

Urban Cultural Policy and the Changing Dynamics of Cultural Production



Made in Marrickville: Enterprise and cluster dynamics at the creative industries-manufacturing interface, Carrington Road precinct

August 2017

Produced for the Australian Research Council Discovery Project:
Urban Cultural Policy and the Changing Dynamics of Cultural Production



FURTHER INFORMATION

For further information, reports and publications, please visit the project's website at:

<http://www.urbanculturalpolicy.com/>

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PROJECT BACKGROUND AND AIMS

The *Urban Cultural Policy and the Changing Dynamics of Cultural Production* research project was funded in November 2016, and formally commenced in February 2017. The purpose of the project is to undertake comparative international case study research around the changing dynamics of the urban creative economy, particularly the emergent relationships with a rapidly evolving manufacturing sector. Creative industries are connected to future urban growth and investment, city marketing and employment generation. Manufacturing, meanwhile, has become more diverse and productive. Manufacturing firms make a spectrum of goods, from the technologically advanced goods to locally-made craft products involving traditional methods. Increasingly, international best practice is urban planning and policy-making that looks toward the nexus between creative industries and urban manufacturing. Cities that foster and deepen relationships between creative industries and urban manufacturing industries, especially in distinctive precincts where the two sectors increasingly co-locate organically, stimulate local jobs and enterprise formation and retain local spending.

To that end, the Federal Government, through the Australian Research Council, has invested in a major international research project benchmarking the performance of Australian cities against counterparts in the United States, UK, China and Germany, on their efforts to foster and deepen the creative industries/manufacturing interface through spatial planning and policy.

The researchers on this project are:

- Examining the production relationships between cultural industries and urban manufacturing;
- Determining how changing industry, urban development, land use change, technological, and policy dynamics affect cultural production; and
- Identifying lessons for Australian cities to develop new policies around cultural production and manufacturing

The research will pinpoint how changes among four major dynamics impact an emerging creative industry-manufacturing nexus. There are four dynamics at the centre of our analysis: *industry relations* (skills, supply-chains, and work practices); *urban development* (including real estate pressures and land use competition); *technological innovations* (in production, distribution and communication); and new *policy-making* agendas. All are implicated in the reconfiguration of the creative industry-manufacturing nexus. The existing empirical evidence base around the impact of these dynamics on cultural production and the ways in which the creative sectors interact with and rely on different forms of manufacturing is extremely limited. The project will fill this knowledge gap and produce new policy concepts and directions for Australia.

FOCUS OF THIS REPORT

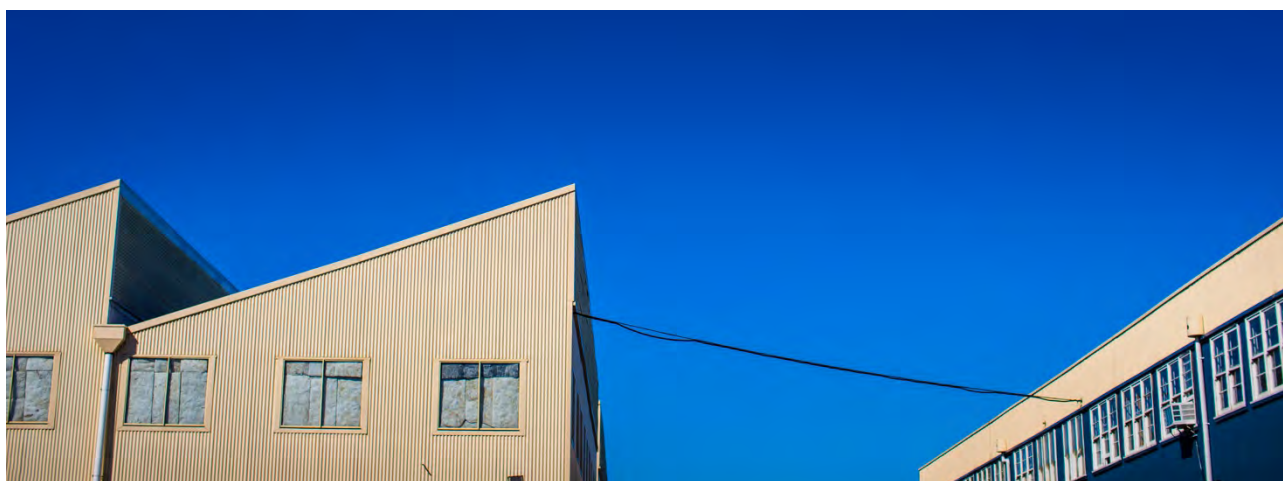
Sydney is one of three Australian cities included in the study. The chosen Sydney case study is the inner-west suburb of Marrickville and, in particular, two precincts that have both strong industrial histories, with clusters of niche manufacturing activity, and distinctive, growing creative industry concentrations. These two precincts are Sydenham Industrial Estate (aka ‘Sydenham creative hub’) and Carrington Road, Marrickville. This interim report - the second for the project, following an initial position paper (available via the project’s website) - is a creative industries-manufacturing cluster audit report for the Carrington Road, Marrickville precinct.

An on-the-ground audit of the Carrington Road precinct was undertaken in July-August 2017, implementing a methodology that will be applied to several case studies being documented in Australia and internationally for the project. All enterprises located in the Carrington Road precinct were documented and categorised. A representative sample of enterprises across economic functions was then identified, and subsequently consulted for information on their activities and links to the precinct. From this, the report identifies crucial insights on not only the employment significance of the precinct’s creative industries-manufacturing interface, but also the functional interconnections between enterprises, within and beyond the precinct.

This report provides an analysis of enterprises and clusters in the Carrington Road precinct, arising from the audit. Subsequent reports will detail policy benchmarking exercises, positioning Australian cities in relation to interstate and international counterparts, as well as additional audits in case study locations.

For further information, and the position paper from the *Urban Cultural Policy and the Changing Dynamics of Cultural Production* project please visit our website:

<http://www.urbanculturalpolicy.com/>



EXECUTIVE SUMMARY

The creative industries/manufacturing interface is vital to the economic functioning of cities

Internationally, major global cities are beginning to proactively plan for fostering the creative industries/manufacturing interface – via initiatives including protecting industrial land use, developing new forms of industrial mixed-use zoning, social enterprise and cooperative formations, and identifying new skills development programs. These programs are reaping benefits including diverse, living wage job creation in central cities; recognition of organically developed SME clusters; emergence of local, high value-added manufacturing incorporating strong design elements linked to local place culture and industrial heritage; and socially progressive outcomes that build relationships between old and new industries and segments of the workforce.

Australian manufacturing is not in decline – it is hidden in plain sight. And, it is changing form, and increasingly interfacing with creative and knowledge industries

According to the Australian Bureau of Statistics (2011), over two-thirds of all manufacturing employment in Greater Sydney is involved in the making of cultural industry products (e.g. apparel, food, furniture). Further, creative industries and manufacturing are increasingly interwoven, through innovation-driven additive manufacturing, craft-based production, and bespoke maker scenes. Together, creative industries and manufacturing form a significant sector of investment and employment for Sydney, while contributing to city vitality and liveability. Australian manufacturing firms are increasingly diverse, more productive and export-orientated than ever. Manufacturing firms invest in R and D, and are more likely to be small-medium or micro-enterprises. Much of this growth in small manufacturing is tied to design, cultural and craft-based production industries - a growing interface profiled in this report.

The creative industries/manufacturing interface requires access to affordable, and physically suitable, industrial land within proximity of major economic and cultural hubs.

Such zones have the right mix of older, low rent buildings with suitable roof height and truck access, and host many likeminded micro-enterprises who cannot afford commercial rents in standalone buildings. These zones are not only of suitable size, characteristics and rent, but provide access to major distribution and business networks, cultural venues and institutions, as well as final markets. Carrington Road's proximity to the CBD, airport, and Port Botany relative to other similarly sized industrial estates, makes it particularly valuable.



Carrington Road precinct is economically significant

Carrington Road boasts 223 enterprises, generating an estimated 1,800 full-time equivalent jobs. The precinct operates as a pivotal node in dense networks of commercial, tacit and social relationships between enterprises within and beyond the immediate vicinity. In this audit, no less than fifteen discrete functional clusters were documented in the Carrington Road precinct, across an impressive array of sectors.

Carrington Road precinct has been a thriving industrial hub for 90 years

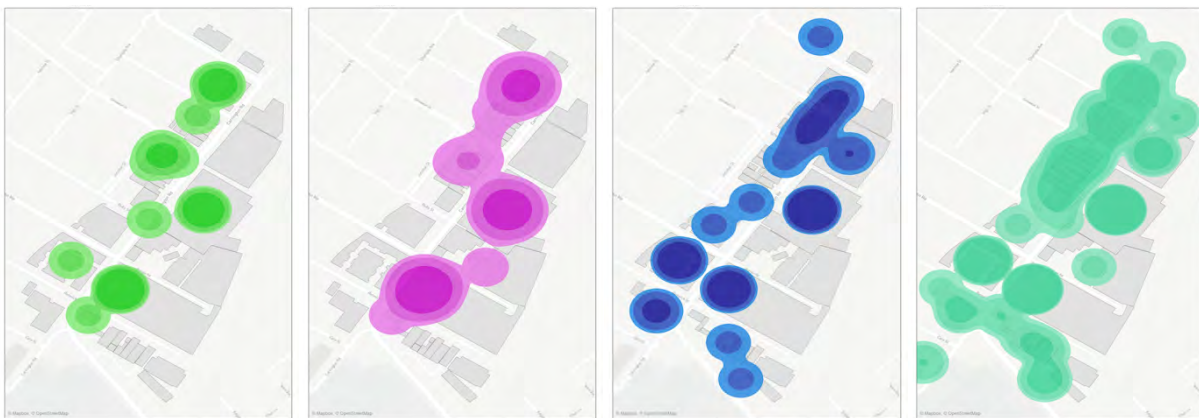
The precinct has retained its industrial character, and with some notable landlords sympathetic to the creative arts and small business, now houses large concentrations of enterprises operating at the creative industries/manufacturing interface. The precinct mirrors changes in the nature of industrial work itself.

Carrington Road has rapidly evolved as a unique creative industries/manufacturing interface precinct in Sydney

Carrington Road hosts a distinctive interface between creative industries and manufacturing, not replicated elsewhere in Sydney. Underpinning this is the built form and inherited stock of factories featuring a mix of affordable and practical workspaces, smaller studio suites and larger production facilities - all in a small number of co-located complexes.

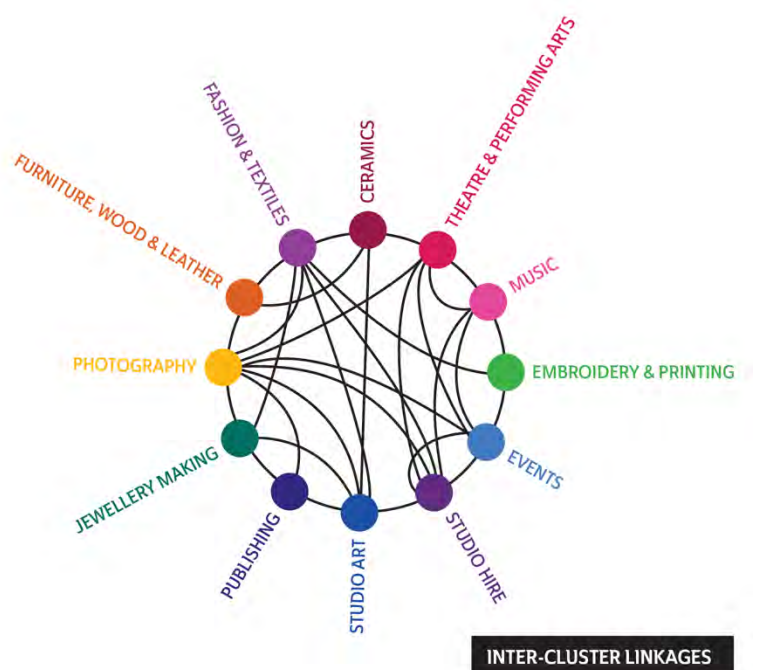
Carrington Road has become more popular as suitable spaces for the creative industries/manufacturing interface disappear rapidly in other parts of Sydney.

Sydney is losing its light industrial lands containing older, low-rent buildings suited to the creative industries-manufacturing interface. As detailed in this report, Carrington Road's significance as a lively creative industries-manufacturing hub, is growing as other industrial zones are lost.



The Carrington Road precinct is strongly place-embedded and proximity dependent

Four main dynamics were present, that underpinned locational sensitivities of enterprises in the precinct: *rent-sensitivity*; *time-sensitivity*; *time-of-day sensitivity*; and *spatial sensitivity* (encompassing *supplier proximity*, *client proximity*, and *social proximity*). A strong degree of place connection and embeddedness enhances local job creation potential, and the propensity to form dense inter-enterprise links. It also means enterprises within the cluster are sensitive to mobility: they are not easily moved, and relocation threatens their local job creation potential, and ability to recuperate lost local relationships and interdependencies.



Within each cluster, interactions and

dependencies have matured - indicative of the organic qualities necessary at the creative industries-manufacturing interface. Locally-made goods from Marrickville combine creative expertise with goods and services sourced from other suppliers in the immediate area. Beyond the precinct's numbers of enterprises and jobs, this means there is a very strong local multiplier effect - amplifying the precinct's overall economic contribution to Sydney.

Sydney's status as a global city relies on the Carrington Road precinct

While the Carrington Road precinct itself retains a somewhat gritty, older industrial aesthetic, and is not especially well-known as a creative hub beyond the local area, it is a vital cog in Sydney's functioning as a global city. Complex networks span from Carrington Road across the city, nation, and globe. Such icons as the Sydney Opera House, Sydney Theatre Co., the Sydney Gay and Lesbian Mardi Gras, Chinese New Year, and Vivid Festival, all rely on supplier and servicing relationships with Carrington Road enterprises. Enterprises on Carrington Road provide producer service functions for countless major transnational businesses. So too, major touring concerts and premiere CBD events; Hollywood film companies; international touring street art performances and festivals. Among the precinct's enterprises are many award-winning companies, with Academy Awards, BAFTAs and ARIA awards among them.



Proposed rezoning of Carrington Road

threatens a unique creative industries/manufacturing interface precinct

Urban renewal plans for the Sydenham-Bankstown Metro Rail corridor, and accompanying rezoning, have created significant uncertainty. The nearby Sydenham Creative Hub area is also likely to lose land from Sydenham-Bankstown Metro Rail corridor renewal plans. Displacement of 200+ enterprises from Carrington Road will mean that rents in the area will escalate, pricing out enterprises documented in this audit.

The assumption that inner-city manufacturing can and will simply relocate to large greenfield sites on the city fringe is not borne out empirically

Desktop employment studies undertaken for the proposed Sydenham-Bankstown Metro rail corridor assume that many businesses will relocate to industrial lands further from the city. This assertion overlooks the evolving and dynamic nature of urban manufacturing/creative industries interface, as well as its actual needs. Many enterprises interface indicated that, should suitable space be no longer available locally, they will either cease trading or leave Sydney altogether. This would constitute a significant loss of enterprises, jobs, industry experience, and human capital, unlikely to be offset by projected temporary job creation in construction, and casual work in retail. The function, form and future of the Carrington Road precinct is therefore of concern to the whole of Sydney, beyond localised renewal plans.

Industrial character is an asset

Industrial land not only provides suitable building stock for the creative industries/manufacturing interface: it also captures the history and character of Sydney's Inner West. Marrickville's industrial history is embedded in the built form and function of the Carrington Road precinct. For a new generation of millennial urban creative workers and consumers, 'packaged' precincts of slick new apartments have little appeal: no organic nightlife, less diversity, too many chain stores and no evidence of local making or crafting scenes. Inner- and middle-ring industrial precincts have the right combination of building stock, enterprises and social mix in order to foster productive, sustainable, and cohesive communities. This mix can be preserved through forward-thinking urban planning that makes room for the creative industries-manufacturing interface.

