Curtin University of Technology

Department of Urban and Regional Planning

A Mixed use Objective: an evaluation of theory, practice and opinion

Presented to partially fulfil the requirements of the Bachelor of Arts (Urban and Regional Planning)

Planning Dissertation 414

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October 31, 2008

School of Built Environment (SOBE)
Table of Contents

Table of Figures.................................................................iv
Table of Tables.......................................................................v
Acknowledgements.............................................................vi
Abstract................................................................................vii
Chapter 1 – Introduction.......................................................1
  1.1 Research problem..........................................................3
  1.2 Research significance....................................................3
  1.3 Research strategy..........................................................3
  1.4 Research objectives.......................................................4
Chapter 2 – New Urbanism....................................................5
  2.1 The emergence of New Urbanism.................................5
      2.1.1 Introducing development control..............................5
      2.1.2 Planning theory of the 20th Century..........................8
  2.2 The New Urbanism.......................................................14
      2.2.1 Smart Growth.......................................................14
      2.2.2 The dimensions of New Urbanism............................15
      2.2.3 Mixed use.............................................................16
      2.2.4 New Urbanism in Western Australia.........................19
  2.3 Reflection & critique......................................................22
Chapter 3 – Methodology ............................................. 25
  3.1 Case studies .................................................. 25
  3.2 Type of research .............................................. 27
  3.3 Research techniques ......................................... 28

Chapter 4 – Case studies ............................................ 31
  4.1 Brief background of case studies .......................... 31
    4.1.1 Claisebrook Cove ....................................... 31
    4.1.2 Brighton Estate ......................................... 32
  4.2 Findings ....................................................... 34
    4.2.1 Observation findings .................................... 34
    4.2.2 Observation analysis ................................... 37
    4.2.3 Survey findings .......................................... 43
    4.2.4 Survey analysis .......................................... 46
      4.2.4.1 Socio-economic findings ......................... 46
      4.2.4.2 Lifestyle findings .................................. 50
  4.3 Chapter summary ............................................. 55

Chapter 5 – Conclusions ........................................... 56
  5.1 Broader implications to planning practice .............. 56

References & Bibliography ......................................... 60
  References ...................................................... 60
  Bibliography ................................................... 64

Appendix 1 .......................................................... 66
Appendix 2 .......................................................... 71
Table of Figures

Figure 1 Diagram of Ebenezer Howard’s Garden City..............................................9
Figure 2 Diagram of Ebenezer Howard’s Garden City..........................................10
Figure 3 Diagram of Ebenezer Howard’s Garden City.........................................11
Figure 4 Photo from Brighton Estate.................................................................34
Figure 5 Photo from Brighton Estate.................................................................34
Figure 6 Photo from Claisebrook Cove...............................................................34
Figure 7 Photo from Claisebrook Cove...............................................................34
Figure 8 Photo from Brighton Estate.................................................................35
Figure 9 Photo from Brighton Estate.................................................................35
Figure 10 Photo from Claisebrook Cove.............................................................35
Figure 11 Photo from Claisebrook Cove.............................................................35
Figure 12 Photo from Brighton Estate...............................................................35
Figure 13 Photo from Claisebrook Cove.............................................................35
Figure 14 Photo from Claisebrook Cove.............................................................36
Figure 15 Photo from Claisebrook Cove.............................................................36
Figure 16 Brighton Estate plan..............................................................................40
Figure 17 Graph of Socio-economic findings.....................................................53
Figure 18 Graph of Lifestyle findings..................................................................53
Table of Tables

Table 1: Socio-economic findings of the resident survey.................................43
Table 2: Lifestyle findings of the resident survey........................................45
Acknowledgments

I would like to thank a number of people who have either helped or supported me in the preparation of this dissertation. Firstly, I would like to thank my supervisor Ian for all his support and assistance. Secondly, I would like to thank Garry for all his hard work in making the unit run so smoothly. I would like to thank my loving girlfriend Lauren for putting up with all my moaning and groaning over the past three months in writing this thesis. Thanks baby. I extend great thanks to my brother Sam for giving up his weekend to help me with the survey. Lastly, I would like to thank mum and dad for all the love and support I ever needed. Thanks guys.

Declaration

I Thomas Abbott declare that this dissertation represents my own research and does not use the work of others except where cited within the text. The ideas, views and opinions expressed are mine personally and do not represent those of my employer or Curtin University of Technology.

Signed:
Date:
Abstract

This dissertation explores the concept of New Urbanism as an advocate for mixed use within the 21st Century. It investigates mixed use as it is defined in terms of theory, practice and opinion. Drawing from findings taken from observations and survey/questionnaires conducted in the two case study areas of Claisebrook Cove and Brighton Estate, the report attempts to determine the meaning behind appropriate mixed use as it relates to planning practice.

It was concluded from the results that design principles adopted through New Urbanist policy initiatives like those seen in Liveable Neighbourhoods can only determine mixed use in practice. However, appropriate mixed use was determined to be attributed to the lifestyle choice of residents. This conclusion was justified in that both case studies represented two contrasting mixed use theories of New Urbanism. Both case study areas had contrasting socio-economic data findings. These socio-economic findings represent the mixed use outcomes of New Urbanism in theory and practice.

With similar opinions toward lifestyle choice found in both contrasting study areas it was concluded that appropriate mixed use needs not be designed so much around theoretical practices but rather the opinions of residents. This thesis further communicates the need for greater planning participation in communities developed around urban design policies.
Chapter 1 – Introduction

Before the 20th Century, mixed use was the dominant urban form. The traditional neighbourhood was its own business district. For these very small business districts to become sustainable they had to attract outside investment while also keeping resident income within the neighbourhood. This was achieved through the provision of essential services that residents wanted to be close to while also representing aspects unique to the neighbourhood in order to attract outsiders. Mixed use provided the neighbourhood with uniqueness so as to attract outsiders and give opportunity for specialized small business (Geisman 2004). Therefore for a neighbourhood to become self sustainable it had to offer quality products and services that appealed to the market. This was only achievable through a mixing of uses.

At the turn of the 20th Century, cities were becoming congested and polluted resulting in a range of social dilemmas. From this period of social chaos in large industrial cities came development control and planning theories of how to combat and reverse the effects of uncontrolled and unplanned urban landscapes. Of all these theories the most influential was that of Ebenezer Howard’s Garden City theory. With events like the Great Depression and World War 2; the division between city and country, planning and the people and in particular land uses became the scope of modern day planning throughout the 20th Century.

The issue of sustainability had been forgotten since Ebenezer Howard first produced his Garden City theory. Planners in the late 20th Century were realizing the separation of land uses was fuelling suburban sprawl leading to further car dependence which was creating congestion and pollution (Filion 2003). These were the same sustainability issues that Ebenezer Howard had noticed at the turn of the century.
To combat such detrimental effects planning theorists advocated the design of urban places which were “vibrant, mixed use and pedestrian friendly, with well-defined edges, coherent open-space systems, and civic centres” (Grant 2006, p. 160). This new theory emphasized “an attractive public realm, high quality design, alternatives to automobile use, and mixed housing types” (Grant 2006, p. 160). These qualities were closely aligned with the urban form of American small towns (Grant 2006). Therefore the theory became to be known as Traditional Neighbourhood Design (TND) (Grant 2006). Although TND became a popular urban design movement within the United States there was still some apprehension about such design amongst a very segregated urban culture (Grant 2006).

How suitable is such traditional theory within the 21st Century? Modern age living habits and technological advances in development need to be considered. A more subtle form of urban design known as Transit Orientated Development (TOD) was experimented with. TOD was a theory that aimed at developing around transit networks. It was thought such a theory could stimulate traditional forms of development characteristics (Grant 2006).

By the early 1990s both TND and TOD theories were united under one theory, the theory of New Urbanism as declared by the founding and formation of the Congress for the New Urbanism (CNU) (Grant 2006). It was only shortly after the creation of New Urbanism that policy makers incorporated the principles of the movement into policy under a political philosophy known as Smart Growth (Grant 2006). The charter of New Urbanism within the United States reverberated around the Western World creating new policy measures bearing a variety of names like Urban Quarter, Urban Villages, and Urban Renaissance (Grant 2006).
1.1 Research problem

What is appropriate mixed use?

1.2 Research significance

The research problem is significant in terms of land use planning because it involves the theory of New Urbanism. New Urbanism is the design theory behind the Western Australian urban design policy, *Liveable Neighbourhoods*. New Urbanism has also been funded by the Commonwealth Government in a nation wide public works initiative known as the ‘Building Better Cities’ program (EPRA 2008). The theory of New Urbanism advocates mixed use design. Therefore it can be seen that New Urbanism has had a major influence on land use planning in Western Australia and nation wide.

1.3 Research strategy

The purpose of this dissertation is to examine New Urbanism in terms of its mixed use objectives and whether these have been appropriate in practice. As a topic with relevance to New Urbanism the strategy chosen in order to fully investigate the research question involves two case studies from Claisebrook Cove in East Perth and Brighton Estate in Wanneroo. This research strategy proposed can be justified in that the case study of the East Perth redevelopment has long been considered as one of the greatest New Urbanist achievements in Australia (Armstrong 2003). The redevelopment area of East Perth followed strict New Urbanist ideals during its development and therefore portrays mixed-use and pedestrian friendly alternatives (Armstrong 2003). However it is simply not enough to explore New Urbanism within Claisebrook Cove. In understanding appropriate mixed use the research strategy will compare findings with Brighton Estate in Wanneroo, another New Urbanist community created using the design principles of *Liveable Neighbourhoods*. By conducting these case studies it will provide the opportunity for intensive analysis into New Urbanism so that generalizations can then be made as to the impact such a concept may have in determining appropriate mixed use.
1.4 Research objectives

1. To examine the role of New Urbanism and mixed use.
2. To understand New Urbanism and its objectives.
3. To investigate mixed use in practice as it stands within Western Australia.
4. To discover the opinions of residents within the case study areas of Claisebrook and Brighton.
5. To analyse resident opinion towards New Urbanism and mixed use.
6. To observe New Urbanism in practice.
7. Review theory, practice and opinions of appropriate mixed use and how it relates to planning practice.
Chapter 2 – New Urbanism

The purpose of this chapter is to investigate the relevant planning theory that provides the contextual background to the topic question by which this dissertation is attempting to answer. What is appropriate mixed use? The defining term used within the topic question is mixed use. In order to fully understand this term this chapter will investigate the relevant planning theory of New Urbanism.

