Chapter 4  Ecologically Sustainable Development Analysis of Melbourne and Geelong Activity Centres

4.1  Introduction

This chapter provides an analysis of the performance of a wide range of Melbourne and Geelong activity centres, as defined in this project, against ecologically sustainable development (ESD) objectives. We begin with a description of the current network of centres using different variables, and an outline of the implications of major trends and influences on the network as a whole and particular types of centres. This is followed by an evaluation of a sample of different centres in Melbourne and Geelong, as well as of the overall network of centres, using a sustainability evaluation framework developed for testing by the Department of Infrastructure and the consultant team.

A wide variety of information sources have been used in this evaluation:

- a pro-forma information sheet on the size, role, type of uses in, employment, form, ownership, transport infrastructure, planning and design, and changes over the last 10 years for 367 different activity centres in Melbourne and Geelong developed from local government and specialist reports, (Working Paper 1a);
- statistical data obtained from government and specialist reports such as the Australian Bureau of Statistics Retail Census Reports from 1979 to 1992 and Property Council of Australia reports on shopping centres, (Working Paper 1b);
- business and consumer surveys undertaken specifically for this project by Roy Morgan Research in relation to four different activity centres – Dandenong, Glenferrie Hawthorn, Footscray and Geelong Central Activity Area, (Working Paper 2);
- a special compilation and analysis for this project by Arup Transportation Planning of the 1994-1997 Victorian Activity Trip Survey (VATS) data pertaining to over 70 activity centres in Melbourne, (Working Paper 3);
- information obtained from 11 focus groups conducted in Melbourne and Geelong with representatives from government, environmental, transport, planning, property, and business interests, (Working Paper 4);
- submissions to this project on retailing trends and retail policy approaches from the Coles Myer Group and Jebb Holland Dimasi on behalf of the Gandel Group, (Working Paper 5);
- a listing of 201 centres in Melbourne which attract the highest number of trips, based on the Department of Infrastructure’s analysis of the 1994-1998 VATS data, (Working Paper 8);
4.2 The Network of Melbourne and Geelong Centres

In Melbourne and Geelong there is a network of about 1000 activity centres of various types and sizes, of which over 75% are of a neighbourhood scale with less than 10,000 square metres of retail floorspace and oriented primarily to providing local retail and commercial services.

Of this total, we have examined 367 different centres of activity in this project. Figure 1 (p 4) illustrates the distribution of these centres across the Melbourne metropolitan area and Geelong region. The 367 centres consist of:

- 130 major shopping and commercial centres (with retail floorspace greater than 10,000 square metres) in Melbourne and Geelong;
- A sample of 139 neighbourhood shopping and commercial centres;
- 58 tertiary educational institutions;
- 29 hospitals;
- other centres including a sample of industrial estates in each region of Melbourne and in Geelong, and all airports in Melbourne and Geelong.

The total group of centres includes the 201 centres attracting the highest number of non-home based trips, using the 1994-1998 Victorian Activity Trip Survey (VATS) data.

Data on the 367 centres are collated in Working Paper 1a. This Paper includes profiles of the centres in each of the inner, middle and outer sections of five Melbourne regions (west, north, east, south and central) as well as the Geelong region.

4.2.1 General Description of the Network

In general, the metropolitan area has developed around growth corridors radiating out from the Melbourne CAD. The CAD continues to perform a critical capital city role as well as being the predominant retail, commercial, cultural, administrative, and civic centre in the metropolitan area. Melbourne has a few very large activity centres, but there is no centre of comparable size or depth of commercial or civic infrastructure to the CAD.

The inner and middle suburbs of Melbourne – except in the western suburbs - have many elongated strip or compact nodal centres based around the train and tram network, as well as a dense configuration of neighbourhood centres. In these areas, many of the larger and neighbourhood centres have a high degree of permeability in terms of ease of access by pedestrians from multiple entry points into the centres. In the western suburbs, as well as outer and newer growth areas throughout metropolitan Melbourne, activity centres are more dispersed without a high degree of permeability. There also are fewer neighbourhood centres in these areas.
The Geelong region is dominated by the Geelong Central Activity Area with a few other traditional centres close to the centre of town. Further out, there are several newer stand-alone shopping complexes such as Corio Village and, in the wider region, a few key traditional country towns such as Ocean Grove and Queenscliff.

The urban design of centres across the Melbourne and Geelong networks varies immensely, both in terms of their aesthetic qualities, and their accessibility by motor vehicles and pedestrians. Some centres such as Camberwell Junction and Templestowe Village have developed a distinctive sense of place, and are attractive, comfortable and safe, whilst others such as Bayswater and Sunshine are less conducive to walking or social interaction. Centres experiencing growth in both established and newer areas have tended generally to spread outwards in a low density form, rather than intensify their uses within a compact area.

The density of housing within or close to activity centres also varies greatly. There has been some development of higher density housing within or close to activity centres in the Melbourne central city and inner suburbs within the last decade. However, there has been a very low level of medium and high density housing within or close to activity centres in the middle and outer suburbs of Melbourne and in Geelong.

In recent years, there has been a proliferation of major stand-alone “superstore” retailing outlets, or strings of convenience or peripheral sales retailing along major roads. These developments constitute a new form of activity centre, as characterised by the “homemaker mile” precinct along Whitehorse Road in Nunawading. They are outside of established centres or planned new activity centres.

In an overall sense, the network configuration of activity centres is related to the urban form of different parts of Melbourne and Geelong and the transport systems operating in those areas.

4.2.2 Regional Description of the Network

A brief outline of the network of different types of activity centres in each region across Melbourne, as well as the Geelong region, is presented below.

Central Region

The central region, illustrated in Figure 2 and comprising the municipalities of Melbourne, Yarra and Port Phillip, is dominated by the Melbourne Central City. Not only does it have the largest retail area of all centres in the metropolitan area, but the Central City also contains over 80% of all metropolitan office floorspace. Six tertiary education campuses including the University of Melbourne and RMIT, as well as nine major medical or dental hospitals are situated in this activity centre.
Figure 2
Activity Centres in the Central Region of Melbourne
The surrounding inner suburbs have a dense network of retail and commercial activity centres of traditional strip or nodal form. Examples of such centres are Bridge Road and Swan Street in Richmond; Smith Street and Brunswick Street in Fitzroy; Bay Street in Port Melbourne; Acland Street in St Kilda; and Lygon Street in Carlton. Although predominantly retail-oriented, these centres have traditional shopfront offices providing business and professional services, and occupying up to 30% of businesses in each centre. The Richmond Business Park off Church Street provides one of the few examples of a mini “office park” form of development in this region.

All centres in the region’s inner suburban areas have very good tram or fixed rail services, as well as a strong neighbourhood, walking scale character. The density of the grid form of the neighbourhoods surrounding these centres contributes to their permeability.

Three hospitals and four tertiary educational institutions are located on the edge of or just outside the City of Melbourne. These facilities are generally part of larger mixed use centres in Fitzroy or Richmond, although the Alfred Hospital is a stand-alone centre on a tram line, but removed from a mixed use activity centre.

With this intense concentration of retail, commercial, educational and medical uses in this region, it is not surprising that 80% of the top work-oriented trip destinations, as indicated in the 1994-1998 Victorian Activity Trip Survey (VATS) data, are activity centres in the central region.

*Inner Western Region*

The inner western regional area of Hobson’s Bay, Maribyrnong and Moonee Valley, illustrated as part of Figure 3, has a more scattered array of activity centres.

Essendon Airport is a large specialist transport-oriented centre in the north-eastern corner of the region.

Compared with the central region, there is a less dense mixture of traditional mixed use centres located around public transport nodes. The two large centres of Footscray and Moonee Ponds, combined with about 10 smaller centres such as Niddrie, Essendon, Williamstown, Union Road (Ascot Vale) and Racecourse Road (Flemington) cover the range. The highest concentration of mixed use centres is in the City of Moonee Valley where there is a more dense and varied network of tram, fixed rail and bus services.

The region also contains Highpoint Shopping Centre, one of the largest stand-alone enclosed shopping centres located adjacent to the Highpoint Homemaker Centre and cluster of other superstores. Airport West and Altona Gate are the only two medium-sized enclosed shopping complexes in this region. These stand-alone centres have much more limited public transport services.
In relation to comparable areas in other parts of Melbourne, the inner west has a limited number of neighbourhood shopping centres. These comprise centres such as Macaulay Road in Kensington, Yarraville, and Borrack Square in Altona North.

Office development in the inner western area is limited and contained primarily to the larger mixed use centres of Footscray and Sunshine. There are no distinct office parks in the region.

The region has two major medical centres – the Western Hospital at Footscray and the Williamstown Hospital. Both are removed from the Footscray and Williamstown mixed use centres, and public transport nodes.

