RMIT UNIVERSITY | Centre for Urban Research

Quarterly internal update
April 2019

NEWSLETTER no 03

Early delivery of equitable and healthy transport options in new suburbs: Critical reforms and tools

Source: Nearmap and PSP Minta Farm

Welcome

Welcome to the third newsletter of the "Early delivery of equitable and healthy transport options in new suburbs: Critical reforms and tools" project. This internal newsletter is to update RMIT's project partners on activities both undertaken and planned, and to report preliminary insights. The project is funded by RMIT's Urban Futures Enabling Capabilities Platform, the Victorian Planning Authority, the City of Casey, the City of Wyndham and Stockland Corporation.

Activities this quarter

In the last few months the project team has focused on conducting interviews with land developers and consultants and finalising the briefing paper on transport goals in the PSP guidelines. For the resident research, finalising the survey questionnaire was the main focus and the survey invitation has been sent out. In addition, the team has looked at Journey to Work and other data for the case study areas in comparison to their overarching Local Government Areas and Greater Melbourne.

Some points from emerging insights

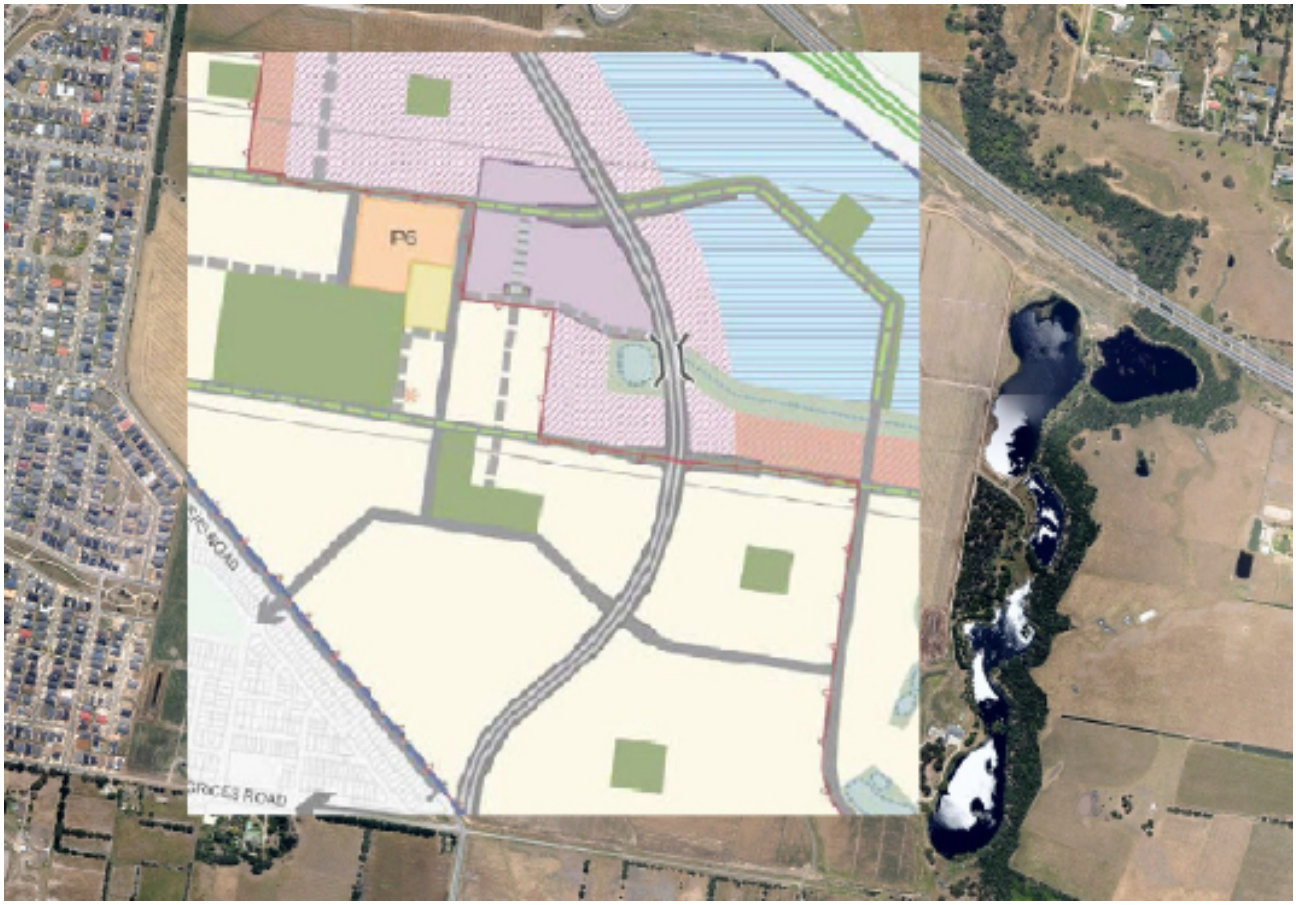
- Journey to Work data (2016) shows that Truganina South has a high share of public transport for journey to work with 21% of workers travelling by public transport. In comparison this mode share lies at 16% in Greater Melbourne and Wyndham and 8% and 10% in Casey and Cranbourne East respectively.
- Active transport modes are low in the case studies and their respective local government area (1%). However, this mode share also only lies at 4% in Greater Melbourne. It needs to be kept in mind though these numbers refer to the main form of transport for work and do not include active transport as form of accessing other forms of transport.
- Truganina South has a strong Indian community with 30% of residents speaking Indo-Aryan languages and 5% speaking Dravidian languages at home and 24% of residents being born in India. Cranbourne East also has a relatively large Indian community with 12% and 5% speaking Indo-Aryan and Dravidian languages respectively at home and 10% being born in India.
- The land developer interviews have highlighted that the Growth Areas Infrastructure Contribution (GAIC) is generally accepted by developers, but that there are still a few implementation issues. While most acknowledge that the process has improved, a number of interviewees stated that particularly the works-in-kind (WIK) process is too complex and bureaucratic.
- Another insight from the interviews was that GAIC and the possibility and process of staged payments influences how developers plan and implement the staging of their developments.
- A number of principles influence good practice of infrastructure contribution schemes. These will be used as a framework for the further analysis of infrastructure contribution schemes in Victoria and are presented in the following.

