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Building Better Suburbs: Design Controls in Master Planned Communities: - an Australian perspective

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Master planned communities in Australia are an increasingly popular form of residential development responding to localised pressure of population increase. They are characterised (Minnery and Bajracharya, 1999; Gwyther, 2005) as private sector driven, large scale, integrated housing developments located on greenfield sites, most frequently on the outskirts of major metropolitan areas. Whilst the conception, planning and provision of such communities lies in the hands of the major stakeholders – developers and state and local government – the provision of the unit of consumption, the dwelling, is the purview of housebuilders and also, at the level of final consumption, the concern of an individual purchaser which is most often a family. Whilst stakeholders at the statutory level may have principled concern about three key dimensions of governance mechanisms, housing market context and the nature of community as discussed in Bajracharya *et al.* (2007) the views of the residents are less well specified.

The objective of this paper is to report upon an original survey of residents of three separate communities in the northern suburbs of Melbourne which investigated respondents' satisfaction in respect of the implementation of design controls within and between their communities. In addition, the research sought to define common design control measures and explore the reasons for their use and role in effecting the outcome of master planned residential development.

The paper provides a review and discussion of the findings which offers some insights into the residents' satisfaction with the design controls and their effectiveness in achieving the developers' intentions. Whilst residents' degree of support varied between developments, it was found that controls which exhibited greater clarity facilitated a more certain outcome; and the more stringent the controls, the more positive was the impact on property value with the greater conformity of design being viewed as a measure of quality which rewarded residents with a better return on their investment than that achieved in less strictly controlled developments.

Keywords: Master planned communities; design controls; resident satisfaction; Australian residential property.

1. Introduction

The purpose of this study is to collect and interpret data on the influences affecting resident and home-buyer satisfaction in respect of the implementation of design controls within master planned communities. Specifically, the research aims to define common design control measures and explore the reasons for their use and role in effecting the outcome of master planned residential development. Face to face interviews of 90 residents from three separate communities in the northern suburbs of Melbourne were conducted. Data collected through the survey was analysed and correlated with findings from a comparison of the design controls governing the three communities. The findings were supported by empirical data gathered through structured interviews with housing design representatives from three volume home building companies. A review and discussion of the study's findings generated conclusions that gauged the status of design controls and their levels of influence within the three communities studied.

The presence of numerous tracts of land under development as master planned communities on the fringes of metropolitan Melbourne is indicative of institutional and market acceptance. Considerable funds are outlaid in advertising across a range of media by private land developers marketing their house and land packages as attractive options to a broad cross section of potential homebuyers. As the purchase process proceeds, buyers become increasingly aware of their contractual agreement to varying degrees of design controls or guidelines to which they must strictly adhere as part of the contract of sale. Whilst the controls are drafted jointly by the developer and the local council, their implementation and enforcement lies with the developer alone. Their principal purpose is generally recognised by the parties as being to guide and shape the outcome of improvements built upon the land to promote the achievement of the overall vision as initially conceived for the planned community as whole.

The degree of control exercised is related directly to the quality the developer wants to attain for the development, all other things being equal. What may influence the importance placed on the quality of the development are the market being targeted, their attitudes towards the measure of control and, consequently, how this would affect the marketability and eventual sale of lots. Compliance is usually mandated and formalized as part of the developer's internal review process when building plans are submitted for their approval prior to obtaining a building permit.

The nature of the controls varies. Some are prescriptive in nature and include setting back the home a certain distance from the front boundary of the site as well as the direction and orientation of siting a house upon the allotment; the requirement for a porch, portico or verandah at the front of the house; a specified proportion of render on the façade; a specified pitch to the roof; a limited choice of colours, materials and profiles for the roof tiles and external finishes; and the need to stagger or offset portions of the façade at given distances in the interests of enhancing the streetscape. Other controls are performance based measures which can also be included within a set of design controls and are more concerned with matters of energy efficiency and acoustic performance for example.

In the current economic climate, the housing market presents affordable opportunities driven by low unemployment rates and relatively low – though firming – interest rates (Ellis 2006:2). These factors have long allowed favourable conditions for more people to achieve the Australian dream of home ownership often considered as a traditional perception of the detached suburban home with the double garage on the quarter acre block (Judd 1993:11). Currently (2008), the Australian economy is starting to respond to international economic pressure with reduced credit availability, higher fossil fuel costs and an increased sense of economic insecurity associated with an emerging recognition of the need for a realistic carbon pricing putting increasing stress on housing affordability and entry level accommodation for families.

