

# Planning and designing healthy new communities: Selandra Rise

Research summary

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## Introduction

The interaction of natural, built and social environments has a significant effect on health and wellbeing (Frumkin 2003). As Australian cities and towns grow, the design and construction of new residential communities provides an opportunity to explore neighbourhood design and planning for health and wellbeing. Neighbourhood design can contribute to a sense of place and to the health and wellbeing of residents (Frumkin 2003). Evidence for the importance of neighbourhood design continues to grow, as does recognition of the social and cultural dimensions of community, and the observation that people can belong to multiple communities across time and space (Maller and Nicholls 2014).

Selandra Rise is a new residential community in Melbourne, Australia. A key focus of Selandra Rise was to implement best practice planning for health and wellbeing and to assess its impact in order to inform the design and development of future residential communities.

Located in Melbourne's south-east growth corridor in the City of Casey, Selandra Rise is the result of a collaborative partnership between Stockland, the Metropolitan Planning Authority, the City of Casey, the Planning Institute of Australia (Victorian division) and VicHealth. Through a Research Practice Fellowship awarded to Dr Cecily Maller at RMIT University, VicHealth funded a five-year research project to study residents' health and wellbeing and to inform future urban design and planning policy.

The key features of Selandra Rise that integrated health into planning include:

- early delivery of services, including public transport (a bus service), a community centre (Selandra Community Place), diverse parks, a secondary school and a town centre
- all households having walking access to parks and green space (within 300m)
- support for physical activity, including paths for walking and cycling and exercise stations.

A summary of these and other key features are presented in Box 1.

### **Box 1: Selandra Rise key features**

- Named by the community through a 'place-naming' competition
- 120 hectare site, 8000m<sup>2</sup> in Clyde North, 52km from Melbourne CBD
- St Peter's Secondary College established October 2011
- First residents moved in November 2011
- Selandra Community Place Community Centre opened March 2012
- Multi-use parks designed with community consultation
  - Hilltop Park, June 2012
  - Heritage Park, March 2014
  - Youth park, November 2015\*
- Bus service started June 2014
- Kindergarten opened January 2015
- Town centre and business precinct established July 2015\*
- Community garden established November 2015\*

*\*not completed at the time of final data collection*

### Key highlights from the research project:

- A long-term partnership between key stakeholders Stockland, the City of Casey, the Metropolitan Planning Authority and the Planning Institute of Australia enabled the early delivery of public transport, Selandra Community Place and diverse parks, which were the key features of Selandra Rise.
- Early provision of diverse parks and interim measures for creating community, such as Selandra Community Place, encourages social interaction and engagement amongst residents.
- Access to public transport and commute times to work are two of the most important dimensions impacting the health of residents. For example, long commutes to work reduced residents' capacity for physical activity, time spent with family and community engagement, while exacerbating weight gain.
- Provision of continuous walking and cycling paths that connect new communities with public transport, local destinations and community facilities and services, both within and beyond a residential development, are needed to reduce car dependency and support physical activity, active transport, social inclusion and community engagement.

This summary report contains an outline of the research approach and participants, and findings and recommendations from the research project for the design of future residential communities in relation to: work travel and health; physical activity; public transport; community engagement; and neighbourhood satisfaction and wellbeing.

#	Recommendation: Overall
1	<i>Develop and participate in partnerships between stakeholders and agencies to work to agreed goals and strategies to design, develop and connect new communities guided by the following recommendations.</i>

## Research approach

The purpose of the research was to explore how best practice planning at a neighbourhood scale can lead to better health and wellbeing for the residents of Selandra Rise. The research studied the planned, emerging and unintended outcomes in relation to residents' health and wellbeing. A number of health and wellbeing priority areas guided the research. These were: physical activity, social inclusion, mental health, childhood health, food accessibility and safety.

The research design had a number of key features.

- Residents participated in the research over three years from August 2011 until March 2015, with some of the same resident households participating each year.
- A 'before and after' (or pre- and post-) design meant data were collected before and after residents moved to Selandra Rise.
- Qualitative and quantitative measures were used to provide depth and breadth including in-person interviews and a survey.

The research was carried out concurrently with the construction of Selandra Rise. Data collection commenced in August 2011, a few months before the first houses were completed and occupied in November 2011. Data collection finished in March 2015, before the completion of the town centre

(delivered in June 2015), a youth park and other features such as the community garden (see Box 1 for key features and completion dates). The findings presented here correspond to the research timing and period of data collection (August 2011 to March 2015), as data were collected *before* residents had access to shops, cafes and other services that have since been completed.

The two main ways data were collected were through in-depth interviews with two groups of residents moving to Selandra Rise at different times and a survey of residents before and after they moved in (Table 1).

Group 1 participants were first interviewed between August 2011 and April 2012, before they moved to Selandra Rise. Group 2 participants were first interviewed between August and October 2013, before or soon after they moved to Selandra Rise. Seventy-six interviews were conducted with 63 individual participants between 2011 and 2015 (most interviewees were interviewed more than once).

The survey was delivered from October to December in 2012 and in 2013, and from February to March in 2015. It was available online with paper copies also delivered to households at Selandra Rise. Approximately 25% of Selandra Rise households participated in one or more surveys over the course of the research (the survey was completed 568 times by 433 individual respondents) (Table 1). In total, 497 current and future residents participated in the research.

**Table 1: Summary of interview and survey participation**

Year	Group 1 interviews		Group 2 interviews		Survey	
	Interviews	Participants	Interviews	Participants	Pre-moving to Selandra Rise responses	Once-moved to Selandra Rise responses
2011/12	21 <sup>#</sup>	34 <sup>#</sup>	-	-	35	89
2013	14	21	22 <sup>#</sup>	29 <sup>#</sup>	31	185
2014/15	12	19	7*	10	22	206
<b>Total</b>	<b>47</b>		<b>29</b>		<b>88</b>	<b>480</b>

<sup>#</sup> Pre-moving to Selandra Rise interviews

\* Group 2 interviews in 2013 included retirement village residents who were not re-interviewed in 2014/15

## Findings and recommendations

### Who were research participants?

Residents at Selandra Rise were predominantly young, employed first home buyers. Most households were couples with or without children and almost half were born overseas (Table 2). Over 80% of survey respondents had completed Year 12 or equivalent, significantly higher than the average for Australia (55%) and the City of Casey (47%) (ABS 2012a). Just over half of the respondents reported having household incomes of more than \$1,500 per week (before tax), which is higher than the City of Casey (39%) and Australian (40%) income averages (ABS 2012a).

**Table 2: Summary of Selandra Rise survey respondents**

Characteristic	%	Characteristic	%
Gender		Education	
- Female	59	- Completed Year 12 or equivalent	84
- Male	41	- Completed university degree	45
Age		Origin	
- <35 years	57	- Born outside Australia <sup>1</sup>	47
- 35–54 years	33	- Speak a language other than English at home	35
- >54 years	10		
Household type		Occupancy status	
- Couple, no children	33	- Mortgage	83
- Couple, children	44	- Owns home outright	8
- Other	23	- Renting/other	9
Employment		Household income (\$ annual before tax)	
- Full-time	68	- <32,000	4
- Part-time/casual	16	- 32,000–52,000	9
- Other	16	- 52,000–78,000	22
		- 78,000–104,000	16
		- 104,000–156,000	26
		- >156,000	9
		- Not stated	15

The majority of Selandra Rise residents worked in white collar jobs, with more than one-third working in professional occupations compared to 14% of City of Casey residents and 22% of Victorians (City of Casey 2011b)<sup>2</sup>. Of Selandra Rise residents, 18% worked in health (mainly nursing) or education and 9% worked in information technology or accounting. Fewer reported working as labourers (3%), machinery operators and drivers (3%), or technicians and trade workers (13%).

The prevalence of overweight and obesity of Selandra Rise residents (51%) was similar to City of Casey (52%) and Victorian averages (50%) (DOH 2014). However with more than half of respondents less than 35 years of age (Table 2), these findings are of more concern.

Residents mainly lived in the east and south-east of Melbourne before moving to Selandra Rise. Their previous suburbs ranged from Melbourne CBD to a broad distribution across the south-east corridor, with a cluster moving from the eastern suburbs. Some had moved from other new residential communities in neighbouring suburbs.

<sup>1</sup> In 2013, 42% had lived in Australia for five years or less, 29% had lived in Australia for 6 to 10 years. The main countries of origin were India (24%), Sri Lanka (19%) and Mauritius (9%).

<sup>2</sup> Respondent bias may have affected these differences.

## Work travel and health

As they are often located in growth areas, many residents of new residential communities in Australia have work commutes longer than the average one-way commute time of 35 minutes (BITRE 2013). Long commutes have been linked to poor health outcomes, including: reduced time spent exercising, preparing food and sleeping (Christian 2012); decreased fitness, higher blood pressure, blood sugar and cholesterol (Hoehner et al. 2012); weight gain (Sugiyama et al. 2013); obesity (Lopez-Zetina et al. 2006) and; stress (Wener and Evans 2011). Internationally it has been reported that every 10 minutes spent commuting reduces all forms of social capital by 10% (Putnam 2001). Local employment is important for reducing commute times.