2.1 The emergence of New Urbanism

2.1.1 Introducing development control

The emergence of New Urbanism is a direct result of contradiction within the development control process. In the early 20th Century the western world began implementing development control in order to thwart the negative impacts of uncontrolled urban growth.

Stannage (1987) suggests this uncontrolled urban growth was caused by mining booms and the great industrialization of major cities during the late 19th Century. Prosperity throughout these cities fuelled unexpected population growth from regional areas and this was intensified with the eventual declines in resource booms (Stannage 1987). With no town planning legislation; and all rights to do with land falling on the land owner urban areas were often uncoordinated with no control over the location, size, and character of the towns and suburbs (Hunt & Layman 2001). This allowed landowners to do with their land what they wished.

Towns and suburbs were becoming places that represented the individual perspectives of land owners. Therefore the more land one person owned the more power they had in influencing development patterns. Stannage (1987) describes that often such power over development was used to ones own advantage and thus many negative impacts on the rest
of the community resulted. Wealthy landowners controlling development and occupying large amounts of land, for the majority of residents it meant a shortage in housing, overcrowding, ghettos, displaced and inadequate service infrastructure like sewerage, disposal and water. Such intense living conditions during a time of poor health led to the rise and spreading of infectious diseases like cholera; typhoid; and bubonic plague (Stannage 1987).

Governments around the western world in recognizing the negative impacts attributed to no development control began creating laws to stop the inequitable rights landowners had in shaping development patterns for their own individual gain rather than for the community as a whole. A good example of a government intervening within the development control process is that of the Government of Western Australia during the early 20th Century.

Due to the detrimental effects of landowner rights, discussed previously, the Western Australian Government in 1928 introduced a milestone piece of legislation that sought to take control of subdivision, delegate power to local authorities and to establish an overarching metropolitan planning body. The legislation was to be known as the *Town Planning and Development Act 1928 (TPD Act 1928)*. The first control set out by this piece of legislation is the control of subdivision. This particular development control took back land rights from property owners and set parameters as to the location, the size, service provision and the design of subdivision. It ensured the efficient use of infrastructure and held land owners or developers accountable for providing the necessary roads, open spaces, utilities and amenities (Development Assessment Forum 1999; 2001).

The second development control delegated planning powers to local authorities to create local planning schemes that restricted a land owners rights in terms of building design. This particular development control streamlined development to restrict building height, setbacks and in some places the character or architecture of buildings so that they didn’t become obstructive, obtrusive or undermine neighboring properties (Stannage 1987).
The third control to be established by the *TPD Act 1928* was the formation of an overarching metropolitan planning body which had the role of coordinating development and development powers throughout the Perth Metropolitan Region. Within this role came opportunities to plan strategically and make decisions as to where development was to occur, how it was to occur and when it was to occur (Hunt & Layman 2001).

The result of such planning removed the adverse affects of past land ownership rights to provide predictable development outcomes. This development control system still exists to this day in Western Australia and although it has proven to extinguish many negative social dilemmas experienced at the turn of the 20th Century there are also many other undesirable issues that have risen throughout the 20th Century from development control.

Armstrong (2003) argues that development control has been very effective in achieving development that is compatible to its surroundings. However in trying to reverse the social impacts from higher densities and the mixing of uses in the past Filion (2003) argues 20th Century development control has created segregated land use zones for subdivisions that give rise to extremely uniform, boring and inconvenient development. This form of development assessment in many cities worldwide where land use is controlled and isolated and as less uses are able to be developed on a single lot of land has therefore led to urban sprawl, car dependence, ghettos etc. Apart from infectious disease the 20th Century with its development control has not resolved many issues of the early 20th Century and can be said to have created many more.

The actions of the Government of Western Australia reflect a broad sense of development control that occurred in other governments of the western world. It was these development controls that led to a range of development theories throughout the mid to late 20th Century that today have brought about the contemporary planning movement of New Urbanism.
2.1.2 Planning theory of the 20th Century

Ever since development control was introduced to thwart the adverse effects of uncontrolled urban growth, a number planning theories proved to be very compatible with these new planning parameters. Under the far reaching blanket of Modernism these theories intrigued practitioners and reshaped the urban landscape throughout most of the 20th Century.

What is Modernism? The Oxford Dictionary (2001) defines Modernism as “modern ideas or methods, especially the rejection of realism and traditionalism……”. Therefore this definition of Modernism confirms that this movement was entrenched within government policy in the way of development control. These planning controls rejected the traditional development patterns of the past. As previously mentioned these development patterns of the past were uncontrolled and resulted in an intensely mixed urban landscape with large social ramifications. It is because of the modernist movement that new planning theories were focused around the issue of how to develop a planned community (Rahder & Milgrom 2004).

Possibly the most well known planning theory to rise out of this era of Modernism is that of the Garden City movement. Supporters of the Garden City movement advocate a theory that will bridge the gap between city and country. They envisage the development of new cities that integrate with the natural environment, are self sustainable, have a clean environment and large public open spaces (Clark & Howard 2003).

Essentially the Garden City movement sought to find a middle ground for development between town and country regions. The Garden City movement believed that there were both problems in the city and the countryside that could be resolved by building towns in the country (Moo Lee & Hyuck Ahn 2003). As well as the notable adverse effects occurring within the city as previously discussed, activists of the Garden City noticed that in the countryside things weren’t much better (Clark & Howard 2003). There was a depopulation occurring due to the high costs of running a farm from lack of infrastructure
and services (Clark & Howard 2003). It was argued that Garden Cities were the key to establishing a balance between town and country (Moo Lee & Hyuck Ahn 2003).

The town and countryside acted as two different magnets, attracting people to live in them because of differing qualities (Clark & Howard 2003). Howard proposed a third magnet (The Garden City) that combined the “energetic and active town life, with all the beauty and delight of the country” (Clark & Howard 2003, p.91). This is further illustrated in figure 1.

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**Figure 1** (Clark & Howard 2003).
In order to capitalize on the positive and reverse the negative aspects of both city and country lifestyles the methodology by which these garden cities were to be created was quite unique. Ebenezer Howard the creator behind the theory of the Garden City had a very focused and ideological perspective of how such Garden Cities were to be formed (Clark & Howard 2003).

Ebenezer Howard proposed that Garden Cities were to be located on Greenfield sites of undeveloped land as this land was very cheap so as to create affordable living, unseen within the city (Clark & Howard 2003). His Garden Cities can be seen to follow very closely with the newly established planning controls of zoning the land for a particular use. Ebenezer Howard envisaged a constellation of cities that were to have growth boundaries, be of a certain population size and be connected via public transportation (Moo Lee & Hyuck Ahn 2003). The cities themselves are illustrated in figures 2 and 3.

![Garden City Diagram](image)

**Figure 2:** (Clark & Howard 2003) Circular cities with a zoning plan that dictated land uses for concentric rings within the circle.
It is made clear by Howard that no development other than that purposed for the last ring is to occur and no city development is to occur beyond the last ring (Clark & Howard 2003). Howard envisaged there to be a constellation of Garden Cities all interconnected with one another (Clark & Howard 2003). However, could this prevent the negative impacts of the large, unplanned cities from the past? How does this bridge the gap between city and country? Aren’t they still just cities?

In putting Howard’s theory into practice it proved harder than he had imagined (Clark & Howard 2003). The Garden City Association that Howard was a part of constructed the first Garden City just outside of London (Clark & Howard 2003). In order to finance the project Howard and the Garden City Association attracted many like minded thinkers and investors (Clark & Howard 2003). Garden Cities from Howard’s perspective were to be about the community and a cooperative approach to sustaining that community and the
environment of which it was surrounded (Clark & Howard 2003). Investors were reluctant in handing power over to the community (Clark & Howard 2003). It can be seen that Howards vision for a Garden City is a theory too socially orientated to work within western world capitalist planning philosophy. Howard’s theory at the time called for community empowerment over development decisions. Although Howard’s Garden City proposal was viewed as unrealistic by investors in the early 20th Century, today’s planning environment, community empowerment over development decisions is a contemporary issue and wouldn’t be as cold heartedly rejected.

In the aftermath of Howard’s death many Governments started taking the more subtle principles of Howard’s Garden City vision and applying them to town planning strategies in order to relinquish the many adverse affects of congested and polluted cities (Lupro 2006). This resulted in the development of many smaller satellite cities and what is known today as suburbia. Although many internal principles of the Garden City plan like more parks and public open spaces were implemented into town planning strategies, many of the more exuberant characteristics of Howard’s vision were Utopian.

The Oxford Dictionary (2001) defines Utopia as an, “imagined perfect place or state of things”. A good example of this Utopian theory can be seen when Howard states, “Here is a task which may well unite a vast army of workers to utilize that power, the present waste of which is the source of half our poverty, disease and suffering” (Howard 1902, pp.139-140 in Clark & Howard 2003, p.95). This statement was made in regard to Howard’s perception of the development of the Garden Cities. Other evidence of utopian values within Howard’s work includes his vision of circular cities with an array of gardens and vast areas of natural amenity. This is often the same design for cities in Utopian literature.

Howard’s vision of the Garden City is a theory that has been attributed to the advent of conventional suburban development which has plagued the urban landscape to this present day (Meyers 1998). This is evident in that when Howard proposed his Garden City theory it revealed a strategy for escaping the detriment of pollution and congestion.
within big industrialized cities and developing smaller cities within the country that consisted between a healthy balance of the natural environment and an active and vibrant city atmosphere.

A number of different planning associations attempted to practice Howard’s Garden City theory throughout the 1920s (Moo Lee & Hyuck Ahn 2003). However with the unfortunate event of the Great Depression many of the proposed Garden City developments were compromised due to lack of funds (Moo Lee & Hyuck Ahn 2003). The loss of finance meant industry was hard to attract and workers did not want to leave there jobs in the city (Moo Lee & Hyuck Ahn 2003). The much emphasized greenbelts of the Garden Cities was unaffordable and many project leaders declared eventual bankruptcy (Moo Lee & Hyuck Ahn 2003). During The Second World War development was basically non-existant due to government cutbacks to fuel war efforts (Moo Lee & Hyuck Ahn 2003). The post-war era saw a Western world that was progressively capitalist and conservative in lifestyle choices (Lupro 2006).

