

Our Ref: 18280

3 September 2018

TWT Property Group Pty Ltd Level 5, 55 Chandos Street St Leonards NSW 2065

Attention: Mr Gavin Zhang

Dear Gavin,

RE: 55-89 CHANDOS STREET & 58-64 ATCHISON STREET, ST LEONARDS PLANNING PROPOSAL FOR MIXED USED DEVELOPMENT TRANSPORT IMPACT ASSESSMENT

As requested by TWT Property Group Pty Ltd (TWT), The Transport Planning Partnership (TTPP) has undertaken a transport assessment of the planning proposal for the site located at 55-89 Chandos Street & 58-64 Atchison Street, St Leonards (the Site).

TWT is proposing to lodge a Planning Proposal with North Sydney Council (Council) seeking approval to rezone the Site for the purpose of constructing a mixed-use development, including dedicated floor area for 'creative space' uses such as galleries, artist studios, dance schools and museums.

Location of the Site

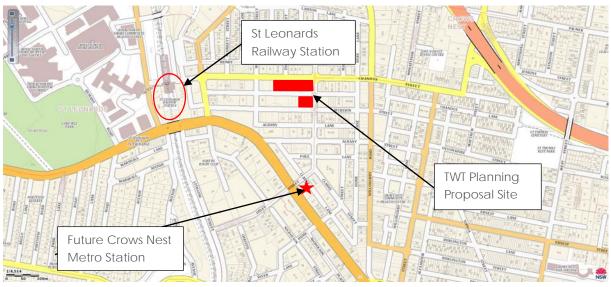
The Site is generally bound by Chandos Street, Atchison Street and Oxley Street. The property lots which make up the Site are shown in Figure 1.

The Site is located within easy walking distance of:

- St Leonards Railway Station and Bus Interchange;
- High frequency bus routes along the Pacific Highway and Willoughby Road;
- St Leonards town centre;
- Crows Nest urban village with its restaurants and retail land uses;
- Royal North Shore Hospital, which is a major employer in the area; and
- Sydney Metro Crows Nest Station (currently under construction).



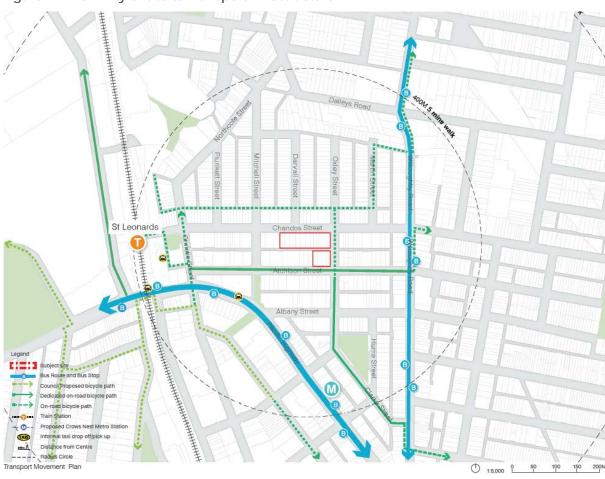
Figure 1 - Planning Proposal Site Location



Source: www.maps.six.nsw.gov.au

The proximity of the Site to the above transport infrastructure is shown in Figure 2.

Figure 2 - Proximity of Site to Transport Infrastructure



Source: Architectus (2018)



Background to Transport Assessment of the Planning Proposal Site

In August 2014, GTA Consultants prepared a Transport Impact Assessment1 as part of a Planning Proposal for a larger land holding by TWT in St Leonards which included the much of the Site considered in this report. The author of the GTA report (Jason Rudd) is now the Director at TTPP and author of this report. Subsequent addendums were prepared by GTA and TTPP² to consider changed traffic and transport outcomes associated with modified development yields.

These traffic and transport assessments essentially concluded that the net change in traffic generation from existing to proposed land uses would be negligible as a result of reduced parking provisions, improved public transport provisions and a greater mix of land use, namely residential and employment uses.

While the Site at 55-89 Chandos Street and 58-64 Atchison Street was part of the previous planning proposal and notwithstanding the above, the Site is now the subject of a separate and distinct planning proposal.

With regard to traffic and transport, the purpose of this report is to present the findings of an assessment of the planning proposal for 55-89 Chandos Street and 58-64 Atchison Street with regard to the following:

- Comparative assessment of the existing traffic generation and proposed Planning Proposal traffic generation potential for the Site;
- Consideration of existing traffic conditions in St Leonards generally; and
- Consideration of Sydney Metro transport infrastructure improvements and other strategic planning policy frameworks.

