Peri-urban Melbourne in 2021: changes and implications for the Victorian emergency management sector

Dr Holly Foster (Fire Services Commissioner Victoria), Dr Briony Towers, Dr Joshua Whittaker, Prof. John Handmer (RMIT University) and Tom Lowe (IPSOS) consider the key economic and population changes that are taking place in Melbourne's peri-urban and fringe areas.

ABSTRACT

The Victorian Fire Services Commissioner has embarked on a program of research exploring anticipated changes across Victoria over the coming decade. Titled *'2021'*, the research aims to identify key changes taking place in Victorian communities and describe the likely impacts on the emergency management sector.

The paper is not intended to present an exhaustive list of possible changes and implications. A detailed report, which includes implications for emergency services organisations and the wider sector, is available from the Fire Services Commissioner's (FSC) website. ®

Introduction

Rapid growth and development on Melbourne's peri-urban fringe represents a significant challenge for the Victorian emergency management sector. Growing and increasingly diverse populations, increased demand on public infrastructure and services, urban development, natural environment, conflict between land uses (DPCD 2012), and the rapidly increasing interface between urban development and fire prone environments are just some of the challenges facing the state and local governments.

This paper identifies and lists some of the key changes taking place on Melbourne's peri-urban fringe and briefly considers the implications for the emergency management sector (State-level policy and strategy) and emergency services organisations (service delivery, programs and local needs).

Growth and development on Melbourne's fringe

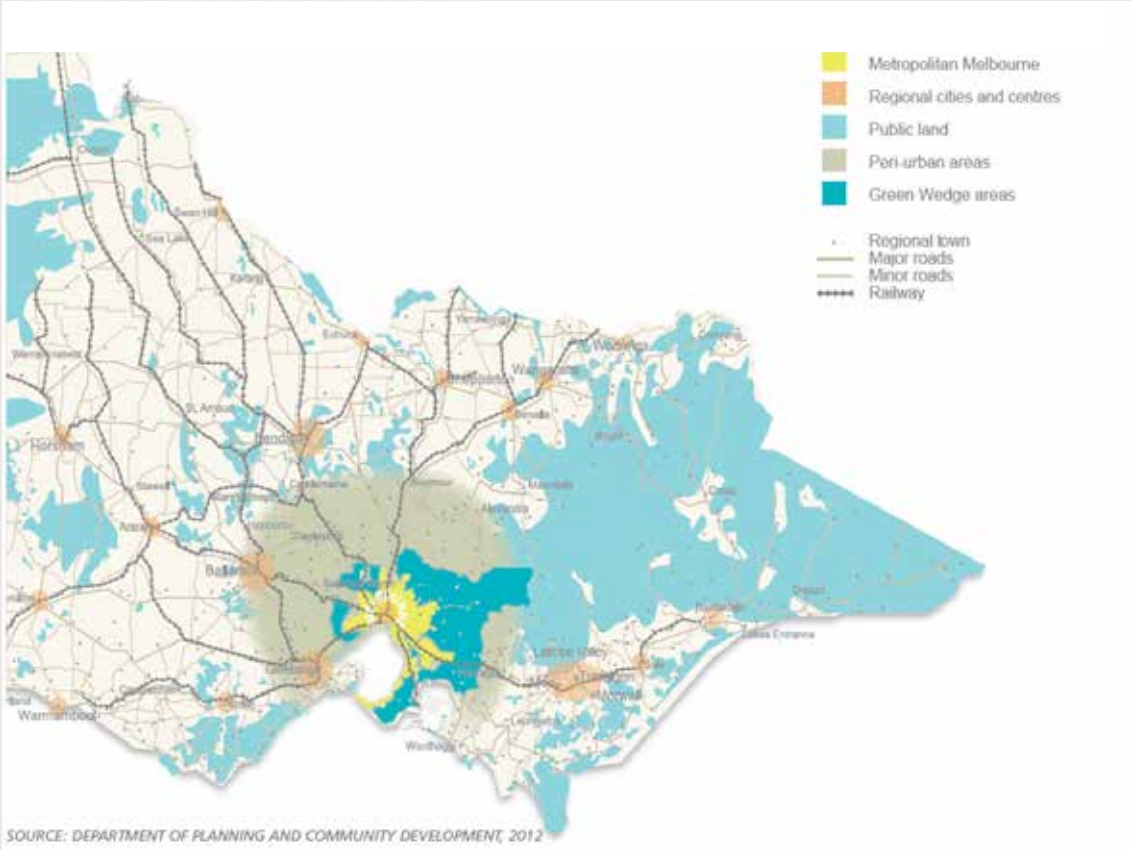
Like many parts of Australia, Victoria is facing significant pressure from population growth and urban development. To accommodate the increase in population, the landscape of Melbourne's peri-urban fringe is being transformed (Butt 2013; Buxton *et al.* 2009).