The Victorian population is currently growing at an annual rate of 82,000 persons through a combination of birth, interstate and overseas migration (Ellis 2006:1). Melbourne SD accounted for 80% of Victoria's population growth between June 2006 and June 2007, and is home to 73% of Victoria's population. Victoria's largest population growth continued to occur in the outer suburban fringes of the Melbourne SD (ABS 2008). Metropolitan Melbourne will need to accommodate an increase of up to one million people by the year 2020 (DSE 2005) and greenfield land is continually being acquired for construction with over a hundred private residential developments identified (Stockland 2006) on the outer fringes of Melbourne as being commissioned and developed by private developers to assist in meeting the increased demand for more housing.

Competition between a greater number of developments means more capital expenditure is concentrated on expensive marketing and advertising as a way for private developers to secure greater market share. The use of design controls, as part of the contract of sale of residential lots, acts as a valuable marketing tool as well as improving the amenity of a planned community. This is conducted within a fickle home-buyer's market, whose initial aspirations and preferences may not always have envisaged newly constructed detached housing located at significant distances from the CBD.

This paper is arranged in six sections. Following this introduction, the context of design controls is discussed by reference to the literature with a comparison of principles and user perceptions elicited. The research objectives and design are then briefly specified and the results of the survey – concentrating on the views of residents interviewed – are presented with a discussion of the relationships which were revealed preceding their review in the conclusion.

2. Application of design controls past and present

2.1 Definition of Design Controls

The actual definition of 'design controls' lends itself to many interpretations, depending on the historical or cultural context and use among various players within the building industry. A common term for design controls is 'covenants', which Delfin describes as:

‘...a restriction placed on the building or development of a property made legally binding in the following documents: Registered Covenants section on the Certificate of Title, Covenant Building and Development Requirements in the Contract of Sale (and) Building Setback Plan’ (Delfin 2006:1).

Other names diverging from overt legal connotations are: design guidelines, design essentials and design requirements. For details of the design control material used for analysis and for a comparison of miscellaneous design control material see Nguo 2006. In the past, design controls were called ‘pattern books’, specifically in the United States (Wentling 1995:11). Currently, in the United Kingdom, they are referred to as either design codes or urban coding (ODPM 2005:6). The Commission for Architecture and the Built Environment in the United Kingdom has developed a working definition of a design code being:

‘...a set of specific rules or requirements to guide the physical development of a site or place. The aim of design coding is to provide clarity as to what constitutes acceptable design quality and thereby a level of certainty for developers and the local community alike that can help to facilitate the delivery of good quality new development’ . (CABE 2005:16)

Recognition of the multiplicity of definitions of design controls is a reflection of complex historical and cultural influences surrounding their use, as well as several hierarchies which may range from ‘traditional’ and specialist residential design guides to character or design area guides, residential road and footpath guides and space around dwellings guides (Carmona 1999) with the complexity of design controls being reflected in the range of perceptions held by those affected by them.

2.2 The purpose of controls – developers’ views

A review of the literature (Nguo 2006) and an associated series of observations from one such design guide identify many purposes in common for having design control within master planned development. These are summarised as follows:

- *To encourage visually appealing streetscapes*
- *To create a safe and secure environment*
- *To promote environmentally responsible development*
- *To provide certainty about the standard of housing in the development*
- *To assure you (the resident), that everyone will contribute equally to achieving a strong neighbourhood character*
- *To protect your investment*
- *To promote... (an) architectural style that responds to the ... climate and fosters a cohesive streetscape and*
- *To foster ‘The Vision’ for... (the development).*

Hawkstowe Design Essentials, Stockland 2005

Table 2 identifies, from a search of the literature, a number of commonly used design controls and the somewhat contradictory views of the residents of the MPCs toward these measures. This post-occupancy

evaluation was carried out primarily through government funded bodies such as the UK’s Commission for Architecture and the Built Environment (CABE) with other sources as cited.

One characteristic from the perspective of community need which Marcus and Sarkissian (1986) reiterated was the need for resident and community consultation before and after the development process of planned residential communities, particularly on design issues:

‘Design practitioners seeking a socially responsible approach find little value in professional criticism. With few exceptions, critiques in professional magazines focus either on building science and technology or on aesthetic principles and style. Rarely are buildings evaluated according to dwellers’ responses or the way the buildings fulfil daily functions’ (Marcus and Sarkissian 1986, p.3)

The actual sources of resident-based views within the existing literature were limited. Even if private developers did challenge the theories nominated in Table 2 regarding the lack of design-based consultation with residents and users in the early stages of the development process, the information collected would be perceived as highly sensitive considering the potential for disclosure to competitors and hence likely to be retained in-house.

