# MELROSE PARK

## TRANSPORT MANAGEMENT AND ACCESSIBILITY PLAN

Final Report

24 JANUARY 2019

JACOBS®

# 7. IMPLEMENTATION PLAN

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## 7.1 Overview

The development of an integrated package of measures and strategies for the Melrose Park TMAP has evolved over an ongoing process based upon close consultation with City of Parramatta, Department of Planning & Environment, Transport for NSW, Roads and Maritime Services and key stakeholders.

The implementation plan provides a framework to ensure an integrated and coordinated approach to achieve the objectives set out in the TMAP.

Whilst a number of the specific measures and strategies of this TMAP will be pursued jointly by both local and NSW Government, there will also be a number of measures and that will be taken forward by Melrose Park proponents separately. In implementing the processes outlined in this TMAP, the outcomes across the precinct and wider region will be consistent and coordinated.

## 7.2 Staging and trigger points for major infrastructure and services

Melrose Park precinct is a multi-decade development and will be developed in stages. The initial staging will be based on land ownership, market demand, cash flow, constructibility, community needs and design considerations.

Melrose Park precinct needs to build in flexibility to accommodate future changes and to ensure land use strategies are closely coordinated with infrastructure delivery. It is important to understand the short, medium and long term changes in demand and service level requirements as the development progress. Although a particular capacity or service level is required for ultimate development, infrastructure will usually be provided in stages to match demand and lower levels of service can be tolerated in the short term.

A key aspect in the timely and cost-effective provision of infrastructure and services is the integration of land release strategies with the delivery of infrastructure. This is to ensure that the use of existing assets and any spare capacity is maximised early in the process to ensure efficient delivery of future infrastructure.

The key aspects of the Melrose Park staging approach include:

- Assessing infrastructure demand over the proposed development period and identifying critical short term, medium and long term demands
- Ensuring public transport services are provided in line with development to encourage sustainable behaviour and reduce car reliance
- Investigation of existing and future infrastructure capacity to identify “trigger” thresholds and timeframes for contribution and implementation
- Preparing an infrastructure staging plan which moderates the development staging plan as required taking advantage of infrastructure capacity.

The detailed staging and sequencing for Melrose Park will be further refined after the planning proposal with development contingent on the delivery of transport infrastructure. The following staging scenarios have been considered:

- An extension of the existing development front from Victoria Road following development occurring at the former Bartlett Park site (Figure 7.1)
- Development occurring on two fronts (i) an extension of the existing Bartlett Park site, and (ii) the proposed new town centre at the south-east corner of the northern precinct (Figure 7.2)

The indicative staging described below has been formulated in conjunction with the establishment of the road network and public transport facilities to ensure that Melrose Park evolves in a coherent and efficient manner.

Dwelling yields for each stage reflect the trigger point for the associated infrastructure. e.g. Stage 1A works are required in order to support a yield of more than 1,100 dwellings. Years shown are indicative only.

**Stage 1A: Delivered at approx 1,100 total dwellings (2021)**

- Widening of Wharf Road south of Victoria Road
- Left in/left out access from Victoria Road to NSR-2 (i.e. at Kissing Point Road)

**Stage 1B: Delivered at approx 1,800 total dwellings (2022)**

- Upgrade of Victoria Road/Wharf Road intersection to provide:
  - Additional dedicated left turn lane on eastern Victoria Road approach
  - 4 lanes at the stopline on Wharf Road approach - 1 left, 1 through, 2 right
  - Removal of slip lane on western Victoria Road approach and realignment of stopline to allow for more efficient ‘diamond’ signal phasing
  - Additional through lane on Marsden Road approach

**Stage 1C: Delivered at approx 3,200 total dwellings (2024)**

- Upgrade of the Victoria Road/Kissing Point Road intersection to provide:
  - Fully signalised intersection allowing all turning movements.
  - Dual right turn lanes on the eastern and western Victoria Road approach
  - Dual right turn lanes and a shared left/through lane on the southern Kissing Point Road approach
  - 4 lanes at the stopline on the northern Kissing Point Road approach - 1 right, 2 through, 1 left.
  - New signalised pedestrian crossings on the northern, southern and western intersection legs
- Widening of Victoria Road between Kissing Point Road and Wharf Road to allow for a continuous bus lane in each direction

There is potential to provide an indented bus bay for eastbound Victoria Road services directly east of the upgraded Kissing Point Road intersection. It is recommended that the provision of this facility be further investigated at the detailed design stage to ensure that relevant design standards can be met at this location.