The promotion of local employment for residents was an aim of the Selandra Rise project, but was unable to be achieved during the period of research. Similar to the majority of households in the City of Casey (City of Casey 2011a), residents' work locations were spread across a wide geographic area. Few worked locally within the Clyde North and Cranbourne catchment while nearly one third worked in Melbourne's CBD, inner and the north-eastern suburbs. With Selandra Rise located approximately 52 kilometres from Melbourne's CBD working here or in the north-eastern suburbs requires a return commute of between 100 and 120 kilometres.

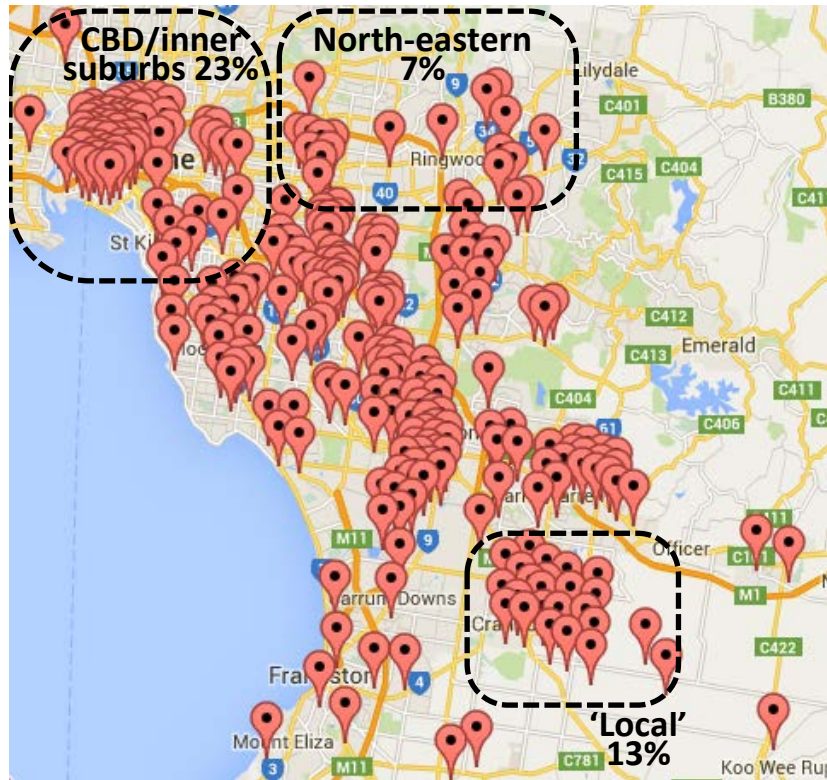
### Key findings for travel to work:

- Work was one of two main regular travel destinations for over 90% of Selandra Rise residents and most made this journey four or more days per week.
- In 2015, 86% of residents mainly used a car to travel to work, with 20% of households owning one car only, while 79% had two or more cars.
- Around one-third of residents worked in the Melbourne CBD, inner or north-eastern suburbs, with the majority of residents working outside the local government area (Figure 1).
- Only 13% of Selandra Rise residents worked in the Clyde North or Cranbourne postcodes (Figure 1). These postcodes represent work locations accessible by a bus ride of 20 minutes or less, or walking up to one hour (walking would be difficult due to the lack of connecting footpaths).
- Commute times increased over the course of the study as roads became more congested. Overall, commute times were unpredictable.
- Few residents found work closer to Selandra Rise during their participation in the study, while some found jobs in more distant locations.
- In 2015, 42% of Selandra Rise Residents travelled between 30 and 59 minutes each way to work, while 22% travelled each way to work in less than 29 minutes (Figure 2).
- Prior to moving into Selandra Rise, 18% of residents had a commute to work more than one hour each way; in 2015, this rose to one in three (36%) Selandra Rise residents (Figure 2).
- This figure is higher than the Australian average of one in four people commuting more than an hour each way to work (Kelly and Donegan 2015). During interviews, some residents reported regularly commuting over 90 minutes to work each way.
- Satisfaction with travel time to work was higher before moving to Selandra Rise. Strong dissatisfaction with commute times grew for Selandra Rise residents between 2013 (21%) and 2015 (29%) (Figure 3).
- Some residents changed their travel times to avoid peak periods of traffic but this often meant spending more time away from home (e.g. traveling to work before breakfast).

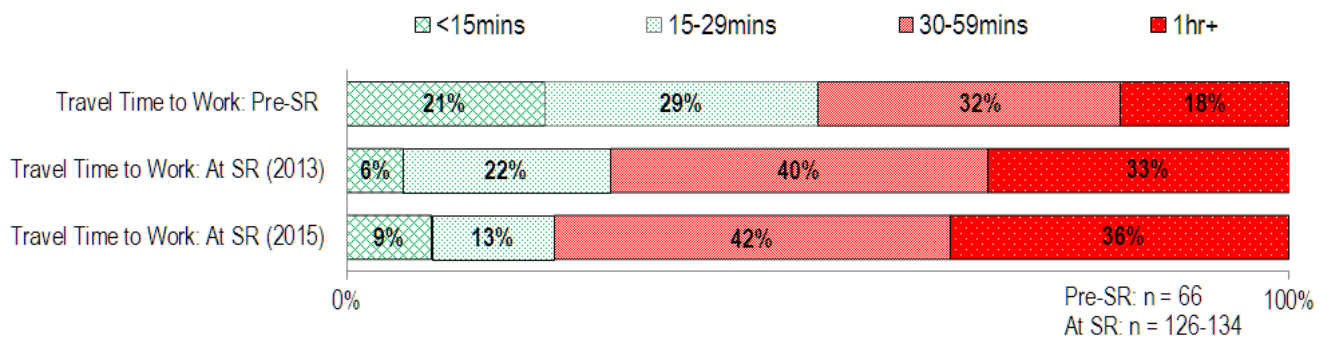


- Suitable local employment opportunities for Selandra Rise residents were limited. Over the course of the research, some residents changed their work location but these locations were generally not closer to Selandra Rise.

**Figure 1: Where residents of Selandra Rise work in 2015** (n=287, 3 not shown; ‘Local’ refers to Clyde North and Cranbourne area) (geocoded using tools from <http://www.aus-emaps.com>, map data ©2015 Google)



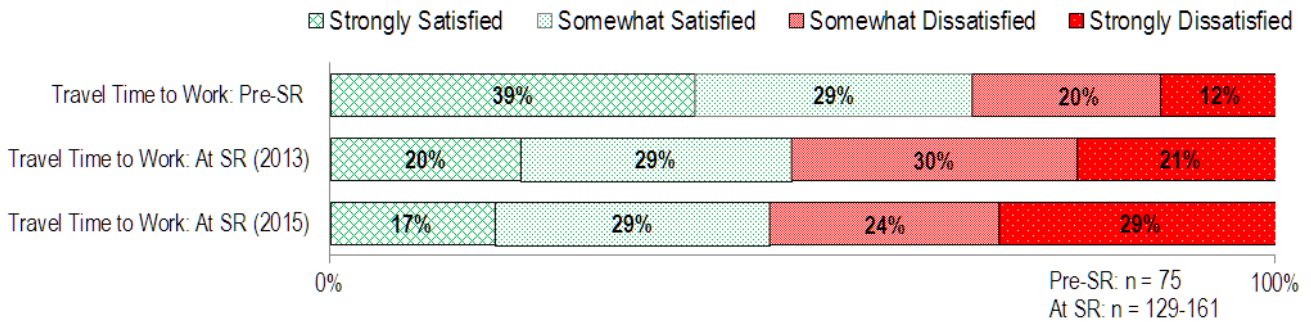
**Figure 2: Comparing one-way work travel times at Selandra Rise in 2013 and 2015 to previous neighbourhoods<sup>3</sup>**



<sup>3</sup> percentages throughout may not total 100 due to rounding

*“Travel time to and from work is the biggest challenge every day.”*  
Survey participant, 2012

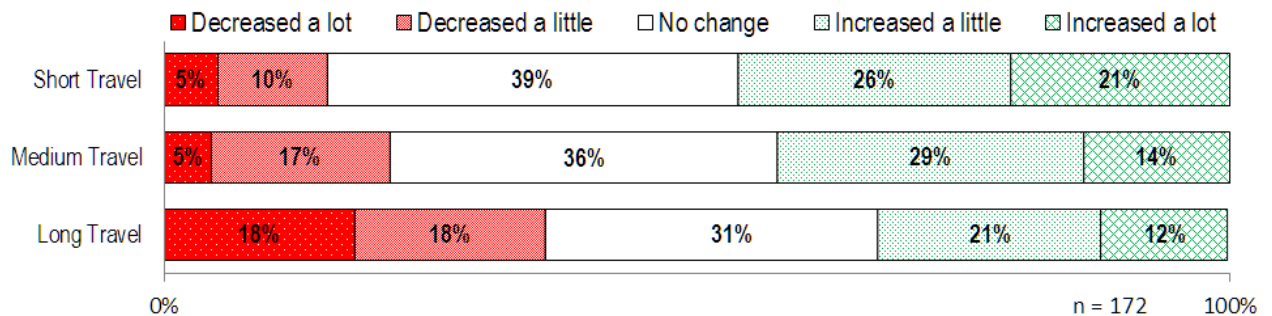
**Figure 3: Comparing resident satisfaction with work travel times at Selandra Rise in 2013 and 2015 to previous neighbourhoods**



**Key findings for commuting and health outcomes:**

- Long commutes were a major concern for many residents and reduced the time they could spend with their families, participate in community engagement, and dedicate to physical activity.
- Residents with short commutes were most likely to report an increase in physical activity since moving to Selandra Rise (47%), while residents with long commutes were most likely to report that they exercised less (36%) (Figure 4).
- Residents with short commutes were most likely to report having lost weight over the course of their participation in the study (46%), while those with long commutes were more likely to report gaining weight (52%) (Figure 5). Overall, most residents gained weight over the course of the study.