Table 2: Commonly used design controls and corresponding resident views

Design Control (FOR)		Resident Response (AGAINST)
1	The requirement for a porch / portico at the entrance to accentuate the entry. The restriction of front fencing (Stockland 2005). This is to encourage neighbourliness and interaction amongst residents.	Residents were reported to have busy lives with work and family, and they did not seek to make friends or socialise within the development (CABE 2005a). Those who did would do so in moderation. Anything more would be classified as ‘hyper-neighbouring’ (Gwyther 2005).
2	The requirement for additional windows , particularly with corner allotments to minimise blank unattractive walls facing the street (Stockland 2005). This is to make the development more inviting and increase surveillance on the streets (Jacobs 1972:45)	What the CABE audit saw ‘introverted and suburban’ in one case, residents appear to value because they <i>‘don’t want everyone knowing their businesses</i> . Most residents of this development appeared to value privacy above sociability (CABE 2005a), hence the use of net curtains.
3	The requirement for houses planned facing each other and close to neighbours on either side, with the front door clearly visible and obstructions such as trees and shrubs removed (Poyner 2006:100). This has the effect of aiding surveillance to the front of the house and allows neighbours to casually watch neighbours’ houses (Poyner 2006:100)	One case in the CABE audit found that residents were pleased with the unique layout of housing: <i>‘...are all sort of set at an angle so they aren’t looking into one another’s house. They aren’t goldfish bowls’</i> (2005a). The proximity to the neighbours in another case, expressed satisfaction: <i>‘There’s a nice view out of our windows on to the garden. You don’t look into someone else’s house because we are not sandwiched together’</i> (CABE 2005a).
4	The requirement for a modern Australian style that responds to the Australian climate and the restriction of period styles and detailing (Stockland 2005). This is to create attractive streetscapes that result in cohesive urban forms while not precluding individual housing solutions (Stockland 2005).	Typical responses from residents in developments that incorporated mixed styles were positive: <i>‘The different styles of the houses are amazing...They’ve tried to make it look like things were built at different times which is quite good because it looks like it developed gradually rather than all at once’</i> (CABE 2005a). Another case revealed residents saw the variety in building styles and exterior finishes as having more character and contributing to their

		overall satisfaction with the development (CABE 2005a).
5	The requirement for garages to be setback behind the main building line . The restriction on garage widths and triple garages (Stockland 2005). This is to reduce the visual dominance of the garage and, through limiting car spaces, limit automobile dependency (Ely 2005).	There was less concern about the design of parking and more about the provision, which was felt to be inadequate for the scale of car ownership and demands for visitor parking (CABE 2005a). Curbing car ownership by restricting car spaces was felt to be unrealistic and have little or no impact on the number of cars a household would acquire (CABE 2005a).
6	The requirement for narrow pedestrian friendly streets with on-street parking (Carter 2004). This is a New Urbanist design trend which, along with sidewalks, planting strips and street trees, provides pedestrians and cyclists with routes that are safe, direct, accessible and free from barriers (Ely 2005).	Residents described the roads in one case to be too narrow and could potentially cause access difficulties for emergency services, especially given the amount of on-street parking (CABE 2005a). The tight corners in another case were not understood by residents for its purpose as a traffic slowing measure. Rather, they stated that people parking their cars and vans on the corners makes for dangerous blind corners (CABE 2005a).
7	The requirement for houses to be sited with a northerly orientation adjoining an area of private open space (Stockland 2005). This is for the purposes of maximising sunlight into the house.	There are subtle cultural differences in what minority home-buyers want in their communities and homes (Schmitz 2004). Feng shui, for example, increasingly influences the design of new homes where the siting toward auspicious features such as mountain ranges and rivers is preferable to a specific orientation.
8	The requirement for roof pitches at a minimum of 25 degrees . The restrictions on flat roofs (Stockland 2005). This is to establish interesting and attractive roofscapes, while heavily limiting the colour and profiles (Stockland 2005).	Historically steeper pitches were justified as many house designs utilised the attic or area under the roof as usable space. The introduction of roof trusses meant that there was no practical reason for roof pitches to be steeper than necessary for water drainage (Wentling 1995:209). Many examples of contemporary homes utilising shallow roof design are just as successful in achieving a design-oriented solution as pitched roofs.