Strategic Transport Planning Context for St Leonards

METROPOLIS OF THREE CITIES

The Greater Sydney Region Plan, A Metropolis of Three Cities is built on a vision of three cities where most residents live within 30 minutes of their jobs, education and health facilities, services and great places. This is consistent with the 10 Directions in Directions for a Greater Sydney which establish the aspirations for the region over the next 40 years and are a core component of the vision and a measure of the Plan's performance.

The Metropolis of Three Cities aims to rebalance economic and social opportunities will leverage that growth and deliver the benefits more equally and equitably across Greater

¹ Chandos Street and Atchison Street St Leonards, Planning Proposal Transport Impact Assessment (GTA Consultants, 5 August 2014) Main Author Jason Rudd now at TTPP

² New Life St Leonards Planning Proposal – Transport Impact Assessment Addendum #2 (TTPP, August 2016).



Sydney. Residents will have quick and easy access to jobs and essential services. Housing supply and choice will increase to meet the growing and changing needs of the community. The environment and precious resources will be protected. Importantly, infrastructure will be sequenced to support growth and delivered concurrently with new homes and jobs.

Having three cities, each with supporting metropolitan and strategic centres, will put workers closer to knowledge-intensive jobs, city-scale infrastructure and services, entertainment and cultural facilities.

St Leonards has been identified as a strategic health, education and employment centre. Further growth in employment and housing as a result of the planned Sydney Metro station at Crows Nest which will add to the existing public transport infrastructure, namely the St Leonards Railway Station and bus interchange.

The Planning Proposal for the Site is consistent with the Metropolis of Three Cities policies as it deliveries employment, housing and cultural opportunities to St Leonards.

NSW LONG TERM TRANSPORT MASTER PLAN

The residential and economic growth of St Leonards as a major employment hub is supported by the NSW Long Term Transport Master Plan which seeks to improve the integration of all modes. The North West Rail Link is considered as an important piece of infrastructure connecting the NW growth areas to the St Leonards Employment Hub.

SYDNEY METRO - CROWS NEST STATION

In May 2016, Transport for NSW released an Environmental Impact Statement for the Sydney Metro – City and Southwest, Chatswood to Sydenham metro line.

The Sydney Metro includes construction of a rail way station at "Crows Nest" with entrances at Oxley Street and Hume Street. An extract from the EIS is reproduced below (Figure 3) showing the new station details.

As shown in Figure 2 above, the new Metro Station will be located within 3 minutes' walk of the Planning Proposal Site. This will be in addition to the St Leonards Railway Station which is located within 5 minutes walk of the Site.

As such future employees, residents and visitors of the Site will have a choice of two separate rail lines to use each within very convenient walking distance.

It is considered that the development of the Sydney Metro with a station in such close proximity will enhance the attractiveness of public transport as a mode of travel and further increase the already high levels of public transport use by people to and from St Leonards.



Indicative only, subject to design development

| Proposed signalised pedestrian crossing | | Services | Proposed tasi rank | Proposed tasi rank | Proposed tasi rank | Proposed pedestrian crossing | Proposed tasi rank | Proposed pedestrian crossing | Proposed tasi rank | Proposed pedestrian crossing | Proposed tasi rank |

Figure 3 - Proposed Sydney Metro Crows Nest Station

Source: Sydney Metro, Chatswood to Sydenham Environmental Impact Assessment (May 2016) prepared by Jacobs Group (Australia) and Arcadis Australia Pacific Pty Ltd

NORTH SYDNEY COMMUNITY STRATEGIC PLAN (2013)

This Plan provides a range of objectives and directions aimed at addressing transport issues identified by the community. The prioritised community issues include:

- High level of vehicle congestion;
- · Lack of on street parking; and
- Impacts to pedestrian accessibility and amenity.

The directions outlined by Council promote the use of public and active transport.

ST LEONARDS / CROWS NEST PLANNING STUDY - PRECINCTS 2 & 3

The Planning Study for St Leonards / Crows Nest – Precincts 2 & 3 was adopted by North Sydney Council in May 2015. The plan was prepared to manage the high level of development interest



near St Leonards Station, protect jobs and deliver much needed public domain and services. The study moves away from the 'stepping down' principle for key landholdings located in the centre.

The North Sydney DCP 2013 was subsequently amended in line with the St Leonards / Crows Nest Planning Study with maximum on site parking provision rates reduced for new development within Precincts 2 & 3.

The proposed development Site is located within Precinct 2 & 3.

INTERIM STATEMENT ON THE FUTURE OF CROWS NEST, ST LEONARDS AND THE ARTARMON INDUSTRIAL AREA (AUGUST 2017)

On 4 August 2017 the NSW Government released its Interim Statement on the future of Crows Nest, St Leonards and the Artarmon industrial area. The statement includes a draft vision, objectives, guiding principles and 10 character statements that are to guide future development and infrastructure delivery in the precinct over the next 20 years.