Howard’s Garden City was more associated with social reform and social justice whereby land was collectively owned and people worked together to produce a common outcome and sustainable future. Post-war governments in the Western world who were ideologically capitalist focused and in the middle of a cold-war with the Communist Soviet Union saw Howard’s theory as socialist. The physical design layout however favoured the pre-conceived values of planners for society during this period, as downtown districts that did not suit the conservative baby-boomer lifestyle (Lupro 2006).

As a result planning during this period was predominantly physical design as it was believed social aspects would follow the nature of the design (Lupro 2006). It can be argued that lifestyles were tightly ordered and regimented reflected the design view of this urban structure. The Garden city had become a Garden suburb and was again further refined due to social divisions as a result most families being middle class and the continued difficulty to locate, keep and finance industry. A reason for this could have
been due to market speculators restricting the working class and other non-white races from living outside the city (Lupro 2006).

It can therefore be seen that the Garden city theory provided the framework of alternative living and was further interpreted and transformed over time due to lifestyles, cultures and attitudes. Garden city design was also continually refined down and eventually advertised as a “purely commuter suburb without its own local economy” (Lupro 2006, p.192).

2.2 The New Urbanism

2.2.1 Smart Growth

In implementing the principles of New Urbanism, Smart Growth measures aim to reverse previous planning practice which created urban sprawl and segregated land use of which shaped an urban landscape dominated by the automobile and plagued by congestion and pollution (Filion 2003). The Smart Growth measure is summarized within the literature as appealing for development in “existing urban centres; the encouragement of infill development and of a reuse of brownfield sites; the promotion of compact and mixed-use forms of development; the fostering of land use patterns that support walking, cycling and public transit use; an enhancement of public transit funding; the shifting of some freight movement from truck to rail; and the protection of green space within and around cities” (Filion 2003, p. 52). The policy measure of Smart Growth adopted by the United States therefore sets in place planning initiatives related to the theory of New Urbanism.
2.2.2 The dimensions of New Urbanism

New Urbanism has often been described by theorists as a theory of theories. It has been argued that New Urbanism conveys an appreciation of four different planning dimensions. These dimensions include incrementalism, plan making, planned communities, and regionalism.

Incrementalism can be seen as a theory toward planning urban spaces through small-scale incremental change (Talen 2006). In essence incrementalism looks at improving individual issues like heritage, mixed use, sustainability, etc (Talen 2006). Therefore the aim of incrementalist planning has been to create better public places. This has a direct lineage with New Urbanism which has a main focus of neighbourhood level development.

Plan making aims at solving the problems of urban landscapes through methods that are much more comprehensive than of the small and detailed methods used by incrementalist planners (Talen 2006). From a practical sense, plan making involves corresponding what has been proposed in extensive plans and creating that plan so it is functional once executed (Talen 2006). Plan making therefore is in contrast to incrementalism in that plan makers have a much broader perspective towards planning. In terms of New Urbanism plan making has provided “the idea of being generalists who merge art and science, of the importance of assessing multiple dimensions of city design in an integrative fashion” (Talen 2006, p.94).

The third dimension to influence New Urbanism is planned communities. Planned communities contribute to the theory, the ability to create unique, idealized and alternative developments (Talen 2006). Therefore planned communities can be seen as the most influential of all theories to influence the formation of the New Urbanism. A strong connection can be made between planned communities and that of proposals like Ebenezer Howard’s vision of the Garden City.
The last dimension of New Urbanism is said to be that of regionalism. Regionalism advocates a strong theology that communities should be planned in terms of the context of place (Talen 2006). In practice regionalists aim to create places that reflect climate, topography and the history of a community (Talen 2006). From this it is apparent that New Urbanism aligns itself with regionalism in aiming to create communities that portray and convey their importance within a much larger framework.

From the theory it can thus be determined that there is the opportunity for New Urbanism to coordinate a range of ideas and theories that alone didn’t work in the past. It is evident from the theory that issues of the past like community empowerment as proposed by Ebenezer Howard’s Garden City proposal are more relevant and acceptable today and is one of the leading principles of New Urbanism. However New Urbanism needs to be careful to not justify its development as exclusively Neo-traditionalist. This type of ideological philosophy led to the demise of Ebenezer Howard’s Garden City. It has been discovered within the theory that fine grained development works better in easing people into alternative living habits.

2.2.3 Mixed use

The concept of mixed use before the late 1980s and early 1990s has not been implemented within urban plans since development control was introduced in the early 20th Century. For many reasons as discussed previously, i.e. congestion, pollution, a segregated land use planning philosophy has dominated the urban landscape of the 20th Century. Realizing the detrimental effects of segregated land use, i.e. car-dependence, congestion, pollution; planning theorists have been looking back to traditional methods for ideas. As previously stated mixed uses dominated the urban landscape of the 19th and early 20th Centuries. New Urbanism in the late 1980s and early 1990s attempted to use mixed use as its primary method for a return to a much more community active environment that promotes pedestrianism, social justice and compact urban design (Talen 2001). Therefore to this day it is the theory of New Urbanism which advocates mixed use. It is the mixed use theory by which New Urbanism is promoting that this paper will
explore further in this chapter so as to provide a context to the question, “What is appropriate mixed use”?

The theory of the New Urbanism is based on traditional urban design methods. Before planning controls were introduced mixed use evolved in traditional neighbourhoods from the will of the residents. In order to understand the methods of New Urbanism in attempting to create appropriate mixed use, the character of traditional mixed use methods need to be defined.

In traditional neighbourhoods at the turn of the 20th Century mixed use was the dominant urban pattern (Geisman 2004). In traditional neighbourhoods, business districts were a fundamental component in creating community (Geisman 2004). Residents wanted to be close to essential services (Geisman 2004). Mixed use provided the neighbourhood with uniqueness so as to attract outsiders and give opportunity for specialized small business (Geisman 2004). It was important for the sustainability of the neighbourhood that businesses represented aspects that were unique to the area or were one of a kind, i.e. Worlds biggest brewery (Geisman 2004). This is what attracted outsiders. Mixed use provided revenue for the neighbourhood to generate public services and infrastructure (Geisman 2004). It was also important in keeping resident income within the neighbourhood (Geisman 2004). People were less inclined in taking their money elsewhere as everything they needed and desired were within the neighbourhood (Geisman 2004). Therefore for a neighbourhood to become self sustainable it had to offer quality products and services that appeal to the market. This is only achievable through a mixing of uses. Another major characteristic to these traditional mixed use areas was also the establishment of mainstream businesses, i.e. industry, factories; as specialized stores are not enough as a sustainable base for employment (Geisman 2004). Furthermore, influencing mixed use within these traditional neighbourhoods was that business owners often lived where they worked (Geisman 2004).
It is the characteristics of mixed use development in traditional neighbourhoods as defined above from which New Urbanism aspires to create. Appropriate mixed use can be seen to have been achieved in traditional neighbourhoods; but these neighbourhoods were small. It is unlikely that in today’s urban environment mixed use could be marketed and be successful from a micro scale like the traditional village. However unlike at the turn of the 20th Century when planning controls didn’t exist, today New Urbanists must look to create mixed use in accordance with an array of strict planning rules and regulations. This next section will explore the New Urbanist theory behind creating appropriate mixed use.

According to New Urbanist theory neighbourhoods should be structured around corridors of mixed use creating large clusters of integrated land uses not segregated nodes (Filion 2003). There should be an intense concentration of mixed use in the core of a traditional neighbourhood rather than dispersed clusters of land uses that promote car use and less activity (Filion 2003).

An appropriate mix of land uses is described by New Urbanists as an active environment that makes efficient use of infrastructure (Grant 2002). For this to occur, a varying range housing types and tenures to accommodate varying family types and income levels must be established (Grant 2002). From this it is believed that a reduction in car dependence will result as different uses are closer to one another (Grant 2002).

Mixed use has been defined by the Urban Land Institute (1987) as mixed use project that “develops according to a coherent plan with three or more functionally and physically integrated revenue-producing uses” (Grant 2002). New Urbanism has two differing perceptions of mixed use in the form of traditional neighbourhood design (TND) and Transit orientated development (TOD). TND promotes increasing the diversity and intensity of land uses while TOD advocates intensity and diversity around transit nodes with land uses dispersing according to density and intensity of the use (Grant 2002). The theory suggests TOD best supports urban infill and redevelopment projects while TND is
best suited to high growth areas i.e. Greenfield sites (Grant 2002). How can car dependence be reduced if development is occurring in Greenfield sites?

2.2.4 New Urbanism in Western Australia

Western Australia and in particular the Perth Metropolitan Region display close similarities to that of many cities throughout the Western World. Western Australia probably more so than in most cities in the Western World dedicated its planning philosophy to modernist practices that offered “segregation of land uses through zoning, low residential density, lack of local employment and long commute distances, lack of services, high car dependence, disconnected street systems, limited public transport and poor walking environments” (Jones 2001, p.82). It was these negative attributes that led to the New Urbanist movement in the late 20th Century (Jones 2001). As stated previously the New Urbanist movement advocated a return to the ‘Traditional City’ (Jones 2001). Such a city was desired by New Urbanists as it was “characterised by nodes of development on streets that connected to other places in the district, concentration of uses and activities that were often densely mixed, a network of streets and lively public places, and ease of pedestrian movement throughout the whole system” (Jones 2001, p.82). This type of urban form was said to be beneficial as services were within walking distance of homes and traffic congestion was eased through an interconnected streets system (Jones 2001).

The New Urbanist movement became known and adapted to planning practice through federal government intervention in the early 1990s with the creation of the ‘Building Better Cities’ program. The aim at this program was to improve Australia’s development processes and urban landscapes with a particular focus of inner city areas (Neilson 2008).