Source: Nguo 2006

2.3 The volume homebuilders' perspective

Volume home builders are said to constitute a special kind of industrial capitalist enterprise (Ball 1983:44) caught between the contradictions of production and exchange as mediated by the separate markets in which they are constrained to operate (Nicol and Hooper 1999). As one English industry participant states '*You have got shareholders and owners, and people asking you to perform on financial criteria, as well as the planning authority, and everybody else, on the design*' (Lane and Chandler 2002:19). One author considers the volume home building process may be likened to a production line mechanism where quantity overrides quality:

Housebuilders are driven by the profit motive and by the requirements of their shareholders and funders. Their concern for design stretches only as far as their marketing strategies allow; or as far as better design either results in higher sales values for their products which receive all the necessary approvals without delay. For them the product is the individual house, and only to a lesser extent the context it defines, while the simplest way to judge what will sell is to repeat what sold before. (Carmona 2001:87)

It was thus identified that the ability to cope with such constraining market pressures was through the process of 'standardisation', recognised as an inherent feature of the industry, exacerbated by the high degree of market volatility (Ball 1983:139). Production in volume develops economies of scale that can be seen to produce standardised products. Such repetition in the production of dwellings also acknowledges the benefits of the limited skills of the labour force (Davison in Carmona 2001:10) and this prior knowledge in the carrying out of repetitive tasks (Ball in Nicol and Hooper 1999) results in lower production costs.

Standardisation in the home building industry has essentially two components: standardisation of the footprint (plan) and standardisation in the elevational treatment (façade). The range of plans and façades produced are rationalised in order to develop a portfolio which carries the 'hallmark' design characteristics of the respective company which serves to differentiate it from its rivals (Hooper and Nicol 1999). Furthermore, the existence of a portfolio of proven designs enables developers to make reasonably accurate estimates of costs and production time at short notice (Leopold and Bishop 1983:23).

Invariably, due to the economies of production in place, a resistance toward alterations and non-conformity to design controls is developed. House builders are only prepared to accommodate the personal choices of the home-buyer if they request such alterations at an early stage of construction (Nicol and Hooper 1999). However, these are often limited to internal changes, preferably changes to fixtures and fittings, rather than external changes because, within the constraint of each standard footprint, a multiplicity of matching elevation treatments is deployed (Hooper and Nicol 1999).

Individuality then becomes largely a process of '*façadism*' (Wentling 1995:147) where the standard housing envelope is able to accommodate a range of different elevational treatments to enhance the 'kerb appeal' of the front elevation and attract customers to the house. A plethora of detail would be developed for the elevational treatment only, much of which is often inappropriate in the local context (Hooper and Nicol 2000). Hence the significance of the front elevation of the dwelling is disproportionate in the overall design concept (Hooper and Nicol 1999). Essentially, Matthew Carmona (1999) has identified a key perception of what residents actually want in their housing appearance as follows:

People like housing of character, with integral and interesting features which do not appear stuck on; traditional styles are favoured; houses should exhibit some individuality, although not too much so they fail to read as a coherent part of the wider context. ('Kerb Appeal', PHF 1998, pp. 1-3 in Carmona 1999)

3. Research objectives and design

Three methods were used: an interview of house builders, a survey of residents and a comparison of design controls. The methodologies embody a combination of qualitative and quantitative approaches seeking to achieve the following objectives:

1. To analyse the issues faced by residents and volume home builders with regard to understanding, interpreting and complying with design controls
2. To measure the current status of design controls, observe opinions and identify possibilities for improvement
3. To analyse the differences in design controls among private developers and evaluate the reasons for the various approaches
4. To determine the effectiveness of design control as a planning and design process and its impact on master planned communities during and beyond development.

Whilst the full report (Nguo 2006) may be obtained from the authors, the survey of residents will form the balance of this paper.

4. Results of the survey

The sample comprised eight housebuilders, 90 residents and a range of documented design controls as the subject of the research. Appendix A provides information on the age and character of each of the three communities surveyed together with some details of their broad market and design parameters. However, for reasons of brevity, the following section discusses the findings from just one of the communities by way of illustration.

4.1 Description of Highlands

Highlands is a 6300 lot development on 760 hectares that adjoins the Delfin Craigieburn development, which was also the subject of survey for this study. Located on the corner of Harrington Avenue and Grosvenor Square, a distinct advantage of the development surrounding the Delfin estate is the elevated land upon Mount Ridley with desirable views toward the city skyline. However, access to this precinct is through the Delfin estate itself. Land and house packages range from \$250,000 to \$350,000 on average.

In summary, Highlands was previously owned by two separate developers (Silverton and then Lensworth) who had commenced work before the purchase by Stockland. Design controls may have been more relaxed before the Stockland acquisition and hence there may be some sections that are considered incoherent or too individual by the current developer and plans to improve on previously owned portions of the development include childcare centres, schools, sports fields, playground and community facilities, as well as some new land releases within its new and much vaunted 'Waterview' precinct, are intended to compensate and so enhance the final development.

The design controls themselves seek to improve upon previous stages with a greater degree of control in evidence as each stage progresses. They are combined with SADPs (Specific Area Development Plans) that show special requirements for each individual lot within each stage. As the name suggests, specific areas of

the development are controlled to exploit unique characteristics of that area rather than having uniform design controls applied throughout.

