Sydney Metro City & Southwest:
Crows Nest
Over Station Development

Social and Economic Impact Assessment Report

Applicable to:	Sydney Metro City & Southwest
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Owner	Sydney Metro Authority
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Executive Summary

This Social and Economic Impact Assessment Report supports a concept State Significant Development Application (concept Application) submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The concept SSD Application is made under Section 4.22 of the EP&A Act.

Sydney Metro is seeking to secure concept approval for a mixed-use development comprising four buildings above the proposed new Crows Nest Station, otherwise known as the over station development (OSD).

The OSD is planned to support two residential buildings with approximately 350 apartments, a separate 260-room hotel (or, alternatively, a commercial building with 15,200 square metres of floor space) and a further separate 2,700 square metre stand-alone commercial building.

This report has been prepared to specifically respond to the Secretary's Environmental Assessment Requirements (SEARs) issued for the concept SSD Application which stipulate that the Environmental Impact Statement (EIS) must address:

- the positive and negative effects of the OSD on the local and regional economy;
- the cumulative impacts due to other developments in the vicinity;
- any increased requirements for local and regional social infrastructure resulting from the project; and
- measures to avoid, minimise and if necessary, offset predicted impacts.

For the purpose of this assessment, it is anticipated that both the station and OSD will be completed in 2024. Should construction of the OSD be delayed, the impacts considered in this report are still relevant but will occur over a longer time period.

This assessment demonstrates that the OSD development will support a net positive impact on Crows Nest and the wider Sydney region. The social and economic impacts of the project are summarised in the table below.

Benefits	Impact
Social	
Accessibility and Connectivity	Enhanced connectivity of local and regional precincts to Metropolitan Sydney.
Public Amenity	OSD has capacity to provide a substantial uplift in public amenity and service provision that is accessible to a broad population.
Public Services	OSD will incorporate hotel/commercial and residential services to support local catchment need.
Economic	
Expenditure	Expenditure (per annum) within the local economy: • $5.7m spent by OSD residents at local businesses, increasing to $6.5m over time • Approximately $1.5m spent by OSD employees at local businesses • $21m spent by hotel guests, including $4.1m at local businesses
Time Saving	For the 400+ workers to be accommodated at the OSD, the annual value of savings resulting from reduced travel times is estimated at $3.7m.
Congestion	An estimated reduction of daily private vehicle trips will occur through the co-location of residences and a train station, providing a net congestion saving valued at $0.9-1.4 million each year.
Agglomeration Economies	• Increased productivity through greater access to labour markets and suppliers • Increased local labour supply due to better infrastructure and reduced journey times
Investment Surplus	Enhanced private investment will increase land values and create further opportunity for appropriate urban renewal

In terms of its social impact, the OSD project will provide an anchor transit-oriented development that will create a viable, liveable and sustainable place to work, live, visit, shop and play. The proposal includes for a 50-place (long day care) child care centre, indoor and outdoor community facilities and landscaped public open space on the podium roof above the station. A station forecourt and retail space will also be provided as part of the station delivery.

The OSD will deliver a range of community, employment and residential offerings to support an increased use of public transport, enhancing both the travel experience and the locality in which the station is situated. It intends to provide a substantial uplift in public amenity and service provisions that will be accessible to the immediate Crows Nest and a broader metropolitan population.

The social impact assessment considers the needs of the broader catchment to enable the identification of new community infrastructure that is required to address the specific needs of the project.

The proposed OSD will increase demand for a range of community facilities and services, but not to a substantial degree.

For the majority of service categories, the existing facilities in proximity to the OSD have capacity to absorb the impacts of the project, without additional services being required.

The OSD location is however suited to the provision of a new child care centre which will be incorporated within the project. A 50-place long day care centre is proposed.

Further dedicated floor space within the OSD complex will be allocated for multi-purpose use and includes a 1,050 square metres outdoor recreation space and an adjacent 250 square metre indoor space.

In terms of its economic impact, the proposal will make a significant impact in terms of economic activity. It is estimated that the mix of commercial, retail, hotel accommodation and residential components will generate a minimum industry value-added (IVA) of $85-98 million.

Assuming a 3-year construction period, 280 full-time equivalent jobs per annum will be created directly in the construction industry and indirectly, for example in supplies, a further 445 full-time equivalent jobs per annum.

When operational the development will provide the community with further employment opportunities in retail, childcare, commercial and the hotel industry. Based upon plans provided, it is expected that when fully operational the site will employ between 550-930 people directly and, indirectly, a further 180-300 people, depending on the market's preferred choice of land use options.

The proposal will generate spending from both its residents and from people working in businesses located within the site or staying at a hotel if accommodated within the project. This combination of land uses could generate almost $30 million annually in local expenditure (including potential hotel room revenue).

The addition of residential floorspace above the Metro Station will assist in reducing commuting times for many existing public transport users and those attracted to the new service. The time saving is estimated to represent a value of $3.7 million per annum. The potential 'modal shift' from car to train will mean less vehicles on the Sydney road network, reducing congestion and providing an estimated saving of $0.9-1.4 million per annum.

The location of businesses in close proximity to high quality public transport provides greater access to job opportunities which will have a positive effect on productivity, including access to larger labour markets and suppliers.

Importantly, the OSD proposal for the Crows Nest Metro station is consistent with the mixed-use vision for locality as outlined in exhibited draft St Leonards and Crows Nest 2036 Plan (draft 2036 Plan). The project will help to secure some of the major objectives of the draft 2036 Plan, i.e. to create and deliver:

- An effective employment hub, strengthening area's commercial capacity;
- Transit-oriented development to leverage the increased transport capacity of the new Metro station; and
- A vibrant community, through an improved public domain in an accessible location.

It is concluded that the proposal will have minimal social impact while contributing significantly to the local economy.

1.0 Introduction

1.1 Purpose of this report

This report supports a concept State Significant Development Application (concept SSD Application) submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The concept SSD Application is made under Section 4.22 of the EP&A Act.

The Sydney Metro Authority (Sydney Metro) is seeking to secure concept approval for a mixed-use development comprising four buildings above the Crows Nest Station, otherwise known as the over station development (OSD). The concept SSD Application seeks consent for a building envelopes and land uses, maximum building heights, maximum gross floor areas, pedestrian and vehicular access, circulation arrangements and associated car parking and the strategies and design parameters for the future detailed design of the development.

Sydney Metro proposes to procure the construction of the OSD as part of an Integrated Station Development package, which would result in the combined delivery of the station, OSD and public domain improvements. The station and public domain elements form part of a separate planning approval for Critical State Significant Infrastructure (CSSI) approved by DPE on 9 January 2017.

As the development is within a rail corridor, is associated with railway infrastructure and is for commercial premises and residential accommodation with a Capital Investment Value of more than $30 million, the project is identified as State Significant Development (SSD) pursuant to Schedule 1, 19(2)(a) of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). The development is therefore State significant development for the purposes of Section 4.36 of the EP&A Act.

