

Community Formation

*Literature review of factors that enhance place-based social relations
in compact cities*

Kathryn Scott, Simon Opit, Eddie Dolan and Karen Banwell, Karen Witten, Robin Kearns

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CONTENTS

Introduction	5
Scope	5
The literature	5
Method	6
Theoretical concepts.....	6
The concept of ‘community’	6
Dimensions of place-based social relations	7
Ecological framework of place-based social relations	11
Literature related to social relations	11
Household.....	12
Older people	12
Children.....	13
Youth.....	14
Home	15
Physical features of the home.....	15
Tenure.....	17
Neighbourhood.....	19
Density	20
Walkability	21
Diversity	23
Participatory design.....	29
Neighbourhood groups and Neighbouring.....	30
Social infrastructure	32
Developers.....	33
City.....	35
Transport infrastructure.....	35
Local government.....	36
Broader society.....	36
Central Government	36
Conclusions	37
Common debates	38

Factors that enhance social relations	40
Research gaps	40
References	41
Appendix 1: Sets of measures of neighbourhood social relations	53
Appendix 2: List of references, with type, methods, place of study	55

Table of Figures

Figure 1: Dimensions of place-based social relations	7
Figure 2: Ecological framework of place-based social relations in compact cities	11

INTRODUCTION

Resilient Urban Futures (RUF) is a research programme funded by the Ministry of Business, Innovation and Employment and led by the Centre for Sustainable Cities. This literature review on place-based social relations in compact cities was conducted to support research undertaken within the residential choice and community formation strand of the wider research programme.

Scope

This review addresses the following questions:

- What does the term ‘community’ mean in the context of social relations in compact cities?
- How does the built environment in compact cities impact on social relations?
- How does residents’ age and stage shape their expectations and experiences of social relationships in compact cities?
- What is the role of different actors in the enhancement of place-based social relations?
- What are the key debates in the literature in relation to place-based social relations?
- What are the gaps and limitations of the literature overall and what further research is required (particularly as it relates to social relations in medium density housing in New Zealand)?

The literature

Key criteria for the literature reviewed were that it related to place-based social relations and urban neighbourhoods in compact cities. Medium density housing was of particular interest, although social relations in medium density housing were not per se the focus in the literature reviewed. Relative to social relations, more common categories (or ideal types) of housing density were ‘new urban’ or ‘mixed communities’, alluding to both housing type and household composition. Relevant points have been taken from the literature to address the report’s questions.

A number of terms and concepts are identified in the literature, some of which are contested and at times ambiguous (e.g., community). There are also a lot of overlapping terms, for

example those used to refer to aspects of social relations, such as sense of community, sense of belonging, social capital, social cohesion, social interaction, social connectedness, collective efficacy, social sustainability, and community development. A selection of this literature was reviewed, particularly those papers that related to urban neighbourhoods and compact cities. The RUF team also has a particular interest in the relationship between age/stage and place-based social relations, so relevant findings have been identified.

Method

The literature reviewed for this report is categorised under key headings of household, home, neighbourhood, city and broader society. Key dimensions and indicators of place-based social relations are identified (Figure 1). Sets of measures of neighbourhood social relations are collated in Appendix 1. For quick reference, a list is provided in Appendix 2 of the main articles including the study types, methods, and place of study. A draft report was reviewed by researchers from the RUF team, leading to the inclusion of a broader range of references.

Theoretical concepts

This review draws on ‘community’ as an analytical concept and Jan Gehl’s (2010) dimensions of place-based social relations, and is analytically framed by an ecological model, as described in this section.

The concept of ‘community’

Community is a word used in everyday English to convey notions of social relationships, cultural values and belonging or having something in common. Within the social sciences, a variety of approaches to understanding the concept of community have emerged, and it remains highly contested and variably interpreted. Whether a community is defined in terms of locality, religion, ethnicity, occupation, special interest, or e-networks, the concept has attracted considerable interest in social science as it continues to be used colloquially to express a social group and a social environment to which people want to belong (Rapport 2014).

Of interest to this review, social scientists have attempted to decouple understandings of sociality from place (e.g., Appadurai 1996), and to reconceptualise community in less essentialist and consensual ways, stressing micro-politics, cross-cutting alliances, social networks, and the idea of communities of interest forming and disintegrating around issues (Park 1984). However, in other academic disciplines and in public policy, the concept of

community continues to be used as what Williams called a ‘warmly persuasive’ and positive, evocative sense (1976:6).

Within the literature about place-based social relations and urban neighbourhoods in compact cities, the term community is used differently by authors. For some, community is more of a spatial phenomenon, where for others it is more of a social phenomenon, consisting of a group of people with shared interests and objectives (things in common). Interpreting community differently, Mooney (2009: 28) defines the term ‘neighbourhood’ as “the fundamental physical unit and psychological boundary in which humans interact and is the geographical location of the community”. In this case community is identified as a social phenomenon, albeit one which often exists within designated boundaries.

The richly ambiguous concept of community is often used as part of a political rhetoric towards solidarity and homogeneity. Nevertheless it invokes sociality and a sense of social connectedness that is highly valued by many people. Because this review is to inform a study of compact cities, it focuses on place-based social relations, in particular, how the built environment in compact cities impacts on social relations.

Dimensions of place-based social relations

To understand the dimensions of place-based social relations, Jan Gehl’s (2010) work on quality of the public realm in cities is recommended. Gehl identifies three key dimensions of place-based social relations in urban neighbourhoods: social, democratic, and friendly and safe. Each of these dimensions has some suggested indicators, as shown in Figure 1.

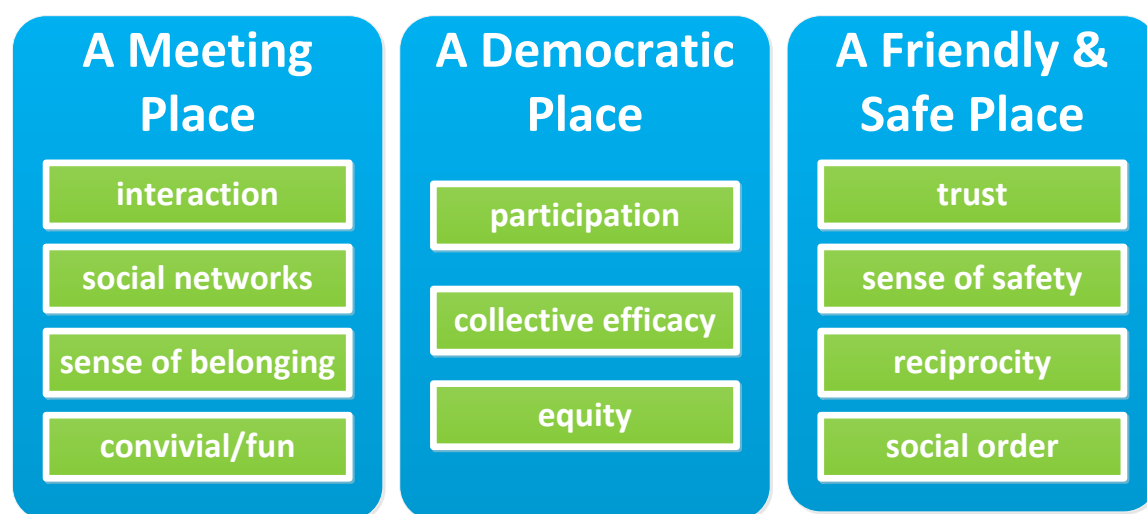


Figure 1: Dimensions of place-based social relations

Social Dimension: A Meeting Place

This dimension recognises that other people are the number one attraction in our cities, and that opportunities to see, hear, and interact with other residents are critical in compact cities. Indicators of the social dimension include:

Interaction: refers to chance and planned encounters between residents in the neighbourhood. Advocates of compact cities contend that increased density leads to more opportunities for spontaneous interactions between neighbours (Duany et al., 2001; Glaeser & Sacerdote 2000). However, sceptics of this claim assert, that while planning can create a situation where people live in close proximity to each other, this is not a sufficient condition to ensure social interaction takes place (Talen, 1999). For example, hospitality towards neighbours may be less important than keeping in touch with significant others in their lives via the internet. Derrida talks about the impact of phone, internet, email, and social media on how, and with whom people relate, and on how porous their sense of self has become (in Bal & Vries 2000).

Social networks: refers to formal and informal ties at a neighbourhood scale, including bonding ties (between family, close friends and ethnic groups) and (usually weaker) bridging or ‘vertical’ ties between groups within and between neighbourhoods or cities (Narayan 1999). Social interaction and social networks are often described as integral aspects of social capital¹ (Forrest & Kearns 2001). Strong and weak informal ties in the neighbourhood increase perceived neighbourhood cohesion (Hipp & Perrin 2006). Social networks can be created by developing an environment in which social interaction can occur, which connects people with mutual concerns and needs (Oldenburg & Brissett, 1982).

Sense of belonging: refers to people feeling connected to their co-residents, their home neighbourhood, and having a sense of belonging to the place and the people (Forrest & Kearns 2001). Sense of belonging is also referred to as sense of community, and is defined as a feeling

¹ Social capital is an essentially contested concept (Gallie 1956), meaning the roots, interpretations and uses of the term are multiple and diffuse. Urban scholars usually draws on Putnam’s (1995, 2000) concept of social capital as social networks and norms of trust and reciprocity that contribute to community wellbeing. Critics of this model draw on Bourdieu (1986) to argue that rather than being a collective community resource, social capital is specific group’s resource that plays a role in reproducing class relations (Baum & Palmer 2002; Scott & Liew 2012).

that community members have of belonging, and that members matter to one another and to the group (McMillan & Chavis, 1986). Sense of belonging also implies a feeling of being accepted in the neighbourhood and city, particularly important to the wellbeing of immigrants (Spoonley et al. 2005).

Conviviality/Fun: Cities can provide opportunities for residents to take part in common activities, for children to play and youth to ‘hang out’ and use the city as a meeting place (Gehl 2010). Conviviality or vitality is identified as a defining feature of successful cities, and indicated by the number and diversity of people taking part in active street life (Montgomery 1998), such as markets, street festivals, concerts, parades and demonstrations. Diversity in urban environments offers an unpredictability and spontaneity in city life (Gehl 2010).