“The overall purpose of the Program was ‘to promote improvements in the efficiency, equity and sustainability of Australian cities and to increase their capacity to meet the following objectives: economic growth and micro-economic reform; improved social justice; institutional reform; ecologically sustainable development; and improved urban environments and more liveable cities’” (Neilson 2008, p.83).
From this program came the redevelopment of the rundown industrial area in East Perth known as Claisebrook. The redevelopment strategy for the area was to construct an urban village with ‘Traditional Neighbourhood Design’ features (Neilson 2008). It was developed and coordinated by the East Perth Redevelopment Authority and financed by Federal and State Governments (Neilson 2008). The finished product of the site was considered an overwhelming success by New Urbanists; with the design producing compact and diverse built form (Neilson 2008).

With the success of the East Perth Redevelopment the Western Australian Government looked at ways of adopting the development ideas of the ‘Building Better Cities’ program into development process of the WA planning system. The government came up with a voluntary policy initiative called *Liveable Neighbourhoods* (Jones 2001). Is the voluntary nature of *Liveable Neighbourhoods* appropriate? Developers will choose the option that will guarantee them a greater profit. The aim of the policy was to reconstruct development as “safe, sustainable, attractive and memorable” (Jones 2001, p.82). Developers were given the choice to build along the code of *Liveable Neighbourhoods* or conventional practices. In Perth most development is still occurring on the metropolitan fringe and it is here where examples of *Liveable Neighbourhoods* development outcomes can be found.

The *Liveable Neighbourhoods* policy has a clear mixed use objective as explained below by Jones (2001).

“*The Liveable Neighbourhoods* approach calls for an urban structure based on walkable, mixed use neighbourhoods with locally based employment and facilities. Neighbourhoods cluster around a town centre to give sufficient population catchments to support main street retail, offices and community facilities. The neighbourhood and town centres are located at junctions of arterial routes or important local streets, rather than having such roads define the edge of development. For transit oriented development, a rail station anchors one end of the town centre main street, if rail is available” (Jones 2001, p.85).
Can the ‘Building Better Cities’ program, the East Perth redevelopment and *Liveable Neighbourhoods* be considered successful? Such programs, projects and policies prove the controversial nature of New Urbanism. For the East Perth Redevelopment to take place it needed a Federal Government initiative with funding and endorsement. The ‘Building Better Cities’ program had easily accessible government owned land to develop upon. It was developed and coordinated under a redevelopment authority and was financed by Federal and State Governments. Is *Liveable Neighbourhoods* too aligned with the practices of what was created in the East Perth redevelopment? With the voluntary nature of *Liveable Neighbourhoods*; are developers opting for the easier and more convenient option of conventional suburban design?
2.3 Reflection and Critique

The objective of this chapter has been to investigate the relevant planning theory that provides the contextual background to the topic question by which this dissertation is attempting to answer. *What is appropriate mixed use?* In doing this the chapter covered the background context of New Urbanism in terms of introduction of development control and the rise of modernism, Garden City, Utopianism and conventional suburban development. It has introduced New Urbanism, Smart Growth and the dimensions of New Urbanism, i.e. regionalism, plan making, planned communities and incrementalism. The chapter then revealed the theory and practice of mixed use while also providing an insight as to Western Australia’s experiences of New Urbanism and mixed use, the context of which two case studies will be explored as part of the empirical research agenda for this dissertation.

After reviewing the theoretical context of New Urbanism within this chapter, many varying conclusions can be made. The first noticeable observation is that of the theories discussed in this chapter inherently all are attempting to solve the same planning problem, congestion and pollution. Thought to be caused by a mixing of land uses and no development control; Modernism attempted to solve congestion and pollution by introducing development control and segregating land uses into zones. It can be argued that such development control lacked strategic thinking but conversely was a necessity in protecting the development rights of residents. Nonetheless this planning philosophy led to conventional suburban development and urban sprawl and car dependence which resulted in congestion and pollution. It can thus be concluded that Modernist planning is contradictory. The New Urbanist movement rather than rejecting traditional urban design like Modernism suggested that the congestion and pollution of the past was not the result of mixed use but rather the lack of any development control. The New Urbanism thus advocated mixed use development which would create vibrant, active communities less reliant on the car due to greater proximity of land uses, structured boundaries and an integrated street network.
In theory New Urbanism works. However this theory is still in very early stages of being practiced and studied. Many case studies into New Urbanism and traditional developments have been investigated within the United States and Canada. These studies have raised a number of questions and issues to do with New Urbanism in the way it is being implemented.

Since the implementation of these New Urbanist practices and policies particularly in Northern America like in Canada and the United States studies have revealed infill developments become havens for intense mixed use, and thus the wealthy, as they become the place to be (Grant 2002). TND developments have also often proved to be unviable in the suburbs because the market is not there (Grant 2002). It has often meant that such places can only be successfully marketed to the wealthy as they are freer to invest in experimental enterprises (Grant 2002, 2006).

Is traditional urban form advocated by New Urbanism appropriate today (Southworth 1997)? New urbanism promotes compact development that is less car oriented, however most development is occurring at the urban fringe (Southworth 1997). Are car orientated conventional suburbs appropriate (Southworth 1997)? Southworth (1997) argues that people are more interested about single family homes than sustainability. New Urbanism is focused on creating a sense of community and providing a range of housing types (Southworth 1997). However traditional turn of the 20th Century cities in the United States has shown that higher residential densities foster less public open space (Southworth 1997). A case study of Kentlands within the United States found that the walkable distance of 5min or 400m might not be an accurate target as most residents still opted to drive into the local commercial centre (Southworth 1997). To walk regularly these distances are too long (Southworth 1997). Southworth (1997) found that fine grain and well connected pedestrian and cycling routes to mixed use can become tourist attractions; however sensitivity to landscape is needed. Most case studies concluded mixed use is a culture that matures within a community, like Elmwood in the US (Southworth 1997). It can be argued that appropriate mixed use is what the community will allow, accept and live amongst.
Adopting many principles and showing lineage with Ebenezer Howard’s proposal of the Garden City, New Urbanism can also be affiliated with controversial theories like Utopia (Talen 1999). It has often been argued that New Urbanism believes community can be created and therefore doesn’t recognize culture and heritage (Talen 1999). However, culture and heritage is considered New Urbanist philosophy. New Urbanist policies such as *Liveable Neighbourhoods* discussed earlier in this chapter suggests that New Urbanism is possibly anti-urban with such a policy clearly designed for Greenfield development on metropolitan fringes. It can be thus argued that unless New Urbanism incorporates appropriate mixed use, issues of congestion, car-dependence, pollution etc. will continue to threaten triple bottom line (Economic, Social, and Environmental) objectives.
Chapter 3 – Methodology

This chapter will involve defining a case study; defining the type of research; and defining the research techniques.

3.1 Case studies

What is a case study?

Case studies involve:

“concentrating on a single phenomenon, individual, community, or institution, to uncover the manifest interaction of significant factors characteristic of this phenomenon, individual, community, or institution” (Berg 2004, p. 251).

Why do a case study?

Stake (1994, 1995 in Berg 2004) suggests that there are three different rationales for using a case study as a research strategy. These include Intrinsic, Instrumental and Collective case studies.

Intrinsic case studies involve cases that are unique and have less of a theoretical background (Berg 2004). They therefore are researched with the sole intention of learning and understanding. Instrumental case studies are used primarily when researching an issue with a large theoretical background (Berg 2004). Therefore the case study is used more as a piece of research in order to support the theory rather than becoming the entire foundation upon which the research is being conducted. The last rationale for conducting case studies involves a collection of instrumental cases whereby one, two or three or more case studies may be explored (Berg 2004). By using a number
of cases, a better understanding of the context through comparing and contrasting can enhance the ability to theorize about a particular topic.

As mentioned previously at the beginning of this chapter the research strategy involves two case studies. It was stated that by conducting these case studies it will provide the opportunity for intensive analysis into New Urbanism so that generalizations can then be made as to the impact such a concept may have in determining appropriate mixed use. Therefore the research strategy to be implemented can be seen as instrumental and of a collective nature.

**Case study strategies**

A case study can be conducted using three different strategies, all of which depend upon why the study is being conducted. According to Yin (1994) the three different strategies for conducting case studies include exploratory, explanatory and descriptive case studies.

Exploratory case studies are used when knowledge about a particular topic is limited and research is needed to ensure further investigation is warranted (Yin 1994). This particular method of case study may be useful for a researcher looking at conducting an intrinsic case study whereby understanding, testing or developing new theory is not the sole purpose of the research. Explanatory case studies are used in conjunction with a researcher’s desire to compare and contrast multivariate cases to examine a particular theory (Yin 1994). This strategy would be best employed when used with a collective case study rationale. A descriptive case study involves developing theory for which the case study will be based around (Yin 1994). Therefore a strong theoretical base is needed before research in the form of a case study can be guided. The case study is a supportive tool for the theory in that data gathered from the case study is linked to the propositions of the theory.
3.2 Type of research

The type of research by which the two case studies will be conducted will involve a mixed method approach. In this case the case studies will involve both quantitative and qualitative research techniques of gathering data.

A mixed method approach

A mixed method approach can be described as having several purposes:

“triangulating or converging finding, elaborating on results, using one method to inform another, discovering paradox or contradiction, and extending the breadth of the inquiry” (Creswell 1994, p. 185).

Undertaking a mixed method approach can be justified in that the question itself is of an exploratory nature. As a result of a case study being used, context matters (Marshall & Rossman 2006). A mixed method research approach would therefore focus on the importance of context and setting as a reference (Marshall & Rossman 2006). Thus by using two different case studies, the social and physical norms of this setting have many complexities. These complexities can include aspects to do with space and built form or internalized notions of culture, tradition and varying values and attitudes (Marshall & Rossman 2006). Only by using mixed methods of research can such complexities in the form of data be collected and analyzed (Marshall & Rossman 2006).
3.3 Research Techniques

In conducting a mixed method approach, two quantitative and qualitative research techniques of gathering data were used. The quantitative method to be used involves a survey/questionnaire while observations are made from a qualitative perspective. This section therefore provides definitions and rationale of the survey and observation techniques for gathering data while also providing a methodology for the use of each technique in the study.

Survey design

“A survey design provides a quantitative or numeric description of some fraction of the population – the sample – through the data collection process of asking questions of people” (Creswell 1994, p.117).