There are five tertiary education campuses in the region. These consist of the two VUT campuses at Footscray and the one at Newport, as well as the Kangan Batman Institute of TAFE campuses at Essendon and Brimbank (Avondale Heights). The Newport and Brimbank campuses particularly are well removed from nearby mixed use centres as well as public transport nodes.

**Outer Western Region**

The outer western region of Brimbank, Melton and Wyndham, illustrated as part of Figure 3, is poorly served by fixed rail public transport, with a sparse arrangement of train lines connecting to Werribee, Melton and St Albans. With no trams and limited bus services in the region, there are only three significant public transport nodes and they are focused around the mixed use centres of Sunshine, St Albans, and the Werribee CBD. Most activity centres in the area, therefore, are not located at or near fixed rail public transport, and are generally car-based.

The region has a relatively high proportion of major enclosed shopping complexes compared with both small and larger traditional retail centres. Examples of these stand-alone complexes include Brimbank Central, Deer Park Central, Keilor Downs Plaza, Watergardens, Woodgrove, and Werribee Plaza.

The dominance of these complexes, the limited public transport network and the design of residential subdivisions have created an environment where there are very few neighbourhood shopping centres.

The largest activity centre in the region – Sunshine - is a mixed use retail and commercial centre with two enclosed shopping complexes within it, a cluster of homemaker businesses and a VUT campus on Ballarat Road, and traditional strip shops at the southern end of the centre. Although an important public transport node in this region, the Sunshine activity centre has expanded in recent years further away from the station towards Ballarat Road, making it less transit-oriented.

In the outer municipalities of Wyndham and Melton, the traditional mixed use centres of the Werribee CBD and Melton SBD are relatively less significant retail centres than the
Figure 3
Activity Centres in the Western Region of Melbourne

- Airport / Port
- Business / Industrial Estate
- Tertiary Education Institution
- Hospital
- Melbourne CAD
- Retail Floor Space >85,000 sq m
- Retail Floor Space 50,000-85,000 sq m
- Retail Floor Space 30,000-50,000 sq m
- Retail Floor Space 10,000-30,000 sq m
- Retail Floor Space <10,000 sq m
- Superstores
- Werribee Agriculture and Food Technology Precinct
nearby enclosed shopping centres of Werribee Plaza and Woodgrove/Coburns Road respectively.

There is a very limited amount of office development in the outer western area. It is primarily in the form of small offices located in the larger mixed use centres of Sunshine, Werribee CBD, St Albans, and Melton SBD. There are no distinct office parks in the region.

Five tertiary education campuses comprising VUT campuses at St Albans, Sunshine, Melton, and Werribee, and the University of Melbourne’s Institute of Land and Food Resources at Werribee are located in the region. Apart from Sunshine, all are well removed from major mixed use centres as well as public transport nodes.

The Sunshine Hospital and Mercy Hospital at Werribee are the only two hospitals in the region. They are similarly removed from major mixed use centres as well as public transport nodes.

In an overall sense, therefore, the region has a very dispersed pattern of fairly large activity centres with many stand-alone tertiary education and hospital centres as well as extensive enclosed shopping complexes. A major deficiency in the network is the paucity of neighbourhood shopping centres.

**Inner Northern Region**

The inner northern region of Banyule, Darebin and Moreland, illustrated as part of Figure 4, has a more dense network of activity centres than the inner western region primarily because of the increased number of train and tram lines, and more compressed settlement pattern.

The region has one large stand-alone enclosed shopping complex at Northland with the adjacent Northland Homemaker Centre. There also is a Coles/Target centre - Summerhill Village - on a stand-alone site along Plenty Road in Reservoir. Apart from these two centres, the major retail-based activity centres in the region are medium-sized, traditional mixed use centres at or near train stations on the region’s three rail lines, and/or along the six tram routes. The largest of these are strip centres such as Sydney Road in Brunswick and Coburg, and High Street in Northcote/Thornbury and Preston, as well as the nodal centre at Greensborough. Other centres include Reservoir, Heidelberg Central and Glenroy. Although predominantly retail-oriented, all of these centres have traditional shopfront offices providing business and professional services, and representing up to 30% of all businesses in the centres.

Each of the three municipalities in the region has a good range of neighbourhood shopping centres. Examples include Westgarth in Darebin, Lygon Street Brunswick in Moreland, and East Ivanhoe in Banyule.
Office development in the inner northern area is in the form of small shopfront offices in the larger mixed use centres of Brunswick, Coburg, Northcote, Thornbury, Preston, and Greensborough. The only distinct office park in the region is the LaTrobe Research and Development Park adjacent to the university.

Five tertiary education campuses comprising LaTrobe University at Bundoora, the Northern Melbourne Institute of TAFE campuses at Preston and West Heidelberg, the RMIT campus at Brunswick, and the Kangan Batman Institute of TAFE campus at Coburg are located in the region. LaTrobe University and the Kangan Batman campus at Coburg are very removed from major mixed use centres and public transport nodes; the NMIT campuses less so. However, the RMIT campus at Brunswick is considered part of the Sydney Road activity centre with its very good train and tram connections.

With the closure of the Preston and Northern Community Hospital (PANCH), the Austin and Repatriation Hospital is the major public hospital in the region. It is close to the Heidelberg railway station and the Heidelberg Central mixed use centre. The John Fawkner Hospital at Moreland is the other hospital in the region, and it is situated close to a railway station and tram line midway between the Brunswick and Coburg ends of the Sydney Road activity centre.

Outer Northern Region

The outer northern region of Hume, Nillumbik and Whittlesea, illustrated as part of Figure 4, has a dispersed pattern of centres, but not as dispersed as the outer western area. The public transport and road networks as well as settlement patterns account for this difference.

Melbourne Airport is the key specialist transport-oriented centre in the area, servicing the wider metropolitan area and the State.

Broadmeadows, Epping Plaza, and Sunbury are the largest retail centres in the region. Epping Plaza is a stand-alone enclosed shopping complex removed from the traditional Epping retail centre and railway station. In contrast, Broadmeadows and Sunbury are more mixed use centres with stronger public transport connections particularly because of their proximity to railway stations.

Several medium sized, traditional mixed use centres operate at strategic points along the fixed rail or tram network. These include Eltham, Thomastown, Lalor and Bundoora. An equal number of predominantly retail centres are less transit-oriented. They include the enclosed shopping complexes of Gladstone Park, Mill Park, Craigieburn in addition to Epping Plaza.

Because of the transport and settlement patterns in Melbourne’s outer north, there are more neighbourhood centres here than in the outer west. These include both traditional centres such as Dallas and Diamond Creek, and newer enclosed shopping complexes such as St Helena Marketplace and Eltham Ridge.
Figure 4
Activity Centres in the Northern Region of Melbourne

- Retail Floor Space >85,000 sq m
- RFS 50,000-85,000 sq m
- RFS 30,000-50,000 sq m
- RFS 10,000-30,000 sq m
- RFS <10,000 sq m

Superstores
Airport / Port
Business / Industrial Estate
Tertiary Education Institution
Hospital
There is a very limited amount of office development in the outer northern area. It is primarily in the form of small offices located in the larger mixed use centres of Broadmeadows, Glenroy, Sunbury, Eltham, Thomastown, and Bundoora. There are no distinct office parks in the region.

Four tertiary education campuses comprising the RMIT campus at Bundoora, Northern Metropolitan Institute of TAFE campuses at Greensborough and Epping, and VUT campus at Sunbury are located in the region. Although close to public transport, the RMIT Bundoora campus and the NMIT Epping campus are not well integrated with nearby shopping centres. The NMIT Greensborough campus and VUT Sunbury campus are totally isolated.

The new Northern Hospital adjacent to Epping Plaza is the only public hospital in the region. It is a car-oriented activity centre, not being easily accessible from the Epping railway station.

**Inner Eastern Region**

The inner eastern region of Boroondara and Stonnington, illustrated as part of Figure 5, is particularly well serviced by train, tram and bus facilities, and consequently there is a dense network of transit-oriented centres.

Chadstone, the most significant stand-alone enclosed shopping centre in the metropolitan area, is located in this region. However, apart from this complex, the major activity centres in the region are traditional mixed use centres at or near train stations on the region’s four rail lines, and/or along the six tram routes. The largest of these are centres such as Chapel Street and Toorak Road in Prahran/South Yarra; Camberwell Junction; the Glenferrie Road centres in Malvern and Hawthorn; and Kew Junction.

There is a wide range of medium sized and neighbourhood centres located across the two municipalities. Most such as Hawksburn, Toorak Village, Ashburton, Harp Village and Maling Road are traditional mixed use, transit-oriented centres. Tooronga Village is one of the very few stand-alone centres not well connected with public transport.

Office development in the inner eastern area is in the form of large and small offices in the larger mixed use centres of Prahran/South Yarra/Windsor, Armadale/Malvern, Camberwell Junction and Kew Junction. Clustering of offices also is evident along a few main roads such as Burwood Road in Hawthorn. There are no office parks in the region.