**Throughout Stage 1**

- Provide shuttle buses to service the public transport demand from Melrose Park to Meadowbank Station. Provision of this service will commence with one shuttle bus, with further shuttles to be brought into service in line with delivery of dwellings with a total of 4 buses providing an ultimate Stage 1 frequency of 12 shuttles per hour in the peak periods.
- Staged improvements to frequency of M52 bus services on Victoria Road as described in section 6.4.6 to provide ultimate frequency of 18 per hour in peak direction. (Noting that Melrose Park demand accounts for 5 of the additional 12 hourly services)
- Staged delivery of internal road network and associated pedestrian and cycling infrastructure to provide access to development.

**Stage 2: Delivered at approx 6,700 total dwellings (2028)**

- New public transport and active transport bridge over the Parramatta River between Melrose Park and Wentworth Point. The bridge will be designed to cater for both bus and light rail vehicles.
- Public transport services as described in section 6.4.6 including maintaining Stage 1 M52 service improvements and also providing services over the new bridge either via Parramatta Light Rail Stage 2 or high frequency bus connections.
- Staged delivery of internal road network and associated pedestrian and cycling infrastructure to provide access to development.

Figure 7.1: Single front staging scenario

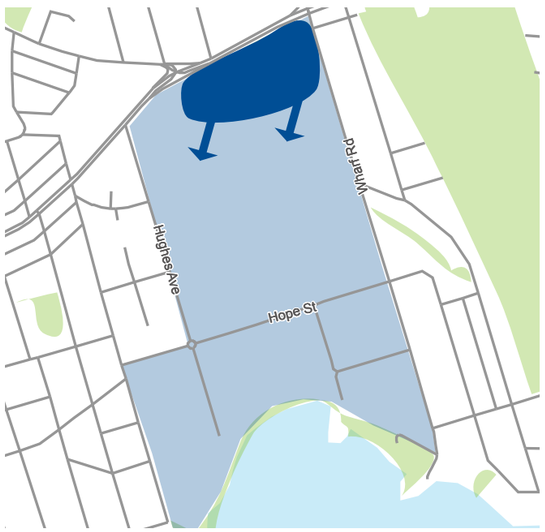
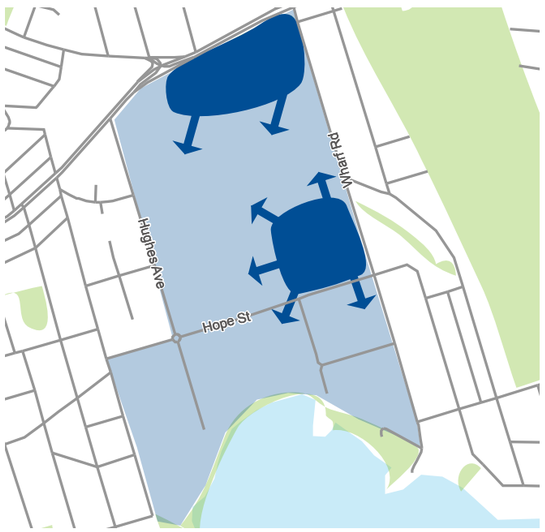



Figure 7.2: Two front staging scenario



A summary of the proposed staging and the total dwelling yield able to be supported by each stage is shown in Table 7.1

**Table 7.1: Staging summary**

| Stage | Delivered at (dwellings) | Yield supported (dwellings) |
|---|---|---|
| Existing network | N/A | 1,100 |
| Stage 1A | 1,100 | 1,800 |
| Stage 1B | 1,800 | 3,200 |
| Stage 1C | 3,200 | 6,700 |
| Stage 2 | 6,700 | 11,000 |

Figure 7.3 to 7.5 set out the staging of identified road infrastructure recommendations for the Melrose Park precinct. Intersection designs and pedestrian crossing facilities will be subject to further refinement at the detailed desgn stage. It is noted that all traffic modelling presented in this TMAP assumes full one-stage pedestrian crossings on all legs of Victoria Road intersections with Kissing Point Road and Wharf Road.

