

Children's everyday freedoms: Local government policies on children and sustainable mobility in two Australian states

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ABSTRACT

While the significant contribution of transport in greenhouse gas emissions is well researched, the pivotal role that children's transport plays in these trends is not fully understood. This paper assesses the potential of integrating the hitherto separate literature and policy bodies of sustainable travel planning with that of child friendly cities, in order to better inform policy development. Based on a review of literature on child friendly cities and sustainable travel, we have developed a new operational framework for child centred sustainable travel policies. The framework measures consideration given to sustainable travel in children's policies and promotion of children and young people's needs and rights in sustainable travel policies from the point of view of children as equal citizens. We then review 25 child friendly policy and guidelines and 19 sustainable travel policies from Australian local governments, using this framework. This policy review finds limited integration between policies on child and youth friendliness and sustainable mobility, despite the recognition of the reduced rates of active travel amongst children.

1. Introduction

A large and growing body of literature has investigated the relationship between sustainability and mobility. The inherent link between urbanization and transport technologies including mass car production has been widely discussed. This combined with cheap oil has afforded increased mobility which, in turn, has resulted in the development of unprecedented urban sprawl in cities across the world, particularly in affluent societies (Newman et al., 2009; Sharpe and Tranter, 2010).

Despite the increasing knowledge regarding the role of location, built environment and the provision of social and physical infrastructure on carbon intensive travel patterns, the contribution of children's transport in these trends has received limited attention. Research on children and their environments generally focus on the link between the growing trend of children's sedentary lifestyles and increased time spent in micro environments. In many of these interdisciplinary studies, the associated health issues such as obesity, diabetes and various cardiovascular diseases have been highlighted (Epstein et al., 2012; Giles-Corti et al., 2014; Rahman et al., 2011; Sallis et al., 2012; Villanueva et al., 2013). While a few scholars, notably Paul Tranter have discussed the link between child friendly cities and sustainable cities (Malone and Tranter, 2003; Tranter and Pawson, 2001; Tranter and Sharpe, 2008),

children's right to sustainable travel is not commonly considered in transport planning discourse, despite the fact that children are future environmental decision-makers.

This article calls for the integration of mobility related sustainability policies with child and youth friendly policies for two main reasons. Firstly, the increasing use of private cars to transport children (due to the contemporary lifestyles imposed upon them and associated environmental issues) requires greater attention in order to facilitate better informed policy making. Secondly, it is critically important to recognize the capacity of children and young people to be active citizens (Cook et al., 2015; Fusco et al., 2012; Horelli, 2007), change agents (Heft and Chawla, 2006; Malone, 2013; Malone, 2015) and indicators for successful cities (Enrique Penalosa quoted in Tranter and Sharpe, 2012) in order to achieve sustainable neighborhoods now and also to secure the changes needed for a sustainable future.

More specifically, this paper aims to answer the following research questions:

- 1) What is the degree of integration between policies relating to child friendly cities and policies relating to sustainable travel?
 - a) What consideration is given to children's mobility needs and rights and sustainable travel in the child friendly cities policies of Australian local governments?

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- b) What consideration is given to children's mobility needs and rights in Australian local government sustainable mobility policies?

Policies for child and youth friendly cities, along with sustainable travel plans and strategies across local governments in Victoria and South Australia (SA), are reviewed (using the HyperResearch 3.7.3 software). Local government areas were selected based on the presence of child friendly initiatives. For Victoria, all of the urban municipalities who were signatories to the Victorian Child friendly Cities and Communities Network are included (12 councils). In South Australia, councils that are part of the Child Friendly SA initiative are included (3 councils). This list represents a wide diversity of socio-economic and spatial characteristics according to the Australian Population and Housing Census in 2016.

First, the purpose and objectives of 25 Australian local government child friendly policy and guidelines in the context of consideration given to sustainable travel are examined. Second, 19 policies in relation to sustainable travel are reviewed in the context of their recognition and promotion of children and young people's role and needs and rights in these spaces from the point of view of children as equal citizens and change agents. The full list of policies reviewed is included in [Appendix 1](#).

2. Defining child and youth friendly precincts

The term 'child friendly' has been used to refer to the UNICEF Child Friendly Cities Initiative that is the embodiment of the *Convention on the Rights of the Child* (CRC) that was developed in 1989 ([UNICEF, 1989](#)). This definition asserts that a child friendly city is actively engaged in fulfilling the right of every young citizen (under the age of 18) to a wide range of standards, including their participatory rights in their communities as equal citizens, their rights to be safe and protected from harm and their rights to have environments supporting their needs to learn, play and be social ([UNICEF, 2013](#)).

Despite the fact that the term 'child friendly' is frequently referred to in the policy and research literature, 'child friendly' is still a concept difficult to define precisely. Firstly, the age range covered with the term varies across the literature. Although the *Convention on the Rights of Children* defines a child as any human under the age of eighteen, in the literature the term commonly represents pre-schoolers and primary school aged children (0–12 years). Throughout this article, we use the term 'child friendly' to cover all children and young people aged from 0 to 18 years, including plans for young people aged 12–18. In addition, we use the term 'youth friendly' to refer to local government youth plans that target the age group of 19–25 years.

The multidimensional nature of child friendliness has been discussed by several scholars and academics. The UNESCO initiated project *Growing Up in an Urbanising World*, lists both the positive and negative indicators for 'child based environmental quality' ([Chawla, 2002](#)). In relation to neighbourhood environment, the positive indicators such as 'safety and free movement', 'peer gathering places', 'varied activity settings' and 'safe green spaces' all directly relate children's mobility to their local environments. In contrast, 'heavy traffic', 'lack of gathering places' and 'varied activity settings' indicate low environmental quality for children. 'Social integration' and 'cohesive community identity' are also closely associated with children's non-motorised mobility whereas 'social exclusion' can be experienced by children who mostly travel by car as a result of loss of opportunities for social interaction ([Chawla, 2002](#), p.229).

[Chatterjee \(2005, p.9\)](#) questions if 'child friendliness' is a place or the experience. She argues that child friendly places require a 'diverse range of physical and social settings from the immediate environment of the child to citywide locations'. She discusses the term of 'children's friendship with places' in the context of 'affordances' and also emphasises the importance of 'accessibility' for children. [Oktay \(2004\)](#) also

highlights the importance of 'hierarchy of public spaces from the front door to the street, to the public places and out to the countryside' because of the specific functions they afford and sense of safety and community they generate (p.33). Similarly, the problems associated with creating age specific places has long been recognized. For example, [Woolley and Johns \(2001\)](#) explain that local governments providing a skate park could result in outlawing skateboarding in the other places of the city. It was argued that play is not separated from the flow of everyday life and it is important to embed playfulness in children's everyday places ([Christensen et al., 2017](#), p. 154). The spatial and temporal containment of play in playgrounds or skate parks, counteract with these notions.

More recently the importance of equal and affordable access to sustainable mobility for all has been included in the *UN New Urban Agenda* (article 34). Providing services in a wide range of areas including sustainable mobility that are responsive to the rights and needs of children and youth has been affirmed ([United Nations, 2017](#)).

3. Situating children in sustainable mobility discourses

The term 'sustainable travel' is often used interchangeably with the terms 'sustainable transport' and 'active travel/transport'. The term encompasses the activities of walking, cycling and usage of public transport. Given the widening presence of 'scootering' and 'skating' particularly amongst children, the definition of 'sustainable travel' can also be broadened to include these activities. Throughout this article we use the term 'sustainable travel' to refer to walking, cycling, scootering, skateboarding and public transport as opposed to 'active transport' which tends to be a dichotomous term to imply that public transport is a non-active mode ([Easton and Ferrari, 2015](#)).