Four tertiary education institutions are located in the region. They comprise campuses of Swinburne University at Glenferrie/Hawthorn and Windsor, Holmesglen TAFE and the Deakin University campus at Toorak. Although on a tram line, the Deakin campus is removed from a mixed use centre. All of the other campuses are situated within or next to mixed use, transit-oriented centres.
Cabrini Hospital is the main hospital in the region, although the Alfred Hospital is just outside the western boundary of the City of Stonnington. Both are stand alone facilities on tram lines, but not integrated with mixed use activity centres.

**Middle Eastern Region**

The middle eastern region comprises the municipalities of Manningham, Monash and Whitehorse, and is illustrated as part of Figure 5. It has an equal mixture of transit-oriented and non transit-oriented centres. There are seven major mixed use centres which are well served by public transport - Box Hill, Ringwood, Glen Waverley, Oakleigh, Clayton, Mt Waverley and Croydon. However, other major centres such as Doncaster, Forest Hill, Waverley Gardens, Brandon Park, The Pines and Wheelers Hill are predominantly enclosed shopping complexes with much more limited public transport facilities.

The largest centre in this region is Box Hill because of the large number of office, tertiary education and medical uses beyond its retailing role. In the middle and outer suburban area, Box Hill is the most significant centre in terms of the extent of these non-retailing uses.

Another very large centre is the Whitehorse Road Precinct at Nunawading with over 120,000 square metres of development. This precinct, stretching for over two kilometres, encompasses the string of homemaker superstores both east and west of Springvale Road, the retail and commercial development around the railway station, and the Whitehorse Civic Centre.

Glen Waverley and Doncaster are the other large retail centres in the region. They have very different urban forms. Glen Waverley has a hybrid arrangement of enclosed complexes (The Glen and Century City walk) and a traditional open air strip. It has a good mixture of uses beyond retailing, and a public transport interchange involving rail and bus. In contrast, Doncaster is predominantly an enclosed shopping complex with a string of commercial uses along Doncaster Road. There are much more limited public transport facilities connecting with this centre.

Apart from the Whitehorse Road Precinct at Nunawading, there are other clusters of superstores located outside of established centres. Examples include along Springvale Road in Brandon Park, and on the east side of Warrigal Road north of Waverley Road.

Office development in the middle eastern area occurs within larger mixed use centres and planned office parks, as well as along a few major roads. There is a mixture of large and small offices in the larger mixed use centres of Box Hill, Glen Waverley, Oakleigh, Clayton, Mt Waverley, Croydon and Pinewood.

Clustering of offices also is evident along a few main roads such as Doncaster Road in Doncaster, Burwood Highway at the corner of Springvale Road, and Springvale Road at Brandon Park. This type of clustering is most dramatic in several free-standing office
Figure 5
Activity Centres in the Eastern Region of Melbourne

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Date: 26/06/01
Source: ODI
parks in the City of Monash part of the region – Tally Ho, Brandon Office Park, Monash Technology Precinct and Wellington Business Park. This form of activity centre - consisting of high quality offices with amenities spread out in a managed and landscaped environment on large sites generally greater than one hectare - is unique to the middle and outer eastern and south-eastern suburbs.

Seven tertiary education institutions are located in the region. Monash University at Clayton is the most significant. Box Hill TAFE has two campuses within the larger Box Hill mixed use centre, and a campus on a large isolated site in Doncaster East. Deakin University has a large stand-alone campus at Burwood, and a similar style of campus (Rusden Campus) at Clayton. The Holmesglen TAFE campus off Waverley Road in Glen Waverley is a free-standing facility on a large site. Unlike the inner eastern region, all of the tertiary education centres in this region except the TAFE campuses at Box Hill are removed from mixed use, transit-oriented centres.

Box Hill Hospital and Monash Medical Centre are the two main public hospitals in the region. The Monash facility is quite removed physically from the Clayton mixed use centre, whereas the Box Hill facility is more integrated with the larger Box Hill activity centre.

**Outer Eastern Region**

The outer eastern area of Knox, Maroondah and Yarra Ranges, illustrated as part of Figure 5, has a dispersed pattern of centres particularly approaching and within the Dandenong Ranges and Yarra Valley.

The two main centres in the region - Ringwood and Knox – are elongated and predominantly retail-oriented. Ringwood is hybrid arrangement of a strip retail and commercial centre based around the Maroondah Highway and Ringwood railway station, as well as three enclosed shopping complexes – Eastland, Ringwood Market, and Ringwood Square. The centre is an important public transport interchange for rail and bus. In contrast, the Knox activity centre is a more car-oriented centre based around the Burwood Highway. On the north side of the highway, there is the enclosed Knox City shopping complex, the Towerpoint complex of superstores and cinemas, and the Knox City Council offices. On the south side of the highway, there is a string of commercial developments.

Several medium sized, traditional mixed use centres operate at strategic points along the Lilydale and Upper Ferntree Gully railway lines. These include Croydon, Mooroolbark, Lilydale, Bayswater, and Boronia. A similar number of medium sized shopping centres in the region are less transit-oriented. Located on main roads, they include the enclosed shopping complexes of Chirnside Park and Stud Park, as well as more open air centres such as Mountain Gate and Wantirna Mall.

The region has about 20 neighbourhood centres, a large proportion of which are townships in the Dandenong Ranges and Yarra Valley. There are several small centres
around Ringwood and Croydon in the City of Maroondah, but very few such centres in
the City of Knox primarily because of the residential subdivision pattern, dominance of
the larger shopping centres and extent of industrial areas.

The region has significant industrial activity centres at Bayswater, Scoresby, Rowville,
and Lilydale. There has been a blurring of industrial and office activity in all of these
areas, with many sites developing more as an office park.

Swinburne University and TAFE campuses dominate the region, being located at
Lilydale, Wantirna, Croydon and Healesville. Apart from Healesville, the campuses are
not well integrated with nearby shopping centres nor close to public transport.

There are three main hospitals in the region – Maroondah and Angliss public hospitals
and Knox Private Hospital. Like the tertiary educational institutions, these hospitals are
situated on stand-alone sites removed more mixed use activity centres and public
transport facilities.

**Inner Southern Region**

The inner southern region of Bayside and Glen Eira, illustrated as part of Figure 6, is
characterised by a reasonably dense pattern of medium sized and neighbourhood centres.
There are no enclosed shopping complexes in the region, although Southland is just
outside the boundary.

All of the larger centres – Bentleigh, Elsternwick, Hampton, Carnegie and Church Street
Brighton - are traditional mixed use, transit-oriented centres, being located on the
Sandringham or Frankston rail lines. There is a large number of neighbourhood centres
scattered throughout the region. Of the 13 examined in our sample, only four have direct
access by either train or tram.

Office development in the inner southern area is predominantly in the form of large and
small offices in the larger mixed use centres. There are no office parks in the region.

The one tertiary education institution in the region – the Monash University campus at
Caulfield – is well integrated with the larger Caulfield activity centre and very close to
the railway station.

The Caulfield General Medical Centre and the Sandringham and District Hospital are the
main hospitals in the region. Both are stand alone facilities not integrated with mixed use
activity centres, nor close to train or tram facilities.

**Mid Southern Region**

The mid southern region of Greater Dandenong and Kingston, illustrated as part of
Figure 6, has a mixture of transit-oriented and non-transit-oriented centres. The larger
traditional mixed use centres of Dandenong, Springvale, Mentone, Chelsea, Moorabbin,
Figure 6
Activity Centres in the Southern Region of Melbourne

Retail and Commercial Centres
- Retail Floor Space >85,000 sq m
- RFS 50,000-85,000 sq m
- RFS 30,000-50,000 sq m
- RFS 10,000-30,000 sq m
- RFS <10,000 sq m
- Superstores
- Airport / Port
- Business / Industrial Estate
- Tertiary Education Institute
- Hospital

Date: 26/06/01
Source: DOI
Cheltenham and Highett are situated at key points along the Dandenong and Frankston rail lines which dissect the region. Dandenong is the region’s dominant centre because of its extensive commercial as well as retail base.

The region has two large enclosed shopping complexes that are less transit-oriented – Southland and Parkmore Keysborough. There also are about 10 clusters of “big box” retailing outlets with the largest number of stand-alone superstores of any region in Melbourne. These stand alone outlets or strings of superstores are located along the Princes Highway in Springvale and Dandenong; Warrigal and South Roads in Moorabbin; and the Nepean Highway at Highett, Mentone, Moorabbin and in Southland. An enclosed factory retail outlet centre also is located on the periphery of the Moorabbin Airport.

There is a reasonably large number of neighbourhood centres in the region. This is due to the subdivision pattern as well as the evolution of small shopping centres next to railway stations. About half of the neighbourhood centres in the region are located adjacent to stations.