This report has been prepared to specifically respond to the Secretary's Environmental Assessment Requirements (SEARs) issued for the concept SSD Application on 26th September 2018 which state that the Environmental Impact Statement (EIS) is to address the following requirements:

Reference	SEARs Requirement	Where Addressed in Report
General Requirements	Where relevant, the assessment of key issues … must include: • Justification of impacts • Consideration of the potential cumulative impacts due to other developments in the vicinity • Measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment An estimate of jobs that will be created during the construction and operation phases of the proposed development	Sections 3.1-3.8 consider the project's social impacts. Sections 4.1-4.6 consider its economic impacts. Section 4.1 provides an estimate of jobs that will be created.
Section 2: **Land Use and Infrastructure**	Demonstrate that the proposal will meet the strategic objectives as identified in the relevant government policies and the environmental, social and economic needs of the occupants of the development and the wider area. This shall include an assessment of the proposal's economic and social impacts to: • demonstrate that the proposed mix of land uses will be consistent with the strategic objectives of the North District Plan and contribute to the employment targets for the St Leonards Strategic Centres • demonstrate retail, services and employment needs of future residents, workers and/or visitors of the development will be met • illustrate the social and economic impacts of the development to the wider area, including nearby local centres Demonstrate the proposed development will be supported by adequate infrastructure and services including the provision of open spaces, recreation facilities, community and social services, drainage, road, transport	Sections 3.1-3.8 set out how the OSD will meeting environmental and social needs/objectives, including commentary on the demand for additional services generated by the project. Sections 4.1-4.6 set out the project's employment outcomes, its benefit to local businesses, the commuting time and congestion saving benefits, and broader agglomeration benefits. Section 5 assesses the possible disbenefits and relevant mitigating measures.

	and social infrastructure. This shall include details on satisfactory arrangement and implementation mechanism to deliver any new or upgraded infrastructure and services required to support the development such as any contributions framework.	

1.2 Overview of the Sydney Metro in its context

Sydney Metro is Australia's biggest public transport project. A new standalone metro railway system, this 21st century network will deliver 31 metro stations and 66km of new metro rail for Australia's biggest city — revolutionising the way Sydney travels. Services start in the first half of 2019 on Australia's first fully-automated railway.

Sydney Metro was identified in *Sydney's Rail Future*, as an integral component of the *NSW Long Term Transport Master Plan*, a plan to transform and modernise Sydney's rail network so it can grow with the city's population and meet the future needs of customers. In early 2018, *the Future Transport Strategy 2056* was released as an update to *the NSW Long Term Transport Master Plan* and *Sydney's Rail Future*. Sydney Metro City & Southwest is identified as a committed initiative in the *Future Transport Strategy 2056*.

Sydney Metro is comprised of three projects, as illustrated in **Figure 1**:

- **Sydney Metro Northwest** — formerly the 36km North West Rail Link. This $8.3 billion project is now under construction and will open in the first half of 2019 with a metro train every four minutes in the peak.

- **Sydney Metro City & Southwest** — a new 30km metro line extending the new metro network from the end of Sydney Metro Northwest at Chatswood, under Sydney Harbour, through the CBD and south west to Bankstown. It is due to open in 2024 with an ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.

- **Sydney Metro West** – a new underground railway connecting the Parramatta and Sydney central business districts. This once-in-a-century infrastructure investment will double the rail capacity of the Parramatta to Sydney CBD corridor and will establish future capacity for Sydney's fast growing west. Sydney Metro West will serve five key precincts at Westmead, Parramatta, Sydney Olympic Park, The Bays and the Sydney CBD. The project will also provide an interchange with the T1 Northern Line to allow faster connections for customers from the Central Coast and Sydney's north to Parramatta and the Sydney CBD.

Sydney's new metro, together with signalling and infrastructure upgrades across the existing Sydney suburban rail network, will increase the capacity of train services entering the Sydney CBD – from about 120 an hour currently to up to 200 services beyond 2024. That's an increase of up to 60 per cent capacity across the network to meet demand.

Sydney Metro City & Southwest includes the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's CBD to Sydenham and on to Bankstown through the conversion of the existing line to metro standards.

The project also involves the delivery of six (6) new metro stations, including at Crows Nest, together with new underground platforms at Central. Once completed, Sydney Metro will have the ultimate capacity for a train every two minutes through the CBD in each direction - a level of service never seen before in Sydney.

Figure 1: Sydney Metro alignment map

On 9 January 2017, the Minister for Planning (the Minister) approved the Sydney Metro City & Southwest - Chatswood to Sydenham application lodged by TfNSW as a

Critical State Significant Infrastructure project (reference SSI 15_7400), hereafter referred to as the CSSI Approval.

The CSSI Approval includes all physical work required to construct the CSSI, including the demolition of existing buildings and structures on each site. Importantly, the CSSI Approval also includes provision for the construction of below and above ground structures and other components of the future OSD (including building infrastructure and space for future lift cores, plant rooms, access, parking and building services, as relevant to each site). The rationale for this delivery approach, as identified within the CSSI application is to enable the OSD to be more efficiently built and appropriately integrated into the metro station structure.

The EIS for the Chatswood to Sydenham alignment of the City & Southwest project identified that the OSD would be subject to a separate assessment process.

Since the CSSI Approval was issued, Sydney Metro has lodged five modification applications to amend the CSSI Approval as outlined below:

- **Modification 1** - Victoria Cross and Artarmon Substation which involves the relocation of the Victoria Cross northern services building from 194-196A Miller Street to 50 McLaren Street together with the inclusion of a new station entrance at this location referred to as Victoria Cross North. The modification also involves the relocation of the substation at Artarmon from Butchers Lane to 98 – 104 Reserve Road. This modification application was approved on 18 October 2017.

- **Modification 2 -** Central Walk which involves additional works at Central Railway Station including construction of a new eastern concourse, a new eastern entry, and upgrades to suburban platforms. This modification application was approved on 21 December 2017.

- **Modification 3** - Martin Place Station which involves changes to the Sydney Metro Martin Place Station to align with the Unsolicited Proposal by Macquarie Group Limited (Macquarie) for the development of the station precinct. The proposed modification involves a larger reconfigured station layout, provision of a new unpaid concourse link and retention of the existing MLC pedestrian link and works to connect into the Sydney Metro Martin Place Station. It is noted that if the Macquarie proposal does not proceed, the original station design remains approved. This modification application was approved on 22 March 2018.

- **Modification 4** - Sydenham Station and Sydney Metro Trains Facility South which incorporated Sydenham Station and precinct works, the Sydney Metro Trains Facility South, works to Sydney Water's Sydenham Pit and Drainage Pumping Station and ancillary infrastructure and track and signalling works into

the approved project. This modification application was approved on 13 December 2017.

- **Modification 5** - Blues Point acoustic shed modification which involves the installation of a temporary acoustic shed at Blues Point construction site and retrieval of all parts of the tunnel boring machines driven from the Chatswood dive site and Barangaroo through the shaft at the Blues Point temporary site. This modification application was approved on 2 November 2018.