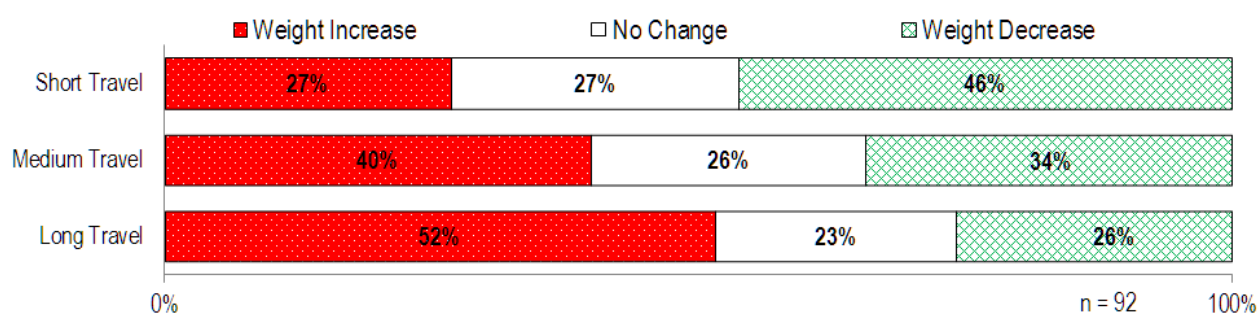
**Figure 4: Change in Selandra Rise residents’ self-reported physical activity levels in relation to time spent travelling to and from work<sup>4</sup>**



<sup>4</sup> Travel time categories were defined as: ‘Short’ – ‘residents whose who travelled less than 30 minutes each way for the majority of trips’; ‘Long’ – residents who travelled more than 1 hour each way at least four days per week; and ‘Medium’ – all other residents who generally travelled between 30 minutes and 1 hour each way.

*"I haven't been able to find the formula again, how to get exercise in my life whilst studying and commuting that long [trip]." Kale, Selandra Rise resident, 2015*

**Figure 5: Change in Selandra Rise residents' self-reported weight in relation to time spent travelling to and from work**



#	Recommendations: Work travel and health
2	<i>Support planning for and delivery of local and regional employment appropriate to the range of work sectors and professions of residents to reduce commute times.</i>
3	<i>Integrate and synchronise all transport options to promote multi-modal use, active travel, and reduce car dependency; ensure sufficient road infrastructure to cope with changing traffic volumes.</i>
	<b><i>See related recommendations for public transport and connectivity</i></b>

## Physical activity

Most Australians do not participate in enough daily physical activity to benefit their health (ABS 2012b). Research has shown that access to attractive, large public open spaces can increase walking (Giles-Corti et al. 2005). The design of Selandra Rise aimed to encourage residents to engage in outdoor physical activity through a walkable neighbourhood with a number of diverse parks central to this aim (Box 2). These parks were delivered earlier than is standard practice, with Hilltop Park completed within six months of the first residents moving in. Residents and future residents had the opportunity to provide feedback on the design of parks.

### **Box 2: Planned features to support outdoor physical activity**

- All dwellings located within 300 metres of open space/parks
- Footpaths 1.5 metres wide
- 2km of bike paths
- A layout to encourage walking or riding to parks, local shops\*, kindergarten, primary\* and secondary schools (including wayfinding signage)
- Hilltop Park with a half-basketball court, children's play equipment, outdoor gym stations, walking circuit and open space
- Heritage Park with a half-basketball court, children's play equipment, an off-leash dog area, allocation for an orchard and open space

*\*not completed at the time of data collection*

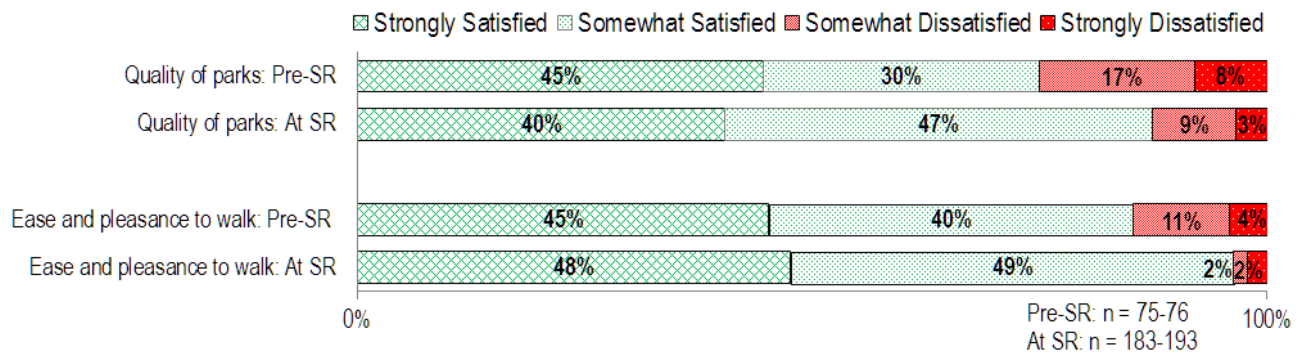
### **Key findings: walking and park satisfaction**

- Being able to walk locally appealed strongly to residents. Walking was the most common type of physical activity, with 72% of residents who exercised including walking as a main type of physical activity and 21% reporting walking as their only type of exercise.
- Resident satisfaction with 'ease and pleasure' (97%) of walking and the quality of parks (87%) were higher at Selandra Rise compared to residents living in their previous neighbourhoods (85% and 75% respectively) (Figure 6).
- Parks were the most common walking destination, but most full-time working residents that did not have young children used the parks infrequently.

*"I like the Heritage Park because it's got barbeques and a drinking fountain... It's got a dog park, which I love... it's got a beautiful ratio of grass to trees... and it's got park benches and you can watch the dogs play and you can watch the kids play footy."*

Petra, Selandra Rise resident, 2014

**Figure 6: Comparing resident satisfaction with quality of parks and walkability at Selandra Rise to previous neighbourhoods<sup>5</sup>**



*“Being able to walk to a school, being able to walk to a park... being really self-sufficient. I really like that idea of not having to [drive] anywhere [for most things].”*

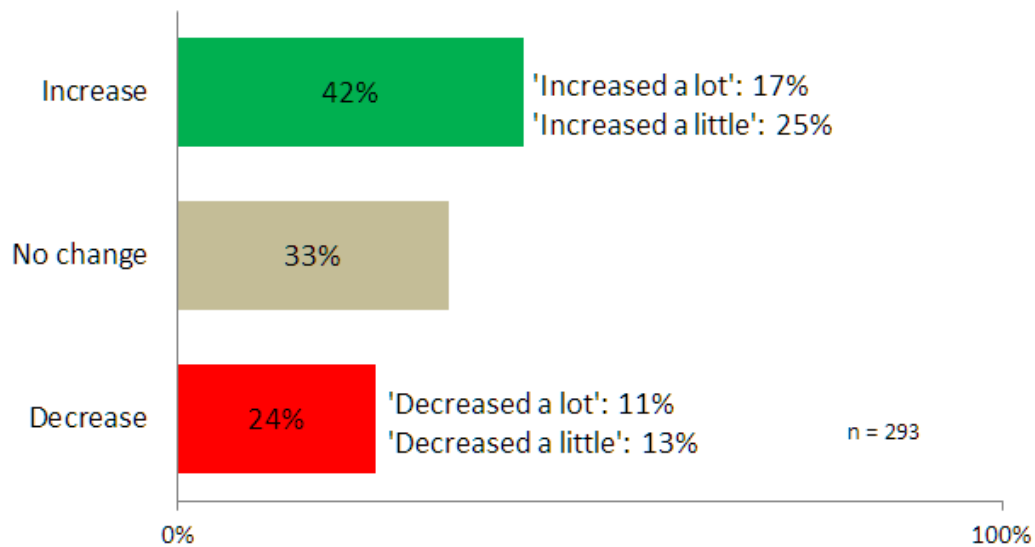
Lucy, Selandra Rise resident, 2012

#### Key findings: changes in physical activity levels

- 86% of residents reported doing ‘at least some physical activity’ when living at Selandra Rise, compared to 78% living in their previous neighbourhoods.
- 42% of residents reported that their physical activity increased on moving to Selandra Rise while most reported no change or that their physical activity decreased (Figure 7) (includes activities on and off-site).
- 49% of residents at Selandra Rise reported being pet owners, with 34% of households having one or more dogs, possibly encouraging physical activity for some residents.
- The impact of being able to walk to parks on residents’ physical activity levels was mixed. For some residents, the local streets and paths encouraged physical activity, but others reported there were insufficient variety, distance and/or destinations to encourage regular exercise.