The 'journey to work' is the focus of much of the current literature pertaining to sustainable travel. In the Australian context, this is particularly evident in the dissemination of official statistics. Apart from infrequent household surveys, the travel patterns of children, or the parents' journeys accompanying their children to school, do not appear in these statistics.

Historically, since the 1987 Brundtland Report ([WCED, 1987](#)) which defined sustainable development as a 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs', numerous studies have focused on the impact of climate change on children. Central to these studies was the fact that children, particularly in developing countries, would be most affected by environmental decline. It has also been recognized that children are at the centre of this definition by the UN not only as 'future generations' but as the 'change agents' and key stakeholders in moving towards sustainability ([Chawla, 2009](#); [UNICEF, 2015](#); [Malone, 2013](#); [Tranter and Malone, 2008](#)).

The importance of 'habitual learning' ([O'Brien et al., 2000](#); [Tranter and Pawson, 2001](#); [Lehner-Lierz, 2003](#)) in earlier ages has been stressed in some studies and also by the United Nations. For example, in its 'children on the front line' document (2015, p.76), UNICEF state that 'sustainable thinking from a young age onwards is more likely to have a lasting effect than trying to modify already ingrained habits later in life'. Similarly, the habitual nature of travel behaviours and the difficulty surrounding overcoming this path dependence is widely acknowledged ([Tranter and Pawson, 2001](#); [Chatterton et al., 2015](#); [Thynell and Wolmar, 2014](#); [Schwanen et al., 2012](#)).

4. Towards a co-benefits approach: Child and youth friendly - and sustainable

Both 'sustainable travel' and 'child friendly cities' have recently been the focus of large body of research and practice. Due to the fast paced urbanization and increased social, economic and environmental pressure on our cities, car dependence is likely to remain as the focus of urban research in the coming decades. Likewise, the health and welfare

related issues of contemporary childhood imposed by fast changing natural, social and built environment conditions are likely to remain on the research agenda. According to UNICEF (2015), as many as 60% of all urban dwellers globally will be under the age of 18 by 2030. In light of such an inseparable connection between children and urban life, the separation in the existing accounts of ‘sustainable travel’ and ‘child friendly cities’ on common issues of environmental and social sustainability is problematic. The policies to transform our cities towards more sustainable, inclusive and resilient cities can gain much through utilizing the experiences of their young citizens.

It is now well established from a range of studies that certain modes of travel have particular advantages for children. Typically, these modes, which include active transport and public transport, have certain features which assist children with the development of their social, emotional and physical wellbeing. Tranter (2016) lists three reasons why active and public transport can be considered as child friendly: ‘children prefer them, children can use them independently and when adults use them this does not make the city less child friendly’ (p.232). Similarly, Gill (2008) refers to walking, cycling and public transport as child friendly modes. Non-motorised travel modes also provide unique opportunities for physical activity, active play, social interaction and social capital, environmental awareness and contact with nature (Gilbert et al., 2017; Schranz et al., 2014; Giles-Corti et al., 2010; Mackett and Paskins, 2008; Gill, 2008; Mitchell et al., 2007), as opposed to passively sitting in a car where the surrounding environment is perceived as a backdrop.

The social, emotional and mental problems associated with the loss of play opportunities in the highly organised and supervised lifestyles of today's children have also been highlighted by various researchers. These researchers articulate the prevalence of a loss of excitement and essential life skills such as confidence, creativity, negotiation and sense of belonging due to parents removing exposure to various risks in children's lives (Gray, 2013; Gill, 2008; Hillman, 2006; O'Brien, 2003). As previously stated in Section 2, children's rights to have local environments supporting their needs to learn, play and be social has been recognized (UNICEF, 2013; Whitzman, Worthington & Mizrachi, 2010). Restricting children's mobility by the predominance of car use counteracts these basic rights. By contrast, active transport and public transport create numerous opportunities to exercise these rights.

The speed of cars is also an important theme both in relation to child friendliness and sustainable mobility. The slow movement of cars has been listed as a feature of sustainable mobility by Banister (2008) and various studies have affirmed the association of slow car speeds with children's free movement in their local environments (Wright et al., 2017; Warner & Rukus, 2014; van Loon, Nettel fold and Naylor, 2014). In many European cities, this was acknowledged by the implementation of speed limits for cars at 30 km/h or less (i.e. at walking speed) (Wright et al., 2017; Hickman et al., 2013; Creutzig et al., 2012; Pucher and Buehler, 2010).

In the absence of a single definition, we have developed an operational framework of child friendly precincts in relation to child friendly environments and sustainable mobility based on the literature review undertaken (Table 1). This operational framework is a theoretical

proposition, particularly in identifying the conditions of child friendliness in the built environment in the context of sustainable travel as single methodology. More broadly, this framework would be useful for local and state governments to streamline the assessment of child friendliness in their sustainable travel policies, as it directly links the quantifiable built environment variables to child friendliness. It offers a set of built environment design variables within five domains of land use/built environment, provision of nature, local accessibility and mobility, provision of services and semi-public third places.

To sum up, the proposed framework embodies a multitude of factors which are recognized as key concepts in creating sustainable and child friendly precincts such as accessibility and affordances of public places, a wide range of activity areas, integration of land use and transport with children in mind. With this, we argue that child friendliness can, and should, be integrated into mainstream planning and transport policies, particularly those with a sustainable travel focus.

5. Policy review

5.1. Demography of the case study areas

Comparatively speaking, Australia has limited local government capacity to affect social and environmental change (Sellers and Lidström, 2007). For example, in terms of the total number of Australian public employees, the share of local governments in 2017 was 9.7% compared to 78.1% for state governments and 12.3% for the Commonwealth Government (ABS, 2017).

Most major metropolises, with the exception of Brisbane, have dozens of local governments, generally with populations below 100,000. In this case study, the majority of the councils selected had relatively large populations (Table 2). Only 3 out of 15 councils had a total population below 100,000 people. Amongst the selected local government areas, the City of Melton (VIC), an outer ring area with mixed socio-economic status (SES) had the highest proportion of children and young people with 31.2% of the population aged 0 to 19 years. It was followed by another outer ring local government area with mixed SES, the City of Whittlesea (VIC) with 27.3% of the population aged 0 to 19 years. The location of each council area was given in Figs. 2–4.

The local government area with the lowest proportion of 0–19 years olds (14.5%) was the wealthy, inner city Victorian council, the City of Port Phillip. The proportion of this age group varied between 20% to 26% across other local government areas which were similar to the metropolitan Melbourne and Adelaide values of 24.3% and 23.6% respectively. With the exception of the City of Boroondara (VIC) which had the highest proportion of people aged 15–19 years, the 0–19 age group cohort was most likely to be concentrated in the low socio-economic, outer ring or regional local government areas.

In terms of the school density for each council area (number of schools per sq. km), the City of Boroondara (VIC) had the highest school density (0.97 schools/sq. km) followed by the City of Port Phillip (VIC). The regional and outer council areas including Ballarat (0.02 schools/sq. km), Greater Bendigo (0.06 schools/sq. km) and the City of Melton (0.06 schools/sq. km) in Victoria had the lowest school density. Though

Table 1
Operational framework of child friendly precinct design in the context of built environment and sustainable travel.

