

3.7 KEY ACTIVITY AREAS

The Bridge Street end of George Street exhibits a number of characteristics which are responsible for its success as a commercial and recreational precinct in Windsor. These characteristics include close proximity to the arterial road on Bridge Street, George Street being the main Street of Windsor; wide streets with ample parking, generous footpath widths, a variety of retail food and beverage outlets, and consistent and well maintained heritage buildings juxtaposed against the attractive parkland in Thompson Square.

The complementary relationship between the George Street retail premises and the Thompson Square parkland creates a natural synergy which results in a most attractive place for a range of activities. This part of Thompson Square can perform a range of activities ranging from a civic square for group activities to a quiet location for a picnic.

Whilst the parkland in Thompson Square provides the appearance of being a large and contiguous area of green space, the alignment of Bridge Street physically and from some viewpoints, visually divides the parkland into two almost equal triangular shaped halves. The upper area fronting onto George Street offers the best amenity with access to the adjoining retail outlets and separation from Bridge Street which is visually, and to some degree acoustically, shielded by the deep cutting. A series of benches and tables are scattered around this area of the park providing picnic facilities for casual use. Views to the river are restricted by trees growing in the intervening area of parkland.

The lower parkland area is surrounded and more exposed to the roads in this part of the Square. The relatively small area of usable green space in this area is separated from the river foreshore by a small car park and The Terrace running parallel to the river's edge. It has a slightly elevated position which provides a vantage point to observe the river through the trees in the park and along the foreshore. Facilities are limited to two picnic table settings and a litter bin.

DESIGN CONSIDERATIONS

Maintaining the successful synergy between the commercial outlets and the parkland is central to the future use and enjoyment of this area of Windsor. Expanding the parkland areas to increase the areas available for use and providing a continuous green space connection to the river are central design opportunities for this project. Working closely with the Council and the community in the design of Thompson Square should enhance the design outcome for the square.



Plate 3.24: View west to George Street from the intersection with Bridge Street. Thompson Square is on the right.



Plate 3.23: Thompson Square looking north from the corner of George Street.



Plate 3.25: View west along George Street Mall from the Baker Street intersection.



Plate 3.26: The lower parkland area of Thompson Square.



Figure 3.21: Key activity zones of the study area.

3.8 ARRIVAL POINTS TO WINDSOR

There are two key arrival points into Windsor within the study area of the project: the George Street and Bridge Street intersection and the Wilberforce Road and Freemans Reach Road intersection. Both of these locations have key visual elements which signify to motorists, cyclists and pedestrians that they are arriving into the township.

There are two key arrival points on the approaches to Windsor; McGraths Hill on Windsor Road and the intersection of Bridge Street and George Street. Both share ridgetop vantage points which alert road users to the arrival into Windsor. The intersection of Bridge Street and George Street is approached up a relatively steep slope, rising out of South Creek. The sense of arrival is heightened by the combination of reaching the top of the ridge at George Street and the opening up of the view created by the open space of Thompson Square. A similar arrival experience occurs when approaching the intersection of Bridge Street and George Street from the north after crossing the Windsor Bridge.

The arrival point at the Wilberforce Road and Freemans Reach Road intersection is situated on the Hawkesbury River floodplain and therefore is not influenced by a change of topography but rather the opening up of the view across the River to Thompson Square and the town. The view is the result of the lack of riverside and roadside vegetation and the presence of a turf farm in the foreground.

DESIGN CONSIDERATIONS

Recognising these landmark locations is an important aspect of the design process which ensures that the road users awareness is heightened in order to respond to the changing road condition and make decisions about breaking their journey in Windsor. Retaining visual connections to the views and vistas of the town is a key design consideration. Strategic tree plantings will be important to retain these key viewpoints. Surface and roadside treatments can also provide queues to road users of the significance of an arrival point.



Plate 3.27: The intersection of Bridge Street and George Street is the key arrival point in Windsor.



Plate 3.28: View north along Bridge Street from the bridge over South Creek.



Plate 3.29: The intersection of Freemans Reach Road and Wilberforce Road.



Plate 3.30: View north from the intersection of Macquarie Park entry road and the northern approach road to Windsor.



Figure 3.22: The key town entry points are George Street / Bridge Street to the south of the river and Wilberforce Road and Freemans Reach Road to the north of the river.