The term 'peri-urban' is used to refer to the interface between urban development and rural or bush areas (DPCD 2012, McKenzie 2006). The peri-urban areas around Melbourne (see Figure 1) are growing and developing at different rates. The 'green wedge' areas – including the Yarra Ranges, Nillumbik and Mornington Peninsula shires – are the open landscapes set aside to conserve rural activities and significant natural features and resources between Melbourne's growth areas (DPCD 2011). In contrast, the population of peri-urban areas is expected to increase rapidly.

Population growth

The population in Melbourne's peri-urban fringe areas is forecast to grow from 1.36 million in 2011 to 1.76 million in 2021. This represents an increase of almost 400 000 people over the decade (Essential Economics 2012, Forecast.id 2013, ABS 2013). However, this growth will not be uniformly distributed across the peri-urban fringe (DPCD 2012, Essential Economics 2012, OSISDC 2012). Most of the population growth is expected to take place in the designated growth areas of Cardinia, Casey, Hume, Melton, Mitchell, Whittlesea and Wyndham (DPCD 2012). Driving this growth will be the continued availability of affordable housing and the extension of the urban growth boundary in these areas, particularly in Hume and Whittlesea where recent population growth has been most rapid (Growth Areas Authority 2013, OSISDC 2012, Regional Development Victoria 2012, DPCD 2012). The green wedge areas of Yarra Ranges, Nillumbik and Mornington Peninsula are also forecast to grow over the next decade, albeit by relatively small amounts compared to both the designated growth areas and metropolitan Melbourne

Figure 1: Melbourne in its Victorian context (State Government Victoria 2012a).



as a whole (OSISDC 2012). This limited growth will be due to a scarcity of available land for development and an associated reduction in the supply of detached dwellings, which will curtail opportunities for young adults and new families to rent or purchase affordable housing (DPCD 2012, Forecast.id 2013).

The designated growth areas are also characterised by high levels of cultural and linguistic diversity. In the growth areas of Casey, Hume, Whittlesea and Wyndham approximately 38 per cent of the current population was born overseas, compared to around 20 per cent in the green wedge areas of Nillumbik and Yarra Ranges (ABS 2013, OSISDC 2012). Newly arrived migrants generally seek the most affordable housing which tends to be located in peri-urban areas (OSISDC 2013). While there are no readily available forecasts on the extent of diversity for *2021*, the continued availability of affordable housing in the designated growth areas suggests that cultural and linguistic diversity will remain a prominent feature of these areas. The limited supply of affordable housing in the green wedge areas will likely limit any major changes in cultural and linguistic diversity.

Dwelling and household growth

Demand for affordable housing continues to drive residential development across Melbourne's urban fringe areas (Birrell *et al.* 2012, DPCD 2012, Butt 2013).

Across these areas, the total number of dwellings is expected to rise from just under 500 000 in 2011 to nearly 740 000 in 2026—an increase of almost a quarter of a million (Essential Economics 2012). Similarly to population growth, household and dwelling growth will not be uniform across the fringe, varying between the designated growth and green wedge areas.