Land use/built environment	Mixed use (e.g. presence of local retail), fine grained (block size), mixed housing types, high school density, proximity to public transport routes/nodes, clean, litter free, accessible public places that welcome informal play, points of interest, skateboarding friendly public places (as opposed to single purpose skate parks only)
Provision of nature	Presence of nature (river, forest, wildlife), parks, nature play grounds, pocket parks, community gardens, walking and cycling trails
Local accessibility and mobility	Active frontage allowing passive surveillance, low speed limits, continuous sidewalks, bike lanes, traffic calming, local travel routes, trees, plants along the street
Provision of services	Basic services for families e.g. local shops, childcare centres, primary and secondary schools, libraries, community and recreation centres and health services in close proximity or within easy access via active transport and public transport
Semi-public third places	A hierarchy of safe, car free public spaces which relate to buildings and their entrances and surrounds e.g. from the front doors, foyers, corridors, verandahs to the street, the square, the park, the nature strips

Table 2
 Socio-spatial characteristics of selected local government areas in Australian states of Victoria and South Australia (ABS, 2017; *Annual Report 2016–2017 for each local government area, Australian Schools Directory, 2018, State of Victoria, 2018).

Local government areas in the Australian states of Victoria (VIC) and South Australia (SA)	Socio-spatial characteristics	Proportion of children aged 0–4	Proportion of children aged 5–14	Proportion of children aged 15–19	Proportion of 0–19 year olds	Median household income (weekly) \$	Medium to High Density ^a (%)	Travel to work (% of car as driver)	Total population	*Number of employees (FTE)	Number of council staff per 1000 residents (0–19)	Number of council staff per 1000 residents (total population)	Total pop'n 0–19	Number of schools	School density per council (no of schools per sq. km)
City of Melton, (2017), VIC	Mixed socio-eco, outer ring	8.5	16.1	6.6	31.2	1542	4.6	69.8	135,443	484	11.5	3.6	42,232	34	0.06
City of Whittlesea, (2017), VIC	Mixed socio-eco, outer ring	8.2	13.2	5.9	27.3	1444	9.1	69.2	197,490	797.7	14.8	4.0	53,793	48	0.10
City of Ballarat, (2017a), VIC	Low socio-eco, regional	6.5	12.6	6.5	25.6	1160	5.1	70	101,689	662.1	25.4	6.5	26,071	46	0.06
City of Greater Bendigo, (2015a), VIC	Low socio-eco, regional	6.4	12.8	6.4	25.6	1184	3.0	70.6	110,479	651.9	23.1	5.9	28,264	51	0.02
City of Onkaparinga, (2017), SA	Low socio-eco, outer	6.2	12.5	6.2	24.9	1194	3.6	69.7	166,766	691	16.6	4.1	41,605	65	0.13
Brimbank City Council (2017), VIC	Low socio-eco, middle ring	6.7	11.8	6.3	24.8	1263	9.9	66.3	194,315	853.4	17.7	4.4	48,114	59	0.48
City of Boroondara, (2017), VIC	High socio-eco, inner city	4.6	12.6	7.1	24.3	2083	31.7	52	167,232	757.2	18.6	4.5	40,719	58	0.97
Town of Gawler, 2017, SA	Low socio-eco, outer	5.8	11.9	6.4	24.1	1112	2.4	72	23,035	121.9	21.9	5.3	5555	8	0.20
City of Greater Dandenong, 2017a, VIC	Low socio-eco, outer	6.9	11.2	5.9	24	1168	16.3	67.9	152,052	711.2	19.5	4.7	36,475	43	0.33
City of Whitehorse, 2017, VIC	Mixed socio-eco, middle ring	5.4	11.4	6.4	23.2	1507	16.3	57.3	162,080	706.4	18.8	4.4	37,591	52	0.81
City of Campbelltown, 2017, SA	Mixed socio-eco, inner/middle ring	5.4	11	6	22.4	1249	11.2	65.6	50,159	136.9	12.2	2.7	11,228	16	0.67
Moonee Valley City Council, 2017, VIC	High socio-eco, inner/middle city	5.7	11.1	5.4	22.2	1635	33.8	56.8	116,674	797.3	30.8	6.8	25,900	38	0.86
Maribyrnong City Council, (2017), VIC	Mixed socio-eco, inner city	6.9	9.1	4.4	20.4	1551	40.5	49.7	82,285	493	29.3	6.0	16,822	22	0.71
Moreland City Council, (2017), VIC	Mixed socio-eco, inner/middle ring	6.3	9.7	4.4	20.4	1503	32.1	47.6	162,564	811.1	24.4	5.0	33,209	44	0.86
City of Port Phillip, (2017), VIC	High socio-eco, inner city	4.8	6.8	2.9	14.5	1842	77.7	41.7	100,863	708	48.2	7.0	14,675	19	0.90
Greater Adelaide		5.9	11.6	6.1	23.6	1265	12.0	66							
Greater Melbourne		6.4	11.9	6	24.3	1542	21.3	60.2							

^a sum of semi-detached/townhouses with two or more storey and flat and apartments.

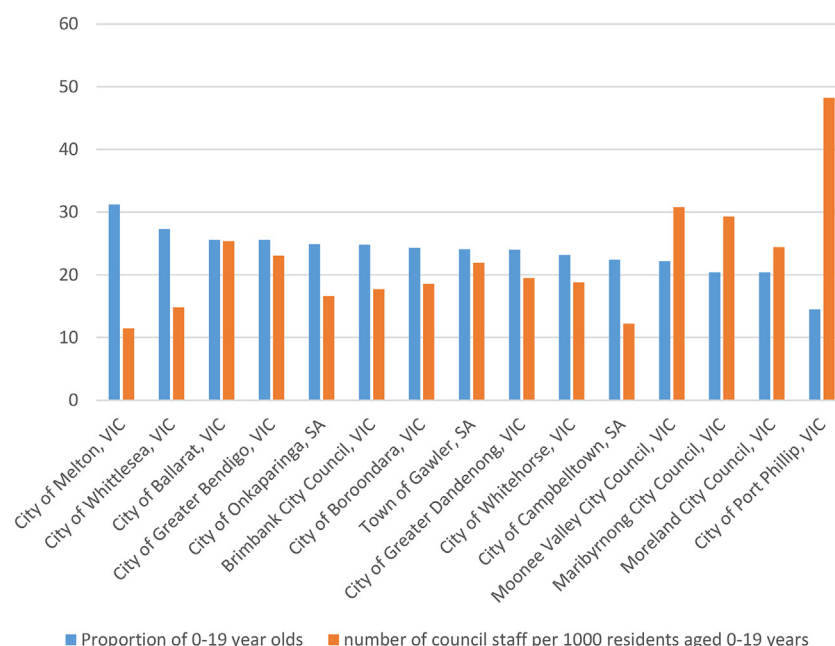


Fig. 1. Proportion of 0–19 year olds and number of council staff per 1000 residents aged 0–19.

the school catchment areas vary (by school type and individual schools policies) and extend beyond the respective council areas, the school density measurement is indicative of the size of catchment areas and potential trip lengths as well as the increased choice of local schools for the residents in those areas. That is, higher school density indicate smaller catchment areas and higher number of school choices and high likelihood of attending a local school.

The size of council resources varied widely across the chosen local government areas. The number of council staff per 1000 residents was the highest for the City of Port Phillip, Moonee Valley City Council, the City of Ballarat and Maribyrnong City Council (Table 2). The number of council staff per 1000 residents aged 0 to 19 years was particularly high for the City of Port Phillip which had the lowest proportion of this age group (48.2 staff per 1000 residents aged 0–19) (Fig. 1).

The housing density varied significantly amongst the councils reviewed. The City of Port Phillip displayed the highest housing density followed by other inner city or middle ring councils.

As mentioned previously, the travel patterns of children are not included in the official statistics in Australia to determine the level of car dependence amongst families with children. However, the journey to work data (travel to work by car as a driver) is a good proxy indicator of general car dependence for each local area. The local governments situated in the outer metropolitan or regional areas with lower socio-economics exhibited high car dependence rates.