The CSSI Approval as modified allows for all works to deliver Sydney Metro between Chatswood and Sydenham Stations and also includes upgrade of Sydenham Station.

The remainder of the City & Southwest alignment (Sydenham to Bankstown) proposes the conversion of the existing heavy rail line from west of Sydenham Station to Bankstown to metro standards. This part of the project, referred to as the Sydenham to Bankstown upgrade, is the subject of a separate CSSI Application (Application No. SSI 17_8256) for which an EIS was exhibited between September and November 2017, and a Submissions and Preferred Infrastructure Report was exhibited in June and July 2018. This application is currently being assessed by DPE.

1.3 Planning relationship between Crows Nest Station and the OSD

While Crows Nest Station and the OSD will form an Integrated Station Development, the planning pathways defined under the *Environmental Planning & Assessment Act 1979* require separate approval for each component of the development. In this regard, the approved station works (CSSI Approval) are subject to the provisions of Part 5.1 of the EP&A Act (now referred to as Division 5.2) and the OSD component is subject to the provisions of Part 4 of the EP&A Act.

For clarity, the approved station works under the CSSI Approval included the construction of below and above ground structures necessary for delivering the station and also enabling construction of the integrated OSD. This includes but is not limited to:

- demolition of existing development
- excavation
- integrated station and OSD structure (including concourse and platforms)
- lobbies
- retail spaces within the station building
- public domain improvements
- pedestrian through-site link

- access arrangements including vertical transport such as escalators and lifts
- space provisioning and service elements necessary to enable the future development of the OSD, such as lift cores, plant rooms, access, parking, retail, utilities connections and building services.

The vertical extent of the approved station works above ground level is defined by the 'transfer level' level, above which would sit the OSD. This delineation is illustrated in **Figure 2**.

The CSSI Approval also establishes the general concept for the ground plane of Crows Nest Station including access strategies for commuters, pedestrians, workers, visitors and residents.

Since the issue of the CSSI Approval, Sydney Metro has undertaken sufficient design work to determine the space planning and general layout for the station and identification of those spaces within the station area that would be available for the OSD. In addition, design work has been undertaken to determine the technical requirements for the structural integration of the OSD with the station. This level of design work has informed the concept proposal for the Crows Nest OSD. It is noted that ongoing design development of the works to be delivered under the CSSI Approval would continue with a view to developing an Interchange Access Plan (IAP) and Station Design Precinct Plan (SDPP) for Crows Nest Station to satisfy Conditions E92 and E101 of the CSSI Approval.

All public domain improvement works around the site would be delivered as part of the CSSI Approval.

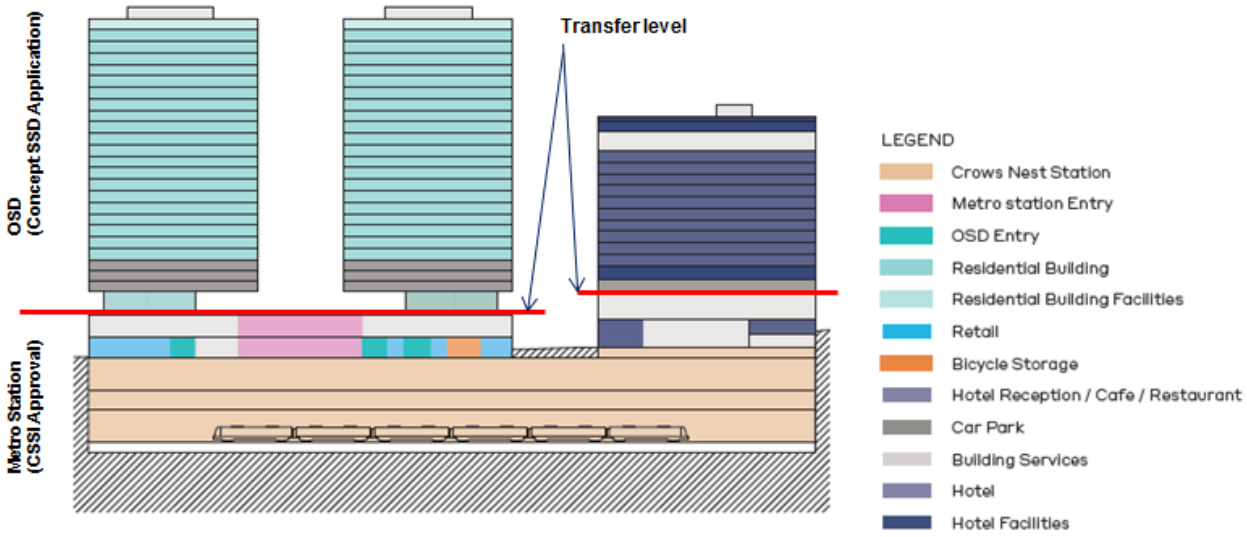


Figure 2: Delineation between the Metro station and OSD (based on indicative OSD design)

1.4 The strategic planning context

DPE is currently undertaking strategic planning investigations into revitalising the area surrounding St Leonards railway station and the metro station at Crows Nest. In August 2017, DPE released the *St Leonards and Crows Nest Station Precinct Interim Statement* and in October 2018 DPE released the *St Leonards and Crows Nest 2036 Draft Plan* (2036 Draft Plan) and supporting documents which detail recommended changes to land use controls in the precinct. These documents recommend new developments be centred around the Pacific Highway corridor and the Crows Nest Station while protecting the amenity of Willoughby Road.

In October 2018, DPE also placed on public exhibition the *Crows Nest Sydney Metro Site Rezoning Proposal* (Planning Proposal). The Planning Proposal outlines the State led rezoning of the subject site, on the basis that the current planning controls in the *North Sydney Local Environmental Plan 2013* do not reflect the opportunities for improved accessibility associated with the new metro station enabling people to live, work and spend time close to public transport. This concept SSD Application is aligned with the planning controls proposed in the Planning Proposal.

1.5 The site

Crows Nest Station precinct is located between the Pacific Highway and Clarke Street (eastern side of the Pacific Highway) and Oxley Street and south of Hume Street, Crows Nest (**Figure 3**).

The site is located within the North Sydney Local Government Area.

The Crows Nest Station precinct is divided into three separate sites as illustrated in **Figure 4** and described below:

- **Site A:** Six lots in the block bound by the Pacific Highway, Hume Street, Oxley Street and Clarke Lane (497-521 Pacific Highway, Crows Nest)
- **Site B:** Three lots on the southern corner of Hume Street and Pacific Highway (477-495 Pacific Highway, Crows Nest)
- **Site C:** One lot on the north-western corner of Hume Street and Clarke Street (14 Clarke Street, Crows Nest).

Sites A, B and C have a combined site area of 6,356 square metres.