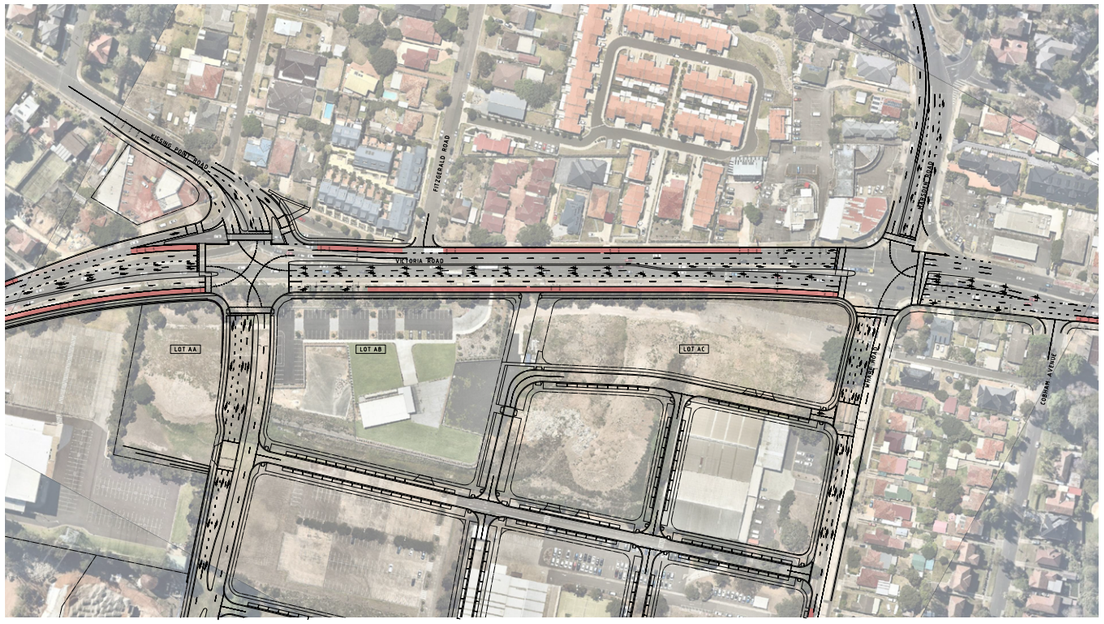
**Figure 7.3 : Victoria Road Stage 1A upgrades (Northrop) - Required at approx 1,100 dwellings**






**Figure 7.4 : Victoria Road Stage 1B upgrades (Northrop) - Required at approx 1,800 dwellings**


**Figure 7.5 :Victoria Road Stage 1C upgrades (Northrop) - Required at approx 3,200 dwellings**



## 7.3 Implementation plan

The table below sets out a summary of the proposed transport infrastructure and services required to support the Melrose Park development. Detailed staging of these items is outlined in section 7.2