3.9 KEY DESTINATIONS AND RIVER ACCESS

Thompson Square provides the only potential open space connection for pedestrians and cyclists from the commercial area of Windsor down to the water's edge on the River. Access to the River foreshore areas are possible along streets which intersect George Street, such as Baker Street however these are not located in a parkland setting such as Thompson Square. The wharf, just north of Thompson Square, provides the only access point to the water's edge from the town other than at Governor Philip Park which is on the northern outskirts of the town. Therefore this access to the wharf and the bridge over the river via Thompson Square, is a most attractive and desirable route for both pedestrians and cyclists.

Due to the intersecting roads through the Square, access to the river is currently restricted to the road reserves through Thompson Square. Access from the George Street area down to the River can be made on either the footpath down Old Bridge Street or the footpath or roadway on the unnamed road on the south eastern edge of the Square.

Access via Old Bridge Street requires people to cross at the George Street and Bridge Street intersection which is a difficult movement due to poor sightlines, the speed of vehicles and the multiple directions from which the vehicles are entering into the roundabout. The steepness of the grades down Old Bridge Street make this route unsuitable for disabled access.

Access via Thompson Square road on the south eastern edge of the square, passed the Doctor's House, is safer and reasonably accessible for people with a disability until they arrive at the intersection of Bridge Street and The Terrace next to the Windsor bridge abutment. At this point a set of timber stairs provides grade separated access under the bridge to the northern side of The Terrace and ultimately to the wharf. At grade access is possible across Bridge Street on The Terrace however the poor sightlines and the speed of vehicles approaching the bridge down Bridge Street, makes this an inherently dangerous crossing.

The pedestrian path across the Windsor bridge is very narrow and provides very limited separation from vehicles travelling in a southbound direction into Windsor. Despite the poor amenity provided on this walkway, it does provide most attractive views upstream and downstream from the bridge.

On the northern foreshore a footpath occurs on the northern side of Wilberforce Road connecting to the path on the bridge. However access to the entrance of Macquarie Park, a key destination for pedestrians and cyclists in this area, is constrained from a natural desire line by poor sightlines on the curved road alignment, the speed of vehicles approaching and leaving the bridge and the cut embankment between the footpath and the entry road to Macquarie Park.

DESIGN CONSIDERATIONS

Improved access which is more direct, not conflicting with vehicles and more accessible for people with restricted mobility is a key design consideration for the project. Improving the amenity for pedestrians and cyclists travelling between the town and the river, and across the River to Macquarie Park.



Plate 3.31: View north along Old Bridge Street to the intersection with George Street that marks the entry to the Windsor retail area



Plate 3.32: George Street leading towards the retail centre of Windsor.



Plate 3.33: The southwestern edge of Thompson Square looking southeast.



Plate 3.34: Entrance to Macquarie Park.