4.2 Results of resident survey Highlands, Stockland

Table 4 presents a summary of all the views gathered from the residents from the Highlands survey.

5. Relationships discussed: what works for the residents surveyed

5.1 Resident perspectives measured against design controls

Although only the results of one MPC (Highlands) is reported here, it is interesting to note that, though the levels of design control between Highlands and Springthorpe (a slightly smaller but more prestigious development) were similar, the residents at Highlands viewed them as far more restrictive. So why were residents at Springthorpe more comfortable with their level of design control? It would seem that in its

Table 4: Summary of views gathered from residents – Highlands, Stockland (Nguo 2006)

Survey Section	Views gathered from residents
1	<p>Design Controls</p> <ul style="list-style-type: none"> At Highlands, there were 80 percent of residents that strongly agreed they were aware of the design controls in place. 48 percent strongly agreed in understanding their purpose while 24 percent agreed Most people being 48 percent agreed that the design controls were too restrictive. Only 14 percent felt strongly about the restrictiveness, while 17 percent disagreed and 7 percent strongly disagreed Responses varied across the board when residents were asked whether the development is looking the way they thought. 34 percent agreed and 21 percent strongly agreed, but just as many people, 24 percent strongly disagreeing Only 55 percent agreed that the development had a clear identity compared to Delfin’s 63 percent for the same question.
2	<p>Siting and the Surroundings</p> <ul style="list-style-type: none"> Satisfaction with land, house and backyard sizes and solar access were overall positive with the majority of residents either strongly agreeing or agreeing The amount of privacy and noise did not seem like a major concern, but privacy between dwellings were satisfactory to an extent where a proportion of residents were only just agreeing 59 percent of residents felt confidently safe walking after dark while 28 percent felt reasonably safe There were mixed feelings toward allowing children play in the neighbourhood unattended but a greater proportion of residents felt safe to do so with 31 percent agreeing and 31 percent strongly agreeing.
3	<p>The design of the home</p> <ul style="list-style-type: none"> The dominant view of residents (48 percent) agreed that the housing in the development had a mixed character. 34 percent thought the housing was modern, 14 percent thought the housing was big or grand and 7 percent thought there was no character When asked what they liked best about the buildings, most residents reinforced the notion of variety and difference. Others claimed the contemporary or modern design of some houses as the most appealing aspect. There were a few misinterpretations where residents stated the views (out to the CBD from Mount Ridley), were the most appealing aspect, not the houses. Just over a third of residents could not identify what they least liked, but those who did identified the example of the ‘blue house’. Much like the beach-house at Delfin’s Craigieburn, the blue house and others were considered an eyesore, which deters visitors and impacts on the value of surrounding houses To the same effect, the slower rate at which housing was erected, the sparseness and lack of maintenance in some areas, the mix of mansion sized lots among smaller cottage lots and the conflicting styles, colours and typologies of housing were the other main dislikes among residents

	<ul style="list-style-type: none"> • Over half the residents strongly agreed they were satisfied with the workmanship and materials of their home, with 28 and 38 percent agreeing respectively. 90 percent of residents were strongly satisfied with the colours used on their homes, again of their own choosing • No one disagreed with the requirement for a porch or portico at the front of the house, with some residents having asked for it • 59 percent of residents had frequent interaction with their neighbours, with 28 percent having mild interaction. Only 3 percent very rarely interacted with neighbours • Not everyone was completely happy with the landscaping requirements, but there was more angst toward the fencing requirements with just as many satisfaction levels strongly disagreeing (31 percent), than merely agreeing (34 percent) • Two thirds of residents strongly felt there was adequate car space provision with an additional 24 percent agreeing. Approximately three-quarters owned two cars.
4	<p>Concluding views of the residents</p> <ul style="list-style-type: none"> • There was a strong consensus supporting the degree of variety within the development (86 percent) • Just over half strongly felt their home added to the street, and a common trend for those who just agreed was the feeling that their home will add to the street once they have completed their landscaping • Most residents felt they had enough time to maintain the front of their homes, and an overwhelming 83 percent agreed that design quality affected the value of their home.
5	<p>Additional comments</p> <ul style="list-style-type: none"> • Overall there was a higher percentage of residents who felt safe letting their children play in the neighbourhood unattended than Delfin's Craigieburn, despite some residents raising concerns about the number of heavy trucks in the development due to the ongoing construction • Many residents had problems not so much with the house but with the fencing and landscaping requirements. They felt the fencing specifications were either too strict or too expensive to implement, with many preferring coloured metal decked fencing over timber paling fences • Trouble with fencing was experienced particularly with corner allotments where residents felt too exposed due to the limitation on fencing lengths • Landscaping requirements were thought to be inappropriate, especially where watering requirements were applied to all lots, including those lots with low maintenance gardens or minimal areas of turf.

efforts to distinguish itself from the neighbouring (competing) Delfin Craigieburn development, Stockland had to enforce a greater control on design at Highlands. Most residents would then question the need for such strict controls, after comparing them to those enforced at Delfin given both developments share the same locality and similar demographics. However, restrictions and greater design control was expected for residents at Springthorpe, many of whom claimed was the very reason for their purchase initially.