Forecasts indicate that the majority of growth will occur in the designated growth areas, where the number of households is projected to rise by around 145 000 (43 per cent) between 2011 and 2021. These areas will experience rapid growth across all household types, including couples with dependents (39 per cent), couples without dependents (51 per cent), one parent families (36 per cent) and one person households (33 per cent) (Forecast.id 2013, ABS 2013). These changes are being driven by a number of factors including housing affordability, children growing up and leaving the family home, new family formation, increases in separation or divorce, and population ageing (ABS 2013, OSISDC 2012, DPCD 2012, Forecast.id 2013).

In contrast, the number of households in the green wedge areas is expected to rise by just 15 500 (12 per cent) over the same period. Most of this growth is expected from increases in the number of couples without dependents (19 per cent), one person households (19 per cent) and one parent families (7 per cent). In contrast to the designated growth areas,

the number of households comprising couples with dependents is not expected to increase, primarily due to the limited supply of affordable, detached housing in green wedge areas (Forecast.id 2012).

Importantly, demand for affordable housing is leading to smaller land lot sizes and high-density living in peri-urban areas. This trend runs counter to the popular perception that large 'McMansions' are proliferating in Melbourne's urban fringe (Birrell *et al.* 2012). Demand for high-density housing estates in peri-urban areas is likely to grow as a result of the federal government's 'First Home Owner Grant' scheme, which is available for purchases of new houses and apartments (State Revenue Office 2013) after 1 July 2013.

Employment and transport

Opportunities for local employment are limited in Melbourne's peri-urban areas, where there is an average of one job for every two labour force participants (compared to a 1:1 ratio in inner metropolitan Melbourne). A lack of locally-based employment contributes to dependency on motor vehicles, long commutes, traffic congestion and air pollution, which reduces liveability in these areas (OSISDC, 2012). Consequently, many residents in peri-urban areas face greater challenges in achieving work-life balance, having less time to spend with their families and involve themselves in community life (OSISDC 2012, Essential Economics 2012).

Transport infrastructure and services in the outer suburbs tends to lag behind urban development and population growth (OSISDC 2012). As new areas are developed, existing roads are unable to cope with increased traffic volumes, while bus and rail services often lack a sufficiently dense residential catchment to provide services that meet the transport needs of the expanding population (OSISDC 2012). Residents in peri-urban areas have access to approximately half the public transport options available to inner Metropolitan residents (Interface Councils 2012). Consequently, levels of public transport use in peri-urban areas are lower than in inner metropolitan areas (OSISDC 2012). Approximately two per cent of peri-urban residents use public transport for their daily commute compared to 12 per cent of metropolitan residents. Similarly, 93 per cent of the peri-urban population are reliant on motor vehicles to get to work compared to 76 per cent of metropolitan residents.

Socio-economic trends

Peri-urban areas, particularly in the designated growth areas, are characterised by lower household incomes, poorer educational and health outcomes, higher unemployment rates and greater youth disengagement. Overall there is less workforce and higher education

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participation (Essential Economics 2013). For example, average wages for peri-urban labour force participants ($43 480) are approximately 12 per cent lower than for the rest of metropolitan Melbourne ($49 650) (Essential Economics 2012). While some outer suburbs in the green wedge areas exhibit a relatively high degree of economic strength in the sense that they are able to provide residents with a greater range of local employment and education opportunities, the broader view of Melbourne's outer suburbs is one of relative disadvantage in terms of household income, education, employment, occupation, and housing (OSISDC 2012, Essential Economics 2012, DPCD 2013). This disadvantage is most clearly demonstrated by the relatively high unemployment rates in the designated growth areas (OSISDC 2012, Essential Economics 2013, Interface Councils 2012, Regional Development Victoria, 2012). In 2011, unemployment rates for Hume (6.8 per cent), Wyndham (6.3 per cent), Melton (6 per cent) and Casey (5.9 per cent) were all slightly higher than the unemployment rate for metropolitan Melbourne as a whole (5.5 per cent) (ABS 2013). By contrast, the green wedge areas of Nillumbik (3.5 per cent), Yarra Ranges (4 per cent) and Mornington Peninsula (4.5 per cent) all had lower rates of unemployment than metropolitan Melbourne (ABS 2013). Home ownership is generally high in the outer suburbs compared with that in the central city (Forecast.id 2013, Profile.id 2013).