Office development in the mid southern area is predominantly in the form of large and small offices in the larger mixed use centres. This is particularly evident in the Dandenong activity centre, where there is over 55,000 squares metres of such development. Springvale, Mentone, Moorabbin and Cheltenham also have offices providing business and professional services, which occupy up to 30% of businesses in each centre.

Moorabbin Airport is a large specialist transport-oriented centre in the middle of the region. Industrial estates are situated at Moorabbin, Braeside, and Dandenong.

Chisholm Institute of TAFE has four campuses in the region at Moorabbin, Dandenong, Noble Park and Bonbeach. Apart from the Noble Park campus, these tertiary education centres are removed from mixed use, transit-oriented centres.

The Dandenong and District Hospital is the main public hospital in the region. Like the Chisholm TAFE campus, the hospital is isolated from the Dandenong mixed use centre.

Outer Southern Region

The very large outer southern region of Cardinia, Casey, Frankston and Mornington Peninsula, illustrated as part of Figure 6, is dominated by activity centres not well served by public transport. The exception to this pattern is the Frankston mixed use centre which is an important public transport interchange for rail and bus. To a much lesser extent, Pakenham is the only other transit-oriented centre in the region.

Frankston is the region’s most significant centre because of its extensive commercial, administrative, entertainment and retail base. The emerging Casey CBD, including Fountain Gate, Narre Warren, Casey Business Park, and the Civic Centre is the region’s
second most significant centre and is almost exclusively car-oriented. Cranbourne, Mornington and Rosebud are the three other large mixed use centres in the region, and they are all poorly served by public transport. Retailing in these centres is provided by shops in a traditional “main street” supplemented by enclosed complexes of varying sizes.

Several medium sized shopping centres operate in the region and all are not transit oriented. Those in the Cities of Frankston and Casey are the enclosed shopping complexes of Karingal Hub, Carrum Downs, and Endeavour Hills. In contrast, those on the Mornington Peninsula are the traditional centres of Hastings and Mt Eliza.

There are relatively few neighbourhood centres in this very large region. Those that exist are largely traditional centres around Frankston and on the Mornington Peninsula. In growth areas within Casey, there is a great paucity of neighbourhood centres. The few that exist are situated a considerable distance apart in locations such as Hampton Park, Thompson Parkway and Pearcedale. The limited extent of these centres is caused primarily because of the residential subdivision pattern, local planning policies, and ongoing expansion of larger shopping centres in the region. Of the 21 neighbourhood centres examined in the region, only six are served by the rail network.

Office development in the outer southern area is predominantly in the form of large and small offices in the larger mixed use centres of Frankston, Casey CBD, Cranbourne, Mornington and Rosebud. The business park in the Casey CBD is one of a very few ‘office park’ style developments in the region, which contrasts with the more traditional streetfront offices in the other centres.

Seven tertiary education institutions are located in the region. Monash University has campuses at Frankston and Berwick, as well as the Business School at Mt Eliza. Chisholm Institute of TAFE has four campuses at Frankston, Cranbourne, Casey (Berwick) and Rosebud. The Chisholm TAFE campus at Frankston is a part of the wider mixed use centre and close to the public transport interchange. The Monash University and Chisholm TAFE campuses at Berwick are close to the railway station, but very isolated from the Berwick Shopping Centre. The remaining five tertiary education campuses are removed from mixed use, transit-oriented centres.

Frankston Hospital and the Mornington Peninsula Hospital at Rosebud West are the two main public hospitals in the region. Both are isolated from mixed use activity centres and major public transport facilities.

Geelong Region

The Geelong region, illustrated in Figure 7, is dominated by the Geelong Central Activity Area (Geelong Central). The centre performs the major retail, commercial, cultural, administrative, and civic centre in the region. However, the centre is not transit-oriented with poorly developed public transport facilities and services.
Figure 7
Activity Centres in the Geelong Region
Close to Geelong Central, there are a few large traditional mixed use centres such as High Street in Belmont and the two Pakington Street centres in Geelong West and Newtown. Further out in the middle suburban and newer residential areas, the larger activity centres such as Corio Village and Town and Country Shopping World at Grovedale are stand alone enclosed shopping complexes. In the outlying parts of the region, traditional mixed use centres such as at Lara and townships such as Ocean Grove, Torquay, Drysdale, and Queenscliff constitute the main type of activity centre. All of these centres are car dominated.

There are two main clusters of “big box” retailing outlets in the region – at the northern entrance to Geelong along the Princes Highway at Corio, and at the south-eastern entrance to Geelong along the Bellarine Highway at Moolap.

The neighbourhood centres in the inner and middle suburbs of Geelong are a mixture of small traditional centres primarily at key points along main roads and small enclosed shopping complexes such as Bellarine Village, Grovedale Square, and Newcomb Community Shopping Centre.

Office development in the Geelong region consists primarily of large and small offices in Geelong Central and, to a much lesser extent, the larger mixed use centres of Belmont and Pakington Street, and the outlying townships. The are no office parks in the region.

Avalon Airport is a large specialist transport-oriented centre in the northern part of the region.

There are two main tertiary education institutions in the region – Deakin University and the Gordon Institute of TAFE. Deakin University has its main campus on an isolated site at Waurn Ponds, as well as a newer waterfront campus forming part of the larger Geelong Central mixed use centre. The main Fenwick Street campus of the Gordon Institute is next to the Geelong railway station on the western edge of Geelong Central. The Moorabool Street campus is south of the main Geelong CAA, and the small Geelong West campus is on an isolated site.

Geelong Hospital is the main public hospital in Geelong Central, and St John of God is the main private hospital. Both are located on the southern edge of the mixed use activity centre.

4.2.3 Hierarchy of Retail Centres

Centres containing some form of retailing represent the vast majority of activity centres in Melbourne and Geelong. As such, it is important to analyse the distribution of different types and scales of retail-based centres, and how the network of these types of centres and their internal characteristics have changed over the last 20 years or so.
A conceptual hierarchy of retail centres has been used for many years to describe the system. The hierarchy has been presented in several different ways, but a fairly simple categorisation is as follows:

- central activity areas;
- major suburban centres differentiated between regional centres (greater than 50,000 square metres of retail floorspace) and sub-regional centres (between 10,000 and 50,000 square metres of retail floorspace);
- neighbourhood centres (less than 10,000 square metres of retail floorspace).

The hierarchy of retail centres examined in this project is illustrated in Figure 8.

**Central Activity Areas**

The Melbourne Central Activities District is at the top of the retail hierarchy. With over 430,000 square metres of retail floorspace, three full-line department stores, and an extensive range of speciality shops including most major chain stores, the Melbourne CAD occupies an unparalleled position in the metropolitan and State hierarchy.

The Geelong Central Activity Area, with over 115,000 square metres of retail floorspace, a department store, discount department stores, and a range of speciality shops is at the top of the hierarchy in the Geelong region. However, in terms of this wider metropolitan analysis, the Geelong CAA fits into the hierarchy more as a regional shopping centre.

**Regional Centres**

In terms of size, there are 21 regional shopping centres (apart from the Geelong CAA) in metropolitan Melbourne, each having total retail floorspace in excess of 50,000 square metres. Seven of these centres – Cheltenham/Southland, Chadstone, Dandenong, Frankston, Ringwood, Greensborough and Highpoint, the majority located in the eastern and south-eastern parts of Melbourne - are “super regional” centres with over 85,000 square metres of retail floorspace.

About half of the remaining 13 regional shopping centres are in Melbourne’s eastern and south-eastern regions. They comprise Prahran/South Yarra in the inner area; Doncaster, Box Hill, Forest Hill, Glen Waverley and the Whitehorse Road Precinct (Nunawading) in the middle suburban belt; and Knox City/Towerpoint, the Casey CBD (Fountain Gate/Narre Warren) and Cranbourne in the outer area. The two adjoining retail strips in Armadale/Malvern make them similar to a regional centre.

The northern metropolitan area has only three regional centres apart from Greensborough – Northland; High Street Northcote/Thornbury; and the cluster of strip centres in Fitzroy/Collingwood. Preston and Broadmeadows are almost regional shopping centres with close to 50,000 square metres of retail floorspace.
Figure 8
Hierarchy Of Retail Centres Across Melbourne Metropolitan Area And Geelong

Activity Centres By Retail Floor Space
(Numbers do not include Geelong centres)

- Melbourne CAD (1)
- Super Regional Centres (>85,000 sq m) (10)
- Regional Centres (50,000-85,000 sq m) (10)
- Major Sub Regional Centres (30,000-50,000 sq m) (30)
- Minor Sub Regional Centres (10,000-30,000 sq m) (72)
The western metropolitan region has the smallest representation of regional shopping centres with only two – Footscray and Sunshine, apart from the “super regional” centre at Highpoint.

