Carter Street Urban Activation Precinct

Submission on behalf of Goodman Property Services (Aust) Pty Ltd

Submitted to NSW Planning & Infrastructure

30 April 2014 ■ 14170

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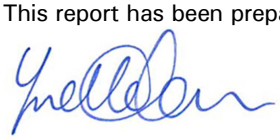

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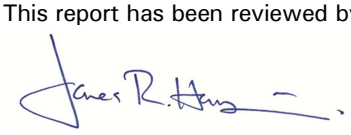

James Harrison 30/04/2014

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1.0 Introduction

This submission has been prepared by JBA on behalf of Goodman Property Services (Aust) Pty Ltd (**Goodman**). The submission relates to NSW Planning & Infrastructure's (**NSW P&I**) proposal for the Carter Street Urban Activation Precinct (**UAP**) which is currently on public exhibition.

The Carter Street UAP proposal presents an exciting opportunity to revitalise a precinct in close proximity to existing infrastructure and services and contribute to better quality housing stock in Western Sydney. The precinct's location in relation to major recreational and sporting facilities at Sydney Olympic Park, major regional parklands and existing public transport infrastructure is **unprecedented** in the Sydney Metropolitan Area. The precinct, unlike many other urban renewal areas, is not constrained by any sensitive adjoining land uses. It is also not constrained by heritage and is relatively free of flooding. In essence the precinct is a blank canvas which, together with its proximity to existing infrastructure, presents an opportunity to maximise its development potential.

The redevelopment of this precinct in a way that maximises density will:

- Capitalise on the existing substantial community assets located in Sydney Olympic Park; and
- Provide an unrivalled intergenerational opportunity to accommodate approximately 7,500 dwellings close to transport and employment opportunities.

Goodman owns 27.9ha of land in the Carter Street UAP, accounting for approximately 54% of the total 52ha (see **Figure 1**). The single ownership of a substantial and contiguous area of land provides a unique opportunity to develop the land holistically and in an orderly and economic manner.

Goodman and its consultants have analysed the Carter Street UAP proposal in detail and have concluded that the proposed Structure Plan together with a maximum FSR of only 2:1 as proposed by NSW P&I fails to encourage *"the orderly and economic use and development of land"*, which is an important object of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**).

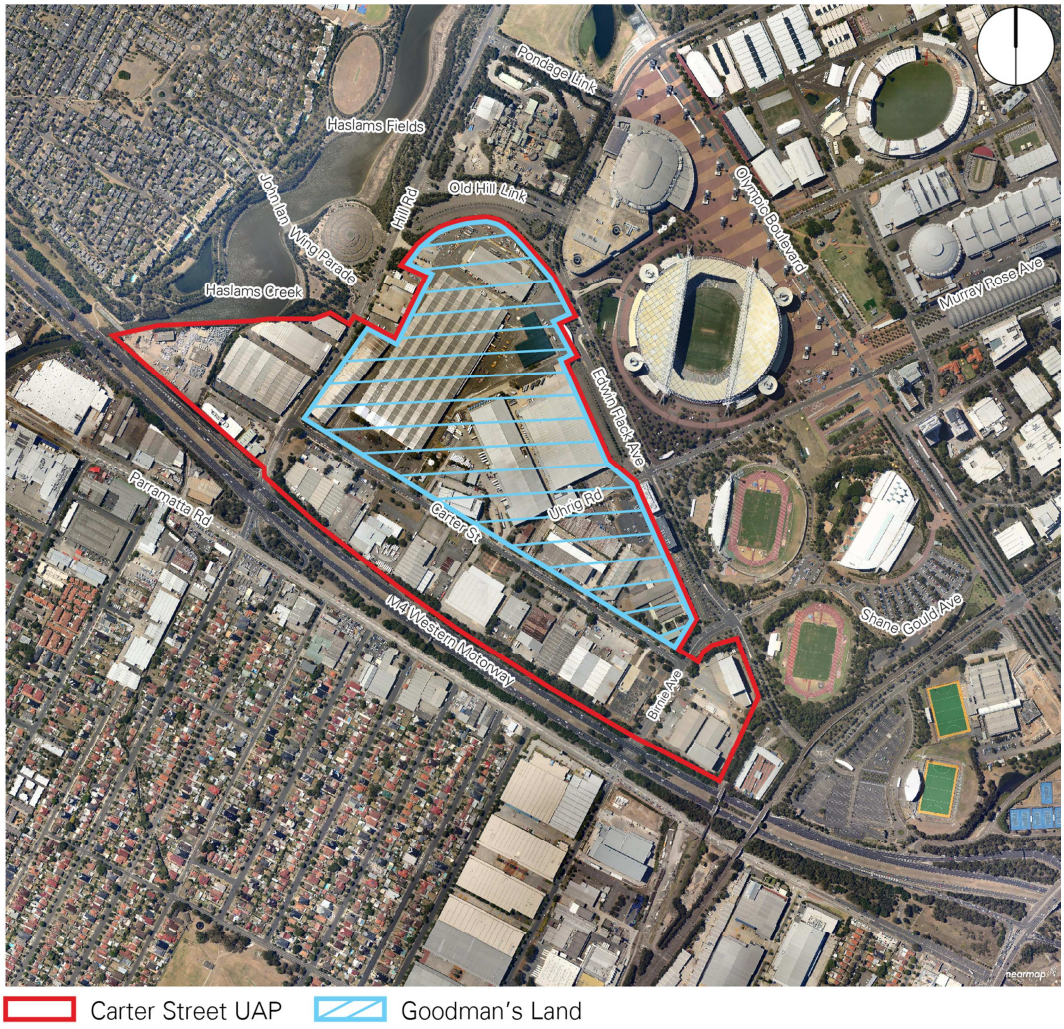


Figure 1 – Carter Street UAP and Goodman's Land

Goodman engaged Nettleton Tribe to prepare an alternative Structure Plan for the Carter Street UAP. The proposed Structure Plan retains the fundamental structure and many of the positive urban design features of the exhibited Structure Plan, but proposes a maximum FSR of 2.75:1 and includes some differences in the access and open space network as well as the capacity for additional community facilities. Goodman's proposed Structure Plan supports Metropolitan Planning objectives and provides a realistic economic outcome.
This submission has been prepared with the support of the following plans and technical reports:

- Proposed Structure Plan and various planning control maps prepared by Nettleton Tribe Architects (**Appendix A**);
- Economic Appraisal, prepared by SGS Economics (**Appendix B**);
- Traffic and Transport Submission, prepared by AECOM (**Appendix C**);
- Infrastructure Budget Cost Estimate Report, prepared by AT&L (**Appendix D**);
- Response to Draft DCP Infrastructure Requirements, prepared by AT&L (**Appendix E**); and
- Revised draft DCP, with amendments marked up by JBA (**Appendix F**).

2.0 Strategic Planning Context

2.1 Draft Metropolitan Strategy for Sydney to 2031

The Draft Metropolitan Strategy for Sydney to 2031 was publicly exhibited in 2013. The NSW Government's aim for Sydney for the next 20 years is for 'A strong global city … a liveable local city'. The Carter Street UAP will, subject to appropriate controls, contribute to this by providing a high density residential community with everything a local centre needs to operate – shops, businesses, schools, community facilities and public open space, within close proximity to public transport networks.

The Draft Strategy recognises the Carter Street UAP as being part of the broader Sydney Olympic Park Specialised Precinct. Sydney Olympic Park directly adjoins the UAP to the north east, providing access to major cultural, entertainment, recreation and sporting facilities, as well as Olympic Park Train Station and the emerging town centre.

The primary role of Specialised Precincts is as employment destinations and/or as the location of essential urban services. The Draft Strategy notes that over time, particular Specialised Precincts such as Sydney Olympic Park may assume a greater mix of residential, retail and service uses, and assume the role of a Major Centre. As noted in the Draft Strategy, the emergence of these other uses in Specialised Precincts needs to be balanced to ensure the employment function is not compromised.

The Carter Street UAP is the perfect opportunity to assist the wider Sydney Olympic Park area to perform the role of a Major Centre. The Draft Strategy states that Major Centres typically have capacity for around 9,000 to 28,000 dwellings. The dwelling target for Sydney Olympic Park is 6,000 and the target for the Wentworth Point UAP is 2,300, resulting in a total target (excluding Carter Street UAP) of 8,300 dwellings. The Carter Street UAP can therefore assist the wider Sydney Olympic Park region in assuming the role of a Major Centre. Based on the P&I's proposal for Carter Street of 5,500 dwellings, the total regional dwelling count would be only 13,800. This is at the smaller end of the scale of Major Centres and given the lack of constraints to the precinct is an underdevelopment of the precinct. Goodman's proposal for at least 7,500 dwellings still leaves considerable remaining capacity to accommodate additional dwellings within the Carter Street UAP before the upper dwelling limit for a Major Centre is reached.

One of the Metropolitan Priorities for the West Central and North West Subregion is to *"facilitate delivery of Urban Activation Precincts at Epping, Carter Street and Wentworth Point"*. This priority will only become a reality if the redevelopment is economically viable. As demonstrated below, the proposed FSR of 2:1 is not economically viable. A higher FSR is required to facilitate the delivery of the Carter Street UAP.

In order to achieve the aims and objectives of the Draft Strategy, it is suggested that the FSR for the Carter Street Precinct be increased to 2.75:1. Separately, in order to achieve an economically viable outcome the FSR control needs to be reconsidered.

2.2 Sydney Olympic Park Master Plan 2030

Sydney Olympic Park Master Plan 2030 has been prepared to guide the evolution of Sydney Olympic Park into a specialist economic centre and urban parkland. Under the master plan more than 31,500 jobs will be situated at Sydney Olympic

Park, with about 6,000 new dwellings in residential buildings up to 30 storeys. The Master Plan is a positive recognition of the ability to increase residential communities, deliver district retail amenity, increase patronage of rail lines, increase patronage of public (sporting and recreation) assets, and increase patronage of WestConnex, while providing improved housing choices for Western Sydney.