Democratic Dimension

This dimension recognises the importance of face-to-face meetings with fellow citizens of all ethnicities and ages in shared public spaces to uphold an open democratic society. Indicators of the democratic dimension include:

Participation: refers to taking part in social and community activities (Forrest & Kearns 2001), widely understood as contributing to social coherence and social network integration (Dempsey et al. 2011). Participation in activities outside the home is a fundamental aspect of a democratic city, and is indicated by the occurrence of local events and other activities that are well-attended (Forrest & Kearns 2001). By coming together to participate in neighbourhood activities, people can learn about one another, find points of commonality, and create a capacity to act collectively to promote social justice. Participation in democratic processes (voting, calling politicians to account, contesting injustice) is also inferred.

Collective efficacy: defined as “shared expectations of and mutual engagement by residents in local social control” (Twigg et al. 2010:1421). People feel they have a voice and co-operate with one another to make changes. In urban studies, collective efficacy is seen as a mediator to crime and disorder, since it implies that people will intervene in instances of antisocial behaviour or crime. Collective mobilisation is contrasted with reliance on key institutions and organisations to respond to a variety of problems (Wickes 2010). Collective efficacy has received the least focus in research on urban communities (Prezza et al. 2009; Wickes 2010).

Equity: has various meanings, including everyone having an opportunity to participate and speak if they want to (Roffey 2013), and equitable distribution. From a physical design and urban planning perspective, social equity in relation to city design principles can be defined as

the equalisation of access to resources (Talen 2002), however this has received less attention in relation to cities (Burton 2003).

Friendly & Safe Dimension

This dimension relates to factors that contribute to friendly social relations. A sense of safety is an integral part of a friendly city, and cannot be separated from it. Trust, reciprocity, and neighbourliness are produced at the block or neighbourhood scale, but contribute to a wider sense of social order that underpins people's sense of safety. Indicators of the friendly and safe dimension include:

Trust: that people feel they can trust fellow residents and local organisations and authorities responsible for servicing or governing the neighbourhood. Different levels of trust include at the micro scale (between neighbours), neighbourhood scale (positive sense of identification with the neighbourhood), and the macro scale (ability to influence) (King & Carson 2003).

Sense of safety: defined as where "people can feel safe in their neighbourhood and are not restricted in their use of public space by fear" (Forrest & Kearns 2001). There are iterative relationships between sense of safety and other aspects of social relations. A sense of safety is enhanced by the presence of informal links within a neighbourhood (Baum & Palmer 2002), and a sense of safety enhances trust, reciprocity, and sense of belonging (Dempsey et al. 2011).

Reciprocity & neighbouring: refers to residents' willingness to help one another (King & Carson 2003). Individuals and organisations co-operate to support one another with the expectation that support will be given to or received from others when needed (Forrest & Kearns 2001). Scholars debate whether neighbouring is a valued activity in contemporary society, and identify class (Buys et al. 2007; Forrest & Kearns 2001; Walters & Rosenblatt 2008), gender (Park 1991), and age/stage (Lund 2003) differences in neighbouring.

Social Order: refers to neighbourhood or city stability and freedom from antisocial behaviour and crime. Formal and informal social controls are inferred. Informal social control is related to the probability that people in a neighbourhood would, for example, do something about a fight near their home in which someone was being beaten up or threatened (Twigg et al. 2010). Local forms of social control are contrasted with reliance on authorities to maintain social order (Walters & Rosenblatt 2008; Wickes 2010).

As will be evident in the literature review, dimensions such as sense of safety and interaction can be mutually reinforcing. On the other hand, strong social networks but inequities may be

evident in a locality. Therefore while these dimensions are a useful starting point for understanding the key dimensions of enhanced social relations in cities, a broader framing is desirable.

Ecological framework of place-based social relations

An ecological analytic framework enables exploration of the links between households, homes, neighbours, neighbourhoods, cities, and broader economic, social, cultural and policy environments (Figure 2). The framework recognises that spatial aspects of compact cities impact on the frequency and quality of interactions between residents. The framework also acknowledges the active role that households have in creating their social environment, and that different household types have differing experiences of, and impacts on, social relations in their neighbourhoods and cities.

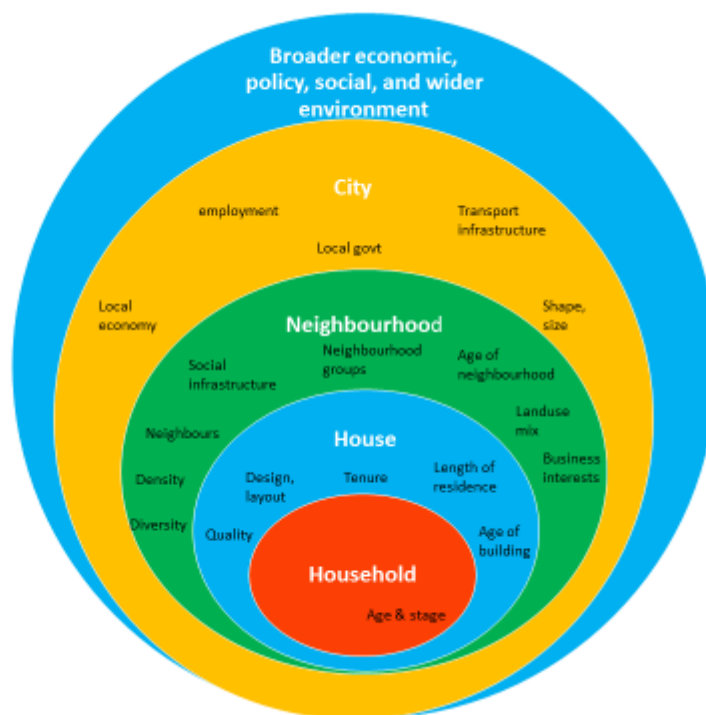


Figure 2: Ecological framework of place-based social relations in compact cities

LITERATURE RELATED TO SOCIAL RELATIONS

Household

This section examines how age and life-stage shape expectations and experiences of the built environment, with a focus on older people, households with children, and youth. Other household characteristics such as length of residence and gender also cross-cut the studies reviewed. Studies of how other characteristics of households (e.g., ethnicity, household income, employment status) shape people's expectations and experiences of the built environment were not evident in the literature reviewed, although they do feature as they relate to neighbourhood diversity (see Neighbourhood section).

Older people

Studies show that the features of the built environment that older people value include local amenities and physical features. Having these nearby enables easy access and creates opportunities for chance encounters with other residents, meeting up with friends, and feeling part of the neighbourhood. For example, a qualitative study of residents' perceptions of housing qualities in Farm Cove, Auckland found that older people who were long-term owner-occupiers valued neighbourhood physical features (e.g., walkways, trees) (Buckenberger 2012). Another qualitative study of a group of 19 older women (aged 55-78) in a socially-disadvantaged community in the north of England found social infrastructure such as local shops were fundamental to the development of mutual caring, trust and reciprocity (Boneham & Sixsmith 2006). Easy access to amenities and services for older people and others without private transport also promotes social equity.

A common idea in the literature is that while the frequency of social interaction and number of local ties in cities is on the decline, this is not the case for older people and households with children who are more likely to interact with neighbours and have a high number of local ties. A large-scale quantitative analysis of social ties in the US, for example, found that those with the greatest number of local ties were the oldest, those with the largest number of children, those who stayed at home (rather than attend school or work), and the least educated (Guest & Wierzbicki 1999). Kearns et al. (2012) found that while less social interaction and support was evident for some people in high-rise apartments in Glasgow, this was not the case for older residents. Park's New Zealand study (1991) found that sociability through neighbouring

particularly applied to women at home with their first baby and for older people who spent a lot of time in the neighbourhood.

However, levels of interaction and sense of place for older residents are also likely to be influenced by other household characteristics. A study in Turkey's capital city found that as older people went further into old age, their local interactions declined, particularly for those with low levels of education, living with only their children and relatives, poor health, and without a regular income, (Hazer & Boylu 2011). Williams and Kitchen (2012) found that sense of place was highest among high socioeconomic neighbourhoods, particularly for retired residents with long term residency in the area.

Children

The benefits of quality neighbourhoods for children are explored in the literature. As a key element of children's living environments, neighbourhoods are an important determinant of childhood health and wellbeing (Bronfenbrenner 1979). Spending time in parks and other green outdoor spaces such as school playing fields has also been shown to reduce stress in children, build competence, increase focus, and help form supportive social groups (Chawla et al. 2014). Neighbourhoods that enable independent mobility have been a particular focus in the literature, as safe spaces beyond the supervision of adults help children's social connectivity (Freeman 2010), and to learn social skills, assess risk, problem-solve, and for independent decision-making (Chawla et al. 2014). Features of neighbourhoods shown to influence New Zealand children's ability to socialise include urban form and road density, while non-spatial factors include attendance at local schools, levels of independence, and having local friends (Freeman 2010).

Evidence from New Zealand about households with children's expectations and experiences of neighbourhoods is emergent. Proximity to schools (Buckenberger 2012), particularly primary schools (Scott, Laing & Park forthcoming) is prioritised by adults for ease of access and for children's ability to socialise with classmates, found to be linked to children's social connectivity (Freeman 2010). Buckenberger (2012) also found that adults in their 30s and 40s with children in Farm Cove, Auckland prioritised quietness in the neighbourhood. In contrast, a study of social housing applicants and tenants found that adults in South Auckland households with children saw good neighbourhoods as those where children and adults felt safe, in places that were familiar, and where family, friends and amenities, especially school, were close by (Scott et al. forthcoming). As these families were facing financial, health, disability and other life challenges, familiarity with the neighbourhood and having important

networks nearby were important resources that enabled them to manage their daily lives. While children's independent mobility, physical activity and access to green spaces were not a focus for adults with children in the study, those living in neighbourhoods protected from fast traffic (such as Housing New Zealand complexes and cul-de-sacs) liked that their children could play safely in the neighbourhood.

Perspectives of children were scarce in the literature. An Auckland City Council 2005 study found that children perceived a strong community to include safety, ability to walk to homes of friends and family, and with quality housing (in Trotman 2006). The Kids in the City study (Carroll et al. 2015, Witten & Kearns 2013) studied children's mobility and experiences of Auckland suburbs. The study found that children preferred to play at home, at the homes of friends or family, or in nearby places such as stairwells, front porches and driveways. The researchers observed that children tended to internalise their parental fears about neighbourhood dangers.

Internationally, the types of urban form – low, medium or high density - that create good environments for children are debated, but this review found little related to children's sociability. An exception was a Glasgow-based study that linked high-density neighbourhoods to reduced social interaction and support amongst apartment residents with children, compared to those living in low-density neighbourhoods (Kearns et al. 2012).

