

Reference: #N112650

15 November 2016

The GPT Group
Level 51, MLC Centre
19 Martin Place
Sydney NSW 2000

Attention: Mr Ryan Cooper (Senior Development Manager, Retail & Mixed Use)

Dear Ryan

**RE: SYDNEY OLYMPIC PARK MASTERPLAN 2030 (2016 REVIEW)
ASSESSMENT OF TRAFFIC AND TRANSPORT OUTCOMES**

GTA Consultants (GTA) has reviewed the Sydney Olympic Park Master Plan 2030 (2016 Review) documentation with respect to traffic and transport outcomes for the Central Precinct and Sydney Olympic Park generally. The key recommendations are summarised below.

- Provide flexibility for roads, circulation and access within the Central Precinct to allow it respond appropriately to good built form and design outcomes. This could be better addressed as part of an integrated design solution.
- Facilitate appropriate retail parking levels and manage/ share parking for efficient usage of supply across the mixed use development.
- Ensure day-to-day operations in the Central Precinct can continue efficiently during special events, with opportunities to leverage new facilities (e.g. parking, retail, temporary accommodation and open space) during special events.
- Provide greater clarity regarding the extent, scope, cost, timing, triggers, funding and delivery for required external road network upgrades.
- The recently announced Sydney Metro West rail is a great initiative by the NSW Government and will provide much needed rail capacity and connectivity to Sydney Olympic Park and Western Sydney. This should be pursued vigorously. In the interim, a direct, full-time heavy rail connection between Sydney Olympic Park and the Sydney CBD should be pursued, to improve public transport travel times and help attract commercial tenants.
- Maximise the benefit of planned public transport initiatives, including Parramatta Light Rail and any rapid transit route or bus network improvements, with consideration for both location of stops/ interchanges and connectivity to the Sydney Olympic Park Town Centre.
- Provide users of Sydney Olympic Park with access to a variety of viable, day-to-day transport options.
- Provide greater clarity with respect to future transport infrastructure provisions and contributions (both internal and external), with a clear nexus between works and future development within Sydney Olympic Park.
- Provide a clear commitment to travel demand management initiatives and look at sustainable funding sources for ongoing costs, outside of the Infrastructure Contributions Framework.

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The above matters are addressed in greater detail in the enclosed advice. I trust this provides a clear overview in relation to the traffic and transport constraints and opportunities for further progressing the master planning and redevelopment of Sydney Olympic Park.

Naturally, should you have any questions or require any further information, please do not hesitate to contact me in our Sydney office on (02) 8448 1800.

Yours sincerely

GTA CONSULTANTS



Brett Maynard
Director

Sydney Olympic Park Master Plan 2030 Overview

The NSW Government, through the Department of Planning and Environment (DP&E), has placed on exhibition the Sydney Olympic Park Master Plan 2030 (2016 Review) (MP Review) and is seeking feedback from the public and from stakeholders. The GPT Group (GPT) has a direct interest in Sydney Olympic Park (SOP), with a significant landholding within the Central Precinct. The future of Sydney Olympic Park and redevelopment potential of this site is determined by the master plan and associated framework. A summary of the master plan is provided below.

The Sydney Olympic Park Master Plan 2030 provides a comprehensive approach to the long-term development of Sydney Olympic Park, ensuring that Sydney Olympic Park continues to evolve into an active, vibrant suburb within metropolitan Sydney. The Master Plan contains a number of planning principles and controls to encourage development of Sydney Olympic Park that responds to its context, and which contributes to the quality of the built environment, future character and cultural significance of the Park including the establishment of a Town Centre, new urban activities and residential uses that will activate the precinct on an 18-24 hour/ 7-day basis.

The MP Review proposes additional gross floor area (GFA) for most land uses, which equates to an extra 460,000 square metres of GFA in total.