<sup>5</sup> Note: ‘Pre-SR’ represents all future Selandra Rise resident survey responses combined (2012, 2013 and 2015). ‘At SR’ figures are most recent survey results (2015) from current Selandra Rise residents unless otherwise indicated.

**Figure 7: Change in residents' self-reported physical activity levels on moving to Selandra Rise**



### Key findings: challenges to outdoor physical activity

- Despite improvements for some residents, physical activity levels for the majority did not meet previous or current recommended guidelines. Increases in physical activity for some residents were offset by substantial decreases for others. Some of the reasons for this finding were discussed in the previous section on work travel.
- The length and variety of routes for physical activity such as cycling and running were limited by the lack of connectivity to suitable infrastructure outside the community. Residents who had previously exercised extensively in their local area (e.g. long walks, runs or bike rides) tended to drive to other locations for exercise or reduced the amount of physical activity they did.
- Four out of five interviewees cited the weather and seasons as reasons for not doing outdoor physical activity at Selandra Rise, including a lack of shade in summer, few places to exercise when windy or rainy, and a lack of daylight in winter.
- Some residents were reluctant to exercise in open public areas (for cultural, safety or other reasons), and others preferred home-based, indoor physical activity such as Wii, Zumba and treadmills.
- The majority of residents were experiencing major life changes while participating in the research (e.g. building, moving into and landscaping a new house; getting married; or having children). These changes disrupted their previous physical activity routines and broke links with established groups and facilities located in other areas.
- Selandra Rise was still being constructed at the time of data collection which caused noise, dust, obstruction of paths and routes by machinery and vehicles. Walkability was also affected by vehicles parked on footpaths (linked to the high proportion of car ownership and residents' use of garages for purposes other than parking cars).

*“In winter it’s a lot harder... because by the time you get home from work it’s seven and it’s dark and there’s no lighting... In summer you get home, it’s still light, so you can go for a walk or a run.” Deborah, Selandra Rise resident, 2013*

Further research is needed to determine the long-term impact of Selandra Rise on resident participation in physical activity, including any effects from the completion of the town centre and improved access and connections between Selandra Rise and other destinations.

	<b>Recommendations: Physical activity</b>
4	<i>Prioritise active transport through the provision of continuous, walking and cycling paths within developments and connected to other communities, local destinations, public transport and other services; provide shading and amenity via greening.</i>
5	<i>Ensure footpaths and bike lanes remain functional throughout the construction phase; provide interim connections for walking and cycling until infrastructure finalised (e.g. installation of gravel paths).</i>
6	<i>Establish walking and cycling connections to local area sports and community facilities to support access to a wide range of physical activity preferences and interests, and encourage participation in team, indoor and other sports.</i>
7	<i>Support early delivery of, or interim measures for, community shops and other facilities including schools and childcare to encourage incidental physical activity and improve walkability.</i>
8	<i>Support access to on-site indoor physical activity opportunities, where not available locally (e.g. in community centres or interim facilities).</i>
9	<i>Deliver parks as the first residents move in to encourage walking, one of the most popular forms of outdoor physical activity.</i>
10	<i>Provide diverse multi-use parks and facilities for outdoor physical activity within communities for different age groups, abilities, and interests (e.g. dog parks or off-leash areas), accessed by walking and cycling.</i>
11	<i>Provide sufficient lighting and shelter (including trees) when delivering parks, outdoor physical activity infrastructure and children’s play equipment to support all-weather use.</i>

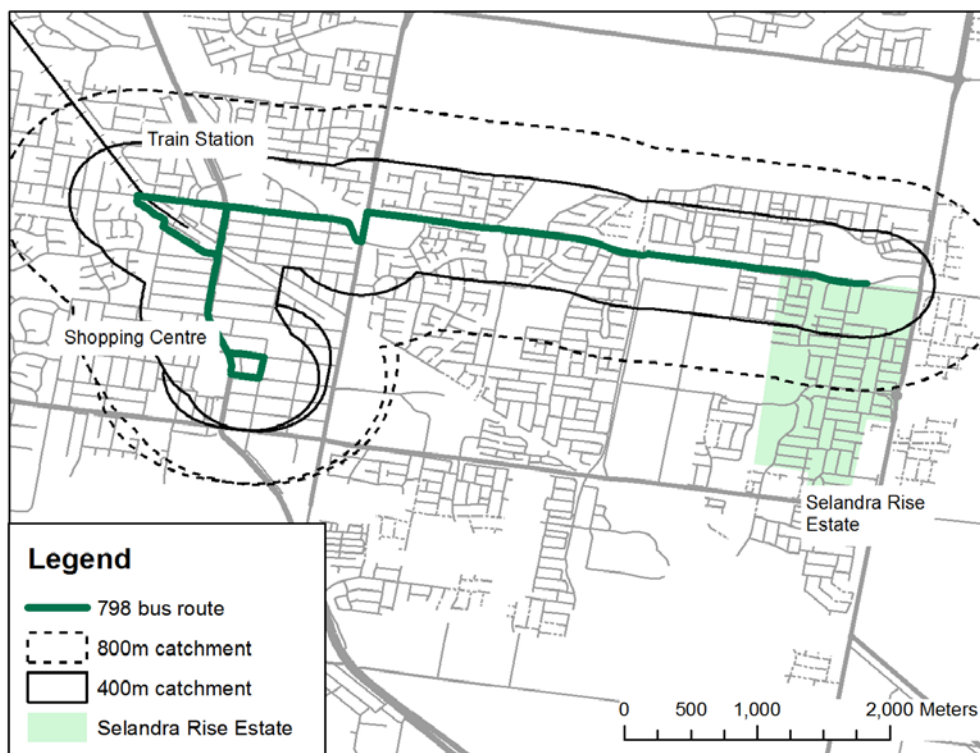
## **Public transport and connectivity**

A key dimension of integrating health into planning was the early provision of public transport, via a local bus service (Box 3). Without sufficient access to public transport households are at greater risk of social exclusion, which has negative health impacts and poor social outcomes for communities (Currie et al. 2009). In July 2014, three years after the first residents moved in, the 798 bus service was introduced connecting the northern end of Selandra Rise to Cranbourne shopping centre via the Cranbourne train station (Figure 8). This service was introduced several years earlier than standard business practice.

### Box 3: Planned features for transport and connectivity

- Early delivery of a bus service for public transport, delivered three years after the first residents moved in
- 20 minute regular service to Cranbourne train station and shopping centre, the closest regional transport hub
- Bus stop located near the Selandra Rise town centre

Figure 8: 798 bus route to Selandra Rise<sup>6</sup> (Source: Delbosc et al. 2016)



### Key findings: public transport and the 798 bus service

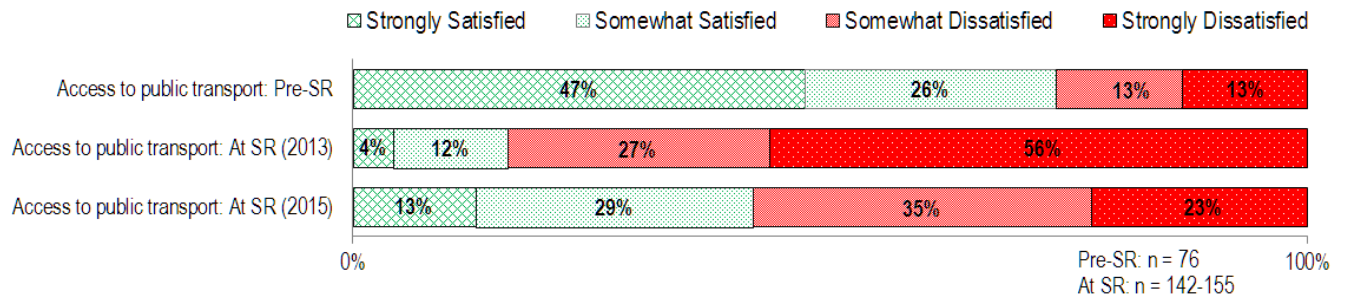
- Residents were more satisfied with access to public transport in 2015 (42%) than in 2013 (16%) after the introduction of the bus, but were still less satisfied than those residents living in their previous neighbourhoods (Figure 9).
- 96% of residents of Selandra Rise knew about the bus, and 92% of residents (including those who had not used the bus) considered it to be important.
- 23% of Selandra Rise residents reported using the bus at least once, with 23% of bus users using it multiple times per week, and 26% of bus users using it a few days per month.