More detailed overviews of the project team activities, insights and further relevant news – including a study on the impact of urban form on health and economic benefits and some thoughts on mobility as a right for children – are set out in the 'Comprehensive update' on the next pages.

Activities January - March 2019

Work across the three work streams "Policy and process analysis", "Funding approaches and modelling" and "Resident Research" has included:

- Stakeholder interviews: interviews with government agencies and developers have been completed and the in-depth analysis has started (content analysis with software NVivo to identify themes);
- Precinct Structure Planning: finalising the Briefing Paper about transport goals in the Precinct Structure Plan Guidelines (this has been circulated and can be disseminated to other stakeholders etc.);
- Statistics: Analysis of relevant Census Data for all completed PSPs with a specific focus on the case study PSPs;
- Resident Research: preparation of survey questionnaire; organising dissemination etc.; the survey is open now;
- Analysis of different developer contributions: first literature review and analysis of interviews;
- Preparing the measurement of transport criteria in PSP areas;
- Presentation to staff at the City of Casey about current status of the project;
- Articles related to our and related projects on the CUR website (http://cur.org.au/news/meet-the-women-helping-plan-the-cities-of-tomorrow/; http://cur.org.au/news/study-reveals-economic-and-health-benefits-of-denser-suburbs/; http://cur.org.au/news/livin-on-the-edge-how-to-plan-a-new-suburb-on-melbournes-fringe/);
- Presentation at the Ethics and Transport Planning Symposium in Melbourne (2/3 February 2019);
- Participation in workshops and meetings on demand-responsive transport, policy challenges for the VPA (Urban Futures Advisory Group) etc.



Source: Nearmap and PSP Minta Farm

Some preliminary insights

Census data – Case study PSPs Cranbourne East and Truganina South

We have continued our statistical analysis; this time with a focus on the respective Precinct Structure Plan areas[1] of our case studies Selandra Rise and Allura. Some interesting insights are presented here.

- Regarding Journey to Work data, it stands out that Truganina South has a high share in public transport (21.1%) in comparison to Wyndham overall (15.6%), but also Greater Melbourne (15.9%). The largest part of this public transport mode share is train travel (20.2%). This train travel includes trips where buses are used to get to and from the station, but overall the share of bus trips is quite low, with trips for "bus only" achieving a 0.4% mode share in Truganina South.
- Even though in Cranbourne East buses (bus only) also have a low mode share (0.6%), the relative importance of buses is slightly higher, as the mode share of public transport is lower overall (9.8%).
- Active transport modes are low in Cranbourne East (0.5%), Truganina (0.6%), Casey (0.9%) and Wyndham (1.2%), and the PSP areas have a lower mode share than the overall LGAs. However, it should be kept in mind that these numbers refer to the main form of transport for work and do not include active transport as form of accessing other forms of transport. The mode share for Greater Melbourne is also relatively low with 4.4% so that these modes need to be supported more overall.