Height and FSR controls for Sydney Olympic Park are now contained within *State Environmental Planning Policy (Major Development) 2005*. The height and FSR maps show that higher densities are to be concentrated around the Olympic Park Station, with heights up to 122m and FSRs up to 12:1 along Olympic Boulevard. Generally, heights and FSRs decrease further away from the station. A similar approach is adopted in Goodman's Structure Plan, whereby increased height and density is concentrated in the local centre which is the closest to shops and services, existing and future bus stops and Olympic Park Station.

2.3 Wentworth Point UAP

The rezoning proposal for the Wentworth Point UAP includes apartments, maritime facilities, a large peninsula park, a school and connections to the nearby Sydney Olympic Parklands. It was on exhibition in mid-2013.

The proposed planning controls for the Wentworth Point UAP include maximum building heights up to 88 metres (25 stories) and maximum FSRs up to 2.6:1 (see **Figures 2 and 3**). The proposal is to accommodate 2,300 dwellings, maritime uses and substantial areas of foreshore open space. At its completion, the entire Wentworth Point peninsula could accommodate up to 9,500 dwellings.

The UAP proposes to service the new residential community through increased and later bus services and the Sydney Olympic Park ferry. In March 2013, approval was also granted to construct a new bridge across Homebush Bay for pedestrians, cyclists, buses and emergency vehicles, linking Wentworth Point to the Rhodes peninsula. The bridge will significantly reduce the walking distance between Wentworth Point and Rhodes Train Station, although it appears it will still be a 1.25km walk at the closest point.

Unlike Wentworth Point, the Carter Street UAP is located within only 800m from Olympic Park Station. On this basis it has the potential to accommodate more dwellings than Wentworth Point. There are no urban design constraints as to why the maximum height for Carter Street should not be at least 25 stories (provided, of course, the road network has the requisite capacity and other urban design considerations support this).

Figure 2 – Wentworth Point Maximum FSR Map
Source: Wentworth Point UAP Planning Report

Figure 3 – Wentworth Point Maximum Height Map
Source: Wentworth Point UAP Planning Report

3.0 Goodman's Proposal

Goodman and its consultant team have designed an alternative redevelopment scheme to that proposed by NSW P&I. The main aim in developing an alternative Structure Plan was to rectify commercial and feasibility issues with the exhibited scheme. The Structure Plan proposed by Goodman takes into account existing uses and leases, topographical constraints, the existing road network, traffic and civil requirements and the community benefits proposed by NSW P&I. It does not compromise on any of the urban outcomes sought to be achieved by P&I's Structure Plan, but allows existing uses to continue operating until the end of their respective lease terms.

This section of the submission provides an overview of Goodman's scheme, a comparison to NSW P&I's scheme and an assessment of Goodman's scheme against key urban design and feasibility considerations. The limitations of NSW P&I's scheme are discussed further in Section 4.0 of this submission.

Goodman's proposal is supported by the following plans prepared by Nettleton Tribe (see **Appendix A**):

- Structure Plan
- Concept Masterplan
- Public Open Space Network
- Staging Map
- Zoning Plan (Auburn LEP)
- Building Height Plan (Auburn LEP)
- Floor Space Ratio Map (Auburn LEP)
- Setbacks (DCP)
- Heights in Storeys (indicative only)
- Shadow Analysis (indicative only)
- Building Separation Analysis (indicative only)
- Unit Types (indicative only)
- Indicative Isometric View (indicative only)
- Architectural Design Statement

3.1 Overview

The main features of Goodman's proposal are summarised in **Table 1**.

Table 1 – Overview of Goodman's proposal

Residential	▪ High density urban community with approximately 7,500 dwellings ▪ Private and communal open space for residents within urban blocks ▪ Walkable neighbourhood to shops, parks and Olympic Park Train Station
Open space	▪ New 0.88ha park at Hill Road for recreation and water sensitive urban design initiatives ▪ New village park in the northern part of the precinct linking to Old Hill Link Road ▪ New linear foreshore reserve along Haslams Creek south of John Ian Wing Parade (although this is not on Goodman's land) ▪ Village square integrated within the main street shopping at Uhrig Road ▪ Village park located at Uhrig Road and integrating with the proposed bio-swale corridor
Retail, office and	▪ Retail centre along Uhrig Road and Edwin Flack Avenue comprising up to 11,000 of

community	retail and services, with office uses anticipated for the first floor along Edwin Flack Avenue ▪ Community centre located adjacent to the village square at Uhrig Road ▪ New primary school located on Carter Street
Built form	▪ Building heights generally ranging from 4 to 25 storeys (aside from a 1-2 storey primary school) ▪ 25 storey buildings limited to Uhrig Road ▪ A single 30 storey building at the end of the Uhrig Road vista ▪ Maximum FSR across the precinct of 2.75:1 ▪ Concentrated urban centre and maximised densities along Uhrig Road due to proximity to retail and services ▪ Heights and densities decreasing as distance from the local centre increases ▪ Landmark building at the end of the Uhrig Road vista ▪ Varied building heights for visual interest and dynamic urban form ▪ Innovative, quality architecture and ecologically sustainable design driven outcomes
Movement network	▪ New streets to create a permeable movement network and to align with major existing leases ▪ Maintain existing alignment of Uhrig Road to assist with the proposed staging of the development ▪ Series of upgrades to intersections to improve traffic flow ▪ Bus priority and new routes to train stations ▪ Publicly accessible foreshore with pedestrian and cycle paths linked to existing network
Staging	▪ 5 stages to align with existing building leases ▪ Concentrated urban centre along Uhrig Road and to maximise the urban density in this precinct in order to support the Stage 1 retail amenity which will be created here

3.2 Comparison to NSW P&I's Scheme

NSW P&I's and Goodman's Structure Plans are set out in **Figure 4** below to enable a direct visual comparison between the two. Goodman's Structure Plan does not incorporate the land outside of Goodman's ownership. The two Building Height Plans are also provided in **Figure 5** below for direct comparison, as there are fundamental differences in the way density is proposed to be distributed throughout the Precinct.

While Goodman's proposed Structure Plan retains some of the fundamental elements of the exhibited Structure Plan, there are a number of differences. The key differences between the two schemes are summarised in **Tables 2 and 3**.

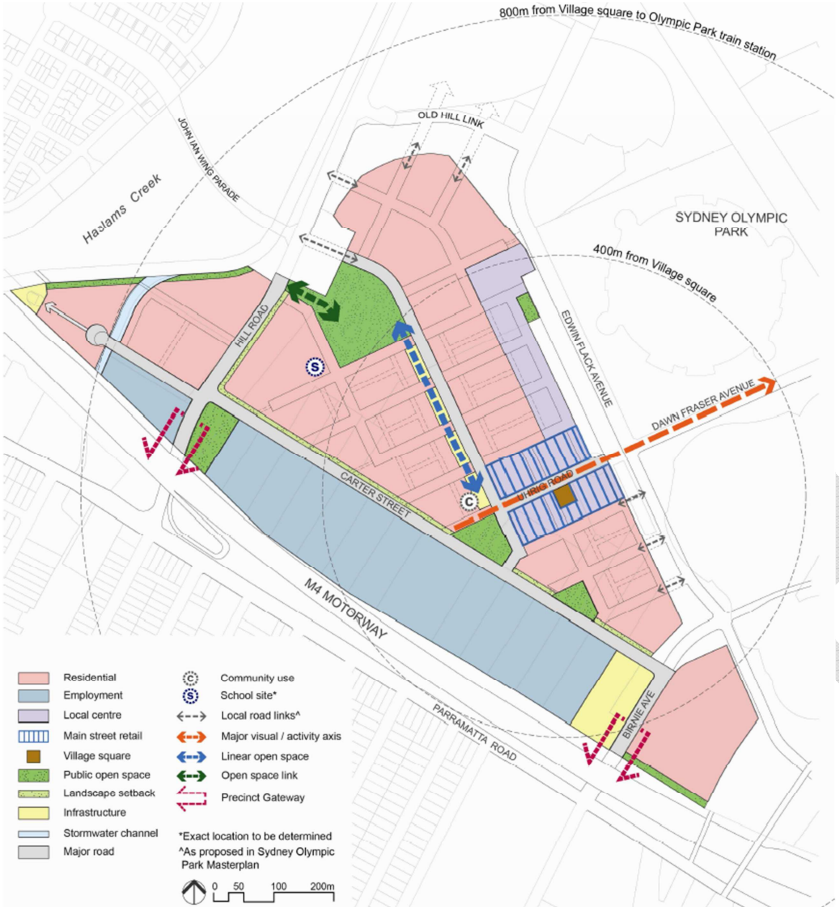
Table 2 – Comparison of NSW P&I and Goodman Schemes (numeric)

	NSW P&I Scheme	Goodman Scheme
Residential	5,500 dwellings	7,500 dwellings
Retail and commercial	12,000m^2	11,000m^2
Village Square	600-900m^2	2,000m^2
Open space/drainage	3.1 hectares	3.7 hectares
School site	1.6 hectares	2 hectares

Table 3 – Comparison of NSW P&I's and Goodman's Schemes (qualitative)

