landscaping	1,001	
	painting	100	
	tank	1,590	
	fireplace	1,700	
	fireplace installation	650	
Sub Total			5,041
Land	raw land	28,000	
Sub total			28,000
Total			**190,000**

Note that the above does not include project management costs which were borne by HOLZink Pty Ltd.

Castle criteria assessment

commercial	
House and land package meets typical industry hurdle rates (say 25% gross margin on land development and building cost)	The 88 East Street homeworkhouse is marginally viable and therefore risky if pursued on another site, particularly in the Major Centre zone in the TRC scheme.
affordable	
House and land package is affordable to households on low to moderate income (household income between $44,000- $105,000)	The 88 East Street homeworkhouse would be affordable to a household on an income of around $75,000 per annum – assumes a maximum 35% of the households income is spent on housing loan of $209,000.
sustainable	
Building meets relevant Building Code of Australia sustainability criteria.	The 88 East Street homeworkhouse met all relevant Building Code of Australia sustainability criteria.
titleable	
Building is on its own freehold titled lot and is not subject to a body corporate under the Body Corporate and Community Management Act 1997	The 88 East Street homeworkhouse is on its own freehold titled lot and is not subject to a body corporate arrangement.
liveable	
Building meets, exceeds or establishes building and planning regulations relating to health, safety, amenity and crime prevention (e.g. innovative solution with respect to crime prevention through environmental design CPTED criteria)	The 88 East Street homeworkhouse meets the current but relatively new provisions of the TRC planning scheme for the Major Centre zone in Clifton which incorporates CPTED innovations.
experimental	
Building has unique features or solutions with evident potential to influence the field or industry practice (e.g. detached homeworkhouses on micro-small lots achieve similar density to medium density apartments)	The relative flexibility of use of each of the spaces in the 88 East Street homeworkhouse is a marked departure from the way contemporary housing is being designed and delivered in the Toowoomba region. It is likely that the region's residents and visitors have rarely if ever seen a building such as this. The small lot on which the building is proposed fits comfortably in a suburban situation achieving around 30dw/ha, including the area of local streets and parks.

Appendix 7

Development application report

88 East Street, Clifton

Planning and Development Report

Combined Development Application for a Development Permit for:
- **Code Assessable Material Change of Use – Service Industry**

- **Reconfiguring a Lot (1 Lot into 2 Lots)**

Prepared by
Malcolm Holz
BAppSc(Blt Env)(QIT) GDURP(QIT) GDUD(QUT) BA(Hons)(USC) MDIA MAPRA
Director HOLZink Pty Ltd

Introduction

This report supports a Combined Development Application for a Development Permit for:

- Code Assessable Material Change of Use (MCU) – Service Industry

- Reconfiguring a Lot (RaL) (1 Lot into 2 Lots)

on land (the land) at 88 East Street, Clifton.

The MCU and RaL (proposed development) is to facilitate the establishment of a small scale service industry on its own lot in the Major Centre zone. The existing residence is to be retained on a separate lot.

The relatively small scale new building has been sited to enable expansion of uses permitted in the Major Centre zone – in accordance with the provisions of the Toowoomba Regional Planning Scheme (the scheme) over time – if the initial service industry use is commercially successful. Recent fires in Clifton have resulted in the loss of at least 1,000sqm of usable commercial space within the Major Centre zone. The premises burnt down in the last year include two large buildings in King Street and the building on the adjoining lot at 86 East Street, Clifton.

It is considered that the small-scale of the proposed new development is more in keeping with other micro-small business operating successfully in this small regional town. The existing residence otherwise contributes to the supply of housing in close proximity to the centre of town.

Land details

Property description
Lot 3 on RP 14881, County of Aubigny, Parish of Clifton
Title reference 11044178

Site area
1,027sqm

Address
88 East Street, Clifton

Property owner
HOLZink Pty Ltd

Toowoomba Regional Council Planning Scheme Designation (planning scheme)
Major Centre

Figure 1 indicates the locality of the land and the planning scheme designation.

Figure 1 – locality and planning scheme designation

This plan shows the zoning of the land in the vicinity of 88 East Street, Clifton. 88 East Street is zoned "Major Centre". The pink areas are in the Residential Choice zone which is the predominant residential zone in the Toowoomba regional planning scheme. There is no prescribed minimum lot size in the Major Centre zone.