Table 1: Mode share for Journey to Work in the Case Studies, Census 2016

	Cranbourne East	Casey (C)	Truganina South	Wyndham (C)	Greater Melbourne
Public Transport	9.8%	8.1%	21.1%	15.6%	15.9%
Vehicle	77.3%	78.2%	66.7%	70.1%	65.5%
Active Transport	0.5%	0.9%	0.6%	1.2%	4.4%
Other Mode	0.4%	0.5%	0.4%	0.5%	0.5%
Worked at home or Did not go to work	11.1%	11.4%	10.4%	11.5%	12.9%
Mode not stated	1.0%	0.9%	0.7%	1.0%	0.9%
Total	100%	100%	100%	100%	100%

[1] It has to be noted that the PSP areas do not entirely concur with ABS statistical areas, so that we have combined the data of SA1 areas covering the respective PSP, which means that in most cases the overall area included is slightly larger than the actual PSP area.

Table 2: Distance to Work in the Case Studies, percentage of people travelling to work, Census 2016

Distance to Work	Cranbourne East	Casey (C)	Truganina South	Wyndham (C)	Greater Melbourne
Nil distance	4.6%	5.7%	4.7%	5.5%	6.0%
Over 0 km to less than 1 km	0.4%	0.9%	0.7%	1.1%	2.6%
1 km to less than 2.5 km	2.2%	3.0%	1.2%	3.65	6.1%
2.5 km to less than 5 km	5.0%	6.6%	3.7%	7.0%	10.7%
5 km to less than 10 km	5.8%	15.4%	15.0%	11.9%	19.9%
10 km to less than 20 km	30.2%	26.2%	19.4%	18.3%	25.9%
20 km to less than 30 km	17.3%	18.3%	43.1%	30.4%	15.3%
30 km to less than 50 km	26.6%	20.0%	9.2%	18.8%	10.3%
50 km to less than 100 km	7.5%	3.05	1.9%	2.5%	2.3%
100 km to less than 250 km	0.0%	0.3%	0.3%	0.3%	0.3%
250 km and over	0.6%	0.5%	0.8%	0.7%	0.6%
Total	100%	100%	100%	100%	100%