RECOMMENDATIONS

1. Increased policy support for enterprises at the creative industries-manufacturing interface

Creative enterprises, small and medium manufacturers, and businesses at the interface of these two sectors, constitute the majority of enterprise activity in the Carrington Road precinct. They bring investment, jobs, vitality and liveability to Sydney, underpin its global city functions, and generate locally-made goods and services that are distinctive to this city.

2. Security of tenure

Consistent with other similar precincts globally, high real estate values and development pressures in the area have the potential to negatively impact existing tenants. The Inner West Council and NSW Government should ensure that development applications that threaten the existence of established studio and workshop spaces are compelled to acknowledge their value. Where possible, such spaces should be re-provided locally, or incorporated into new developments in a format suitable to tenants, with accompanying covenants on affordability.

What baffles me with these new apartment developments, is they'll happily make space for a convenience store or a cafe. Why isn't there space for something different? An art space, a woodworking school, could be a real destination for people. Why can't we have provision for another space?
Woodworker, Carrington Road

3. Acknowledge the economic value of local social and cultural milieu

Local creative industries and manufacturing enterprises are linked to the urban social and cultural character of the Inner West. Echoing similar findings and recommendations from London's Olympics Legacy Development Corporation project (LLDC 2014), the potential for local enterprises to set a 'tone' of an area should be recognised in development applications. Careful consideration of proposed enterprise and employment uses, and precise practical space needs, should be encouraged (as opposed to generic provision of commercial space).

4. Consider future urban governance models for Carrington Road's creative industries/manufacturing interface

This audit's documentation of distinctive spatial clusters demonstrates how enterprise type, size and physical built form organically interact. The project's next phase will explore best practice governance models from other global cities on how to protect and best use industrial lands for creative and manufacturing enterprises in Australia. Carrington Road provides Sydney an ideal opportunity to test and implement such best practice models suited to the city's needs.

5. Retain and update industrial zoning in inner- and middle-ring Sydney, including the Carrington Road Precinct – rather than abolish it

In light of this audit's documented concentration of Carrington Road's diverse and numerous enterprises and clusters, and its vital function in the city's overall creative economy, retaining industrial space will protect rent-sensitive, suitable light industrial space, and would result in positive planning outcomes for both

There are no home-work spaces in Sydney. It's crazy. They have them in London. Old warehouses. You work downstairs and live upstairs. That's what I'd love to see. Hide architectural leather,
Carrington Road

Marrickville and for Sydney as a whole. Cities in the US as diverse as Boston, New York, Nashville, and San Francisco are revising zoning codes to balance competing land uses and preserve urban manufacturing. Sydney can be the first Australian city to engage in new models of industrial mixed-use zoning.

6. Conduct a city-wide, on-the-ground audit of loss of industrial lands

A city-wide, on-the-ground audit is needed of the extent of loss of industrial land, and its impact on enterprises. That audit should consider industrial land loss with geographic precision, calculated in proximity to key city nodes (CBD, Parramatta, Sydney Airport etc), and categorised by building stock type and suitability for various diverse creative industries and manufacturing functions. The audit should also document impacts of land use change on the displacement and loss of enterprises at the creative industries/manufacturing nexus in the past decade, to calculate the city's overall balance of enterprises and jobs at this vital interface. The issue is central to Sydney's interstate and global city competitiveness.

Carrington Road is one of the few remaining affordable spots left in Sydney. Everything else pretty much east of here has gone. Sydney seems to be 'throw up apartments and screw everybody else.'
Artisanal maker, Carrington Road

7. Integration of Carrington Road's creative industries-manufacturing clusters into existing strategic plans, planning procedures, and relevant policies for NSW, Sydney and the Inner West

These include Sydney Metropolitan Strategies, the Sydenham-Bankstown Urban Renewal Strategy, Inner West Council Strategic Plan and Development Control Plan, and the Sydenham Creative Hub. International urban policy comparison points to the clear conclusion that city/state governments must intervene through the planning/land use system in order to allocate appropriate space for strategically important economic activities, which, as the experience in New York, San Francisco, Portland and other North American cities suggests, includes the creative industries-manufacturing interface. In developing strategic plans and relevant policies Sydney should look to other successful examples internationally.

8. Prior to any rezoning or urban renewal, state and local government must inform affected enterprises of plans, engaging them in genuine consultation, and work with enterprises to meet their space needs.

None of the enterprises consulted for this study were aware of the details of renewal plans for the precinct, nor that a period to receive submissions was imminent. No direct consultation by NSW Government or Inner West Council appear to have been undertaken with affected enterprises. Carrington Road's enterprises have distinctive space needs that must be documented and incorporated into the evidence base upon which any rezoning or renewal proceeds.

LITERATURE REVIEW AND POLICY BACKGROUND

Policies aimed at the cultural economy have come to play an integral role in the urban development strategies of cities around the globe (Grodach and Silver, 2013; Hutton, 2008; Scott, 2004). Under the rubric of creative industries, the cultural economy has been positioned as a central part of a knowledge economy defined by advanced services, information technologies, innovation, and a workforce high in human capital (Howkins, 2013). Second, the cultural economy has emerged as a central facet of urban policy for its ability to drive consumption, attract mobile knowledge workers, and improve the city image (Grodach and Loukaitou-Sideris, 2007; Oakley and O'Connor, 2015). Cities around the world have spent considerable sums of money to develop arts precincts, flagship cultural destinations, and other cultural amenities. While the consumption-based approach has generated highly visible, 'spectacular' spaces for culture, the reality is that this has limited impact on enterprise formation and employment generation in underpinning cultural *production* (Pratt 2004; Grodach, 2010; Noonan, 2013). Further, many argue that an approach geared towards spaces of cultural consumption has contributed to the displacement of preexisting residents and businesses, including many cultural producers (Catungal, Leslie, & Hii, 2009; Curran, 2010; Grodach, 2012, 2013; Shaw, 2013).

At the same time, as part of a broader innovation agenda, cities on the leading edge of urban cultural policy are seeking ways to reconnect cultural industries with material manufacture and craft-based production (Anderson 2012; Berger 2013; Westbury, 2015). Mature urban cultural policy is just beginning to consider how to link the cultural industries with other sectors in novel ways that revitalise manufacturing and tap into new opportunities for the development and expansion of a wide range of cultural and craft industries (Müller et al. 2009; Bryson and Ronayne 2014; Tomlinson and Branston, 2014). This second phase of creative city thinking, now well underway, focuses on the employment and development opportunities related to cultural production – in the sense of the material prototyping, manufacture and assembly of physical goods infused with cultural or semiotic meaning.

AUSTRALIAN MANUFACTURING – VITAL SIGNS

- Exports grew 4 percent p.a. 2014-2016
- The second largest exporter after mining
- Generates a third of the value of Australia's exports
- The most significant investor in research and development (R&D) of any Australian industry sector, measured on a per-employee basis
- R&D investments increased at a rate faster than the whole Australian economy – even during the post-GFC period
- Since WWII, total output of Australian manufacturing has quadrupled

Sources: OECD 2013, Department of Industry, Innovation and Science 2016, DIICSRTE 2013, Productivity Commission 2003

Reinventing manufacturing

There is a renewed public and policy interest in 'making things' (Anderson 2012; Berger 2013; Westbury 2015), encompassing additive manufacturing, bespoke making, and craft-based production. Opportunities abound to pursue urban economic development strategies that build upon, rather than eschew, industrial, migrant and working-class skills and legacies (Gibson 2016). Further supporting such policy development is that manufacturing is itself no longer defined primarily by large-scale industrial production, heavy machinery and massive infrastructure. Despite the headlines of job losses in large firms, SMEs with fewer than 50 employees make up the vast majority of manufacturing firms in the United States (Mistry and Byron, 2011) and a majority of firms in Australia (Gibson and Warren 2013), and elsewhere.

While assembly line jobs are in decline, overall employment in the sector has diversified, as manufacturing morphs and hybridises with knowledge, creative, health and agricultural industries. Australian manufacturing SMEs display increasing levels of specialization, absorptive capacity, innovation expertise and niche marketing, across diverse sectors. This is a picture of labour productivity, multiplication of specialist niches, as well as the shift to high-value added production. Much of this growth in small manufacturing is tied to design, cultural and craft-based production industries

Indeed, while few predict a comeback of large-scale mass production industries, new studies point toward the growing importance of small, flexible and regionally-specific manufacturers (Bryson et al 2008; Bryson and Ronayne 2012; Mistry and Byron, 2011; Sassen, 2010). Many products continue to be made in Australia because they are heavy and expensive or tricky to transport; others are made here by specialist firms because clients want customised products and ongoing support and therefore seek manufacturers who respond quickly, can visit in person and who speak the same language. This is significant because these types of manufacturing can provide stable, higher-quality and more accessible employment than tourism, retail and consumption-orientated redevelopment. And, it is work that is not easily automated, outsourced or undercut by e-commerce. Unlike traditional manufacturing industries that compete on cost or volume, small manufacturers and cultural production firms alike compete on innovative design, product differentiation, and specialize in customized production (Warren and Gibson 2013). As a result, these firms tend to be highly place-bound and locally-integrated (O'Connor, 2004; Pratt, 2004; Scott, 2000; Warren and Gibson, 2013). And, when owned by employees themselves, small manufacturers tend to be more innovative, and thus resilient to wider market volatility (Koski et al 2012).

The creative dimension

Much of the growth in small manufacturing is tied to design, cultural and craft-based production industries (Hatch, 2013). Many cultural industries look to local manufacturing and craft industries to supply crucial materials and components (Thomas et al., 2013). Architecture firms may rely on metal-workers and foundries for specialized building components or industrial designers may look to ceramics manufacturers to fabricate special containers and display cases. In addition, cultural industries often require specialized craft and manufacturing skills and services. For example, film and theatre producers rely on the expertise of set designers and woodworkers. Moreover, important niche markets with strong local and culturally specific profiles develop around the products of small manufacturers and craft producers including clothing, furniture, jewellery, and artisanal food products.

In this sector, place identifiers and degree of connection to specific precincts are assets; locally-made is a source of competitiveness (Rusten et al 2007), and 'buzz' (Storper and Venables 2004) surrounding social interactions within specific precincts in turn generates economic dynamism.

Linked to new forms of youth culture, and the millennial generation's preferences for 'authentic' and tactile experiences, this evolving creative/manufacturing nexus is attracted to certain kinds of urban spaces: those that are affordable, and both practical industrially, and that have genuine history



of industrial land use. Inner- and middle-ring industrial suburbs feature strongly: they have the right mix of old factories, and a ‘gritty’ feel with an industrial aesthetic. A place search on Instagram of Marrickville reveals not only diverse cultural heritage, artisanal food, cafes and bars, and galleries, but also locally-made crafted goods, and an industrial aesthetic. Judging by their reactions to proposed urban renewal schemes, local residents are sceptical to traditional marketing, more interested in industrial heritage and lived local neighbourhoods rather than tech parks, or bland blocks of new-build, high-rise apartments. They appreciate warehouse and light industrial locations where everyday interactions with niche manufacturers, suppliers and crafters are possible. To tap into the creative industries-manufacturing nexus, cities need an edgy feel, an urbane outlook, and distinctive cultural legacies linked to local histories of creativity, manufacturing and craft.

Planning for creative manufacturing: the land-use nexus

However, shifting land use patterns and policies of urban densification threaten the very locations where such conditions are found. Local governments increasingly convert scarce urban land from industrial uses to enable higher density and higher return residential and commercial development, but they do so at the expense of job quality and equality (Curran 2010; Lester, et al., 2013). In the US, cities as diverse as Baltimore, Minneapolis, and San Francisco have all lost sizeable portions of industrial land in recent years (Leigh and Hoezel, 2012). Metropolitan and state governments often argue that the land use shift supports a changing, ‘post-industrial’ economy. However, Australian, UK, and US research demonstrates that in some cases the loss of manufacturing from central cities is due less to deindustrialization than to a failure to preserve industrial lands and regulate encroaching development (Curran, 2010; Ferm, 2016; Shaw, 2015; Wolf-Powers, 2005). This pushes many manufacturers out of central city areas while serving to justify the upzoning of industrial properties in favor of high-density residential property and ‘mixed use’ development.

Industrial displacement has a particular effect on small manufacturing and cultural production industries, which depend on central city locations. Many cities work from an outdated zoning system that does not recognize the changing shape of manufacturing nor cultural production—despite the growing connections. As has been demonstrated in cities with strong property markets such as London, Melbourne, and New York, planning and rezoning around mixed-use land are part of a deliberate attempt to reshape the city for advances services, luxury residential, and upscale consumption (Ferm and Jones, 2016; Shaw, 2015; Shaw and Davies, 2014; Wolf-Powers, 2005). Cities target industrial lands for rezoning and redevelopment to maximize real estate values under the misperception that appropriate manufacturing land is in the outer suburbs and that central city industrial areas are no longer appropriate for manufacturing activity (Shaw and Davies, 2014).

Some manufacturing certainly requires large greenfield spaces with good transportation access on the periphery, but this is not universal. In reality, the urban context functions as a production factor for small manufacturers particularly those with ties to the creative industries such as apparel, furniture, jewelry, and printing. As we elaborate in the following audit analysis, because such businesses tend to be highly specialized, they often rely on close proximity to similar businesses, skilled labor, and a large urban market of consumers. The tendency of cultural product industries toward vertically disintegrated production encourages the high industry agglomeration found in urban areas (Scott, 2000; Pratt, 2004; Reimer et al. 2008). For example, specialist woodworkers may benefit from a location near furniture makers or architecture and design firms, which also depend on close proximity for fast turnaround and direct interaction on custom-made parts for finished products. Others emphasize the importance of the built environment as critical to cultural production (Hutton, 2008; O’Connor, 2004; O’Connor and Gu, 2010; Rantisi and Leslie, 2010; Wood and Dovey, 2015). Compact urban design, active streetscapes, and public spaces are said to shape the creative process by generating opportunities for social exchange, which in turn helps

producers with employment opportunities, contracts, partnerships, and innovative ideas. Distinctive place qualities also inspire and give identity to artistic products (Marotta et al., 2016). Finally, an urban location also means immediate access to dense local markets. Creatively made products find viable markets nearby and in turn reflect local social and cultural values.

However, with state-sponsored rezoning projects geared towards higher density real estate developments have come rising property values, and lower vacancy rates. The shift to mixed-land use zoning – frequently justified as replacing ‘dirty’ industry with more attractive, ‘cleaner’ city spaces and industries – has the effect of rising potential rent returns per square metre by demolishing existing low-rise industrial buildings and replacing them with higher-density residential apartment developments (Shaw 2015). The consequence is further gradual evacuation of small manufacturing and start-up creative enterprises from the inner city. Lost are relatively well-paid jobs that build upon manual skills, as well as entrepreneurial creative start-ups.

Cities that have converted port facilities into leisure zones, or that have busily promoted office and apartment tower developments on previously industrial lands, have seen limited or even decreased enterprise formation at the creative industries/manufacturing interface. The result of such redevelopments, from Singapore to Baltimore, has been slick but placeless business districts; harbourside precincts aimed at tourists and consumption rather than production; and new dormitory apartment neighbourhoods with no commercial activities other than low-paid, poor quality jobs in cleaning and retail. Meanwhile, as is evident elsewhere in Marrickville, many retail spaces underneath new apartments remain vacant for many years. Retail spaces are for many creative industries-manufacturing interface enterprises too expensive, unsuitable on technical or logistical grounds, or cannot host noisy or late-night production activities. For the new generation of urban creative workers and consumers, packaged precincts and apartments with only a few retail spaces below have little appeal: no organic nightlife, less diversity, too many chain stores and no evidence of local making or crafting scenes (Hae 2012). Accompanying real estate pressures affect affordability, and leave fewer vacant low-rent warehouse spaces – all of which work against those enterprises at the creative industries/manufacturing interface.