Existing conditions and proposed development

The land was purchased by the current owner in May 2013. Buildings/structures existing on the land at the time of the current owners purchase include an existing dwelling house and a small shed. The land is otherwise vacant. The existing building was first constructed over 35 years ago and has been used for a variety of purposes during this time, including a restaurant/café and offices. In recent years the existing building has been renovated and is currently used as a residence.

Whilst the existing residence is very basic and the "living room" is only two metres wide, for a part-time worker or small household, it is very comfortable and eminently affordable. No change is proposed to the existing building nor its current residential use.

To the east of 88 East Street is an existing garage which has been partially destroyed by fire. To the west of 88 East Street is an existing steel engineering works, including Clifton's original blacksmith shop (in part the inspiration for the building form proposed for the service industry use on the land – see Figure 3).

Opposite 88 East Street is 105 East Street, typical of housing in Clifton and reflective of the predominant uses on the Residential Choice zoned land fronting the southern side of East Street. The land is very close to the existing railway station, shops and other essential services.

Figure 2 is a photograph of the existing residence at 88 East Street Clifton. Figure 3 indicates the steelworks on the adjoining lot to the west of 88 East Street, original Clifton blacksmith building right. Figure 4 illustrates 105 East Street. Figure 5 is an aerial photograph illustrating the existing buildings on and in the vicinity of the land.

Figure 2 – existing residence

Figure 3 – adjoining development

Figure 4 – 105 East Street, Clifton

Figure 5 – existing conditions

The proposed new building will establish the streetscape approach for future development of the land. It is anticipated that given the 50 metre frontage of the existing site, that there will be ample area for service vehicles to park along the East Street frontage of the land. And as is the case with adjoining uses, visitor car parking will also be available in the street in addition to what is required on site to service the proposed new service industry use as well as the existing residential use.

Figures 6 – 12 illustrate the proposed new building. Figures 13 – 14 indicate the proposed development and subdivision of the land.
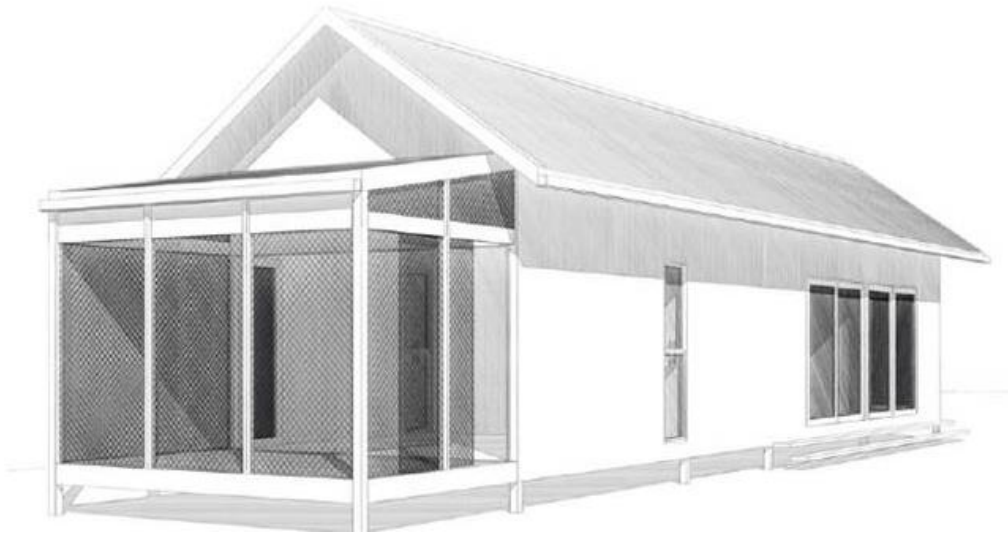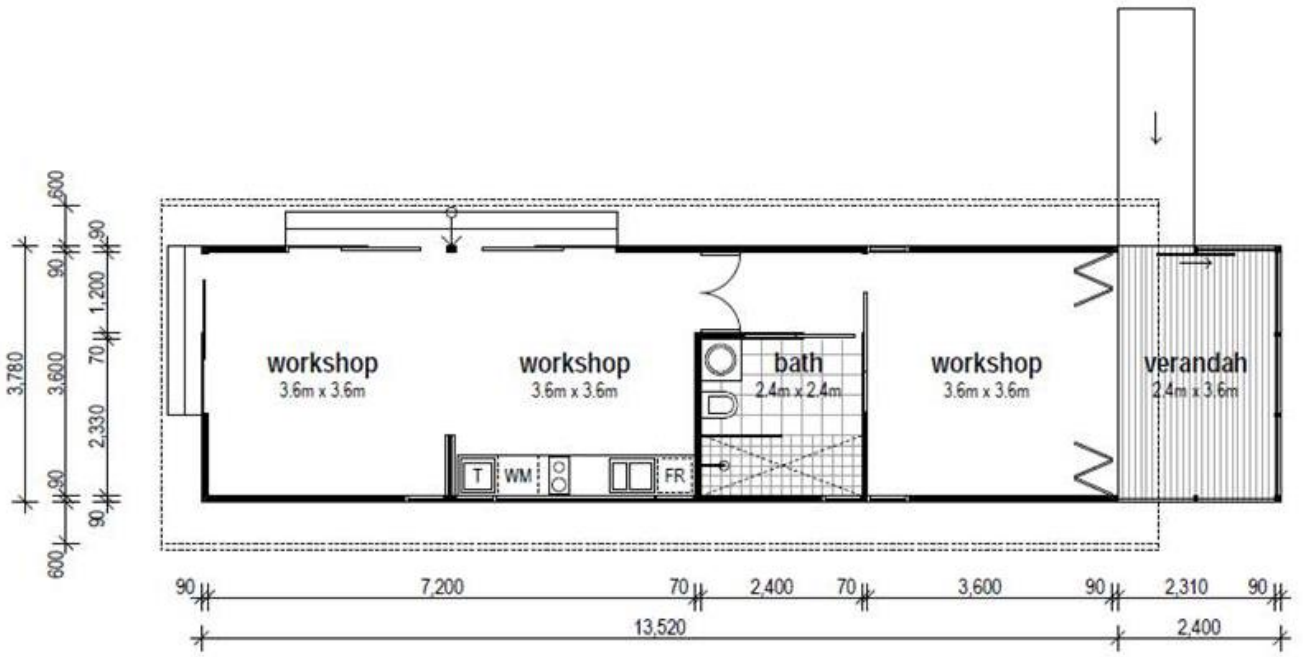