	Differences	Justification for Change
Road network	Both schemes propose to extend John Ian Wing Parade, however in Goodman's scheme the road is aligned further to the east.	Goodman's proposed alignment of John Ian Wing Parade aligns with existing building leases. P&I's scheme fails to address the commercial realities of existing leaseholds and their sequence of expiry, which would have significant consequences for Goodman. This is addressed further below.
	P&I's scheme proposes to realign Uhrig Road whereas Goodman's scheme proposes to retain its existing alignment.	Better alignment of this intersection with Carter Street.
	Goodman's proposal includes a new north-south major road connection linking Carter Street to the John Ian Wing Parade extension and then extending further north-east from there.	This road has been proposed in order to respond to the existing topography of the land. The new road defines a significant change in landform by approximately 5m. NSW P&I's proposal proposes a series of local roads which ignore the topography and would require more land grading in terms of cut and fill which would add further expense to infrastructure costs.
	P&I's proposed road network shows numerous minor north-south roads, whereas Goodman's proposal rationalises the local roads to be provide a more consolidated local road network.	P&I's proposed road network creates the following issues: ▪ Significant duplication of utility and stormwater drainage infrastructure (capital cost and asset maintenance burden); ▪ Significantly greater road pavement areas (capital cost and asset maintenance burden) plus the generation of large volumes of stormwater requiring treatment; ▪ More complex road network with a significant number of 4 way cross intersections which may require signal control; and ▪ Minimises block sixes sizes which can constrain basement carpark layouts.; and ▪ Poor alignment of multiple intersections along Carter Street.
Land use distribution	Both schemes centralise the local centre precinct along Uhrig Road, however Goodman's scheme terminates the ground floor retail at the proposed north-south major road while extending it further south. Goodman's scheme also proposes to locate a new community centre adjacent to the village square.	Goodman's scheme allows for a supermarket which is not accommodated in P&I's scheme. The proposed co-location of the village square and community centre will help to encourage increased activity and community gathering in the village square.
Building height and density distribution	P&I's scheme proposes a predominant height limit of 8 storeys, with high rise buildings up to 20 storeys at certain gateway locations. Goodman's scheme proposes building heights up to 25 stories along the Uhrig Road activity spine, with one 30 storey building at the end of the Uhrig Road vista. Rather than distributing the high rise buildings as proposed by P&I, Goodman proposes to concentrate density by placing all of the high rise buildings along the Uhrig Road activity spine, and decreasing building heights as distance from the local centre increases.	There is no urban design justification for limiting building heights to 20 storeys in the Carter Street UAP. Permitting 25 storey buildings will still achieve NSW P&I's aim of the 30 storey buildings in Sydney Olympic Park to be read as the dominant built form in the skyline. Furthermore, a 30 storey building at the end of the Uhrig Road vista will establish a relationship and balance with Sydney Olympic Park and better connectedness. The concentration rather than disbursement of density is more in line with established urban design practice which places the most height and density in centres. It will also enable the intersection of Uhrig Road and John Ian Wing Parade and the village square to become a thriving urban quarter, the heart of the Carter Street UAP. The spreading of major residential towers to mark entry points to the precinct, as proposed in the exhibited Structure Plan, would have less potential to create a sense of place than Goodman's scheme. It also presents as a more economically rational development, allowing greater density in the first two stages of development to offset the significant remediation and infrastructure costs.
Open space network	P&I's Structure Plan incorporates approximately 3.1 hectares of open space, whereas Goodman's scheme incorporates approximately 3.7 hectares. Both schemes include a new Hill Road park, a bio-swale corridor linking village parks and other local neighbourhood parks. Goodman's scheme includes an additional village park in the northern part of the Precinct.	P&I's detailed secondary road pattern resulting in the intersection of nearly all roads with Carter Street will fragment the open space linkages and connections to a point where many residential blocks would feel detached from any local open space. Goodman's Structure Plan, on the other hand, creates a high level of permeability while achieving linkages and connections between nearly all areas of proposed open space. In addition the reinforcement of more formal open space linkages throughout the precinct has added significant identifiable permeability to the proposal.

P&I's Proposed Structure Plan



Goodman's Proposed Structure Plan

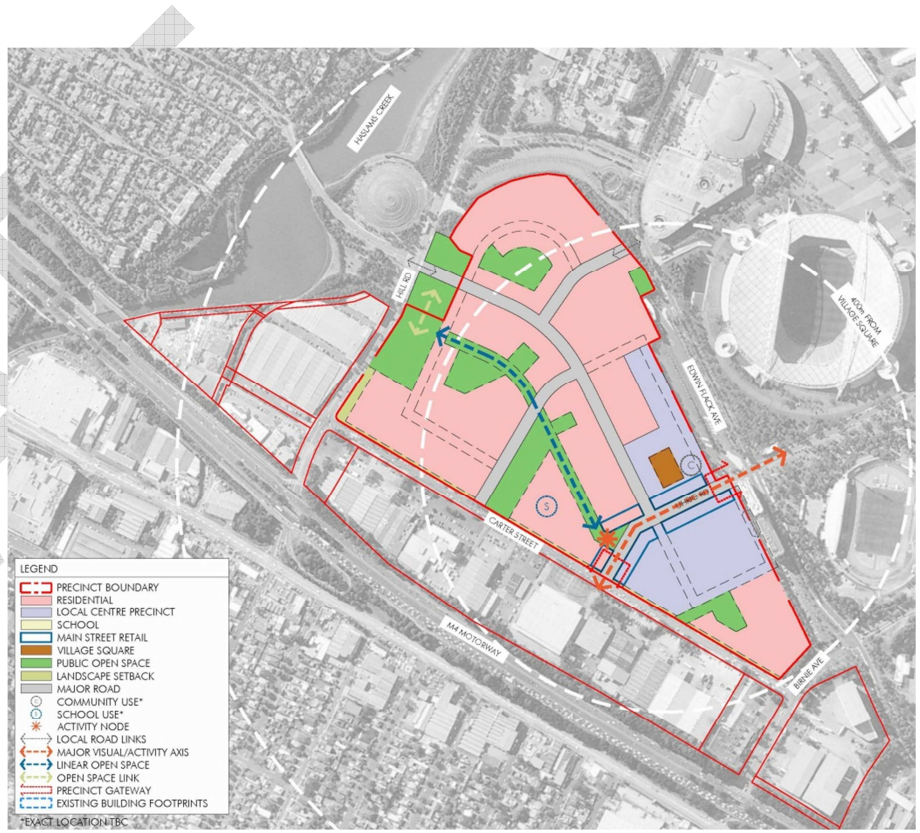
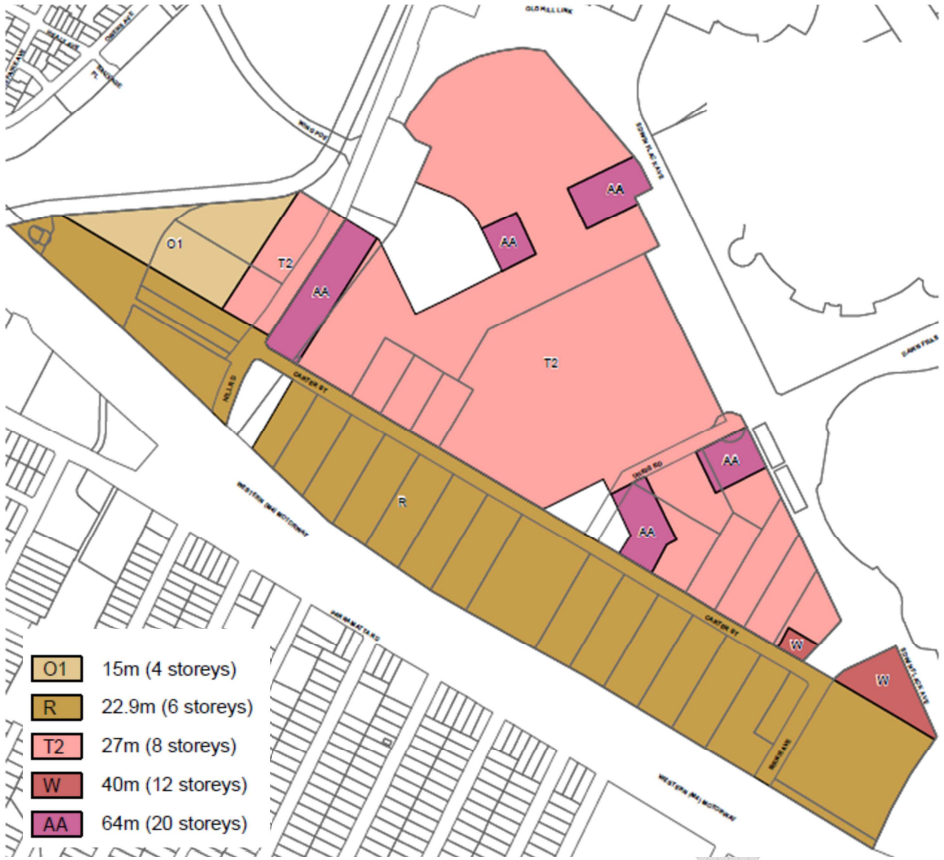


Figure 4 – Exhibited and Proposed Structure Plans

P&I's Proposed Height Plan



Goodman's Proposed Height Plan

Figure 5 – Exhibited and Proposed Building Height Maps

3.3 Proposed DCP Amendments

We have marked up the draft DCP with proposed amendments to reflect Goodman's scheme. The marked up DCP is provided in **Appendix F**. Key changes and a justification for each change are summarised in **Table 4**.

Goodman is not in favour of finalising the Carter Street DCP until the Structure Plan and maximum height and FSR controls are finalised. However, the intention behind amending the draft DCP at this stage is twofold. The first reason is to ensure the draft DCP reflects Goodman's proposed scheme. The second reason is to ensure the planning controls for the precinct are flexible. As explained in section 4.4 of this submission, currently the draft DCP controls are highly prescriptive and constrain future flexibility.

Table 4 – Summary of key proposed changes to draft DCP

Clause	Description of amendment	Justification
Clause 2.3 Indicative structure plan Table 1 Key elements	Delete required size of Hill Road park	To provide flexibility in the future planning of Carter Street UAP. Overall, the Goodman scheme provides more open space than P&I's scheme.
	Change 5,500 dwellings to 7,500 dwellings.	To reflect Goodman's proposed scheme.
	Deletion of "Active street level uses adjacent to Hill Road park"	It is proposed to locate residential uses on street level at Hill Road, with a proposed 10m landscape setback to provide adequate acoustic buffering and visual screening from heavy vehicles using Hill Road.
	Amend detailed description of height in storeys	To reflect Goodman's Structure Plan and Building Height Plan
Clause 2.3 Indicative structure plan Control 2	Deletion of "confirm the street, pedestrian and cycleway network" with a new provision whereby the subdivision DA will confirm major roads but will propose a local street, pedestrian and cycleway network.	To provide flexibility in the development of the precinct.
Figure 2 Indicative structure plan	Replace with a new Structure Plan to reflect Goodman's proposal.	To reflect Goodman's proposal.
Clause 3.1 Street network and design	Deletion of certain objectives/clauses relating to: ▪ the extension of Uhrig Road ▪ the provision of rear laneways for vehicular access	It is proposed to maintain the existing alignment of Uhrig Road to better align this intersection with Carter Street. As required by the modified clause 2.3, a future subdivision DA will include local roads and rear lanes if required.
	Addition of a new control requiring a subdivision DA to propose a street network that identifies a hierarchy of streets, provides good connectivity between public places, is permeable, relates to the topography of the precinct and integrates with the proposed bio-swale corridor.	To ensure local street pattern is well designed.
Figure 3 Street network	Replace with a new figure to reflect Goodman's proposal. Major roads should be delineated but not local roads which should be the subject of a Stage 1 DA.	To provide flexibility in the future planning of Carter Street UAP.
Figures 4 to 7 Street sections	Replace with street sections provided in AT&L's report at **Appendix E**.	Refer to AT&L's report.
Figure 8 Pedestrian and cycle access	To be updated in consultation with Goodman.	To reflect Goodman's proposal.
Clause 3.3 Open space network	Various minor changes.	To reflect Goodman's proposal.