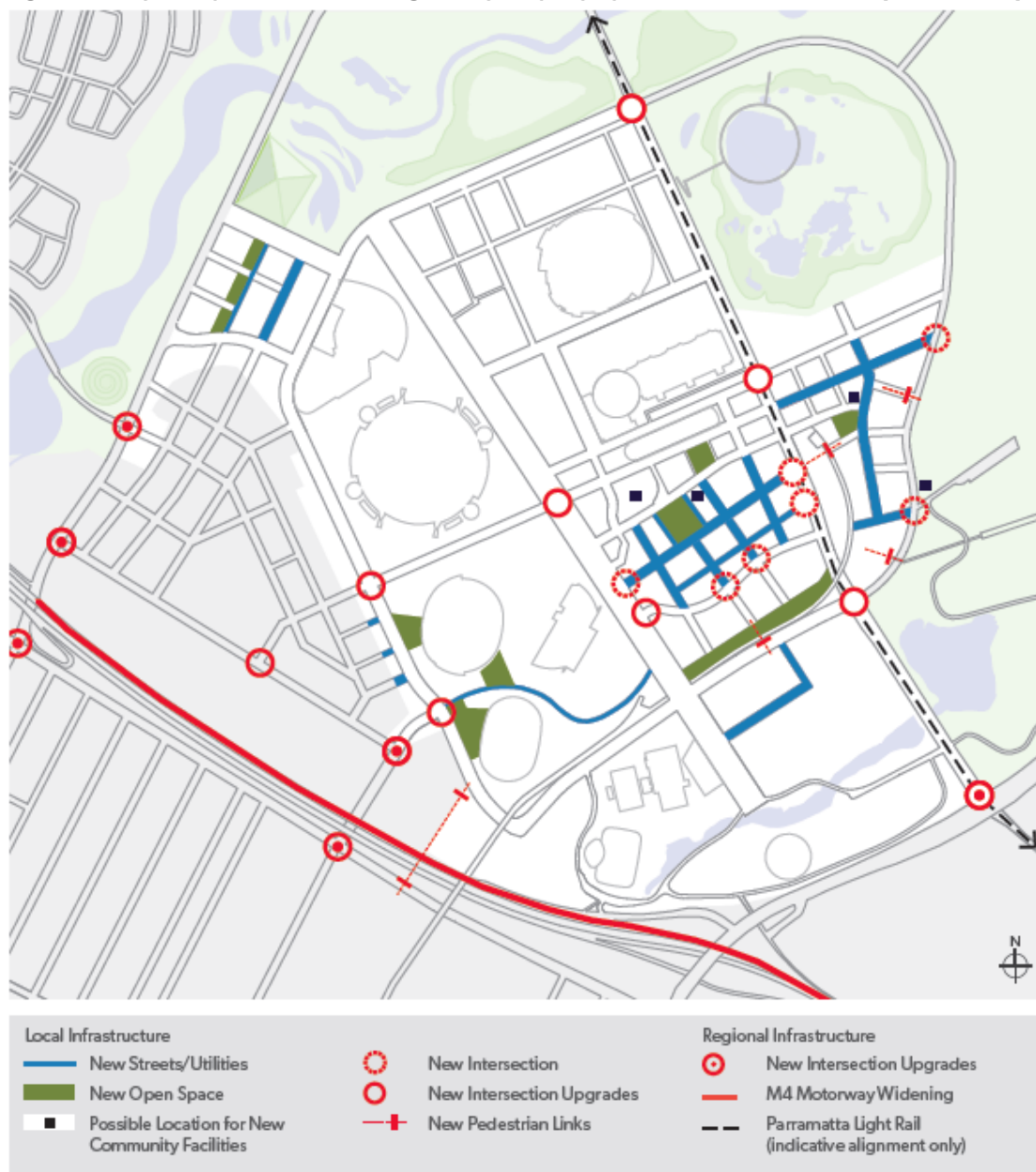
In order to facilitate the additional trips likely to be generated by the increased development, the MP Review identifies the following key transport and access initiatives:

- expansion of the street network to make it easier to walk and cycle and increase connections to, from and within Sydney Olympic Park
- provision of a dedicated service street to support the mixed use commercial centre within the Town Centre
- use changes in road levels to create connections or crossings over busy streets and railway lines.

The MP Review recognises the importance of major public transport improvements such as Parramatta Light Rail, station upgrades at Lidcombe and Concord West and bus service to Rhodes via the new Bennelong Bridge through Wentworth Point, to assist in achieving public transport mode share objectives for workers in the precinct, which was increased from the 28 per cent (currently achieved) to 40 per cent.

Figure 1 shows the key transport network changes identified in the MP Review.

Figure 1: Key Transport Network Changes in Sydney Olympic Park Master Plan 2030 (2016 Review)



Source: NSW Planning and Environment, Sydney Olympic Park Master Plan 2030 (2016 Review) [Summary of Proposed Planning Changes](#), accessed on 28 October 2016.