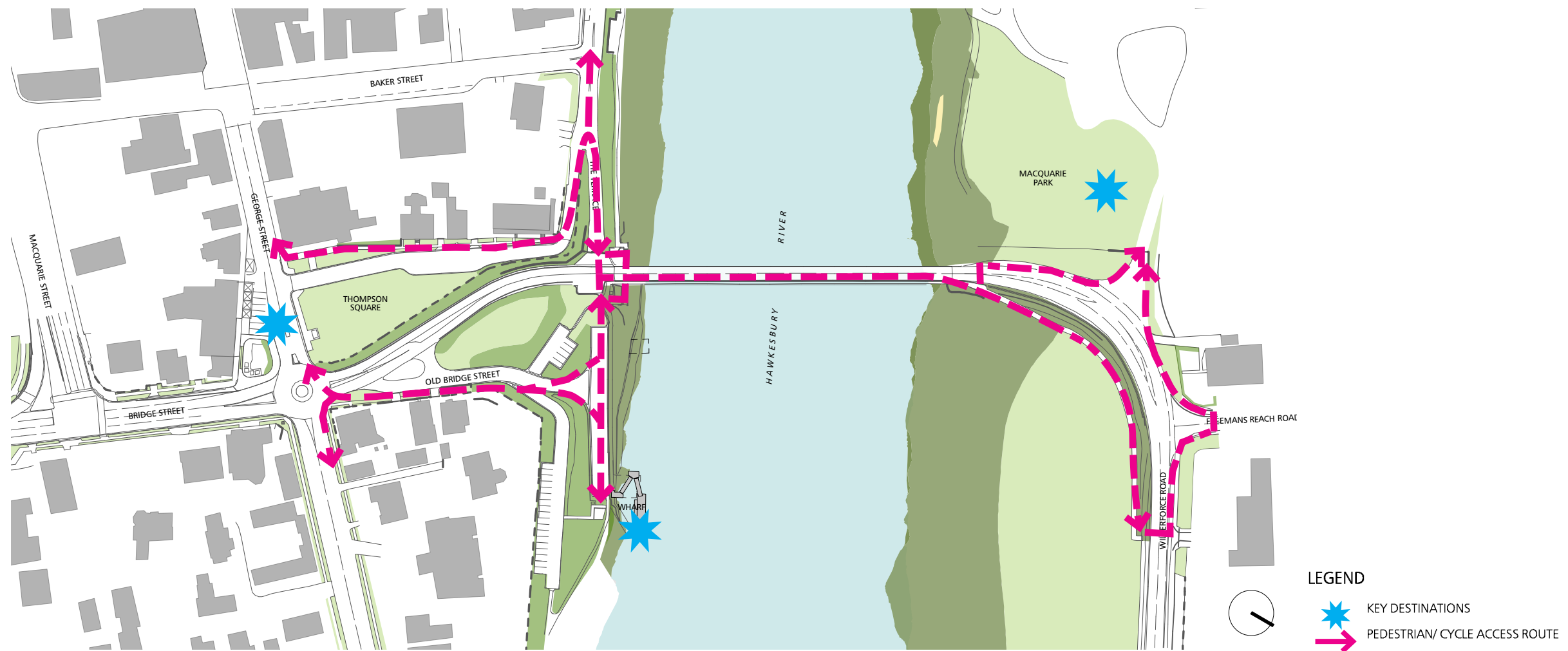


Figure 3.23: Existing pedestrian and cycle connections.

3.10 PATTERNS OF TRAFFIC MOVEMENT

The patterns of vehicular traffic movement around and through Thompson Square have a direct correlation to the range of recreational and other uses which can occur in the Square. Traffic movement, including volumes, speed and changing diurnal patterns, directly affects the amenity of the area as well as accessibility around and through it.

There are two main thoroughfares in Windsor, the primary route being the arterial road which follows Bridge Street through the Square and onto the Windsor Bridge, and the other being the Macquarie Street bypass of the CBD of Windsor. The patterns of traffic movement on Bridge Street are dominated by the narrow cross section of the existing bridge, the relatively steep and narrow approach road through Thompson Square, the roundabout at George Street and the signalised intersection at Macquarie Street. The volumes of traffic are at their highest level in the morning and evening peak periods.

Typically Bridge Street between Macquarie Street and George Street carries high volumes and during peak periods at relatively slow speeds. However during non peak periods the speeds would increase as the volumes reduce. As vehicles approach the roundabout on George Street the speeds drop substantially as it acts as a natural traffic calming device.

Beyond the roundabout, traffic travelling in both directions on Bridge Street, are generally travelling at a slow speed due mostly to the narrow and steep road alignment, and the poor sightlines. Vehicle speeds do not substantially vary during peak and non peak periods due to these road conditions and the narrow bridge configuration. The steep grade on Bridge Street results in elevated heavy vehicle noise as they climb the steep slope or use engine braking devices to slow their descent.

Beyond the bridge on the northern foreshore vehicle speeds increase on both Wilberforce Road and Freemans Reach Road, although considerable congestion occurs during the morning peak as higher volumes of vehicles negotiate the intersection of these two roads and approach the narrow bridge.

The local roads within Windsor including George Street, Old Bridge Street, The Terrace and Thompson Square road all carry lower volumes of traffic travelling at much slower speeds than the roads mentioned above. The lower volumes and slower speeds facilitate a range of indoor and outdoor activities associated with the local shops, hotel and the parkland areas by making the area more accessible and reducing noise which directly affects amenity.

DESIGN CONSIDERATIONS

Creating an attractive environment and maximising accessibility for all modes of transport through and around Thompson Square is a key design consideration. Reducing vehicle speeds and therefore noise levels is a central issue in improving the amenity of the area particularly for outdoor activities. Improving safety and accessibility for pedestrian and cycle movements around the square is important to developing the square as a better place for people to congregate and enjoy. Maximising accessibility for vehicles entering and leaving the square is vital for the continued commercial viability of the businesses along George Street and Old Bridge Street. It is also noted that the predicted growth in traffic is natural and would occur even if the current bridge was not replaced.



Plate 3.35: View south west along George Street.



Plate 3.36: View west to the intersection of Bridge Street and Macquarie Street.



Plate 3.37: View south east to north west along Old Bridge Street and Thompson Square.



Plate 3.38: View west along Wilberforce Road to the northern approach to the bridge.



Plate 3.39: Signage at the intersection of Wilberforce Road and Freemans Reach Road.