Children's place-based social relations are linked to those of adults in the household; in that children can act as a social bridge for their parents to meet other proximate parents. This was described by a father spoken to as part of Williams and Pocock's (2009:81) research:

A lot of the guys that work where I work, they live around this area too. We can see each other and things like that. Sometimes give lift to each other ...It's overlapping for me. We [also] have a great relationship because of the school. We get friendships through it. [We've met] six or seven families and we every so often ...have lunches together, dinners together. So the school has been very important for that? I think the school relationships, friendships that you made out of your kids are lasting relationships.

Youth

Place-based social relations of youth are understudied but likely to be more closely indicated by intense bonding networks with friends and family rather than bridging networks to adults (through neighbourhood, volunteerism, and civic engagement) (Billett 2012). There is little evidence about youth expectations related to the built environment. Interviews with Australian youth found they felt that sporting facilities were critical to local participation (Baum & Palmer

2002). Adults in South Auckland households with teens said that as children aged, having the school nearby became less important, and proximity to shops, buses and other amenities became more important for youth (Scott et al. forthcoming).

Maimon and Browning (2010) found that unstructured socialising was a powerful predictor of violence, and that collective efficacy has a regulatory effect on violence. However, from the perspectives of adults, youth are often seen as a problem in neighbourhoods (e.g., Scott et al. forthcoming). Such concerns can result in resistance to youth-friendly facilities in neighbourhoods. For example, Freeman and Riordan (2002) observe that the presence of skate parks in cities and neighbourhoods causes conflict between young people and other users of public space which is often 'solved' by locating skate parks in out-of-the-way places, counter to youth preferences for visibility and public display of their skating prowess.

The findings in this section show scant evidence about different age and life-stage expectations and experiences of built environments but what is known suggests that households with people at different ages and life stages can have differing, or even competing expectations of neighbourhoods. Where one-person households and households with adults and no children were mentioned in the literature, it tended to be in the context of their dominance in the higher density housing market and the impact of exclusion of households with children, rather than a focus on the expectations and needs of these types of households.

Home

This section examines how physical features of the home and tenure arrangements and duration impact in compact cities impact on social relations.

Physical features of the home

Physical features of the home of relevance to social relations include the design, layout, quality, connectivity/barriers, street frontages, and privacy/overlooking other properties and the street. The home may include an individual building or group of buildings that the home is part of (e.g., single dwelling, duplex, terrace houses, apartments, housing complex). Home-scale aspects of urban form attract far less attention than density as it relates to social relations. However, the available evidence suggests that physical features of homes can have an important impact on the social dimensions of social relations (interaction, social networks, sense of belonging and conviviality) and more generally, satisfaction with a neighbourhood.

Building layout designs that create opportunities for unplanned social interactions can enhance social relations (Cattell 2001), and have been shown to be more important to social networks and social cohesion than housing density (Raman 2010). Design and layout features that promote social interaction between neighbours include the positioning of doors, paths and common areas which provide opportunities for visual and spatial linking of residential units and people, simple and legible layouts that bring people together, and well-located communal spaces (King 2013). An example of medium density dwellings that create opportunities for social interactions are those laid out in U-shape to create a common entry/exit point (Karuppannan & Sivam 2009, in Karuppannan and Sivam 2011).

There is a relationship between the quality of houses and people's sense of attachment to a neighbourhood (Randolph 2006) and dimensions of social cohesion and people's satisfaction with their neighbourhood (Dempsey 2009).

Visibility of common access points and public open space enhances the sense of safety (Worpole 2003, in Dempsey et al. 2011). Residents may also value public spaces for respite from city life (van den Berg et al. 2007) and to create physical barriers to prevent visibility into their living spaces (Southworth & Parthasarathy 1997). In an impoverished neighbourhood where social relations were characterised by low levels of trust, low participation in local activities, widespread concerns about safety, little sense of pride in the place, and high population turnover, improvements to layouts of more recently renovated apartments in the neighbourhood were perceived by residents to enhance social relations (Cattell 2001).

Dwellings that are close together can create more intimacy between neighbours (Karuppannan & Sivam 2011). However, design features are found to be significant predictors of privacy and low noise levels (Raman 2010), which have a profound influence on residents' satisfaction with a neighbourhood (Dempsey et al. 2012). Care is needed in design and layout to create opportunities for passive surveillance and for residents to meet and greet neighbouring residents in their daily lives but also create a sense of privacy and control over the home domain.

Designs that seek to integrate the public and private realms are sometimes subverted by residents' realms (e.g., by erecting screens on front porches) because the residents prioritise privacy over passive surveillance for safety (Southworth & Parthasarathy 1997). Counter to the dominant view that neighbourhoods that encourage privacy also encourage isolation and withdrawal from social life, studies have shown that privacy provision reduces stress and enables more positive social interactions (Wilson & Baldassare 1996), and stronger

neighbourhood ties and a sense of community among every age group (Karuppanan and Sivam 2011). Churchman (1999) found that urban densities that create less individual control over their interactions can lead to psychological or physical withdrawal, and so detract from social relations. A degree of control over one's immediate environment is likely to be an important factor that promotes positive social relations.

Block size, street landscaping and arrangement of houses on the block, amenities, architectural design, and garage location are significant factors in relation to sense of community (Kim 2007). Building and block design that provide easy access to public outdoor space promote sociality (Gehl 1987, in Karuppanan & Sivam 2011).

Tenure and length of residence

There is mixed evidence for the relationship between types of housing tenure and social relations. Some studies find that home owners have increased motivation towards social interaction with neighbours (Ancell & Thompson-Fawcett 2008; Carson et al. 2010), and stronger sense of place (King & Carson 2003; Williams & Kitchen 2012). Winstanley et al. (2003) contend that this increased sociality is partly the result of home owners' desire for safety, security and investment protection.

There is little research on the effects of joint-owned multiplexes on social relations (Dredge & Coiacetto 2011). Randolph (2006) cautions that the quality of governance arrangements (e.g., body corporate) for managing multiplex apartments depends on the good will and capacity of residents to work together. Where the work falls on one or two individuals, or where the majority of apartments are owned by absentee landlords, conflicts inevitably emerge, particularly over time as maintenance requirements need attention. In social housing complexes where residents live in close proximity to each other and share semi-private spaces such as stairwells, courtyards and entranceways, careful attention to tenancy management is required (Scott et al. 2011).

Length of residence may be more closely correlated to enhanced social relations than tenure type (Baum & Palmer 2002, Carson et al. 2011, Williams & Kitchen 2012). Kearns and Parkinson (2001) identified long term residence as a mechanism that produced familiarity, and as a result, psycho-social benefits such as a sense of identity and belonging. Predictability and familiarity with the people and their ways of acting and interacting have been found for some people to create comfort and a sense of safety (Bailey et al. 2012). Such predictable encounters help people feel 'at home' (Kearns & Parkinson 2001). Attachments to a neighbourhood appear

to intensify over time, for older people at least (Wiles et al. 2009), and this is expressed in emotional and symbolic terms such as social connectedness. Wiles et al. (2009:670) conclude that “attachment involves a delicate and constantly shifting balance between the social-emotional and the practical aspects of living in a particular place”. A UK study (Phillipson et al. 2001) found that many older people now said they felt fearful, isolated or a sense of loss of community life, despite long-term residential attachment to their neighbourhoods and frequent contact with neighbours. These studies highlight not only changes by age and stage but also changing needs, aspirations, and experiences of social relations through time.

Baum and Palmer (2002) observed that people who valued on-going engagement with fellow residents also reported a reduced sense of ‘community spirit’ due to economic and social changes. Some residents attributed their reduced local participation to the loss of local amenities and the death of familiar and eccentric characters. This suggests, rather perversely, that when neighbourhoods go through considerable transformation, those with longer tenure may feel a stronger sense of attachment (enhanced Social dimension) but participate less (reduced Democratic dimension).

There are some interesting interrelationships between tenure type, length of residence, and perceptions about social relations which suggest that newcomers and renters are often stigmatised or excluded, and social norms are controlled by longer term homeowners, thereby maintaining power (Carson et al. 2010, Winstanley et al. 2003). Carson and co-authors found that while community leaders in Canada perceived that home-owners and those with a greater length of residency had increased attachment and involvement in the community, quantitative analysis did not support this. Forrest and Kearns (2001) found that renters and owners had similar feeling about being part of the local community, and similar reciprocity (exchange small favours), but a higher proportion of people renting than owning their home do not exchange favours with anyone.

Length of residence has been found to be linked to residents’ sense of place (Williams & Kitchen 2012). There is conflicting evidence related to length of residence and community attachment, sense of belonging and sense of community, suggesting that social outcomes are partly about the community itself (Carson et al. 2010). However, Carson et al. (2010) found that length of residence was more predictive than home ownership of membership and tangible bonds, but not for perceived community influence, reported participation, emotional bonds. Prezza et al. (2009) found length of residence significantly influenced only membership rather than other aspects of social relations.

Neighbourhood ‘churn’ or resident turnover is identified as a barrier to enhanced social relations (Dempsey et al. 2011, Howley 2009), suggesting that factors that support longevity in tenure, such as suitability of a neighbourhood to ‘age in place’, are useful. Using a survey and questionnaire with apartment dwellers in Dublin, Howley (2009) found that neighbourliness was linked to low residential mobility (intra-urban moves²). Age was an important predictor of mobility: respondents aged 29 or younger were almost twice as likely as residents over 29 to expect to move residence in the next five years. A similar finding related to household, with individuals in multi-person households almost twice as likely to expect to move residence in the next five years as those in single-person households.

Neighbourhood

This section examines how density, walkability, social and physical diversity in compact cities impact on social relations. It also includes the role of neighbourhood groupings and neighbours, schools, and developers in shaping social relations.

The neighbourhood scale has received by far the largest proportion of attention in the literature in relation to social relations but little consensus emerges. Jane Jacobs (1961) theorised that compact, mixed land use and pedestrian friendly streets enhance social relations in a neighbourhood. These social benefits are understood to result from people living closer to one another – and making use of the same facilities and services – therefore having more opportunities to interact socially (Bramley & Power 2005). Mixed land use, includes a diversity of residential, commercial, recreational, industrial, institutional, and transport networks being located near to each other (Jabereen 2006).

New Urbanism, a highly influential planner-led movement, has called for the reintroduction of the public sphere into urban spaces through creating more pedestrian friendly environments, significantly reducing the ‘car’ elements of neighbourhoods and building cohesive and recognisable neighbourhood communities. Design approaches of New Urbanism can include grid-patterned streets, well-designed public buildings and gathering places such as plazas, medium-to-high density housing, and quality parks and streetscapes (Deitrick & Ellis 2004, in Wood et al. 2008).

² Rather than residential migration (moving from one labour market to another).