| ID | Description | Responsibility | Background | Objective | Timing |
|---|---|---|---|---|---|
| Road network | | | | | |
| 1 | Internal road network | Proponents | The internal road network will be delivered in lockstep with the staged development of Melrose Park. It is proposed to develop internal roads progressively to provide access to core development areas as they come online. | 2,5,6 | Ongoing |
| 2 | Wharf Road intersection upgrade at Victoria Road | Proponents/ RMS | Proposed upgrade to the Victoria Road/Wharf Road intersection will improve access to and from Melrose Park whilst also improving efficiency for buses, freight and general traffic on Victoria Road. | 2,4,5,6 | Short term |
| 3 | Kissing Point Road - new access at Victoria Road | Proponents/ RMS | New left-in/left-out access into the precinct via the Victoria Road/Kissing Point Road intersection. This will be required in the initial stages of the development to allow for local access. | 2,4,5,6 | Short term |
| 4 | Intersection upgrades - As part of PLR Stage 2 | TfNSW | Intersections along Hope Street will require adjustments as PLR stage 2 is delivered. This will result in newly signalised intersections at Hughes Avenue, NSR-2 and NSR-3/Waratah Street. | 2,4,5,6 | Medium term |
| 5 | Kissing Point Road - intersection upgrade at Victoria Road | Proponents/ RMS | Full upgrade of the Victoria Road/Kissing Point Road intersection. This will provide full access into and out of the Melrose Park precinct whilst also improving efficiency for buses, freight and general traffic on Victoria Road. | 2,4,5,6 | Medium term |
| 6 | Victoria Road upgrade between Wharf Road and Kissing Point Road | Proponents/ RMS | Widening of Victoria Road between Kissing Point Road and Wharf Road to allow for extended turning lanes and a continuous bus lane in each direction. | 2,4,5,6 | Medium term |
| Public transport network | | | | | |
| 7 | On-demand services | TfNSW | On-demand services to Macquarie Park are currently being trialled in the Melrose Park area. The possible expansion of these services to other hubs will reduce car reliance for Melrose Park residents and workers. | 1,2,5,7 | Short term |
| 8 | Local bus shuttle services | Proponents | The provision of bus shuttle services to promote integration with local bus and rail services at Meadowbank. Staged provision of buses to allow an ultimate Stage 1 (pre-bridge) headway of 5 minutes in the weekday peak period. 4 buses required to support up to 6,700 dwellings. Potential minor works and pedestrian crossing on Bank Street or at kiss and ride facility to support shuttle operations at Meadowbank station. | 1,2,5,7 | Short term |
| 9 | Bus service enhancements | TfNSW | The following improvements will provide efficient and sustainable travel options for residents and visitors of Melrose Park in the short to medium term:<br>• Increased frequency on M52 to cater for both background growth and Melrose Park demand along Victoria Road to Parramatta and the Eastern City<br>• Potential new service Top Ryde to Concord Hospital via a new bridge over Parramatta River<br>• New and upgraded bus stops on Wharf Road to ensure a maximum 400m spacing and to provide increased waiting areas and passenger amenity | 1,2,5,7 | Short to medium term |
| 10 | Ferry services | TfNSW | Investigations into the following ferry service improvements are recommended:<br>• Service improvements for F3 Parramatta River services to cater for future commuter ferry and tourist patronage demand<br>• Investigate and consult with TfNSW and RMS on ferry shuttles between Olympic Park and Parramatta and a potential new wharf at Melrose Park | 1,2,5,7 | Short to medium term |
| 11 | New bridge across Parramatta River | Proponents/ TfNSW | A new bridge connecting Melrose Park and Wentworth Point will have a transformative impact on Melrose Park and the wider region. Rapid transport connections via bus or light rail will directly connect Melrose Park with jobs, services and key transport corridors at Rhodes and Sydney Olympic Park. | 1,2,3,4,5,7 | Medium term |
| 12 | PLR Stage 2 | TfNSW | A new light rail line will be provided connecting Melrose Park with Parramatta CBD and Olympic Park. At least two stops will be provided within Melrose Park to cater for central / northern and southern precinct access to the light rail corridor. The structure plans makes provision for a LRT corridor along Hope Street. | 1,2,4,5,7 | Medium term |
| 13 | Sydney Metro West | TfNSW | New metro line connecting Westmead, Parramatta CBD, Olympic Park, the T1 Northern rail line, Bays Precinct and Sydney CBD. This will be a key connection for Melrose Park residents who can access the line at Sydney Olympic Park via PLR Stage 2. | 1,2,4,5,7 | Medium term |
| 14 | Victoria Road bus improvements | TfNSW | As outlined in Future Transport 2056 - Improvements will include upgrading bus services and infrastructure on the Victoria Road corridor. Improvements will transform the Victoria Road Corridor into a more attractive place to live and work. Improvements would enhance access for Melrose Park residents traveling to Parramatta or the Eastern City. A potential indented bus bay to be investigated eastbound on Victoria Road east of Kissing Point Road. | 1,2,4,5,7 | Medium term |
| 15 | T1 Northern Line improvements | TfNSW | Investigations into capacity improvements for the T1 Northern Line are currently underway. TfNSW has indicated improvements will be necessary within the next 10 years. Improved services would enhance access for Melrose Park residents who could reach West Ryde/Meadowbank via bus or on-demand services before transferring to the T1 Northern Line | 1,2,4,5,7 | Medium term |
| 16 | T1 Western Line improvements | TfNSW | The T1 Western Line Rail Upgrade Program is recommended to be implemented in order to provide more capacity for Northern Line services | 1,2,4,5,7 | Medium term |