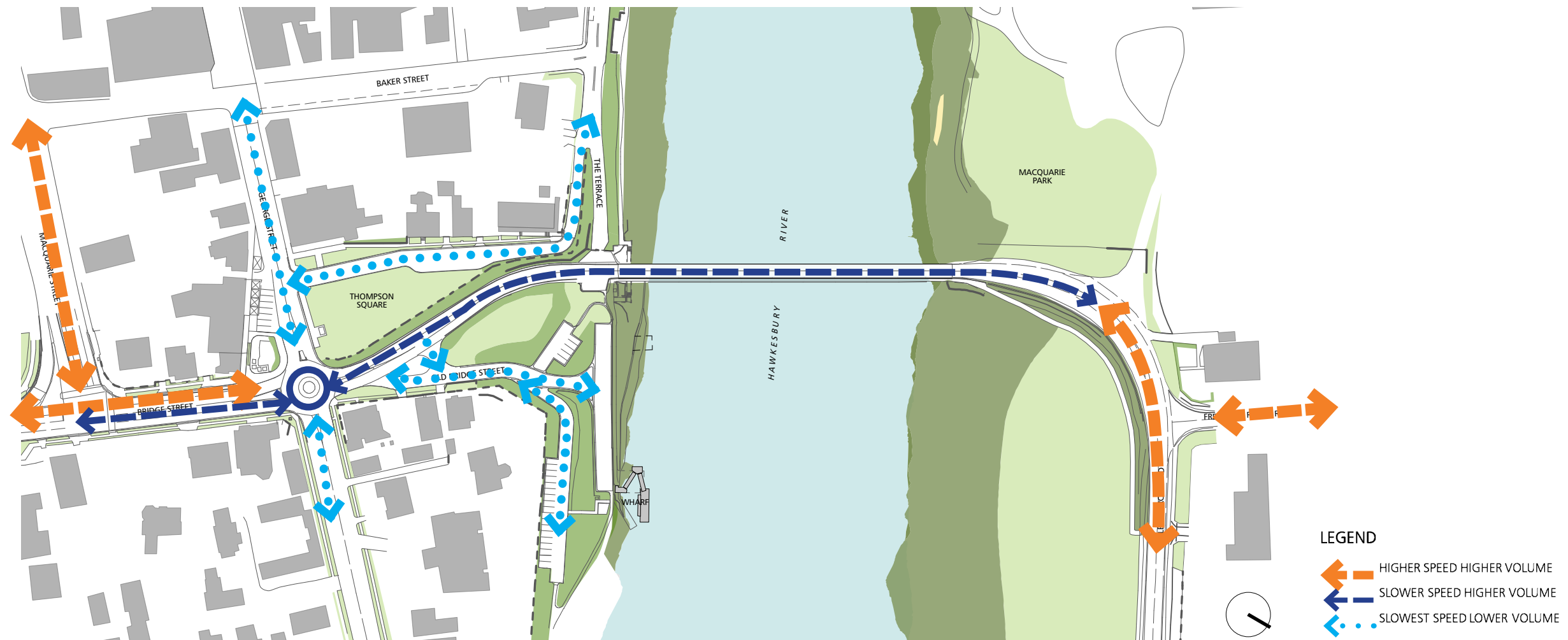


Figure 3.24: Analysis of existing traffic speeds and volumes within the study area.

3.1 | EXISTING TREE SPECIES

A range of tree species occur within the study area. A large number of the trees are located within Thompson Square, with the balance occurring along the edge of the River on both the northern and southern foreshores, and adjacent to Wilberforce Road, Freemans Reach Road and the entry to Macquarie Park.

The trees in Thompson Square and along the southern foreshore of the River are a combination of exotic and Australian native species. Some of the Australian native species are endemic to the area such as the Swamp Oak, *Casuarina glauca*, however many of the other native species originate in other parts of Australia such as the Silky Oak, *Grevillea robusta*.

Many of the trees are self seeded, particularly those closer to the foreshore. It appears that whilst some of the more mature specimens in the parkland areas of Thompson Square have been planted and may date back many decades, a large number of the less mature specimens may have self seeded from the mature trees which were planted. This is particularly evident along the embankments of the cuttings where a number of trees are now growing in locations where it is unlikely that they would have been planted.

Some of the more mature specimens growing in the upper parklands area near George Street, are landmark trees creating a significant presence in the park and the adjoining streets. An example of these landmark trees are the two Norfolk Island Pines, *Araucaria hetrophylla*, growing adjacent to the entrance to the Macquarie Arms Hotel and a large but aging Silky Oak on the corner of George Street and Bridge Street. Whilst the two Norfolk Island Pines are in apparent good health, the Silky Oak is growing on the edge of the road cutting and is showing signs of senescence.