<sup>6</sup> 400m is considered the standard walking catchment for a bus service; after 800m the likelihood of walking to public transport services reduces.



- Overall, 35% of residents reported that someone from their household had travelled on the Selandra Rise bus, including visitors. In households that do use the bus, one-third reported there were multiple bus users.
- More households with children had used the bus (47%) compared to those without children (23%).

**Figure 9: Change in resident satisfaction with access to public transport after the introduction of the 798 Bus Service, comparing previous neighbourhoods with Selandra Rise in 2013 and 2015**



To measure the impact of the bus service, as well as the VicHealth funded RMIT University survey of residents (Nicholls et al. 2015), researchers from Monash University also conducted an intercept survey of passengers on the 798 bus.

### 798 bus survey by Monash University

Many local buses in Melbourne’s suburbs are designed as a ‘social transit’ safety-net service with circuitous routes, short service spans and infrequent (often hourly) services. In contrast, the 798 bus was deliberately designed to provide a frequent, direct connection between Selandra Rise (and surrounding estates) and the Cranbourne town centre (Figure 8). This design encourages a ‘mass transit’ usage of the bus (direct, frequent services with less network coverage), attracting higher use for core economic activities. The 798 route is a relatively frequent bus service for a suburban area (20 to 30 minute intervals) with long service spans (5:30 to 22:30 weekdays, 6:30 to 24:00 Saturday, 7:00 to 21:30 Sunday).

The 798 bus survey by Dr Alexa Delbosc and Professor Graham Currie of Monash University (Delbosc et al. in press 2016) was conducted through self-completion questionnaires distributed to passengers on board the 798 bus. Twenty-nine questionnaires were in April and June 2015, capturing both peak-hours, inter-peak and weekend periods. The survey addressed a range of questions including: purpose of trip, reason for taking the bus and satisfaction with the bus.

### Key findings: 798 bus patronage

- Compared to the resident survey, bus users were a relatively captive audience of young, recent migrants who usually had did not have access to a car. Many were reliant on others for mobility without the bus. The 798 is therefore performing an important ‘social transit’ function (Betts 2007).
- Most respondents lived at Selandra Rise (60%) or were visiting someone else who lived at Selandra Rise (21%). This is despite the bus passing through several more established residential communities, suggesting early delivery of services and strong awareness from residents can increase patronage.

- Almost 90% of bus survey respondents walked to the bus and were prepared to walk over one kilometre to access it, more commonly seen for mass transit services. This is most likely explained by the younger ages of respondents.
- The majority of respondents (63%) used the bus to travel between Selandra Rise and either the Cranbourne shops or rail station and 31% continued on to a connecting bus or train service.
- The most common trip purpose was work (39%) followed by study (18%) and shopping (16%), and 98% of users used it at least a few days per week.
- The service effectiveness of the new route was between 35% to 40% higher than that achieved in local social transit design route services. By this metric, the new route has achieved its objective of higher ridership compared to social transit services.
- Beyond the focus on the individual bus user, the 798 bus also had an important role for other household members. When one household member uses the bus, it frees up the time of other household members who would otherwise provide lifts.
- The bus route has poor penetration into the suburb (only a small portion of households are within 400m of a bus stop). A number of respondents suggested more people would use the bus if it entered further into the community.

*“[Without the 798 bus there is] no way to go to work and college. It is important for me.”* Bus user survey participant, 2015

<b>Recommendations: Public transport and connectivity</b>	
12	<i>Deliver public transport early, as early as possible, ideally with the arrival of the first residents to provide those unable to drive with transport to work and study; provide high frequency bus services (e.g. minimum of every 20 minutes) and service runs with extended hours during the week and weekend to facilitate regular use.</i>
13	<i>Plan bus routes so the majority of households are within walking distance (less than one kilometre) to a bus stop for accessibility, social inclusion and incidental physical activity.</i>
14	<i>Ensure service connectivity of public transport to other services such as connecting to additional bus routes and train stations, and major facilities such as town centres.</i>

## **Community engagement**

Community engagement and social connectedness are key determinants of health (Wilkinson and Marmot 2003). In new growth area communities, local social connections and a ‘sense of community’ can increase residents’ perceptions of belonging and attachment to where they live (Walters and Rosenblatt 2008). A number of features to encourage community connections were provided at Selandra Rise (Box 4), the main initiative being Selandra Community Place, an interim community centre delivered as residents first arrived. Selandra Community Place was key part of the early delivery of services and facilities to residents at Selandra Rise. Temporarily based in one of the display homes, it offered a range of educational and social activities, including the Sustainable Homes program run by the South-East Councils Climate Change Alliance (SECCCA).

#### **Box 4: Planned features to encourage community engagement**

- Selandra Community Place offered a range of lifestyle and sustainability programs from when residents first moved in
- On-site community development and sustainability officers
- Selandra Community Place website
- Establishment of a community garden\*
- Neighbourhood BBQs and children's play equipment in Hilltop and Heritage parks
- An off-leash dog area in Heritage Park
- A youth park\*

*\*not completed at the time of data collection*

*"I think it helps that moving in with a new estate and a new community, you already have that in common...you've built a house together... I think it's a lot different when you move into an established community."*

Cesar, Selandra Rise resident, 2015

#### **Key findings: community engagement and social connection**

- A range of preferences for community engagement were reported, with some residents valuing the formation of deeper friendships while others preferred to maintain a polite distance.
- Residents reported forming social connections through the common experience of building a new home in a new community. In 2011, a future resident started a Facebook page that now has over 1600 members who provide each other with advice and exchange information about the community.
- Overall there were high numbers of brief social interactions described by residents which they felt gave Selandra Rise a friendly feel.
- In 2015, 41% of residents reported attending some kind of social event, meeting or activity on-site at Selandra Rise in the previous 12 months.
- Residents at Selandra Rise were more satisfied with the opportunities to meet people (88% somewhat or highly satisfied) compared to those living in their previous neighbourhoods (65%).
- Some reported stronger feelings of community compared to previous neighbourhoods, and residents at Selandra Rise were more satisfied with the number of people known locally (79% somewhat or highly satisfied) compared to those living in previous neighbourhoods (62%).

*"I think [Selandra Community Place] and the events that happen there regularly is one of the best things... it was really helpful in knowing the neighbours."*

Sid, Selandra Rise resident, 2014

### Key findings: Selandra Community Place

- Selandra Community Place was used most regularly by residents who were not working full time or were able to attend classes at the times offered. Lack of time related to working and commuting were the main reasons given for not attending.
- The majority of residents were supportive of Selandra Community Place, although the types of programs offered appealed more to women than men, a finding similar to other work on neighbourhood houses in Victoria (ANHLC 2013, 2014).
- Suggestions for activities from men included: photography, gardening, home maintenance (e.g. 'Owning a New House 101'), music nights, computer networking and games.
- In 2015, 23% of residents reported attending a social event or open day, while 17% attended another activity or workshop at Selandra Community Place in the previous 12 months.
- There was a marginal difference in increased satisfaction with access to community centres between residents in their previous neighbourhoods and those living at Selandra Rise.
- For some residents, interviews revealed that Selandra Community Place played a vital role in reducing social isolation. Community centres have heightened importance in connecting residents vulnerable to social isolation, such as first-time mothers, those from culturally and linguistically diverse backgrounds, or residents who are unable to drive or have access to a car (ANHLC 2013).
- A small but dedicated group of around 10 residents were members of the Selandra Community Garden group, using Selandra Community Place as a place for regular meetings.