5.2. How do cities approach child and youth friendliness?

The majority of councils reviewed have children's plans which targeted the age group of 0–12 years (e.g. City of Greater Dandenong, 2015a; City of Whitehorse, 2014a) and a youth plan for the age group of 12–25 years (e.g. City of Whitehorse, 2014b; Town of Gawler, 2013) or 10–25 years (City of Onkaparinga, 2013). Some of the councils, including the City of Greater Bendigo and the City of Boroondara had plans to cover all children and young people from birth to age of 25. The City of Port Phillip was the only council with the separate plans and strategies targeting three different age groups in recognition of different needs of different age groups, namely 0–8, 8–11 and 12–25. For Maribyrnong City Council, there were no children or youth plans available at the time of writing of this paper.

The majority of children and young people's plans were developed

for a period of 4–5 years. In terms of what child and youth friendly plans draw upon, state and federal government as well as international guidelines were commonly utilized as the founding principles of these plans. The state and federal government directions in relation to children's development were the basis of the majority of these plans. Brimbank City Council (2015a; 2015b), Moonee Valley City Council (2014; 2015; 2016), the City of Boroondara, 2015 in Victoria, and the City of Campbelltown (2015a; 2015b) in SA specifically referred to UN Convention on the Rights of the Child as part of their guiding principles.

In addition, community consultation comprising surveys with children and young people along with parents and various service providers informed the development of many of these plans. During the consultation process, children were asked to report on the key issues concerning them along with the activities they enjoy in their respective council areas.

In relation to the main objectives and actions of child and youth friendly plans and guidelines, broad statements such as 'improving the health and wellbeing of children and their families' were frequently used. A few councils included highly detailed actions including location specific ones. Moreland City Council provides a good example of the practice of strong advocacy with state governments for better infrastructure for children. Under the theme of children related infrastructure, the action list includes the following: 'Council will advocate for increased investment by the Commonwealth and State Governments in publicly provided children's services':

- i. Investment in new early years facilities at the community hub in development at the former Glenroy Primary School is the main priority.
- ii. Provision of new facilities – including a primary school – to meet projected demand in Brunswick and East Brunswick is a 'medium term priority' (p. 14, Moreland City Council, 2016).–

5.3. Do child friendly initiatives recognize children's role in sustainable mobility?

In total, 'health' and 'education' were the main policy issues across all children's and young people's plans reviewed. More specifically, 'health' and 'wellbeing' were used 1932 times in total, making it the fourth most frequently used word amongst all words (Table 3). It

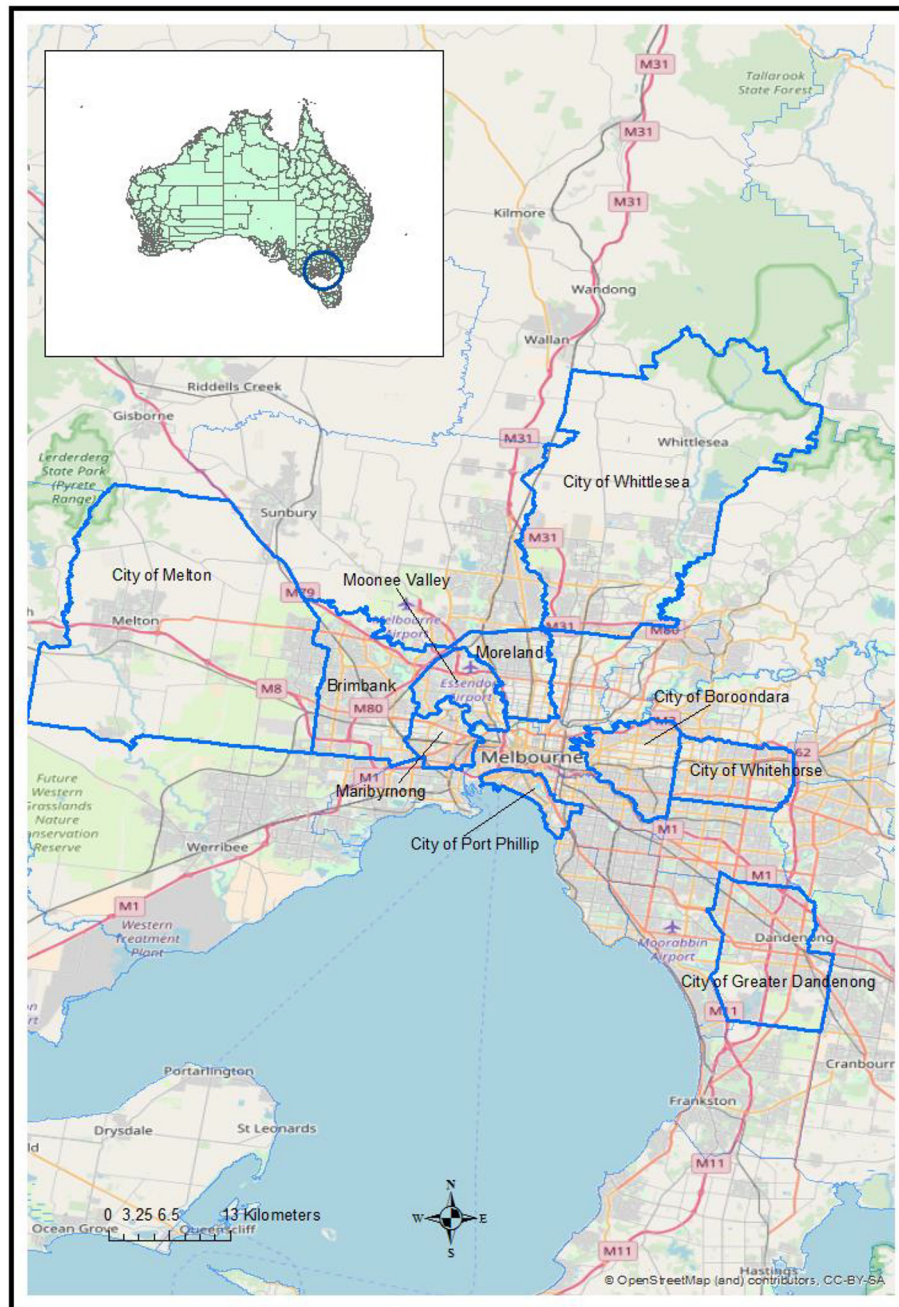


Fig. 2. Selected local government areas in Victoria (metropolitan).

appears that councils with a high proportion of children aged 0 to 19 years, particularly those situated in regional or outer metropolitan areas (e.g. *City of Ballarat*, 2015; *City of Greater Bendigo*, 2015b; *City of Melton*, 2014a; 2014b; *City of Whittlesea*, 2013) were more likely to prioritise health and education than their counterparts in inner and middle city areas. Health and wellbeing was also emphasized by the *City of Boroondara* which had the highest school density and the highest proportion of children amongst the inner-city councils.

Though most councils referred to where children and youth plans sit in their broader policy environment, 6 out of 14 councils (namely the *Moreland City Council*, 2016, the *City of Greater Bendigo*, 2011, 2015b; 2015c the *Moonee Valley City Council*, 2015; 2016, the *City of Melton*, 2014a; 2014b, the *City of Port Phillip*, 2012; 2014a; 2014b; 2014c and the *City of Whittlesea* 2013) specifically claimed these policies to be guiding frameworks for various other policies rather than a standalone policy. These plans included significant detail on how children and

youth plans would inform the other activities of Councils.

These councils were also more likely to provide details and specific goals for addressing children's and young people's mobility needs. Amongst these councils, active transport to/from school for primary school aged children was frequently mentioned, while public transport had more weight in youth plans.