Regional shopping centres are often considered by the retail development industry more in terms of retail mix than size. To this industry, a regional shopping centre is a centre providing “higher order retailing” with one or more department stores, one or more discount department stores, one or two supermarkets, and a considerable number of speciality chain shops. This definition would reduce the number of regional centres included on the basis of size by half. The inclusion of a department store would be the critical differential factor. It would limit the regional centres in the metropolitan area to 11 centres - Highpoint, Footscray, Northland, Doncaster, Ringwood/Eastland, Knox City/Towerpoint, Glen Waverley, Chadstone, Southland, Dandenong, and Frankston. Six of these centres are stand-alone enclosed complexes; four have an enclosed retail complex as an important part of a mixed use activity centre.

Regional shopping centres also are more likely than other retail-based centres to have cinemas within them. Fifteen (or 68%) of the 22 centres with cinema based entertainment in suburban Melbourne are regional centres. With the exception of Footscray, all of the 11 regional centres with a department store have multiple cinemas, and these cinemas are situated within an enclosed shopping complex in the activity centre. Of the remaining nine regional shopping centres, determined on the base of floorspace, five have cinemas – Sunshine, Greensborough, Prahran, Forest Hill and Cranbourne. All of these cinemas are part of an enclosed shopping complex in the activity centre. With the exception of the Casey CBD in the outer south-east, all of the regional centres without cinemas are more traditional mixed use centres in the inner and middle eastern suburbs - Fitzroy/Collingwood, High Street Northcote, and Box Hill.

The physical form of Melbourne’s regional centres varies considerably. Inner area centres within seven kilometres of the CBD – Fitzroy, Prahran/South Yarra, Northcote/Thornbury, and Footscray - are largely open air traditional strip centres or nodes with a significant mixture of uses beyond retailing, an important public realm, and major public transport interchanges involving tram and/or rail. The settlement pattern in these areas and the public transport connections have had a major influence on the form of these centres.

By contrast, eight of the regional centres – Highpoint, Northland, Doncaster, Forest Hill, Chadstone, Southland, Knox City/Towerpoint, and Fountain Gate are large privately owned enclosed complexes with predominantly shopping and entertainment activities, and extensive car parking areas within and around them. They rely solely on bus services for public transport. The design of these complexes by major retail developers, rather than the surrounding urban form or transport arrangements, have been the major influence on the physical form of these centres.

Eight other regional centres – Sunshine, Greensborough, Box Hill, Glen Waverley, Ringwood, Dandenong, Frankston and Cranbourne are hybrid arrangements of a
traditional open air centre and an enclosed complex. Almost all of these centres have a very good mixture of uses beyond retailing, an important public realm, and major public transport interchanges involving rail and bus. A mixture of the retail and commercial form developing around the railway stations at these centres, State and local government policies and implementation measures, and major developments by private retail developers has influenced the physical form of these centres.

The last regional centre – the Whitehorse Road Precinct in Nunawading – is a mixture of an elongated strip of superstores and a traditional shopping centre based around the Nunawading railway station and Whitehorse Road- Springvale Road intersection.

**Sub Regional Centres**

In terms of size, there are about 115 sub regional shopping centres in metropolitan Melbourne and Geelong, each having total retail floorspace between 10,000 and 50,000 square metres.

The eastern and south-eastern parts of Melbourne are well represented by this scale of centre, with almost 40 in the eastern suburbs and about 25 in the southern suburbs. The northern and western areas are less well represented in the same way that there are fewer regional centres in these areas. The west has about 20 sub regional centres and the north only 17. The inner central municipalities of Melbourne, Yarra and Port Phillip have about 10 sub regional centres based around major roads in Carlton, Fitzroy, Richmond, St Kilda, South Melbourne and Port Melbourne.

In the western region, the majority of sub regional centres are concentrated in the Cities of Moonee Valley and Brimbank. There is no centre of such scale in the City of Maribyrnong, primarily because of the dominance of Footscray and Highpoint. There are only two or three sub regional centres in each of the municipalities of Melton and Wyndham because of the comparatively limited settlement pattern and low population density in these areas.

In the northern region, there are two or three sub regional centres in each of the municipalities of Moreland, Darebin, and Banyule. For the inner parts of this region, this type of centre consists of a large strip centres along a major road (eg, Sydney Road and High Street). In the City of Hume, there are three sub regional centres which are very spread out across the municipality. Each centre has an enclosed shopping complex as a key part of the retailing activities undertaken in the centre. In contrast, in the City of Whittlesea, there is a mixture of three traditional strip centres and two enclosed complexes. In Nillumbik, the complete lack of sub regional centres is caused by the dominance of the nearby Greensborough centre, the limited settlement pattern and constrained catchment area.

As with regional centres, the retail industry considers sub regional shopping centres more in terms of retail mix than size. To the industry, a sub regional shopping centre is a centre based around one or more discount department stores such as a Target, K Mart,
Big W or Harris Scarfe store. In the late 1960’s, this type of centre was usually about 10,000 square metres in size based around stand-alone K Mart and Coles stores but without specialty shops. Kmart Plaza in its early days at Burwood East was a key example of this type of centre. Most DDS based centres constructed in the 1970’s and 1980’s were slightly larger enclosed complexes of up to 15,000 square metres and included specialty shops. Most recently, these types of centres are enclosed complexes anchored by two DDS’s and are generally between 30,000 and 40,000 square metres.

The industry definition of a sub regional centre as a centre with a DDS reduces the number of sub regional centres in Melbourne and Geelong included in our analysis on the basis of size from about 115 to about 30. The vast majority of the 30 centres are privately owned enclosed shopping complexes comprising the totality of the activity centre and located on major roads in the middle and outer suburban parts of Melbourne, as well as in a couple of suburban areas of Geelong. Melbourne’s western region has the largest network of these complexes with eight, half of which are located in the City of Brimbank. The eastern and southern regions each has a network of six such sub regional complexes, all of which are spread across more outer suburban areas at least 13 kilometres from the Melbourne CBD. Melbourne’s northern region has only two such complexes at Broadmeadows Town Centre and Epping Plaza, while the central area does not have any.

The other three DDS based centres are mixed enclosed/open air shopping centres in more inner suburban locations in Melbourne - Glenferrie Road, Malvern; Camberwell Junction and Northcote, as well as similar locations in Geelong such as at High Street Belmont.

**Neighbourhood Centres**

We have examined a sample of about 140 neighbourhood centres with less than 10,000 square metres of retail floorspace spread across the Melbourne metropolitan area and in Geelong. The most dense concentration of these centres occurs in the inner areas of Melbourne, with the numbers decreasing as one moves further outwards. In outer municipalities such as Casey, Wyndham and Melton there are very few neighbourhood centres.

Most neighbourhood centres are open air strip or nodal centres located at key points along public transport networks (predominantly train and tram lines), and/or designed in a central location as part of a residential subdivision. A few are small privately owned enclosed complexes containing a supermarket and speciality shops – examples are Milllea and Coburns Road (Melton) in the west; St Helena Market Square in the north; Tooronga Village, Ferntree Plaza and Wheelers Hill in the east; Parkdale Plaza and Thompson Parkway in the south; and Bellarine Village and Grovedale Square in Geelong.

In recent years, the established hierarchy of retail centres has broken down with the emergence of major new forms of both shopping and retail activity centres. The new developments consist of purpose-built homemaker centres or clusters of “big box”
homemaker shops, other freestanding “category killers” or superstores, factory outlet stores and centres, and clusters of 24 hour convenience outlets along major roads. A brief description of these types of retailing and associated new activity centres follows.

**Homemaker Centres or Clusters of Big Box Homemaker Shops**

Big box homemaker shops and purpose-built homemaker centres have evolved to cater for the bulky goods retailing market. These types of goods are characterised by their size, weight or shape requiring a large area for display, handling or storage. Bulky goods retailers prefer to locate outside shopping centres in the traditional retail hierarchy in order to obtain lower rents.

In Melbourne, the major purpose-built homemaker centres are located next to the large enclosed shopping complexes at Northland, Highpoint, and on a stand alone site at Cranbourne. These centres range between 20,000 and 35,000 square metres in size. As distinct from purpose-built centres, big box homemaker shops are similar to other large superstores or “category killers”.

**Category Killers and Superstores**

“Category killer” chains and superstores – also known as “big box retail outlets” - represent a small but increasingly visible component of the retail development market. These stores specialise in a niche market and provide a comprehensive range of products in that market. Examples are Bunnings, BBC Hardwarehouse, Harvey Norman, Myer Megamart, Officeworks, Kmart Garden Supercentre, Rebel, Toys R Us, and Borders. Superstores typically range in size from 4,000 to 18,000 square metres, depending on the product category. For example, a Bunnings hardware superstore is typically over 10,000 square metres which is quite significant in scale when compared with a large supermarket of 3,000 to 5,000 square metres.

Some category killers such as Toys R Us, Rebel and Borders have located within enclosed or strip shopping centres within the retail hierarchy. Some superstores are located on the edge of, or adjacent to, established centres within the hierarchy.