While New Urbanism is often seen as aligned with ‘Smart Growth’ and ‘Compact City’ movements (McCann 2009), several writers have outlined important distinctions between them (Knaap & Talen 2005, Kushner 2002). A key distinction for this review is that Smart Growth’s motivation lies primarily in achieving ‘sustainability’, whereas New Urbanism’s goal is focused around creating community. This difference is evident in the fact that New Urbanist developments are often mainly residential rather than incorporating a diversity of land uses that reduces reliance on private vehicles by enabling residents to live, work, shop, and socialise in the same location.

Density

Researchers have used a range of approaches to examine the social benefits of different types of urban form, including quantitative studies comparing cities/neighbourhoods or densities, and qualitative and quantitative case studies of New Urbanist or Master Planned neighbourhoods. These studies can be at the neighbourhood scale (neighbourhood type) or at the household scale (housing type), and cover a range of density levels which makes it difficult to compare results.

There are contradictory findings in the literature, but this review found more evidence for a negative relationship between increased density and social relations. Some studies from the UK, US, Australia and Canada have found that compact development, typically with apartments and other forms of medium density housing, has a negative relationship to sense of community (Williams 2000, Kim 2007), sense of place (Williams & Kitchen 2012), and social interaction (Kim 2007, Woods et al. 2008). After controlling for two socio-demographic variables (length of residence and location chosen to be closer to friends and family), one study showed that residents in low and medium density neighbourhoods perceived similar high levels of sense of community, but the residents in the new urbanist (medium density) neighbourhood had more social contact with neighbours (Brown & Cropper 2001). Causation factors are not always clear and may relate to characteristics of the place and/or the people who live there. For example, one study found that the reason for weaker social relations amongst apartment and duplex dwellers was due to experiencing a weaker sense of safety compared to those in low-density housing neighbourhoods (Wood et al. 2008).

For New Zealand, a review of literature (Syme et al. 2005) found that the research is inconclusive for the relationship between density and social relations. Syme and co-authors concluded that housing intensification appears to increase social interaction with neighbours, but this does not necessarily translate into a strong sense of community. Surveys with residents

of medium density neighbourhoods found that some people enjoyed socialising locally while others did not and so minimised contact with neighbours (Syme et al. 2005, Ancell & Thompson-Fawcett 2008). Ancell and Thompson-Fawcett (2008), in a case study of medium density housing in Christchurch, found that Asian and non-Asian neighbours had little to do with each other. Few of the residents intended to live in their homes long term, which the researchers suggest may partly explain the lack of cross-community linkages. This study also found that as densities increased in central city Christchurch, lower-income families were being displaced from the city centre due to a lack of affordable housing. It may also reflect New Zealanders' strong resistance to higher density housing for families (Dixon & Dupuis 2003).

Studies of high-rise apartments tend to show a more negative relationship between density and social relations than low to medium density. Although high density neighbourhoods are not the focus of this review, a few of these studies are included here as they show contradictions or mediating factors that are relevant to social relations in New Zealand compact cities.

In line with a widely perceived view of high density city suburbs, Wilson and Baldassare (1996) found that residents in high-rise apartments had less overall sense of community than those in low-density development. This study did not control for socioeconomic status, and could be explained by numerous interacting variables. A more nuanced study comes from Glasgow (Kearns et al. 2012), based on surveys in 14 parts of the city with high levels of social housing. High-rise dwellers had considerably less frequent contact with neighbours, less social support and less collective efficacy. Somewhat perversely however, this study also found that neighbourhood satisfaction, arguably an important element of a friendly and safe city, was better for residents higher up in high-rise apartments. The high-rise neighbourhoods studied experienced high levels of anti-social behaviour. Kearns et al. (2012) propose that people in higher level apartments felt somewhat distanced from anti-social behaviour at the street level, in contrast to people in ground-floor apartments. Other mediating factors were management and tenure mix in high-rises, and age and stage of the household.

Walkability

Walkability relates to the ability of residents to go for walks, and to walk or cycle to destinations such as services, facilities, the workplace, and to visit people. Reduced reliance on private motor vehicles is found to be evident in walkable higher density neighbourhoods (Dempsey et al. 2012), which improves the chances residents will meet and greet neighbours.

There is strong evidence for a positive relationship between walkability and enhanced social relations. Studies have found that walkable neighbourhoods promote more frequent social interactions (Kim & Kaplan 2004, Lund 2003), social networks (Lund 2002, 2003; Leyden 2003), and a sense of community (du Toit et al. 2007, Lund 2003). Another benefit of reduced vehicle dependence is the equity aspect: unemployed, older people and young families will have greater accessibility to facilities and services (Dempsey et al. 2012).

Studies of the relationship between walkability and social relations tend to compare low-density with medium/high-density developments, and rely on quantitative analysis of the number of walking trips, social interactions, and social networks. A commonly cited study (Lund 2003) tested the link between pedestrian travel behaviour and neighbourhood interactions in eight new urban and conventional neighbourhoods in Portland. The study found a correlation between the number of walking trips that people take and the frequency of both casual or unplanned interactions with neighbours. The study also found some support for the relationship between pedestrian-friendly environments and 'neighbouring behaviours', but strong indications that non-design factors, especially residents' attitudes, were also of importance. Demographic characteristics, particularly households with children, also helped explain evidence of a correlation between the number of trips taken and the number of social ties: for example, higher number of social ties when a household has children aged 0 to 4. Strolling trips were found to be more conducive to neighbouring behaviours than destination trips (Lund 2003). Another study also identified the significance of the presence of children, in this case aged 5 to 12, on supportive acts of neighbouring, as well as length of residency and attitudes to neighbourhood interaction (Wood et al. 2008).

The study by Wood et al. (2008) investigated the number of destinations within 800m of homes and found a negative correlation with social capital, in contrast to another study (Leyden 2003, in Wood et al. 2008). The difference in these findings may suggest that the type and quality – not just quantity – of destinations are likely to be important variables.

Factors that promote walkability in neighbourhoods include spatial elements, condition and safety elements, and preferences of residents. Spatial elements found to promote walkability include grid-street networks and mixed land use which are found to be more pedestrian-friendly (Leyden 2003, Witten et al. 2012). While compact urban form can increase the likelihood that people will walk or take public transport, poor urban layout, traffic volumes and lack of surveillance and street lighting negatively impact on sense of safety and so negatively impact on walkability (Dempsey et al. 2012). Other spatial elements that promote walkability

include having walkable destinations (such as local shops), footpaths, and interesting and pleasant walking environments (such as natural features and open space) (Wood et al. 2008, Kim & Kaplan 2004).

Kim and Kaplan (2004) examined 17 distinct aspects of the physical environment, alongside resident surveys and interviews, to compare Kentlands (a new urbanist neighbourhood) and a nearby conventional suburb for evidence of stronger community formation. They found that the natural features and open spaces in Kentlands were of particular importance in encouraging outdoor activity, increasing the likelihood of social interactions. Kim (2007) also found that proximity of apartments to parks and reserves influenced apartment dwellers' levels of social interactions. Rogers and Sukolratanmetee (2009) followed a similar case study comparison methodology as Kim and Kaplan, selecting four suburban neighbourhoods in Houston, Texas for resident surveys. The neighbourhoods were selected for their comparable socio-demographics and similar housing typologies, but with two being identified as more pedestrian friendly environments. Rogers and Sukolratanmetee (2009) found that although physical design could have some impact on a sense of community, it was far outweighed by the social processes, including sociodemographic and behavioural characteristics, of residents, irrespective of layout and design.

Safety is a key element that promotes walkability of neighbourhoods. Safety and walkability are also mutually reinforcing elements of social relations. More pedestrians on the street enhance safety (Jabereen 2006), and a sense of safety promotes walking (Baum & Palmer 2002, Lund 2002, in Wood et al. 2008). However, qualitative studies show a link between sense of safety and socio-economic profiles of neighbourhoods (Cattell 2001), to be examined in more detail below.

Safety and the aesthetic quality of the neighbourhood are also mutually reinforcing characteristics of walkability (Baum & Palmer 2002). Passive surveillance and attractive aesthetics are produced through quality design but can also be related to the condition and maintenance of the place (Wood et al. 2008, Worpole 2003, in Dempsey et al. 2011). However, causation is not clear. As Wood et al. (2008) acknowledge, neighbourhoods with strong social relations may take better care of the neighbourhood, and therefore experience a stronger sense of safety.

Diversity

Jane Jacobs (1961) promoted the idea that diversity creates good neighbourhoods and cities to live in; this includes diversity in housing types, building densities, household size, ages, cultures, and incomes (Jabereen 2006). By providing a range of housing types, a neighbourhood can attract a diverse mix of people. This design-approach to neighbourhoods is aimed at promoting ‘vibrant’ and inclusive communities, and is underpinned by an assumption that residents want to live in socially diverse neighbourhoods, and that people can choose which neighbourhood to live in. However, the literature suggests that preferences of households, and the wider social, cultural, policy, and economic context are just as important in shaping where people live, which in turn impacts on social relations at a neighbourhood scale.

This section examines the evidence for the relationship between diversity (built environment, tenure) and social relations.

Diversity in the built environment

Diversity in the built environment – including a mix of housing types, building densities, neighbourhood design and housing age – can improve residents’ levels of satisfaction with neighbourhoods. People’s sense of attachment to a neighbourhood has been linked to a diversity of housing types (Turner et al. 2004). Residents’ perceptions are also found to be shaped by the diversity of neighbourhood design (Guy & Marvin 2000, in Arbury 2004; Turner et al. 2004), and the diversity of housing age that results from gradual development (King 2013). An evaluation and comparison of a range of medium density developments in New Zealand found that diversity of design is important in creating identity and acceptance (Turner et al. 2004).

King’s (2013) study found that gradual changes to urban form led to a mix of densities and age of buildings that created a more satisfying place to live than where dwellings were all the same. Talen (2006) notes that diverse neighbourhoods tend to be older than non-diverse places. Social changes are integral to social relations but need to proceed slowly in order to ensure acceptance by society (Chiu 2003, in Ancell & Thompson-Fawcett 2008).

Tenure mix

A systematic UK review of research published between 1999 and 2005 (Sautkina et al. 2012) found varied evidence for the effects of mixed tenure on social relations. They found stronger evidence that mixed tenure had no effect on social capital/peer behavioural influences, and weaker evidence that mixed tenure had no effect on sense of community/social cohesion.

Mixed tenure effects on community participation were mixed, and weak. These researchers note that most of the studies reviewed were case studies across nearly 100 sites, and were of modest quality, and recommend that future research needs to be longer term and longitudinal in nature, using comparison case studies and secondary data.