Figure 6 – perspective from south east

Figure 7 – dimensioned floor plan
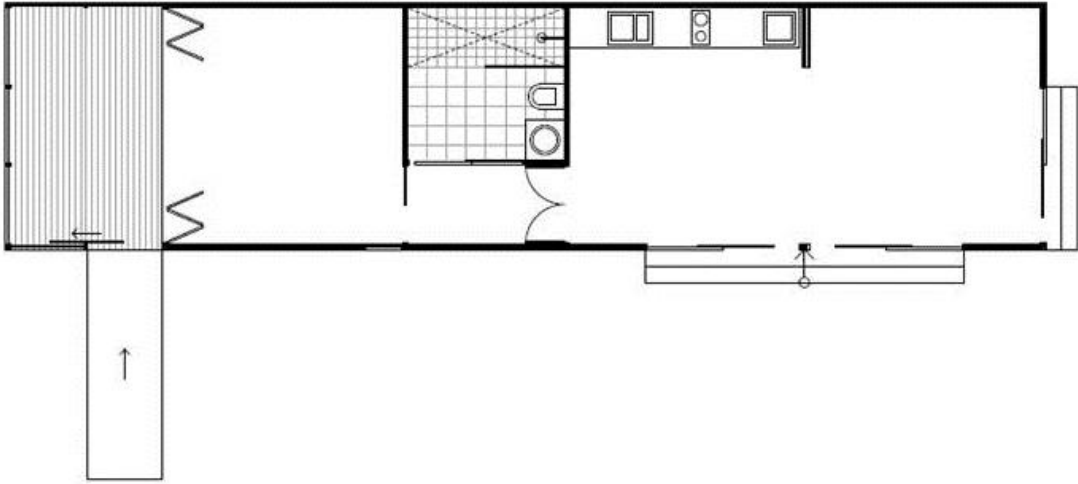

Figure 8 – perspective from south
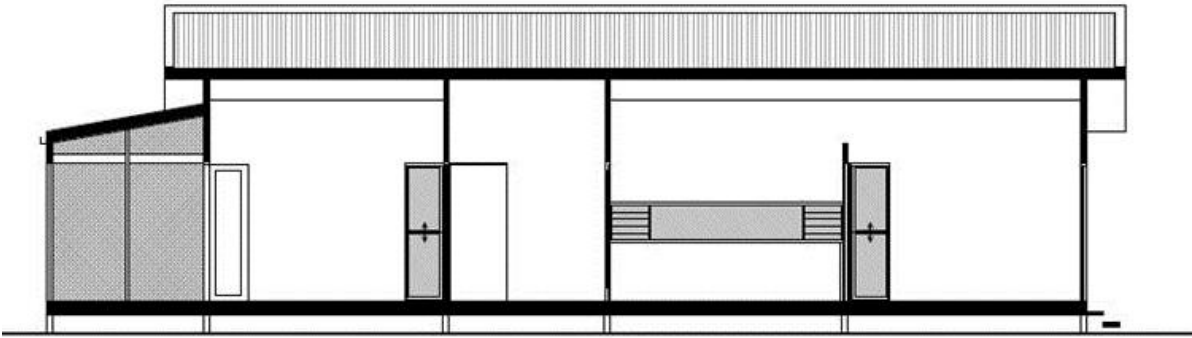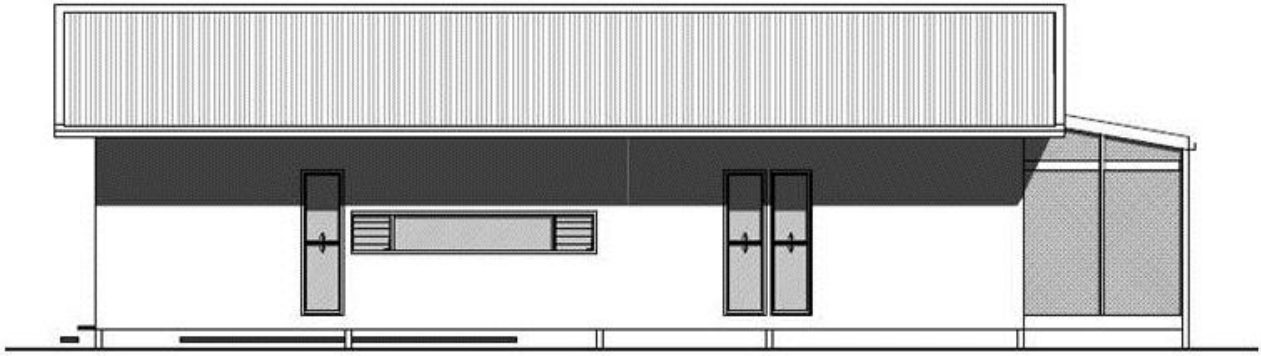
Figure 9 – concept floor plan

Figure 10 – section
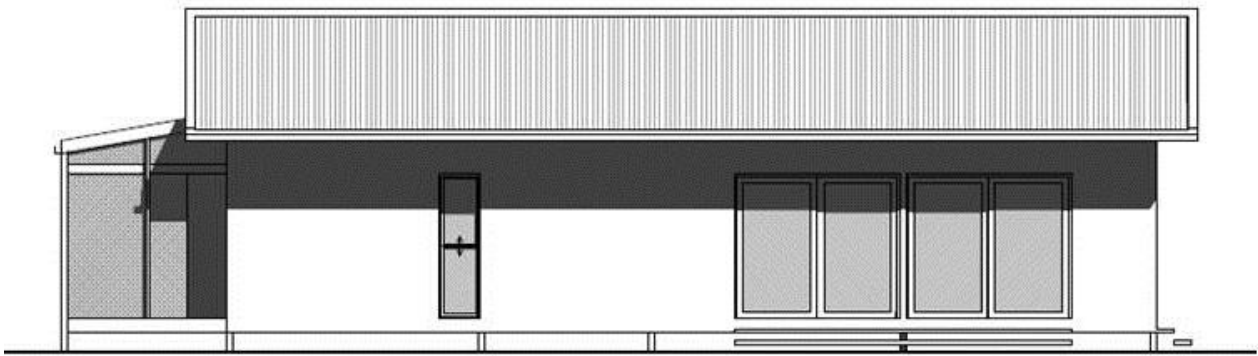
Figure 11 – west elevation

Figure 12 – east elevation

Figure 13 – concept site development plan

Figure 14 – concept site subdivision plan

Compliance with overall outcomes of the Major Centre zone code

Some of the overall outcomes of the Major Centre zone code are not applicable to this proposed development, and there are specific overall outcomes sought for Clifton. It is therefore submitted that the proposed development complies with the following overall outcomes of the Major Centre zone code:

- The development is small scale and therefore does not undermine the viability, role or function of the Principal Centre;

- The intent is to establish a service industry in the first instance, however the proposed building comprises flexible spaces which could easily be adapted for a full range of small-scale centre activities, including traditional retailing, commercial, community, entertainment, cultural and residential uses;