The Precinct is identified as a Strategic Centre in the Greater Sydney Commission's (GSC) draft North District Plan. The importance of the Precinct as a key employment centre in Sydney, combined with a new metro station at Crows Nest presents a unique opportunity for renewal and a co-ordinated plan for the Precinct. The NSW Government is looking to provide new homes and jobs located close to transport and social infrastructure such as open space and schools.

The DPE is proceeding to Stage Two of the study which will identify areas within the Precinct suitable for redevelopment and guide future development and infrastructure delivery over the next 20 years. A Special Infrastructure Contribution will be developed to fund new infrastructure.

Overview of Planning Proposal Development Yields

The Planning Proposal for 55-89 Chandos Street and 58-64 Atchison Street seeks approval to demolish the existing commercial / retail buildings on the site to construct a mixed use development comprising 3 towers with associated podiums and basement parking and loading areas.

In summary;

- Tower A is 28 storeys (fronting Chandos Street)
- Tower B is 23 storeys (fronting Oxley Street)
- Tower C is 18 storeys (fronting Chandos Street)



It is understood that the planning proposal for the Site would include:

- Non Residential Floor Space (GFA) = 8,908m² including approx. 4,000m² of 'creative space'
- Residential (Apartments) = 438 apartments

Basement car parking and service vehicle facilities would be provided with vehicle access from Atchison Lane.

The design concepts would also allow public through site links between Chandos Street and Atchison Street.

It is noted that the envisaged car parking provisions listed above reflect the relevant car parking controls set out in North Sydney Council's Development Control Plan (DCP) 2013 for Precinct 2 & 3 based on the proposed apartment mix. Further details are provided below.

Furthermore, bicycle parking, car share and loading dock facilities will need to be accommodated within the development proposals in line with Council's DCP requirements and / or the needs of the proposed site uses.

Traffic Generation Potential of Planning Proposal Site

The traffic generation potential of the current Planning Proposal for the Site has been estimated utilising the RMS guidelines (TDT 2013/04a) and specifically the surveyed results of St Leonards site contained in the RMS guidelines.

The estimated traffic generation of the current proposal is shown in Table 1.

Table 1 – TWT Planning Proposal Estimated Traffic Generation – The Site (55-89 Chandos Street and 58-64 Atchison Street)

Land Use	Apartments / Floor Area (m²)	Traffic Generation Rate (veh/hr)		Traffic Generation Trips (veh/hr)	
		AM Peak Hr	PM Peak Hr	AM Peak Hr	PM Peak Hr
Residential	438 apartments	0.14 trips / apartment	0.07 trips / apartment	61	31
Non-Residential	22 car spaces (8,908m²)	1 trip / car space	2 trips / car space	22	44
Total				83	75

In considering the traffic implications of the Planning Proposal site, it is considered important to assess the net change in traffic generation potential between the existing site uses (ie. commercial / retail uses) with the proposed site uses.



It is noted that the Site includes an existing animal hospital / veterinary clinic which generates relatively high volumes of traffic compared with typical commercial spaces due to the turn over of customer parking. It is also noted that existing commercial floor space with historical car parking provisions would significantly exceed current DCP maximum allowable spaces.

The traffic generation of the existing Site uses have been estimated based on surveys of the existing on site parking provisions and applying the same traffic generation rate for commercial uses as set out in Table 1.

The existing Site land use traffic generation is shown in Table 2 and compared with the potential traffic generation of the proposed site uses.

Table 2 – Comparison of Traffic Generation Potential – Existing Site Use & Planning Proposals

	Traffic Generation (veh / hr)
Existing On-site Car Parking Spaces	118 spaces
Existing Office Uses Traffic Generation Rate - AM / PM	1 trip per parking space 1.
Existing Office Uses Traffic Generation - AM / PM	118 veh / hr
Planning Proposal Traffic Generation (See Table 1)	83 - 75 veh / hr
Net Change Existing v Planning Proposal	-35 to -43 veh / hr

Notes: (1) Existing parking spaces are generally commercial tenant spaces, with little to no retail parking. Hence AM rate applied to both AM / PM

Table 2 indicates that with the Planning Proposal for the site, there is expected to be a net decrease to the total volume of peak period traffic accessing the Site compared with the existing site uses.

It is noted that the traffic generation rates used in Table 2 for non residential uses have assumed a commercial (office) use of the on site parking provisions. It is envisaged that the traffic generation potential for 'creative' uses to be provided from the non residential floor area will have a lower traffic generation potential than traditional commercial uses, particularly in the AM period, hence the net increase of traffic is likely to be lower than estimated in Table 2.