	<b>Recommendations: Community engagement</b>
15	<i>Undertake community consultation to guide designs and plans for parks and major facilities; provide regular opportunities for community members to have input into decision-making processes.</i>
16	<i>Tailor social activities to residents' demographic profile and support a range of culturally diverse opportunities and events for social interaction and connection, including informal outdoor events and open days for the whole community.</i>
17	<i>Deliver community centres, facilities and support for community activities as the first residents arrive and/or provide interim measures to meet these needs through partnerships with a range of stakeholders and providers.</i>
18	<i>Engage with future residents and local communities early to determine program support requirements and preferences for activities and times offered at community centres and other facilities.</i>

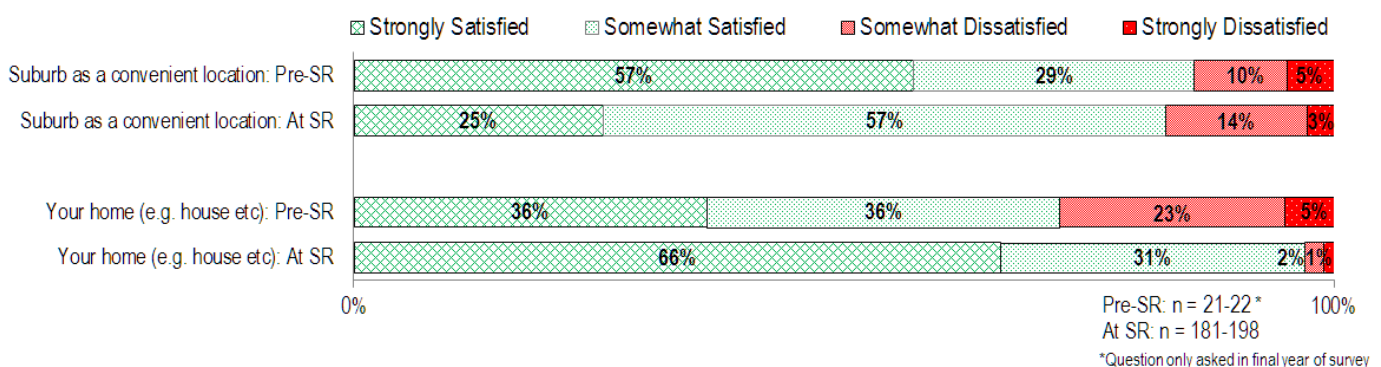
## Neighbourhood satisfaction and wellbeing

Residents were asked about how satisfied they were with a range of neighbourhood qualities, services and facilities. These neighbourhood features were chosen for their relevance to the health priority areas of physical activity, social inclusion, mental health, childhood health, food accessibility and safety. Measuring how satisfied residents were with these features provides an indication of whether their needs and expectations were being met and whether there was likely to be a positive or negative impact on their wellbeing.

### Key findings:

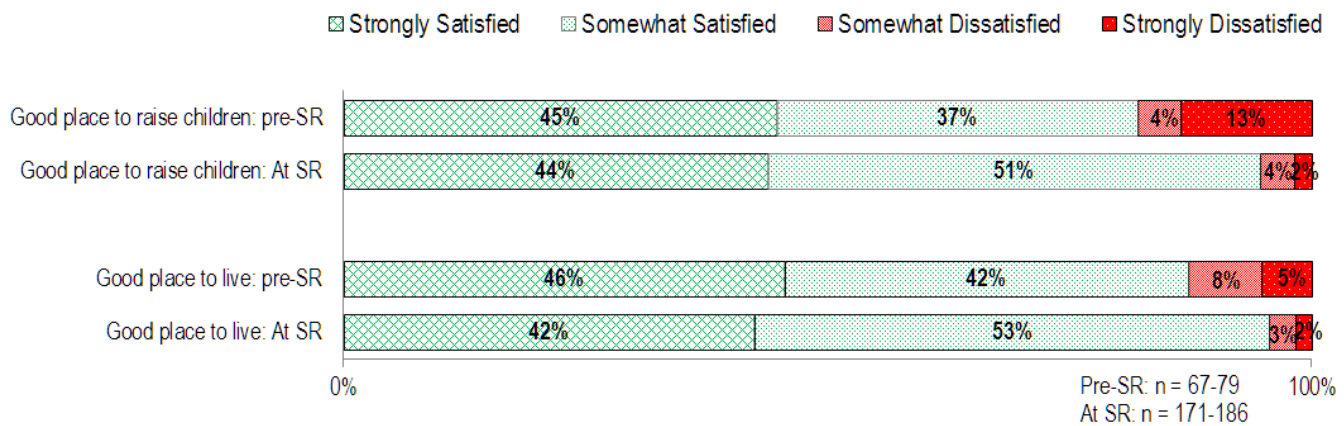
- Nearly all Selandra Rise residents were satisfied with their house (97%) compared to those in previous neighbourhoods (72%) (Figure 10). This satisfaction level is higher than any other aspect of the Selandra Rise neighbourhood.
- More residents living at Selandra Rise were dissatisfied (46%) with their access to fresh food shops compared to residents living in their previous neighbourhoods (20%).
- Only 25% of residents were strongly satisfied with the Selandra Rise as ‘a convenient location’, compared to 57% of residents in previous neighbourhoods (Figure 10). This finding suggests Clyde North is not the first choice for many residents.
- High levels of satisfaction with having a new house is likely to contribute to residents’ satisfaction with Selandra Rise as ‘a good place to raise children’ and ‘a good place to live’, which were higher (both 95%) when compared to previous neighbourhoods (82% and 88% respectively) (Figure 11).
- Resident satisfaction cannot be entirely attributed to facilities provided within Selandra Rise. Many residents took a wider view of what is available in their neighbourhood. Neighbouring communities also offered features and destinations that residents reported accessing, including lakes and wetlands, parks and play equipment.

**Figure 10: Resident satisfaction levels with home and suburb, comparing previous neighbourhoods to Selandra Rise in 2015**



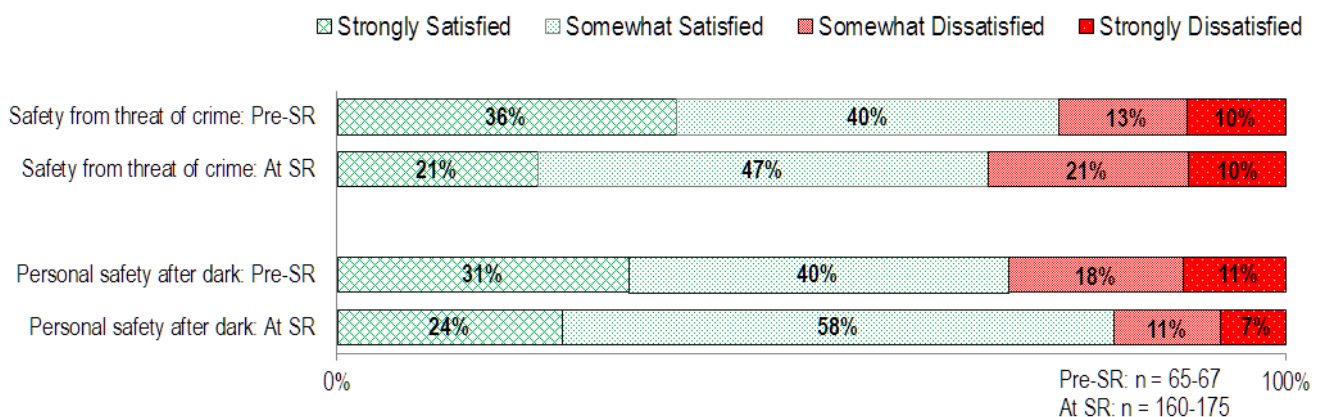
*“We like that we will get to know our neighbours... Schools are in the estate and it looks like a good place to raise children.” Survey participant, 2012*

**Figure 11: Resident satisfaction levels with their neighbourhood as a good place to live and a good place to raise children, comparing previous neighbourhoods to Selandra Rise in 2015**

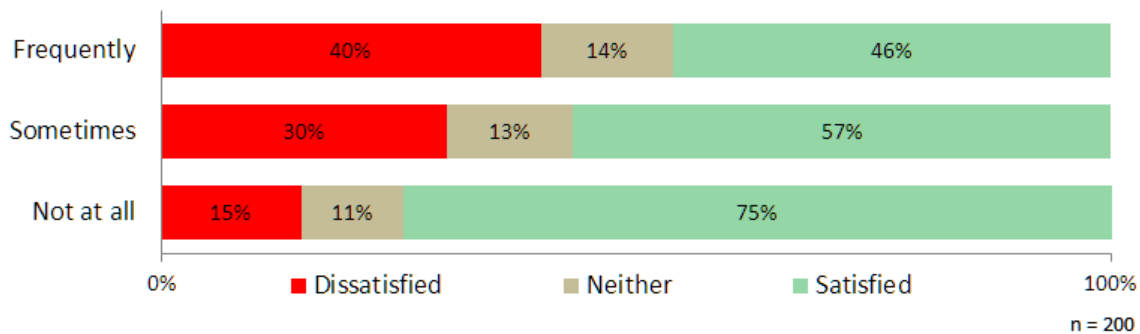


- More residents living at Selandra Rise were satisfied with their personal safety after dark (82%) compared to those living in their previous neighbourhoods (71%) (Figure 12).
- In relation to perceptions of crime, fewer residents at Selandra Rise felt safe from the threat of crime (68%) compared to those living in their previous neighbourhoods (76%) (Figure 12).
- Although social media such as Facebook can be an important instigator of and tool for social connection, it can also have negative impacts in relation to perceptions of crime.
- Residents who looked at the Facebook page ‘frequently’ or ‘sometimes’ were less likely to be satisfied with ‘safety from the threat of crime’ compared to residents who did not look at the Facebook page (Figure 13).