- The proposed building could be adapted for residential use providing an opportunity for micro-small scale mixed use development which integrates with and enhances the fabric of the centre – it is to be noted that the existing residence is proposed to be retained, therefore the small scale mixed use of the "parent parcel" of land in total is achieved ;

- The development provides a high level of amenity, embraces sustainable practices and is reflective of the surrounding character of the area;

- The development is on a state controlled main road and within a two minute walk of the Clifton railway station, and within a five minute walk of shops, community and other services in the main King Street and surrounding streets;

- The land has immediate access to infrastructure – power, water and sewer are located in East Street;

- The small-scale nature of the proposed development is in itself consistent with design intent to maximise energy efficiency, conserve water and support sustainable transport use;

- The proposed building could be adapted to accommodate the small to medium scale office needs of the major centre catchment, although it is acknowledged there are special building code requirements – largely relating to wheelchair accessibility – to be met if the building was to be used for offices;

- The proposed building could be used for small-scale music and other performances and/or exhibitions therefore meeting community and entertainment needs of the major centre catchment;

- The proposed use is for service industries that will make a small contribution to the needs of the catchment and not adversely impact on the overall amenity or functionality of other uses which

could be established in the major centre zone – the building design features flexible spaces which can readily be adapted for a wide range of uses;

▪ The proposed building is sited and designed to establish the basis of an active, integrated and compact built form and streetscape for future development in the Major Centre zone in East Street, Clifton;

▪ The proposed building is oriented towards and activates its East Street frontage via the inclusion of a screened veranda to be built on the front boundary of the land – it is to be noted that no other awning is proposed over the verge in this location as this is not consistent with the existing streetscape in this location and the veranda to the front boundary is considered sufficient for the purposes of street activation in this situation.

With particular regard to Clifton:

▪ The proposed uses and activities are anticipated to service the needs of the residents and visitors of the Clifton centre to some extent – this is a small scale development at this stage;

▪ The existing residence is proposed to be retained albeit on a new lot within the centre and will contribute to the vibrancy of the mixed use prevalent in this location in Clifton

▪ The building design reflects and respects the traditional character of the streetscape as outlined above;

▪ The proposed new building will establish the streetscape approach for future development of the land – the new building is of a traditional "country town" style suited to the prevalent and small scale centre activities in Clifton (see Figures 15 – 16)
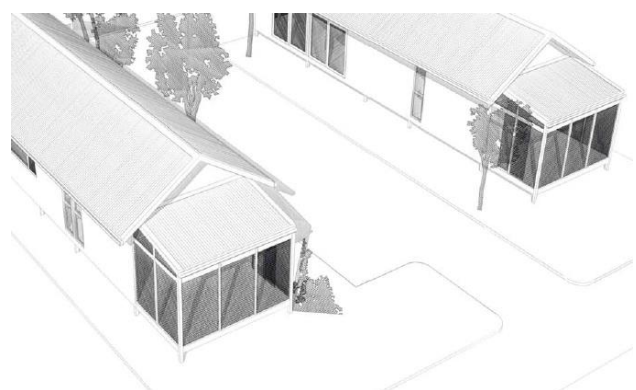

Figure 15 – existing Clifton streetscape

Figure 16 – possible East Street streetscape

Compliance with other scheme provisions

Definitions

Service industry means premises used for industrial activities that have no external air, noise or odour emissions from the site and can be suitably located with other non-industrial uses. Examples include audio visual equipment repair, film processing, bicycle repairs, clock and watch repairs, computer repairs, dry cleaning, hand engraving, jewellery making, laundromat, locksmith, picture framing, shoe repairs, tailor. It is anticipated that the proposed development will be marketed and promoted to the more "creative" end of the "service industry" definition, good examples being jewellery making and picture framing.

Major Centre Zone Code

It is noted that service industry is a consistent use in accordance with Table 6.3.2:2 – Major Centre Zone – for assessable development.

It is further submitted that the proposed development complies with most of the performance and acceptable outcomes outlined in section 6.3.2 Major Centre Zone Code, in particular that the proposed building:

- is less than two storeys in height and is of a size and scale consistent with the role, function and character of the centre, and provides an appropriate interface with the scale and character of proximate residential areas (indeed the proposed design could be considered a dwelling house in appearance);

- is oriented to the street with active uses located at ground level;
- incorporates streetscape elements such as a screened veranda on the front property boundary that enhance the quality of the pedestrian environment;
- is built to the frontage of the site;
- has an active façade that faces the street; and
- has the majority of car parking provided at the side of the proposed new building.