However, about 20 of the over 50 superstores in Melbourne and Geelong are located outside the established hierarchy of retail centres. They operate as freestanding stores or part of clusters or strings of category killers along major roads such as the Princes Highway, Maroondah Highway, Nepean Highway, Bellarine Highway, Warrigal Road, and Ballarat Road.

**Factory Outlet Stores and Centres**

Factory outlet stores are a small but growing part of the Australian retail landscape. These stores allow a range of brand name fashion and homeware manufacturers, wholesalers and vertically integrated retailers to sell their surplus merchandise directly to
the public at discount prices. Outlet stores also have been the means of disposal of second quality, surplus and slow moving stock, as well as the testing of pilot products.

There is a wide range of factory outlet stores in Melbourne’s inner area strip centres such as Bridge Road Richmond and Smith Street Collingwood. However, purpose-built factory outlet centres are a more unusual phenomenon. There are only two existing centres in Melbourne – the Direct Factory Outlet Centre which opened in 1997 next to Moorabbin Airport and the Brand Smart centre which opened in 1999 as part of the cluster of homemaker superstores along the Maroondah Highway in Nunawading. There have been development applications to establish other free-standing factory outlet centres at Melton and Thomastown, although these centres have not been approved.

24 Hour Convenience Retailing Along Major Roads

The most common forms of such developments are 24 hour convenience stores or small main road based retail clusters. Many of these retail clusters began with a service station and expanded with take-away food outlets and video shops. This form of retail centre is becoming increasingly visible along the major highways in the outer areas of Melbourne and Geelong.

The established retail hierarchy has broken down not only because of the emergence of new forms of retailing, but also because the dynamics of the retail components which have underpinned the hierarchy also are changing. For example, “higher order retailing” associated with department stores at the top end of the hierarchy is diminishing with the increasing segregation of key department store sections (fashion, cosmetics, toys, whitegoods, electrical goods, computers) into separate retail formats (eg, Megamart) and a variety of stores in different types of locations (eg, large and small strip centres, enclosed shopping complexes, clusters of superstores, or homemaker centres).

The growth of both upmarket and discount specialty brand shops (eg, Country Road, Calvin Klein, Nike, The Body Shop, The Reject Shop) has undermined the significance of department stores, and altered the perceptions of what constitutes a regional shopping centre. These speciality shops can be found in centres of different size and retail mix, and, because of their pulling power, can give local centres as much of a regional orientation as centres at the top end of the retail hierarchy.

Similarly, the growth of lifestyle-oriented shopping and leisure activities has witnessed the increasing importance of cafes, restaurants and specialist food outlets across the full spectrum of centres. This phenomenon has made some neighbourhood centres as important as larger centres in terms of catchment areas, further diffusing the concept of hierarchy.
4.2.4 Office Development and Activity Centres

Over 75% of office development in the Melbourne metropolitan area is contained within mixed use activity centres in the Central Region municipalities of Melbourne, Yarra and Port Phillip. Melbourne Central City is, and will continue to be, the dominant location with major clusters of corporate offices in the CBD, St Kilda Road, and Southbank.

With Melbourne’s inner area rejuvenation, other strip or nodal centres in the region have experienced an increasing number of shopfront or warehouse offices providing business and professional services. The Richmond Business Park off Church Street provides one of the few examples of a mini “office park” form of development in the area.

Suburban office development also is expanding particularly in the eastern and southern metropolitan regions. Increased population in these areas coupled with the desire by companies to be close to the markets they serve and the people they employ have stimulated new offices. The rapid growth of service industries related to property, business, culture, recreation, and personal services that do not require central city locations has prompted businesses to seek suburban alternatives. Changes in information technology as part of the growth of the “new economy” have prompted company restructures or the emergence of new companies with preferences for regional operations in the suburbs, or new smaller and more flexible suburban start-up businesses. Suburban locations are considered by some employers to provide social and environmental amenity attributes, as well as better car parking facilities.

Suburban office development is increasingly being provided in several different forms – home-based businesses; small business incubators; shopfront offices in traditional strip or nodal centres or enclosed shopping complexes; stand-alone offices along major roads; office parks including research and technology precincts; and office and industrial parks. This pattern indicates the increasing dispersal of office development throughout the metropolitan area.

The growth of the office park is the most significant new development in the last 15 years. This form of activity centre - consisting of high quality offices with amenities spread out in a managed and landscaped environment on large sites generally greater than one hectare - is unique to the middle and outer eastern and south-eastern suburbs. There are several examples particularly in the City of Monash – Tally Ho, Brandon Office Park, Monash Technology Precinct and Wellington Business Park. The Casey Business Park as part of the emerging Casey CBD is one of the few examples in the outer southern region.

In many industrial areas of Melbourne, there has been a blurring of traditional distinctions between ‘office’ and ‘industry’ with buildings accommodating advanced industrial operations becoming indistinguishable from office buildings. New forms of office and industrial parks have emerged at locations such as Laverton, Broadmeadows, Bayswater, Scoresby-Rowville, and Dandenong.
The high concentration of office activity in the Melbourne Central City and the dispersal of suburban office development has resulted in very few traditional mixed use activity centres having a significant office component. Most such centres have small shopfront offices constituting no more than 30% of the total floorspace of the centre. Box Hill is the only suburban centre with office floorspace greater than 100,000 square metres. The only other traditional centres outside the inner region with office floorspace greater than 30,000 square metres are Prahran/South Yarra, Kew Junction, Camberwell Junction, Dandenong, Frankston, Cheltenham, and Moonee Ponds.

The very limited number of significant suburban office-oriented centres in Melbourne close to public transport contrasts with the cities highlighted in Chapter 2 in our international survey.

4.2.5 Tertiary Educational Institutions and Hospitals

Tertiary educational institutions and hospitals are considered important “activity centres” in this project. In our regional overview in Melbourne and Geelong, we have examined the location of 58 educational institutions and 29 hospitals as to the coverage of educational and health services in different regions, and whether the campuses or hospitals are stand-alone facilities or integrated with other uses in larger activity centres.

In the central area of Melbourne and to a much lesser extent in Geelong, there is a dense concentration of tertiary education institutions and hospitals. Almost all of these facilities are integrated with larger mixed use activity centres and are close to public transport facilities. Six tertiary education campuses including the University of Melbourne and RMIT, as well as nine major medical or dental hospitals are situated in the Melbourne Central City. Three hospitals and four tertiary educational institutions are located within or close to mixed use centres on the edge of or just outside the City of Melbourne in Fitzroy and Richmond. The Alfred Hospital is the only major exception to this pattern. It is a stand-alone centre on a tram line, but removed from a mixed use activity centre. In Geelong Central, Geelong Hospital and St John of God Hospital are both located on the southern edge of the mixed use activity centre.

In the inner and middle suburban areas of Melbourne, there is a more limited as well as dispersed arrangement among the major medical facilities. The hospitals in the west at Footscray and Williamstown are quite removed from mixed use centres and public transport nodes, whereas the main hospital in the north (Austin and Repatriation) is close to the Heidelberg railway station and mixed use centre. In the east, Box Hill Hospital is integrated with the larger Box Hill activity centre, although Cabrini Hospital and the Monash Medical Centre are stand-alone facilities quite removed physically from nearby mixed use centres. In the south, Caulfield General Medical Centre, Sandringham and District Hospital, and Dandenong and District Hospital are stand-alone facilities not integrated with mixed use centres, nor close to train or tram facilities.
The location of the tertiary educational institutions in these areas display a similar pattern. In the west, the main VUT and Kangan TAFE campuses are on the edge of mixed use centres, although smaller campuses at Newport and Avondale Heights are not. In the north, LaTrobe University and the Kangan Batman campus at Coburg are very removed from major mixed use centres and public transport nodes; the NMIT campuses at Preston and West Heidelberg less so. Only the RMIT campus at Brunswick is part of a major activity centre (Sydney Road) with very good train and tram connections.

In the inner east, three major tertiary education institutions - Swinburne University at Glenferrie/Hawthorn and Windsor, and Holmesglen TAFE - are situated within or next to mixed use, transit-oriented centres. Further out, the two TAFE campuses at Box Hill conform to this pattern. However, Monash University at Clayton, as well as the Deakin University campuses at Burwood and Clayton are removed from mixed use, transit-oriented centres. In the inner south, the Monash University campus at Caulfield is well integrated with the larger Caulfield activity centre and very close to the railway station. Further out, three of Chisholm Institute of TAFE’s four campuses in the region (at Moorabbin, Dandenong, and Bonbeach) are removed from mixed use, transit-oriented centres.

In the outer areas of Melbourne, there is not only a more limited provision of tertiary education and hospital facilities commensurate with the population base, but an increased dispersal of these facilities away from mixed use transit oriented centres. All the major hospitals – Sunshine, Mercy (Werribee), Northern (Epping), Maroondah, Angliss, Knox, Frankston, Mornington Peninsula (Rosebud West) - are situated on stand-alone sites which are car-oriented.