A survey/questionnaire was chosen as the preferred research technique for gathering data because two different case studies were being used and, given time limits, questionnaires are known to be the easiest and simplest of ensuring a structured data matrix (de Vaus 1995). Questionnaires are useful in that they can describe the characteristics of a set of cases (de Vaus 1995). Further justification is that the focus of case studies is made on a particular phenomenon to uncover the manifest interaction of significant factors characteristic of that phenomenon. Survey/questionnaires are simply a tool used to locate the cause of a phenomenon (de Vaus 1995). By quantifying the data, characteristics of different case studies can be easily compared and contrasted.

In the context of this dissertation the purpose of the questionnaire is to retrieve data from two different case study examples in order to provide the opportunity for intensive analysis into New Urbanism so that generalizations can then be made as to the impact such a concept may have in determining appropriate mixed use. Therefore there is no need for a control group as both case studies are considered to be products of New Urbanism.
According to the East Perth Redevelopment Authority (2008) Claisebrook Cove has approximately 1,450 households. It was confirmed by the Brighton Estate sales office (2008, pers. comm. 8 October) that Brighton Estate has approximately 2,500 households. A sample size of 10% in each case study was seen as ideal in order to provide a legitimate data matrix. However this would mean conducting approximately 200 surveys in each case study area. With regard to time constraints (Survey could only take place on weekends so as to obtain a representative sample. Sundays were not appropriate surveying days; as known in Australian culture, this is known as a day of rest and worship), printing costs and the circumstances surrounding this dissertation; a sample size of 30 households within each of the study areas was decided upon.

“A sample is obtained by collecting information about only some members of the population. A sample which accurately reflects its population is called a representative sample” (de Vaus 1995, p.60).

In determining a representative sample for my case study surveys, a sample size of 30 households in each case study area may not give an accurate representation of the population. As explained previously due to having two case study areas to survey and with notable time and resource constraints this number is all that was possible. However in seeking to provide a somewhat representative sample another method of ensuring this is through the method in which the sample is chosen. Therefore in the case of this survey the method of Simple random sampling was employed. Due to the large population of each case study this method of random sampling made choosing the sample an extensive process. However, this is the most representative method of choosing a sample (de Vaus 1995). Rather than surveying each randomly chosen household the sample in this survey involved randomly choosing a street in each study area and conducting a survey of each household on that street.

Both samples involve residents from each case study and both samples were given the same questionnaire. The questionnaires were distributed in the same manner in each case study. A face-to-face/ door-knock approach was used to ensure rapid turn around in data
collection and is reasonably inexpensive. These face to face surveys were administered longitudinally over two weekends to ensure maximum feedback and a representative sample.

The purpose of the survey/questionnaire is to gain insight into the underlying values and attitudes of residents as to what they consider to be appropriate mixed use. In understanding why the residents have those opinions it is important to know their demographic backgrounds in order to provide reasons as to the answers they provide. Therefore the questions used in the survey of both Claisebrook Cove and Brighton Estate (see Appendix 1) were half demographic in nature (i.e. age, income etc.) and half about mixed use within the case study area.

Observations

Observations although not as valuable in providing the level of information gathered from surveys can prove valuable in providing more disclosure and as supporting evidence for data collected in such surveys (Flick 2006). Therefore the observation method toward analysis of the question will be used as a description of the context of the case study (Flick 2006). In terms of the case studies there is plenty of opportunity to take photos of both study areas which will serve as excellent empirical evidence in providing site analysis as to mixed use in practice and justifying or even raising questions as to current New Urbanist theory.
Chapter 4 – Case studies: Claisebrook Cove & Brighton Estate

The objective of this chapter is to analyze and discuss the findings from the two case studies of Claisebrook Cove and Brighton Estate. These two case studies form the primary research basis of this dissertation. As mentioned in the previous chapter this research comprises a mixed approach between observations and survey/questionnaires.

Analysis and discussion of the findings involves constant referral back to the theoretical knowledge gained in Chapter 2. It is intended that this chapter will provide the explanation as to what mixed use means in terms of practice and opinion within the context of New Urbanism.

To accomplish these objectives this chapter comprises: a brief background of the case study areas, a findings section of observations and analysis and a final section on the findings and analysis from the survey data.

4.1 Brief background of case studies

4.1.1 Claisebrook Cove

Claisebrook Cove was engineered as part of an early 1990s Federal and nation wide public works initiative known as the ‘Building Better Cities’ program (EPRA 2008). As previously mentioned in Chapter 2, the overall purpose of the program was “to promote improvements in the efficiency, equity and sustainability of Australian cities and to increase their capacity to meet the following objectives: economic growth and micro-economic reform; improved social justice; institutional reform; ecologically sustainable development; and improved urban environments and more liveable cities” (Neilson 2008, p.83).
From this program came the redevelopment of the rundown industrial area in East Perth known as Claisebrook. The redevelopment strategy for the area was to construct an urban village with ‘Traditional Neighbourhood Design’ features (Neilson 2008). It was developed and coordinated by the East Perth Redevelopment Authority and financed by Federal and State Governments (Neilson 2008). The finished product of the site was considered an overwhelming success by New Urbanists; with the design producing compact and diverse built form (Neilson 2008).

The Claisebrook Cove redevelopment area is governed by the East Perth Redevelopment Authority covering 137.5 hectares and is home to approximately 2,500 residents and 1,450 households (EPRA 2008). The area hosts a wide variety of services which includes 6,000 health, education and media employees and 1,500 TAFE students (EPRA 2008).

4.1.2 Brighton Estate

With the success of the East Perth Redevelopment the Western Australian Government looked at ways of adopting the development ideas of the ‘Building Better Cities’ program into development process of the WA planning system. The government came up with a voluntary policy initiative called Liveable Neighbourhoods (Jones 2001).

“The Liveable Neighbourhoods approach calls for an urban structure based on walkable, mixed use neighbourhoods with locally based employment and facilities. Neighbourhoods cluster around a town centre to give sufficient population catchments to support main street retail, offices and community facilities. The neighbourhood and town centres are located at junctions of arterial routes or important local streets, rather than having such roads define the edge of development. For transit oriented development, a rail station anchors one end of the town centre main street, if rail is available” (Jones 2001, p.85).
The Brighton Estate has been developed according to these guiding principles of *Liveable Neighbourhoods* and is part of the current development of the new northern corridor extension. It was developed as part of the overarching Jindalee Enquiry-by-Design Workshop which used the original draft *Liveable Neighbourhoods* design code to assess the compatibility of introducing an alternative to conventional development control policies (Armstrong 2001).

Brighton Estate is located within the City of Wanneroo in the suburbs of Butler and Ridgewood and is approximately 40 kilometres north of Perth (Satterly 2008). The estate includes 2,500 households and is home to approximately 5 to 6,000 residents (2008, pers. comm. 8 October).

The Brighton Estate is host to a number of commercial centres, four schools and vast public open spaces. The Brighton Village Shopping Complex is the largest commercial activity centre within the Brighton Estate and “………..includes, Coles, Beautician, Optometrist, Hairdresser, Barber, Newsagency, Brumbies, Pizza, Fish and Chips, Vet, Café and Real Estate Agent. The opening of this complex has been a boost for local employment with approximately three quarters of Coles employees living in the area” (Satterly 2008).
4.2 Findings

4.2.1 Observation findings

Figure 4: Brighton - Uniform housing type

Figure 5: Brighton – Alternative housing and an increase in density closer to village centre

Figure 6: Claisebrook – Mix in housing type

Figure 7: Claisebrook - Exclusiveness
Figure 8: Brighton – Wide streets, low density

Figure 9: Brighton – Village centre

Figure 10: Claisebrook – Intense mixed use

Figure 11: Claisebrook – Semi-industrial uses across the road from residential

Figure 12: Brighton – Large open spaces

Figure 13: Claisebrook – Gardens
Figure 14: Claisebrook – Street network and public transport

Figure 15: Claisebrook – Difficult public transport access
4.2.2 Observation analysis

In comparing and contrasti the observations made in figures 4 to 14 of Claisebrook Cove and Brighton Estate to the theoretical understanding of New Urbanism a number of conclusions can be made as to mixed use in theory and mixed use in practice. Drawing from the theory of New Urbanism as discussed in Chapter 2 of this paper; New Urbanism emphasizes “an attractive public realm, high quality design, alternatives to automobile use, and mixed housing types” (Grant 2006, p. 160).

New Urbanism has two differing perceptions of mixed use in the form of traditional neighbourhood design (TND) and Transit oriented development (TOD). TND promotes increasing the diversity and intensity of land uses while TOD advocates intensity and diversity around transit nodes with land uses dispersing according to density and intensity of the use (Grant 2002). The theory suggests TOD best supports urban infill and redevelopment projects while TND is best suited to high growth areas i.e. Greenfield sites (Grant 2002).

In terms of housing type, figures 4 and 5 of Brighton Estate portray mostly uniform, single detached, low density housing as the dominant form. A noticeable change in the type and density of housing can be only witnessed in close proximity to the village activity centre. Here housing can be seen to be semi-detached with a subtle increase in density. Although subtle and with the notable lack of a transit station, the density gradient between the village centre and outer fringes of the development is evident in Brighton and therefore conveys a comparison to the characteristics of a Transit Oriented Development.
In Claisebrook Cove, housing type as portrayed in figures 6 and 7 is diverse encompassing mostly semi-detached houses and apartments in a variety of shapes, sizes and densities. These are inherent characteristics of Traditional Neighbourhood Design as described by New Urbanism. However as can be seen in figure 7 much of the housing in Claisebrook Cove is overly exclusive and private, particularly within many of its gated apartment complexes.

Figures 8 to 11 can be seen to describe the intensity of the uses within each of the study areas. In Brighton figure 8 shows that the intensity and mix of uses is restricted to almost purely residential. The clear segregation between uses is made even more evident in figure 9 where it shows the village centre of Brighton. Although a mix of activities exists there is still the distinct separation of uses with the notable exclusion of residential. The village is characterized by single level commercial land uses along a boulevard located at the edge of Brighton on Marmion Avenue. Transit Oriented Development does acknowledge a dispersal of land uses according to density and intensity. However towards areas of activity, most commonly a transit node; TOD advocates intensity and diversity. Brighton lacks this intensity and diversity around its village centre.