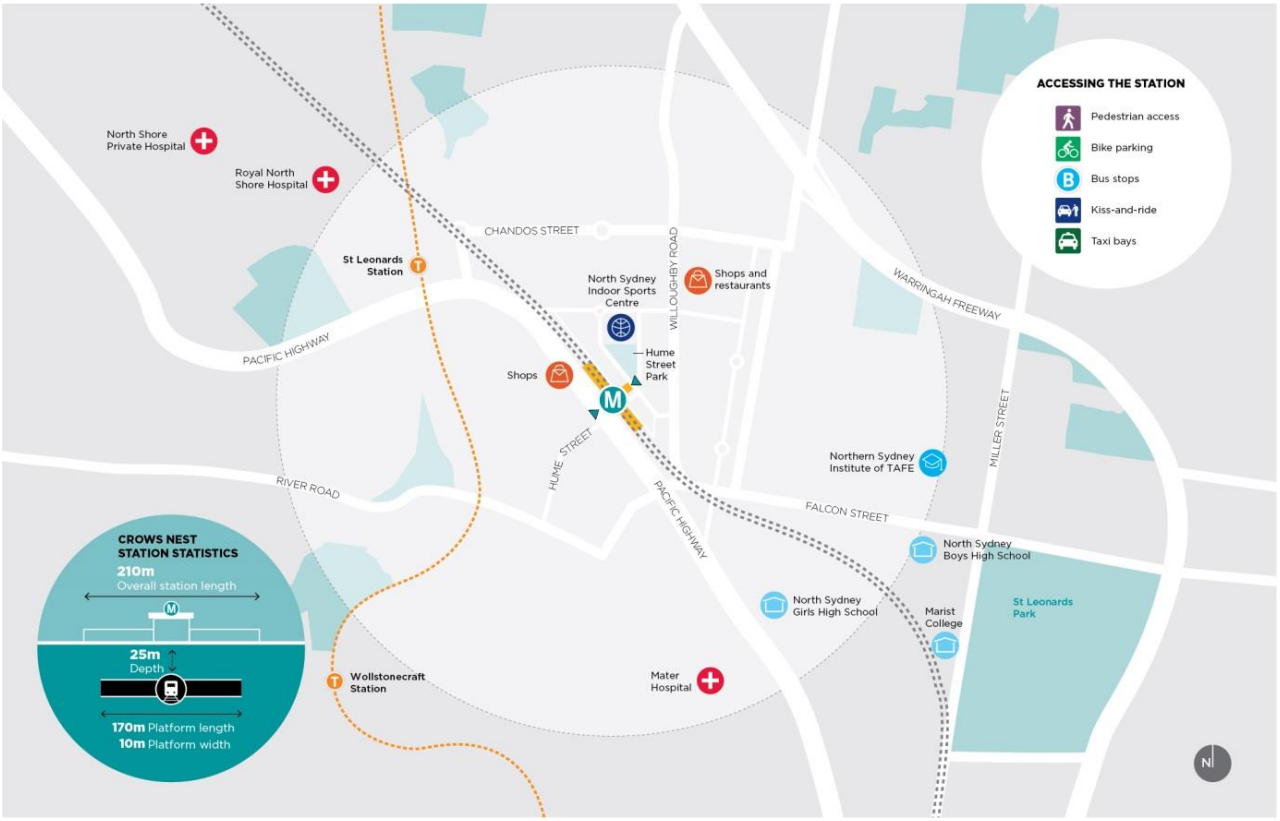


Figure 3: Crows Nest Station location plan

Figure 4: The subject site

The site comprises the following properties:

- **Site A:**
  - 497 Pacific Highway (Lot 2 in DP 575046)
  - 501 Pacific Highway (Lot 1 in DP 575046)
  - 503-505 Pacific Highway (Lot 3 in DP 655677)
  - 507-509 Pacific Highway (Lot 4 in DP 1096359)
  - 511-519 Pacific Highway (SP 71539)
  - 521-543 Pacific Highway (Lot A and Lot B in DP 374468)
- **Site B:**
  - 477 Pacific Highway (Lot 100 in DP 747672)
  - 479 Pacific Highway (Lot 101 in DP 747672)
  - 491-495 Pacific Highway (Lot 100 in DP 442804)
- **Site C:**
  - 14 Clarke Street (Lot 1 in SP 52547)

1.6 Overview of the proposed development

This concept SSD Application comprises the first stage in the Crows Nest OSD project. It will be followed by a detailed SSD Application for the design and construction of the OSD to be lodged by the successful contractor who is awarded the contract to deliver the Integrated Station Development.

This concept SSD Application seeks approval for the planning and development framework and strategies to inform the future detailed design of the Crows Nest OSD.

The concept SSD Application specifically seeks approval for the following:

- maximum building envelopes for Sites A, B and C, including street wall heights and setbacks as illustrated in the plans prepared by Foster + Partners for Sydney Metro
- maximum building heights:
  - **Site A:** RL 183 metres or equivalent of 27 storeys (includes two station levels and conceptual OSD space in the podium approved under the CSSI Approval)
  - **Site B:** RL 155 metres or equivalent of 17 storeys (includes two station levels and conceptual OSD space approved under the CSSI Approval)
  - **Site C:** RL 127 metres or 8 storeys (includes two station levels and conceptual OSD space approved under the CSSI Approval)

    Note 1: the maximum building heights defined above are measured to the top of the roof slab and exclude building parapets which will be resolved as part of future detailed SSD Application(s)

- maximum height for a building services zone on top of each building to accommodate lift overruns, rooftop plant and services:
  - **Site A:** RL 188 or 5 metres
  - **Site B:** RL 158 or 3 metres
  - **Site C**: RL 132 or 5 metres

  Note 1: the use of the space within the building services zone is restricted to non-habitable floor space.

  Note 2: for the purposes of the concept SSD Application, the maximum height of the building envelope does not make provision for the following items, which will be resolved as part of the future detailed SSD Application(s):

  - communication devices, antennae, satellite dishes, masts, flagpoles, chimneys, flues and the like, which are excluded from the calculation of building height pursuant to the standard definition in NSLEP 2013
  - architectural roof features, which are subject to compliance with the provisions in Clause 5.6 of NSLEP 2013, and may exceed the maximum building height, subject to development consent.

- maximum gross floor area (GFA) of 55,400sqm for the OSD comprising the following based on the proposed land uses:
  - **Site A:** Residential accommodation - maximum 37,500 square metres (approximately 350 apartments)
  - **Site B:** Hotel / tourist accommodation and associated conference facilities or commercial office premises GFA - maximum of 15,200 square metres (approximately 250 hotel rooms)
  - **Site C:** Commercial office premises GFA - maximum of 2,700 square metres
  - **Site A or C**: social infrastructure GFA inclusive of the GFA figures nominated above for each site, with provision optional as follows:
    - Site A: podium rooftop (approximately 2,700 square metres)
    - Site C: three floors and rooftop (approximately 1,400 square metres)

  Note 1: GFA figures exclude GFA attributed to the station and station retail space approved under the CSSI Approval
- a minimum non-residential floor space ratio (FSR) for the OSD across combined Sites A, B and C of 2.81:1 or the equivalent of 17,900 square metres

- the use of approximate conceptual areas associated with the OSD which have been provisioned for in the Crows Nest station box (CSSI Approval) including areas above ground level (i.e. OSD lobbies and associated spaces)
- a maximum of 150 car parking spaces on Sites A and B associated with the proposed commercial, hotel and residential uses
- loading, vehicular and pedestrian access arrangements
- strategies for utilities and services provision
- strategies for managing stormwater and drainage
- a strategy for the achievement of ecological sustainable development
- a public art strategy
- indicative signage zones
- a design excellence framework
- the future subdivision of parts of the OSD footprint, if required.