In terms of having a clear identity for the community and looking the way residents anticipated it would eventuate, Highlands fared the worse. The main concern was the slow rate at which the development was progressing, which resulted from a number of overgrown, vacant blocks in some areas. This patchy progress may be because the development itself is relatively young compared to the neighbouring Delfin MPC and also that the estate has experienced two recent transfers of ownership with Stockland being the third owners. Planning and design control of varying character and degree have thus been enforced since the project's inception. The choice of block sizes was, however, seen to be a positive feature of Highlands as residents were mostly satisfied with the size of their land, more so than the residents at Springthorpe where they had no choice of block size.

The additional requirements for privacy, overlooking and overshadowing control at Highlands have benefited the development in comparison with Delfin, where residents admitted their main dislike were the houses being too close together. Springthorpe had consideration for these issues built into their design guidelines, with considerably wider side setbacks than the other two estates. Respondents believed the houses *'not to be on top of each other'*, even though the land was undulating in some parts. This reinforces the importance of considering topography in the master planning. Over half the residents at Springthorpe had nothing to dislike, with the exception of the strict Northerly orientation of their houses where a number of respondents confirmed too much sunlight was admitted into the home.

Springthorpe is a more compact community which comprised larger individual allotment sizes. A feeling of enhanced security was apparent, despite links to the existing Latrobe University and EPA facilities. There was a greater sense of enclosure and concentration of housing, but this was interspersed with reserve areas to break up feelings of density and concentration. The results were linked open space networks with sensitive landscaping acting as buffers between the housing. People could walk around the parks and reserves without feeling overlooked but also without feeling completely isolated at the same time because houses were always close by. This was reflected in residents' positive attitudes toward allowing their children play in the neighbourhood whereas generally negative impressions were observed among residents from the other two estates.

The extra control on colours and materials were telling at Springthorpe. They precluded the typical example of the 'eyesore' home witnessed at both Delfin's Craigieburn and Highlands estates. There was a 'green' (literally green in colour) house noticed at Springthorpe but, when alluded to as part of the survey, residents could not readily identify which house was being referred to as it was tucked away at the end of a cul-de-sac in amongst established trees. The green house, nevertheless, was of a contemporary style with the addition of eaves which sympathised with the style of housing across the rest of the development.

Similar views concerning the degree of workmanship were recorded across all three which suggested that limiting the choice of builder (as at Springthorpe) did not affect the opinions of residents. The most telling factor, however, was that Springthorpe residents were satisfied with the materials to a larger degree. Springthorpe showed a greater restriction in terms of colours, but this did not affect resident satisfaction. The survey proved that while colours were limited to certain palettes, as long as the option for choice was available, residents were satisfied.

There was overall satisfaction with porch, portico and verandah requirements but whether it enhances neighbourly interaction or not remains inconclusive. There is a relationship between Highlands and Springthorpe where greater levels of interaction were found between residents, where requirements for

porches and porticoes were necessary. However, it is recognised that this in itself could be influenced by a multitude of other factors.

Significantly greater levels of satisfaction with landscaping and fencing requirements were recorded at Springthorpe whereas similar levels of restriction at Highlands failed to please residents. This was quite possibly due to the illusion of an established environment at Springthorpe – the difference between greenfield development and redevelopment on land with a previous use. This redirects us to the notion of developer gain for smaller, compact communities as discussed in Nguo. (2006:16) Greater contributions are seen to be delivered from Urban Pacific into the surrounding environment for Springthorpe (e.g. street trees, planting and shrubs) which takes the focus off the individual landscaping of houses.

The greatest variety in housing was found at Highlands which was, surprisingly, also seen as a positive feature by residents of Delfin (Craigieburn). This supports the view of residents in Table 2 (item 4, above) that variety in building style and exterior finish represents more character and contributes to overall satisfaction within a development. In contrast, there was a clear agreement from Springthorpe residents of the positive visual contribution of their homes to the appearance of the street. This suggests the need for a response from developers' internal review departments to provide a virtual representation of the anticipated streetscape with the proposed facades of all the homes they assess within a given street — if they are not doing so already. This would indeed ensure more cohesive streetscapes especially if it is stated as such an objective within their design control material.