In figures 10 and 11 of Claisebrook Cove land uses can be seen to be of an intense mix. In figure 10 the photo shows an apartment on top of an optometrist. This type of intense mix is an exact reflection of the nature of Traditional Neighbourhood Design. The photo seen in figure 11 further illustrates the intensity of land uses within Clasiebrook Cove. The photo shows semi-industrial land uses only across the road from residential semi-detached housing. Incorporating semi-industrial and residential together as compatible uses can be seen to even surpass the theory behind TND which advocates the creation of special districts for industrial uses.

In terms of Public Open Space figure 12 of Brighton Estate shows large open spaces for public recreation. In Appendix 2 it can be seen that Brighton provides extensive areas of Public Open Space including lakes and bushland. These public purpose areas are bordered by an extensive network of boulevards. From Appendix 2 Brighton can be seen
to portray many characteristics similar to Ebenezer Howard’s Garden City theory. As
described in Chapter 2 Howard’s theory of a Garden City advocated the development of
communities with characteristics associated with both the city and the country. It
envisioned the development of new cities that integrate with the natural environment, are
self sustainable, have a clean environment and large public open spaces (Clark & Howard
2003).

In contrast, Claisebrook Cove does not have the numbers of large Public Open Spaces
and natural ambience of Brighton. Claisebrook instead as seen in figure 13 has carefully
manicured gardens in very close proximity and overlooked by large mansions. Although
for public use these areas of Public Open Space feel like private gardens, as one is cast in
shadow by a large wall of housing and surrounded by an intensely mixed urban
landscape.

In terms of public transport it can be seen from figure 16 (Next page) that no train line
exists (See also Appendix 2). A train line is planned for the future however at the current
stage of planning no public transport exists in Brighton. Figure 16 shows that much of the
essential infrastructure fundamental to Transit Oriented Development has been left until
the end of the development stage of Brighton Estate. Many of the commercial centres and
housing have been developed without the essential services of public transport.
Remember Brighton is 40km north of Perth and at this stage doesn’t even have a bus and
is home to over 5,000 people.
Figure 16: Brighton Estate plan
The location of the future railway line is expected to be developed along with a future railway station precinct is illustrated in Figure 16 (See also Appendix 2). Although one day Brighton will be provided with public transport; the location of the new railway precinct is not located to what is considered to be the entrance and centre of the Brighton Village. The already established commercial precinct known as the Brighton Village Shopping Centre and the centerpiece of Brighton is on the other side of Brighton Estate in relation to the future railway station precinct. Although the new railway station precinct will be in close proximity to many residential and future commercial uses; one must wonder what will be the impact on mixed use within the central commercial centre of Brighton Estate.

By looking at figure 14, one would consider Claisebrook Cove to be a Transit Oriented Development. Claisebrook is serviced by a CAT bus and train line. However the street network of Claisebrook cove is also evident. The street network although highly interconnected for pedestrians; provides for very narrow, busy streets and on-street parking; and therefore reduces the accessibility and convenience of the CAT bus. This may suggest why in figure 14, which shows the CAT bus in making its route, must back track and therefore complete a long and inconvenient circle route around Claisebrook Cove.

The train line surrounding Claisebrook Cove (Figure 14) can be seen to be located outside the fringe of the development and also presents accessibility issues. Due to the intense nature of development within Claisebrook and the location of the Claisebrook train station permeability to the station is compromised.

In summary of the observations presented on both Brighton Estate and Claisebrook Cove it can be seen that in terms of the relevant theory, both case studies portray clear contrasts and similarities with their interpretation of New Urbanism and its mixed use objectives. Brighton Estate can be seen to have a lineage towards New Urbanism’s Transit Oriented Design while Claisebrook Cove reflects the alternative theory of Traditional Neighbourhood Design. Although many similarities exist between the two case studies
and the theory of New Urbanism, the differences between the case studies and New Urbanism convey the real issues for achieving a mixed use objective.

Issues that arose from the observations illustrate that TND and TOD developments are divided in their provision of appropriate mixed use; in terms of housing type, diversity and intensity of land uses, public transport, Public Open Space and the interconnectedness of the street. The findings from these observations have concluded that TND as in Claisebrook Cove is much more appropriate in terms of housing type, diversity and intensity of land uses and the interconnectedness of the street. Alternatively TOD developments like Brighton Estate prove to be more effective in achieving a mix of public transport and Public Open Space.

However the appropriateness of mixed use demonstrated by TND and TOD is only as appropriate as the opinions of the people who live in these developments. Therefore it will be the objective of the survey analysis in the next section of this chapter to reach a conclusion as to what residents believe to be appropriate mixed use.
4.2.3 Survey findings

Table 1: Socio-economic findings of the resident survey

<table>
<thead>
<tr>
<th>Socio-economic findings</th>
<th>Claisebrook Cove (%)</th>
<th>Brighton Estate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>83</td>
<td>27</td>
</tr>
<tr>
<td>Trade</td>
<td>10</td>
<td>57</td>
</tr>
<tr>
<td>Unemployed</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Student</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Retired</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td><strong>Immigration rate to Australia</strong></td>
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<td></td>
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<tr>
<td>Yes</td>
<td>47</td>
<td>53</td>
</tr>
<tr>
<td>No</td>
<td>53</td>
<td>47</td>
</tr>
<tr>
<td><strong>Family composition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Couple with children</td>
<td>63.33</td>
<td>71</td>
</tr>
<tr>
<td>One parent with children</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Couple</td>
<td>33.33</td>
<td>14</td>
</tr>
<tr>
<td>Single</td>
<td>3.33</td>
<td>7</td>
</tr>
<tr>
<td><strong>Couples, both working</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>76</td>
<td>46</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>54</td>
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<tr>
<td><strong>Motor vehicles per household</strong></td>
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<td>5+</td>
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<tr>
<td><strong>Individuals per household</strong></td>
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</tr>
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<td>1</td>
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<td>13</td>
<td>53</td>
</tr>
<tr>
<td>5+</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Tenure</td>
<td>Claisebrook Cove (%)</td>
<td>Brighton Estate (%)</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Being purchased</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Purchased</td>
<td>60</td>
<td>45</td>
</tr>
<tr>
<td>Renting</td>
<td>10</td>
<td>31</td>
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<tr>
<td>Other</td>
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<td>0</td>
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<table>
<thead>
<tr>
<th>Method of travel to work</th>
<th>Claisebrook Cove (%)</th>
<th>Brighton Estate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor vehicle</td>
<td>67</td>
<td>84</td>
</tr>
<tr>
<td>Cycle</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Walk</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>Public transport</td>
<td>16</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age of participant</th>
<th>Claisebrook Cove (%)</th>
<th>Brighton Estate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>0</td>
<td>6.66</td>
</tr>
<tr>
<td>25-34</td>
<td>13.33</td>
<td>43.33</td>
</tr>
<tr>
<td>35-44</td>
<td>6.66</td>
<td>33.33</td>
</tr>
<tr>
<td>45-54</td>
<td>33.33</td>
<td>3.33</td>
</tr>
<tr>
<td>55-64</td>
<td>43.33</td>
<td>3.33</td>
</tr>
<tr>
<td>65+</td>
<td>3.33</td>
<td>10</td>
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</table>

<table>
<thead>
<tr>
<th>Annual household income</th>
<th>Claisebrook Cove (%)</th>
<th>Brighton Estate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1-6,000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>$6,001-30,000</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>$30,001-75,000</td>
<td>11</td>
<td>39</td>
</tr>
<tr>
<td>$75,001-150,000</td>
<td>33</td>
<td>46</td>
</tr>
<tr>
<td>$150,001+</td>
<td>56</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 2: Lifestyle findings of the resident survey

<table>
<thead>
<tr>
<th>Lifestyle findings</th>
<th>Claisebrook (Cove) (%)</th>
<th>Brighton Estate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Apprehensions about living in the area?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23</td>
<td>67</td>
</tr>
<tr>
<td>No</td>
<td>77</td>
<td>33</td>
</tr>
<tr>
<td><strong>Sense of community?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>77</td>
<td>93</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td><strong>Method of travel in and around the area?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>Cycle</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Walk</td>
<td>75</td>
<td>57</td>
</tr>
<tr>
<td>Public transport</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Want more commercial activity?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>No</td>
<td>40</td>
<td>25</td>
</tr>
<tr>
<td><strong>Use the services offered in the area?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>87</td>
<td>89</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td><strong>Most free time spent at......</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>Restaurants/cafes/retail</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Parks/recreation</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Even mix</td>
<td>58</td>
<td>70</td>
</tr>
<tr>
<td><strong>Are the existing services/land uses adequate?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>61</td>
<td>88</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>12</td>
</tr>
<tr>
<td><strong>Does the primary income earner work in or around the area?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td>No</td>
<td>72</td>
<td>80</td>
</tr>
<tr>
<td><strong>Would you work in the area if the opportunity arose?</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>67</td>
<td>78</td>
</tr>
<tr>
<td>No</td>
<td>33</td>
<td>22</td>
</tr>
</tbody>
</table>
4.2.4 Survey analysis

In reaching a conclusion as to what the residents of both Claisebrook Cove and Brighton consider to be appropriate mixed use, this next section will involve analysis into the socio-economic background of the residents and their lifestyles in order to form an opinion about each case study area. These opinions of the residents will provide evidence into the appropriateness of New Urbanism’s mixed use objective in theory and practice.

4.2.4.1 Socio-economic findings

From the socio-economic findings in table 1, strong contrasts in the data can be seen between the two case studies. In Claisebrook Cove it can be seen that an overwhelming majority (83%) of residents work as professionals. In Brighton however only 27% of households surveyed consisted of professionals while 57% were involved in a trade and 13% of respondents were retired. The overwhelming majority of professionals in Claisebrook Cove can be explained by the desire of residents to be close to their workplace in the Central Business District. In Brighton the majority of trade workers are consistent with the large number jobs such as plumbing, electrical etc. confined to the suburbs where most related work is found outside of the inner city.