Centre Activities Code

It is noted that the proposed development, whilst having an active frontage to the street, is not intended to incorporate footpath awnings.

Rather, in accordance with PO_{12} of section 9.3.1.1 Centre Activities Code, the proposed development will contribute towards a comfortable and safe public realm as follows:

In accordance with $AO_{12.5}$ of the Centre Activities Code – if development does not provide awnings as outlined in $AO_{12.4}$, pedestrian shelter is provided as a free standing structure (such as an umbrella).

It is further that the proposed development otherwise complies with all performance and acceptable outcomes of the Centre Activities Code.

Transport, Access and Parking Code

It is noted that in accordance with section 9.3.4.5 Transport, Access and Parking Code, for service industry, one on-site parking space is required per 100sqm of gross floor area. The GFA of the proposed building including veranda area and bathroom facilities is 60sqm requiring one on-site car parking space.

It is also noted that for development which is less than 500sqm GFA an on-site area for maneuvering and parking one heavy rigid vehicle is also required. However in this context it is submitted that the latter is onerous, and should not be required as a condition on this proposed development, given:

- the low-key nature of the proposed uses;

- the small scale of the building;

- the short depth of the site, and

- the generous parking spaces available along the 50 metre frontage of the site uninterrupted by driveways, meaning ample on-street space for a HRV if one was ever demanded by future development of the land.

Reconfiguring a Lot Code

It is submitted that the proposed subdivision complies with section 9.3.3.1 Reconfiguring a Lot Code.
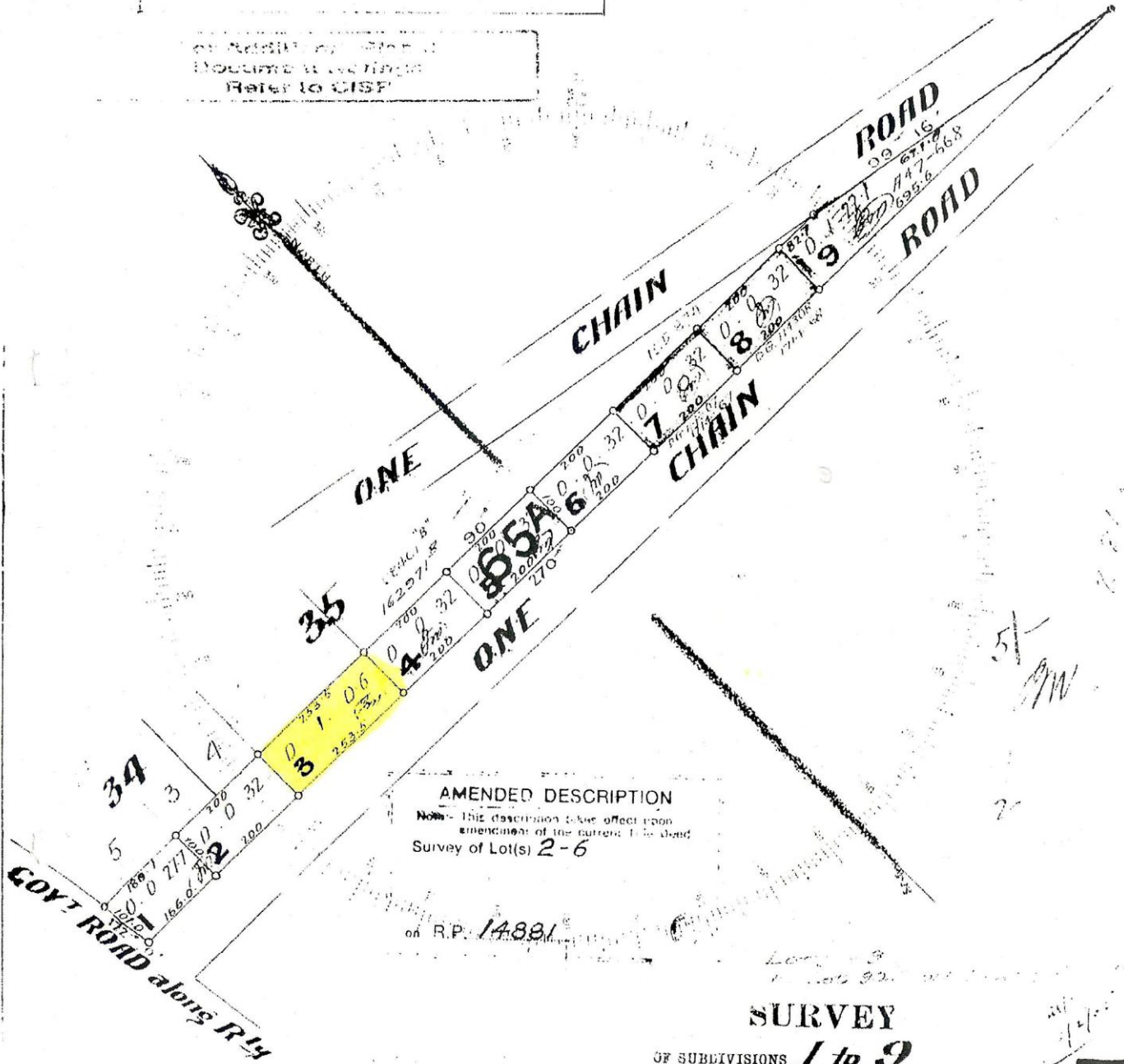
Conclusion