**Figure 12: Resident satisfaction levels with safety from threat of crime and personal safety after dark, comparing previous neighbourhoods to Selandra Rise in 2015**



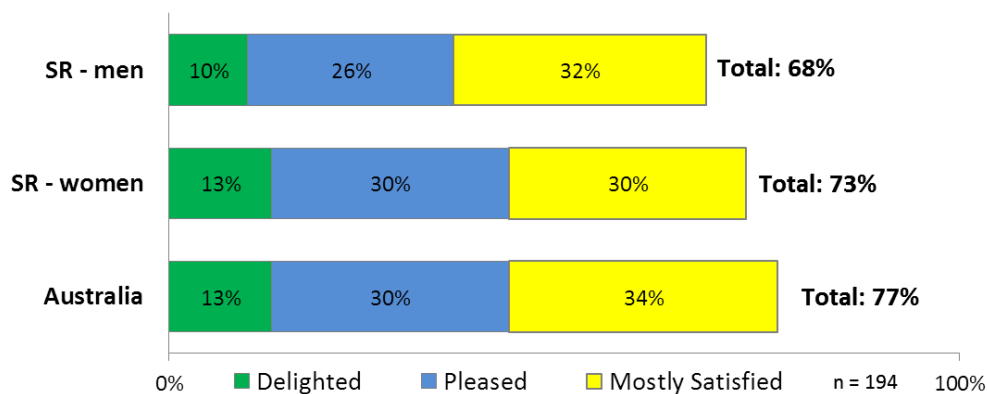
**Figure 13: Satisfaction with 'Safety from the threat of crime' and use of the Selandra Rise community Facebook page in 2015**



### Overall life satisfaction

As an indicator of wellbeing, a question about overall life satisfaction was introduced in the survey in 2015. This measure is from the Australian Bureau of Statistics (ABS 2010) and was used to compare Selandra Rise residents in relation to the wider Australian population. The question provided an indication of how participants regarded their life as a whole, reflecting on their experience in the prior 12 months. The scale includes options of: 'Delighted', 'Pleased', 'Mostly satisfied', 'Mixed', 'Mostly dissatisfied', 'Unhappy' and 'Terrible'.

**Figure 14: Comparing life satisfaction scores between male and female residents living at Selandra Rise with the Australian population**



### Key findings:

- The majority of Australians (77%) report they are 'delighted', 'pleased' or 'mostly satisfied' with their lives (Figure 14). Selandra Rise residents are less satisfied ('delighted', 'pleased' or 'mostly satisfied') than the general Australian population, with men reporting less life satisfaction (68%) than women (73%) (Figure 14).
- This finding is similar to other measures of subjective wellbeing in the City of Casey, where men have lower scores than women and subjective wellbeing scores are generally lower than in Victoria (Community Indicators Victoria 2015).

- Adults with a similar profile to Selandra Rise residents are aged between 18 to 35 years, are couples/never married/married, employed and own their own home. For this group, life satisfaction scores are 80% in the Australian population (ABS 2010).
- Lower life satisfaction scores at Selandra Rise may be attributed to residents' experiencing major life changes at the time of the research, commuting stress (Wener and Evans 2011), or other causes of dissatisfaction. For example, moving house has also been associated with short-term negative effects on mental wellbeing (Cleland et al. 2015).

## Implications for the design of future communities

To improve the health outcomes for residents in growth areas, their social connections and infrastructural and service needs, both within and outside of the communities where they live, need to be clearly understood. Although there may be some commonalities in the types of residents attracted to growth area communities, there are also likely to be differences between communities—better understanding of these communities throughout Australia is needed. The residents at Selandra Rise are not necessarily representative of residents living in other growth area communities around Australia so the findings presented here should be interpreted with this in mind.

The initiatives delivered at Selandra Rise are a positive step towards integrating health with planning and improving health and wellbeing outcomes for residents. The early delivery of public transport, diverse parks and a community centre indicate small but positive impacts on some residents' health and wellbeing. On the whole, residents were highly satisfied with Selandra Rise, but long commutes were areas of persistent and increasing dissatisfaction. The resulting time-poverty affected residents' capacity for community engagement and physical activity, among other health and wellbeing impacts. Selandra Rise residents with long commutes are at risk of worsening health outcomes over time.

Improving health and wellbeing in new residential communities is likely to be challenged most by residents' travel and employment circumstances. A large proportion of Selandra Rise residents are well-educated first-home buyers who work in professions located in or near the Melbourne Central Business District. Although other new residential communities in growth areas are likely to differ in their demographic profiles, it indicates Melbourne has poor alignment between the location of affordable housing and suitable employment for young professionals.

To improve the design and delivery of future residential communities in growth areas moving beyond a neighbourhood scale to more integrated planning and timely delivery at the regional level is needed. In particular, the connections between employment opportunities and affordable housing need to be addressed. In part this can occur through the earlier provision of public transport, pathways and roads; however efforts to decentralise employment in Melbourne will also be important. The principle of early delivery could be improved so that major services such as transport, local shops and employment are delivered before or as the first residents move in. The integration and linking of new residential communities with existing communities and infrastructure is also vital to maintain or improve health and wellbeing in the long term. The early delivery of any new infrastructure to make these links should be a priority.

The set of recommendations presented here can be used as a basis for an integrated, early-delivery approach (refer Appendix 1). Many of the findings discussed are interrelated, and the corresponding recommendations have implications for the short and long-term health and wellbeing of residents. From a health promotion perspective the recommendations are designed to work together, rather than feeding into separate future initiatives. For example, any reductions in the time residents need



to commute to work will create time that can be used for participating in family life or doing regular physical activity.

## Conclusion

Health being at the centre of planning means broader recognition of, and support for, the social determinants of health. The two most important social determinants in relation to growth area communities are access to employment and transport. These determinants are usually tackled independently from the planning, design and delivery of new residential communities, and as a consequence are often delivered well after the last residents have moved in. Improving the early delivery of employment opportunities and access to transport highlight the necessity for partnerships and long-term collaboration in the creation of new communities. Attending only to the provision of amenities and services within their boundaries will not be effective in improving health outcomes unless access to transport and employment are also addressed.

The sustained partnership and collaboration behind Selandra Rise has played a key role in bringing it to fruition, and has demonstrated the value of bringing a broad range of stakeholders together. In future, even broader partnerships along with a whole of government strategy are warranted, extending the model and improving the process of embedding health into planning from the very first stages of community inception.

The findings presented here provide a 'snapshot' in time of the early impacts of moving to Selandra Rise on residents' health and wellbeing. Data were collected in the initial stages of the community's development and before the delivery of the town centre and other facilities. Other important, long-term health and wellbeing outcomes will become evident as the Selandra Rise community continues to develop in the future.

**Box 5: Dr Cecily Maller, Senior Research Fellow, Centre for Urban Research, RMIT University**

**VicHealth Research Practice Fellow, 2010–2015**

This research was conducted by Dr Cecily Maller, Senior Research Fellow with co-researcher Dr Larissa Nicholls, Research Fellow. Guidance and advice was provided by Professor Ralph Horne (RMIT University) and Professor Anthony Worsley (Deakin University).

Dr Cecily Maller received a VicHealth Research Practice Fellowship in Community Development and Residential Planning from 2010 to 2015. The research was also supported by Stockland, the City of Casey, the Metropolitan Planning Authority and RMIT University. From 2016 to 2020 Cecily will be Vice Chancellor's Senior Research Fellow in the Centre for Urban Research at RMIT University.

The research was approved by the RMIT University Human Research Ethics Committee, approval number CHEAN A-2000495-05/11

## Appendix 1: Compilation of recommendations

### Legend:

- Recommendation based on the demonstration features achieved at Selandra Rise; recommended for the design, delivery and health of future communities.
- Recommendation based on the demonstration features of Selandra Rise that could be improved on in the design, delivery and health of future communities.
- New recommendation based on the outcomes of Selandra Rise to improve the design, delivery and health of future communities.