Clause	Description of amendment	Justification
Figure 9 Public spaces	Replace with new plan.	To reflect Goodman's proposal.
Figure 10 Uhrig Road village park and Figure 11 Haslams Creek foreshore	Delete.	These plans are too restrictive and constrain future flexibility.
Clause 4.1 Building height and form	Amend detailed description of height in storeys and add new provision requiring buildings of 12+ storeys to be adequately separated to achieve adequate levels of visual and acoustic privacy.	To reflect Goodman's Structure Plan and Building Height Plan and ensure good privacy amenity outcomes.
Clause 4.2 Setbacks and public domain interface Figure 12	Deletion of detailed setback controls and replacement with setback controls that apply to major roads only.	Setbacks from local roads are to be assessed on the merits and against the objectives of the clause. This will provide more flexibility in the development of the precinct.
Figure 12 Setbacks and building separation	Replace with new plan.	To reflect Goodman's proposal.
Clause 4.5 Vehicular access and car parking	Modification of controls to allow above ground parking, provided it is well designed and integrated into the building design and does not have adverse visual impacts on the streetscape.	The water table in the Precinct is high which means that excavation would be very costly. In addition, above ground parking is more environmentally sustainable than basement parking because it does not require mechanical ventilation which allows a higher Green Star rating to be achieved.
Clause 6.3 Stormwater	Changes to the location of the 20m wide bio-swale corridor	Refer to AT&L's report
	Amendments to the stormwater controls	Refer to AT&L's report
Figure 13 Indicative stormwater management	Replace with a new plan to reflect Goodman's proposal.	To reflect Goodman's proposal.

3.4 Analysis

3.4.1 Consistency with Strategic Planning Context

Goodman's proposal is consistent with the Draft Metropolitan Strategy in that:

- The proposed Structure Plan and Staging Plan ensure the proposal can contribute to providing for Sydney's growth and is commercially feasible, which is essential to achieving the Metropolitan Priority for the subregion to *"facilitate delivery of Urban Activation Precincts at… Carter Street"*;
- The additional FSR in the precinct is consistent with Draft Strategy's focus on transit-oriented development and maximising the number of new dwellings that are well serviced by local services and public transport;
- The proposed number of dwellings (7,500) will assist the wider Sydney Olympic Park area to perform the role of a Major Centre, with considerable remaining capacity to accommodate additional dwellings before the upper dwelling limit for a Major Centre is reached;
- WestConnex will provide improved transport connectivity and existing constraints to road infrastructure should not be a barrier to increased density as is suggested by the Transport Impact Assessment prepared for NSW P&I.

3.4.2 Economic & Community Benefits

Goodman engaged SGS Economics and Planning to undertake a cost benefit analysis of Goodman's proposal compared to NSW P&I's proposal (see **Appendix B**). SGS concluded that higher densities in this precinct are likely to have substantial community benefits including:

- Increased affordability, as more dwellings are provided in an established precinct with economies of scale in production leading to reduced costs of construction;
- Urban renewal benefits, as the provision of additional housing at Carter Street will free up housing opportunities elsewhere in Sydney, as residents who move to the precinct will vacate their existing premises, and alleviated demand in greenfield areas no longer consumes land or requires servicing;
- Transport savings, which become manifest as travel time savings due to greater yields with greater proximity of residents to workplaces and public transport networks;
- Leveraging existing assets, as higher yields will lead to more effective use of existing infrastructure in the immediate area, including Sydney Olympic Park, existing public transport infrastructure and committed future infrastructure, including commercial investments as part of Sydney Olympic Park;
- Workforce productivity benefits, as additional residents accommodated in Carter Street add to Sydney's overall agglomeration benefits.

3.4.3 Urban Design Outcomes

Goodman's Structure Plan retains the fundamental urban structure suggested by the exhibited Structure Plan but contains a number of differences that make it a more economically and commercially feasible scheme. The proposed Structure Plan goes back to first principles and has been driven by key urban design rules of thumb. In particular, the proposed scheme achieves the following outcomes:

- The greatest heights and densities are located on and around Uhrig Road, which is where most shops and services are planned to be located. This is consistent with the discussion on page 4 of the UAP Proposal in relation to the general desire of people to live near centres to allow them to walk or cycle to shops for their everyday needs. It also presents a more economically rational development, allowing greater density in the first two stages of development to offset the significant remediation and infrastructure costs.
- Uhrig Road is also a sensible location for shops, services and higher residential density as it is closer and more accessible to Olympic Park Train Station than anywhere else in the Carter Street UAP. Uhrig Road is only a 10-minute walk to the station. This is consistent with the principle of transit-oriented development.
- The concentration rather than disbursement of density will enable the intersection of Uhrig Road and John Ian Wing Parade and the village square to become a thriving urban quarter, the heart of the Carter Street UAP. It is also likely to promote the use of the community centre which is proposed to be located adjacent to the village square. The spreading of major residential towers to mark entry points to the precinct, as proposed in the exhibited Structure Plan, would have less potential to create a sense of place than Goodman's scheme.
- Building heights of up to 25 storeys in the Carter Street UAP would still enable the 30 storey towers in Sydney Olympic Park to be read as the dominant built

form in the skyline. In addition, the proposed 30 storey tower at the end of the Uhrig Road vista in Goodman's proposal will establish a better connected relationship with Sydney Olympic Park. We are not aware of any urban design justification for limiting building heights to 20 storeys in the Carter Street UAP.

- Goodman's scheme acknowledges and respects the existing topography of the precinct. The proposed north-east to south-west road linking Carter Street, John Ian Wing Parade and Edwin Flack Avenue defines the edge of a significant change in landform from RL 11 on the eastern side, to RL 5 on the western side. In contrast, P&I's Structure Plan proposes a series of local roads which do not respond to this topography at all. P&I's scheme would require far more land grading in terms of cut and fill which would add further expense to infrastructure costs.
- While the exhibited Structure Plan creates a high level of permeability through the precinct, the detailed secondary road pattern resulting in the intersection of nearly all roads with Carter Street will fragment the open space linkages and connections to a point where many residential blocks would feel detached from any local open space. Goodman's Structure Plan, on the other hand, creates a high level of permeability while achieving linkages and connections between nearly all areas of proposed open space. While Goodman's scheme seeks to increase site density, it increases the amount of open space. In addition the reinforcement of more formal open space linkages throughout the precinct has added significant identifiable permeability to the proposal.
- Concentrating taller building heights along both sides of Uhrig Road reduces the overall building height across the rest of the precinct, ensuring good solar access to the open space network. Nettleton Tribe's overshadowing analysis indicates that Hill Road Park will not be in shadow from late morning in mid-winter and with minor impact at 3pm at the equinox. Whilst part of the ribbon park may be in shadow for some short periods of time, the connecting parks allow patrons access to solar access throughout the entire day. The village square similarly has good solar access during both mid-winter and the equinox due to the reduced built form to the north and east.
- While demonstrating compliance with the SEPP 65 principles and Residential Flat Design Code (**RFDC**) rules of thumb will be required at DA stage, Nettleton Tribe has tested the densest part of the precinct adjacent to Uhrig Road to test the ability for minimum building separations to be achieved. The analysis shows that the recommended rules of thumb can be achieved, subject of course to the correct habitable to non-habitable relationships.

3.4.4 Traffic Generation & Impacts

AECOM has considered the likely traffic generation of the proposed scheme. AECOM adopted trip generation rates of 0.19 trips per dwelling in AM peak and 0.15 tips per dwelling in the PM peak, consistent with the latest RMS trip generation surveys for high density residential flat buildings greater than 6 storeys that are close to public transport. In contrast, P&I's consultant adopted a trip generation rate of 0.3 trips per dwelling but have not justified the use of this higher rate.

AECOM's analysis has revealed that Goodman's proposed scheme is expected to generate fewer trips than the expected trip generation of the exhibited UAP scheme (when adopting the different trip generation rates). AECOM's figures are reproduced in **Table 5**.

Table 5 – Trip generation

Scenario	Residential dwellings	FSR assumption	Trip generation rate	Total trips generated
Current UAP proposal	5,445	2:1	0.3 trip per dwelling	1,630
Additional yield on site	7,525	2.75:1	0.19 trips per dwelling in AM peak 0.15 tips per dwelling in the PM peak	1,430 in AM peak 1,130 in the PM peak

It is important to note that the conclusions of the report relied on by NSW P&I have a limiting effect on the assumed maximum FSR in the Carter Street UAP Planning Proposal. Traffic appears to be the sole basis that NSW P&I have limited FSR to 2:1. If the trip generation rate is closer to AECOM's prediction, then a substantial opportunity to provide maximum development potential will be lost.

In addition to the above, Goodman engaged SGS Economics & Planning to undertake an economic appraisal of the Carter Street UAP proposal. In relation to traffic and transport matters, SGS concluded:

- The additional development under Goodman's scenario is unlikely to place a significantly higher pressure on an already congested network which needs upgrading imminently.
- The Carter Street UAP is located a minimum of 800m from Olympic Park Station. While this is seen as being beyond the typical catchment for railway stations, many rail travellers walk further than this to catch trains for their commute, particularly where the alternative of a congested road network is not appealing. Therefore it is plausible that the mode share for public transport would increase beyond that anticipated by Parsons Brinckerhoff.
- Furthermore, the higher public transport patronage resulting from a higher yield at Carter Street are likely to make new transport investments more feasible and financially sustainable and will help the government reap higher returns sooner.

3.4.5 Community Facilities

The Carter Street UAP Planning Report attaches a Community Facilities Study that was prepared by Elton Consulting in October 2013. The Study analyses Council's community infrastructure needs based on Council's 2007 *Community Facilities Needs Assessment and Development Study*, as well as recent discussions with Council officers.