An extensive area of the southern and northern foreshore is heavily weed infested which restricts some tree growth and also contributes to an unattractive character in what is otherwise a very attractive setting.

Along the boundaries of Macquarie Park and the heritage property Bridgeview, there are hedgerow plantings of native and exotic species including Lilypilys, Photinia and Cypress Pine which delineate the boundaries and present an orderly and more suburban character to an otherwise rural setting. A number of mature Eucalypt trees occur as isolated specimens along the roadside and at the entry to Macquarie Park.

DESIGN CONSIDERATIONS

Protecting the established and mature tree specimens will be a key design consideration in order to maintain the heritage qualities and consistency of the appearance of the area on both sides of the river. In areas of Thompson Square, where Bridge Street is to be removed and the area returned to parkland, there is an opportunity to not only replace any trees removed during the construction process but also to reinforce the parks character in order to enhance the amenity and usefulness of this area of the square. New plantings should not be located in places where they may obstruct views into and out of Windsor.

Table 3.1: EXISTING TREE SPECIES WITHIN THOMPSON SQUARE.

Note: This table provides an outline of the existing tree species present. A tree assessment report would be undertaken by a qualified arborist in the future. Refer to diagram on the following page for location.

REF.	SPECIES	COMMON NAME
T1	<i>Fraxinus spp.</i>	Ash
T2	<i>Grevillea robusta</i>	Silky Oak
T3	<i>Grevillea robusta</i>	Silky Oak
T4	<i>Brachychiton populneus</i>	Kurrajong
T5	<i>Brachychiton populneus</i>	Kurrajong
T6	<i>Grevillea robusta</i>	Silky Oak
T7	<i>Grevillea robusta</i>	Silky Oak
T8	<i>Grevillea robusta</i>	Silky Oak
T9	<i>Liquidambar styraciflua</i>	Liquidambar
T10	<i>Grevillea robusta</i>	Silky Oak
T11	<i>Araucaria bidwillii</i>	Bunya Pine
T12	<i>Grevillea robusta</i>	Silky Oak
T13	<i>Liquidambar styraciflua</i>	Liquidambar
T14	<i>Grevillea robusta</i>	Silky Oak
T15	<i>Grevillea robusta</i>	Silky Oak

REF.	SPECIES	COMMON NAME
T16	<i>Melia azedarach</i>	White Cedar
T17	<i>Jacaranda mimosifolia</i>	Jacaranda
T18	<i>Grevillea robusta</i>	Silky Oak
T19	<i>Olea europaea</i>	European Olive
T20	<i>Grevillea robusta</i>	Silky Oak
T21	<i>Grevillea robusta</i>	Silky Oak
T22	<i>Melia azedarach</i>	White Cedar
T23	<i>Melia azedarach</i>	White Cedar
T24	<i>Ulmus parvifolia</i>	Chinese Elm
T25	<i>Jacaranda mimosifolia</i>	Jacaranda
T26	<i>Grevillea robusta</i>	Silky Oak
T27	<i>Cedrus spp.</i>	Cedar
T28	<i>Ulmus parvifolia</i>	Chinese Elm
T29	<i>Jacaranda mimosifolia</i>	Jacaranda
T30	<i>Schinus molle</i>	Peppercorn Tree

REF.	SPECIES	COMMON NAME
T31	<i>Jacaranda mimosifolia</i>	Jacaranda
T32	<i>Casuarina glauca</i>	Swamp Oak
T33	<i>Jacaranda mimosifolia</i>	Jacaranda
T34	<i>Casuarina glauca</i>	Swamp Oak
T35	<i>Lagerstroemia indica</i>	Crepe Myrtle
T36	<i>Lagerstroemia indica</i>	Crepe Myrtle
T37	<i>Araucaria hetrophylla</i>	Norfolk Island Pine
T38	<i>Araucaria hetrophylla</i>	Norfolk Island Pine
T39	<i>Melia azedarach</i>	White Cedar
T40	<i>Melia azedarach</i>	White Cedar
T41	<i>Melia azedarach</i>	White Cedar
T42	<i>Melia azedarach</i>	White Cedar
T43	<i>Melia azedarach</i>	White Cedar
T44	<i>Ficus hillii</i>	Hills Fig
T45	<i>Schinus molle</i>	Peppercorn Tree



Plate 3.40: Mature tree planting in the upper parkland area of Thompson Square.



Plate 3.41: Hedge planting separating the northern approach road and Macquarie Park.



Figure 3.25: Location of existing trees within Thompson Square.

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