A preference for neighbourhood stability underpins assumptions about tenure mix. However, a review of the literature suggests that currently there is no consensus on the part that residential mobility or ‘churn’ has on neighbourhood social relations (Dempsey et al. 2011). Low levels of mobility have been linked to increased feelings of attachment to neighbourhoods (Wilson & Taub 2006, in Dempsey et al. 2011) but are not necessary for social order to prevail (Forrest & Kearns 2001). Increased social networks have been posed as the mechanism by which length of residency and neighbourhood stability enhances neighbourhood cohesion (Kasarda & Janowitz 1974). Residents’ decisions to stay in a neighbourhood may be related to satisfaction with the neighbourhood or to particular life stages (Dempsey et al. 2011).

Residents of higher density neighbourhood were found to live there for a shorter time and had plans to move in the next five years (Dempsey et al. 2012). In Australia, Randolph (2006) determined that the current higher density market in major cities is distinctive as it is predominantly a rental market. Housing form is being determined by perceptions and behaviour of investors rather than people looking for homes to buy to live in. Smaller, two-bedroom dwellings are predominating, and high tenancy turnover, closely associated with the rental market, is a feature of high density development. Neighbourliness is associated with children (Randolph 2006), but higher density development had few families with young children, resulting in less sense of community (Howley 2009; Kim 2007). Randolph notes anecdotal evidence that higher density housing has “lots of DINKS [dual-income, no kids] and SINKS [single-income, no kids] whose main interests are work, recreation and socialising outside the house” (Randolph 2005: 21). Randolph raises concerns about the impact of these features on social stability, community building, provision of open space, exclusion of children, and design and building quality. Likewise, Ancell and Thompson-Fawcett (2008) found that medium density housing in New Zealand is predominantly inhabited by older people and young professional renters, suggesting that concerns raised by Randolph may apply equally to New Zealand.

Social diversity

Duany et al. (2001), advocates of New Urbanism, theorised that walkability and social diversity in neighbourhoods contribute to enhanced social relations, particularly the democratic dimension of social relations:

In the absence of walkable public places – streets, squares, and parks, the *public realm* – people of diverse ages, races, and beliefs are unlikely to meet and talk. (Duany et al. 2001: 60, quoted in Wood et al. 2008).

Duany et al. (2001) present an aspirational idea that a diverse mix of people can and do live and interact in their local neighbourhoods and that this provides the conditions for a healthy public sphere. However, as this section explores, the link between social diversity and social relations in compact cities is far from straightforward and is intimately linked with broader societal factors.

While there is some evidence in the literature that socially-diverse neighbourhoods can create socially-oriented places to live, more studies show a negative correlation and suggest instead that homogeneity is linked to enhanced social relations. The literature suggests that who lives in a neighbourhood is just as important as the physical characteristics of the neighbourhood in which they live in shaping social outcomes (Twig et al. 2010, Talen 1999). The devil is in the detail, in particular how diversity and/or homogeneity impact differently on the range of dimensions of social relations. While these findings provide a complexity that is difficult to translate into policy recommendations, they do provide a consistent message that poverty, not social mix, needs to be the policy focus to improve the lives of the poor (Cheshire 2007, Talen 2010, Twig et al. 2010). Additionally, they show that broader historical, cultural, political and economic factors shape residents' diverse experiences and expectations of neighbourhood social relations.

The relationship between ethnic diversity and social relations has revealed inconclusive findings. Studies have shown a negative relationship between ethnic diversity and social trust (Gundelach & Freitag 2013, Twig et al. 2010), and neighbourhood attachment (Górny & Toruńczyk-Ruiz 2013). While Gundelach and Freitag (2013) found that lack of social trust translated into reduced collective action, Twig et al. (2010) found very little evidence of any relationship between trust and collective action. Górny and Toruńczyk-Ruiz (2013) also found that inter-ethnic relations moderate the relationship between ethnic diversity and neighbourhood attachment differently for natives and migrants. Ethnic diversity did not erode attachment to neighbourhood for natives who had inter-ethnic ties, or for migrants with non-ethnic ties. Isolation from neighbours can be self- or group-imposed due to negative

perceptions about other groupings (Syme et al. 2005), or perverse economic incentives for ethnic minorities to maintain a marginalised position rather than participate in ‘community’ (Scott & Liew 2012).

Some studies show a positive relationship between social diversity more generally and residents’ tolerance for diversity and levels of satisfaction with their neighbourhood (Talen 2010, Frey & Farley 1996). However, Talen found that this did not translate into civic participation, collective efficacy, or neighbourliness and it created more concern about privacy (Talen 2010). Tensions between new and existing residents in neighbourhoods were manifested physically through the erection of fences, security doors and the segregation of new housing units. These findings point to the temporal element of neighbourhoods and that sudden or planned changes impact on residents differently.

The desire for socially-diverse neighbourhoods appears to be in part based on nostalgia associated with neighbourhoods that have emerged historically with a diverse mix of residents. Talen (2010) observes that historic, economic and political factors contribute to socially-diverse neighbourhoods in cities. Diverse neighbourhoods, for example, have often functioned as immigrant ports of entry, and this diversity has enabled economic and other forms of diversity. Diverse neighbourhoods tend to be older, have a mix of building ages, and include some affordable housing (Talen 2010).

There is a mismatch between policy expectations about planned changes to neighbourhoods and findings in the academic literature related to such changes. Such attempts have been traced back to at least the late nineteenth century, with scant evidence of success (Cheshire 2007). Reconfiguring the place to create a greater ‘social mix’ is a common policy response to concentration of poverty. Compound effects of concentration of poverty are well established, and reflect lack of access to cultural and material resources (Cheshire 2006). A review of the literature found that it is not living in a less equal neighbourhood that lowers an individual’s welfare but having an income lower than the neighbourhood average (Luttmer 2005, in Cheshire 2007): ‘neighbourhood’ was measured by census areas with mean populations of 144,000 people, which by New Zealand standards is about the size of the city of Hamilton. Analysis shows that the effects of extreme inequality fall not just at household and neighbourhood scales but on everyone at a city or national scale (Wilkinson & Pickett 2010).

Social mix policies appear to be based on a belief that if the poor and low income workers live in neighbourhoods next to middle class people this proximity will ensure that they become more like them, but often result in poor people being moved away from familiar places and

networks (Arthurson 2012:17), rather than addressing the causes of poverty (Cheshire 2007). Put simply, “the incomes of people determine the character of the neighbourhood they can afford to live in. The problem is poverty, not where poor people live” (Cheshire 2007:ix). Another common critique is that redevelopment of impoverished areas and intensified social control that often goes along with it may enhance some residents’ perceptions of a neighbourhood but this may not equate with reduced crime rates or enhanced social relation (Wacquant 2008, Wickes 2010).

Cheshire cites a study by Kling et al. (2005) that examined social outcomes for people aged 15 to 25 from relocation into higher socio-economic neighbourhoods. The study found that moving to better schools did not lead to improved educational outcomes. However, gender differences were evident: girls, but not boys, had higher expectations of finishing school, greater participation in sports, reduced truancy, and more social connections with peers who engaged in school activities.

The social mix policy effects on social relations of particular relevance to New Zealand are evident in a study of redevelopment in Kensington, Australia (Hulse et al. 2004). The social housing estate had become stigmatised by nearby residents who considered it a source of law and order problems related to drug use and sales. Estate residents were culturally diverse—which these residents valued highly to the extent that they downplayed the law and order problems—but they shared the experience of living in poverty. Creating social mix was a key aim in the redevelopment, to be achieved by moving out many of the social housing tenants and increasing the mix of public and private homes. Many of the 1000 public housing tenants relocated as part of the first stage of the redevelopment were families with children who spoke Vietnamese and Somali, and who had low incomes. Hulse and her evaluation team found that while most of those moved were relatively happy with their new location, 30 percent had lost touch with people who were important to them, which created isolation and a considerable reduction in support in their daily lives.

Analysis of a UK national survey of residents found that both diversity and disadvantage were statistically associated with reduced levels of social cohesion, trust, and informal social control (e.g., monitoring neighbourhood children’s behaviour in public open spaces) (Twig et al. 2010). Twig et al. found that as deprivation increases, the negative relationship between diversity and social cohesion and trust diminishes. This is somewhat counterintuitive, and may suggest that where poverty is most deeply entrenched, people are very reliant on one another to survive, but this intimate reliance cannot be seen as a triumph for social relations.

Harvey (1997), Landecker (1996), Leher and Milgrom (1996), Silver (2004) and Talen (2000) have observed that whether New Urbanists promote socio-economic diversity in their developments or not, the reality is of upper-middle class resident homogeneity. With a continuing lack of new high-quality well-designed neighbourhoods both in New Zealand and overseas, without integration into regional and national housing policy directives, house prices in such developments will inevitably rise as a function of the housing market.

Hulse et al. (2004) and Kling et al. (2005) findings are part of a growing body of research suggesting that there can be benefits that come from people in similar household types living close together, for example for families with young children (Cheshire 2007). While in more affluent neighbourhoods, neighbourhood quality is likely to be important, in poorer neighbourhoods, neighbouring can be an important resource to help people get by (Buys et al. 2007; Forrest & Kearns 2001; Twig et al. 2010; Walters & Rosenblatt 2008, Scott et al. forthcoming). The literature reviewed here suggests that for neighbourhood redevelopment to improve, those most disadvantaged – and social equity as an element of social relations – they need to include a strong policy focus on economic revival, place management and social support. These findings are also a strong reminder that neighbourhood change impacts on the social relations of groupings of residents in different ways, and that analysis needs to go beyond the neighbourhood scale to include wider socioeconomic issues that shape social relations in cities.

The results from Brazil (Villarreal & Silva 2006), the UK (Forrest & Kearns 2001), Australia (Walters & Rosenblatt 2008), and New Zealand (Winstanley et al. 2003) suggest that social equity cannot be assessed at only a neighbourhood scale. Equitable access to resources at a neighbourhood level may merely mean everyone lives in poverty. City- or nation-wide inequities between different groupings become more apparent.

Participatory design

A common way in which social goals are linked to neighbourhood planning in compact cities is through participatory design. Participatory processes aimed at enhancing social interaction and consensus building make up a major part of the community-building efforts of New Urbanism (Talen 2002). However, there is a tension between these social community-building efforts and a tendency towards highly prescriptive and restrictive spatial and architectural planning measures. The spectre of being labelled ‘physically deterministic’ hangs over New Urbanism, or at least a sense of physical *fixation*. This is evident in New Urbanist design and planning publications, with titles such as, ‘*The New Urbanism: Towards an Architecture of*

Community' (Katz 1994) and '*Community by Design*' (Hall & Porterfield, 2001). For example, Hall and Porterfield (2001: 20), assert:

“...paths, edges, districts, nodes, and landmarks used in combination with the concepts of axial design, hierarchy, transition elements, dominant features, and enclosure are the building blocks and tools we need to create communities that are liveable and dynamic”.