As this is a staged development pursuant to section 4.22 of the EP&A Act, future approval would be sought for the detailed design and construction of the OSD.

The proposed location of the buildings on the site is illustrated in the location plan provided at **Figure 5**.

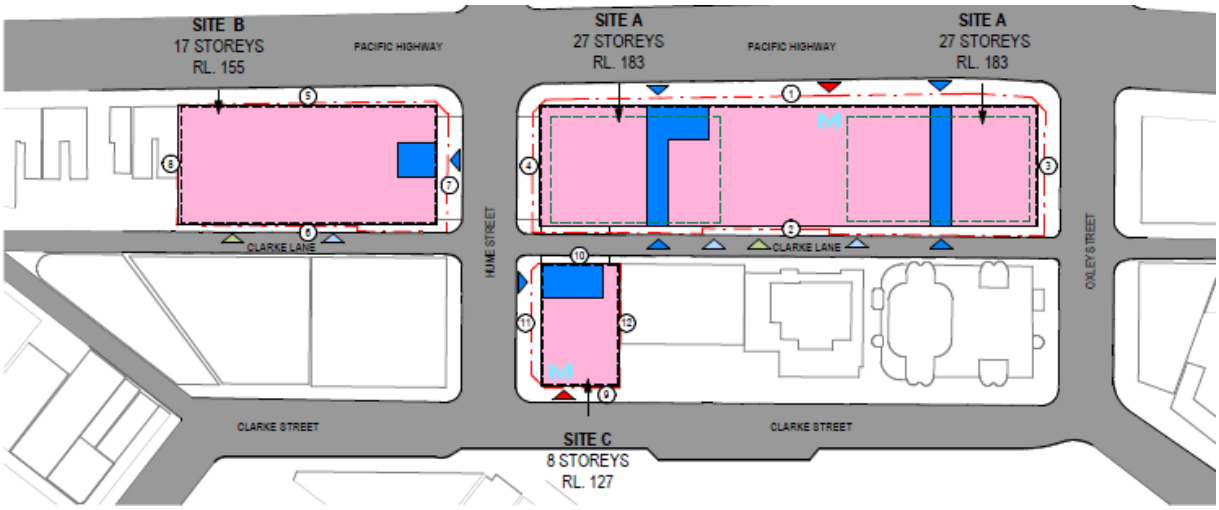


Figure 5 – Proposed location of buildings on the

The total GFA for the integrated station development, including the station GFA (i.e. retail, station circulation and associated facilities) and the OSD GFA is 60,400 square metres, equivalent to a floor space ratio (FSR) of 9.5:1.

The concept proposal includes opportunities for community uses in the development on either Site A or Site C. This space has the potential to be used for a range of uses

including community facilities, child care centre, recreational area/s, library, co-working space, which can take advantage of the sites accessibility above the metro station.

Through design development post the CSSI Approval, pedestrian access to the metro station is proposed from the Pacific Highway and from Clarke Street, opposite the Hume Street Park. Vehicular access to the site including separate access to the loading docks and parking is proposed from Clarke Lane.

Public domain works around the site would be delivered as part of the CSSI Approval. Notwithstanding, the OSD will be appropriately designed to complement the station and activate the public domain. Provision for retail tenancies to activate the public domain are included in the ground floor of Sites A, B and C, as part of the CSSI Approval. Future detailed development applications will seek approval for the fitout and specific use of this retail space.

Drawings illustrating the proposed building envelopes are provided in **Figures 6A** and **6B**. The concept SSD Application includes an indicative design for the OSD to demonstrate one potential design solution within the proposed building envelope (refer to **Figure 7**).

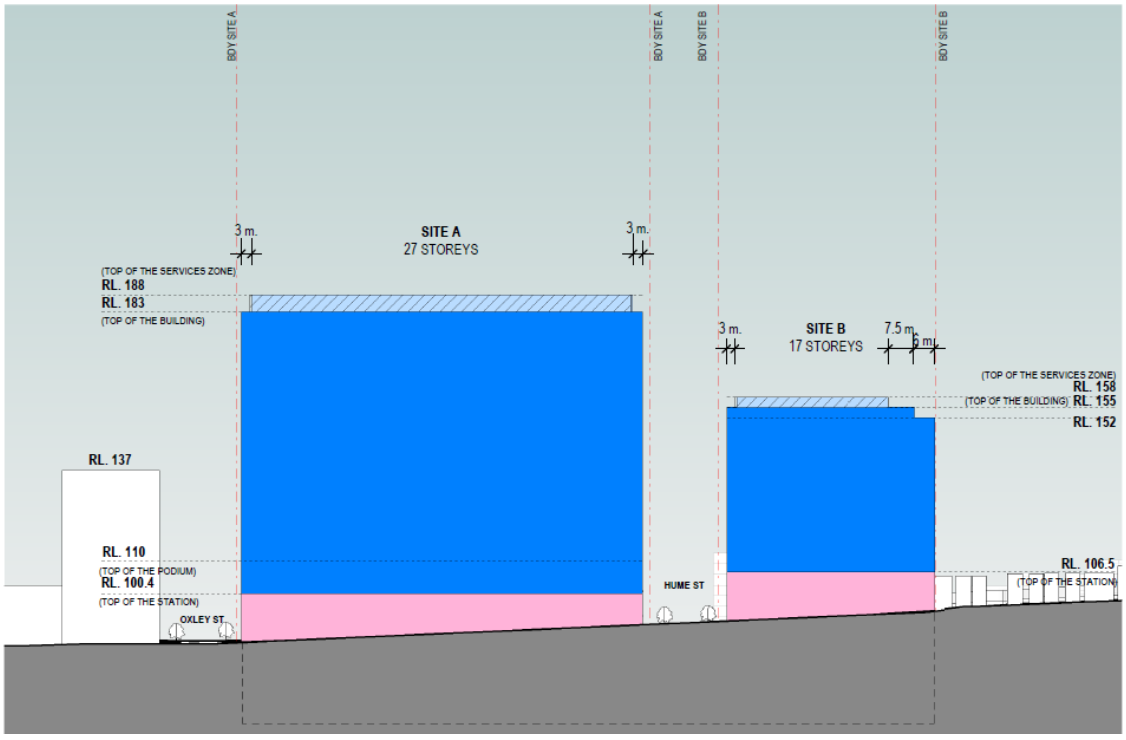


Figure 6A: Proposed Crows Nest OSD building envelopes – west elevation (Pacific Highway)