Eighty-five per cent of the tertiary education campuses in Melbourne’s outer regions are isolated from major mixed use centres as well as public transport nodes. These include VUT campuses at St Albans, Melton, Werribee and Sunbury; the RMIT Campus at Bundoora; the NMIT campus at Greensborough; Swinburne University campuses at Lilydale, Wantirna and Croydon; Monash University campus at Berwick and Business School at Mt Eliza; and Chisholm TAFE campuses at Cranbourne, Berwick and Rosebud. The only campuses that are integrated to any extent with mixed use transit oriented centres are the Chisholm TAFE campus at Frankston, the Swinburne campus at Healesville, and the VUT campus at Sunshine.

4.2.6 Network of Metropolitan Melbourne Centres with Highest Number of Trips

Trip generation has been an important criterion in the definition of activity centres used in this project. Consequently, it is important to examine the location and types of centres that generate the highest number of trips, to draw some conclusions about the characteristics of those centres in contributing to the performance of the overall network.

Data have been organised on 201 activity centres in the Melbourne metropolitan area attracting the highest number of non home based destination trips, based on the 1994-
1998 VATS data. Summary information on those centres is contained in Working Paper 8. Figure 9 illustrates the location of these centres.

The trips generated to these centres represent 37% of all trips recorded in the VATS data. A few of the centres for which data have been collected and analysed are components of larger activity centres. For example, the VATS data relating to the Central Melbourne activity centre have recorded separate listings for the Melbourne CBD, Parliament area, King Street strip, Queen Victoria Market, Southbank-Princes Bridge, North Melbourne, and West Melbourne. In the suburbs, separate data have been recorded for parts of centres such as Dandenong, Werribee, Williamstown, Kew Junction and Prahran/South Yarra.

From the data, there is a strong correlation between the centres generating the highest number of trips and those centres having a significant shopping centre base in terms of retail floorspace. Over 80% of the 201 centres are major shopping centres (or parts of those centres) with retail floorspace greater than 10,000 square metres.

Over 90% of all major shopping centres in the Melbourne metropolitan area are included on the list of the 201 highest trip generating centres. The major centres missing from the list are primarily shopping centres in outer areas (eg, Hastings, Healesville, Belgrave, Hampton Park, Carrum Downs), and newer centres in the western suburbs (Brimbank Central, Deer Park Central, Watergardens) where it could be expected that trips would be low for the period of analysis. Five other major retail-oriented centres - Bulleen Plaza and Templestowe Village in the east; Thomastown and Glenroy in the north; and Union Road, Ascot Vale in the inner west are not included on the list. It is difficult to ascertain what particular characteristics of these centres prevented them from generating a similar level of trips as other comparable and nearby centres which are included on the list.

A few neighbourhood centres with retail floorspace less than 10,000 square metres generated enough trips for them to be included in the list of 201. These comprised Tooronga Village, North Balwyn, North Croydon, North Ringwood, and Vermont South in the east; Caulfield and Glenhuntly, Murrumbeena, East Bentleigh, and Parkdale in the south; and Eaglemont and Eltham Ridge in the north.

The generation of relatively high trip numbers in these centres is likely related to a combination of factors such as the characteristics of the immediate catchment area, business mix in the centre, transport connections and centre management and marketing. In addition, for Caulfield, the presence of major non-retail facilities such as the Monash campus and VATC racecourse explains the high number of trips generated for that centre.
Apart from the major suburban and neighbourhood centres, the remaining 14% of high trip generating centres comprises:

- educational campuses (Melbourne University at Carlton, Monash University at Clayton, Latrobe University at Bundoora, Xavier College at Kew, Deakin University at Burwood, VUT at Footscray);
- Melbourne Airport;
- major medical precincts such as the Monash Medical Centre at Clayton and the Dandenong Hospital (listed highly because it is located next to Dandenong TAFE);
- inner city non-retail areas such as St Kilda Road, the Melbourne sports precinct, East Melbourne, West Melbourne, the Carlton Exhibition Buildings and gardens area, the beach area at Port Melbourne, and the Royal Botanic Gardens.

The highest trip generating centres are in the Cities of Melbourne, Yarra and Port Phillip. This represents 37 of the 201 centres analysed. Of the remaining 164, 113 (69%) are in the eastern and southern suburbs, compared with 51 (31%) in the northern and western suburbs.

Many of the top 210 trip generating centres are traditional strip or nodal centres with a mixture of uses beyond retailing and with good transit orientation. This applies not only in the inner areas, but throughout the middle and outer suburbs. Over 110 centres on the list are mixed use centres located next to a railway station or along a tram line. In contrast, only 29 (14%) of the top trip-generating centres are stand-alone enclosed shopping centres.

The location of the top 30 trip-generating centres is illustrated in Figure 10. These centres represent 17.5% of all trips recorded in the VATS data. Figure 10 also compares the location of these top 30 trip-generating centres with the largest retail centres, measured in terms of floorspace.

Thirteen of the top 30 trip-generating centres, including all of the top seven, are activity centres in Melbourne’s inner central municipalities of Melbourne, Yarra and Port Phillip. Most but not all perform a major retailing role. The major exception to this is Melbourne University which is ranked fifth on the list. However, in analysing the business mix, it is evident that it is not just retailing that has contributed to the high level of trip generation. Each of these centres performs important commercial, entertainment, community service and housing roles, the mixture of which has been more important than retailing alone in attracting very high numbers of trips.

Outside the inner central area, all of the seven “super regional” shopping centres – Cheltenham/Southland, Ringwood, Chadstone, Frankston, Highpoint, Dandenong and Greensborough are included in the list of top 30 trip-generating centres, but not necessarily corresponding in order to the retail size of the centre. For example, Ringwood generates more trips than Chadstone, although it is a less significant retail centre. The less dense network of major shopping centres around Ringwood, the centre’s
role as a major public transport interchange involving two rail lines, and its mixture of other uses are likely to be contributing factors in Ringwood’s higher standing in trip generation.

Six other major shopping centres – Box Hill, Prahran, Knox City, Sydney Road Brunswick, Doncaster and Glen Waverley also are included in the list of top 30 trip-generating centres, but again not necessarily corresponding in order to the retail size of the centre. Box Hill, for example, generates more trips than any of the “super regional” shopping centres, although it has only about 55% of the retail floorspace of Southland - the largest retail centre. Box Hill’s role as a major public transport interchange on the Ringwood and Belgrave rail lines, its relatively high proportion of commercial office space, the presence of a major tertiary educational institution and hospital on the edge of the centre, and other non-retail uses are likely to be contributing factors to its higher standing.

Outside Central Melbourne and immediately adjacent areas, the other activity centres on the list of top 30 trip-generating centres are Camberwell Junction, Glenferrie Road, Hawthorn; Toorak Road South Yarra; Brunswick Street, Fitzroy; Sydney Road, Brunswick; North Melbourne; St Kilda; and Glenferrie Road, Malvern. All are important strip centres, have a diverse mix of uses beyond an important base in retailing, and are very well served by tram or rail public transport. The high ranking of Camberwell Junction and Glenferrie Road Hawthorn are a result of the non-retail mix in the centres (particularly Swinburne University in the case of Glenferrie Road), and their position as major public transport interchanges.

The strong correlation between centres generating the highest number of trips and those centres having a significant retail base suggests that shopping centres should remain an important focus of activity centre policy. However, as the mixture of uses beyond retailing as well as public transport services appear to be critical factors in higher trip generation, the focus in developing a sustainable centres policy should be more on mixed use transit-oriented centres than just shopping centres.

4.2.7 Mode Share of Trips to A Selection of Activity Centres

In addition to trip generation, it is important to analyse the different modes of transport used to get to various activity centres, particularly in terms of their transit sustainability.

The mode share (proportion of people using a particular method of transport) of people travelling to particular activity centres was investigated by Arup Transportation Planning for this project. The full report is presented in Working Paper 3. Using the VATS data from the 1994 -1998 surveys, Arup examined the mode share for a sample of 71 activity centres across Melbourne. It was considered that this sample was adequate to cover a range of major and neighbourhood centres in different parts of Melbourne.
The average figure for public transport usage in Melbourne is 5%. From the sample, only 10 activity centres had a proportion of trips made by public transport that was 9% or higher. The data on these centres are presented in the following table.

Activity Centres with Higher Than Average Proportion of Public Transport Trips

<table>
<thead>
<tr>
<th>Activity Centre</th>
<th>% Public Transport Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melbourne CAD</td>
<td>47%</td>
</tr>
<tr>
<td>Footscray</td>
<td>17%</td>
</tr>
<tr>
<td>Box Hill</td>
<td>16%</td>
</tr>
<tr>
<td>Sunshine</td>
<td>15%</td>
</tr>
<tr>
<td>Chapel St, Prahran</td>
<td>12%</td>
</tr>
<tr>
<td>Bentleigh</td>
<td>12%</td>
</tr>
<tr>
<td>Brunswick St, Fitzroy</td>
<td>11%</td>
</tr>
<tr>
<td>Fitzroy St, St Kilda</td>
<td>11%</td>
</tr>
<tr>
<td>Camberwell Junction</td>
<td>10%</td>
</tr>
<tr>
<td>Sydney Rd, Coburg</td>
<td>9%</td>
</tr>
</tbody>
</table>

There is not a strong correlation between the largest retail centres generating a high number of trips, and those centres with the highest proportion of public transport trips. Very few of the “regional” centres and none of the enclosed retail centres are included in the table. This suggests that the large retail centres are predominantly car-oriented.