| ID | Description | Responsibility | Background | Objective | Timing |
|---|---|---|---|---|---|
| Active transport network | | | | | |
| 17 | Walking and cycling infrastructure on internal network | Proponents | The internal road network within the Melrose Park precinct will include provision for safe, efficient and attractive walking and cycling trips, particularly to/from Melrose Park Primary School. A midblock crossing on Hope Street between Wharf Road and Waratah Street is recommended to be investigated to facilitate safe connections between the northern precinct and the school. This will encourage local trips to be undertaken via active modes whilst also enhancing access to nearby public transport services. A shared path will be provided on the western side of Wharf Road. | 1,2,3,7 | Ongoing |
| 18 | Enhanced local connections | Proponents/ CoP | Enhancements to active transport infrastructure linking Melrose Park Precinct to the surrounding activity areas through new connections via the internal road network to the Parramatta River foreshore shared path and to George Kendall Reserve | 1,2,3,7 | Short term |
| 19 | Cycle parking and end of trip facilities | Proponents | End of trips facilities and secure and visible cycle parking should be provided at all commercial centres and other major trip generators<br>Adopt bicycle parking provision of:<br>• 1 per dwelling + 1 visitor space per 10 dwellings<br>• 1 per 150m$^2$ commercial GFA + 1 visitor space per 450m$^2$ commercial GFA<br>• 1 per 250m$^2$retail GFA + 1 visitor space per 100m$^2$ retail GFA | 1,2,5,7 | Short term |
| 20 | Implement and refine Parramatta Bike Plan 2017 | Proponents/ CoP | • Fully separated cycleway for Hope Street providing a new high quality east-west connection between Melrose Park and Rydalmere<br>• Painted lanes on Wharf Road connecting Hope Street cycleway to existing Parramatta Valley cycleway<br>• New shared path connecting north-south through the Melrose Park precinct and connecting with the Parramatta Valley cycleway | 1,2,3,7 | Short to medium term |
| 21 | Shared mobility facilities | Proponents | Shared mobility pods to be provided within Melrose Park for bike share, as well as emerging forms of shared mobility such as electric mopeds. | 1,5,7 | Medium term |
| 22 | New bridge across Parramatta River | Proponents/ TfNSW | A new bridge connecting Melrose Park and Wentworth Point will include dedicated walking and cycling infrastructure. This will provide direct active transport connections between Melrose Park and key centres such as Rhodes and Sydney Olympic Park. | 1,2,3,4,5, 7 | Medium term |
| 23 | Walking and cycling facilities to be delivered as part of PLR Stage 2 | TfNSW | Improved cycling and pedestrian facilities should be investigated during planning and delivery of PLR Stage 2 along the Hope Street and Waratah Street corridors. | 1,2,3,7 | Medium term |
| Policy | | | | | |
| 24 | Parking policy | CoP/ Proponents | • Consider maximum parking rates for Melrose Park in the long term with parking provision of:<br>  • 0.73 spaces per dwelling (average based on currently assumed dwelling mix)<br>  • 1 space per 30m$^2$ commercial GFA<br>  • 1 space per 50m$^2$ retail GFA<br>• Prioritise on-street car share within Melrose Park at a residential car share rate of 1 space per 40 dwellings<br>• On-street parking to be provided within the internal road network and be designed to support the function for the street.<br>• Provide real-time parking information along key access streets and the proposed town centre<br>• Unbundling /decoupling parking from the sale of apartments, to deliver housing choice and efficient allocation of parking across the development.<br>• Monitor on-street parking activity on the surrounding street network at Wharf Road, Hope Street and Hughes Avenue to minimise over flow parking from Melrose Park | 1,6,7 | Ongoing |
| 25 | Demand management | Proponents | • Ensure that transport information is up to date and liaise with the local residential and business communities on transport issues<br>• Aligning information at stops and streets with digital transport information provided through websites, apps and electronic information displays<br>• Liaise with transport providers to resolve any impediments to their efficient service and promote regular improvements<br>• Enabling significant investment in car share, providing accessible mobility choice to households without parking or who choose not to own a car<br>• Introduce parking management and control measures e.g. parking charges, constraining parking supply, unbundled/decoupled off-street parking<br>• Facilitate car-sharing to reduce the need for private car ownership<br>• Provide shared work spaces and ‘smart hubs’ to facilitate flexible working arrangements and minimise the need for peak hour commute trips<br>• Provide opal cards to initial residents of the precinct | 1,2,6,7 | Ongoing |