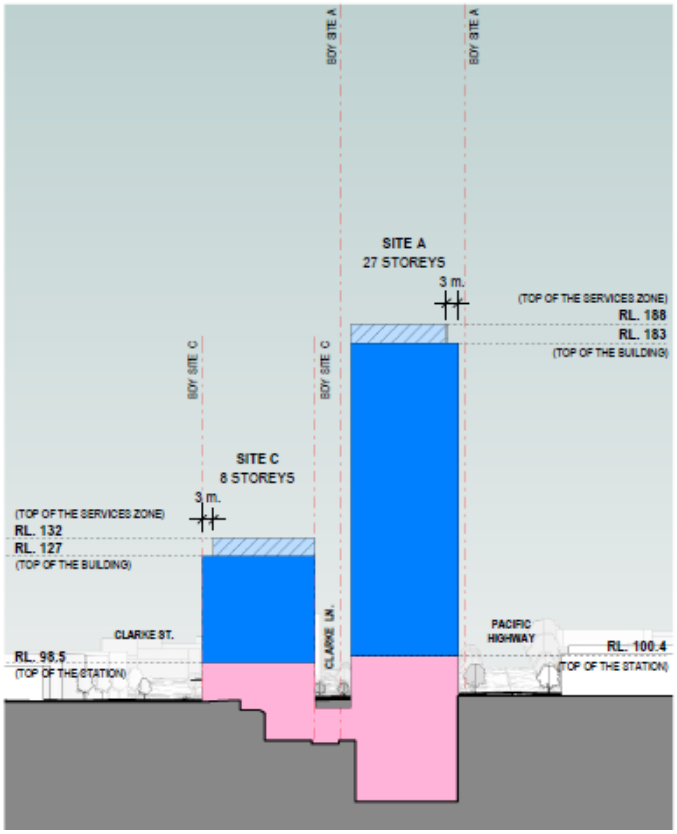


Figure 6B: Proposed Crows Nest OSD building envelopes – cross section through the site (east-west)

Figure 7: Crows Nest OSD indicative design

1.7 Staging and framework for managing environmental impacts

Sydney Metro proposes to procure the delivery of the Crows Nest Integrated Station Development in one single package, which would entail the following works:

- station structure fit-out, including mechanical and electrical
- OSD structure fit-out, including mechanical and electrical.

Separate delivery packages are also proposed by Sydney Metro to deliver the excavation of the station boxes/shafts ahead of the Integrated Station Development delivery package, and line-wide systems (e.g. track, power, ventilation) and operational readiness works prior to the Sydney Metro City & Southwest metro system being able to operate.

Three possible staging scenarios have been identified for delivery of the Integrated Station Development:

1. Scenario 1 – the station and OSD are constructed concurrently by constructing the transfer slab first and then building in both directions. Both the station and OSD would be completed in 2024.
2. Scenario 2 – the station is constructed first and ready for operation in 2024. OSD construction may still be incomplete or soon ready to commence after station construction is completed. This means that some or all OSD construction is likely to still be underway upon opening of the station in 2024.
3. Scenario 3 – the station is constructed first and ready for operation in 2024. The OSD is built at a later stage/s, with timing yet to be determined. This creates two distinct construction periods for the station and OSD.

Scenario 1 represents Sydney Metro preferred option as it would provide for completion of the full Integrated Station Development and therefore the optimum public benefit at the site at the earliest date possible (i.e. on or near 2024 when the station is operational). However, given the delivery of the OSD could be influenced by property market forces, Scenarios 2 or 3 could also occur, where there is a lag between completion of the station component of the Integrated Station Development (i.e. station is open and operational before subsequent development of the OSD).

The final staging for the delivery of the OSD will be resolved as part of the future detailed SSD Application(s).

For the purposes of providing a high-level assessment of the potential environmental impacts associated with construction, the following have been considered:

- Impacts directly associated with the OSD, the subject of this SSD Application
- Cumulative impacts of the construction of the OSD at the same time as the station works (subject of the CSSI Approval).

Given the integration of the delivery of the Sydney Metro City & Southwest metro station with an OSD development, Sydney Metro proposes the framework detailed in **Figure 8** to manage the design and environmental impacts, in relation to noise and vibration, consistent with the framework adopted for the CSSI Approval.

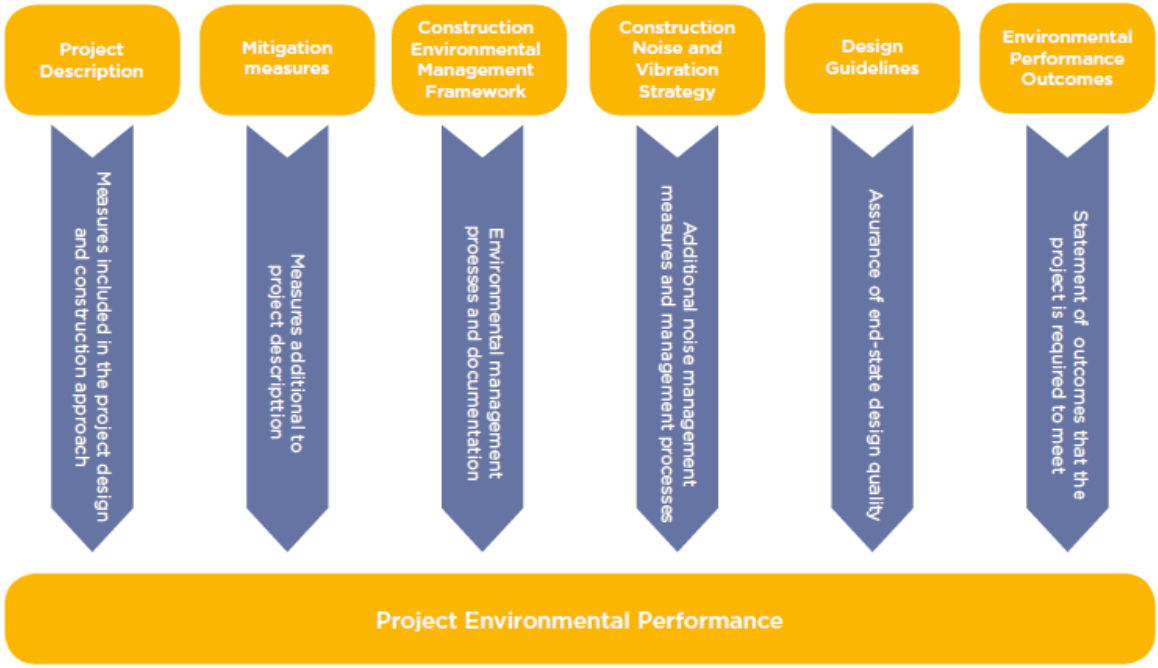


Figure 8: Project approach to environmental mitigation and management

This approach will be implemented until such time as practical completion of the station works (i.e. works under the CSSI Approval) is achieved. Beyond that point, standard construction environmental management practices will be implemented by the OSD developer in accordance with relevant guidelines and any conditions of approval.

2.0 Scope of Assessment

This report documents the Social and Economic Impact Assessment that has been undertaken for the OSD concept drawings prepared by Sydney Metro for the OSD at Crows Nest.