We're refugees from 75 Mary Street, which was rezoned from industrial into a 'Creative Space'. But 'Creative Space' doesn't mean woodworkers or cabinet-makers or sculptors or another manual trade any more. It means IT start ups, web designers and fashion boutiques. Sure, those things are 'of the moment', and now the industrial chic, grunge look is in, they love old factories. But at \$300 m², we can't sustain that.
Heartwood Creative Woodworking,
Carrington Road

I'm another creative artist displaced by the shift to designating a precinct as 'creative'! It was going to be a space more for creatives, but then they made it all 'nice' and jacked up the rents.
Visual artist, Carrington Road

best part of half a century in Sydney, leaves very few locational options available for enterprises located at the creative industries/manufacturing interface. It is in this context that Carrington Road looms as a precinct of significance beyond its immediate vicinity.

In Sydney, successive loss of suitable industrial spaces due to the conversion of land to residential real estate developments has seen displacements of creative workers, manufacturing enterprises, and a net loss of human capital. Meanwhile, suitable urban land for the creative industries-manufacturing interface continues to diminish. This process of gentrification, unfurling for the

HISTORICAL CONTEXT FOR THE CASE STUDY

The Carrington Road precinct is located south of the Bankstown-City rail line, six kilometres southwest of Sydney Central Business District (CBD). Most of the precinct lies within a low-lying saucer, part of the Cooks River basin, over what was the Gumbramorra Creek, feeding into nearby Gumbramorra Swamp. The traditional owners of the land are the Cadigal people of the Eora Nation. The Aboriginal name for the area is Bulanaming. After European settlement, the cultural and ecological role of Gumbramorra Swamp 'was not fully understood or appreciated' (Meador 2008). The swamp and creek were drained in the 1890s to facilitate further occupation. Residential streets were established on the drained Gumbramorra Swamp, but after a disastrous 1889 flood, the area was rezoned as industrial, unfit for residential use (Cashman and Meador, 1997: 22).



Made in Marrickville

From the 1890s onwards, the area became industrial in character. Manufacturing enterprises were established including woollen mills, steel and metal fabrication, automotive assembly and potteries. In 1926 General Motors opened a large automotive factory on Carrington Road. It employed 400 people, but closed in 1931 as a result of the Great Depression. Carrington Road's iconic Phoenix palms, evocative of the inter-war Hollywood and Art Deco periods, were planted in the 1930s as part of government-funded Depression relief employment schemes.



By 1935 there were more than 130 manufacturing businesses in Marrickville, making goods that ‘ranged from chocolates to fishing lines and guitars through to saucepans and shoes, radios and rugs to heavy-duty machinery and mowers, margarine, bathtubs and boots’ (Meador 2008). As historian Chrys Meador (2008) described, ‘Whole families spent their working lives in the confines of one factory within walking distance or a short bus or tram ride from their homes. Marrickville was proud of its industry, holding regular industrial exhibitions of its home grown products’.

Industrial character

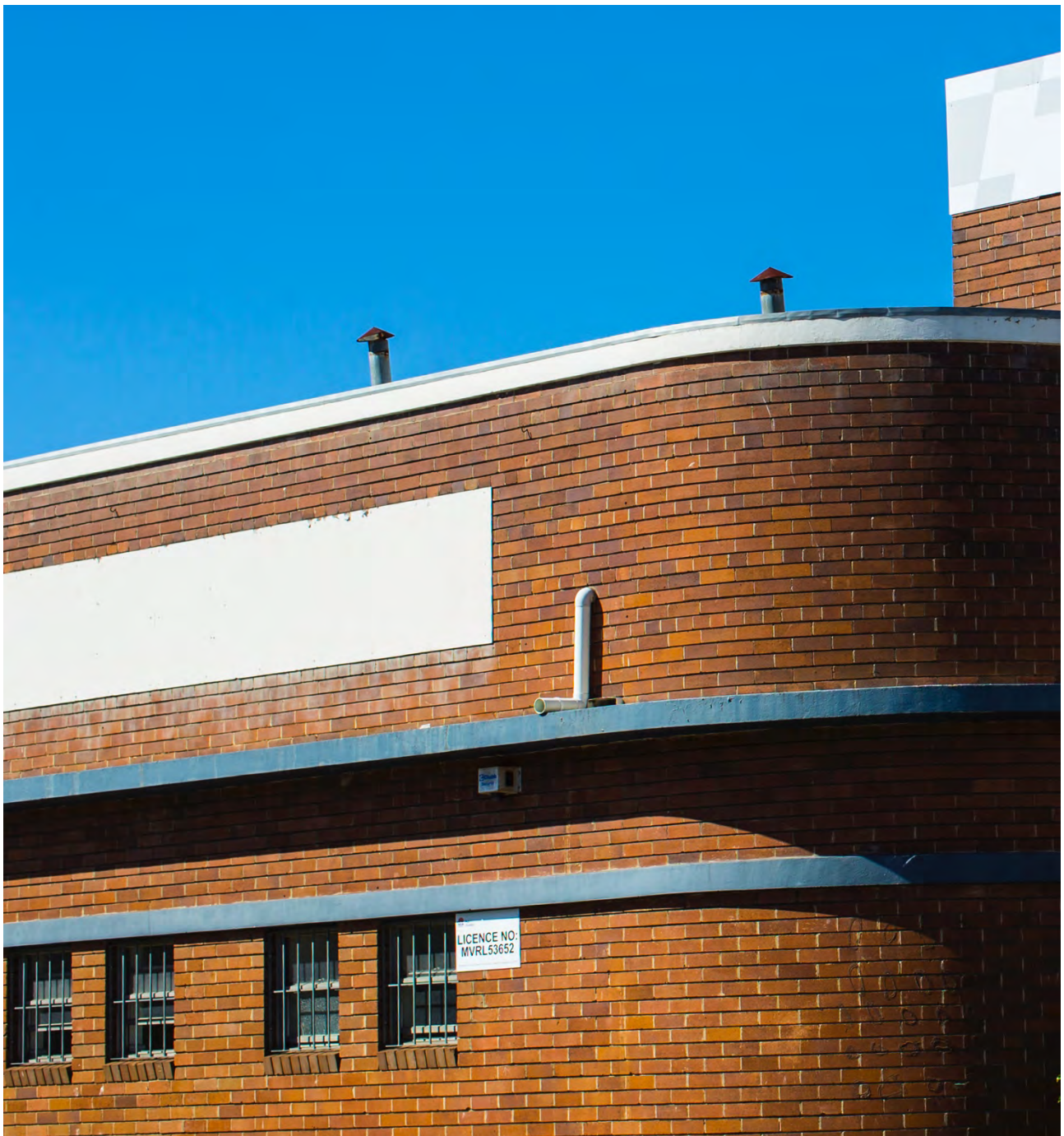
The industrial legacy of Marrickville resonates today, albeit in transformed shape. Large manufacturers are now gone, and many of the area’s factories have been converted to retail or residential uses, or lost to redevelopment. Carrington Road is one remaining intact precinct, with a string of factories from different eras, and a remaining cluster of enterprises representing older forms of manufacturing (including Sydney’s last remaining knitwear manufacturer), new forms of advanced manufacturing, and craft-based makers.

Carrington Road displays a remarkable spectrum of occupation by industrial firms, in buildings that represent all major periods of industrial architecture since the 1920s (Edwardian, Art Deco, modernist, post-modern). The precinct’s micro and small enterprises are housed in physical buildings that date from the late 1920s through to the 1960s, as well as newer-build industrial estates (such as at 49 Carrington Road).

Present enterprises present capture the sequence of typical industrial activities since the 1920s, and reflect iconic local manufacturing activities that have defined Marrickville for over a century. These

include the automotive industry (the precinct's cluster of automotive maintenance and repair workshops echoing the original GM-Holden plant); woollen mills (Marrickville was once Sydney's hub for woollen mills and textile manufacture; an industry practically extinct in Sydney, except for King's Knitwear, located on Carrington Road); and pottery (the area was once a major hub nationally for ceramic products, an industry that lives on in designer ceramics, for example Hayden Youlley Designs - see profile below).

Unusually for Sydney, in the Carrington Road precinct, there has been no significant displacement for apartment complexes, retail or cafes/restaurants. Carrington Road is a rare example in Sydney of an intact, inner-city industrial precinct still used for its intended purpose. The history of manufacturing (and now creative enterprise) is present, and living, in Carrington Road.



AUDIT METHODOLOGY

This Carrington Road study is one of several fieldwork activities scheduled for Year 1 (2017) of the *Urban Cultural Policy and the Changing Dynamics of Cultural Production* project. An on-the-ground audit was accordingly conducted throughout July-August 2017.

Undertaking an on-the-ground audit of enterprises and cluster dynamics is an established methodology in economic geography and spatial planning, especially for cultural and creative industries (Chapin et al, 2010; Cook and Lazzeretti, 2008; Currid, 2012, Currid and Connelly, 2008; Grodach et al, 2014). It proceeds from the recognition that census data and other broad-level desktop surveys and secondary statistical analyses, while important for observing broad-brush trends, do not provide sufficient granular depth to ‘get inside’ precincts, to unlock insights into the internal dynamics and relationships that typify modern industrial clusters, and that give rise to newly formed enterprises.

To date, economic planning activities surrounding the Sydenham-Bankstown metro rail renewal strategy have yet to achieve such granular analyses. In 2016, NSW Planning and Environment commissioned consultancy firm AEC to investigate employment impacts of proposed redevelopments throughout the corridor, including the Carrington Road precinct. Consistent with desktop-based audits, the AEC report is not based on primary empirical investigation of actual enterprise formation, employment dynamics or functional interconnections within affected industrial precincts. According to AEC, ‘Market investigations and gathering of market intelligence is carried out at a desktop level... Detailed site inspections were not undertaken nor interviews or consultation with businesses in the Opportunity Sites.’ (2016: 3)

Unlike desktop studies, on-the-ground audits involve the more time-consuming tasks of visiting precincts, observing and verifying the presence of enterprises, interviewing managers and workers, accumulating primary empirical data and analysing results accordingly. Desktop studies that purport to present findings on present and future needs, are methodologically flawed, in that they have not actually visited or spoken to affected people about their business activities, their use of space, and their locational decisions. Strategic planning decisions should be informed by in-depth on-the-ground auditing of affected enterprises. To this end, this report provides one such in-depth on-the-ground audit, in an effort to document the texture and detail of enterprise formation and cluster dynamics in a single precinct.

Stage I: enterprise documentation

Following established practice, an initial step was to document all enterprises present in the selected case study area through field visits. In this audit, the precinct was defined spatially as land zoned IN1 or IN2 in the Marrickville Local Environment Plan 2011, located either side of Carrington Road between Myrtle and Premier Streets, Marrickville. The process of documenting enterprises consisted of observation of occupied buildings, and workshops and pods within existing larger complexes. Where details were present regarding enterprises’ websites and contact details, these were recorded for post-fieldwork verification, online, or through direct contact with the enterprise. Where occupancy of a building, workshop or pod was not clear, this was identified for further post-fieldwork investigation and verification.

From the total dataset of documented enterprises, an analysis of enterprise types, by sector, was undertaken. This enabled a clearer picture of the precinct’s granular diversity to emerge. Much debate has surrounded the definition of cultural, creative and arts sector enterprises (Markusen et al., 2008; O’Connor, 2010). Here, enterprises were counted as ‘creative’ if their main purpose fell within generally accepted categories used by the ABS (2014). Official statistics classify firms as

manufacturing if they engage in ‘the mechanical, physical, or chemical transformation of materials, substances, or components into new products’; they may ‘use power-driven machines and materials-handling equipment’ or ‘transform materials or substances into new products by hand or in the worker’s home’ (US Census Bureau, 2016). This definition applied here to those enterprises engaged in producing repeat quantities of mass-manufactured goods, including cosmetics, steel products and food processing. Creative/manufacturing firms were distinguished by their engagement in the production of *cultural* products and materials central to the creative economy, including fashion apparel, wood-based objects (furniture, custom-designed installations), jewellery and theatre props and puppets. This category encompasses shop and craft work across the craft-manufacturing spectrum. For further exploration of issues of statistical categories and identification of cross-sector enterprises and workers, see Grodach, O’Connor and Gibson (2017).

Stage II: enterprise site visits

Second, a representative sample of 17 enterprises at the creative industries/manufacturing interface were approached for subsequent follow-up discussions and site visits. They included representatives from the following sectors: theatre; prop making and studio hire; fashion design; knitwear manufacturing; photography; visual arts; ceramics; woodworking, architectural installations; music; t-shirt screenprinting; and entertainment micro-enterprises (a stilt-maker and festival performer, and a magician).

Follow-up discussions were held informally within workshops and pods, usually with the general manager or owner of the enterprise. Questions covered a range of themes, including: employment; locational choices; duration of operation; functional linkages across the city and to other sectors of the economy; sensitivity to property market fluctuations; and relocation potential. Most discussions culminated in a brief workshop tour, to describe creative and/or making activities undertaken, facilities and equipment, and building/space needs. Workshop tours, as understood in economic geographical literature, enable insights on enterprise function, labour process, technology, and workplace culture that are otherwise impossible to glean from desktop surveys (Warren 2014; Carr and Gibson 2017).

Stage III: cluster mapping

Enterprise-level discussions also enabled researchers to gather data in order to undertake cluster mapping. Cluster mapping is another accepted methodological tool in economic geography and spatial planning, that aims to unlock insights on the functional interlinkages between enterprises that co-locate proximately within city spaces (Grodach et al 2014). Cluster mapping captures the centripetal forces at work in industries where functional relationships, social networks and spatial-temporal proximity matter to enterprise competitiveness. Typically applied to knowledge-based and creative industries, cluster mapping is also increasingly undertaken in relation to advanced and niche manufacturing sectors.

Two forms of cluster mapping are typically pursued: a quantitative and/or a qualitative approach. The quantitative approach sometimes involves applying statistical tools such as Anselin Local Moran's I or Getis-Ord Gi ‘hot spot’ statistics to spatial data. This approach is normally undertaken within desktop studies at a broader spatial scale (the whole city or state), to identify whether there are clustering tendencies between objects in cartesian space. In this case, the already-existing co-location of enterprises in the tightly contained Carrington Road precinct makes such exercises redundant. Enterprises are already spatially co-located; statistical tests are not required to prove that. However, the detailed data that was gathered via Stage 1 did permit a degree of spatial visualisation using density analysis – a technique for revealing the arrangement of business types within the precinct. The enterprise documentation database formed the data source for density mapping in the Audit Results section below. Each business address was assigned a

latitude/longitude coordinate pair using google's geocoding API. The resulting coordinates are only accurate to the level of each building so in the case where multiple businesses reside within a single building, all results were overlain directly on top of each other. For example, 20-28 Carrington Rd holds 58 businesses, with each business represented by the same lat-long pair. This has a bearing on the interpretation of the density maps: intensity was magnified in cases where coordinates overlapped. Density maps were produced using a kernel weighting and a search radius of 50m. Multiple maps have been produced based on business categorisation applied during Stage 1 (for example creatives, manufacturing, creative-manufacturers). To permit ease of comparison between maps, each were styled with a quantile break scheme.

Notwithstanding the density analysis revealing distinct spatial arrangements and links between business categories and built form, quantitative cluster mapping is limited due to the same problems as other desktop surveys: they cannot 'get inside' the dynamics that constitute spatial industry clusters. Accordingly, a second, qualitative, approach to cluster mapping was also pursued here, consistent with similar audits such as the London Legacy Development Corporation's *Local Economy Study (Part C)*, conducted in 2014 after the London Summer Olympic Games. This typically involves asking questions in person about the benefits to enterprises of co-location geographically, and whether there are functional, social and/or commercial interdependencies between enterprises that cluster geographically. This approach provides insights on the precinct-specific qualities that attract enterprises, and the relationships and interdependencies that bind them together, and to the place.

From information gleaned from enterprise discussions, clusters were then identified, around similarities, connections and relationships between enterprises. These are described more fully in Audit Results sections below. Additionally, clusters were re-analysed according to the predominant locational dynamics underpinning enterprises' presence on Carrington Road. This led to the identification of a second set of four cluster sensitivities present in the precinct: rent-sensitivity; time-sensitivity; time-of-day sensitivity; and spatial sensitivity.