# 8. KEY FINDINGS AND CONCLUSIONS

# 8. CONCLUSIONS AND RECOMMENDATIONS

## 8.1 Overview

The Melrose Park TMAP has examined a wide range of issues in a complex land use and transport planning environment given the strategic location of the precinct within Greater Parramatta Olympic Peninsula (GPOP). The TMAP has sought to address the following key issues:

- The need to achieve a high level of public transport use, cycling and walking in order to achieve the *Future Transport Strategy 2056* broad strategic planning objectives of improved integration of land use and transport planning
- A strong commitment to bring light rail into the precinct as part of PLR Stage 2 and anchored by future connections to PLR Stage 1 and Sydney Metro West at Sydney Olympic Park
- The need to balance transport and access expectations in an environment where the road network, particularly at key intersections surrounding the site, is already close to capacity
- A staged approach to parking provision that will balance the short term needs with the long term objectives for sustainable parking management within the precinct
- To cluster residential, commercial and retail development in such a way that a 'critical mass' of trip generation is established within public transport catchments from the earliest stages of development.

## 8.2 Key findings

The key findings of the Melrose Park Precinct incorporating 11,000 dwellings in terms of transport infrastructure and services requirements are:

- Based on the nominated service levels for the road network, upgrades to Victoria Road intersections (Wharf Road and Kissing Point Road) will be required in order to efficiently service the Melrose Park precinct
- The road network analysis has identified that the remainder of the existing road network is able to cater for traffic generated by the proposed development, with no significant impacts compared to a future 'do minimum' scenario
- The public transport network for Melrose Park has been planned to cater for the full development without the need for light rail.
- Increased bus service frequencies on Victoria Road are required to support development and achieve mode share targets. Investigations have confirmed the required bus service levels are feasible
- A new bridge crossing (public and active transport only) across the Parramatta River linking Melrose Park to Wentworth Point is required by 2028 (approximately 6,700 dwellings) to enable connections from residential and employment areas to key public transport nodes
- New bus services between Top Ryde and Concord Hospital via Melrose Park are proposed to operate via the new bridge
- Shuttle services between Melrose Park and Meadowbank station are proposed to operate prior to the implementation of the new bridge. Proposed operations can be implemented without signifcant works or impacts
- Ferry user patronage demand from Melrose Park is likely to be small but may play an important role for discretionary trips. A new bridge across the Parramatta River will provide access to Sydney Olympic Park and proposed new ferry wharf at Rhodes East
- A light rail corridor is being proposed by TfNSW established through the core of the development. This would bring light rail services through the heart of Melrose Park with direct access to the proposed Sydney Metro West station at Olympic Park
- The introduction of PLR Stage 2 leads to a number of access implications along Boronia Street, Hope Street and Waratah Street which will need to be carefully managed
- The northern precinct structure plan maintains a corridor on Hope Street between Hughes Avenue and Waratah Street to enable the implementation of light rail. The southern precinct allows for light rail along Waratah Street.
- The entirety of the road works shall be delivered early with all upgrades delivered prior to the implementation of the new bridge over the Parramatta River. This plan ensures that infrastructure is in place to support the development and minimise wider network impacts.
- Key elements of Stage 1 - Prior to bridge (up to 6,700 dwellings:
  - Stage 1A, Stage 1B and Stage 1C road upgrades
  - Enhanced Victoria Road bus services to cater for background growth and Melrose Park demand
  - Shuttle services to Meadowbank Station
- Key elements of Stage 2 - After new bridge (more than 6,700 dwellings)
  - New high frequency services (bus or light rail) over the bridge
  - Continued enhanced Victoria Road bus services to cater for background growth and Melrose Park demand

## 8.3 Key conclusions

The key conclusions of the Melrose Park TMAP are:

- The scale of development envisaged for Melrose Park (11,000 dwellings) presents very significant, but manageable challenges for road and public transport infrastructure and services
- The package of transport infrastructure and services proposed and assessed in the TMAP is capable of accommodating the Melrose Park development yields (11,000 dwellings) and regional transport requirements as defined in *Future Transport Strategy 2056*
- Sydney Metro West will deliver significant benefits across the entire rail network for residents from Melrose Park with high capacity and more frequent services between Parramatta CBD, Sydney Olympic Park and Sydney CBD
- A new bridge crossing (public and active transport only) across the Parramatta River linking Melrose Park to Wentworth Point is required by 2028 (approximately 6,700 dwellings) to enable connections between multiple trip origins and destinations linking residential and employment areas to key public transport nodes
- Parramatta Light Rail Stage 2 will provide a direct link to and through the Parramatta CBD, and to the broader rail network, for the growing areas of Melrose Park, Wentworth Point, Sydney Olympic Park, North Parramatta and Westmead
- The public transport network needs for Melrose Park Precinct has been planned to match the type and scale of development without the need for light rail. The new bridge across Parramatta River linking Melrose Park and Wentworth Point will provide a key connection and will provide, a fast, direct, high frequency feeder bus services linking Melrose Park to Rhodes Station and future metro station at Sydney Olympic Park
- The signalised intersections within the study area are adequate and will operate at acceptable level of service with the improvements recommended. The TMAP analysis has shown LOS E or better for all the signalised intersections within the study area during the peak hours
- The additional traffic demands as a result of Melrose Park development on the surrounding local road network fall within acceptable capacity thresholds
- Parking provision in the early stages will need to balance the imperative of achieving as much development as early as possible (to contain travel within the area), while parking provision in the later stages will need to constrain parking supply as a means of reducing travel by private car
- The proposed 9,441 off-street parking spaces provided within Melrose Park is considered adequate to cater for the likely parking demand generated from the site at full build-out by 2036, which will be complemented by the public transport initiatives identified in the TMAP
- An integrated package of measures is required to be implemented over the next five to ten years as the development progresses, with the package containing a mix of policy and infrastructure and transport services measures
- The staging of the development will not cause any noticeable degradation of performance on the surrounding road network with the proposed integrated package of mitigation measures
- The staging of infrastructure and services is focused on ensuring high levels of accessibility in the short term. Road network upgrades and significant public transport service improvements are proposed in the early stages of the development.
- The measures presented within the TMAP need to be integrated comprehensively and consistently over the short, medium and long term if the mode split targets are to be achieved, and if the surrounding road network is to continue to function at an acceptable level of service.