The movement's more cautious supporters advocate its value as part of a “coordinated strategy” that can provide an “incremental approach for revitalization that blends with the city and complements it, rather than fragmenting and dissolving it” (Bohl 2000: 794-5). Similarly, Talen (2008), in a more recent and favourable review, praises New Urbanism's influence in promoting social equity in the post-Katrina rebuilding projects and the Mississippi Gulf Coast. The strong influence of New Urbanist principles in the US Department of Housing and Urban Development's HOPE VI programme perhaps realised this potential and saw designs aimed at a wider variety of people's housing needs, including lower-income groups. However, public support for the New Urbanist team working in one Gulf Coast city, Biloxi, soon began to dry up as the plans became public (Howard 2014).

Closer to home, participatory processes in neighbourhood and suburban redevelopment have become common place. Large urban redevelopment programmes such as in Tāmaki and the Christchurch post-earthquakes rebuild have prioritised inter-agency collaboration and public participation to create innovative approaches to redevelopment. The Tāmaki Transformation Programme (now Tāmaki Redevelopment Company) adopted a 'joined up' approach to achieve a 'mixed and cohesive community at the street level' (TTP 2009:21). This assumption that participatory processes would improve social relations and socioeconomic outcomes for residents was supported by Tāmaki community leaders. However, rather than Tāmaki being a problem to be fixed, an increasingly active and well-connected community sector in Tāmaki perceived a need for changes in the way services and programmes were designed and delivered. While government actors focused on dialogue, community leaders saw ongoing cross-sectoral relationships as critical to successful participatory processes (Scott 2013). While ideally community participation in urban redevelopment results in improved strategic plans, civic engagement, and collaboration at a local scale, it can also cause community conflict, create costs for community members and reduce the amount of time people have for other civic and kin activities (Scott & Liew 2012).

Neighbourhood groups and Neighbouring

The social capital literature is underpinned by the view that the more neighbourhood networks and groups, the better the social relations (Putnam 2000). However, as examined in relation to age and life stage of households, people's motivations differ towards building local connections and participating in local activities (Winstanley et al. 2003). For example, having school-aged children, in particular, is a strong mobiliser for people to participate in local neighbourhood groups and develop informal and formal ties. In contrast, some people do not seek to have more interactions through formal or informal groups at a neighbourhood scale (e.g., Ancell & Thompson-Fawcett 2008; Southworth & Parthasarathy 1997; Winstanley et al. 2003). Social relations with neighbours may be less important than keeping in touch with the significant others in their lives via the internet (Derrida, in Bal & Vries 2000).

In new urban development in Christchurch, for example, neighbourliness implied a desire to know the neighbours but to maintain a degree of social distance (Winstanley et al. 2003). Another study of medium density housing neighbourhoods in Christchurch found that residents knew of a few neighbourhood groups that they perceived as aimed at creating 'a sense of community' (Ancell & Thompson-Fawcett 2008:436), but that many residents preferred not to take part in local activities. The researchers took a fairly cynical view that neighbourhood groups were a tool used by residents to exert some control over their surroundings (Ancell & Thompson-Fawcett 2008). Adversity appears to promote sociability. For example, a longitudinal study in Christchurch found that levels of satisfaction with neighbourhoods improved after the earthquakes for social housing tenants with children, which may be explained by neighbours working together to keep safe and get by in their daily lives (Scott et al. forthcoming)

Other studies have found that neighbourhood groups and neighbouring enhance social relations. Winstanley et al. (2003) note that in urban areas, community groups can be responsible for effective change in living conditions or contribute to community development. Park (1991) observed that in Pakuranga, Auckland, neighbouring was a women's domain, and involved processes by which households managed resources, particularly to fill 'gaps' in a household's kinship network. For many, neighbouring was a resource necessary for livelihood ('I would have gone crazy without my neighbour when Jenny got sick') and socialisation ('someone knowing you're alive') (Park 1991:18). Socialisation through neighbouring was particularly important for women at home with their first baby and for older people who spent a lot of time in the neighbourhood.

A recent quantitative New Zealand survey identified factors that could improve neighbourhood 'sense of community' or social capital: reduced noise pollution, increasing and promoting participation in local sports teams, and increasing the diversity and appreciation of the local arts scene (Sengupta et al. 2013). Participation in neighbourhood projects has been found to be positively associated with the number and strength of social networks (Dekker et al. 2010).

Social cohesion is a common policy goal, which attracts similar critiques as those related to the valorisation of social mix. Miciukiewicz et al. (2012) observe that while social cohesion is theorised in contradictory ways, it continues to be used as a policy objective to refer to the social forces and public actions that are needed for the inclusion of all groups and citizens into urban society. An integral aspect of social cohesion is commonality of values (Spoonley et al. 2005) which may reflect shared financial health of the neighbourhood, or disadvantage (Wickes 2010). Forrest and Kearns (2001) interrogate the concept of social cohesion in relation to neighbourhoods and note that social cohesion may result from people coming together to promote or defend some common local interests, but can also involve the dominant majority imposing social norms and codes of behaviour (therefore enhancing collective efficacy but detracting from social equity aspects of the Democratic dimension). Highly cohesive neighbourhoods, such as Villarreal and Silva (2006) observed in Brazil, can be highly disadvantaged areas with high crime rates together with high perception of risk of victimisation. Overall, this review concurs with Cheshire (2007) that social segregation is longstanding in many cities, and this is a problem when specific groupings are deliberately excluded and when social segregation coincides with extremes in wealth distribution.

Social infrastructure

Social infrastructure has been framed as 'local opportunity structures' (Macintyre & Ellaway 1999, in Baum & Palmer 2002), or 'third space' (Soja 1996, Oldenburg 1997), in recognition that local facilities and service provide places for residents to meet and get to know each other. Studies show that residents value having local places to build and maintain loose social ties, develop trust, cooperation norms and reciprocity at a neighbourhood scale (Baum & Palmer 2002, King & Carson 2003, Macintyre & Ellaway 1999). For example, when asked what they liked about their neighbourhood, a study participant commented:

Shops and cafés and stuff are close. And there used to be a shop and that made a big difference and that's gone now ... they were like a hub, like the hub of the gossip network and the community ... You know things are at your fingertips. You can walk a few minutes and you can go and have a coffee in a café and there's a friendly feel about it (Baum & Palmer 2002:354).

This quote reflect Gehl's (2010) idea that 'a human scale' in cities is critical to attract people to live there. Local shops, parks, and cafes that people can walk to, rather than having to negotiate major road intersections along the way, shape people's experiences of cities (Dempsey 2009; Williams 2000), and therefore the likelihood of meeting and socialising with other people in ways that enhance individual and collective wellbeing. Available and accessible services and facilities such as transport nodes and services are critical to social equity (Burton 2003; Bramley & Power 2005, 2009; Dempsey et al. 2011, 2012).

Parks and reserves can provide places for solitude, social interaction and strengthening social ties (Kweon et al. 1998; Maas 2013, Petersen 2013), and experience civic diversity (Petersen 2013). Studies emphasise that high quality public open space promotes higher levels of social and civic participation (Baum & Palmer 2002). Qualities valued include spaces that are 'green', open (Baum & Palmer 2002), well-maintained (Dempsey et al. 2012), accessible (Karuppannan & Sivam 2011), and with social control (Baum & Palmer 2002, Wickes 2010). Visibility of disorder decreases residents' satisfaction with the neighbourhood, but when disorder is invisible (such as when graffiti is quickly painted over, public controls enforced) residents like the place better even though high crime rates still exist and people do not interact (Wickes 2010).

Schools are important local institutions in neighbourhoods (Witten et al. 2007), and are the most commonly researched local institutions that have a role in enhancing social relations in compact cities. As neighbourhoods intensify, a concern is lack of schools and pre-school facilities for children, and therefore exclusion of the very demographic that is recognised as positively associated with neighbouring in urban neighbourhoods (Randolph 2006). Quality of schools is an important factor when some people are deciding where to live. In UK neighbourhoods with good schools, house prices can rise by as much as 33%, thereby reducing social equity (Bretherton & Pleace 2008, in Dempsey et al. 2012). Incomes levels and housing markets are important sorting mechanisms for urban populations: people's incomes determine the character of the neighbourhood they can afford to live in (Cheshire 2007), and therefore the schools they can access.

Other neighbourhood institutions that have received little attention in the literature on social relations include sports clubs, dog parks, community halls or groups (e.g., Grey Power, ratepayers associations), and child-related groups (e.g., scouts).

Developers

Property developers have an important influence on the types of neighbourhoods that are created and therefore potentially have a related role in shaping social relations in compact cities. Australian studies show that a common aspiration of developers is to create a sense of community in a growing number of Master Planned Estates (McGuirk & Dowling 2007; Thompson 2013, Peterson 2006; Blandy et al. 2006; Walters & Rosenblatt 2008; Wickes 2010; Wood 2002). One of the ways developers do this is by establishing regulations and covenants to protect architectural homogeneity (Goodman & Douglas 2010), and public controls to impose a strong sense of social order (Helms 2005, Walters & Rosenblatt 2008; Wickes 2010).

The process of creating the image of community in new developments often begins long before the bricks and mortar are laid. Developers and their advertisers populate promotional material with signifiers to generate reactions and socially construct understandings and ideological statements to frame urban environments (Opit & Kearns 2014, Perkins et al. 2008, Wood 2002). However, Bauman (2001: 70) warns us that community cannot simply be bought, that these are 'aesthetic communities' for 'on-the-spot consumption – they are fully disposable after use'. Several studies of the use of community as a promotional device by developers have found the effects of such symbolic deployments can often be perverse. Even though developers commonly talk of vibrant and diverse residential spaces, Young (1990: 234) finds that 'commitment to an ideal of community tends to value and enforce homogeneity'. This is supported by the work of Winstanley et al. (2003: 185), who found that, despite having claims of being 'suitable for people of all ages' and for 'any family of any ages', the promotional imagery itself tends to always show young white and heterosexual families with children.

Residents were also found to be happy to leave the establishment of the symbols of community to the property developer, for example, by creating nostalgic physical reminders and providing 'community welcome nights, or seed funding and facilities for community groups (Walters & Rosenblatt 2008). In this way, the developer distinguishes the development as a good community in which to live, without the added requirement for residents of having to work together or develop local networks.