All but one Springthorpe resident believed that housing design quality added to the value of the property, compared with other properties in the locality. Similarly, 83 percent of residents at Highlands and 73 percent at Delfin Craigieburn agreed. These views support the findings of FPD Savills (2003:16-17) that design can enhance the revenue from a site considerably and that premiums were evident in the developer's products where they have maintained high design standards. Conversely, it was admitted that elements of good design do increase costs to residential schemes and so it should be clearly demonstrated and promoted by the developer — when considering such elements as dwelling orientation, additional windows for security and cross ventilation, eaves for shading, provision for areas of open space etc. — as not only enhancing the aesthetics of a house but its function sufficient to be considered a prudent investments for the benefit of the resident.

6. Conclusion

The following is a summary of the key findings under each objective heading for the research:

1. The rationale behind the use of design controls is to provide certainty about the standard and quality of housing within a development. They are used to promote visually appealing, safe and secure environments which would contribute to strong neighbourhood characters. They are seen as a set of

guidelines which allow homebuyers to be involved in the design or selection of their home but within defined limits.

2. Issues of understanding, interpreting and complying with design controls are primarily due to a lack of certainty within the design control documentation. Interpretation can be difficult particularly in cases where design controls are inadvertently applied to the detriment of the resident, hence the need to consider design controls on a site-by-site basis. Often, they are not aligned with current building regulations and compliance can be difficult when wording is not forthright. Unintended outcomes may be that a volume homebuilder's established processes may be disrupted and a homebuyer's financial limits may be stretched even further.
3. Support for design controls varies across developments. Some were considered too restrictive overall but their effects would still be felt by residents without their realising it. Therefore a firmer, clearer descriptive wording of design controls should be employed to communicate — unequivocally — the developer's intentions. Diagrams, images and illustrations should accompany the wording which describes the purposes of particular design controls. This bridges communication gaps between the developer, builder and homebuyer. Another measure to achieve this is the establishment of dialogue between builders and developers through face-to-face meetings.
4. It was found where design controls were more restrictive, the quality of the housing development was greater. However, greater design control use within a development may be a deterrent to potential buyers, as well as existing residents, some of whom fail to comply with, for example, landscaping requirements. This can lead to underdeveloped properties which may fail to maintain their appeal into the future. Limiting the choice of builders did not have an impact on people's attitudes toward the quality of the work which they generally considered to be poor.

Overall, it may be concluded from this study that design controls are an effective tool for transferring the costs of implementing quality design to the resident. Having this cost carried by the resident makes sense especially where the benefits of enhanced design quality improves the capital value of the home — a fact upon which a strong majority of the residents surveyed agreed. Therefore the developer, who receives no share in the appreciated value, is able to focus their costs and efforts toward creating more visually attractive surroundings to generate a more positive buyer sentiment which in turn generates more rapid sales and thus improves the project's profitability.

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Appendix A: Supplementary design and demographic details of the MPCs surveyed

Description of Craigieburn, Delfin

Craigieburn is a 333 hectare very well established master planned development by Delfin Lend Lease in a joint venture with George Adams. It comprises 3300 lots with an expected completion date of 2008. The development started in 1998 and is located on Dorchester Street in Craigieburn.

In summary, Craigieburn offers varying levels of precincts each with their own unique attractiveness. 'Parkview' for example, has the unique advantage of being close to parks for children's leisure, and convenience to shops. Golfer's link has a proximity and visual links to a golf course. There is a range of lot types aimed at distinct demographics, with lot sizes ranging from 300sq.m to 805sq.m. Packages for lots start from \$98,000 to \$205,000.

The actual design controls are based around specific lot types, of which there is a large variety. Restrictions on built form within each lot type limit flexibility, e.g. town cottage lots must have an early Australian cottage style with full width verandas and front fences. Another feature of the design controls are the different roof pitches specified for different lot types. There is also a free choice of builders, promoted as a flexible feature. On average, 17.6 lots are sold per month.

There is a clear focus on the Delfin brand and being part of an established and growing community with large open spaces and facilities.

Description of Highlands, Stockland

Highlands is a 6300 lot development on 760 hectares that adjoins the Delfin Craigieburn development. Located on the corner of Harrington Avenue and Grosvenor Square, a distinct advantage of the development surrounding the Delfin estate is the elevated land upon Mount Ridley with desirable views toward the city skyline. However, access to this precinct is through the Delfin estate itself. Packages range from \$250,000 to \$350,000 on average.