Although 18 out of 25 plans reviewed (by 12 out of 14 councils) referred to children's mobility and active transport and some highlighted the precipitous decline in the rates of active transport to school, the context in which they were mentioned was rather broad (Table 4). There were 8 plans and strategies (out of 25) that recognized children's mobility needs in more specific terms. For the majority of these (5 out of 8), the primary focus was on the journey to school, particularly for the Early Years Plans. The *Moonee Valley City Council* (2014), the *City of Greater Bendigo*, 2017 and the *City of Port Phillip* (2012) provide examples of plans with greater detail on the importance of

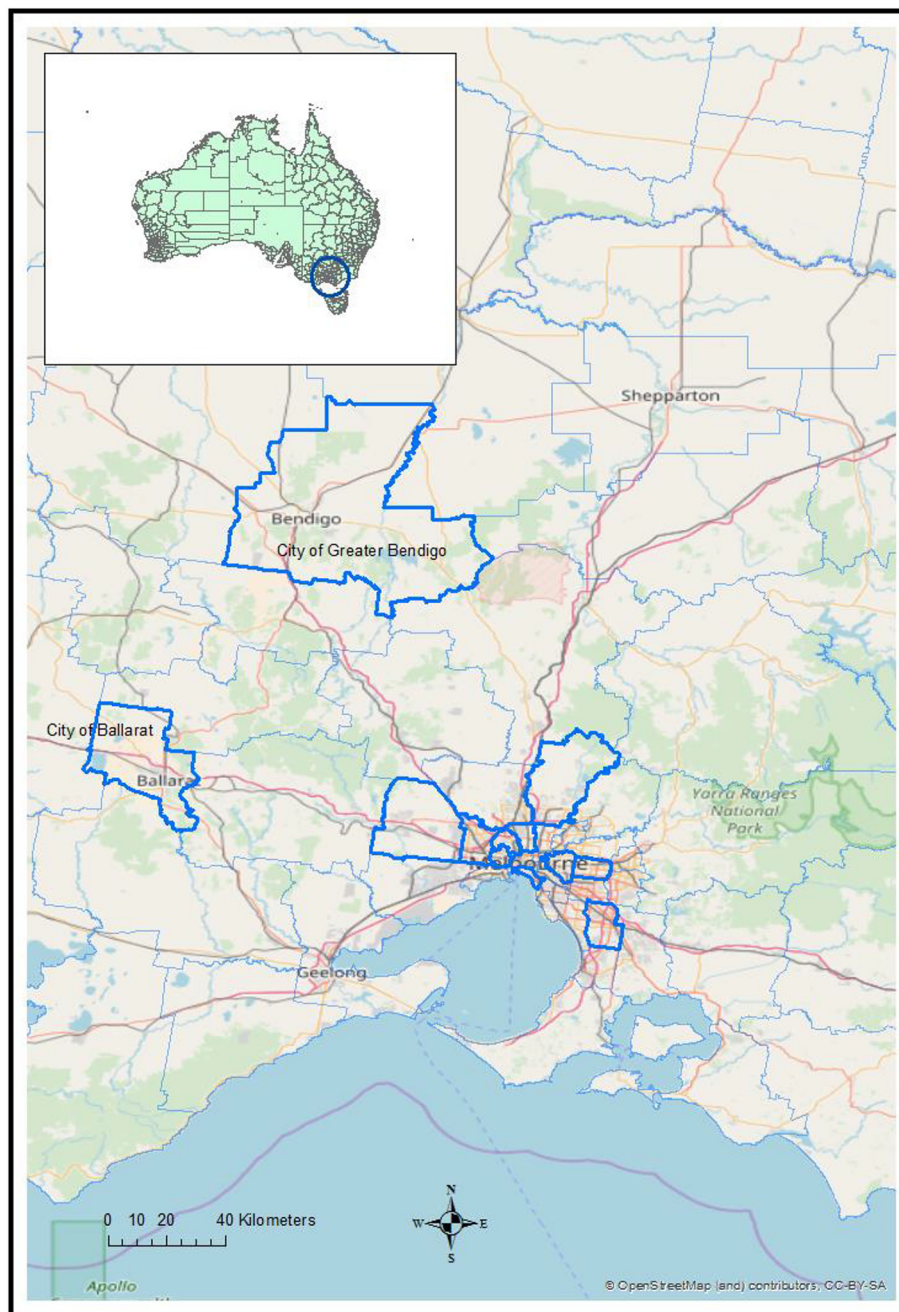


Fig. 3. Selected local government areas in Victoria (regional).

children's mobility and how they could be improved. However, by and large, these policies all include broad strategic objectives rather than easily measurable local environment variables. For example, the Moonee Valley City Council's *Early Years Plan 2014–2022* (p. 9) includes the following strategic objectives:

Generate child-friendly neighborhoods and public spaces that encourage active and independent children

- 2.1 Advocate and generate a child friendly and intergenerational response to urban design and the natural and built environment.
- 2.2 Progress the Complete Street principles to rethink, reprioritise and reorder streets to encourage public transport, safe walking and cycling.
- 2.3 Identify opportunities to activate public space that supports children's creativity, independence and the freedom to safely explore.

The City of Greater Bendigo's *State of Children's Report* (City of Greater Bendigo, 2011) and the City of Port Phillip's *Happy, Healthy and Heard: Youth Commitment Plan* (City of Port Phillip, 2014b) also shows high regard for children's and young people's independent mobility and the importance of independent access to various public places. This was in line with the definition of child and youth friendliness articulated by Chawla (2002) and Chatterjee (2005) and the operational framework we proposed (Table 1). For example, the City of Greater Bendigo's *State of Children's Report* makes specific references (and provided details) to child specific atlases and interactive mapping tools within their plans. Children's favorite places within the community are also highly recognized by this policy.

Similarly, the City of Port Phillip's *Youth Commitment Plan 2014–2019* (City of Port Phillip, 2014c) provides a detailed action plan on 'creating physical infrastructure that provides young people opportunities to have fun, connect socially with their peers, learn and get