Implications for emergency management

The changes taking place in Melbourne's peri-urban fringe have a number of implications for emergency management strategy and policy.

Rapid population growth and residential development in peri-urban areas will increase the number of people and houses that may need assistance during emergencies. As noted, these areas stand to gain an additional 400 000 new residents and almost 250 000 new households by 2021. This rapid growth will require considerable, joined-up strategic planning by emergency services agencies. Already, sector-wide reform is underway, with advances in emergency management policy, doctrine, information, capability and capacity expected during the next ten years. This includes a movement towards an all-hazards and unified approach to emergency management; encouraging collaboration between communities, emergency services agencies and all layers of government to better prepare, manage and recover from disruption. The synergies created through this collaboration will enable effective service delivery and the management expectations in rapidly expanding peri-urban communities.

Affordable housing will continue to draw young families and recent immigrants to the peri-urban fringe, which will increase the cultural and linguistic diversity of these areas. Such diversity requires a capacity to communicate information on prevention and preparedness, as well as warnings, using a range of media and engagement strategies. One of the key actions outlined in the *Victorian Management Reform White Paper* (State Government Victoria 2012b) is to expand the reach of emergency broadcasts to include more commercial television and culturally and linguistically diverse communication channels, such as Internet-based media. Where possible this will involve the completion of memorandums of understanding with broadcasters (State Government Victoria 2012b).

Socio-economic trends in peri-urban areas also represent a significant challenge for emergency management. As noted, average incomes and levels of education attainment tend to be lower in peri-urban areas than inner metropolitan areas, resulting in a degree of social and economic disadvantage. Householders with low incomes and other financial strains (such as mortgage stress), may find it difficult to allocate resources to risk reduction measures, such as modifying or retrofitting their house. They may also be less able to afford insurance, thus impeding their capacity to recover from emergencies and disasters (Priest, Clark & Treby 2005, Booth & Williams 2012). Underinsurance may also lead to increased expectations and dependence on government and emergency services organisations in terms of response, relief and recovery.

Residents of peri-urban areas may need to travel relatively long distances to access infrastructure, services and employment. Longer commutes to work are one of the main reasons Australians have less time to spend with family and community (Strazdins *et al.* 2011, Pocock, Skinner & Williams 2012). As such, emergency services organisations will need to redefine their offer (or value proposition) to address new barriers and cater for changing expectations and needs of volunteers.

A survey undertaken for the *National Volunteering Strategy* (DPMC 2011) found that being unable to leave work for extended periods of time and having a busy life/competing priorities are major barriers to emergency services volunteering. Limited time for community involvement is also likely to inhibit the development and functioning of local social networks. These networks are vital in emergencies and contribute to overall community resilience (Rolfe 2006). While these challenges are likely to remain until infrastructure, services and employment meet local demand, emergency management strategy and policy should aim to support initiatives that promote local community participation and development.

Implications for emergency services organisations

Population change will provide significant practical challenges for emergency services organisations to manage. Rapid growth in the number of people and households, particularly in the designated growth areas, will result in a substantial increase in the number of lives and assets that require assistance and protection in emergencies. This will lead to increased

demand on the time and resources of emergency services organisations. Furthermore, many residents will have migrated to peri-urban areas from inner suburbs, bringing with them more urban experiences and expectations of emergency services. Some, for example, may be unaware of the different roles and capabilities of fire and rescue services, or opportunities to contribute as volunteers. Consequently, it is essential that emergency services organisations develop new and effective skills, capacities and roles to support changing communities. Given increasing levels of cultural and linguistic diversity in the designated growth areas, it is also important that these strategies consider the needs of different cultural groups.