This report outlines how the proposed development of 88 East Street Clifton will make a contribution to the provision of commercial development – whilst retaining a useful residential building – in the Major Centre zone in this small rural town in the Toowoomba region. Whilst the proposed new building is small in scale, it has been sited to allow some expansion on its own lot. The existing residence will be retained to assist in providing housing choice close to the centre of Clifton.

The report demonstrates substantial compliance with all but one provision of the applicable planning scheme codes. The ample length of frontage to 88 East Street which is uninterrupted by driveways, and the substantial width of the East Street carriageway ensures sufficient areas for on-street parking for heavy rigid vehicles and other visitors to the proposed development, even with substantial further development of the site for commercial and/or mixed uses.

It is recommended that the development application be approved subject to reasonable and relevant conditions in accordance with the text, plans and illustrations in this report.

Sub 1   See D.G. 132/90 Vol. 2356 Fol. 200

For Additional Sheet
Document settings
Refer to QISP

ONE CHAIN ROAD

CHAIN ROAD

ONE CHAIN

ONE

GOV'T ROAD along R'ly

AMENDED DESCRIPTION

Note:- This description takes effect upon
amendment of the current title deed

Survey of Lot(s) 2-6

on R.P. 14881

SURVEY

OF SUBDIVISIONS 1 to 9

OF ALLOTMENT OR PORTION No. 65 A

OF SECTION

COUNTY of Aubigny

PARISH of Clifton

Cat. No. H4/-585

SCALE 2 chains to an inch.

In preparation of this road, I agree to this plan of subdivision.

Signature of
Proprietor

14881 P

14881

QISP

M.F.

Appendix 8

Toowoomba Region – creative industry related car parking rates

Parking requirements (TRC 2012a)

Note: Access to State-controlled Roads requires the approval of the Department of Transport and Main Roads.

(1)	'No specific rate' – means the required number of parking spaces (or facilities for service vehicles) will be based on the circumstances of the specific proposal and assessed against the Performance Criteria and information provided with the application.
(2)	SRV - means Small Rigid Vehicle (for vehicle dimensions and manoeuvring requirements see Australian Standard AS 2890.2 – Off Street Parking – Commercial Vehicle Facilities).
(3)	HRV - means Heavy Rigid Vehicle (for vehicle dimensions and manoeuvring requirements see Australian Standard AS 2890.2 – Off Street Parking – Commercial Vehicle Facilities).
(4)	AV - means Articulated Vehicle (for vehicle dimensions and manoeuvring requirements see Australian Standard AS 2890.2 – Off Street Parking – Commercial Vehicle Facilities).

Dwelling unit	One (1), per one (1) and two (2) bedroom unit plus two (2) for each unit of three (3) or more bedrooms.	Nil
Food and Drink Outlet	One (1) space per 25m² GFA.	1 SRV.
Function facility	0.4 space per patron.	No specific rate
Home based business	One (1) space per non-resident employee (FTE).	Nil
Office	3.5 spaces per 100m² GFA.	Less than 200m² GFA – Nil.
Outdoor sales	One (1) space per 150m² of total use area.	1 AV.
Sales office	Two (2) spaces per Dwelling.	Nil
Service industry	One (1) space per 100m² GFA.	Less than 500m² GFA – One (1) HRV.
Shop	One (1) space per 25m² GFA.	Less than 500m² GFA – One (1) HRV.
Showroom	One (1) spaces per 40m² GFA.	Less than 1,000m² GFA – One (1) HRV.
Low impact industry	Two (2) spaces per tenancy plus one (1) space per 100m² GFA.	0 – 999m² GFA: One (1) HRV.