Another way that developers potentially have a role in shaping social relations is in their responsibility for establishing the governance structure for multiplex apartment. Developers usually oversee governance for the first two to five years before handing the responsibility over to property owners (Goodman & Douglas 2010). These structures, if not well developed, can create conflict between owners (Goodman & Douglas 2010; Dupuis & Dixon 2007).

City

A common urban planning principle is that by providing a range of housing types, a neighbourhood or city can attract a diverse mix of people, which in turn can enhance social relations. More spatially-focused research shows that the reality in many cities departs from these ideals, as a result of city or regional policies such as a metropolitan urban limit and zoning (Jabereen 2006), investment patterns (Harvey 1996), housing affordability (Punter 2011, Winstanley et al. 2003), and historical processes of segregation and concentration of poverty (Cheshire 2007). Although some studies have investigated social equity in cities (e.g., Bramley and Power 2005, 2009; Burton 2000, 2003), the focus tends to be on access to local facilities and services rather than employment (Cook and Swyngedouw 2012).

Studies of city-scale factors that impact on social relations in compact cities relate mainly to transport infrastructure, which is a focus of this section. Other factors are likely to include the shape and size of the city, location of neighbourhoods within the city (central, suburbs, periphery) and accessibility to wider opportunities (e.g., employment, affordable housing, amenities). The role of local government in shaping social relations in compact cities is also included in this section on the city scale.

Transport infrastructure

There has been limited research on the relationship between transport infrastructure and social relations and mobility inequalities (Geurs et al. 2009, Miciukiewicz & Vigar 2012, Trotman 2006). The effects of a city's transport infrastructure such as enhanced mobility and traffic nuisance are experienced at a neighbourhood scale and can impact on social relations (Glaeser & Sacerdote 2000). For example, a comparison of three cities in the United States identified a strong relationship between reliance on vehicles and weaker neighbourhood social ties (Freeman 2001). Public transport may provide contact nodes for individuals and groups (Currie & Stanley 2008) to create and negotiate meanings, cultures and identities or 'political sites of the everyday' (Miciukiewicz & Vigar 2012:1944).

Neighbourhoods that are not dominated by the visibility of vehicles and busy roads and intersections appear to enhance people's sense of safety and satisfaction with neighbourhoods (Baum & Palmer 2002, Brown & Cropper 2001, Dempsey et al. 2012, Freeman 2010, Randolph 2006, Williams 2000). However, compact urban design principles promote grid-patterned road networks, arterial roads to promote traffic flow, and higher density development around transport nodes and main arterial routes (e.g., Ministry for the Environment's design

guide for urban New Zealand (MfE 2002). These principles may be at odds with factors that enhance social relations and the acceptability of housing intensification more generally (Randolph 2006). However one study showed that increases in road noise and other traffic-related factors as a result of intensification in three London suburbs were perceived positively and negatively by different people (Williams 2000).

Local government

The role for local authorities in relation to place-based social relations is primarily in supporting interaction through public space and facilities, resourcing community groups, and providing a limited range of community services. Auckland Council, for example, supports festivals (heritage, cultural, youth) and numerous other activities, and provides infrastructure (e.g., community halls, swimming pools, parks and reserves). However, this review found no research that investigated the ways that such provisions by local authorities contribute to social relations in compact cities.

In a review of local literature on building strong communities in Auckland, Trotman (2006) proposed that Auckland City Council (now Auckland Council) could adopt a broader, responsive approach that includes not just provision of services, but also a dynamic mix of facilitation, advocacy, and partnership. Auckland Council's partnership with central government for the Tāmaki Redevelopment Company is an example of such a broader role. More recently, the Auckland Plan prioritised strengthened communities, to be achieved through community-led development. Auckland Council's role, together with central government, NGOs, and the private sector, is to plan and provide physical and social infrastructure, services, resources and support, suggesting a return to a largely service provision role (through partnerships) for this local authority.

Broader society

Central Government

The role of central government in shaping social relations in compact cities is examined in this section. In New Zealand, responsibility for community planning is diffused throughout a range of government agencies. MfE advises on environmental law, policies, standards and guidelines, and monitors and improves practice as necessary. MfE's contribution to urban issues has been the provision of the NZ Urban Design Protocol (MfE 2005). MfE also guide, monitor, and review the Resource Management Act (1991), so influence urban planning in that way.

The Department of Internal Affairs has a range of functions related to quality of life in communities, such as funding community development, and building government and voluntary sector partnerships (Cheyne 2006). The Ministry of Social Development and Ministry of Business, Innovation and Employment also have a role in shaping long-term direction through strategic documents, reporting and monitoring progress. More broadly, provision of and adherence to human rights legislation, investment in social development, and shaping immigration policy can contribute to social connectedness, for example, by safeguarding civil, political, property rights (Spoonley et al. 2005).

In 2008, the New Zealand government established the Urban Intensification Taskforce to improve planning and coordination of urban development. This is to be achieved by determining the value proposition for increased urban intensification in New Zealand, understanding consumer demand and resistance, and facilitating successful urban intensification (Ministry of Business, Innovation and Employment 2009). Taskforce members are leaders drawn from central and local government and industry.

While urban communities are largely governed by local government, central governments are taking on increasing responsibility for urban/community renewal. For example, since 2012, central and local government have been joint owners of the Tāmaki Redevelopment Company (TRC press release 2/9/2012). The intention is to work with developers to create a greater mix in tenure, which is anticipated to improve outcomes for residents. In the UK, central government took the lead, through an Urban Task Force, to densify cities and create ‘mixed communities’, with mixed results (Punter 2011). Successes included repopulation of central cities, particularly through brownfields development, and widespread improvements in the quality of council housing and urban parks. However, key failures included the creation of a crisis in affordable housing, increased gentrification, and less ‘engaged’ communities. This highlights the need for central government to ensure that local authorities have the resources, staffing and skills to oversee the delivery of quality development, and to boost the number of houses, including social housing and other forms of housing tenure, to maintain affordability (Punter 2011).

CONCLUSIONS

Common debates

This review has identified the following research questions debated in the literature related to social relations in compact cities:

- What is the relationship between urban density and social relations?
- Is it density or quality that has the most impact on neighbourhood satisfaction and social relations?
- To what extent does socio-demographic composition of neighbourhoods shape social relations, relative to urban form?
- Does diversity or homogeneity enhance social relations?
- Is ownership or length of residency more influential on social relations?

The majority of studies of relevance to social relations in compact cities are on the neighbourhood scale. A particular focus is the relationship between density and social outcomes, but findings are still mixed. This suggests that historical context and neighbourhood compositional factors are at least as important as spatial elements in shaping social relations. There is good evidence that walkable neighbourhoods enhance social relations (Leyden 2003, Lund 2003, du Toit et al. 2007), and social infrastructure provides opportunity structures for enhanced social relations (Baum & Power 2002, Boneham & Sixsmith 2006, Karuppappan & Sivam 2011, Petersen 2013). However, these social outcomes are strongly mediated by sense of safety and social order, which are in turn shaped by socio-economic variables.

There is lack of clarity about causal relationships between urban form and social relations (Talen 1999). The research shows, for example, that medium density neighbourhoods in New Zealand (Dupuis et al. 2008) and elsewhere (Walters & Rosenblatt 2008, Baum & Palmer 2002) may merely attract people who value strong social relations, rather than the urban form shaping social relations as such. However, these studies also show that residents may profess a desire for a strong community but their behaviour suggests that this does not include frequent interaction or collective action with neighbours.

There is less research focus on elements related to the home, yet layout, design, landscaping, connectivity, and quality and diversity of buildings and amenities are found to be the most important spatial elements that shape social relations (Kim 2007, King 2013, Raman 2010, Randolph 2006, Turner et al. 2004). These elements are critical to people's satisfaction with their neighbourhood and ability and willingness to interact with neighbours. While opportunities for unplanned social interactions can enhance social relations (Karuppanan & Sivam 2009, in Karuppanan & Sivam 2011), research also shows that people need a degree of control over their immediate living environment and not to be adversely affected by unwanted social interactions and traffic nuisance (Churchman 1999, Wilson & Baldassare 1996), although this differs by age/life stage and class (Williams 2000).

This review shows recursive relationships between dimensions and indicators of social relations. A sense of safety is a strong mediating factor, strengthening social interactions and use of public space (Karuppanan & Sivam 2011) and neighbourhood walkability (Baum & Palmer 2002; Lund 2002, in Wood et al. 2008). However, causation factors are not clear. Increased numbers of people walking and surveying the street, and well-maintained neighbourhoods may increase sense of safety, walkability and social relations, or neighbourhoods with strong social relations may take better care of their neighbourhood (Wood et al. 2008)—or attract a greater proportion of public and private investment.

Recurrent themes are diversity and homogeneity. While diversity in urban design and sociodemographic profiles of neighbourhoods and cities is theoretically linked to enhanced social outcomes (Jabereen 2006, Jacobs 1961), the evidence points more strongly towards sociodemographic homogeneity (Talen 1999, Winstanley et al. 2003). However, homogeneity may enhance social interaction, sense of belonging, participation and collective efficacy, but reflect social inequity at a city or neighbourhood scale. This review shows that socioeconomic deprivation is a strong mediating force in social relations (Cheshire 2007, Syme et al. 2005, Twig et al. 2010). Equity, including distributional justice, is shown to be an important indicator of social relations.

The presence of children and older people in a neighbourhood is linked with enhanced social relations. Families with children show increased social interactions (Baum & Palmer 2002, Lund 2003), social ties (Guest & Wierzbicki 1999, Wood et al. 2008), neighbourliness (Lund 2003, Park 1991, Randolph 2006), and sense of community (Kim 2007). Similarly, older people are found to have an increased sense of place (Wiles et al. 2009, Williams & Kitchen 2012), neighbourliness (Park 1991), and more contact and social support (Guest & Wierzbicki

1999, Kearns et al. 2012), although having a regular income is a predictor of social interaction (Hazer & Boylu 2011). Older people value local amenities (Boneham & Sixsmith 2006, Buckenberger 2012), families with children prioritise proximity to schools and quietness (Buckenberger 2012). While there is little evidence about youth in social relations, sporting facilities are shown to be important (Baum & Palmer 2002), and may support social relations by providing structured socialising, which is shown to decrease violence amongst youth (Maimon & Browning 2010). Enhanced social relations for youth can be measured by ties with family and friends (Billett 2012), but this is at odds with ideals of increased bridging networks with other adults in a neighbourhood.