Relevant to: Refers to stakeholders who are involved in planning, implementation, advocacy or community building

#	Overall recommendation	Relevant to
1	<i>Develop and participate in partnerships between stakeholders and agencies to work to agreed goals and strategies to design, develop and connect new communities guided by the following recommendations.</i>	<i>State government Local government Developers Statutory bodies Transport providers Retailers Peak bodies</i>
	<b>Recommendations: Work travel and health</b>	
2	<i>Support planning for and delivery of local and regional employment appropriate to the range of work sectors and professions of residents to reduce commute times.</i>	<i>State governments Local governments Statutory bodies Federal government Peak bodies Planners</i>
3	<i>Integrate and synchronise all transport options to promote multi-modal use, active travel, and reduce car dependency; ensure sufficient road infrastructure to cope with changing traffic volumes.</i>	<i>Transport providers State governments Local governments Statutory bodies Peak bodies Planners</i>
	<b>Recommendations: Physical activity</b>	
4	<i>Prioritise active transport through the provision of</i>	<i>State governments</i>

	<i>continuous, walking and cycling paths within developments and connected to other communities, local destinations, public transport and other services; provide shading and amenity via greening.</i>	<i>Local governments</i> <i>Statutory bodies</i> <i>Developers</i> <i>Planners</i> <i>Peak bodies</i> <i>Builders</i>
5	<i>Ensure footpaths and bike lanes remain functional throughout the construction phase; provide interim connections for walking and cycling until infrastructure finalised (e.g. installation of gravel paths).</i>	<i>Developers</i> <i>Statutory bodies</i> <i>Local governments</i> <i>Planners</i>
6	<i>Establish walking and cycling connections to local area sports and community facilities to support access to a wide range of physical activity preferences and interests, and encourage participation in team, indoor and other sports.</i>	<i>State governments</i> <i>Local governments</i> <i>Statutory bodies</i> <i>Developers</i> <i>Peak bodies</i> <i>Planners</i>
7	<i>Support early delivery of, or interim measures for, community shops and other facilities including schools and childcare to encourage incidental physical activity and improve walkability.</i>	<i>Developers</i> <i>Local governments</i> <i>Community organisations</i> <i>Peak bodies</i> <i>Education providers</i>
8	<i>Support access to on-site indoor physical activity opportunities where not available locally (e.g. in community centres or interim facilities).</i>	<i>Developers</i> <i>Local governments</i> <i>Community organisations</i> <i>Planners</i>
9	<i>Deliver parks as the first residents move in to encourage walking, one of the most popular forms of outdoor physical activity.</i>	<i>Developers</i> <i>Local governments</i> <i>Statutory bodies</i> <i>Planners</i>
10	<i>Provide diverse multi-use parks and facilities for outdoor physical activity within communities for different age groups, abilities, and interests (e.g. dog parks or off-leash areas), accessed by walking and cycling.</i>	<i>Developers</i> <i>Local governments</i> <i>Peak bodies</i> <i>Planners</i>

		<b>Community groups</b>
11	<i>Provide sufficient lighting and shelter (including trees) when delivering parks, outdoor physical activity infrastructure and children's play equipment to support all-weather use.</i>	Developers Statutory bodies Local governments Peak bodies
	<b>Recommendations: Public transport and connectivity</b>	
12	<i>Deliver public transport early, as early as possible, ideally with the arrival of the first residents to provide those unable to drive with transport to work and study; provide high frequency bus services (e.g. minimum of every 20 minutes) and service runs with extended hours during the week and weekend to facilitate regular use.</i>	Transport providers Statutory bodies Local governments Peak bodies Planners Developers
13	<i>Plan bus routes so the majority of households are within walking distance (less than one kilometre) to a bus stop for accessibility, social inclusion and incidental physical activity.</i>	Transport providers Statutory bodies Local governments Peak bodies Planners Developers
14	<i>Ensure service connectivity of public transport to other services such as connecting to additional bus routes and train stations, and major facilities such as town centres.</i>	Transport providers Statutory bodies Local governments Peak bodies Planners
	<b>Recommendations: Community engagement</b>	
15	<i>Undertake community consultation to guide designs and plans for parks and major facilities; provide regular opportunities for community members to have input into decision-making processes.</i>	Developers Local governments State governments Statutory bodies Community organisations Future residents

16	<i>Tailor social activities to residents' demographic profile and support a range of culturally diverse opportunities and events for social interaction and connection, including informal outdoor events and open days for the whole community.</i>	<i>Developers</i> <i>Local governments</i> <i>Community organisations</i> <i>Future residents</i>
17	<i>Deliver community centres, facilities and support for community activities as the first residents arrive and/or provide interim measures to meet these needs through partnerships with a range of stakeholders and providers.</i>	<i>Developers</i> <i>Local governments</i> <i>State governments</i> <i>Statutory bodies</i> <i>Community organisations</i> <i>Future residents</i>
18	<i>Engage with future residents and local communities early to determine program support requirements and preferences for activities and times offered at community centres and other facilities.</i>	<i>Developers</i> <i>Local governments</i> <i>Community organisations</i> <i>Future residents</i>

## References

- ABS (2010). *General Social Survey: Summary Results*, Australian Bureau of Statistics, Canberra.
- ABS (2012a). *Census of Population and Housing 2011*, Australian Bureau of Statistics, Canberra.
- ABS (2012b). *Australian Health Survey: First Results, 2011-12*, Australian Bureau of Statistics, Canberra.
- ANHLC (2013). *Multiple Benefits: How Neighbourhood Houses are good for individuals, communities and government*, Association of Neighbourhood Houses and Learning Centres, Melbourne, Victoria.
- ANHLC (2014). *Neighbourhood Houses Survey 2014*, Association of Neighbourhood Houses and Learning Centres, Melbourne.
- Betts, J. (2007). Transport and social disadvantage in Victoria: A government perspective, in G. Currie, J. Stanley and J. Stanley (eds): *No way to go : Transport and social disadvantage in Australian communities*, Monash University ePress.
- BITRE (2013). *Population growth, jobs growth and commuting flows: a comparison of Australia's four largest cities* Bureau of Infrastructure Transport and Regional Economics, Australian Government, Canberra.
- Christian, T. J. (2012). Trade-offs between commuting time and health-related activities. *Journal of Urban Health*, **89**, 746-57.
- City of Casey (2011a). *Better Roads, Better Buses, Better Trains: City of Casey's Transport Advocacy Campaign, Version 2*, The City of Casey, Narre Warren, Victoria.
- City of Casey. (2011b) *Community Profile: Occupation of Employment*, Retrieved 09 November, 2015, from <http://profile.id.com.au/casey/occupations?BMID=40>.
- Cleland, C., Kearns, A., Tannahill, C. and Ellaway, A. (2015). Home truths: Are housing-related events more important for residents' health compared with other life events? *Housing Studies*, 1-24.
- Community Indicators Victoria (2015). *Casey Wellbeing Report*, The McCaughey VicHealth Community Wellbeing Unit, The University of Melbourne, Melbourne.
- Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R. and Stanley, J. (2009). Investigating links between transport disadvantage, social exclusion and well-being in Melbourne: Preliminary results. *Transport Policy*, **16**(3), 67-105.
- Delbosc, A., Currie, G., Nicholls, L. and Maller, C. (in press 2016). *Social transit as mass transit in a suburban greenfield development*, Transport Research Board Committee 95th Annual Meeting, T. C. A. S. a. E. F. o. Transportation, Washington D. C., USA.
- DOH (2014). *City of Casey Statistical Profile*, Department of Health and Human Services, State Government of Victoria, Melbourne, Victoria.
- Frumkin, H. (2003). Healthy Places: Exploring the Evidence. *American Journal of Public Health*, **93**(9, September), 1451-154.
- Giles-Corti, B., Broomhall, M. H., Knuiaman, M., Collins, C., Douglas, K., Ng, K., Lange, A. and Donovan, R. J. (2005). Increasing walking: How important is distance to, attractiveness, and size of public open space? *American Journal of Preventive Medicine*, **28**(2, Supplement 2), 169-176.
- Hoehner, C. M., Barlow, C. E., Allen, P. and Schootman, M. (2012). Commuting distance, cardiorespiratory fitness, and metabolic risk. *American Journal of Preventative Medicine*, **42**, 571-578.
- Kelly, J. and Donegan, P. (2015). *City limits: why Australia's cities are broken and how we can fix them Melbourne*. Melbourne University Press, Melbourne.
- Lopez-Zetina, J., Lee, H. and Friis, R. (2006). The link between obesity and the built environment. Evidence from an ecological analysis of obesity and vehicle miles of travel in California. *Health and Place*, **12**, 656-664.
- Maller, C. and Nicholls, L. (2014). Encountering the Multiplicity of Community in Planning and Designing New Neighbourhoods. *Urban Policy and Research*, **32**(1), 17-32.

- Nicholls, L., Phelan, K. and Maller, C. (2015). *Time poor, health poor? Travel-related time poverty and resident health in a greenfield master-planned estate*, The State of Australian Cities Conference, SOAC, SOAC, The Gold Coast, 9-11 December.
- Putnam, R. D. (2001). *Bowling Alone: The Collapse and Revival of American Community*. Simon & Schuster.
- Sugiyama, T., Ding, D. and Owen, N. (2013). Commuting by car: weight gain among physically active adults. *American Journal of Preventative Medicine*, **44**, 169-173.
- Walters, P. and Rosenblatt, T. (2008). Co-operation or Co-presence? The Comforting Ideal of Community in a Master Planned Estate. *Urban Policy and Research*, **26**(4), 397 - 413.
- Wener, R. E. and Evans, G. W. (2011). Comparing stress of car and train commuters. *Transportation Research Part F: Traffic Psychology and Behaviour*, **14**(2), 111-116.
- Wilkinson, R. and Marmot, M. (2003). *Social determinants of health: The solid facts*. World Health Organisation, Copenhagen.



Victorian Health Promotion Foundation  
PO Box 154 Carlton South  
Victoria 3053 Australia  
T +61 3 9667 1333 F +61 3 9667 1375

[vichealth@vichealth.vic.gov.au](mailto:vichealth@vichealth.vic.gov.au)  
[vichealth.vic.gov.au](http://vichealth.vic.gov.au)



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