Stage IV: enterprise profiles

Consistent with similar audits conducted internationally (London Legacy Development Corporation 2014), selected enterprises were identified to profile in this report. Unlike desktop surveys, these profiles provide a meaningful picture of the types of enterprises present in Carrington Road, their lived experiences, locational preferences, local linkages, and concerns for the future.

International policy benchmarking

Future reports and activities from the *Urban Cultural Policy and the Changing Dynamics of Cultural Production* project will document international policy comparison and analysis, and further fieldwork in Australia, the United States, China and Europe. Policies and plans to foster the creative industries/manufacturing interface globally are being analysed, to enable benchmarking of Australian cities against comparable cities internationally.

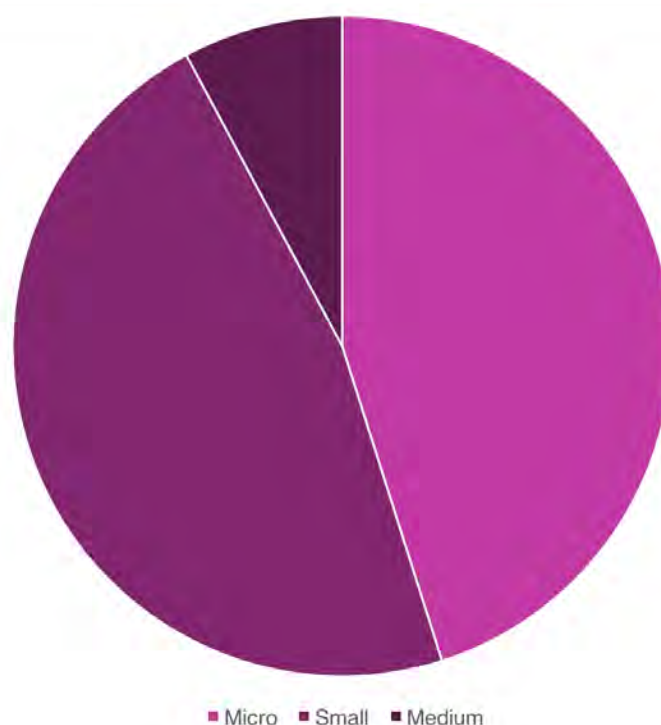
AUDIT RESULTS

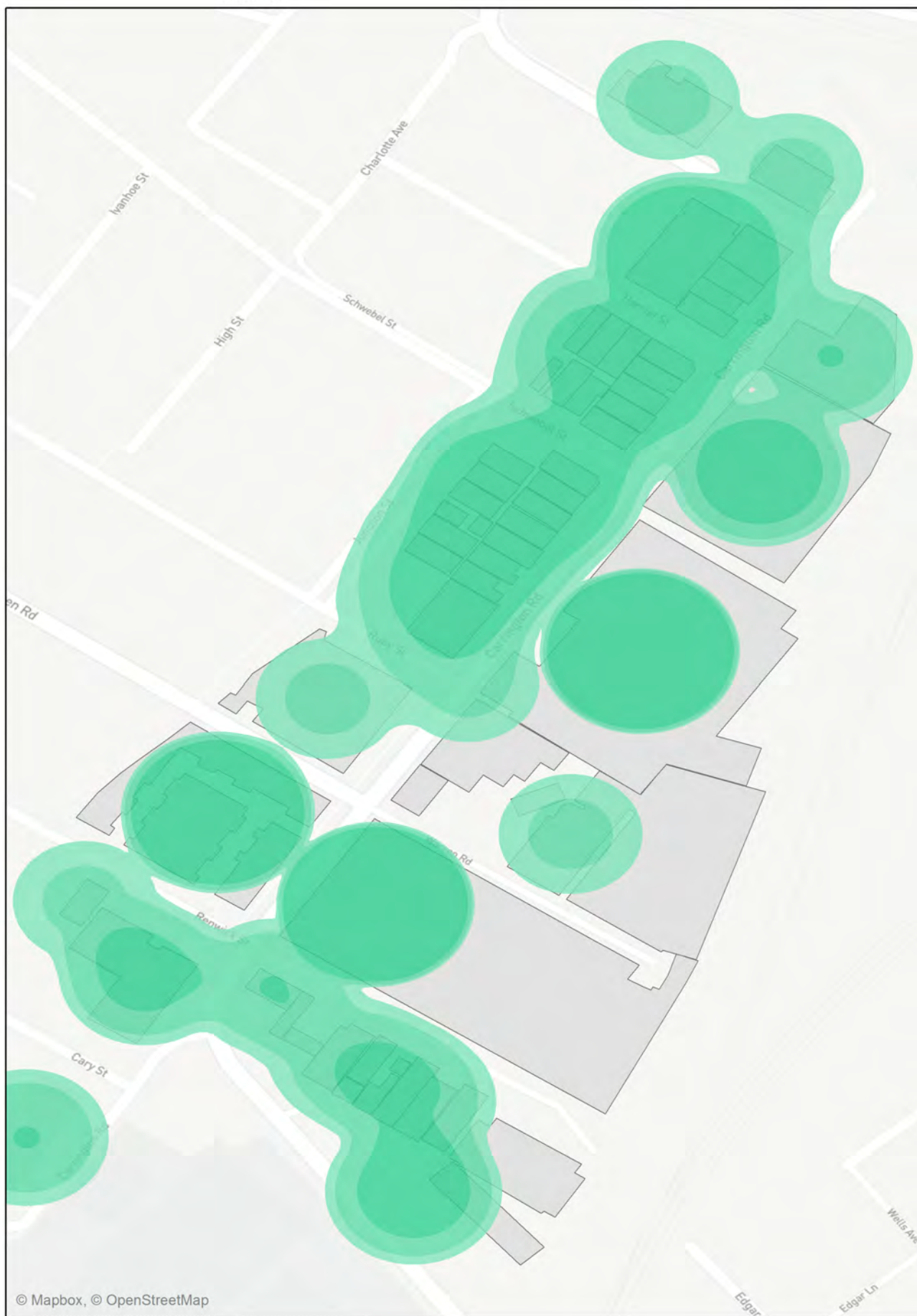
PRECINCT ENTERPRISES AND EMPLOYMENT

Carrington Road is a highly active hub of local business activity, with low vacancy rates, and significant employment creation both within the precinct, and for services such as deliveries, taxis and studio hire that interact with its enterprises. The audit documented 223 enterprises within the Carrington Road's 700 metre precinct, and further categorised 172 of these by sector. The three most prevalent categories of enterprises in the precinct were manufacturing (27%), creative (17%) and creative/manufacturing (17%). Together, these three categories at the interface account for 60 percent of known enterprises in the precinct.

Enterprise by industry	Number	%
Manufacturing	46	26.74%
Creative	30	17.44%
Creative/Manufacturing	29	16.86%
Services	26	15.12%
Warehousing	13	7.56%
Manufacturing/Services	10	5.81%
Auto Repair	9	5.23%
Community Services	5	2.91%
Warehousing/Services	4	2.33%
Total	172	100%

The precinct is overwhelmingly home to micro (less than four employees) and small-businesses (between 5-19 employees), as defined by the Australian Bureau of Statistics. Micro- and small enterprises constitute 92 percent of the precinct. This reflects the large number of solo-operated creative enterprises, but is also indicative of manufacturing trends in advanced industrial societies such as the United States, Germany and Australia. SMEs with fewer than 50 employees make up a majority of Australian manufacturing firms nationally (OECD 2013). Although the precinct is dominated by micro- and small businesses, there are a smaller number of major anchor tenants including Choice, New Directions, Lush Cosmetics, Double Roasters, and Vital Strength/Power Foods International.





Heat map, total enterprise activity, Carrington Road precinct

Precinct employment

In their desktop estimation of employment impacts for the proposed Sydenham-Bankstown metro rail corridor, AEC (2016) estimate 1200 jobs in the precinct. A complete dataset of persons employed in the precinct was not possible to calculate from this audit, for two reasons. First, only a sample of enterprises at the creative industries/manufacturing interface were subject to follow-up discussions. Where such discussions took place, accurate employment numbers were recorded. Employment numbers for enterprises outside of the scope of this project's focus were derived from a mix of sources including online information, approximations based on site visits, and direct observation of workplaces. This cannot, however, replicate a complete and accurate coverage of employment numbers. Second, a full dataset was not possible due to ambiguities around what constitutes employment in the precinct, and the nature of work in the creative industries. A photographic or recording studio, for instance, may be owned and operated by a solo entrepreneur, but used by more than a hundred people per week. Many of these users of the precinct's space earn incomes because of activities occurring within the precinct, but could not be described as being 'based' there. This problem of dispersed but related 'workplaces', acute within the creative industries, is typically overcome in economic geography through topological methods that capture multiple work sites (Brennan-Horley 2010). Such methodologies, although powerful, require information on all worksites across a city, for all workers and enterprises. Topological analysis was thus beyond the scope of possibility for this audit.

Nevertheless, based on our own follow-up discussions, site visits and field observations (in which enterprises were categorised using standard ABS business size categories – micro, small, medium, large) – it was possible to calculate lower, median and upper range employment estimates for the precinct. These range from 824 (lower) to 1829 (median) and 2956 (upper). In all likelihood, the actual number is somewhere between AEC's estimate of 1200, and our median estimate. Whichever is more accurate, it is clear that the precinct is a major employment hub.

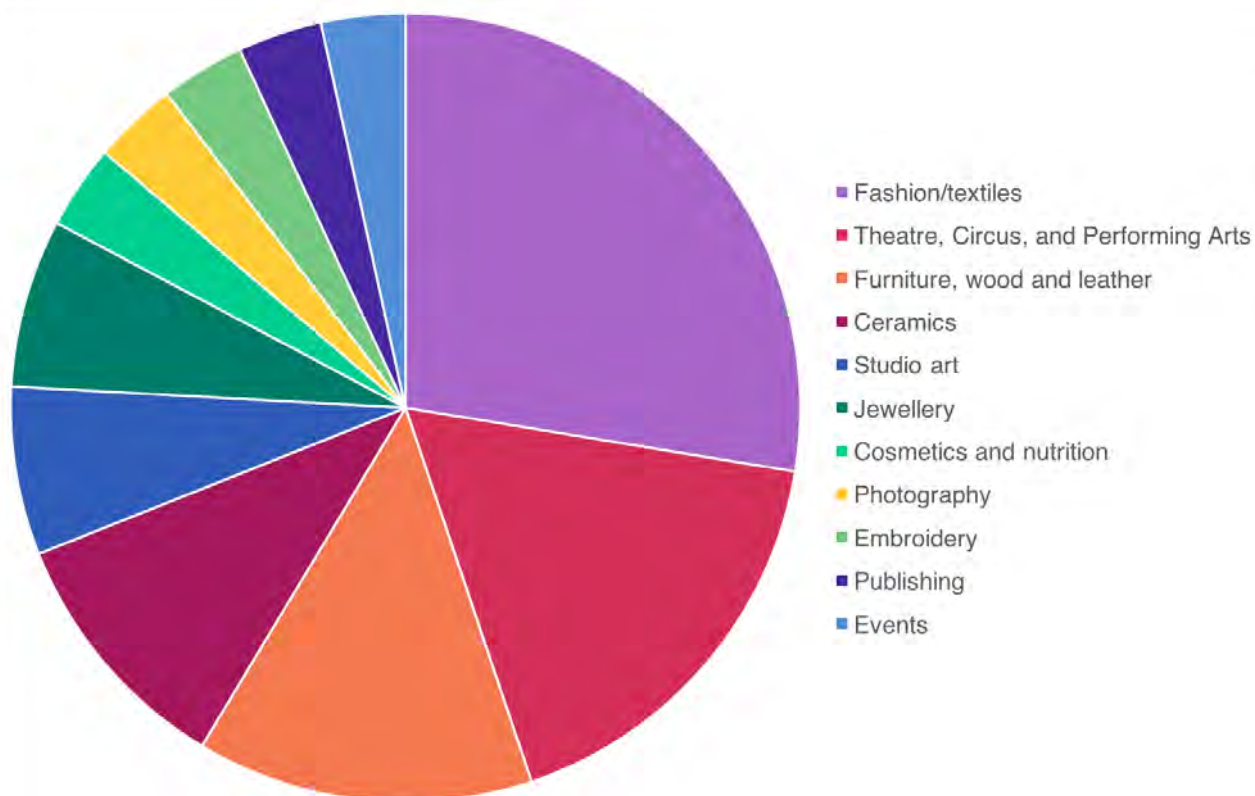
*If all the people who worked on this street
worked in one company, and were sacked, it'd
be national headlines.*
Maker micro-enterprise, Carrington Road

THE CREATIVE INDUSTRIES-MANUFACTURING INTERFACE

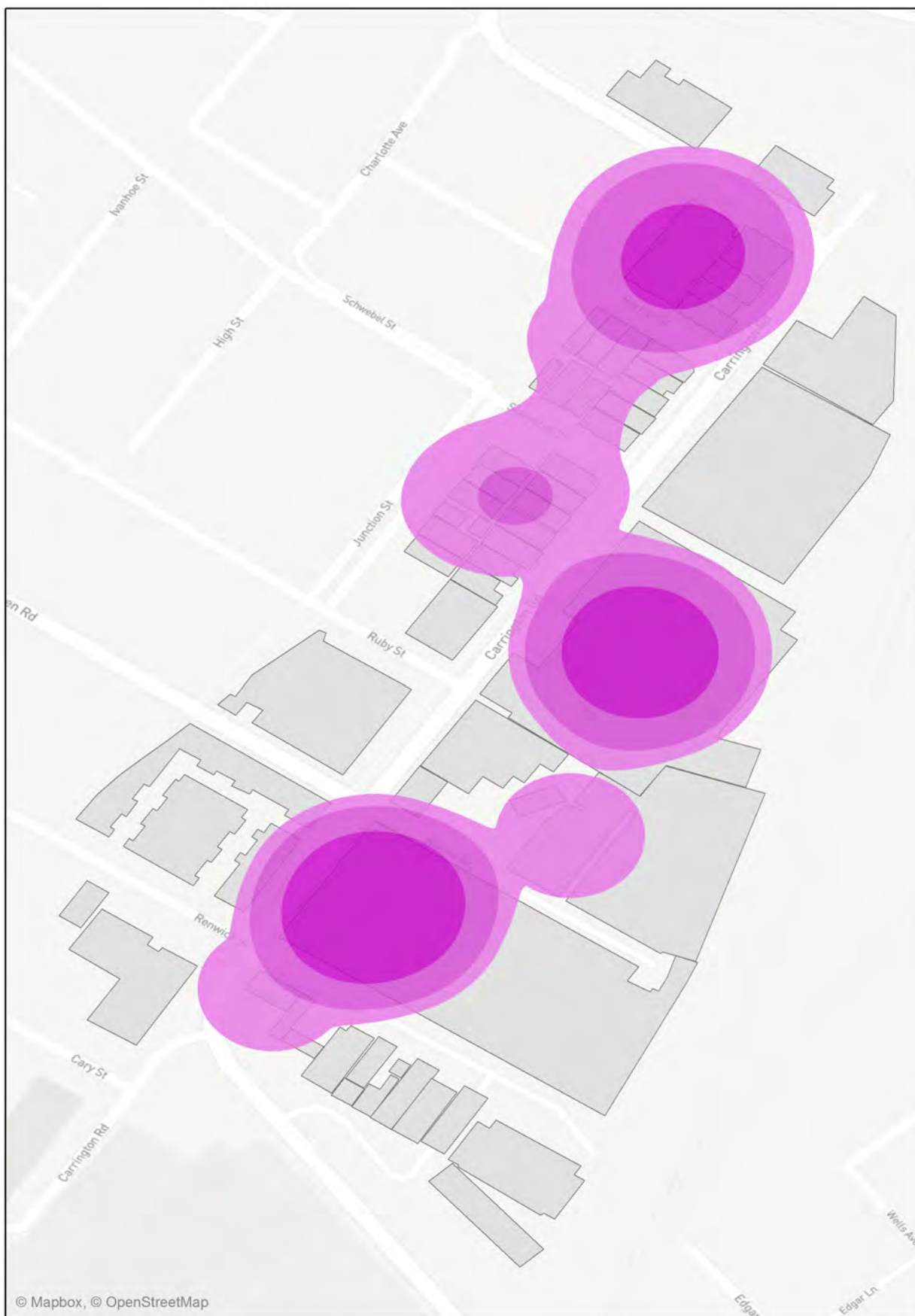
Of particular note to this report are enterprises operating at or across the creative/manufacturing interface, encompassing 29 enterprises in Carrington Road. Some 80 percent are micro-enterprises employing less than five people. Fashion design (encompassing garment-making, textiles and fabric), theatre, circus and performing arts (encompassing prop, puppet, stilt making and prosthetics), and furniture, wood and leather craft, account for 60 percent of the total.