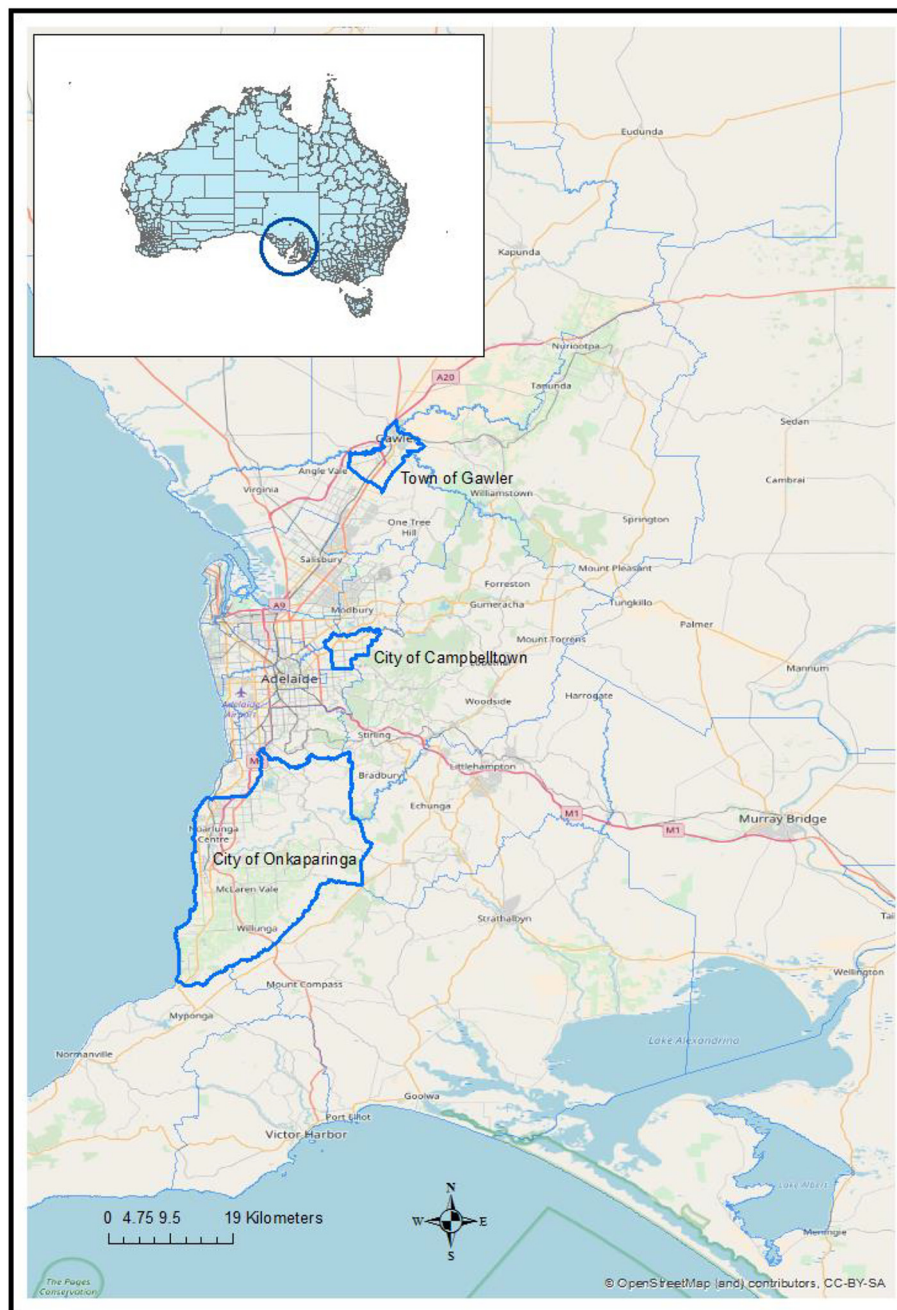


Fig. 4. Selected local government areas in South Australia.

Table 3
Most frequently used words in Children's and Youth Plans (10 highest).

Term	Occurrences
Child/Children	4728
Services/service	2453
Young people	2053
Health/wellbeing	1932
Community	1837
Families/Family	1727
Education/school/learning centre/kindergarten	1376
City	1239
Youth	1139
Development	845

involved with their community and/or access support services' (p. 7).

In terms of the influence of car traffic and speed limits on children's movements, only the *Children and Young People's Strategy* by the [City of Boroondara, 2015](#) specifically refers to this issue. It recognizes that speed limits around built up areas and schools create safety issues for children. The plan lists an action item to 'improve community safety by continuing to advocate for the introduction of 40 km/h speed limits in identified shopping strips' (p.77).

Objectives related to the improvement of public transport were recognized within 11 out of 25 plans and strategies. The majority of these plans were Middle Years or Youth Plans (7 out of 11). Some of these plans also refer to social isolation within the public transport poor areas. This issue was also highlighted during the consultation with young people prior to the development of various youth plans such as the importance of young people without a driving licence to get around independently (Moonee Valley City Council's Strategy for Young

Table 4

Frequency of words related mobility, sustainable travel, active transport/travel in Children's and Youth Plans.

Sustainable mobility related terms	Word count	Council
Mobility	8	Bendigo, Port Phillip, Whittlesea, Campbelltown
Active transport/sustainable transport	12	Bendigo, Melton, Dandenong, Port Phillip, Moreland, Boroondara, Whitehorse
Walk/walking	60	Moonee Valley, Bendigo, Boroondara, Brimbank, Dandenong, Whitehorse, Campbelltown, Melton, Moreland, Onkaparinga, Port Phillip
Cycle/cycling/bike	157	Moonee Valley, Bendigo, Boroondara, Campbelltown, Dandenong, Whitehorse, Moreland, Onkaparinga, Port Phillip, Whittlesea
Public transport	56	Moonee Valley, Bendigo, Boroondara, Brimbank, Melton, Dandenong, Whitehorse, Onkaparinga, Port Phillip, Whittlesea

People).

Many councils whose plans were reviewed also have standalone web pages in relation to resources on active transport to school. Some councils with high proportions of children such as the City of Melton and the City of Boroondara have dedicated Active Transport Officers working with schools and various service providers.

5.4. How do cities approach sustainable mobility?

An Integrated Transport Strategy was the most common form of policy dealing with sustainable transport (e.g. City of Boroondara, 2006; City of Melton, 2015; Moonee Valley City Council, 2008). There were 7 councils with specific walking and cycling strategies (Brimbank City Council, 2016a; City of Ballarat, 2017b; City of Campbelltown, 2007; City of Greater Dandenong, 2015b; 2017b; City of Port Phillip, 2011a; City of Whitehorse, 2016; City of Whittlesea, 2016). Four of them had these plans in addition to their broader integrated transport strategies (City of Port Phillip, 2011a; 2011b; Maribyrnong City Council, 2014a; 2014b; City of Whitehorse, 2011; 2016; Brimbank City Council, 2016a; 2016b). For Gawler (SA), the topic of sustainable transport is included in their *Environmental Management Plan* (Town of Gawler, 2016). The timeframe for these transport strategies varied between 4 and 10 years. The Onkaparinga Council (SA) did not have any transport plans accessible to public at the time of writing this report.

In terms of the structure of these integrated transport strategies, the most commonly used themes were walking/cycling, public transport, roads/car parking and land use. Most of these were informed by Council Plans, with an aim to sustainably address the transport needs of their growing cities.

In terms of urban design related actions for delivering sustainable transport outcomes, there were varying levels of detail in each plan. Most plans use broad terms such as 'encourage cycling', 'promote active transport to/from schools' and 'identify and implement best design practice for cyclists and pedestrians'. Some of these plans refer to separate urban design frameworks for the implementation of urban design principles promoting sustainable transport.

In total, there were 6 out of 19 plans which used some specific urban design principles in relation to sustainable transport. Most of these (4) were specific walking and cycling plans as opposed to the integrated transport and land use plans (2).

The City of Whittlesea's *Bicycle Plan 2016–2020* was amongst the

few policies with a content closest to the built environment variables we displayed in Table 1. As such, it comprises various sustainable transport related objectives followed by detailed, location-based action plans. For example, under the objective of 'better recreation trails', three problem areas are identified: 'gaps and missing links', 'poor quality surfaces' and 'inadequate lighting'. These are followed by detailed, location-based actions along with the relevant partners and the priority ranking: 'build/upgrade major recreation trails to a suitable all-weather surface, particularly Darebin Creek Trail (Metropolitan Ring Road to Findon Road)' (p. 31).

The recognition of skateboarding and scootering was not apparent across the sustainable transport strategies reviewed. In total, the terms related to skateboarding and scootering were used 18 and 13 times respectively, by all plans and strategies reviewed. Most of the time, the context for the skateboarding was in the form of an improvement to a specific skate park location as opposed to the consideration given to the needs of skateboarders throughout the city in the given policy. The term 'scootering' was frequently used in the context of 'mobility scooters' for people with special needs and in one occasion it was used in a negative form e.g. walking issues created by cyclists and scooters through the misuse of footpaths.

5.5. Do sustainable mobility policies refer to children and young people and their (specific) mobility needs and car dependence?