The report sets out the requirement for community facilities in the Carter Street UAP, concluding that:

- The closest community facility to the Carter Street UAP is the Newington Community Centre (1.7km walking/driving distance). It includes a main hall and a branch library which Council's 2007 study described as 'inadequate'.
- Public primary schools in Auburn LGA are at capacity and are not able to accommodate additional student demand generated from the Carter Street UAP.
- While the proposed library at Wentworth Point did not include provision for the future Carter Street UAP population, it would nevertheless be a suitable facility to meet the library needs of the Carter Street UAP (page 12).
- There is a significant shortage of child care across the LGA. SOPA has proposed a new child care centre in reasonably close proximity to the Carter Street UAP.

The report analysed the demand for community facilities based on an assumed occupancy rate of 2.1 persons per dwelling. For reasons set out in section 4.1 of this submission, we believe 1.8 persons per dwelling is a more appropriate occupancy rate. Based on an occupancy rate of 1.8 and the community facility rates per person set out in Elton's report, Goodman's proposal generates demand for the facilities outlined in **Table 6**. Goodman's proposal will deliver/is capable of delivering these facilities within the precinct.

Table 6 – Demand for community facilities

POPULATION STATISTICS	
Projected dwellings	7,525
Occupancy rate	1.8
Projected population	13,545
COMMUNITY CENTRE DEMAND	
Community centre provision rate per person	0.05sqm
Community centre demand	677.25sqm
CHILD CARE CENTRE DEMAND	
Projected population aged 0-4 (@5.8% of total population)	785.61
Child care centre provision rate per person	1 place for every 5 children
Total number of places required	157.122
No. of centres required (assuming an average of 65 children per centre)	2.4 centres

3.4.6 Staging

Goodman's landholding is made up of a number of buildings that are subject to short, medium and long term leases. The exhibited scheme fails to address the commercial realities of existing leaseholds and their sequence of expiry. Therefore the development assumptions relied on by NSW P&I are not realistic and the opportunity to fulfil Metropolitan Planning objectives will be lost.

In contrast, Goodman's road network and staging plan address the commercial realities of existing land uses and their sequence of expiry. A proposed staging plan is provided at **Figure 6** and in **Appendix A** and proposed staging of infrastructure is set out in AT&L's Infrastructure Budget Cost Estimate Report (**Appendix D**). The proposed staging ensures that retail services are provided at the same time as the greatest amount of density is provided along Uhrig Road. The defined stages of development proposed by Goodman respond to the commercial and physical constraints of the site.

By staging the precinct's redevelopment in this way, the cost of breaking leases, which can be significant, are avoided and this provides some relief from the complicated redevelopment process.

However, it is important to note that economic viability is not just controlled by staging the development. It is also impacted by the services and infrastructure (and its rollout), community facilities, the take up of apartments and general vagaries of economic circumstances. All of these issues require that careful consideration be given to the appropriate FSR. As this is a brownfields site without any neighbourhood issues the site can accommodate additional FSR and further consideration of this issue is warranted.

This issue is addressed further in section 4.5 below.

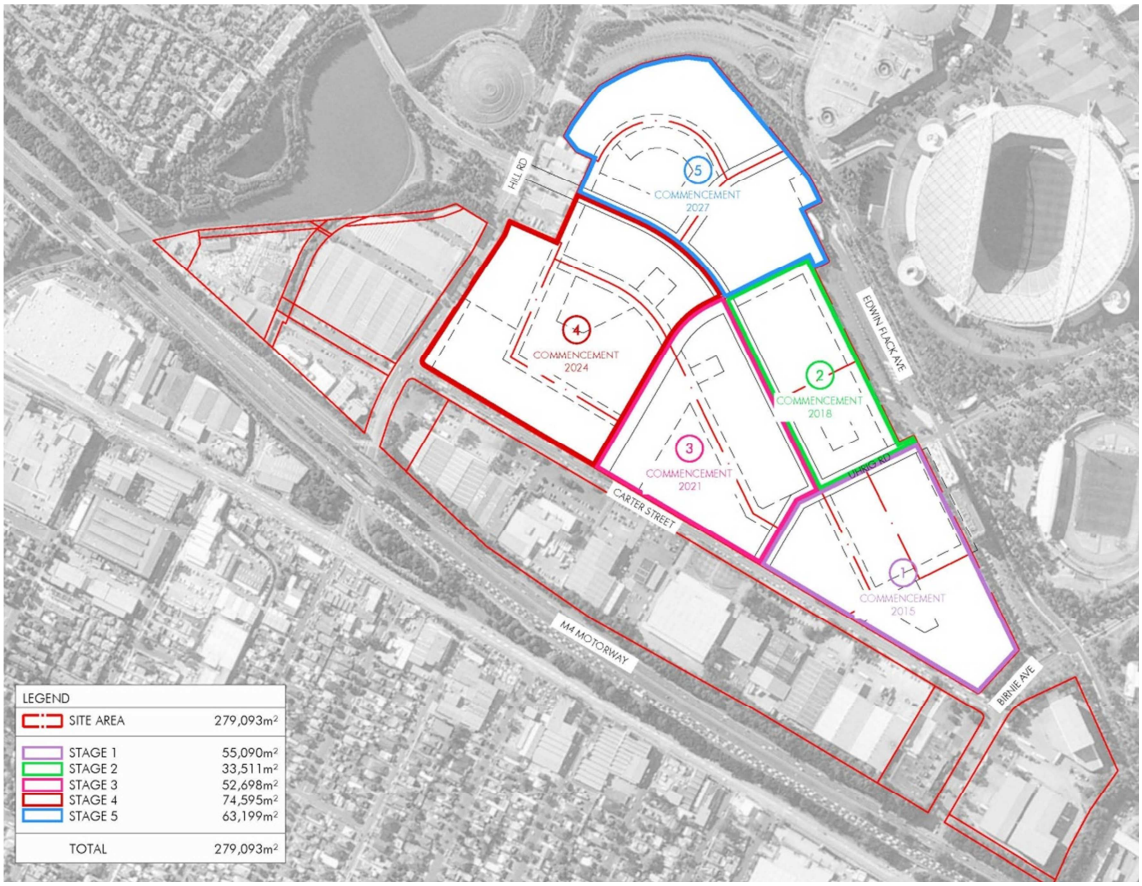


Figure 6 – Staging Plan

4.0 Issues with NSW Planning & Infrastructure's Proposal

NSW P&I's proposed Structure Plan incorporates a number of positive urban design features such as:

- Concentrating local retail uses along the Uhrig Road activity spine, which is connected directly to Sydney Olympic Park and the Olympic Park Station;
- Extending John Ian Wing Parade to increase the permeability of the precinct;
- Providing a high level of connectivity in the proposed road network (subject to the comments below);
- Locating all apartments within 400m of public open space; and
- Providing linear open space linkages between parks.

However, NSW P&I's scheme has a number of issues which are discussed in this section of the submission. There are two main issues:

- The proposed Structure Plan does not align with existing leases throughout the Precinct, which has significant consequences for Goodman as landlord;
- No reason is provided for imposing a maximum FSR of 2:1 other than road network capacity. However, the assumed trip generation rate used by NSW P&I's consultants is unjustifiably high and the potential benefits to be brought by WestConnex have not been fully considered.

4.1 Structure Plan & Road Network

Alignment with Existing Leases

The Carter Street UAP proposal lists some 'key constraints' to the delivery of the proposal. One of them is that *"Long-term leases or commitments by owners and/or recent investment in quality buildings may restrain the process of revitalising the precinct"* (page 24). This is indeed a significant issue for Goodman which has short, medium and long-term lease contracts over the land.

Redevelopment of the UAP in accordance with NSW P&I's proposal could require a number of leases to be broken which would have significant consequences for Goodman. The scale of foregone revenues, breakage fees or tenant relocation costs is unknown (as these costs would have to be negotiated with the tenants) but is likely to be lower under Goodman's scheme compared with NSW P&I's. That is because Goodman's proposed road alignments and staging will align better with existing lease contracts, and therefore, the pay-out required to cut short leases and relocate tenants will be lower.

For example, NSW P&I proposes an extension of John Ian Wing Parade that will cut through 15 Carter Street which is currently leased by Rand until 2020. Goodman proposes to realign this proposed road further east so that the lease does not have to be terminated early. Instead, the road will cut through the edge of the Toll building which lease expires earlier (2017). In other words, Goodman's proposal allows the John Ian Wing Parade extension to be constructed three years earlier than NSW P&I's proposal.

Topography

The second issue with the proposed road network is that it ignores the topography of the precinct. There is a significant change in landform from approximately RL 11 to RL 5, which is defined in Goodman's proposal by a new north-south connection linking Carter Street to the John Ian Wing Parade extension and then extending further north-east from there. NSW P&I's proposal, on the other hand, proposes a series of local roads which do not respond to this topography at all. The problem with NSW P&I's proposal is that it requires far more land grading in terms of cut and fill which would add further expense to infrastructure costs. Rationalising the design and location of roads to suit the physical constraints does not diminish the outcome but is a more economically efficient use of land.