Notably, all but two of the precinct's enterprises at the creative/manufacturing interface are located in larger complexes that are subdivided into smaller workshops, studios and pods (GM-Holden Building, Myrtle Street Studios). This is a function of affordability, and the inability of micro-enterprises to cover overheads associated with standalone buildings. It is an important detail, in the context of Sydney's dynamic property market, and overall loss of industrial land in the past decade. Not only has Sydney lost land zoned for industrial purposes, but much of what industrial space remains is unsuited to sub-divided spaces inhabited by micro-enterprises co-located within a larger complex. Nearby Sydenham estate, for example, which has been earmarked as a 'creative hub' by Inner West Council, is dominated by standalone factories rather than complexes that lend themselves to subdivision into smaller units.

It's all the overheads and operating costs if you rented a standalone building. Council regulations would mean we'd have to install ramps, toilets. I already have \$100k in machines in here. And it's only two of us. There's only so much we can do.
Woodworker, Carrington Road



Many enterprises in this category sell wares at burgeoning makers markets in Sydney, Canberra, Melbourne and beyond. A prominent example is the Makers and Shakers market in Marrickville Town Hall, held twice yearly. Makers and Shakers is 'an indoor curated even that brings together people who care about where things come from, how things are made and what they are made of' (<http://themakersandshakers.com/april-2017-lineup-sydney/>).



Heat map, creative-manufacturing enterprises, Carrington Road precinct

CLUSTER MAPPING

SPATIAL CLUSTERS

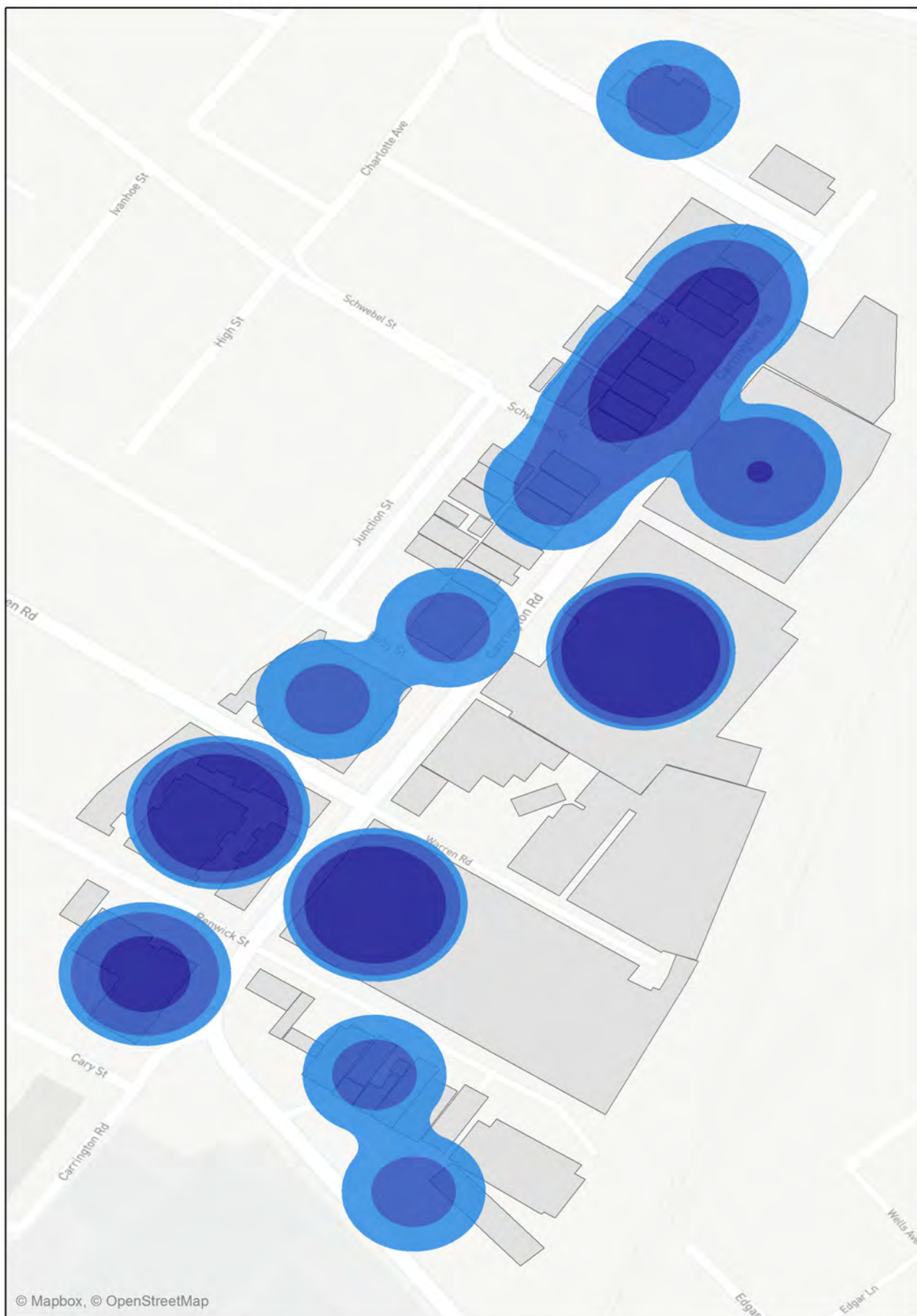
By definition, the more than 220 enterprises present in the Carrington Road precinct are geographically proximate, and thus exhibit centripetal tendencies to agglomerate spatially. Upon closer observation, the researchers noted each major building or subdivision exhibits particular characteristics. While the precinct as a whole is a vibrant hub of business, within it there are identifiable spatial clusters of activity with distinctive characteristics. Here, what matters is not just that buildings are occupied, but that they house ‘scenes’, which ‘buzz’ with activity (Storper and Venables 2004), encouraging collaboration and innovation. Such scenes in turn are a product of enterprise type and size, and how these enterprises inhabit complexes with certain kinds of built form. Creative and creative-manufacturing micro-enterprises tend towards studio spaces in large complexes, whereas manufacturers, event management and studio hire facilities need larger spaces (though not too large) with ample roof height, and truck access.

The dominant presence on Carrington Road is the GM-Holden plant, a tract that encompasses 13 hectares and several discrete but inter-related buildings, housing over a hundred enterprises. The GM plant is owned by a single landlord, also a local resident with a long history in the area, who has been sympathetic to the local community and to the needs of micro-enterprises in creative industries and manufacturing. Why the precinct has evolved to become an important creative industries-manufacturing cluster for the whole of the city, is in no small part due to the flexibility and care with which the GM-Holden plant has been managed by the present landlord over the years. Within this sprawling complex are different building types, and within them, sections and floors with different spatial arrangements, and thus different clusters of enterprises.

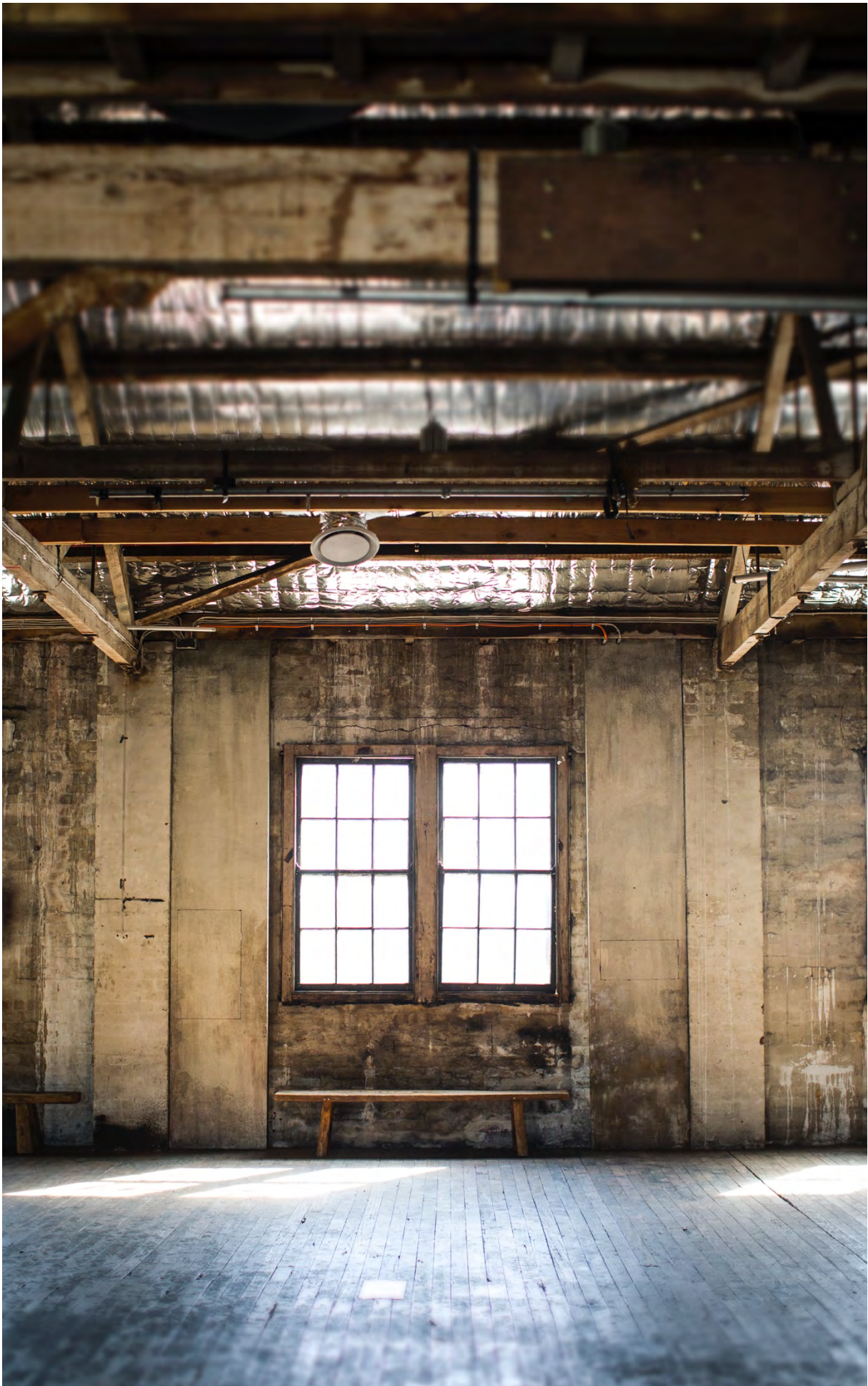


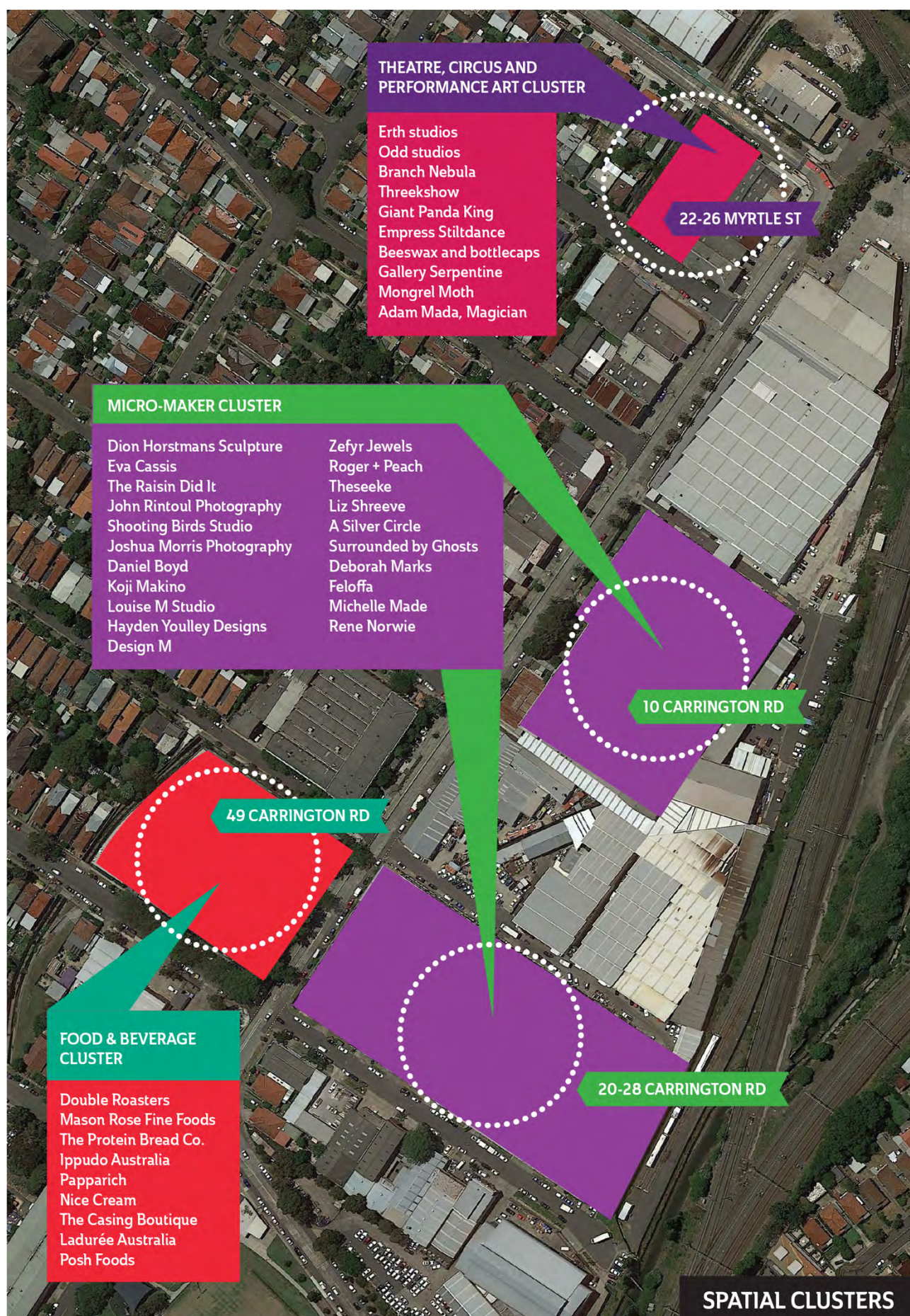


Heat map, creative artists, Carrington Road precinct



Heat map, manufacturers, Carrington Road precinct





Most prominent from the street is 10 Carrington Road - an original brick building (in transition Edwardian/Art Deco style) that housed GM offices and executives. Upstairs are a mix of studios, rehearsal and recording spaces for photography and music. Downstairs and towards the rear, is the larger original assembly plant space, now converted into workshops of varying sizes, that house a spatial cluster of woodworking, furniture/cabinetry and interior installation enterprises. This cluster includes a high-end woodworking school (Heartwood), an elite antiques furniture restorer, and an architectural leather maker and installation expert. A second spatial cluster of enterprises within the building is linked to Sydney's events, festivals and concerts, and music industries: t-shirt screenprinting, t-shirt suppliers and embroiderers.