Out of 19 plans and strategies reviewed, there were 14 plans with references to children's sustainable travel patterns. However, most were in a broad context and usually in the form of recent trends of reduced walking and cycling rates to and from schools.

There were fewer references to 'young people' than 'children' across the sustainable policies reviewed. In total, the term 'child/children' was referenced 209 times while 'youth, the young, young people' were used 48 times (Table 5). Similarly, there were more references to 'primary schools' compared to 'secondary schools' (53 and 23 times respectively). Most of these councils also used the term 'family/families' in association with preschoolers or primary school aged children e.g. families with young children.

It appeared that councils with less car dependence such as the City of Port Phillip, Maribyrnong City Council and the City of Boroondara were more likely to recognize families with children compared to the councils with higher car dependence. However, the presence of higher

Table 5

Frequency of words related to children and young people in Sustainable Travel plans.

Term	Word count	Councils
Child/children	209	Ballarat Cycling Strategy, Bendigo Connect, Boroondara (highest no), Campbelltown, Dandenong (Cycling, Walking), Maribyrnong (ITS and Bicycle), Moonee Valley ITLUS, Moreland, Melton, Port Phillip (Bike and Transport Strategy), Whitehorse (ITLUS and Cycling), Whittlesea
Youth/the young	30	Bendigo, Boroondara, Gawler, Dandenong (Cycling and Walking), Melton
Young people	18	Bendigo, Boroondara, Dandenong (Cycling and Walking), Port Phillip
Family/families	44	Ballarat, Bendigo, Boroondara, Dandenong (Walking and Cycling), Maribyrnong (ITS and Bicycle), Moreland, Whitehorse (ITLUS and Cycling)
School aged	8	Ballarat, Bendigo, Boroondara, Whitehorse (Cycling)
Primary school	53	Bendigo, Boroondara, Campbelltown, Dandenong (Walking), Maribyrnong (ITS and Bicycle), Moonee Valley, Melton, Whitehorse (ITLUS), Whittlesea
Secondary school	23	Bendigo, Boroondara, Dandenong (Cycling), Maribyrnong (Bicycle), Moonee Valley, Melton, Whitehorse (ITLUS and Cycling)

SES and a greater availability of resources (high ratios of staff/residents) within these councils is likely to be more relevant than the location and the extent of car dependence.

In fact, socio-economic characters of the local government areas seemed to be indicative of the reference to children, particularly in the context of the journey to school. As such, councils with higher SES were more likely to refer to school related travel patterns in their plans. There was no apparent relationship between the proportion of children and young people and the recognition of children and young people in these councils' sustainable travel plans however there was a relationship between increased recognition of children in these plans and higher school densities.

The context in which young people were most commonly mentioned was regarding the lack of car ownership. Many policies refer to the presence of social disadvantage and limited mobility due to not owning a car for the young and elderly under the section of equity and social inclusion. A few plans such as the City of Greater Bendigo's *Connecting Greater Bendigo Integrated Transport and Land Use Strategy*, elaborate on this by linking this statement to their public transport related objectives: 'Many in the community do not drive private cars: young people, elderly people, those unable to drive or without the financial means to run a car. They are disadvantaged by developments which create a reliance on private vehicles. Providing equity and inclusion means ensuring everyone can access transport that is relevant to their needs and circumstances' (p. 22).

In terms of children's mobility needs in relation to the access to a range of environments as opposed to just schools as we emphasized in the new operational framework, the City of Greater Bendigo's *Integrated Transport and Land Use Strategy* is a good example. This plan regards children's active transport to various community places highly and includes information on various child friendly spatial tools adopted by Council, such as *Community Compass*.

Similarly, the Moreland City Council's *Integrated Transport Strategy 2010–2019* comprises a detailed action plan to promote active transport (walking and cycling) amongst children, particularly through primary schools. Their plan includes a trial to introduce tighter parking restrictions within the immediate school vicinities (Moreland City Council, 2010).

The impact of car speed on the safety of pedestrians and cyclists has been emphasized by nearly all of the sustainable travel plans. In terms of speed limit reductions to promote sustainable mobility, 40 km/h is the most commonly recommended speed limit in their action plans. Though three plans refer to the European practice of 30 km/h speed limits in urban areas, only *Maribyrnong Integrated Sustainable Strategy* includes an action to adopt this speed limit:

'In the vicinity of schools and through activity precincts advocate for part-time 30 km/h speed limits' (p. 42).

The City of Ballarat's *Cycling Action Plan* (City of Ballarat, 2017b) also refers to an assessment matrix to be used for cycling related projects with a specific question on children's cycling: 'Does the project encourage people to ride their bike more? Project must encourage people of all ages and abilities to ride more often. This includes catering for children and groups that are less mobile, such as the elderly' (p. 23).

In terms of the policy context and how these sustainable transport strategies interacted with other council plans, there were only three plans that specifically listed a Children's Plan within the list of other relevant policies. These councils include the *City of Port Phillip* (2011b) (Sustainable Transport Strategy), the *City of Greater Dandenong*, 2017b (Cycling Strategy) and the *City of Whitehorse* (2016) (Cycling Strategy).

Those plans that refer to children's journey to school and a high reliance on private cars tend to focus on the health and traffic issues associated with these trends. Maribyrnong's *Integrated Transport Strategy* seems to be the only plan which explicitly recognizes the capacity of schools and children in creating and sustaining the behavior change

towards sustainable travels:

'School travel plans are a structured approach to creating a culture of walking and cycling at a neighbourhood level - supported by local infrastructure improvements. As with all travel planning, school travel plans follow a set process designed to gain early and sustained stakeholder acceptance and support and develop clear policies and programs to induce behaviour change. The City of Maribyrnong can use school travel plans not only to bring about immediate behaviour change amongst the target audience of children and their parents, but also to "lock in" the gains of this behaviour through better local infrastructure as well as policy changes' (Maribyrnong City Council, 2014b; p. 112).

5.6. Children's right to sustainable travel: who makes this decision?

In Australia, state governments are responsible for making and implementing policies in relation to primary and secondary schools, hospitals, major roads, public transport, public housing, and social services. The local governments work in partnerships with the state governments in most of these areas including education, health and transport. More specifically, in accordance with the state government planning and development law, they are responsible for producing policies and guidelines and assessing most of the development applications in their respective council areas.

Despite being the smallest part of the three-tier government structure, it is evident in the policy review that local governments play a critical role in governing sustainable travel within their council areas as well as the creation of child and youth friendly environments. Therefore, it is possible to say that local governments have a responsibility to address children and young people's mobility needs in a sustainable and democratic manner where their voices are included. However, this policy review reveals a fragmented approach to this issue and a lack of a clear policy domain as to where and how this is being addressed, particularly for children older than 12 years.

Within local government child and youth friendly guidelines, the focus has been primarily on health and education with relative neglect of children's mobility needs and rights. Similarly, children's sustainable mobility rights, particularly for those older than 12 years are not explicitly recognized and addressed within local government transport policies.

Though the children and youth plans reviewed widely recognized children and youth as equal citizens, the explicit recognition of children's capacity to be change agents in their societies is not apparent. There was only one sustainable travel policy that explicitly recognizes children's and young people's role as change agents towards sustainable mobility which is Maribyrnong's *Integrated Transport Strategy*. This strategy discusses the importance of children being the target audience through school travel plans to create a behaviour change and develop a culture of walking and cycling at a neighbourhood level (p.112). To a degree, the *Whitehorse Cycling Strategy 2016* also links the importance of active transport related activities in early years to sustainable travel behaviours.