GPT's Landholding within the Central Precinct

As part of GPT's preliminary development concept for its landholding within the Central Precinct, GTA prepared a preliminary transport assessment to understand the likely traffic and transport impacts, as well as considerations for the regional transport network. It is understood this report was provided to Sydney Olympic Park Authority (SOPA) as background and assistance for the MP Review process.

Traffic and Transport Strategy

The key transport principles of Sydney Olympic Park Master Plan 2030 remain unchanged, with some key outcomes noted as:

- Leveraging opportunities that the proposed Parramatta Light Rail presents.
- Implementing additional strategies for the separation of event and non-event traffic.
- Increasing the non-car mode share to 40% by 2030 as the previous 25% target has been exceeded. A higher stretch target of around 60% non-car mode share will be adopted if supported by major public transport and demand management initiatives.

While the MP Review notes that the *"recommended upgrades to the impacted road networks are fundamentally unchanged"*, it also notes that *"it is likely that more significant upgrades (than those nominated in the Baseline Transport Strategy) to gateway intersections and other key intersections providing access to and from SOP will be required due to the increased development proposed in surrounding areas"*.

At this stage, the extent of these upgrades are unknown, as they are under investigation as part of the *Olympic Peninsula Regional Transport Infrastructure Investigations* by Roads and Maritime Services. Consultation with landowners and transport stakeholders would assist in understanding the timing and traffic generation of proposed developments and the associated timing of external road network upgrades.

It is noted that the Sydney Olympic Park Master Plan 2030 (2016 Review) Traffic and Transport Strategy (2016 review) (T&T Review) recommends long-term upgrades to the road network to improve access to and from the Olympic Peninsula, including:

- increasing the amount of strategic access points to and from the SOP precinct; and
- future upgrades to connecting arterial roads.

While the intersection upgrades on the key existing access routes to Sydney Olympic Park are identified, and WestConnex works referenced, there is no further information in relation to any specific strategic access point opportunities. It would be valuable for the *Olympic Peninsula Regional Transport Infrastructure Investigations* to consider regional connectivity and upgrades, such that potential solutions are available and can be planned for.

MP Review notes that commercial development will generate most of the travel demand in the peak commuter periods and that full utilisation of this commercial development potential cannot be supported by the current levels of public transport use and the current road network. The initiatives identified by MP Review and listed below are strongly supported by GPT.

- Implementing travel demand strategies
- Providing new transport enhancements, including:
 - regional road intersection upgrades
 - local road intersection upgrades
 - Parramatta to Strathfield Strategic Bus Corridor
 - additional strategic bus corridor services (e.g. north/ south)
 - additional heavy rail services
 - new Parramatta Light Rail
 - provide for future Metro stop
 - relevant state road enhancements (e.g. WestConnex)
- Increasing the trip mode share to public transport during peak commuter periods to 40 per cent
- Targeting a specific bicycle/ pedestrian mode share split of 8 per cent.

In previous advice prepared for GPT, GTA identified a select range of key transport initiatives to address existing transport related constraints within SOP as outlined below. These would provide a solid platform from which mode share targets could be realised, by ensuring that users have access to a variety of viable, day-to-day transport options.

- **Lidcombe Station facilities upgrade works** – improve connectivity between train services, safety measures and, more generally, the 'customer experience'.
- **Concord West Station access** – improve level of connectivity between SOP and Concord West Station and bicycle parking facilities to promote as a viable alternative daily travel option (facilitated by bike hire schemes).
- **Bus services** – focus on key linkages and facilities improvements to promote better utilisation.
- **Homebush Bay Bridge connectivity** – more frequent and better connected rapid bus services to make effective use of new infrastructure.
- **Parramatta Light Rail** – specific details yet to be announced by Transport for NSW (TfNSW) with linkages and alignment essential to future viability.
- **Precinct shuttle bus loop** – to link SOP precincts with each other, transport facilities, key generators and to meet specific worker/ resident needs. Can be adjusted as required.
- **Precinct wide transport plan** – formation of a SOP transport management association to ensure a co-ordinated approach to transport solutions and realise mode share targets.