- The median distance of travel to work is 21.1 km in Cranbourne East, 21.2 km in Truganina South, 17 km in Casey, 20.9 km in Wyndham and 10.9 km in Greater Melbourne.
- The average car ownership is relatively comparable with 1.8 motor vehicles per dwelling in Truganina South, 1.9 in Cranbourne East and Wyndham, and 1.7 in Melbourne; although Casey has an average car ownership of 2.1 cars per dwelling. More households in Casey overall own more than three motor vehicles (22.7%) than in Cranbourne East (13.5%). In comparison 16% of households in Greater Melbourne own more than three motor vehicles and in Truganina South 13% and in Wyndham 17.5%.
- Only a small share of households own no motor vehicle: 1.5% in Truganina South, 2.2% in Cranbourne East, 3% in Casey, 3.5% in Wyndham and 8.5% in Greater Melbourne.
- 20.7% of households in Cranbourne East are renters, similar to 20.1% in Casey. In Truganina South and Wyndham the share is about a quarter (26.6% and 26.9%) and in Melbourne this share lies at 28.1%.
- Nearly half of the houses in Cranbourne East (47.1%) and Truganina South (45%) have four bedrooms or more. In Casey this share lies at 42.4% and in Wyndham at 43.8%. In Greater Melbourne the share is 27.8%.
- Regarding occupation, in comparison to Greater Melbourne the share of professionals and managers is a bit lower in the case study PSP areas and local government areas. The share of technicians and trade workers is a bit higher in the case study PSP areas, but not in overall Casey and Wyndham.
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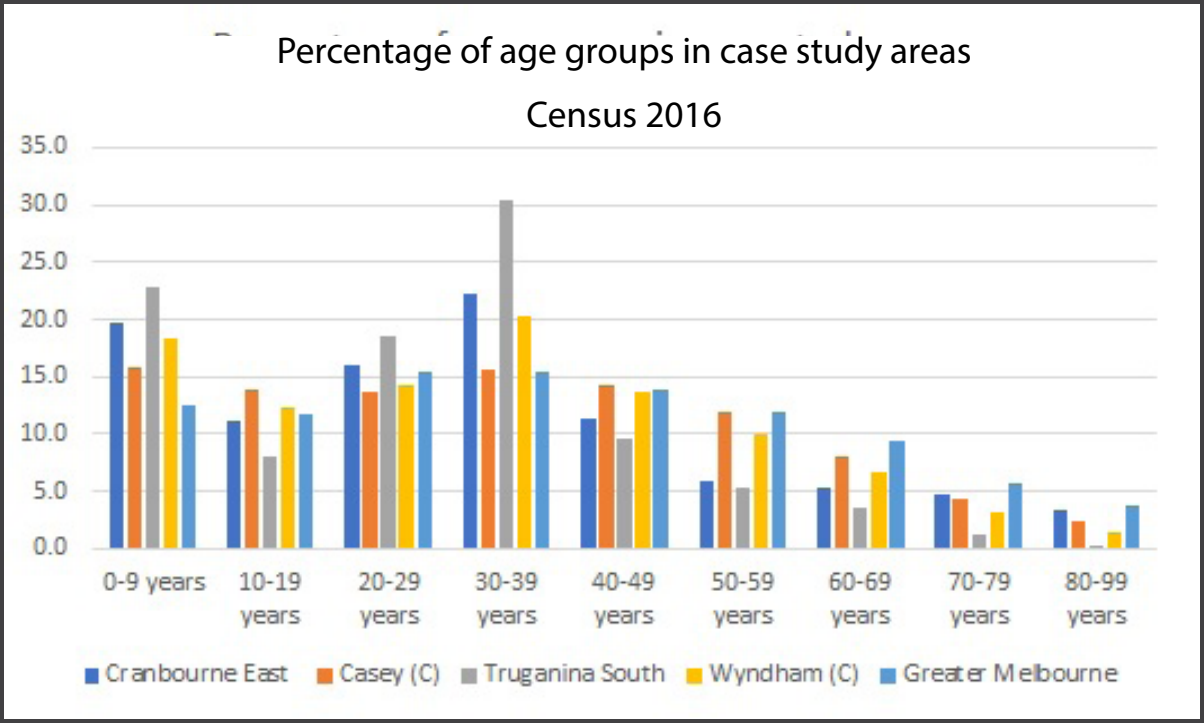
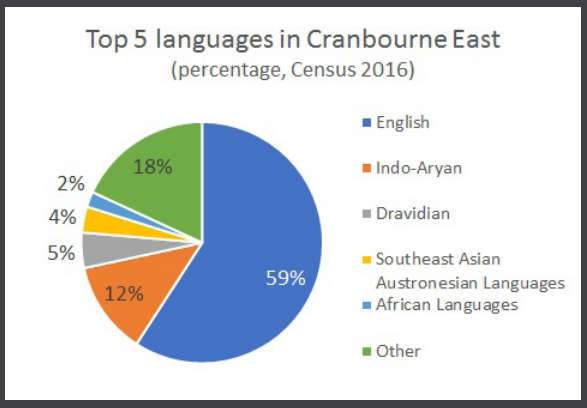
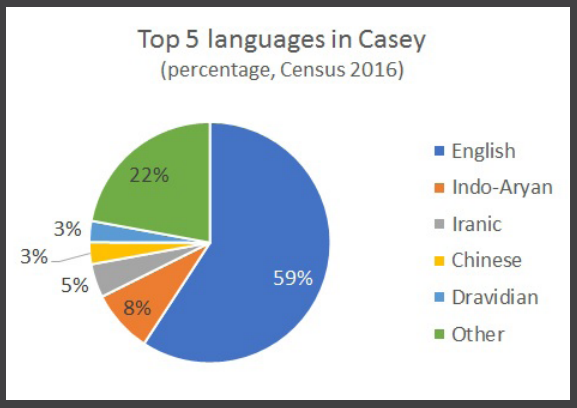
Figure 1: Percentage of age groups in the case study areas, Census 2016



- Regarding age groups it can be seen that in Cranbourne East and Truganina South the percentage of 0-9 year-olds, 20-29 year-olds and 30-39 year-olds is higher than in Casey, Wyndham and Greater Melbourne overall, indicating that more families and (young couples or singles) live in those areas. However, the percentage of 10-19 year-olds is a bit lower than in the LGAs and Greater Melbourne. See also figure 1.
- The median age is 30.1 years in Truganina South, 31.3 years in Cranbourne East, 32.6 years in Wyndham, 34.2 years in Casey, and 36.6 years in Melbourne.