Still on the GM plant site, 20-28 Carrington Road takes a different spatial form, and reflecting this, a distinctive spatial cluster. Workshops are in general smaller, suiting micro-enterprises. Accessible from the outside on the north side are ground level workshop studios inhabited a diverse range of purposes including sculpture and boutique food processing micro-enterprises. Ground level on the south side is broken up into pods that house ceramics, cabinet-making, niche food and beverage distribution. Upstairs inside is a narrow corridor with smaller workshops; these have high quality natural light. They house a specialist photographer and photographic studio for rent (Shooting Birds), fashion designers and makers, jewellery makers, studio, visual arts, animators etc. Co-located in a single building, solo artists, makers and creative services specialists in this section of the GM plant interact regularly within the one complex.

I like the building's ambience, and having likeminded people about. Our landlord looks after us. People are friendly, but also very professional. They're here to work.
Visual artist, 20-28 Carrington Road



On the west side of Carrington Road, number 49, is a newly built complex of industrial units behind a row of fig trees scheduled for heritage-protection. This complex houses a distinctive spatial cluster of food processing, gourmet food makers and providores who supply Sydney's cafes, bars and restaurants with everything from roasted coffee to yoghurt, gluten-free bread to sausage casings. The cluster features ethnic small businesses servicing the city's Asian restaurants, European grocers, continental bakehouses. Vegetable chopping services (All Seasons Gourmet Produce). The Protein Bread Co. Wellness by Tess provides quality food for people with specialty diets. Brooklyn Boy Bagels bake for local cafes and markets. Laduree makes luxury macaroons and tea blends for city stores and teahouses.



A fourth distinctive spatial cluster is located at the opposite end of the Carrington Road precinct, the Myrtle Street Studios. This unassuming building houses a truly unique and carefully 'curated' cluster of quirky enterprises in theatre, circus, film and stage entertainment - companies who make props, prosthetics, stilts and magic tricks. Companies who perform circus acts, install street art, entertain with vaudeville and magic shows, who make elaborate costumes, fetish clothing and cult fandom publications. Companies who have toured the world with major performances, festivals and exhibitions; companies who have won Academy and Bafta Awards (see below for profile).

FUNCTIONAL CLUSTERS

Functional clusters are defined by the presence of relationships and dependencies between enterprises that exhibit agglomerating tendencies (Scott 2004; Reimer et al. 2008). Sometimes these dependencies are commercial in nature - where for example a maker uses a local supplier of component parts or necessary services. Sometimes such dependencies are tacit - that is, informal dependencies, based on social relationships, and/or knowledge exchanges that are provided 'in kind', in quid-pro-quo or informal arrangements (for example, where a maker asks technical questions of another enterprise to assist in a particular task, without money changing hands) (O'Connor 2004; Darchen 2015). Sometimes functional clusters feature 'anchor' businesses that attract other, smaller enterprises. Alternatively, likeminded and similarly-sized enterprises can develop functional clusters with formal and/or informal relationships, without an anchor business present.

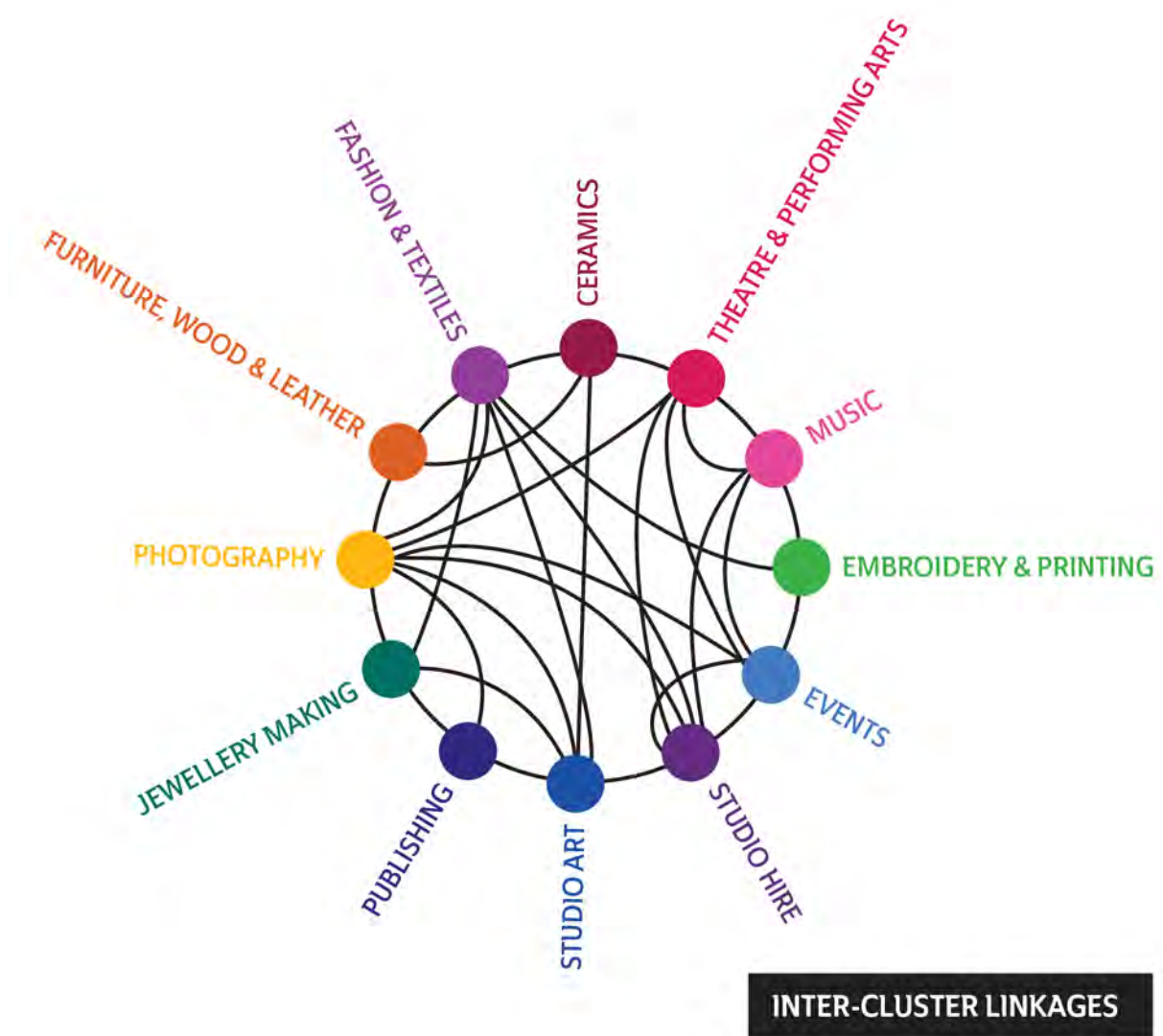


Some fifteen discrete functional clusters were documented in the Carrington Road precinct. These extend across an impressive array of sectors: theatre production, circus and performance art; furniture, wood and leather products; fashion design and textiles; clothing embroidery and screen printing; cosmetics, beauty and nutrition products manufacture; events; studio hire; automotive repair and maintenance; and food and beverage – as well as six discrete functional clusters of micro-entrepreneurial creative/makers: ceramics, jewellery, photography, studio art and design, music, and publishing.

By way of illustration, one cluster defined by commercial relationships, revolves around T-1 Print (<http://www.t-1print.com.au/>), Sydney's premiere t-shirt screen printing service for the music industry (concerts and festivals). Run by ex-Mambo designer, Pamela Mannell, T-1 screenprint t-shirts, primarily for the rock 'n' roll industry, festivals, events, concerts, and other causes. They have survived despite competitive pressures, and lack of policy support. Large run, low cost screen printing has just about all moved offshore. By contrast, T-1 specialise in quick response runs, high quality and environmental stewardship. Their competitive advantages are in flexibility and responsiveness to clients' needs; cutting-edge advanced manufacturing equipment and machines (including digital printing for short runs, and expensive Radicure 14-colour screenprinting presses); use of low-toxicity water-based inks; and geographic proximity to major events, venues and promoters. Pamela says, 'offshoring is the big problem in the industry. Anything with a long lead time is done in China. We specialise in fast turnaround jobs. We pay decent wages and penalties.' As well as cheap/poor quality overseas competition, screen printing courses have been cut from TAFE, making staff recruitment difficult. Nevertheless, the space is ideal for T-1's operations. 'Screenprinters are usually squashed into cramped factory spaces, with no ventilation or air flow. Here I have high ceilings, it's a big space to manage all our machines and equipment.' T-1 has formed commercial functional links with co-located t-shirt manufacturers and distributors and embroidery services. 'There's an embroiderer over there, and another out the back. Two t-shirt suppliers in this complex. They deliver at no cost to us. It's a real hub for us.'



Enhancing and deepening the embeddedness of Carrington Road's cluster diversity is the degree of interaction *across* functional cluster types. Individual enterprises frequently belong to more than one functional cluster. Events, for instance, encompasses business purely orientated to event management, but also enterprises in the music and theatre clusters who are deeply connected to the events sector, though not solely dependent upon it. Creative Works Australia, for example, produce installations for large scale music events and festivals; some of the acts who play at these rehearse and record at studios at the area. The events in question hire PA and audio equipment from the area, and musicians have their amplifiers serviced from within the precinct. Theatre production companies such as Erth meanwhile make props and puppets, but also run events, curate tours, and perform themselves at major events. In turn, theatre production and prop-making companies also have studios for hire, used by Sydney's theatres and television and film industry. Photographers too, have studios for hire, as well as taking commissioned commercial work for magazine and other publishing clients, and product shots for clothing designers and jewellers within the precinct. The number and diversity of functional clusters, and inter-cluster linkages, enhances local job creation potential within the precinct.



LOCATIONAL SENSITIVITIES

Another way to interpret clustering dynamics in the precinct is by tracing locational sensitivities. The precinct houses clusters of enterprises with business and tacit links both within and beyond the area, that are bound to the location, geographically. That is, factors that compel enterprises to locate in this area rather than elsewhere in Sydney, because of dynamics relating to the price of space, or proximity.

Four main dynamics were present, that underpinned locational sensitivities of enterprises in the precinct:

- rent-sensitivity
- time-sensitivity
- time-of-day sensitivity
- spatial sensitivity (within which are three, often inter-related, dynamics: [supplier proximity](#), [client proximity](#), and [social proximity](#)).

These four cluster types are further indications of strong degrees of place connection and embeddedness. They also demonstrate that enterprises within the cluster are sensitive to mobility: they cannot easily move without incurring financial costs, and damage to business links and relationships. Potential relocation threatens their established locationally-sensitive market base, and ability to recuperate lost local relationships and interdependencies.



Rent sensitivity

Typical of creative micro-enterprises and small manufacturers elsewhere, the precinct houses many businesses with acute rent-sensitivity, including craft-based makers, photographers, and visual artists. These are often solo operators who do not seek to expand beyond a certain threshold: they have sought to carve a livelihood from a labour-intensive creative passion, building up a client base or dedicated market for their products, and striking a balance between high-margin, low-volume production, and time for family life outside work (Luckman 2015). And further echoing experiences documented in previous studies (e.g. Warren and Gibson 2013), such enterprises by definition typically remain small, with small batch runs, and an emphasis on bespoke and custom services, which in turn limits volume and turnover potential, and thus potential to pay higher rents. John Stephens, from Hide architectural leather, put it simply: 'There's only so much you can pay in rent'.



Time sensitivity

Time-sensitive enterprises are those who (events, props, staging, audio, t-shirt screen-printing). Sydney Props make custom installations for promotions and special events, among other things; being responsive and nearby to those events is critical. 'Sometimes an installation is underway, and there is only a window of a couple of hours in which to work. But there is a bolt missing. You have to skip back to Marrickville to find it and then back to the event again all

before the promotional launch begins at 6pm. This wouldn't be possible if we were located further from the city.' Heartwood Creative Woodworking courses start at 6pm and folks from city and inner west come straight from work. Can't travel further. Courses are mostly for makers and enthusiasts who work in white collar jobs in the Sydney CBD and surrounding inner-suburbs, who lack workshop space or garages at home, and thus use Heartwood's facilities and learn the craft in after-work classes. 24 Hour Promotions do t-shirts and corporate merchandise with rapid turnaround. T-1 specialise in rapid response.

Time-of-day sensitivity

This relates to enterprises who operate after regular working hours, and therefore need IN1-zoned space, within time and distance proximity of the city centre. See 'Carrington Road by Night' below.

Spatial sensitivity

Spatial sensitive enterprises are those with geographic determinants limiting locational choices. These proximity factors may have rent and time dimensions to them, affected by affordability concerns, in being able to rapidly respond to customers' needs, or to pick up extra supplies without needing time-consuming shipping or travel. But they also encompass the geographically-specific business relationships, and face-to-face/social interactions upon which untraded interdependencies depend.

Within this group, are three, often inter-related dynamics: supplier proximity, client proximity, and social proximity.



Supplier-dependent enterprises need to be physically near suppliers. Mia Penn, trading as The Raisin Did It clothing, for example, relies on a network of suppliers all within a 2.5-kilometre radius. She sources custom buttons and knitwear on the same street, ink and vintage fabrics elsewhere in Marrickville, and small run services of cutting and pressing in Sydenham (see profile, below).

Client proximity-dependent enterprises are those for whom being located close to customers and markets is vital. The precinct's music rehearsal and recording spaces are located here because it's affordable, but also because the Inner West is where a critical mass of musicians - the market itself - is concentrated. In a 2014 national study of musicians, APRA AMCOS ranked Newtown/Enmore as #1 in NSW and #3 nationally, and Marrickville #3 in NSW and #8 nationally, according to songwriter postcode rankings. For these enterprises, relocating would sever, through sheer physical distances, facilities from existing core markets.

Socially-proximate enterprises need to be located within the area because the local community is where staffing and talent are found, where social relationships are either vital to the enterprise's existence, or indeed where enterprises arise from the social and cultural context itself. Local culture shapes the character of enterprises, while itself ensuring a degree of market viability for those enterprises. Theatre production companies emphasised that they need to be located in the inner-west because



of supplier proximity, but also because the area is where their staff and talent live. Choice (consumer advocacy and magazine), the precinct's largest employer, also has a highly localised workforce. Such enterprises locate in the area to be close to staff and talent, while people move to the area to be close to work. For many, especially creative micro-enterprises, people choose to work on Carrington Rd simply because it's close to their existing communities. These are enterprises for whom regularly catching up and maintaining relationships is essential, underpinning trust, and sustaining local customer bases. Such locational sensitivities are overlooked by broader-scale, desktop studies of employment, because they do not fit the mould of *a priori* 'rational' market practices. Rather, they are enterprise activities that emerge in real geographic space, because time and distance matter, and because they are socially-embedded in surrounding neighbourhoods.

CARRINGTON ROAD IN THE GLOBAL CITY

The Carrington Road precinct is not only a hub for locally-orientated enterprises. It is also a pivotal space for many of the back-end functions that underpin Sydney's role as Australia's global city. Many of Sydney's global city business activities, major cultural and scientific institutions, and tourist destinations rely on the enterprises contained within the Carrington Road precinct to provide many core and auxiliary products and services in the global economy.



In particular, many enterprises associated with the Events functional cluster (see 'Functional Clusters', above) are intertwined with the functioning of the global economy. As previously discussed, these enterprises have particular time- and spatial-sensitivities that require them to be located proximate to the CBD. Major roles within this cluster include:

- Design and construction of trade exhibits for international trade conventions;
- Prop construction and hire for international events;
- Audio-visual installation and operation for large events;
- Production of merchandise for major international events;
- Entertainment (circus, theatre, magic, music, performing arts) for corporate events;
- Costume and prop design for major cultural festivals, such as Vivid, Sydney Gay and Lesbian Mardi Gras and Chinese New Year.

Other producer service functions located in the Carrington Road Precinct include:

- Photography, advertising and creative works for major corporate clients
- Studio hire for major television networks
- Studio hire for commercial photography shoots
- Recruitment services for the finance and business sector;
- Production and design of publications relating to the finance industry.