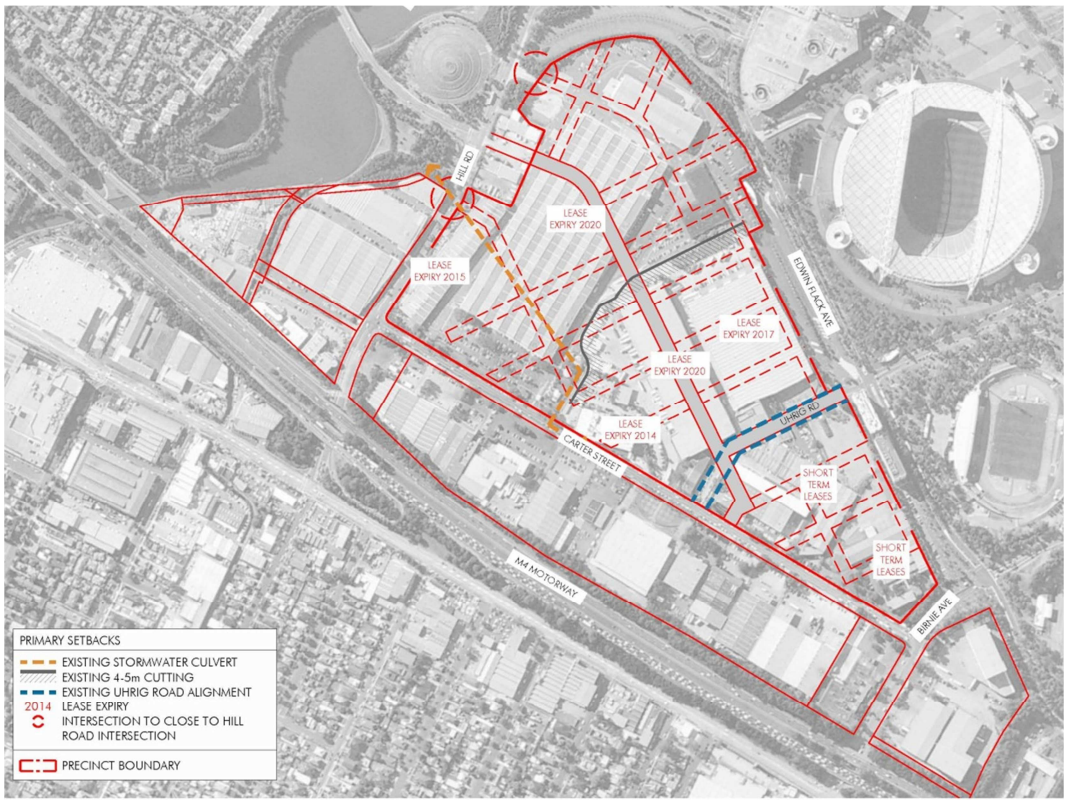
Local Road Network

Finally, P&I's proposed road network shows numerous minor north-south roads, which should be rationalised to provide a more consolidated road network. The proposed road network creates the following issues:

- significant duplication of utility and stormwater drainage infrastructure (capital cost and asset maintenance burden);
- significantly greater road pavement areas (capital cost and asset maintenance burden) plus the generation of large volumes of stormwater requiring treatment;
- more complex road network with a significant number of 4 way cross intersections which may require signal control; and
- minimises block sizes which can constrain basement carpark layouts.

A comparison of NSW P&I's and Goodman's road network in relation to existing building leases is provided in **Figure 7**.

NSW P&I's Proposed Road Network



Goodman's Proposed Road Network

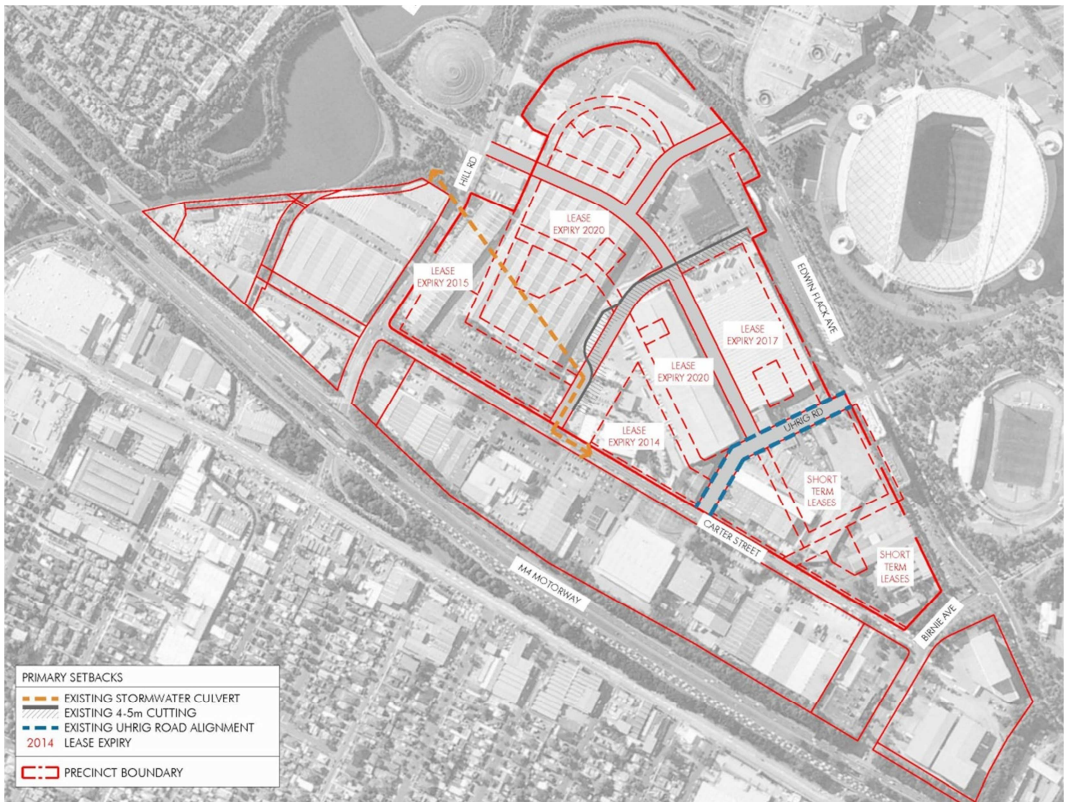


Figure 7 – Exhibited and Proposed Road Networks in relation to Existing Leases
Source: Nettleton Tribe

Distribution of Density

- P&I's proposal includes taller buildings located at key landmark sites at Uhrig Road and parks. Two of the taller buildings are located at the northern end of the precinct, away from the local centre. The spreading of major residential towers to mark entry points to the precinct, as proposed in the exhibited Structure Plan, would have less potential to create a sense of place than Goodman's scheme. It would also require greater number of people to walk longer distances to the station.
- P&I's scheme assumes that the 30 storey residential towers of Sydney Olympic Park town centre should remain the dominant built form elements of the wider Carter Street/Sydney Olympic Park/Homebush Bay skyline, without providing any justification for why this is important. Even assuming this is important from an urban design point of view, there is no justification for why buildings at Carter Street should be capped at 20 storeys. Maximum heights of 25 storeys limited to the Uhrig Road activity spine would still read as a lower built form compared to Sydney Olympic Park. Buildings of this height would be consistent with the heights proposed for the Wentworth Point UAP. And a single 30 storey building at the end of the Uhrig Road vista would create a balance with Sydney Olympic Park.

Open Space Network

- While the exhibited Structure Plan creates a high level of permeability through the precinct, the detailed secondary road pattern resulting in the intersection of nearly all roads with Carter Street will fragment the open space linkages and connections to a point where many residential blocks would feel detached from any local open space. Goodman's Structure Plan, on the other hand, creates a high level of permeability while achieving linkages and connections between nearly all areas of proposed open space. While Goodman's scheme seeks to increase site density, it also increases the amount of open space. In addition the reinforcement of more formal open space linkages throughout the precinct has added significant identifiable permeability to the proposal.

4.2 Transport Impact Assessment

Goodman engaged AECOM to review the Transport Impact Assessment prepared by Parsons Brinckerhoff, and to provide advice in relation to Goodman's alternative Structure Plan.

AECOM's submission is attached at **Appendix C**. The submission discusses a number of recent transport initiatives put in place by the NSW Government and examines the increasing use of public transport services by residents in other high density residential areas similar to the future Carter Street UAP.

AECOM challenges some of the assumptions made and methodology used in the Transport Impact Assessment. Key issues identified by AECOM are summarised below.

Methodology

AECOM identified a number of issues with the methodology adopted in the Transport Impact Assessment undertaken for NSW P&I:

- **Methodology:** The Transport Impact Assessment does not adopt a robust methodology. For instance, it did not fully consider the potential benefits of regional infrastructure upgrades in the area including WestConnex and public transport initiatives.

- **Car share schemes:** The Transport Impact Assessment referred to car share schemes becoming an increasingly attractive option, with the potential for one car share vehicle to replace the need for 9-13 private cars. However, this was not factored into the assumed trip generation rates
- **Trip distribution:** The trip distribution pattern adopted in the Transport Impact Assessment does not take into account likely future changes in trip distribution as a result of the Wentworth Point UAP and Sydney Olympic Park Masterplan. Following the redevelopment of these areas to the north, travel patterns are likely to be shifted to the north which would put less pressure on the M4 intersections.
- **Cumulative impact assessment:** The Transport Impact Assessment adopts a worst case assumption in terms of the cumulative impacts of the Carter Street UAP, Sydney Olympic Park Masterplan and Wentworth Point UAP. However, it did not consider the staging of these developments which in turn may have limited the assumed potential of the Carter Street UAP.

Trip Generation Rates

The trip generation rates adopted in the Transport Assessment are too high and have not been justified.

The rate that has been adopted is 0.3 vehicle trips per dwelling, which is on the higher end of the range in the latest RMS trip generation surveys for high density residential flat buildings greater than 6 storeys that are close to public transport. The rate adopted is 60% higher than the average AM rate (0.19) and 100% higher than the average PM rate (0.15) as derived from latest traffic surveys of similar sites.

The lower trip generation rates are appropriate in light of the mode shift away from car use as a result of public / active transport infrastructure and initiatives proposed for this UAP and the wider Sydney Olympic Park area.

WestConnex

As part of WestConnex it is proposed to construct a new eastbound access to the M4 from Sydney Olympic Park at Hill Road (see **Figure 8**). At this stage it is not proposed to construct a new westbound off-ramp into the Precinct in this location. As a result, westbound vehicles wishing to enter the Carter Street UAP will be required to exit the M4 at Homebush and then enter the precinct via Sydney Olympic Park. This is problematic because the Sydney Olympic Park Authority closes roads within the precinct during special events.

We understand that a westbound off-ramp in this location is currently being considered by the WestConnex Delivery Authority. Due to the timing of this with the exhibition of the Carter Street UAP documentation, the Transport Impact Assessment undertaken for the NSW P&I does not consider the potential benefits a westbound off-ramp could have on the Carter Street UAP, Sydney Olympic Park and Wentworth Point UAP.

A westbound off-ramp at Hill Road would significantly improve accessibility to the Carter Street UAP, Sydney Olympic Park and the Wentworth Point UAP. It is anticipated to assist with improved traffic and transport issues in the Carter Street UAP. If that is so, then the proposed maximum FSR of 2:1, which is said to be driven by treansport issues, could be relaxed.