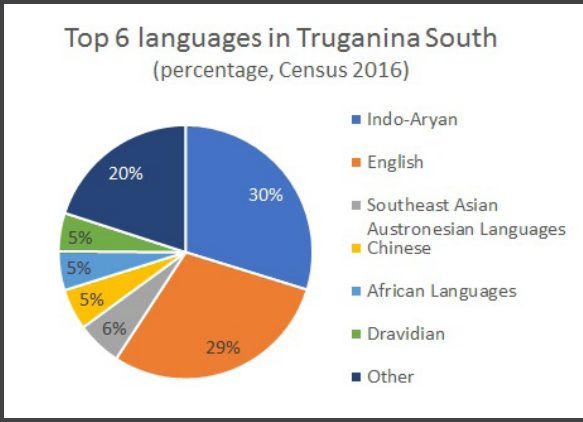
Figure 2: Top 5 languages spoken at home in Cranbourne East and Casey, Census 2016

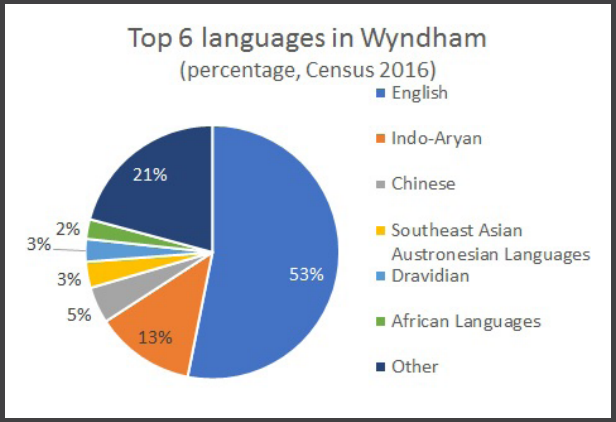




- Figure 2 and 3 show the top 5 and top 6 languages (language spoken at home, persons place of usual residence) in the case study areas. English, Indo-Aryan, Dravidian, Southeast Asian Austronesian Languages (including e.g. Indonesian, Malay, Timorese), African Languages (including e.g. Somali, Zulu, Swahili, Kirundi), and Chinese are common in the case studies. In Casey overall Iranic is also spoken by 5% of residents.
- In comparison in Greater Melbourne the top 5 languages are English (62%), Chinese (6%), Indo-Aryan (5%), Mon-Khmer (3%) and Greek (2%).

Figure 3: Top 6 languages spoken at home in Truganina South and Wyndham, Census 2016





Some further interesting points from the interviews – GAIC

The final interviews with developers have been conducted in March and analysis of the interviews is ongoing. This section provides some interesting points on the Growth Areas Infrastructure Contribution (GAIC) from the developer interviews. These statements reflect the perceptions of the developers and will need to be followed up in the analysis.

- Overall, GAIC is accepted by the development industry, although there are naturally some points of critique.
- There are different perceptions about the GAIC funds. Some still think that the money is not spent and "just sitting there". However, others know that the funds are spent now and acknowledge that the process of GAIC spending has become a bit more transparent.
- Regarding what GAIC is spent on, there exist different assessments of whether to use the GAIC funds for smaller or larger projects (i.e. less/more expensive and complex). While some believe that the money should be spent on little projects that are "game changers" and "actually make a difference" even though they are "not really that sexy politically", others argue that especially for transport the "big items" should be funded through GAIC.
- In that context some also state that there is a lack of a strategic approach. "The government doesn't really have a plan for how it would use the GAIC that's public and transparent. I'm not really sure what the grand plan is for how the money is to be used."
- In a similar vein it was stated that GAIC was introduced very quickly and it was not clear how to implement or administer it when it was introduced.

- The process to apply for GAIC funds and for GAIC works-in-kind (WIK) is seen as too complicated.
- Particularly the GAIC WIK is seen as not very attractive for developers, even though in theory or other situations WIK are often preferred in comparison to payment.
- Specific points were the time it takes to get the approval and the high risk for developers. One person mentioned timing as a huge issue, stating that it is important to get the WIK approved before the GAIC liability sets in, as otherwise the first 30% of the overall liability need to be paid without the WIK being recognised. The details of this will need to be confirmed, but others mentioned similar issues: "then it diminishes our ability to do things like trade off GAIC on our school sites because we don't have any deficit if we pay it all out".
- The 30% payment refers to the possibility of staged payment agreements where 30% have to be paid at the beginning and then the remaining amount is paid in stages, whenever a new stage is started. This influences how developers plan their development, as "you run the risk of triggering the entire GAIC liability if you don't follow the staged payment agreement". This is difficult for developers as their staging usually changes depending on the market (what is best to sell at the moment) or because a government authority requires changes. "You're forced to develop through an entire title rather than moving in a logical fashion because you trigger the next 30%."
- The other "complaint" with staged payments was that the 30% have to be paid when the developer is at "peak debt" so that cashflow becomes an issue.
- Positively mentioned was the annual indexation of the GAIC rate, which makes it easier to plan.
- Regarding the transfer of the GAIC costs to home buyers, most developers stated that in general the GAIC amount is factored into the overall costs and will in the end be added to the price for the (home) buyer.