Sydney Prop Specialists

CARRINGTON ROAD BY NIGHT

There has been much talk and policy work around the ‘night-time economy’ in recent years. Typically, however, this focuses on entertainment and dining precincts of cities, and related problems of social disruption and alcohol- and drug-related violence. What the night-time economy debate has overlooked is that there is another night-time economy to cities. One that takes place in much more anonymous industrial precincts, behind closed doors. This night-time economy is hidden and far less controversial. But it is nevertheless crucial to the functioning of the city’s overall creative industries, education and hospitality sectors. And its spatial needs have by and large been overlooked in strategic urban planning to date.

At dusk, Carrington Road sheds its skin and becomes something else entirely. Workers from cosmetics factories and auto repair workshops head home. In-coming are musicians and manufacturing workers in food processing, gourmet baking, and cafe and restaurant distribution. Bankers and IT executives arrive after a long day in front of a screen to take an after-work woodworking or photographic class.

Music is a sore point in Sydney’s Inner West. A bitter history of pubs overtaken by poker machines, noise complaints from newcomer residents gentrifying old working-class neighbourhoods, and technical problems like fire safety and liquor licensing placing major hurdles before musicians simply after a place to play and build audiences. In this context, Marrickville Council has for over a decade sought to find planning solutions by promoting live music in its industrial precincts (Gibson and Homan 2004; Lyons 2016). On Carrington Road, the emphasis is less on live music, and instead on rehearsal, recording, and equipment supplies and rentals. Using Carrington Road’s music spaces are several hundred bands. ARIA-award winning artists and producers maintain spaces, including members of Custard, Machine Gun Fellatio, and Youth Group. Countless albums have been recorded there. The impact of the precinct on Sydney’s musical ecology is difficult to quantify; beyond mainstream recording artists it supports a thriving scene of grass-roots music-making in a city otherwise starved of appropriate rehearsal and recording spaces.

Operating alongside musical night-time activity is a cluster of food processing and manufacturing businesses who operate at hours attuned to the city’s cafe and restaurant sector. This includes specialist baking, distribution of coffee and other supplies, outside of standard business hours. These enterprises, while very different to music, nevertheless also require access to suitable space within time and distance proximity of their core markets in the CBD and inner-city.

If Sydney is a 24-hour global city, it needs proximate industrial zones that operate on a 24-hour basis to support its entertainment, dining and creative scenes. Managing potential for conflict within such spaces, if subject to future residential and/or mixed-use redevelopment without careful zoning and design, is an on-going challenge – not just locally, for affected enterprises and residents, but for the entire city.

I need IN1 space [industrial zoning], because I teach at night. If I’m in IN2 [transition industrial] space and teaching at night, with machines going, that means potentially upsetting residential neighbours. There goes my business.
Heartwood Creative Woodworking

PROFILES

Inside magical Myrtle Street Studios - Sydney's hidden creatures

On Myrtle Street, at the northern end of the Carrington Road precinct, is an unassuming factory of whitewash walls. Once a Venetian blinds factory, it now houses enterprises among Australia's leading theatre, film, television, festival and event producers.

The major tenant, and manager of the studios, is Erth Visual & Physical Inc. (<http://www.earth.com.au/>), a theatre, event and production company who make puppets, props and models, and curate performances and exhibitions that tour nationally, and increasingly internationally, into the United States, UK, China, and Japan. Founded in Ballarat in 1990, Erth develop and tour bespoke performances, and make puppets and other creatures, aiming to entertain audiences and educate them, especially children, about the earth, nature and archaeology. They design and make giant dinosaurs and sea creatures, after extensive consultation with palaeontologists, and pull together entertaining stories and performances that bring science and natural history to life. Employing six full time people, Erth have been located in Sydney since 1994 after a street show production for the Sydney Festival. Their roster of productions includes: *Incubator*, *Gargoyles*, *The Garden*, *Gondwana*, *The Nargun and the Stars*, and most recently, *Dinosaur Zoo*, *I, Bunyip*, and *Spirit Creatures*. Their credits include the 2000 Sydney Olympic Games Opening Ceremony, Hong Kong Fringe, Singapore Arts Festival, Shanghai World Expo, Sydney Children's Festival, City of Sydney Chinese New Year Parades, Vivid Sydney, and Melbourne's Moomba Festival.



Erth's Executive Director, Sharon Kerr, spoke to us about their enterprise, the Myrtle Street Studio hub in which they are located, and the Carrington Road, Marrickville precinct. "We've been here since September 2016", says Sharon. "We were originally based in Carriageworks, Redfern. It was more of a public facing space there, and didn't have much ventilation so the windows and doors were open and folks wandered in. Myrtle Street has better ventilation and street access at rear; it's a much more anonymous building". Erth manage the Myrtle Street Studios building and hold the lease. The building's main office and a large central workshop area house Erth's activities, while smaller workshop spaces house likeminded enterprises.

Since Erth moved to Carrington Road, they have invested in the site; installing waste management systems, bathrooms, carpets, and fire safety measures. A theatre rehearsal space has also been developed for hire. Reflecting the chronic shortage of space suitable to companies at the creative industries-manufacturing interface, it took considerable effort, cost, and disruption to their business, to locate an appropriate location: 'It was really difficult for us to find the right space. It took 18 months and we had many real estate agents working for us. Meanwhile we were still trying to work and bring the money in. The sheer cost was a barrier. We needed bank guarantees and the like. Practically, we need roof height, and the space needs to be riggable. It's the way we deal with stock, to store our puppets and dinosaurs without damage. The space needed to be semi-industrial - somewhere we can cut metal, somewhere we paint. No wooden floors or carpets. Multipurpose, with running water, and a loading dock, with street access to load in and out, for deliveries'.



22-26 MYRTLE ST

THEATRE & PERFORMING ARTS

Erth studios
Odd studios
Branch Nebula
Threeshow
Giant Panda King
Empress Stilt dance
Beeswax and bottlecaps
Gallery Serpentine
Mongrel Moth
Adam Mada, Magician

I feed by osmosis off the energy. I love the sound of creative industry. I thrive in this space.

Emily Buttle, Empress Stilt dance, tenant of Myrtle St Studios

We asked Sharon about the possibilities of the precinct being redeveloped, and alternatives for their enterprise. Sharon holds a five-year lease, and hopes that the precinct will indeed retain its factories and eclectic mix of creative industries and manufacturers. Moving to a greenfield site is not an option. Sharon describes: ‘All the staff live locally. We couldn’t really move to, say, Chullora. We need proximity to the suppliers and businesses we use to get stuff done. And proximity to public transport.’

Co-located with Erth, is Odd Studio. Run by Directors Adam Johansen and Damian Martin, Odd Studio is an Oscar and Bafta award-winning film production company at the forefront of prosthetic make up, creature effects, animatronic characters, special effects, props and models. With over twenty years’ experience, their credit list reads like history of film itself, including: *Alien*, *Pirates of the Caribbean*, *The Great Gatsby*, *Wolverine*, *Australia*, *Where The Wild Things Are*, *Superman Returns*, *Star Wars (Revenge of the Sith, Attack of the Clones)*, *The Matrix*, and *Babe*, *Pig in the City*. Most recently they worked on *Mad Max 4 Fury Road*, for which they won both an Academy Award and Bafta Award for Best Hair and Makeup (<http://oddstudio.com/>).

Elsewhere in the Myrtle Street Studios are smaller workshops housing two internet companies, a bookkeeping firm, and several other likeminded theatre and film, circus, prop, puppet and production companies. Branch Nebula are a performance art company specialising in youth productions, and skater culture (<http://www.branchnebula.com/>). Giant Panda King are a boutique publishing company ‘who create limited edition books, prints, records and apparel’ based on inventing recycling of cult film and pop culture iconography (<https://giantpandaking.com/>). Empress Stilt Dance is a micro-enterprise run by Emily Buttle, who makes stilts, and large costumes (flowers, bugs, butterflies), and manages a performance troupe of eight, who do roving street acts and festival shows around Australia, and internationally, including WOMAD, Glastonbury, and the Berlin Love Parade (<http://www.empressstilt dance.com/>).

Also tapping into the street art and performance scene, Beeswax and Bottlecaps are a self-described Bespoke Performance company, run by Monica Trapaga, George le Couteur and Lil Tulloch, specialising in vaudeville-inspired cabaret, circus and aerial tricks (<https://www.beeswaxandbottlecaps.com/>). Gallery Serpentine make and sell Victorian fetish, corsetry, and steampunk gear (<https://www.galleryserpentine.com/>). Adam Mada is a magician and event manager (<http://www.adammada.com/>) who moved to Carrington Road after the industrial space he occupied previously in Canterbury, near the Cooks River, was rezoned and developed into high-rise residential apartments. ‘For self-employed small businesses, being co-located somewhere with others is healthy. Rents on commercial spaces aren’t possible. Microbusinesses can only do it like this’.



Adam Mada, magician and event manager



Emily Buttle, Empress Stilt Dance

Follow the grain: Carrington Road's wood and leather cluster

A distinctive functional cluster on Carrington Road encompasses furniture, wood and leather. The original anchor business is Anagote Timbers (anagote.com), owned and operated by Rodney Henderson for over 20 years. Anagote is Sydney's last fine timber dealer within a 20km radius of the CBD. They stock high-end and rare timbers not normally available in timber yards, suitable for fine furniture, joinery, master woodturning, and musical-instrument making. 'I couldn't be here if I didn't own it', says Rodney.

At the creative hub is Heartwood Creative Woodworking, a design and woodworking school run by Carol and Stuart Faulkner. Stuart Faulkner, who established Heartwood with his partner Carol, emphasised that 'I have to be located here. It's where my market is'. Somewhat paradoxically, Sydney's rapid redevelopment and shift towards high-rise apartments has created



demand for woodworking classes. Stuart explains: 'We're a recreational woodwork school. Most students live in this area, in the eastern suburbs or near the CBD, and they live in apartments. All through the airport area, Gardener's Road, Mascot. All those factories have been demolished and are now high rises. There are lots of young people in those apartments. Among them, craft is having a real resurgence. When I started at Sturt Woodworking School [Southern Highlands] decades ago, craft was a dirty word. Now there's growing interest in craft, boutique beer, bespoke. We know students in apartments - they have no room, so they have workbenches on balconies. They don't have a shed or a garden. They work in banks or they work in IT. There are only so many cafes they can go to. Life gets boring! They want to do something creative and something tangible'.

In the same complex, Tim Noone is a cabinet-maker who crafts hand-made furniture in small batch runs or by commission (<http://timnoone.com>), and Nik Teply (<http://nikteplyrestorations.com.au/>) is a cabinet-maker and fine antique furniture restorer, who trained originally in Germany. For Nik, furniture restoration is both a passion for manual craft, and what he calls a 'green trade': 'Let's live green, let's recycle. Let's fix this. I'm saving furniture to be re-used. But also because of the age and history of the object, I'm saving Australian cultural history. It's Australian red cedar. It's Australian history right there'. By definition his business model relies on small volume, personal relationships, and care: 'I can tell you the story about each item, why it's here, what it means to the people getting it restored. That table there, the client came in to pick it up and began crying. It had huge sentimental value. It looked exactly like she remembered as a child, when it was her grandfathers. Sitting at the kitchen table with her grandpa'.

John Stephens, trading as Hide, is an architectural leather design artist and installation producer who makes high-end objects for interiors, and installs leather features as part of renovations and new build projects. With over 20 years' experience, he began making leather bags, in London. John then got a call through someone he knew to work on films. 'A thing that just happens, and you find yourself working on Hollywood movies.' Among other projects, John made leather armour for the films *Alexander*, and *Troy*. Work began to come in on architectural leather and interior installations, which John has specialised in for nearly a decade, and for five years since re-locating to Sydney.



Carol and Stuart Faulkner, Heartwood Creative Woodworking



Nik Teply, Antique furniture restorer

These enterprises enjoy many tacit interdependencies with each other, within the same building. John chats with, learns from, and swaps tools with Stuart, Nik, and Tim. They share equipment, provide advice and solve technical problems. There are commercial benefits, too. Stuart explains how ‘We generate lots of spin-off work. We refer students to Tim, if they need a new kitchen but don’t want to use one of the big companies, and want to pay a little more for something better quality, we refer them to the other makers here’. Meanwhile, proximity to the Anagote timber yard remains a major attraction. Nik describes how ‘For me, and the work I do, I need to see the individual piece of timber’. Says Stuart, ‘If Anagote Timbers goes, I’ve got to travel out to Smithfield, or to Trend Timbers in Richmond. That’s two or three hours in traffic jams. Here, I can walk into Anagote, pick the exact piece of timber I need, put it over my shoulder and walk one block back. I don’t have to sit in traffic for two hours’. Proximity to Anagote means that Heartwood can source supplies for their students just-in-time, reducing their space needs for wood storage, and thus keeping down overheads. Proximity also means being able to reduce shipping costs to nil, and being able to hand-select individual pieces of timber for high-end making purposes.

When asked about the future, both Stuart and Nik expressed concern about Sydney’s property market, and dwindling IN1-zoned land, within a suitable market catchment. Nik explained: ‘all my clients are in the inner west, east and north. If I moved elsewhere, it’s too far for my customers. What would I do in

My ultimate dream is to have a world class international woodworking school in Sydney, with a gallery, a cafe, a retail outlet, and a proper makerspace. We have massive demand. We have a good catchment area... The problem we’re going to face is there’ll be no suitable industrial space left, and what’s left will become too expensive.
Stuart Faulkner, Heartwood Creative Woodworking

Smithfield? It’s actually finding a place that’s the problem. The problem is money, but it’s also physically finding a space - is there anything actually suitable to rent?’ Stuart added: ‘The overinflated housing market in Sydney is the problem. We’re losing industrial space. And at the same time, people are mortgaged to the hilt and their repayments are huge. All it takes is a slight increase in interest rates, and the first things to go will be after-work classes like woodworking. Our clients may end up pinched, or we’ll be pinched on the rent for small workshops’.

Stuart is at pains to point out that his enterprise is no charity, and does not need subsidisation. He would like Heartwood to expand, if they could. ‘If I could get a bigger space, we could take on more students, run more classes, employ a technician, generate more work for teachers, and guarantee them an income. That would mean more makers and fine craftspeople being able to earn a livelihood. We would love to make the next step, but we can’t expand. We’d love to double our space. But 450-500m² would double our rent. That’s a big mental leap’.

Making matters worse is the chronic industrial space shortage: ‘The problem we’re going to face is there’ll be no suitable industrial space left, and what’s left will become too expensive. Victoria Road is going to be redeveloped into apartments. This is Sydney’s last. If I move to Ingleburn, none of my customers are going to travel that far. And in the outer suburbs, folks already have space, gardens, sheds, space for workshops. This is where the market is. But as industrial spaces in the inner city disappear, the prices skyrocket’.

Contemplating Carrington Road’s future, Stuart admits, ‘If this place disappears, I would probably have to fold. I’d probably leave Australia and teach in America. It’s not because there’s a lack of market here. It’s because of lack of suitable industrial space in this area. When my business goes, it’ll have knock-on effects for lots of others too. The even bigger knock-on effect will be the loss of skills. The skills will be gone. I don’t know what our future is’. Adds Stuart, ‘I do ask myself ‘why am I doing it?’. ‘Because you love it’, says Nick.

Shooting Birds Studios/John Rintoul Photography

At the end of a long corridor of studios on the upper level of what looks like old factory management offices, is John Rintoul Photography, and his adjacent facility, Shooting Birds Studios. John has 20 years extensive experience in the professional photographic industry. He shoots still life portraits, product and people shots, everything from perfumes and sunscreens to watches and sunglasses. Chances are if you've picked up a fashion magazine anywhere in Australia, you've flicked through advertisements and product pages featuring John's work. A particular speciality is photographing liquids. Ever wondered how those ads were made that perfectly capture the first crisp drops of beer being poured into a cold glass? John also manages an adjacent, purpose-built photographic studio, available to commercial clients, in which he has invested over \$100,000 in lighting, sets, and a bespoke cyclorama (a curved, white-wall installation that enables taking photographs with no wall, floor or ceiling edges visible).