The specific matters that this report must address are outlined in the Secretary's Environmental Assessment Requirements (SEARs) issued for the concept SSD Application on 26 September 2018, as provided below:

> *The environmental impact statement (EIS) must … include an environmental risk assessment to identify the potential environmental impacts associated with the development.*
>
> *Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include:*
>
> - *justification of impacts*
> - *consideration of the potential cumulative impacts due to other developments in the vicinity*
> - *measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment*
>
> *The EIS shall … illustrate the social and economic impacts of the development to the wider area, including nearby local centres … and … demonstrate the proposed development will be supported by adequate infrastructure and services including the provision of open spaces, recreation facilities, community and social services, drainage, road, transport and social infrastructure. This shall include details on satisfactory arrangement and implementation mechanism to deliver any new or upgraded infrastructure and services required to support the development such as any contributions framework.*

The SEARs provide a frame for the assessment that is undertaken in this report.

This report provides an independent assessment of the economic and social impact of the proposed OSD, with specific regard to the potential positive and negative effects on the local and regional economy as well the social impacts of the development including the increased requirement for social infrastructure resulting from the project.

2.1 Scope of Report

2.1.1 Overview

MacroPlan has been commissioned by Transport for NSW to assess the potential social and economic impacts of the Over Station Development at Crows Nest Station, which forms part of the new Sydney Metro network.

This social and economic impact assessment demonstrates the wider impacts of the development of the OSD on both the local and regional economy.

The assessment demonstrates that the OSD development will support a net positive impact on Crows Nest and the wider Sydney region.

2.1.2 Data Sources

This report draws on a wide range of information sources, including:

- Population Projections, NSW Department of Planning and Environment (2016);
- Census of Population and Housing, Australian Bureau of Statistics (2011, 2016);
- Australian Bureau of Statistics;
- Rawlinson's Construction Handbook (2018);
- MarketInfo[1];
- Bureau of Infrastructure, Transport and Regional Economics (BITRE, 2015)
- Tourism Research Australia;
- Relevant experience throughout New South Wales and Australia, with particular reference to economic and social impact assessments, area trends, and market conditions and performance.

[1] MarketInfo is a proprietary micro-simulated spend database that is regarded as an 'industry standard' in retail property research.

3.0 Social Impact Assessment

The purpose of this section is to assess the presence and capacity of existing community facilities/resources and the future needs of the proposed development.

The methodology for this assessment draws on numerous sources, including Population Projections, NSW Department of Planning and Environment (2016); Census of Population and Housing, Australian Bureau of Statistics (2016); Australian Bureau of Statistics; various benchmarks for community infrastructure in urban renewal areas and Arup's recent 'St Leonards and Crows Nest Station Social Infrastructure and Open Space Study – Background Review' of February 2017.

Specifically, the assessment follows the following steps:

- Consider the OSD project in the context of the St Leonards/Crows Nest Station Precinct locality.
- Establish the context of the subject locality, including its socio-demographic profile and future urban character.
- Develop an understanding of the development's character, including its residential yield, its commercial yield and its built form.
- Identify the proposal's likely population, including total population and age structure.
- Establish a catchment, being a flexible geographic area over which the proposal would have most impact on, and conversely, the area from which the proposal could draw upon.
- Undertake a comprehensive analysis of the study area, including the generation of an inventory of existing private and public community infrastructure provisions such as public parks, schools and libraries.
- Identify and apply indicative benchmarks used to guide the provision of open space and social infrastructure for similar urban renewal project across Sydney.
- Evaluate specific infrastructure needs generated by the OSD.

3.1 Metropolitan Context

3.1.1 St Leonards and Crows Nest Station Precinct

In July 2016, the then Minister for Planning announced the strategic planning investigation of the St Leonards and Crows Nest Station Precinct ('the Precinct')

DPE is currently undertaking investigations of the Precinct to accommodate the needs of its growing community. It is currently consulting with Lane Cove Council, North Sydney Council, Willoughby City Council and relevant delivery agencies to ensure a coordinated approach to planning for the precinct and has sought feedback from those who live and work in the locality.

DPE has recently released a series of draft documents (see Section 3.1.2 below) that provide a strategic planning framework to guide future development and infrastructure delivery for the precinct over the next 20 years.

An 'interim statement' for the Precinct has also been prepared. It incorporates the following vision:

"The St Leonards and Crows Nest Station Precinct has a strategic role within the Sydney metropolitan area. It provides a unique opportunity to strengthen and develop many of the existing qualities which attract people to live, work and relax here. Future development will be responsive to place with a clear identity and purpose, which is inspiring, enjoyable and rewarding."

The interim statement acknowledges that the future of St Leonards and Crows Nest is founded on its key locational and community assets which include:

- A skilled, diverse workforce supported by a diverse range of housing types and strong residential demand
- Good quality existing open spaces such as Gore Hill Oval, Newlands Park, with Hume Park to be upgraded
- Proximity to a large network of health care and education facilities
- A higher than average usage of public transport.

3.1.2 Draft St Leonards and Crows Nest 2036 Plan

The DPE has recently released its draft St Leonards and Crows Nest 2036 Plan (draft 2036 Plan) to inform planning decisions in the precinct.

The draft 2036 Plan provides a vision for future land uses and infrastructure improvements in the area, informed by the above-mentioned Interim Statement, released in August 2017, and community consultation undertaken in March 2018.

The draft 2036 Plan recognises the strategic role of the area and the capacity for a diverse range of commercial and mixed uses to be focused immediately around and between the two stations.

The draft Plan is based on a vision for growth and improvement in the area to 2036, informed by community aspirations identified in the draft Local Character Statement.

The draft Plan is informed by a draft Green Plan and technical studies that recommend new and upgraded infrastructure. A draft Special Infrastructure Contribution Scheme has been developed alongside the draft Plan to assist with funding and delivery of State and regional infrastructure to support the areas sustainable growth.

The draft 2036 Plan provides the following vision (and corresponding actions) for the St Leonards-Crows Nest area:

- An employment hub - protect and strengthen the area's commercial role with additional commercial and complementary uses to capitalise on renewed confidence in the commercial market as well as retail, creative, health and education sectors.
- Transit-oriented development - create future employment opportunities that leverage the increased transport capacity of the new Metro station.
- A vibrant community – encourage community uses on the Sydney Metro sites and improvements to the public domain to create a new community focal point in this accessible location.
- An accessible place – ensure the Sydney Metro sites are an attractive and easy place to visit, with improved pedestrian and cyclist connections.
- A well-designed place – ensure new buildings to demonstrate the highest quality design that respects and enhances the diverse local character of the area.

Specifically, for Crows Nest the draft 2036 Plan identifies opportunity for new mixed use, high density development at and between the two stations, the activation of Clarke, Sergeants and Christie Lanes, an expansion of the Hume Street Park and improved connections to regional open space.

Importantly, the draft 2016 Plan informs the DPE's separate Rezoning Proposal Report for the Crows Nest Sydney Metro site which, along with the draft 2036 Plan and other documents (including a draft Local Character Statement, a draft Green Plan and a draft Special Infrastructure Contribution), are exhibited for public feedback until 3 December 2018.