Infrastructure Contributions – A framework for assessing user-pays development contribution systems

New greenfield suburbs require different items of new infrastructure, which can be funded through different processes, such as general rates, bank loans, federal/state government grants or development contributions. As these infrastructure contributions provide the potential to finance parts of transport infrastructure, the project team will analyse developer and infrastructure contribution schemes in Victoria and compare them to good practices; alternative funding schemes will also be explored.
In order to analyse the existing contribution schemes a framework for analysis is necessary. The framework that we will use is adapted from Robinson & De Gruyter (2018)[2]. The authors have developed their good practice framework to assess and compare user pays contribution instruments for local infrastructure, such as Development Contribution Plans in the five major Australian states[3]. We will extend this framework for the assessment of funding schemes for the provision of state infrastructure, namely GAIC. The following table (table 3) introduces the good practices framework from Robinson & De Gruyter (pp. 168/169) as a starting point of our analysis.

[2] Robinson, J.; De Gruyter, C. (2018) "Financing infrastructure through user-pays development contributions: an assessment of Australian practice." Australian Planner 54(3): 165-176. DOI: 10.1080/07293682.2017.1420086
[3] The framework has been developed on the basis of Kirwan(1990):"Infrastructure Finance: Aims, Attitudes and Approaches." Urban Policy and Research 8 (4): 185–193.; supplemented by the Victorian Development Contributions Guidelines (2003) and Infrastructure Contributions Plan Guidelines (2016). As it might seem problematic to use the Victorian Guidelines even if only partly to analyse the Victorian funding schemes, it has to be noted that the academic literature on good practice principles is very limited, which is why Robinson & De Gruyter used the Victorian and to some extent NSW and Western Australian Guidelines as supplement for their framework. However, the main benchmarks are derived from Kirwan (1990).

Table 3: Overview of good practice principles for user-pays contributions (Robinson & De Gruyter 2018)

Principle	Description
Nexus	Local governments should demonstrate a nexus between the development being levied and the need for the infrastructure being funded (i.e. the development will use the infrastructure for which it is being charged).
Equity	A development contribution to the cost of an infrastructure item should be proportional to the projected share of its use attributable to the development. Infrastructure cost should be estimated reasonably by councils.
Certainty	Developers should have certainty regarding: levies payable; infrastructure to be funded using their contributions; levy indexation; contribution offsets for those that provide works-in-kind. Potential instruments can be a set of leviable items and levy caps.
Financial accountability	Development contributions should only be used for the infrastructure for which they were levied, and financial accounts should exhibit this.
Timeliness	Local governments should provide required infrastructure for new developments before or as it is needed. This could mean using a delivery schedule based on thresholds of development (e.g., a nominated population or floor space). For contribution plans (such as a DCP or ICP), a reasonable timeframe should be set.
Transparency	The methods required of local governments to calculate levies should not be prohibitively complex to follow, nor for developers to understand.
Public accountability	Public involvement regarding potential plans for development contributions should be welcomed and considered, and final decisions explained to the public.
Essentiality	Developers should be required to contribute only towards infrastructure that is essential (non-essential items can be provided at the discretion of the developer). This will need to be defined. Infrastructure could be deemed essential when it is needed to make the development fundamentally liveable (such as sewerage/stormwater facilities and key roads), or required to sustain an acceptable level of service and safety in the transport network, or that cannot be provided once the development is complete.
Alignment	The infrastructure needs of a development should be considered in the context of the wider planning framework.

Preliminary assessment

The Victorian user-pays frameworks (DCP & ICP) mostly satisfy the nine principles. DCPs and ICPs are required to fully demonstrate nexus and must be incorporated into local planning schemes. Moreover, councils are kept accountable through requirements for the refunding of unspent levies, the keeping of separate accounting records (and periodic reporting on them), and public exhibition of the plan draft. The recent introduction of ICPs has introduced standard cost estimates for common basic and essential infrastructure in PSP areas. The legislation also sets out allowable items and establishes caps for expenditure. The idea behind the standard benchmark estimates is to make plan preparation more efficient. It is also thought to assist assessment whether standard levies are sufficient or whether a supplementary levy is justified. For items that are 'nonstandard' (e.g. bridge crossings, large intersections with multiple legs) item-specific estimates will need to be undertaken. The principles where there is room for improvement are the equity of the charges and the essentiality of infrastructure funded.