In Claisebrook the majority of residents surveyed (53%) were not immigrants but in Brighton it was the exact opposite with 53% disclosing they were immigrants to Australia. These figures suggest that the residents of Claisebrook Cove are seeking an alternative lifestyle to that of the conventional suburb which has dominated the Perth Metropolitan for decades. The same is for the residents in Brighton. They to, may be seeking an alternative lifestyle; however, one with a less intensive landscape that offers much more peace and quiet but still provides a sense of city living.
Family composition saw a major swing in both case study areas towards couples with children (Claisebrook 63.33%, Brighton 71%). However it can be seen that Claisebrook Cove has a lot more couples (33.33%) while Brighton was much more evenly spread throughout the categories of couples (14%), single parents with children (8%) and singles (7%). Of those residents that responded as a couple, Claisebrook Cove couples were more likely to both work while in Brighton it was the opposite. From these findings on family composition it can be assumed that because most couples work then the children of those couples are less dependent on their parents. The large proportion of couples within Claisebrook also justifies the large majority of professionals in the area. In Brighton the overwhelming majority of couples with children and the small proportion of couples working suggest that these children are still dependant and therefore the case study area contains a large proportion of young families.

In terms of the number of motor vehicles per household in both case study areas the majority of households proved to have less than 3 motor vehicles. However in terms of households having 3 or more vehicles, 47% of households in Claisebrook had 3 or more vehicles compared to only 24% in Brighton. These figures are directly relevant to the number of individuals per household as described below.

The survey findings for the number of individuals per household showed that in Claisebrook Cove there is a good spread of averages for two people and more per household. In Brighton the averages are much more clustered with the majority of households containing 4 individuals. These figures again justify less children dependent working households within Claisebrook Cove. This would reflect also the large percentage of car ownership as older less dependent children may have their own cars while it could also mean shared living arrangements with people who are part of the household but not necessarily the family. In Brighton these figures of individuals per household again justify a family oriented environment consisting of couples with two children.
In terms of tenure, both case study areas have a strong rate of homeownership (Claisebrook 60%, Brighton 45%). The rate of homeownership is stronger in Claisebrook while in Brighton there is a stronger trend towards renting a home, with 31% of households choosing this option. The difference between the proportions of homeownership in each of the case study areas can be justified in terms of the family composition. The high rate of homeownership in both case study areas can be linked to the high proportion of couples with children. The higher rate of homeownership in Claisebrook as compared to Brighton may be due to the larger number of working couples in the area which may mean joint incomes and greater housing affordability. In Brighton it has been established that the families living in the area are families with young dependent children. The proportion of couples who both work in Brighton is also considerably less than those in Claisebrook which in turn means less income and therefore less housing affordability. The large number of couples with dependent children further justifies this argument.

The majority of households (Claisebrook 67%, Brighton 84%) in Claisebrook Cove and Brighton Estate drive there cars to work with Brighton demonstrating an overwhelming majority in this form of transport. In terms of alternative transport modes, 14% of households in Claisebrook Cove walked to work while 16% used public transport. The large dependence on cars in both study areas can be seen to be due to the high rate of car ownership in Claisebrook and the lack of public transport and close areas of employment in Brighton.

The age of participants from both case study areas were very different. The majority of households in Claisebrook are over 45 years of age while in Brighton it was the opposite with the majority of residents under the age of 35. The large proportion of older residents within Claisebrook, directly reflects the notion of older families living in the area. For Brighton these age figures again justify that the area most likely consists of younger families with dependent children.
In terms of average annual household income, the majority of households in Claisebrook are earning more than $150,000 annually while in Brighton this figure dropped to less than $75,000 for most households. The large income levels of households within Claisebrook Cove can be seen to justify the earlier perception higher income levels due to the large proportion of working couples. This also supports results from studies conducted in the US and Canada (Described in Chapter 2) which revealed infill developments become havens for intense mixed use and thus the wealthy as they become the place to be (Grant 2002). TND developments have also often proved to be unviable in the suburbs because the market is not there (Grant 2002). It has often meant that such places can be only successfully marketed to the wealthy as they are freer to invest in experimental enterprises (Grant 2002). The smaller income averages for Brighton are also justified by the proportion of couples who both work; which is notably smaller than in Claisebrook Cove.

In summary of the socio-economic findings from the Claisebrook Cove and Brighton Estate resident surveys it can be concluded that a deep divide exists between the two study areas whereby two particular socio-economic groups can be recognized. Claisebrook Cove can be characterized as consisting of large professional working households with alternative living arrangements and large incomes while the majority of Brighton households consist of ‘blue collar’ workers with dependent families and a high level of car dependence. In the broader context of this dissertation as to the research question ‘What is appropriate mixed use?’ these socio-economic findings provide an insight into what type of people live in varying ideals of mixed use. The opinions of these residents in the next section of this chapter will determine whether appropriate mixed use is a reflection of socio-economic status or choice of lifestyle.
4.2.4.2 Lifestyle findings

As part of the survey in both Claisebrook and Brighton, residents were asked, “What appeals to you the most about the lifestyle in Claisebrook Cove/Brighton Estate?” The majority of households in Claisebrook Cove found it appealing due to its proximity to the city while the majority of households found Brighton to be appealing due to it being quiet, relaxed, safe and of having a good family environment. These opinions from the residents in Claisebrook and Brighton justify the socio-economic findings and suggest a difference of opinion as to what may be appropriate mixed use.

As stated previously the theory of New Urbanism suggests TOD best supports urban infill and redevelopment projects while TND is best suited to high growth areas i.e. Greenfield sites (Grant 2002). In the case of Claisebrook Cove and Brighton Estate this theory is disproved by the observations which illustrate that Claisebrook follows TND while Brighton has shown to portray TOD aspects of mixed use. With TND conveying diversity and intensity of land uses while TOD portrays intensity and diversity around transit nodes with land uses dispersing according to density and intensity of the use (Grant 2002); conflict occurs in that Claisebrook can be seen as urban infill and Brighton as Greenfield with the opinions of residents are associated accordingly.

The following analysis is in response to the lifestyle findings of the resident survey as shown in table 2. In terms of apprehensions about living in their area, the majority of Claisebrook Cove residents surveyed (77%) had no anxiety. In Brighton however, 67% of households had concerns about living in their area. When asked what these apprehensions were; the majority of households confirmed an apprehension about living so far away from the city.
Both Claisebrook Cove and Brighton Estate residents think that their area conveys a sense of community. This in turn implies that mixed use within these areas may be adequate enough to provide enough community interaction. In Claisebrook Cove the diverse and intense nature of mixed use can be assumed to provide the needed social interaction for residents. The design of mixed use in Brighton however is far more subtle and the sense of community which 93% of the households surveyed thought was so may come from the large number of parks and Public Open Spaces, the centralized shopping centre and schools and community centres.

In both Claisebrook and Brighton the majority of residents’ surveyed (Claisebrook 75%, Brighton 57%) chose walking as their preferred mode of transport in and around their communities. However in Brighton it can also be seen from the findings that 40% of households drove their car as compared to Claisebrook where only 8% of households drove there car in and around their area. These findings along with those from table 1 further justify the high level of car dependence in Brighton Estate. The high level of car dependence particularly in and around Brighton may be due to the lack of intensity among uses as compared to that found in Claisebrook Cove.

It can be seen that the majority of households in both case study areas show a desire for an increase in commercial activity. In Claisebrook 60% of households desired more commercial activity while an overwhelming majority (75%) wanted to see more activity in Brighton. The larger figure for Brighton conveys a lack of mixed use within the community. However the desire for more uses does not necessarily mean a desire for increased intensity of these uses.

An overwhelming majority of the households surveyed in Claisebrook (87%) and Brighton (89%) can be seen to make full use of the services offered to them in their communities. This in turn supports the theory of New Urbanism which advocates sustainable local business. These figures conclude that local businesses and services will be supported and utilized in communities with appropriate mixed use.
In terms of where households in these two case studies chose to spend most of their free time, both Claisebrook (58%) and Brighton (70%) admitted to spending this time at a mix of either their homes, restaurants/cafes/retail or at parks and areas of a recreational nature. Therefore the more time spent doing mix of these activities can be recognized as a defining feature in determining appropriate mixed use. The lower figure for Claisebrook indicates that maybe the mix of uses in that community are too intense whereby 11% of households opted to spend the majority of their free time in parks or areas of recreational activity and another 23% choosing to stay at home.

Residents in both Claisebrook (61%) and Brighton (88%) believed that the services/land uses offered in their communities were adequate. In comparison to Brighton Estate, Claisebrook had a much lower majority of households who believed the services/land uses in the area were adequate. When asked why this was so, the majority of households again confirmed their desire for more commercial activity. They also required more parking as the need for parking by businesses was congesting their own residential parking. This suggests that the residents of Claisebrook would like to see a less intense mix of uses with more uses being centralized away from residential.

The survey findings as to whether the primary income earner works in or around their community reveals that 72% of Claisebrook households and 80% of Brighton households surveyed do not work in or around their communities. These figures dispute the assumption that living in Claisebrook is solely a desire to live close to work; although a professional working community the majority of Claisebrook residents surveyed actually don’t work in the city. In Brighton the large number of households not working within the community or around it, is ultimately a reflection of the location of the estate and the lack of local employment opportunity.
In terms of whether households in Claisebrook and Brighton would work in their communities if the opportunity arose, 67% of Claisebrook households and 78% of Brighton households answered yes. Although both study areas show interest in working closer to home; the results suggest that the working environment of Brighton may be more desirable to work in. However the results could also suggest that Brighton residents feel too much time is being spent commuting elsewhere due to its isolation from the rest of the metropolitan. The less positive response from Claisebrook residents may mean they enjoy the separation between work and where they live.