Now is an opportune time for a whole of government approach to considering traffic and transport issues in the wider precinct including the Carter Street UAP, Wentworth Point UAP and Sydney Olympic Park.

Due to the wider regional benefits a westbound off-ramp is likely to bring, the cost of constructing it should be borne by developers within the Carter Street UAP, Wentworth Point UAP and Sydney Olympic Park, but that cost could be offset by increased FSR.

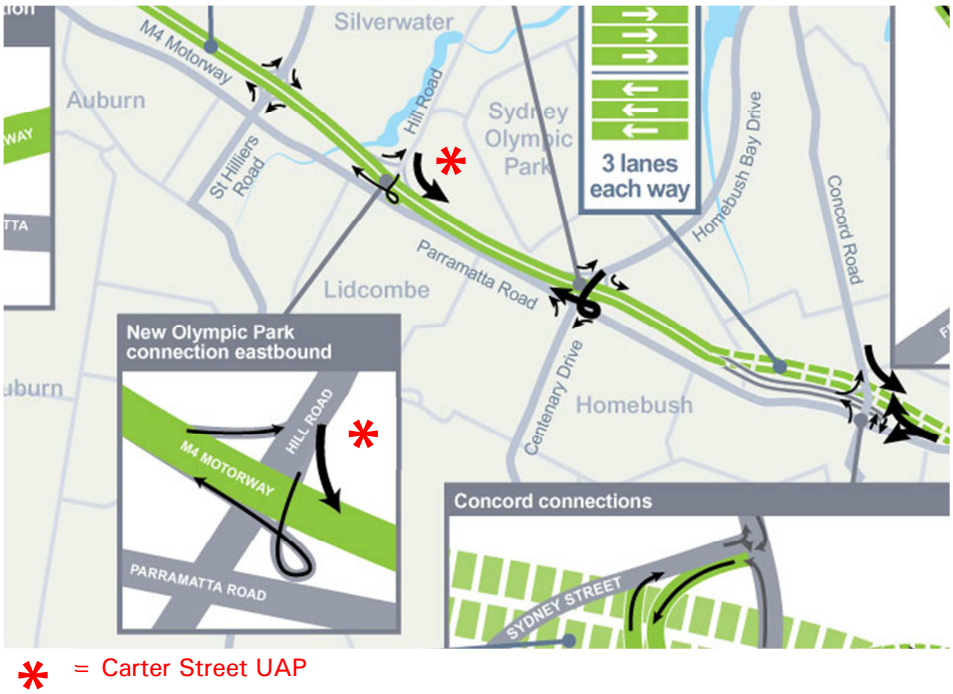


Figure 8 – WestConnex
Source: http://www.westconnex.com.au/explore_the_route/stage_1/index.html

Another issue is the recommendation in the Transport Impact Assessment that vehicles coming from the M4 Motorway be prevented from turning right into Carter Street from Hill Road. This will have flow-on impacts on the surrounding road network, as it will increase the number of vehicles (and potentially heavy vehicles) passing through the residential area to access the employment area of the Carter Street UAP. A practical solution would be to move the location of the Hill Road/Carter Street intersection further north, however this has not been discussed in the Transport Impact Assessment.

Other Issues

- **Land use:** NSW P&I should reconsider the use of the proposed B6 Zone to another use with lower trip generation. The high trip generation of employment uses has potential impacts on the residential yield that could be achieved elsewhere in the precinct.
- **Infrastructure apportionment:** The UAP Planning Report assumes that the developer is required to fully fund a number of intersection upgrades in the precinct. However, Hill Road/Carter Street and Birnie Avenue/Carter Street intersections were already identified for upgrade in the Sydney Olympic Park Masterplan. The responsibility of funding regional and local infrastructure items needs to be coordinated with a number of stakeholders.

Recommendations

In light of the above, AECOM makes a number of recommendations, including the following:

- A regional traffic study should be undertaken that considers the potential benefits of regional infrastructure upgrades in the area including WestConnex and public transport initiatives;
- The WestConnex Delivery Authority should continue to investigate the feasibility and benefits of constructing a westbound off-ramp at Hill Road;
- The high trip generation rate of 0.3 trips per dwelling should be reconsidered in light of the precinct's close proximity to public transport and the suggestion for a car share scheme;
- Options to run more direct train services to Olympic Park Station should continue to be investigated given the proposed redevelopment of Sydney Olympic Park and the Carter Street UAP; and
- The future density capacity of the Carter Street UAP should be further analysed at the conclusion of the above investigations. The Carter Street UAP may be able to accommodate even more than 7,500 dwellings as proposed by Goodman as part of this submission.

4.3 Occupancy Rate

The Carter Street UAP Planning Report states that the projected population for the Carter Street UAP is approximately 11,550 based on 2.1 people per 5,500 dwelling units. The Community Facilities Study prepared by Eltons (page 11) that the occupancy rate of 2.1 was determined by considering occupancy rates of high density, urban infill Sydney suburbs considered to contain a similar dwelling structure to the proposed Carter Street UAP. The examples provided in the study were as follows (see **Table 7**).

Table 7 – Occupancy Rates according to Elton's Community Facilities Study

Suburb	Average persons per dwelling
Rhodes	2.3
Wentworth Point	2.0
Pyrmont	2.1
Zetland	2.1

Source: Elton Consulting (2013), Community Facilities Study, page 11

The study states that the figures shown in the table above were sourced from Census of Population and Housing data for 2011 (Australian Bureau of Statistics). However, we reviewed the 2011 Census data as reported on profile.id and found that the average occupancy rates were actually lower than those reported in the Community Facilities Study (see **Table 8**).

Table 8 – Occupancy Rates according to ABS Data

Suburb	Population / dwellings (2011 Census)	Average persons per dwelling
Rhodes (West)*	Population 5,295 Dwellings 2,590	2
Wentworth Point	Population 2,764 Dwellings 1,495	1.8
Pyrmont	Population 11,631 Dwellings 6,236	1.9
Zetland	Population 14,475 Dwellings 8,054	1.8

Source of population and dwelling statistics: profile.id

* We limited our research to Rhodes West as Rhodes East is not a redevelopment area.

In relation to Rhodes (West), the figure of 2 persons per dwelling is likely to be skewed upwards, because a significant part of the eastern side of the precinct, east of the railway line, comprises low density dwellings (see **Figure 9**).

On this basis, an occupancy rate for the Carter Street UAP of 1.8 is more in line with comparable suburbs than 2.1. It is also a commonly adopted rate for new high density communities and, we are instructed, was the occupancy rate assumed by NSW P&I during discussions with Goodman prior to the UAP's public exhibition.

Figure 9 – Rhodes (West) precinct
Source: profile.id

4.4 Flexibility of the Planning Controls

The UAP Report states (on page 2) that flexible planning controls are proposed to guide development throughout construction. However, the draft DCP controls are highly prescriptive and constrain future flexibility by, for example, prescribing the location of all local roads and all street and upper level setbacks. While the introductory provisions in the draft DCP acknowledge the EP&A Act's requirement for consent authorities to be flexible in applying DCPs, in practice flexibility rarely occurs when the DCP provisions are highly prescriptive and include wording like "is to be provided".

Flexibility is required because, as pointed out in Section 3.2 of this submission in relation to transport issues, there are still further studies to be done to determine regional and local road network capacity which will affect street networks and height/FSR capacity in the Carter Street UAP. These matters should be resolved before detailed prescriptive development controls are set.

For this reason, while we agree that there should be an overall Structure Plan to guide future development, detailed matters such as local road networks, building footprints and the like should be resolved at the DA stage. Clause 2.3 of the draft DCP anticipates that development of the Goodman land will be the subject of an initial subdivision DA, which will:

- Confirm the street, pedestrian and cycleway network;
- Identify individual development lots, and lots for open space or other public purposes;
- Identify a suitable site for a primary school;
- Confirm how development will be distributed across the area consistent with the floor space ratio controls identified in the Auburn Local Environmental Plan 2010, by allocating a maximum allowable floor space for each development lot; and
- Include a stormwater management strategy for the area.

Goodman generally supports this approach and anticipates that the above 'subdivision DA' would take the form of a Stage 1 DA under Division 2A of Part 4 of the EP&A Act. However, the Stage 1 DA should *establish* local road networks rather than 'confirming' any such local road networks set out in the DCP.

In addition, we note that the draft DCP encourages non-residential uses at street level in certain locations, where a zoning of R4 High Density Residential is proposed. Currently, the Auburn LEP 2010 permits a very narrow range of non-residential uses in the R4 Zone. For example, the only retail use that is permitted is neighbourhood shops which are capped at 80sqm GFA. If ground floor non-residential uses are desired outside of the commercial and mixed use areas, then the zoning controls should reflect this. Failure to address this issue as part of the Planning Proposal will further affect the feasibility of redevelopment taking place.

4.5 Developer Contributions & Infrastructure Costs

Goodman engaged civil engineers AT&L to prepare a preliminary budget cost estimate for infrastructure works to support redevelopment of the Carter Street UAP (see **Appendix D**). The cost estimates were based on Nettleton Tribe's Structure Plan.

AT&L's cost estimates are provided in detailed spreadsheets in their report for each stage of the redevelopment and overall. The total infrastructure cost estimate is $297 million, which includes $133.5 million for earthworks including removal of general solid waste (GSW) and contaminated hotspots.

These infrastructure costs are considerable, particularly given that extensive precinct-wide infrastructure is required up front. This necessitates a sensible staging approach that provides an early return for the developer.

In addition to the above, AT&L analysed the cost differences between Goodman's and P&I's schemes and concluded that P&I's scheme would be more expensive to facilitate than Goodman's scheme. The additional costs are in the order of $14.3 million (additional 20%), and result from the number of additional roads in P&I's scheme. The additional roads generate a greater area of pavement, lengths of kerb and gutter, piped road drainage and all utilities that have to be installed in the road verge (electrical, street lighting, water, recycled water, sewer, gas, telecommunications, etc.). The cost comparison is provided in AT&L's report at **Appendix E**.