Miscellaneous/News

Impact of urban form on health and economic benefits

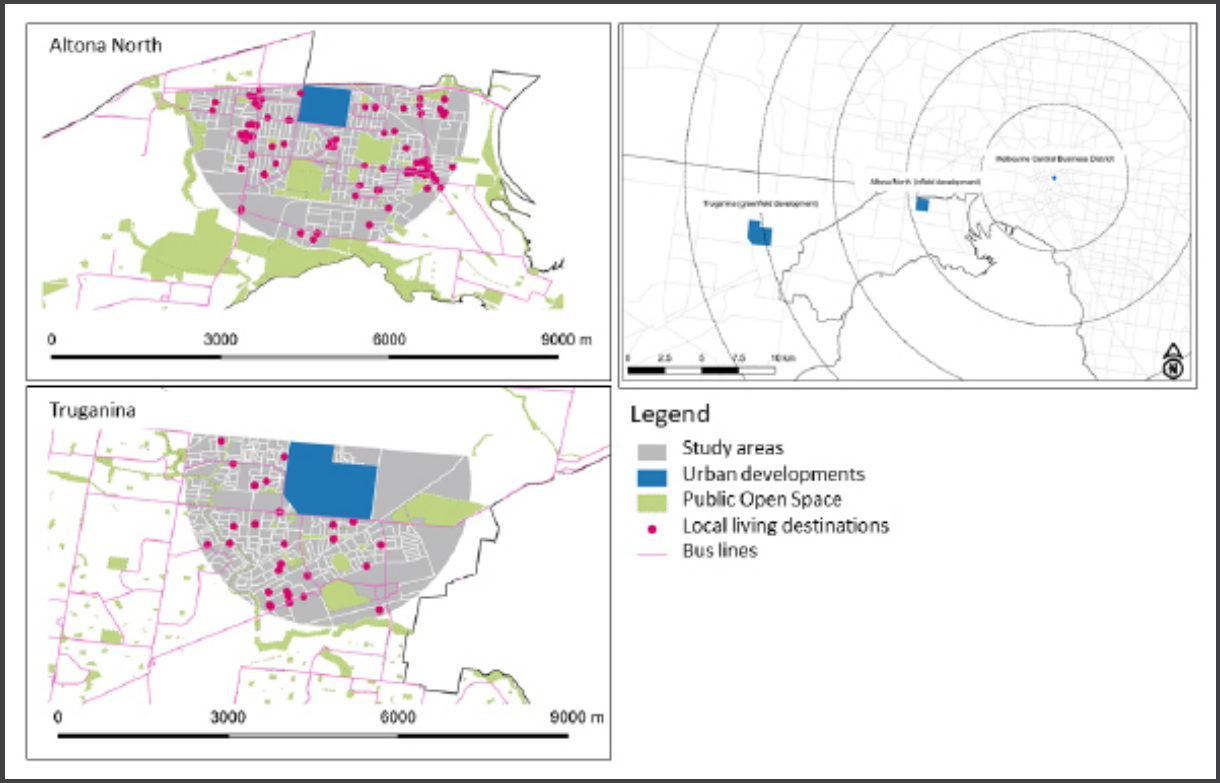
A study on the impact of urban form on health and the related economic benefits through its influence on physical activity has been undertaken by Centre for Urban Research's researchers Lucy Gunn (team member of the Transport Options Project), Belen Zapata-Diomedi, Claire Boulange and Billie Giles-Corti.

The study compared the impact of housing people in a medium-density brownfield development in an established area with existing amenities (Altona North) and a low-density suburban greenfield development (Truganina). For this, the probability of residents' transport walking and average time spent walking was estimated based on VISTA data and combined with a quantitative health impact assessment model.

The planned brownfield redevelopment at Altona North will provide 3,000 dwellings. In the analysis, a street network buffer zone of 3.2 km was used, which captured the distance covered in 20 min walking and a number of destinations and amenities, such as grocery stores and public transport. Truganina was selected as a greenfield suburb with a similar number of houses and adult resident population. While both areas have similar populations, the built environment structure is very different with Truganina having fewer amenities, such as a variety of public transport options, shops and services.