Public Transport Provisions

The MP Review notes that:

- Train capacities would be increased on the T7 Line shuttle service from Lidcombe Station.
- Rapid transit services are currently being investigated (by others) but would be beyond the 2030 timeframe.
- Parramatta Light Rail would provide some additional public transport capacity and frequent services, but would reduce available traffic capacity and some turning movements along the proposed corridor (yet to be confirmed).
- Bus service coverage and capacity should be increased, with several specific actions noted. The new Homebush Bay Bridge reduces travel distances to the north.
- Ferry services would continue from SOP Ferry Wharf.
- Further walking and cycling facilities and connections should be constructed, in addition to promotion of existing facilities in order to continue to grow mode share.

Competitive public transport travel times to SOP, with a good customer experience at any interchange points to/ from key destinations within the Sydney metropolitan area, is essential for achieving a high non-car mode share, as evidenced by the private bus services provided either currently or historically by tenants within SOP. In terms of future rail provisions, it is noted that:

- A direct, full-time heavy rail connection from Strathfield (or a new rapid transit line) is essential for connectivity between SOP and Sydney's CBD (as opposed to the current western line cross-overs from Strathfield that are only used for special events).
- The Parramatta Light Rail stop would ideally be located adjacent to the proposed civic core if it cannot be located adjacent to the existing heavy rail station for any reason.
- A combination of the above two elements could provide a valuable interchange facility and relieve pressure elsewhere on the rail network.

In addition, the T&T Review recommends that traditional bus infrastructure solutions should be implemented at key points of congestion, however no specific measures are identified and it is assumed that these are not necessarily included in the Infrastructure Contributions Framework

(ICF) where relevant. Specific solutions should be identified and included the ICF and Special Infrastructure Contribution (SIC) funding levies as appropriate.

Traffic Analysis

The T&T Review identifies the anticipated traffic generation and distribution for the land use changes proposed by the MP Review, however no detailed analysis has been undertaken to understand the impacts or likely scope of intersection upgrades. While this is understandable given the extent and complexity of the surrounding road network, as well as the conceptual nature of the proposed land uses, detailed modelling will be required in the short term. It is anticipated that there would be significant benefit in preparing a single, detailed model, through collaboration between SOPA, TfNSW, RMS and key land owners within SOP, in order to have an appropriate tool for testing the traffic impact of specific sites and establish road network upgrade requirements.

One of the travel demand management strategies identified in the MP Review is increasing travel 'internal containment' through increasing the population both living and working within the Olympic Peninsula. This includes both the Wentworth Point and Carter Street precincts. Care should be taken in the application of any trip containment percentages, as internal intersections will still carry a significant proportion of these internal trips due to the size of the Olympic Peninsula and associated car trips between land uses. The promotion of active travel (walking and cycling), for internal trips in particular, will be essential to reduce such internal car travel.

Car Parking

The parking ratios identified in the MP Review have been analysed, with key points as follows (further details below):

- Lower residential visitor ratios would be better suited to the likely size of residential buildings and current best practice.
- Retail developments of this scale and nature typically require higher parking ratios for satisfactory car park/ access operation and to reduce traffic and parking impacts on immediate local areas.
- The master plan should acknowledge and provide opportunities for parking to be shared between uses at different times (e.g. commercial parking available for retail outside business hours, residential visitor shared with retail/ commercial).

Retail Parking

The parking ratios identified for retail (1 space per 50 m² for local and themed retail, and 4 spaces per 100 m² for supermarkets) would not be adequate for any significant retail centre. It is recommended that a single higher maximum parking ratio of **4.5 spaces per 100 m²** gross lettable area (GLA) is adopted for retail facilities in the precinct greater than (say) 5,000-10,000 m² GLA, as such facilities would have a broader trade catchment and should sufficient parking not be made available, could potentially have significant implications for access, circulation and areas surrounding the site. Ideally, a uniform ratio would be adopted across the different retail tenant types, as parking will not be physically separated between tenant types (and any reductions from the maximum provisions can be appropriately justified by applicants). Opportunities for parking to be shared between co-located land uses (further details below) could influence retail parking supply requirements. This recommendation is consistent with other existing and proposed centres through Sydney as shown in Table 1, noting that these examples are also, not maximum rates.