John has a long history in Sydney's media and publishing industries. He was involved in establishing Pioneer Studios, once Sydney's premiere photographic industry cluster on Broadway (and now a campus of Notre Dame University). Emblematic of the creative displacement problem plaguing Sydney, John has moved four times in the past five years. Like many other Carrington Road tenants, he previously rented space at the old Taubmans paint factory site in Mary Street, St. Peters. Taubmans moved to Villawood in 1965. Over several decades, that building became inhabited by a diversity of light industry, warehouses and creative enterprises. When in 2016 that site was rezoned from industrial land, and designated a 'creative precinct', rents rose accordingly. John recalls how one landlord would walk potential new tenants through his studio space, showing off the presence of creative enterprises. But then the rent effectively tripled in price, forcing John and many other Precinct 75 creatives and makers to look elsewhere.



John is highly skilled and passionate about his work, but disillusioned with the lack of policy and planning support for creative industries in Sydney. Available spaces suitable to his purposes in Sydney are disappearing and becoming prohibitively expensive. John speaks very highly of his present landlord, and hopes that spaces will remain suitable and affordable in Carrington Road, should it be redeveloped. If not, 'I don't know where I'd go then. Maybe move to Melbourne – except I hate the cold weather – or back to Coffs Harbour.'

True Local – The Raisin Did It clothing

Mia Penn is a clothing designer, maker and entrepreneur – the brainchild behind The Raisin Did It Clothing (www.theraisindidit.com.au). Mia makes children's, women's and men's clothes. Her enterprise began with a love of vintage fabrics, and a desire to make children's clothing locally, in contrast to the flood of cheaply-made, poor quality imported clothing. Requests from customers for items made in adult sizes led to a womenswear range. It grew from there. Her core aesthetic combines vintage fabrics, hand-screenprinted illustrations, bold use of contrasting colours and patterns and fabric collage. Emphasis is on quality, durability, careful patternmaking and superior fit. The idea is to produce garments that will eventually become hand-me-downs or even family heirlooms. Production runs are limited, in part due to small quantities of available rare and reclaimed fabrics. Mia says, 'The dress I've got on, I made 20 of them, not 200'.

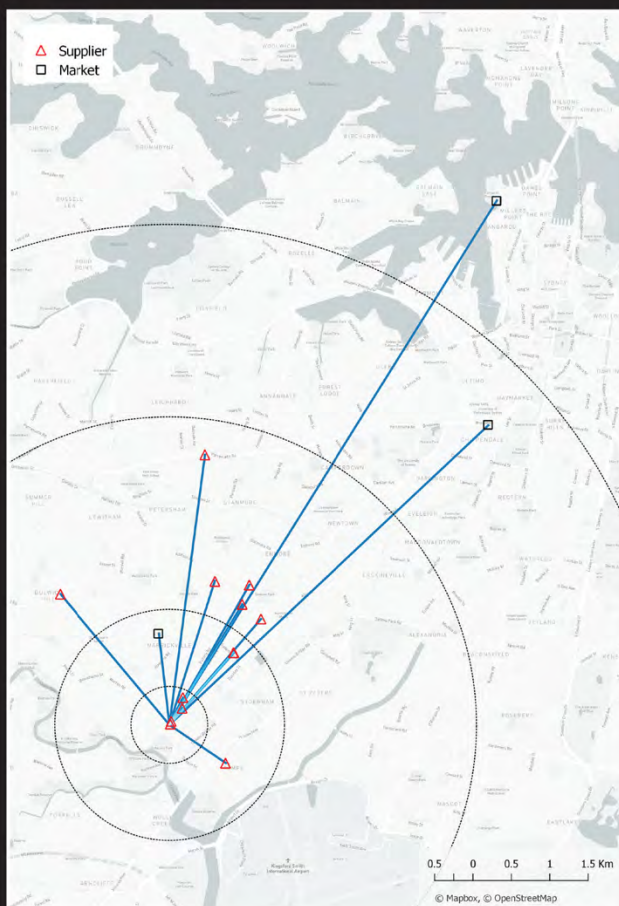
What I do couldn't be moved offshore. It's too small. I am all about locally-made. All my suppliers and services are within a kilometre or two radius. It has to be here.



Mia lives locally. Her children attend the local primary school. She shares a workshop space on Carrington Road with another tenant, a jewellery maker. Some clothes are hand-made personally by Mia in the Carrington Road, space, but she also maintains a network of local makers, suppliers and services in the Marrickville area in order to complete production runs. Mia likes the building's good light, and appreciates her landlord's sympathy to local creatives such as herself. Her workshop is located next door to celebrated Indigenous artist, Dan Boyd. Down the corridor is photographer John Rintoul. Being in the same building as likeminded people adds to the stock of knowledge and design inspiration. Mia says, 'I can't fit at home doing this. It's a physical space. If all you need is a desk and a computer you can pay commercial rent on an office. But I need space for fabrics, a large cutting table, mannequins, storage. Dan next door – his paintings are huge. He needs to make a mess. We don't have triple garages we could use at home'.

She sees the future of the Carrington Road precinct as an issue affecting the whole community, with hot button issues such as schools, parks and traffic. But also, she is concerned about local manufacturing, for how things are made, especially locally: 'My clothes are 100 percent locally

made. I get second-hand and vintage fabrics, packaging and props from Reverse Garbage in the Addison Road Complex. I buy my ink in Leichhardt. Screenprinting is done in Petersham. Zippers come from Ming On, on Addison Rd. I get cutting and sewing done in Sydenham; pressing at Sunny, near Marrickville metro. I sell my clothes at the Finders Keepers and Makers and Shakers markets, and the Sydney Made markets run by Etsy. All my work is contingent and co-dependent on other local businesses’.



Where's the support for locally made? Bill at Kings Knitwear is the last knitting factory in Sydney. He makes for me, and for shops like Made in Newtown. If he goes, it dies entirely and goes to China. This area has a very unique mix of creatives and manufacturers and the two intermingle. It's how it's possible to make quality things, locally. The city ought to recognise and cherish this'

Mia Penn, The Raisin Did It

MAP (left): Supplier network and key markets, The Raisin Did It

Object beauty – Hayden Youlley Designs

Slab building, coil building, wheel throwing and mould making – unfamiliar terms that describe the advanced skills a ceramicist brings to the making of beautiful objects. Hayden Youlley learnt them first at Sydney’s College of Fine Arts, and then at the world-renowned University of Illinois Ceramic Department. He now shares a workspace with two other ceramicists in the micro-maker marvel that is 20-28 Carrington Road. Hayden makes tableware, lighting and ornamental designs. His products, made in small batch runs, have been profiled in *Home Beautiful*, *Vogue Living*, *House and Garden*, *Inside Out* and the *Sydney Morning Herald*, and are available in stockists and galleries across Australia, as well as at maker markets in Sydney and Canberra. A core value of his work is the ‘importance of creating both environmentally and socially sustainable solutions to the design problems posed by the contemporary world’.



The three ceramicists share the space in order to reduce rent costs, but also to share and spread out equipment, materials and knowledge. Kilns for example, are shared, spreading costs and risks, but also encouraging collaboration. One of the building's larger workshop spaces, it would be prohibitively expensive to rent individually. Although the market for quality, locally-made homewares is burgeoning, rent costs for ceramicists, who need ample space for materials, kilns, and stock, can make enterprises unviable. Hayden appreciates Carrington Road's comparatively low rents, especially within the Sydney market. The building is also suitable for important technical reasons. It is on the ground floor, and has roller door/street access. This is needed for deliveries in and out. In ceramics these are heavy, and frequently fragile. Ceramicists also need to move kilns in and out if need be. Lifts and stairs are inappropriate. He also likes the friendly people. Although not reliant on them commercially, he gets along well with clothes makers and the woodworkers.



Diversity defines Hayden's suppliers and clients – there are lots in the local area, but also elsewhere, tapping into the growing market for well-made and beautiful local products across Australia. Hayden hopes the area keeps its factories and studios, but worries about Sydney losing its last affordable spaces: “Where are we going to go next? That’s the million-dollar question for artists in Sydney right now. Should we all get together and move somewhere? But in Sydney, there won’t be anywhere else.’

CONCLUSIONS

Creative industries and manufacturing are increasingly interwoven, through innovation-driven additive manufacturing, craft-based production, and bespoke maker scenes. The assumption is that the decline of Australian manufacturing is inevitable, is false and misleading. Employment, exports, enterprise formation and R&D investment statistics all point to manufacturing's endurance, as well as its transformation and increasingly diverse character. Simplistic depictions of manufacturing's decline override empirical evidence of complexity in favour of a simple narrative that justifies other ends, such as conversion of industrial land to high-density residential real estate developments.

The creative economy, meanwhile, is rapidly changing due to altered dynamics around production and labour, urban development, and digital technologies. Creative sectors – from visual arts and design to theatre and music – are increasingly connecting with new forms of material production. They do so in inner-city industrial zones, where other relevant enterprises are co-located, and where buildings are often older and lower rent, with suitable roof heights, truck access and limited restrictions on noise.

Together, creative industries and manufacturing form a significant sector of investment and employment, while contributing to city vitality and liveability.

Manufacturing is becoming increasingly interwoven with creative industries, through innovation-driven additive manufacturing, craft-based production, and bespoke maker scenes. Cities such as New York and Portland are recognising and proactively planning for this, because the creative-manufacturing interface generates jobs, assists place marketing, contributes to liveability and enlivens local communities.

Carrington Road, Marrickville, presents a pre-eminent example of this in Sydney. In Carrington Road, a distinctive and significant precinct has emerged featuring both creative industries and manufacturers, and crucially, a critical mass of enterprises whose functions and products bridge across both sectors. Precinct enterprises are diverse, across a spectrum from food processing to clothes design, theatre puppet making to ceramics.

Strong place embeddedness was evident through local business ties, functional cluster dynamics, and durable social networks. Underpinning Carrington Road's emergence as a pre-eminent creative/manufacturing interface precinct has been a combination of affordability, sympathetic landlords, industrial land use zoning, mix of small and large factory spaces with suitable features, proximity to central city economic and cultural hubs, skilled workforces and core markets, and a surrounding social and cultural environment. The precinct represents the culmination of an uninterrupted sequence of industrial land use since the 1920s, overlaid with increased significance arising from the loss of similar industrial lands elsewhere in Sydney.

Future uncertainty

Much uncertainty prevails over Sydney's remaining industrial lands. Like cities across Australia and around the world (Leigh and Hoelzel 2012; Lester et al 2014; Shaw 2015) industrial lands containing low-rent, older buildings that have sufficient roof heights and street access, within proximity to the city centre, are being lost. Unlike Chicago, San Francisco or Portland, there are no provisions to protect industrial employment lands of the sort needed at the creative industries/manufacturing interface. Creative spaces in Sydney, where they have been so designated through local planning, have over time become zones of consumption – typically featuring retail shopfronts selling homewares and clothes – rather than spaces of cultural *production*. Carrington

Road, by contrast, is largely free from retail and tourists, but abuzz with creative productivity.

At the same moment that Carrington Road has risen to prominence as a distinctive site of interaction between creative industries and manufacturing, NSW Government renewal initiatives around the Sydenham-Bankstown Metro Rail corridor suggest its future is better served as a site for residential real estate development. In a recent *Daily Telegraph* news report announcing plans for 35,000 new residences in that

My artist friends have had enough of Sydney rents and are moving out, predominantly to the upper Blue Mountains. If the NSW government or Inner West Council doesn't save spaces or subsidise them for creatives, they're simply going to lose the diversity in the area, the diversity that makes the area so great, and gives it character.

Visual artist, Carrington Road

corridor, NSW Planning Minister Anthony Roberts was quoted as saying that 'each precinct has its own unique character and after listening to the views of the community living along the corridor, we understand that keeping the local character of these precincts is vital'. Carrington Road's industrial history, intense business clusters and unique mix of creative industries and manufacturing activities are what provide the area its local character.

At the scale of local council planning, Marrickville Council (now amalgamated with Leichhardt and Ashfield in the Inner West Council) has responded to land use, gentrification and environmental concerns with a strategy to develop nearby industrial lands in Sydenham into a designated Creative Hub. Although enjoying similar locational advantages to Carrington Road, the Sydenham estate industrial lands are not extensive enough to function as a metropolitan-scale cluster for the entire city or state, and it cannot be expected to absorb potentially over 200 displaced Carrington Road enterprises, let alone further displaced enterprises from across Sydney as industrial lands throughout the city continue to be rezoned. The Sydenham industrial precinct, too, will also lose land from the Sydenham-Bankstown Metro Rail corridor renewal plans, with Victoria Street also planned to be rezoned for residential purposes. Notwithstanding well-informed local council intentions to plan for creative industries, the remaining suitable land in the Sydenham Creative Hub precinct will inevitably escalate in rent value with the loss of Carrington and Victoria Road precincts, pricing out the vast majority of the enterprises documented in this audit - which are very rent-price sensitive. How the Sydenham Creative Hub evolves remains to be seen, but like other creative/manufacturing interface precincts before it, there is the risk that in time, the very activities it is designed to encourage may also be displaced, through conversion of spaces to commercial/shopfront/retail purposes, with accompanying escalating rents.

For two years I went across Sydney, looking for a place. If you want 3,000m², not a problem. Under 500m², you've got a problem. When you look at new industrial sites, it was all HUGE. That's okay if you're a company with 500 employees. I'm just one person and need a small workshop. It just doesn't exist. The people here, to find a space this size, where do they all go?
Furniture Maker, Carrington Road

Meanwhile, there are few other locational options for enterprises whose views are contained in this report. The assumption that inner-city manufacturing can and will simply relocate to large greenfield sites on the city fringe is not borne out empirically, and overlooks the evolving and dynamic nature of urban manufacturing/creative industries interface, as well as its actual needs. Greenfield sites are more suitable to manufacturers and warehousing enterprises that need large amounts of floor space, 'hanger' structures, and motorway and airport access for large freight volumes. At the creative industries/manufacturing

interface documented in Carrington Road, Marrickville, such considerations are largely irrelevant. Instead, locational decisions are underpinned by availability of low-rent, older buildings with

suitable roof height and truck access, and co-location with likeminded and/or functionally interdependent enterprises. Close proximity to skilled creative labour forces is key, as is the area's social and cultural context, and proximity to suppliers and clients located in the CBD and surrounding inner-city suburbs, both geographically, and in terms of time thresholds for travel. The function, form and future of the Carrington Road precinct is therefore of concern to the whole of Sydney, beyond the immediate vicinity.

Learning from other global cities

This project's next phase will explore best practice governance models from other global cities on how to protect and best use industrial lands for creative and manufacturing enterprises in Australia. There are options. Chicago's Planned Manufacturing Districts and Industrial Corridors programs are long-standing and successful exceptions of industrial land preservation (Fitzgerald and Leigh, 2002). The German zoning system has long mixed 'nondisturbing' industry with other uses (Hirt, 2007). In London, home-work spaces in industrially-zoned precincts enable micro-enterprises to live and sustain workshops affordably. Meanwhile, San Francisco's Production, Distribution and Repair (PDR) zone attempts to accommodate the growth of small manufacturers through a cross-subsidy on new, higher rent office development to support lower rent industrial space. Austin, Boston, Los Angeles, Nashville, New York, Portland and Vancouver are pursuing similar policies in targeted areas as well.

To proactively counteract continued loss of industrial land in urban areas, plans and planners have to identify strategic industries for the region, and craft land-use policies that take into account the needs of each industry and look for ways to meld alternative uses together with industrial ones. Furthermore, any provisioning of public infrastructure such as multimodal facilities and transportation investments should be strategically coordinated with industry locations.

William Lester, Nikhil Kaza, Sarah Kirk,
University of North Carolina, 2014

Carrington Road has emerged organically as Sydney's own distinctive, productive and valuable precinct where the creative industries and manufacturing meet. It provides Sydney an ideal opportunity to test and implement such best practice models suited to the city's needs.

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