Urban form features and the probability of transport walking were compared for Altona North (with and without the proposed urban development) and Truganina. Overall, Altona North with the new development had higher scores for all evaluated urban form features and those commonly found to be

Figure 3: Maps of brownfield Altona North and green-field area of Truganina showing their urban structure, access to destinations, public open space and bus lines.



associated with walking behaviour. However, the new development itself will not change the destination mix significantly. Instead, the impact is that the new 3,000 homes are built in proximity to existing amenities and destinations.

The overall result was that if adult residents of Truganina and its surrounding area were instead exposed to the urban development form observed in Altona North and it's surrounding area then physical inactivity-related chronic diseases such as Type 2 diabetes, heart disease and colon cancer would decrease and on average people would gain an additional month of living with full health. This represents an economic benefit of $4,500 per person over their lifetime, or $94 million for a population of 21,000 people housed in Altona North. The results whilst are conservative, but nevertheless represent the value that comes from well planned developments which are typically ignored when planning major infrastructure such as roads, public transport and residential developments.

These findings indicate that planning policies that create walkable neighbourhoods with access to shops, services and public transport will lead to substantial health and economic benefits associated with reduced incidence of physical inactivity related diseases and premature death.

They also indicate that there is a cost to society for not having infrastructure that supports a healthy, active population, as chronic diseases linked with physical inactivity are a huge cost to individuals and our health system.

The paper can be accessed here.

Mobility as a right for children

Hulya Gilbert from the University of South Australia presented at the Ethics & Transport Planning Symposium (where the Transport Options Project also presented) on her research on the mobility of children. Parts of her presentation are summarised here, as we believe that taking into account the rights for children with regard to mobility offers some interesting and potentially new viewpoints.

The private car is currently the most dominant form of transport amongst families with school aged children in Australia. Car-based travel patterns of children are seen by many as unavoidable outcomes of our modern society. Basis of this are inherent assumptions that influence norms and social practices, such as that children are best accompanied by their parents (generally in a car) to be safe from the car traffic; that journey to school is the most important travel pattern for children; and that not having access to car is a disadvantage.

However, these car-based and dependent travel patterns actually counteract children's basic rights to have access to places to support their needs for learning and playing and participating in civic life. In 1989 the UN Convention on the Rights of the Child (CRC) was developed and the UNICEF Child Friendly Cities Initiative has defined a child friendly city as being committed to improving the lives of children within their jurisdiction by realising their rights as articulated in the CRC (UNICEF 2019).

- Broadly, the key aspects of children's mobility rights are:
- Access to quality social services
- Participation in family, cultural, city/community and social life
- Safe secure and clean environment with access to green spaces
- Places to play, meet friends and enjoy themselves (UNICEF 2019)

The predominant use of cars to transport children for their daily activities does not support these rights, as this means that children are not able to go from one activity to another independently. Also, the extended time spent in cars and loss of streets and public places as play areas due to high volumes of high speed car traffic go against

these rights and undermine children's right to be able to move around their neighbourhoods independently.
By contrast, active transport and public transport create numerous opportunities to exercise these rights. Active and public transport can be considered as child friendly because children can use them independently. Such non-motorised travel modes provide opportunities for physical activity, active play, social interaction and social capital, environmental awareness and contact with nature.
Many transport policies in Australia consist of objectives and refer to guidelines for the development of active transport plans for schools with recognition of the reduced rates of walking and cycling amongst children. Though this is an important step towards sustainable mobility, the focus of these travel plans are usually journey to school (primary) and their adoption by schools is optional. However, the daily lives of children extend to various non-school destinations such as sports grounds, parks, shops and wide range of venues for extra-curricular activities and especially the independent travel between those destinations is difficult.
Local governments in particular play a critical role in promoting sustainable mobility within their council areas. However, within the child and youth friendly guidelines of local government, the focus has been primarily on health and education with relatively little addressing children's mobility rights and needs without a car. Policies and practices related to children's mobility needs often operate from the point of car-based mobility and accessibility.
A change towards the opportunity for independent movement of children may change some of these policies and practices.
Hulya can be contacted under hulya.gilbert@mymail.unisa.edu.au

Planned activities

- Analysis of different developer contributions in Victoria and accompanying Briefing Paper
- More detailed analysis of interviews ahead of planned publications for 2019
- Resident survey in Selandra Rise and Allura in April & May 2019
- Publication for PlanningNews
- Project Advisory Group: 9th May 2019 9.30-11.30 am, Building 37 (411 Swanston St), Level 2 – the same room as last time

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