Table 1: Sydney Growth Centres DCP Retail Parking Rates

Area (Council)	Parking Rate	Parking Rate per 100sq.m	Type	Comments
Rouse Hill (The Hills)	1space/ 18.5 m ² GLFA	5.4 spaces	Minimum	Rouse Hill Regional Centre (Site Specific DCP)
Edmondson Park South (State Significant Precinct)	1 space/ 20 m ² GFA	5 spaces	Specified Rate	
Cudgegong (Blacktown)	1space/ 22s m ²	4.5 spaces	Specified Rate	
Blacktown Growth Centre Precincts DCP (Blacktown)	1 space/ 22 m ²	4.5 spaces	Specified Rate	<ul style="list-style-type: none"> - Alex Avenue Precinct - Riverstone Precinct - Marsden Park Industrial Precinct - Area 20 Precinct - Schofields Precinct - West Schofields Precinct (Townson Road)
Oran Park (Camden)	1 space/ 22s m ²	4.5 spaces	Minimum	Retail Premises/ Shop/ Kiosk (merit assessment for shopping centre)

Residential Parking

There is an opportunity to reduce residential visitor parking ratios. The *Guide to Traffic Generating Developments* (Roads and Maritime Services, 2002) recommends a ratio of 0.14 to 0.2 spaces per unit for high density residential development, while current best practice is 0.1 spaces per unit. The larger residential buildings and associated basements that are anticipated within SOP present economies of scale for visitor parking, where an oversupply typically leads to visitor parking spaces not being used for their intended purpose.

Shared Parking between Land Uses

The master plan should acknowledge and provide opportunities for parking to be shared between uses at different times (e.g. commercial parking available for retail outside business hours, residential visitor shared with retail/ commercial visitor parking). Shared parking aims to get better utilisation of overall parking supply throughout a typical week, while still providing suitable parking for each use during peak times.

To assist with annual peak retail trading periods and special events, it is recommended that the master plan considers the opportunity to share parking across the broader SOP precinct. This could include:

- Appropriate arrangements for existing parking stations to be available for peak retail demands (e.g. prior to Christmas), with a shuttle bus service to connect patrons.
- Central Precinct retail parking to be available for special event/ sporting parking demands, where these occur outside weekly peak retail trading periods.

This could further improve the utilisation of parking across the Central Precinct and SOP generally, and both introduce cost savings for complementary individual land uses, as well as minimise any parking shortfall at during various peak demand periods.

Transport Infrastructure

Funding Sources

It is noted that the responsibility and/ or funding source for external intersection works, such as the intersection of Homebush Bay Drive, Australia Avenue and Underwood Road, have been transferred from the ICF to the SIC funding levy. Such intersection works have a clear, immediate need and contributions have already levied against existing and approved developments. It is recommended that planning for both internal and external works be progressed through further transport modelling and analysis, as identified above, in order to identify appropriate staging and trigger points for the required works, based on the likely timing of redevelopment throughout SOP (and adjacent precincts) that could be determined through consultation with landowners.

Preparing a staging plan would assist in determining temporary funding shortfalls and allow suitable cash flow forecasting for both the ICF and SIC. A level of certainty that necessary infrastructure and initiatives can be appropriately timed with development activity is important for future investment and planning approvals within SOP and adjacent precincts.

While M4 ramps/ improvements at Homebush Bay Drive and Hill Road are included in the WestConnex project, and therefore funded, other intersection upgrades that are required for regional road network performance may not receive funding in the required timeframes and could therefore delay development activity and/ or reduce viability of new development.

Infrastructure Contributions Framework

The T&T Review identifies short term upgrades (surrounding road network and SOP precinct local road network), as well as long term upgrades (surrounding road network only), with a basic scope of works only, however no costing information is available in order to understand the adequacy of funding allocated. Past experience shows that undertaking works in several stages can significantly increase the associated costs. As previously noted, the scope and cost of some upgrades are likely to have changed since the previous detailed costings were prepared, which would impact current allowances.

Some further discussion or commentary with respect to undertaking works-in-kind and the general delivery methodology for the required road-related works would assist general understanding and provide a level of certainty for these works.

The ICF allocates significant funding to public transport and specifically identifies travel demand management and precinct shuttle bus services. Well planned and coordinated travel demand management within SOP will be essential for positive future transport outcomes and it is recommended that there is clear commitment to travel demand management initiatives, including a transport management association. Using examples such as Macquarie Park, it is recommended that sustainable funding sources are identified for ongoing running costs of travel demand management initiatives, outside of the ICF, with ICF funding focussed on capital and start-up costs.