In summary, Highlands was previously owned by two separate developers before Stockland. Silverton were the first owners followed by Lensworth. Design controls may have been more relaxed before the Stockland acquisition; hence there may be some regions that are considered incoherent or too individual. But plans to improve on previously owned portions of the development include childcare centres, schools, sports fields, playground and community facilities, as well as some new land releases within its new and highly anticipated 'Waterview' precinct.

The design controls themselves seek to improve upon previous stages with a greater amount of control as each stage progresses. They are combined with SADPs (Specific Area Development Plans) that show special requirements for each individual lot within each stage. As the name suggests, specific areas of the development are controlled to exploit unique characteristics of that area rather than having the design controls singly applied throughout.

Description of Springthorpe, Urban Pacific

Springthorpe is located 14km from the CBD, significantly closer than the other two communities. It comprises a combination 600 architecturally designed homes, 100 medium density dwellings and a retirement village, located at the intersection of Waiora Road and Main Drive, Macleod. The site of 429 hectares was previously occupied by a hospital. Land starts from \$270,000, with packages starting from \$600,000.

The 429 hectare site was previously occupied by a hospital. The most notable features of the development were the retention of historical structures and significant landscaping, a country club for the residents and a limited choice of nine select builders. The distinct advantage of the development being located within an existing metropolitan fabric is the proximity to public and private schools, tertiary facilities (Latrobe University), medical and health facilities (Austin Hospital), libraries, golf courses (Strathallan golf course), shopping centres and established public transport links. A strategic benefit of the development is its links to adjoining wildlife reserves and corridors.

With the design controls being limited for the use with nine select builders, they are clearly more demanding of purchasers so that residents are ensured that everyone that buys into the development plays an equal role in protecting the amenity of the built environment. The developer has employed an architecture firm to oversee that the design controls are met, and to coordinate the builders in their understanding of the design expectations for the development.

Survey Respondents

Delfin, Craigieburn		Highlands, Craigieburn		Springthorpe, Macleod	
Age	%	Age	%	Age	%
25 – 34	30	25 – 34	35	25 – 34	16
35 – 44	37	35 – 44	35	35 – 44	42
45 – 54	17	45 – 54	14	45 – 54	19
55 – 64	13	55 – 64	14	55 – 64	16
> 65	3	> 65	3	> 65	6

Delfin, Craigieburn		Highlands, Craigieburn		Springthorpe, Macleod	
Sex	%	Sex	%	Sex	%
Male	70	Male	69	Male	65
Female	30	Female	31	Female	35

Delfin (ABS 2006)		Highlands (ABS 2006)		Springthorpe (ABS 2006)	
Median Income	\$1,175 p/week	Median Income	\$1,240 p/week	Median Income	\$2016 p/week
Median House Price	\$255,000	Median House Price	\$283,000	Median House Price	\$470,000
Mortgage Commitment	\$1,481 p/month	Mortgage Commitment	\$1,716 p/month	Mortgage Commitment	\$2,084 p/month
Mortgage / Income %	31.5%	Mortgage / Income %	34.8%	Mortgage / Income %	25.8%

Key Takeouts

- Springthorpe is situated within an established, centralised area with greater accessibility to the CBD and is not viewed as ‘the end of the line’.
- Springthorpe is in a more tightly held location surrounded by pockets of amenity such as areas reserved for parks, recreation / conservation and public use.
- The vast expanses of open space and park reserves provided within Springthorpe are not entirely the developer’s decision, but more so the result of planning (zoning) compliance. Developer turns this into marketable aspect and ramps up the price points for the product.
- As such, Springthorpe maintains a much slower rate of sales than the volume-driven offerings out at Craigieburn.
- As one resident at Springthorpe states, the mature aged trees are something that money cannot buy, trees that would take over a lifetime to watch mature. This is a stark comparison to the saplings planted alongside the freshly laid roads at Craigieburn.
- Higher proportion of older residents at Springthorpe (35+ years based on survey sample), who are likely to be a more fickle market. Prefers to have their finances in check and manageable (refer mortgage / income percentages).
- The ongoing body corporate fees associated with the premium lifestyle of Springthorpe makes the buyer decision one that bases itself on whether a similar range of benefits can be derived elsewhere in the area (e.g. opportunity costs of gym vs. country club, size of land, proximity/access to parklands etc). An address in Springthorpe would be considered exclusive.

- Exclusivity is one which is reflected in the median household income of \$2016 per week, nearly 75% higher than that at Craigieburn.
- Highlands and Delfin Craigieburn has offerings catered toward a younger market, with around twice the number in the 25 - 34 age bracket as Springthorpe. The entry points are more accessible from an affordability perspective, but distance from amenity and centralised services is compromised.
- Highlands attracts more younger residents than Delfin Craigieburn, only because Delfin has commenced sales of the project 1-2 years earlier than when Highlands commenced.