The centres with the highest proportion of public transport trips are generally large retail and commercial centres that are within about 10 kilometres of the Melbourne CAD. For Box Hill, which is outside this radius, the high proportion of public transport trips also can be explained by the high level of office activity in its business mix.

In addition to being large mixed use centres, the top three centres outside the CAD have significant modal interchanges. The remaining centres have not only a mixture of uses with an important retailing base, but also transit facilities which are at a focal point within the centre – either a tram line along the length of the centre or a rail with tram and/or bus interchange in the middle of the centre.

Car travel accounts for, on average, about 75% of all trips to Melbourne activity centres. The following table provides data on those activity centres within the Arup sample with proportion of car trips lower than this average.
Activity Centres with Lower Than Average Proportion of Car Trips

<table>
<thead>
<tr>
<th>Activity centre</th>
<th>% car use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitzroy St, St Kilda</td>
<td>48%</td>
</tr>
<tr>
<td>Melbourne CAD</td>
<td>49%</td>
</tr>
<tr>
<td>Acland St, St Kilda</td>
<td>57%</td>
</tr>
<tr>
<td>Lygon St, Brunswick</td>
<td>58%</td>
</tr>
<tr>
<td>Sydney Rd, Brunswick</td>
<td>61%</td>
</tr>
<tr>
<td>Sydney Rd, Coburg</td>
<td>62%</td>
</tr>
<tr>
<td>Brunswick St, Fitzroy</td>
<td>62%</td>
</tr>
<tr>
<td>Lygon St, Carlton</td>
<td>64%</td>
</tr>
<tr>
<td>Smith St, Collingwood</td>
<td>64%</td>
</tr>
<tr>
<td>Chelsea</td>
<td>66%</td>
</tr>
<tr>
<td>Swan St, Richmond</td>
<td>68%</td>
</tr>
<tr>
<td>Bridge Rd, Richmond</td>
<td>68%</td>
</tr>
<tr>
<td>Oakleigh</td>
<td>68%</td>
</tr>
<tr>
<td>Chapel St, Prahran</td>
<td>70%</td>
</tr>
<tr>
<td>Box Hill</td>
<td>71%</td>
</tr>
<tr>
<td>Sunshine</td>
<td>72%</td>
</tr>
<tr>
<td>Elsternwick</td>
<td>73%</td>
</tr>
</tbody>
</table>

Most of these centres, particularly those with the lowest proportion of car usage, are strip centres in the inner areas of Melbourne where residential densities are higher, car ownership is lower than average, and the centres are physically integrated with the surrounding areas. Not all of these have a correspondingly high proportion of public transport use, indicating a high proportion of walking and sometimes cycling. Other centres in this table such as Oakleigh, Box Hill and Sunshine are larger middle suburban centres with a good mixture of uses and significant public transport interchanges.

The final table identifies the activity centres within the Arup sample with the proportion of walking trips above the Melbourne average of 16%.

Activity Centres with Higher Than Average Proportion of Walking Trips

<table>
<thead>
<tr>
<th>Activity centre</th>
<th>% Walking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitzroy St, St Kilda</td>
<td>41%</td>
</tr>
<tr>
<td>Acland St, St Kilda</td>
<td>34%</td>
</tr>
<tr>
<td>Chelsea</td>
<td>30%</td>
</tr>
<tr>
<td>Lygon St, Brunswick</td>
<td>30%</td>
</tr>
<tr>
<td>Sydney Rd, Brunswick</td>
<td>28%</td>
</tr>
<tr>
<td>Smith St, Collingwood</td>
<td>27%</td>
</tr>
<tr>
<td>Sydney Rd, Coburg</td>
<td>26%</td>
</tr>
<tr>
<td>Brunswick St, Fitzroy</td>
<td>25%</td>
</tr>
<tr>
<td>Oakleigh</td>
<td>23%</td>
</tr>
<tr>
<td>Bridge Rd, Richmond</td>
<td>23%</td>
</tr>
<tr>
<td>Swan St, Richmond</td>
<td>22%</td>
</tr>
<tr>
<td>Elsternwick</td>
<td>22%</td>
</tr>
<tr>
<td>Lygon St, Carlton</td>
<td>19%</td>
</tr>
</tbody>
</table>
These figures again show a higher proportion of walking to a few larger strip centres in the inner suburbs. The density of urban form and degree of permeability with respect to these centres are significant factors contributing to this result.

The only centres in the table outside the inner areas are the traditional mixed use centres of Elsternwick, Oakleigh, and Chelsea in Melbourne’s south-east. It is difficult to ascertain what particular characteristics of these centres and their surrounding areas, compared with other similar types of centres, caused this result.

4.2.8 Business and Resident Perceptions of Centres

To further our understanding of the dynamics of activity centres, surveys of businesses within four centres, and of individuals who live near to those centres, were undertaken by Roy Morgan Research for this project. The full results of the surveys are presented in Working Paper 2.

The aim of the business survey was to investigate issues relating to perceptions about centre prosperity, business synergies within centres, benefits to businesses of clustering activities in centres, perceptions of access, public transport provision, centre competition and sense of community. The purpose of the resident survey was to gain insights into issues of centre usage, perceptions and preferences of centre users, mode of travel to centres, and sense of community.

The four centres investigated were Dandenong, Footscray, Glenferrie Hawthorn and Geelong Central Activity Area. From the telephone surveys of both businesses and residents in the four centres, some key conclusions can be drawn.

Firstly, clustering of businesses in an activity centre is perceived by business to create beneficial synergies. According to the majority of respondents in all centres, it provides ease of access to goods and services; attracts greater numbers of people; reduces transport costs; and provides the opportunity for joint marketing exercises.

Secondly, the physical environment is considered to be very important to perceptions (both business and resident) of a centre’s prosperity and sense of community. The Melbourne centres in the Roy Morgan research perceived to have a better physical environment were Glenferrie Hawthorn and Footscray. It is interesting to note that these centres have higher shares of people visiting the centre by walking, compared with Dandenong.

Thirdly, the proportion of trips made by public transport to the three Melbourne centres reported in the Roy Morgan research was fairly similar to the proportion indicated in the VATS analysis. Dandenong in particular had a very low rate of public transport usage - 12% in this Roy Morgan work compared with 9% in the VATS analysis. This is indicative of the poor location of the Dandenong railway station on the periphery of the centre and/or the lack of bus services connecting with the centre.
For all Melbourne centres, while public transport did not feature as a very important factor in the business respondents’ original decision to locate in a particular centre, it is now perceived to be a very important factor for many businesses.

Finally, a relatively low level of both business and resident respondents in three centres (Glenferrie Hawthorn being the exception) considered that their centre was prospering. For all centres surveyed, an average of only 49% of all business respondents, and 50% of residents held this view. This varied across the centres from Glenferrie Hawthorn (69% of business and 73% of individuals) to Footscray (28% for both business and individuals), with Geelong and Dandenong in between. The main explanations given for the perceived lack of prosperity were local economic conditions, withdrawal or closure of significant businesses, lack of financial investment by significant businesses, general economic conditions and competition with other centres. Resident respondents had similar reactions.

Similarly, just over half of all respondents thought that their centre had a good sense of community with Glenferrie Hawthorn again showing the highest favourable rating particularly amongst business respondents, and Geelong showing the least favourable rating among residents. Interestingly for Geelong, there was a considerable disparity of opinion between the business and residential communities. While 56% of businesses considered that Geelong Central had a strong sense of community, only 27% of residents felt that way. Across the four centres, the main contributors to the sense of community were considered, by the business community, to be an active, friendly business community, while for residents, it was the range of leisure facilities such as eating or meeting places.

From this research, the fact that large centres such as Dandenong, Footscray and Geelong Central with an extensive mixture of uses are not perceived, in many quarters, to have a strong sense of prosperity or community provides some important signals about key aspects of their sustainability. The survey responses suggest that, beyond size and business mix, centres need to have an attractive and safe physical environment with a strong sense of place where it is easy and comfortable to meet people.

The contrast between public transport usage of Dandenong (very poor) and Footscray (well above average) shows having public transport infrastructure with various transit services does not necessarily mean that businesses or residents use these facilities, or perceive that they are valuable. From this research, the location, extent and integration of public transport services within a centre, and convenience of their use, seem to be more critical factors.