The varying age profiles across the peri-urban areas also have implications for emergency services organsiations. In the designated growth areas, the significant increase in the number of school age children and young people will require an increased emphasis on the development and delivery of education programmes for this age-group. A major benefit of engaging children and young people in emergency management is that they are able to take messages about emergency preparedness and response into their homes (Towers 2012). This has particular value in areas with high levels of cultural and linguistic diversity; where parents do not speak English as a first language and are not as engaged in the local community. To accommodate the increasing numbers of children and young people, designated growth areas will experience new schools, kindergartens and day care centres, all of which will require assistance and support to prepare for, and respond to, emergencies. This presents an opportunity to engage with these institutions at the outset to create a culture of safety and preparedness.

In the green wedge areas, characterised by ageing populations, emergency services organisations will need to focus on the specific needs of the elderly and frail, particularly with respect to evacuation. With an aging population, the green wedge areas will have increased numbers of aged care facilities which will require assistance and support during times of emergency. Given increasing demands on emergency services organisations in peri-urban areas, it may be worth considering alternative approaches, including requiring aged care facilities to have rehearsed plans and the capacity to implement them in an emergency. This is consistent with the idea of sharing responsibility between agencies and community as set out in the *National Strategy for Disaster Resilience*.

The lack of local employment opportunities across the peri-urban fringe has several major implications for emergency services organisations. Long commute times to places of employment outside the local area reduce the amount of time that peri-urban residents spend at home with family and community. This reduces the amount of time available for tasks related to household mitigation and preparedness or volunteering for community-based emergency services agencies such as the Country Fire Authority and the SES. Residents working outside their local area find it more difficult to return in times of emergency to protect their home and assets from the impacts of fast onset events, such as flash floods and fast moving grass or bush fires. Emergency services organisations will need to consider the specific needs of families with dependents, especially when both parents work outside the area. In the designated growth areas, where numbers of children and young people are forecast to dramatically increase, the needs of families facing these circumstances must be considered.

Inadequate transport infrastructure across the peri-urban fringe has serious implications for emergency services organisations. Traffic congestion is likely to be a major issue affecting these areas due to the lag in investment in road infrastructure. In the event of an emergency, this congestion would be further exacerbated by increased numbers of people seeking to either evacuate or return home to protect household assets. Congestion may also place residents in danger and restrict the response capabilities of emergency services organisations. As such, careful consideration will need to be paid to levels of congestion and road infrastructure in emergency evacuation plans for peri-urban areas. Public transport may be inadequate across the fringe areas and could potentially impede the emergency response capacity of residents with limited access to private vehicles. This is most likely to affect the elderly, the disabled, newly arrived immigrants, children and young people, and one vehicle households where the use of that vehicle is dedicated to commuting to employment outside the area. (This subject is currently being explored in other projects within the FSC.) It is essential that emergency services agencies consider these groups and ensure that evacuation plans accommodate address these needs.

Conclusion

This paper has identified some of the key changes taking place on Melbourne's peri-urban fringe and the implications for emergency management and emergency service organisations. Population growth and urban development is increasing the number of people, assets and infrastructure at risk in emergencies, as well as the demands on emergency services organisations. These changes present a number of challenges, such as increasing household risk awareness, planning and preparedness and managing community expectations. These circumstances also present opportunities, including the potential to engage children and young people in emergency management to build a culture of safety and preparedness.

Long commutes and limited public transport services represent a particular challenge for residents of peri-urban areas, who may find it difficult to leave during an emergency or to return to assist other household members. The growing cultural and linguistic diversity of peri-urban areas calls for an enhanced capacity to communicate information and warnings, using a range of media and engagement strategies. Many of these challenges will require greater coordination and synergies between all those involved in emergency management, including government, non-government organisations, industries, businesses and communities.

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