The traffic generation presented in Table 2 also does not include the future attraction to public transport modes arising from the Metro line station at Crows Nest. Traffic generation rates for peak period traffic are likely to be further reduced.

Notwithstanding the above, it is noted that measures to encourage public and active transport travel demand is the key to reducing private motor vehicle trips to and from the Site. Thus the implementation of a Green Travel Plan for site is recommended. A draft Green Travel Plan has been prepared for the Site and forms part of the Planning Proposal submission.



Implication of Planning Proposal Traffic Generation

As noted above, the Planning Proposal Site is currently occupied by a range of commercial / retail uses, each of which generates existing traffic. This existing traffic generation would not occur and would essentially be replaced (albeit at a lower level) by traffic associated with the Planning Proposal, should it proceed.

It is noted that Planning Proposal would reduce the existing number of on site car parking spaces allocated to non-residential development. The reduction of car parking spaces will increase the attractiveness of alternate modes of transport (ie. public and active transport) for non-residential land uses.

The reduction of "destination" car parking spaces for non-residential land uses will potentially result in a nett decrease of Site traffic generation with the Planning Proposal development.

Moreover, the planning proposal is consistent with the strategic transport objectives for the St Leonards precinct as outlined above. And, along with the existing and planning improvements to public transport, the planning proposal on the Site, will be part of the development of a major employment hub at St Leonards which will be supported by housing and services.

Parking and Vehicle Access Arrangements

The proposed car parking provisions for the planning proposal Site would be provided in accordance with North Sydney Council's Development Control Plan. This would include car, motorcycle and bicycle parking provisions.

The proposed on site car parking provisions compared with DCP 2013 controls are set out in Table 3.

Table 3 - Proposed On Site Car Parking Provisions

Land Use	Yield (Indicative)	DCP Max. Parking Rate	DCP Max Allowable Spaces	Proposed Car Parking Provision
Residential				
1 bedroom apartment	70	0.25 spaces / apartment	18	-
2 bedroom apartment	272	0.5 spaces / apartment	136	-
3 bedroom apartment	76	0.5 spaces / apartment	38	-
Visitor	-	NIL	0	0
Residential Car Spaces			192	192
Non Residential	8,904 m2	1 / 400m2 GFA	22	22
Total Parking			214	214



The provision of car parking spaces to be subject to detail design of the basement levels and confirmation of uses within the 'creative' floor space. It is considered that the parking demand for 'creative' uses are not necessarily reflected in the parking rates expressed in the DCP generic "non residential' for St Leonards Precinct 2 & 3.

The Site is currently serviced by numerous driveways and additional direct accessed parking spaces. The majority of access driveways are via Atchison Lane which acts as a service lane (rear lane) for buildings fronting Chandos Street and Atchison Street.

However, there are two major existing driveways to Oxley Street which service on site parking. The removal of these driveways at Oxley Street, combined with a significant building setback will allow the provision of improved pedestrian amenity along the Site' Oxley Street frontage and assist with traffic flows along Oxley Street.

No vehicle access to the Planning Proposal Site will be provided along Atchison Street or Chandos Street thereby allowing these streets to accommodate pedestrians flows without conflicts at vehicle driveways. This arrangement would thereby promote pedestrian accessibility and amenity.

It is noted that any final vehicle access and parking layout configuration will be detailed as part of any subsequent detailed design DAs and will be subject to further assessment by Council. This may also include a shared basement connected by underground access below Atchison Lane. Any such access would be negotiated with Council as part of the standard DA process.

Summary and Conclusion

This report has been prepared to consider the traffic implications associated with the modified Planning Proposal for the TWT Property Site at 55-89 Chandos Street and 58-64 Atchison Street, St Leonards.

The potential traffic and transport implications of development on the Site has been considered as part of previous Planning Proposals.

The assessment presented in this report has concluded that:

- Compared to the existing uses of the Site, the reduction of non-residential car parking spaces (ie. destination parking) by the Planning Proposal will potentially result in an effective nett no change in Site peak traffic generation compared with existing Site uses
- The construction of the Sydney Metro rail line with a new station within 3 minutes walk of the Site will facilitate urban developments such as the Planning Proposal and further enhance St Leonards functionality as a Transit orientate hub for travel to, from and through the centre.



• The planning proposal is consistent with the transport objectives of the various state and local government strategic plans for the St Leonards precinct.

Should you have any queries regarding the above or require further information, please do not hesitate to contact us at TTPP Pty Ltd on (02) 8437 7800.

Yours sincerely,

Jason Rudd

Director

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