Appendix 9

Toowoomba Region – home based business code

9.3.1.4 Home Based Business Use Code

(1)	The purpose of the home based business Use Code is to allow for business activities to be integrated within a dwelling house, whilst ensuring the primary use of the land remains residential and the amenity of the residential neighbourhood is maintained.
(2)	The purpose of the code will be achieved through the following overall outcomes:
	(a) a home based business is a domestic scale business that is subordinate to the primary residential or rural use of the site;
	(b) a home based business in a residential zone is not distinguishable from other dwelling houses in terms of visual appearance, noise emissions and traffic generation; and
	(c) a home based business does not adversely affect the character, amenity or function of the surrounding area.

Table 9.3.1:4 – Home Based Business Use Code – for self assessable and assessable development

Performance outcomes	Acceptable outcomes
Scale	
PO$_1$ The use is limited to a small scale operation and: (a) is located wholly or mainly within a dwelling and associated outbuildings; (b) is conducted by a resident or residents of the dwelling; and (c) maintains a domestic scale and character.	AO$_{1.1}$ The use is conducted entirely within the dwelling and/or any associated outbuilding on the site. AO$_{1.2}$ The use is carried out by residents of the dwelling. AO$_{1.3}$ The use involves no more than one (1) non-resident employee[16] on site at any one time.
Amenity	
PO$_2$ The use is visually integrated with the residential use, the streetscape and adjacent premises.	AO$_{2.1}$ Equipment, goods and materials associated with the use are stored inside the dwelling or outbuilding. AO$_{2.2}$ The use does not involve the display of goods or materials, whether or not generated by the use, to be visible from outside the dwelling or outbuilding.
PO$_3$ Hours of operation are suited to a residential environment.	AO$_{3.1}$ home based business activities generating visitors or audible noises outside the dwelling or outbuilding (other than for a bed and breakfast) are not conducted outside the hours of 7:00 am to 7:00 pm, Monday to Saturday and 8:00 am to 7:00 pm Sunday and public holidays.

Performance outcomes	Acceptable outcomes
PO$_4$ The use does not impact adversely on the amenity of the surrounding area through the production of excess noise, vibration, odour or lighting.	AO$_{4.1}$ Noise levels generated by the Use do not exceed 5dB(A) above ambient background levels at the property boundary at anytime. AO$_{4.2}$ No source of power other than one or more single phase motors of not more than 0.4kW power is used provided that the total power drawn by all motors does not exceed 1.5kW. AO$_{4.3}$ Any odour emissions do not exceed one (1) odour unit beyond the site boundaries. AO$_{4.4}$ The use ensures that illumination levels 1.5m outside the site do not exceed 8 lux.
PO$_5$ The operation of the use is safe for the occupants of the dwelling, the employees, visitors and neighbours.	AO$_{5.1}$ The amount of stored chemicals, gases or other hazardous materials is no more than the limits normally associated with a residential dwelling. AO$_{5.2}$ The use complies with the Australian Standard, The *Storage and Handling of Flammable and Combustible Liquids AS 1940*, including standards for minor storage in a residential building of any type.
PO$_6$ Use of motor vehicles associated with the home business must not impact adversely on residential amenity.	AO$_{6.1}$ The business does not include any type of vehicle service or repair on the site.

Traffic	
PO$_7$ The use does not generate traffic more than that reasonably expected for the surrounding area.	AO$_{7.1}$ The use does not involve more than one (1) business related motor vehicle being parked on the site or in the street/s the site has frontage to, at any time (excluding business related vehicle/s of the permanent resident/s and one non–resident employee's vehicle). AO$_{7.2}$ The use involves no more than one (1) visit per day of a delivery vehicle with a capacity of less than 2.5 tonnes. AO$_{7.3}$ The use does not involve or require the use of or visit by a vehicle with a capacity of more then 2.5 tonnes. AO$_{7.4}$ Loading or unloading activities are undertaken within the site. AO$_{7.5}$ The use does not generate more than 10 vehicle trips per day where one (1) vehicle trip equates to arriving and departing the site.
PO$_8$ Where access is from a state-controlled road, on-site parking areas provide sufficient clearance from accesses to ensure vehicles do not block through-traffic lanes when negotiating entry to the site.	AO$_{8.1}$ On sites with access from a state-controlled road an access strip/driveway of at least 3m in length is provided between the frontage of the site and the first car parking bay.