The UAP Planning Report (in section 6) sets out a list of infrastructure required to support the Carter Street UAP redevelopment and who will be responsible for providing/funding it. Most of the infrastructure is to be funded by the developer, and a lot of the developer-funded infrastructure will have wider regional benefits beyond the Carter Street UAP. **Table 9** below replicates the list in the Planning Report, with an indicative cost for each item (provided by AT&L).

Those items which are to be funded (or partially funded) by the developer and that will have wider benefits beyond the Carter Street UAP are coloured in pink.

Table 9 – Infrastructure summary

Item	Measure	Who	Indicative Cost*
Local traffic improvement			
1)	Access intersection improvements: ▪ Hill Road and Carter Street: signalisation, upgrade ▪ Hill Road and John Ian Wing Parade: modification of existing signals and upgrade ▪ Edwin Flack Avenue, Dawn Fraser Avenue and Uhrig Road: signalisation ▪ Birnie Avenue and Carter Street: signalisation upgrade	Developer	$6M (design, signals, minor civil works only excluding utility relocation)
2)	Internal intersection improvements: ▪ Carter Street and Uhrig Road: signalisation & upgrade to assist movement of pedestrians & buses ▪ John Ian Wing Parade extension to Uhrig Road	Developer	$500K (signals only)
3)	On-street parking management strategy	Council	Nil to developer
4)	Car share scheme	Developer	Nil
5)	Bus stop infrastructure	Developer	$320K (assumes 2 bus stops internal (Uhrig Rd) and 2 external (Carter St))
6)	Cycle links and public bike parking	Developer	$700K (excludes Carter St off road shared path)
7)	Pedestrian network improvements including pedestrian signals on M4 east bound on ramp, mid- block crossings of Carter Street and footpaths	Developer	$300K
8)	Resident transport information packs	Developer	Nil
9)	Workplace travel plans	Developer	Nil

Item	Measure	Who	Indicative Cost*
10)	Wayfinding and directional signage	Developer	$50K
Regional traffic improvement			
11)	Investigate subregional arterial road network capacity through wider area traffic modelling, informed by proposals identified in WestConnex project such as a new east bound ramp onto the M4 motorway from Hill Road	TfNSW	Nil to developer
12)	Investigate design solutions to provide vehicle, pedestrian and cycle access to Carter Street UAP to accommodate West Connex project	TfNSW/ Developer	$50K (concept only)
13)	Investigate intersection improvements when funding available: ▪ Parramatta Road, Hill Road and Bombay Street ▪ Parramatta Road and Birnie Avenue ▪ Hill Road and Old Hill Link ▪ Edwin Flack Avenue and Birnie Avenue	TfNSW/ Developer	$60K (traffic investigation and concept only)
Public transport improvements			
14)	Further feasibility studies into Sydney Olympic Park Line of proposed Western Sydney Light Rail Network incorporating a link into Carter Street	TfNSW/ Parramatta Council	Nil to developer
15)	Review and improve bus service coverage and frequency	TfNSW	Nil to developer
16)	Cycle connection along Carter Street in parallel to M4 Motorway	Developer	$300K (civil cost only)
17)	Investigate options to run more direct train services to Olympic Park Train Station	TfNSW	Nil to developer
Community infrastructure			
18)	Community centre	Developer	Assume 500m2 $1.8M**
19)	Child care centre	Developer	Assume 500sqm $2.1M**
20)	Primary school	Department of Education & Community/ Developer	Assume 2 Ha $60M**
21)	New 1.8 ha park at Hill Road	Developer	$28.8M**
22)	Village park at Uhrig Road and Carter Street as a termination for Dawn Fraser Avenue axis	Developer	Assume 0.8 Ha $13M**
23)	Village square as a central meeting place on Uhrig Road 'main street'	Developer	Assume 0.4 Ha $6.8M**
24)	Public access along Haslams Creek and construction of Haslams Creek southern bank south of John Ian Wing Parade	Developer	$200K (civil works only)
TOTAL (excluding section 94 contributions)			**$120,980,000**

* Costs included are indicative estimates only and subject to detailed design

** Combined land and build cost

Source: Indicative costs provided by AT&L

The above demonstrates that developers will be responsible for providing/funding a significant amount of infrastructure with wider benefits beyond the Carter Street UAP. The total estimated infrastructure cost (including land costs for certain community facilities/parks) to be borne by developers is in the order of **$121 million**. This includes a new 2 hectare school. Goodman should be compensated with additional FSR for the amount of developable land lost in delivering this facility.

Despite this, there is no discussion in any the exhibited documentation regarding Section 94 contribution offsets. These need to be very clearly identified, otherwise

a scheme may be adopted without any offset regime in mind. While ordinarily a VPA might identify those infrastructure items with local and regional benefits, if a VPA is not progressed prior to gazettal then at the very least the DCP should make the distinction between regional and local facilities and the section 94 plan be amended to ensure offsets are provided for local facilities. In respect of regional facilities the compensation for these needs to be addressed now as part of the of the Structure Plan. Further, due to the number of land owners in the precinct, it is not practical to identify local and regional infrastructure in a VPA. Therefore this should be clarified in the current documentation.

In addition to the above, the UAP Planning Report assumes that the developer is required to fully fund a number of intersection upgrades in the precinct. However, Hill Road/Carter Street and Birnie Avenue/Carter Street intersections were already identified for upgrade in the Sydney Olympic Park Masterplan. The responsibility of funding regional and local infrastructure items needs to be coordinated with a number of stakeholders. It will be critical for any future section 94 plan to recognise this.

5.0 Conclusions

Goodman and its consultants have analysed the Carter Street UAP proposal in detail and have concluded that the proposed Structure Plan and proposed maximum FSR of only 2:1 fail to encourage *"the orderly and economic use and development of land"*, which is an important object of the EP&A Act. The proposed height and FSR controls, combined with the proposed road network, do not optimise the development opportunities that the precinct provides and also do not facilitate a feasible development.

5.1 Floor Space Ratio

The proposal by NSW P&I to impose a maximum FSR control of 2:1 appears to be based solely on the capacity of infrastructure, particularly roads, to accommodate additional development in this locality. This approach unduly limits the development potential of the Carter Street UAP given the significant additional work that is required on traffic and transport issues. In particular, as identified in this report at **Section 4.2** and explained more fully in AECOM's report at **Appendix C**:

- The Transport Impact Assessment undertaken for NSW P&I does not fully consider the potential benefits of WestConnex, in particular the potential for a westbound off-ramp into the precinct at Hill Road which is currently being investigated by the WestConnex Delivery Authority.
- The trip generation rates adopted in the Transport Assessment are too high and have not been justified. Lower trip generation rates are appropriate in light of the mode shift away from car use as a result of public / active transport infrastructure and initiatives proposed for this UAP and the wider Sydney Olympic Park area.

In addition, increased population in the precinct makes running direct connections between Olympic Park Station and the Sydney CBD more feasible.

We recommend that the above matters be considered further before establishing a maximum FSR control for the Precinct. AECOM and NSW P&I's consultants should discuss these issues and the various other issues with the Transport Impact Assessment prepared for NSW P&I.

While the maximum FSR for the precinct should not be decided until further work has been undertaken, for the purposes of this submission Goodman has designed a scheme which has a maximum FSR of 2.75:1 and can accommodate 7,500 dwellings. In our view, a higher FSR of 2.75:1 is supportable because:

- The more realistic trip generation rates adopted by AECOM demonstrate that Goodman's proposed scheme is expected to generate fewer trips than the expected trip generation of the exhibited UAP scheme (when adopting the different trip generation rates) which NSW P&I has deemed to be acceptable.
- The Carter Street UAP is located a minimum of 800m from Olympic Park Station. While this is seen as being beyond the typical catchment for railway stations, many rail travellers walk further than this to catch trains for their commute, particularly where the alternative of a congested road network is not appealing.
- The Carter Street UAP, unlike many other urban renewal areas, is relatively unconstrained in terms of sensitive adjoining land uses, heritage and flooding. There are no other precincts where substantial densities can be delivered in unconstrained and well-located precincts.

- The redevelopment of this precinct in a way that maximises density will have a number of community benefits including increased affordability, urban renewal benefits, transport savings, leveraging existing assets and workforce productivity benefits (see section 3.4.2 of this submission).
- Being a majority landowner in the precinct, Goodman unlike other landowners is being required to deliver major infrastructure items that will have both local and regional benefits such as a new school, community facilities, open space and new roads. Goodman should be compensated with additional FSR (as well as section 94 offsets).
- The Wentworth Point UAP proposes a maximum height of 25 storeys and a maximum FSR of 2.6:1, with the potential for the Wentworth Point peninsula to accommodate up to 9,500 dwellings at its completion. Unlike the Carter Street UAP, Wentworth Point will be located approximately 1.25km walking distance from Ryde Station once the new bridge is constructed. Uhrig Road where most of the density is proposed in Goodman's Structure Plan, is only 800m-1km from Olympic Park Station.

Goodman is open to discussing the possibility of some of the additional FSR being tied to an incentive scheme like the Green Square community infrastructure floorspace scheme. Under the *Sydney Local Environmental Plan 2012*, bonus FSR is only available if the development provides public works and community infrastructure to Council's satisfaction, such as public roads, drainage or flood mitigation works, recreation facilities, public open space and streetscape improvements. A similar scheme could be considered by NSW P&I in consultation with Goodman.

Again, rather than losing an unrivalled opportunity to deliver additional homes and jobs in an accessible location, NSW P&I and Goodman should discuss what the issues are and how to resolve them. There is more work to be done, so capping FSR at 2:1 at this stage, based on an unresolved issue, is premature. Further, we note that whatever solution is required to relieve traffic issues should be shared between developers in the Carter Street UAP, Wentworth Point UAP and Sydney Olympic Park.

5.2 Structure Plan

Goodman alternative Structure Plan has been designed primarily to rectify commercial and feasibility issues with the exhibited scheme. The Structure Plan proposed by Goodman takes into account existing uses and leases, topographical constraints, the existing road network, traffic and civil requirements and the community benefits proposed by NSW P&I. It does not compromise on any of the urban outcomes sought to be achieved by P&I's Structure Plan, but allows existing uses to continue operating until the end of their respective lease terms.

Goodman requests that the alternative Structure Plan be discussed with NSW P&I prior to finalising a scheme for this Precinct.