Most of the policies reviewed displayed a clear understanding of the declining active transport to/from school rates and some of them included sets of targets and actions to tackle these trends. While the role of schools to tackle these trends is clearly important (Easton and Ferrari, 2015), in the context of child friendly environments, there is a need for more considerations of the whole urban environment rather than just the journey to and from school, as we proposed in our operational framework above. As such, it is critical to develop clear and precise policies aiming to create a wider range of environments within the sustainable transport reach of children. Given that the mobility needs of primary and secondary aged children differ greatly (e.g. participation in workforce amongst secondary school aged children), limiting the focus of these discourses to children aged 0 to 12 years seems

problematic. The City of Port Phillip provides a good example of how this distinction can be recognized in local policies. Their policy environment includes targeted policies for children (birth to 8), middle years (8–11) and youth (12–25). For example, for children aged 8 to 11 years, they discuss their unique needs that cannot be addressed by either early years or youth programs (Family, Youth and Children Strategy 2014–2019, p.4).

Though there were several examples of plans that highlighted the importance of public places for young people with a wide range of affordances e.g. to hang out and socialise (Chawla, 2002; Chatterjee, 2005), a large number of plans consider young people in the context of limited mobility due to not having a driving licence. This outlook seems to undermine the importance of young people's right to sustainable travel and right to choose not to get a driver's licence and a car. Similarly, it seems to overlook the importance of integrated activities and services, not just lack of access to cars, in the transport disadvantage areas (Currie et al., 2009). This view also implies that young people are expected to have a car at a later stage of their lives. Many benefits can be gained from reframing this policy position from seeing the lack of car ownership amongst young people as a disadvantage to becoming an opportunity to reinforce sustainable travel through targeted investments (Delbosc, 2016). In fact the community consultation with young people (conducted by various local governments as part of the development of these policies) echoed their desire for the ability to get around without a car. For example, consultation with younger children in Bendigo revealed a strong expression for a more scooter and skateboard friendly town.

6. Conclusion

Through this policy review, we found that there is little integration between Australian local government policies on child and youth friendliness and sustainable mobility. By and large, the place of children's mobility needs and rights in these policy spaces seems to be limited to the acknowledgement of reduced rates of walking and cycling to/from school without clearly and consistently defined objectives to address these trends. Moonee Valley City Council's *Integrated Transport Strategy*, Maribyrnong City Council's *Bicycle Strategy* and the City of Ballarat's *Cycling Action Plan* are good examples of the inclusion of detailed design guidelines.

Still, it appears that the promotion of sustainable travel is typically achieved through several separate planning schemes and guidelines or set of objectives by local government plans. These principles for sustainable travel are usually the sum of broad objectives and desirable outcomes such as 'encourage walking, cycling and public transport use' rather than concrete standards and checklists that consider the needs and rights of all of their citizens. Similarly, the child and youth friendliness of a neighbourhood is generally promoted through stand-

alone guidelines derived from broad international policies (e.g. UN *Convention of the rights of Children*). This approach allows only limited room for local adaptability and often presents the child friendly context as an optional, onerous task on top of other planning guidelines (Whitzman et al., 2009).

The development and the use of the operational framework above represents a shift from stand-alone objective-based guidelines to a set of minimum standard-based guidelines. In doing so, the child's needs and rights are placed in the centre of the policies related to sustainable mobility. Child friendly cities initiatives should not be seen as a specialised field and the responsibility of a few professionals but embedded in all policies concerning our cities. In the context of the highly complex policymaking environment and the limited institutional capacity at the level of Australian local governments, integrating these policy areas would be highly beneficial.

Ultimately, this article aims to analyse the connections between the policies on sustainable travel and child friendly neighborhoods and to better understand how these connections could be more fully harnessed and utilized. If transport policies are to tackle car dependence, it is critical that the role of children, their needs and rights are fully understood to ensure that carbon emissions are reduced now, and these sustainable lifestyles will be carried over to future generations. Given most of the council areas in this study have relatively large populations, in order to develop a more comprehensive picture of how child friendliness and sustainable mobility can be integrated, additional studies examining the practice in smaller council areas will be needed.

Child-centred sustainable travel policies can provide numerous social co-benefits through 'blurring the boundaries between work and play, child and adult space and nature and culture' (Whitzman and Freeman, 2015). Viewing our policies that shape our local environments through the lens of children's everyday life and their everyday freedoms will provide important information on sustainable mobility and reinforce the intended environmental and social outcomes of these policies. Likewise, child friendly initiatives will benefit from a better integration with sustainable travel policies through gaining wider impact in the advocacy of the interest of children of all ages and young people who seem to be generally marginalised within these policies. The integration of policy instruments in the fields of sustainable travel and child friendly cities has much to offer in achieving effective strategic planning and practice and efficient use of the limited institutional capacity at the local government level.

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Appendix 1. Appendix

Child Friendly Cities policies/guidelines	Sustainable Travel Plans
Brimbank City Council:	Brimbank City Council:
Brimbank Children's Plan 2015-2019	Brimbank Cycling and Walking Strategy Update 2016
Brimbank Youth Strategy 2015-2019	Unlock the opportunity
Moreland City Council:	Moreland City Council:
Moreland Early Years Strategy 2016-2020	Moreland Integrated Transport Strategy 2010–2019
City of Port Phillip:	City of Port Phillip:
Early Years Plan: Creating a Child Friendly Port Phillip 2012-2015	Bike Plan 2011-2020
Happy, Healthy and Heard: Youth Commitment Action Plan 2014-19	Sustainable Transport Strategy
Youth Commitment Plan 2014-2019	City of Greater Bendigo:
Family Youth & Children Strategy 2014-2019	Connecting Greater Bendigo Integrated Transport and Land Use Strategy (ITLUS)
City of Greater Bendigo:	Moonee Valley City Council:
The State of Bendigo's Children report	Moonee Valley Integrated Transport Strategy
Municipal Early Years Plan 2015-18	City of Ballarat:
Municipal Early Years Plan 2015-18 Action Plan	Ballarat Cycling Action Plan 2017-2025
Moonee Valley City Council:	City of Greater Dandenong:
Early Years Plan 2014-2022	Cycling Strategy 2017-2024
Thrive: Strategy for Young People	Draft Walking Strategy 2015-2023
Thrive Action Plan one (to 2017)	City of Melton:
City of Ballarat:	Moving Melton: Melton's Integrated Transport Strategy 2015
Municipal Early Years Plan 2015-2018	Maribyrnong City Council:
City of Greater Dandenong:	Maribyrnong Bicycle Strategy 2014
Children's Plan 2015-2019	Maribyrnong Integrated Transport Strategy
City of Melton:	City of Whitehorse:
Early Years Plan 2014-2017	Whitehorse Integrated Transport Strategy
Youth Strategy 2015-2017	Whitehorse Cycling Strategy 2016
City of Whitehorse:	City of Whittlesea:
Early Years Plan 2014-2018	Whittlesea Bicycle Plan 2016 - 2020
Youth Plan 2014-2018	City of Boroondara:
City of Whittlesea:	Boroondara Integrated Transport Strategy
Connect: A municipal plan for children, young people and their families in the City of Whittlesea 2013 to 2018	Town of Gawler (SA):
City of Boroondara:	TOWN OF GAWLER ENVIRONMENTAL MANAGEMENT PLAN
Children and Young People's Strategy	City of Campbelltown (SA):
Town of Gawler (SA):	Strategic Bicycle Plan
Youth Development Plan 2013-2018	
City of Campbelltown (SA):	
Child Friendly Community Plan 2015	
Children's Voice Project Report 2017	
City of Onkaparinga (SA):	
YOUTH STRATEGIC MANAGEMENT PLAN 2013–18	

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