Housing intensification can lead to reduced reliance on vehicles, which is positive for older people, young families and others who are limited in their mobility (Dempsey et al. 2012). New Zealand and Australian research shows that medium density housing is most often inhabited by young professionals and older people (Ancell & Thompson-Fawcett 2008, Randolph 2006), suggesting that without dedicated efforts to provide amenities, infrastructure and housing suitable for young families, social relations in compact cities for these households may be inhibited.

Factors that enhance social relations

In summary, this review finds the following factors are shown to shape place-based social relations in compact cities, while recognising there are numerous intermediary factors:

- Walkable neighbourhoods/Reduced reliance on vehicles
- Quality social infrastructure
- Regular upkeep of public amenities
- Sociodemographic homogeneity
- Passive surveillance in the public sphere and public/private interface
- Privacy, low noise and resident control over private living spaces
- Quality design, layout, and amenities
- Diversity in the built and natural environment

Research gaps

This review identifies the following research gaps in the literature:

- Youth aspirations and experiences of compact cities (Billett et al. 2012)
- The relationship between neighbourhood ‘churn’ and social relations
- What are the distinct challenges for New Zealand cities related to social relations?

- Ethnographic research to unpack social, cultural, political dynamics of sense of belonging and its relationship to social relations (Kitchen et al. 2012).
- What do people share, rather than how do they differ? (Carson et al. 2010)
- How are neoliberal concepts of the autonomous, responsible individual expressed in social relations in compact cities?
- How does age and life stage shape social relations in mixed land use neighbourhoods?
- What factors create conviviality and a sense of fun in compact cities?
- What is the relationship between transport and social relations/mobility inequalities? (Geurs et al. 2009)

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APPENDIX 1: SETS OF MEASURES OF NEIGHBOURHOOD SOCIAL RELATIONS

The following sets of measures of neighbourhood social relations have been recommended in the literature reviewed for this report:

Sense of community:

- Kitchen et al. (2012) – *sense of community belonging*: psychological construct of levels of social attachment to and social comfort with their community, friends, family, workplace, or personal interests.
- Steinberger (1981, in Carson et al. 2010) – *communality*: local interpersonal contact and friends, many relatives locally, owning local property.
- McMillan and Chavis (1986, in Carson et al 2010) – *psychological sense of community*: membership, influence, integration and fulfilment of needs, shared emotional commitment. Tartaglia (2006) added place attachment and social bonding.
- Prezza et al. (2009) – *Sense of community*: membership, shared influence, social climate and bonds, help in case of need, and needs fulfilment.
- Patterson et al. (2011) – ‘*sense of community*’: affirming moral codes, ‘defending’ other members, distinguishing insiders and outsiders, enacting empowerment, challenging institutions.
- Kim (2007) – *Sense of community*: community attachment, social interaction, community identity, pedestrianism.

Sense of attachment, belonging

- Carson et al 2010 – *neighbourhood attachment* (psychosocial) and *involvement*: membership, influence, emotional bonds, tangible bonds, participation
- Roffey (2013) – *sense of belonging in schools*: equality and democracy, inclusion, respect, safety and choice, agency, positivity
- Williams & Kitchen (2012) – *sense of place* – by ethnicity – NZ (McCreanor et al. 2006)

Social sustainability

- Karuppanan and Sivam (2011) – *social sustainability*: social equity, social sustainability of communities
- Karuppanan and Sivam (2011) – *design parameters*: provision and location of open space; provisions and location of social infrastructure; accessibility and permeability; circulation pattern; aesthetics; safety (security and crime prevention).
- Dempsey et al. (2012) – *social sustainability*: includes 2 broad concepts – social equity and sustainability of community. Socio-spatial features of community: Social interaction/social networks in the community; Participation in collective groups and networks in the community; Community stability; Pride/sense of place attachment; safety and security.

- Ghahramanpouri et al. (2013) – *social sustainability*: social equity, satisfaction of human need, wellbeing, quality of life, social interaction, cohesion and inclusion, sense of community, and sense of place.
- “A livable place is safe, clean, beautiful, economically vital, affordable to a diverse population and efficiently administered, with functional infrastructure, interesting cultural activities and institutions, ample parks, effective public transportation and broad opportunities for employment. It also connotes a sense of community” (Balsas 2004:103)

Social capital

- Buys et al (2007) – **social capital**: based on Bullen and Onyx (1998: 34) social capital scale, with 8 categories - participation in local community; proactivity in a social context; feelings of trust and safety; neighbourhood connections; family and friends; tolerance of diversity; value of life; work connections [but they didn't use the work connections category].
- Putnam (2000) – quality of housing, public facilities, facilities for children, sports and recreational facilities, sense of safety, community spirit, friendliness and privacy (in Raman 2010)

Neighbourly social relations

- King (2013) – *neighbourly social relations*: cohesion, control (shared beliefs and expectations used to intervene for collective good), intergenerational closure (awareness and looking out for local children), reciprocal exchange
- Raman (2010) – *social relations*: sense of safety, participation, sense of belonging and community, friendliness and community spirit, social networks, social interaction - and influenced by physical and spatial characteristics (form) [good but doesn't include anything about equity, power relns]
- *Satisfaction with neighbourhood* - Dempsey et al. (2012) say this is another way of looking at social sustainability in high density development.

APPENDIX 2: LIST OF REFERENCES, WITH TYPE, METHODS, PLACE OF STUDY

Authors	Study type		Methods	Place
	Quantitative	Qualitative		
Baum & Palmer 2002		x	40 interviews	Adelaide, Australia
Boneham & Sixsmith 2006		x	Case study: 76 interview with older women	North England
Bramley et al. 2009	x		Surveys, mapping, sociodemographic data for five British cities	UK
Buckenberger 2012		x	Case study – neighbourhood: interviews, “tag clouds”	Farm Cove, Auckland
Buys et al. 2007	x		Case study, 276 questionnaires	Gold Coast, Australia
Carson et al. 2010	x	x	City case study comparison: 920 surveys, Interviews	Canada
Cattell 2001		x	2 Case studies, interviews	East London
Cheshire 2007			Review article: segregated neighbourhoods	UK
Churchman 1999			Review article: Density	
Dempsey et al. 2011			Review article: urban social sustainability	UK
Dempsey et al. 2012	x		15 case study neighbourhoods: 4381 surveys, census data	UK
Dredge & Coiacetto 2011			Review article: Strata title	Australia
du Toit et al. 2007	x		Comparative – neighbourhood. Questionnaire, mapping	Adelaide, Australia
Forrest & Kearns 2001			Review article: social cohesion, social capital, neighbourhood	UK
Freeman 2010		x	Interviews, mapping: 92 chn aged 9-11	NZ
Ghahramanpouri et al. 2013			Review article: urban social sustainability	Malaysia
Glaeser & Sacerdote 2000	x		Secondary data: American Housing Survey & National Crime Victimization Survey	US
Goodman & Douglas 2010		x	Case study MPEs	Melbourne, Australia
Górny and Toruńczyk-Ruiz 2013	x		Cross-city survey	Bilbao, Lisbon, Rotterdam, Thessalonica, Vienna, Warsaw.
Guest & Wierzbicki 1999	x		Secondary data: longitudinal national General Social Survey	US
Gundelach and Freitag 2013	x		City-wide survey of 692 residents, random selection	Konstanz, Germany
Hazer & Boylu 2011	x		City case study: Survey of 348 elderly registered at a health clinic	Ankara, Turkey
Hipp & Perrin 2006	x		Neighbourhood Case study: survey	Southern US
Jabereen 2006			Review article: sustainable urban forms	USA
Karuppanan a & Alpana Sivam			Comparative 3 case studies neighbourhoods. Household surveys, observation	Delphi, India
Kearns et al. 2012	x		Survey, 14 areas of city	Glasgow, UK
Kim 2007	x	x	Case study: surveys, interviews	Kentlands, Maryland, US
King 2013	x		Secondary data: population-based multilevel	Chicago, US

			community survey, census	
King & Carson 2003		x	Comparison 2 case studies neighbourhood	South Australia
Kitchen et al. 2012	x		Secondary data: National comparative survey	Canada
Kleinhans & Kearns 2013			Review article: neighbourhood restructuring-relocation	
Lund 2003	x	x	Comparative 8 neighbourhoods. Household survey, interviews	Portland, US
Park 1991		x	Compares 3 ethnographic case studies	NZ
Phillipson et al. 2001	x	x	Longitudinal in 3 urban areas of England	UK
Prezza et al. 2009	x		Comparative – city scale: questionnaire	Italy
Punter 2011			Review article: urban design & English urban renaissance	UK
Raman 2010	x	x	Comparative, 6 neighbourhoods: network mapping, questionnaire, observation	UK
Roffey 2013			Review article: inclusive belonging in schools	UK
Rosenblatt et al. 2009	x	x	Case study MPE: survey, secondary data	Queensland, Australia
Sautéing et al. 2012			Review article: UK studies of mixed tenure effects	UK
Sengupta et al. 2013	x		National phone survey with 6631	NZ
Spoonley et al. 2005			Review article: social cohesion	NZ
Syme et al. 2005			Review article – compares lit and surveys: social implications housing intensification Auckland	NZ
Talen 1999			Review article: Sense of community & neighbourhood form	US
Talen 2006			Review article: place diversity	US
Talen 2010		x	Comparative 6 Chicago neighbourhoods: interviews	Chicago, US
Turner et al. 2004			Review article: case studies of medium density neighbourhoods	NZ
Twigg et al. 2010	x		Secondary data: National British crime survey	UK
Villarreal & Silva 2006	x		Comparative – city neighbourhoods: survey	Belo Horizonte, Brazil
Walters & Rosenblatt 2008		x	Case study MPE	Australia
Walton et al. 2008	x		Comparative – densities across city: mail survey	Auckland, NZ
Wickes 2010	x	x	Comparative 2 urban suburbs: survey, interviews	Brisbane, Australia
Winstanley et al. 2003		x	City case study, Christchurch: Interviews, document & media review,	NZ
Wiles et al. 2009		x	Random selection w control grp. Interviews	NZ
Williams & Kitchen 2012	x		Comparative – 3 neighbourhood clusters in a city: Household quality of life survey	Ontario, Canada
Wilson & Baldassare 1996	x		Orange County telephone survey	Orange County, US
Witten et al. 2012	x		Comparative 48 neighbourhoods - associations of built environment with physical activity	NZ
Wood et al. 2008	x	x	Comparative 3 suburbs: interviews, random cross-sectional telephone survey, mapping, GIS data sets	Perth, Australia