![Age of residents](image_url)

*Figure 17: Example of the large contrasts found in the socio-economic findings*

![More commercial activity?](image_url)

*Figure 18: Example of the similarities in the Lifestyle findings*
In summary of the lifestyle findings from the Claisebrook Cove and Brighton Estate resident surveys it can be concluded that both study areas share similar opinions as to what they consider to be appropriate mixed use. It can thus be seen from these findings that resident opinion towards mixed use is a reflection of lifestyle choice rather than socio-economic status. The opinions towards mixed use in neither Brighton nor Claisebrook are influenced by their socio-economic status. This is particularly evident with the comparison of figures 17 and 18 which illustrate that due to the opposing trends between these two data sets no justifiable correlation can be made between socio-economic status and lifestyle choices of residents. The analysis of the survey results also suggest that the opinions residents hold about appropriate mixed use in their communities are in contrast to what has been described in theory and observed in practice. Therefore neither TND nor TOD mixed use theories of New Urbanism characterize appropriate mixed use. From the survey analysis, common issues found from resident opinions imply that TND and TOD mixed use practices were not appropriate when it came to the intensity of mixed uses.
4.3 Chapter summary

The objective of this chapter was to analyze and discuss the findings from the research gathered from the two case studies of Claisebrook Cove and Brighton Estate. It was the intention of this chapter to provide an explanation as to what mixed use means in terms of practice and opinion within the context of New Urbanism. To accomplish these objectives the chapter gave a brief background of the case study areas, a findings section of observations and analysis and a final section on the findings and analysis from the survey data.

Issues that arose from the observations illustrate that TND and TOD developments are divided in their provision of appropriate mixed use; in terms of housing type, diversity and intensity of land uses, public transport, Public Open Space and the interconnectedness of the street. The findings from these observations have concluded that TND as in Claisebrook Cove is much more appropriate in terms of housing type, diversity and intensity of land uses and the interconnectedness of the street. Alternatively TOD developments like Brighton Estate prove to be more effective in achieving a mix of public transport and Public Open Space. However the appropriateness of mixed use demonstrated by TND and TOD is only as appropriate as the opinions of the people who live in these developments.

The survey analysis of the resident surveys concluded that both study areas hold similar opinions as to what they consider to be appropriate mixed use. However, opinions towards mixed use are a reflection of lifestyle choice rather than socio-economic status and are in contrast to what has been described in theory and observed in practice. Therefore this chapter has identified from the opinions of Claisebrook and Brighton residents that New Urbanism itself cannot determine appropriate mixed use because it imposes design options rather than communicative planning outcomes representing the views of residents.
Chapter 5 – Conclusions

This paper has investigated the research problem “What is appropriate mixed use?”
Seven research objectives were approached in Chapter 1. These research objectives were:

1. To examine the role of New Urbanism and mixed use.
2. To understand New Urbanism and its objectives.
3. To investigate mixed use in practice as it stands within Western Australia.
4. To discover the opinions of residents within the case study areas of Claisebrook and Brighton.
5. To analyse resident opinion towards New Urbanism and mixed use.
6. To observe New Urbanism in practice.
7. Review theory, practice and opinions of appropriate mixed use and how it relates to planning practice.

The purpose of this chapter is to review and draw to a conclusion about the seven stated objectives.

5.1 Broader implications to planning practice

In determining the broader implications to planning practice this paper has revealed that appropriate mixed use is divided between theory, practice and opinion. To determine this, the report examined the relevant planning theory of New Urbanism. This theory was tested against how it was portrayed in practice and viewed by the opinions of residents.

In terms of mixed use, New Urbansim has two differing perceptions of mixed use in the form of traditional neighbourhood design (TND) and Transit oriented development (TOD). TND promotes increasing the diversity and intensity of land uses while TOD advocates intensity and diversity around transit nodes with land uses dispersing according to density and intensity of the use (Grant 2002). The theory suggests TOD best supports
urban infill and redevelopment projects while TND is best suited to high growth areas i.e. Greenfield sites (Grant 2002).

In practice the observations presented on both Claisebrook Cove and Brighton Estate conveyed in terms of the relevant theory, clear contrasts and similarities with their interpretation of New Urbanism and its mixed use objectives. Brighton Estate can be seen to have a lineage towards New Urbanism’s Transit Oriented Design while Claisebrook Cove reflects the alternative theory of Traditional Neighbourhood Design. Although many similarities exist between the two case studies and the theory of New Urbanism, the differences between the case studies and New Urbanism convey the real issues for achieving a mixed use objective.

Issues that arose from the observations illustrate that TND and TOD developments are divided in their provision of appropriate mixed use; in terms of housing type, diversity and intensity of land uses, public transport, Public Open Space and the interconnectedness of the street. The findings from these observations have concluded that TND as in Claisebrook Cove is much more appropriate in terms of housing type, diversity and intensity of land uses and the interconnectedness of the street. Alternatively TOD developments like Brighton Estate prove to be more effective in achieving a mix of public transport and Public Open Space.

From the observations made of New Urbanism in practice, appropriate mixed use looked to be determined by theoretical practices such as housing type, diversity and intensity of land uses, public transport, Public Open Space and the interconnectedness of the street. These conclusions however were disputed during the analysis of the survey findings.

The survey findings involved both socio-economic findings and lifestyle findings of both Claisebrook and Brighton residents. The analysis determined that the socio-economic findings reflected what was described in theory and observed in practice. However, the analysis of the lifestyle findings uncovered strong similarities between both case study areas as to their opinion of mixed use. From the survey analysis, common issues found
from resident opinions imply that TND and TOD mixed use practices were not appropriate when it came to the intensity of mixed uses. This suggests that appropriate mixed use is separate from what is described as appropriate under New Urbanism and delivered in practice.

The implications toward planning that therefore need to be considered in light of these conclusions involve particularly the development of New Urbanist policy. Policy initiatives as seen within *Liveable Neighbourhoods* directly reflect the practices as advocated by New Urbanism.

“*The Liveable Neighbourhoods* approach calls for an urban structure based on walkable, mixed use neighbourhoods with locally based employment and facilities. Neighbourhoods cluster around a town centre to give sufficient population catchments to support main street retail, offices and community facilities. The neighbourhood and town centres are located at junctions of arterial routes or important local streets, rather than having such roads define the edge of development. For transit oriented development, a rail station anchors one end of the town centre main street, if rail is available” (Jones 2001, p.85).

This report has provided evidence to show that the practices of such New Urbanist policies such as *Liveable Neighbourhoods* may define mixed use developments as described by housing type, diversity and intensity of land uses, public transport, Public Open Space and the interconnectedness of the street. However in delivering appropriate mixed use as determined by the opinions of the residents who live in such developments; such policies are not effective.
With similar opinions toward lifestyle choice found in both contrasting study areas it was concluded that appropriate mixed use needs not be designed so much around theoretical practices but rather the opinions of residents. Although New Urbanism can be said to define mixed use, appropriate mixed use may need to come from other avenues of planning practice in the way of further community consultation, collaboration and participation. This thesis further communicates the need for greater planning participation in communities developed around urban design policies.

“From the traditional community, epitomised by the rural village, where close social ties were born of necessity, we have seen the development of a modern form of community, whose archetype is the ‘housing estate’, with a much greater freedom of choice in social relations. More recently a third, postmodern, conception of community seems to have emerged, reflecting deeply felt needs for emotional, psychic, or ‘ontological’ security in a fragmented and chaotic social environment. This is a community of ‘lifestyle choice’, where social bonds are inconsequential but image and identity are all. This is the force behind the production of new kinds of distinctive urban places, from waterside lofts to reproduction villages. However, those who lack consumption choices also lack a choice of identity, and increasingly find themselves in the least desirable, stigmatised housing estates” (Brindley 2003, p.62).
References & Bibliography

References


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Bibliography


Appendix 1

Claisebrook Cove/Brighton Resident Survey

Claisebrook Cove/Brighton Community Profile Questions:

1. Occupation of primary income earner within the Household? Circle

(a) Professional    (b) Trade    (c) Unemployed
(d) Student          (e) Retired

2. Have you immigrated to Australia? Circle

YES    NO

3. What is your family composition? Circle

(a) Couple + Children under 15    (b) Couple + Children over 15
(c) One Parent + Children under 15    (d) One Parent + Children over 15
(e) Couple    (f) Single
4. If you circled any answer in question 3 as a couple, do both of you work? Circle

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

5. Number of Motor vehicles in the household? Circle

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5+</th>
</tr>
</thead>
</table>

6. Number of individuals in Household? Circle

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6+</th>
</tr>
</thead>
</table>

7. Tenure? Circle

(a) Being purchased  
(b) Purchased  
(c) Renting  
(d) Other

8. Method of travel to work? Circle

(a) Motor vehicle  
(b) Cycle  
(c) Walk  
(d) Public transport  
(e) Other

9. What is your age? Circle

(a) 18 – 24  
(b) 25 – 34  
(c) 35 – 44  
(d) 45 – 54  
(e) 55 – 64  
(f) 65+
10. What is your annual household income? Circle

(a) $1 – 6,000  
(b) $6,001 – 30,000  
(c) $30,001 – 75,000  
(d) $75,001 – 150,000  
(e) $150,001 +

Claisebrook Cove/Brighton Estate lifestyle questions:

11. What appeals to you the most about the lifestyle in Claisebrook Cove/Brighton?

________________________________________________________________________

12. Did you have any apprehensions about living in Claisebrook Cove/Brighton. If so what were they?

________________________________________________________________________


YES       NO

14. What main method of travel do you use most in and around Claisebrook Cove/Brighton? Circle

(a) Motor vehicle  
(b) Cycle  
(c) Walk  
(d) Public transport  
(e) Other
15. Would you like to see more commercial activity within Claisebrook Cove/Brighton? Circle

YES  NO

16. Do you make use of the existing services within Claisebrook Cove/Brighton or do you travel elsewhere?

____________________________________________________________________

17. Where do you like to spend most of your free time? Circle

(a) Your home  (b) Restaurants/cafes/ retail

(c) Parks/recreation  (d) an even mix

18. Are the services or land uses within Claisebrook Cove/Brighton adequate and desirable to you? If not, why?

____________________________________________________________________

________________________________________________________________________

19. Does the primary income earner of the household work in or around Claisebrook Cove/Brighton? If you answer no answer the next question. Circle

YES  NO
20. Hypothetically, regardless if you are employed, primary income earner or not; if your career gave you the opportunity to work in Claisebrook Cove/Brighton or elsewhere, where would you choose? Circle

(a) Claisebrook Cove/Brighton  (b) Elsewhere

Thanks for your participation
Appendix 2