Special Infrastructure Contribution

The proposed SIC could be a good mechanism for delivering regional infrastructure and consistent with similar initiatives in the key growth centres. The DP&E planning report notes that:

State infrastructure the NSW Government has already committed to build in the region includes the Hill Road off ramp (\$140m) and the light rail (\$1bn). Additional State and regional infrastructure could include:

- further regional road and intersection upgrades
- upgrades to local and regional bus networks
- upgrades to existing rail service
- upgrade to Woolara Park
- New High school

Without a more detailed understanding of the proposed SIC, the extent to which the plan might seek to address Parramatta Light Rail funding is not clear and therefore how this relates to the transport needs within the Central Precinct and SOP generally, and the funding available for other necessary regional infrastructure to support the anticipated development remains unknown. Allocation of funding from the SIC should have some relationship to the anticipated mode share (either at an individual contribution or aggregate basis).

There is currently no details of what road infrastructure is included in the SIC, other than the "regional infrastructure" identified in the figure below. This is essential to understand the extent to which the proposed contributions can fund the required works.

Assuming other nearby precincts would be required to contribute to the SIC funding, upgrade requirements are driven by a range of road user groups and origins/ destinations. It could take a considerable period of time to collect a meaningful amount of SIC funding, which may not match the intersection priorities and required upgrade timeframes.

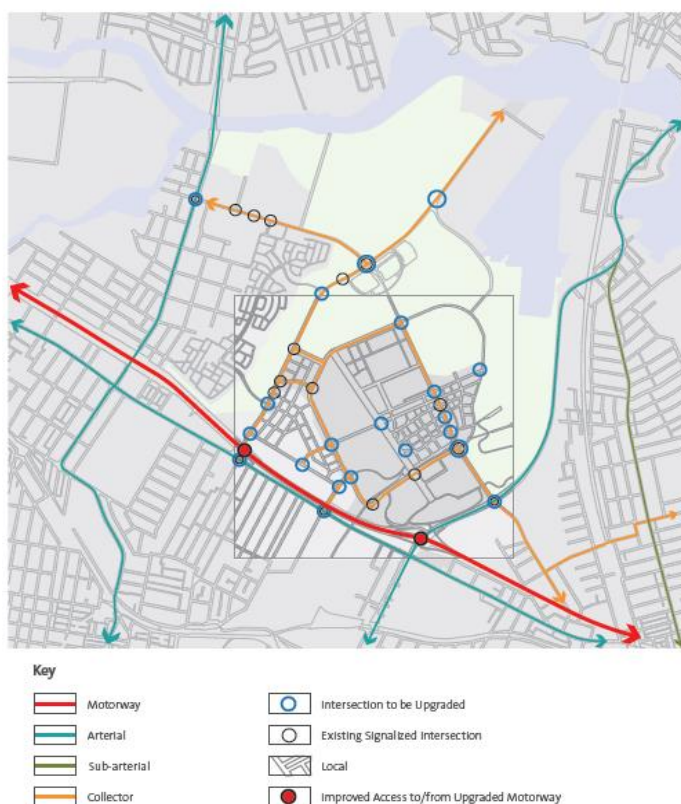
A clear nexus should be established between the regional infrastructure included in the SIC and the transport and other impacts of the developments required to contribute to the SIC. It is noted that there are several existing issues at key locations on the regional road network, including the intersection of Homebush Bay Drive, Australia Avenue and Underwood Road, for which State Government funding (co-contributions) should be attributed to addressing in the immediate future.

Proposed Works

The MP Review and the DP&E planning report identify slightly different intersection works around the Central Precinct as shown in the extracts below. For example, and specifically related to the Central Precinct, the Australia Ave/ Figtree Drive intersection is identified for upgrade in the Vehicular Access Plan, but not elsewhere. The T&T Review no longer recommends that this intersection is signalised, but references a section of the document that does not exist for further details (this is the same for details of other upgrade works).

As previously noted, it is anticipated that further detailed network analysis and modelling (including consideration of Parramatta Light Rail impacts) will be required to adequately finalise the scope of road network upgrades required to support the master plan. Ideally, a suitable level of flexibility would be applied to the ICF in particular, with more detailed studies commenced upon finalisation of the MP Review to provide greater certainty.

Figure 3.9 Vehicular Access Plan



Source: Sydney Olympic Park Authority, Sydney Olympic Park Master Plan 2030 (2016 Review), Draft for Public Exhibition



Figure 32 Proposed local and regional infrastructure to be provided at Sydney Olympic Park

Source: NSW Planning and Environment, Sydney Olympic Park Master Plan 2030 (2016 Review) [Summary of Proposed Planning Changes](#).