The Rezoning Proposal Report applies to land acquired by the Sydney Metro for the construction of the Crows Nest Sydney Metro station and supports an amendment of current local planning controls to accommodate new mixed-use development outcomes.

The OSD proposal for the Crows Nest Metro station incorporates a combination of residential, commercial and community-based services and is entirely consistent with the mixed-use vision for this locality as outlined in DPE's draft 2036 Plan.

3.1.3 Social Infrastructure & Open Space Study, 2017

In conjunction with the above planning actions a range of studies have been commissioned by DPE to advise on the precinct's characteristics.

The 'St Leonards and Crows Nest Station Social Infrastructure and Open Space Study – Background Review' was completed by Arup in February 2017.

The Arup report has identified the major drivers of demand for social infrastructure in the Crows Nest/St Leonards Station Precinct as:

- The area's higher proportion of lone person households
- Increased cultural diversity
- Ageing communities
- Health inequity
- Ageing facilities

Consequentially, Arup suggests that social infrastructure planning will require:

- Better consideration of accessible public spaces, as people decrease their 'private living space';
- Flexibility, to accommodate a wider demographic including an ageing population;
- Improving and maintaining open space and public recreation networks, to encourage healthy communities; and
- Maintaining and upgrading existing facilities so that they do not become outdated and underutilised.

Arup has presented a range of benchmark ratios based on its reconnaissance of applicable standards, although it acknowledges that "there are currently no benchmarks institutionalised by state government that determine minimum provision of social infrastructure in existing urban areas".

Arup's suggested standards are generally consistent with those identified and applied in this report.

3.1.4 Crows Nest Strategic Employment Review, 2017

This study by SGS Economics and Planning was conducted in May 2017. It acknowledges the Precinct as a major employment hub in Sydney and identifies its major strengths which include its highly qualified local skills base which contains one of the most qualified and educated workforces in the NSW and the Australian economy.

The study suggests that enhanced access to the Precinct through the new Crows Nest metro station will provide additional opportunities for employment growth and the revitalisation of commercial uses.

3.1.5 North District Plan

In March 2018 the Greater Sydney Commission released a suite of documents to guide Sydney's growth over the next 20 years. The North District Plan sets out priorities and actions for the North District, within which the proposed OSD is located.

The vision includes strengthening the Eastern Economic Corridor. Specifically, the Plan recognises the role of education, community facilities, social enterprise, community initiatives, clubs, sporting organisation and facilities in connecting people and locations. As such, the Plan recognises the role these civic uses play in fostering healthy, culturally rich and networked communities.

The North District Plan notes that the St Leonards-Crows Nest area is well served by public transport and is a key employment centre in Greater Sydney which, combined with the new Sydney Metro station at Crows Nest, presents an opportunity for renewal and activation.

The Plan projects that the North District's population will grow from 886,550 (2016) to 1,082,900 (2036), an increase of 196,350 people over 20 years and requiring a concomitant increase of 92,000 dwellings over the period.

The Plan sets the following 5-year housing (dwelling) targets for the local government areas (LGAs) that are of relevance to the Crows Nest OSD site:

- Lane Cove: 1,900
- North Sydney: 3,000
- Willoughby: 1,250

Longer term housing targets will be informed by local government housing strategies.

The North District Plan also sets the following employment targets for the St Leonards-Crows Nest Planned Precinct location:

- 2016 (estimate) 47,100 employed persons
- 2036 (base target) 54,000 employed persons
- 2036 (high target) 63,500 employed persons

3.2 Understanding the OSD Proposal

The proposed OSD SSDA is part of a larger development outcome for the new Crows Nest Metro station. The Metro Station Precinct is approximately 6,365 square metres in area, comprising an amalgamation of allotments and the creation of 3 key sites dissected by Hume Street and Clarke Lane.

The site presents over 200m of frontage to the Pacific Highway, both to the north and south of Hume Street and incorporates a further allotment of land at the northern corner of Hume Street and Clarke Street. All previous uses on the site have been demolished for the construction of the Crows Nest Metro Station.

Concept development plans prepared for the OSD incorporate a combination of residential and commercial buildings, a hotel (or commercial office building), community-based podiums and a new pedestrian network connecting the proposed uses to the new Crows Nest Station and other adjoining uses.

The project's 4 buildings comprise:

- 2 x residential buildings
- 1 x commercial office building
- 1 x hotel (the floor area of which could alternatively be used for commercial purposes)

The OSD will deliver:

- Approximately 350 residential dwellings/apartments
- Around 250 hotel rooms (or an equivalent commercial floorspace)
- 2,700 square metres of additional commercial floorspace
- Indoor and outdoor community space/facilities and a 50-place child care centre

The total GFA for the integrated station development, including the station areas (i.e. retail, station circulation and associated facilities) and the OSD is approximately 60,400 square metres.

Approximately 20,000 square metres of non-residential GFA is proposed, comprising 1,500 square metres of station retail space, 15,800 square metres of hotel/commercial floor space (Site B) and a separate 2,700 square metres of commercial floor space (Site C).

The residential component of the OSD is comprised of two 27-storey buildings, accommodating a GFA of 37,500 square metres (for around 350 units).

The proposed apartment mix incorporates:

- 15 percent studios
- 30 percent one-bedroom apartments

- 45 percent two-bedroom apartments
- 10 percent three-bedroom apartments

Notably, the St Leonards / Crows Nest Planned Precinct is expected to deliver significant jobs growth, given its metropolitan status as a 'Strategic Centre'.

The Crows Nest OSD provides an opportunity for strategically located new homes, with convenient access to a world-class metro system, connecting directly to the Sydney CBD and the broader metropolitan area. The site presents an easy walking distance to existing bus services on Willoughby Road and to the growing St Leonards Commercial Centre and other nearby services.

Figure 9: Key Surrounding Social Infrastructure

Source: Nearmap, MacroPlan 2018

The St Leonards/ Crows Nest Planned Precinct will develop as an integral part of North Sydney, providing critical mass to support its growing commercial function, but incorporating retail facilities to support its own worker and resident population base.

Figure 10: OSD Architectural Plans

Source: TfNSW, 2018

3.3 Locality Socio–Demographic Analysis

This section provides an analysis of the socio-demographic characteristics of the locality. It draws from the Australian Bureau of Statistics' Crows Nest – Waverton Statistical Area Level 2, (CNWSA2 – see map at ***Appendix A***)[2] and, where relevant, the North Sydney LGA, as well as a pedestrian-based 1km radius catchment around the OSD site.

Total Population and Population Growth – LGA

In 2017, North Sydney LGA had a population of 73,077 people having grown by more than 5,300 people between 2012 and 2017. Whilst North Sydney experienced significant population growth over the 5-year period, its average rate of growth was below the Sydney metropolitan average (1.5% compared to 1.9% year-on-year).

	2012	2013	2014	2015	2016	2017
North Sydney (A)	67,701	68,782	69,937	71,100	72,037	73,077
Greater Sydney	4,679,872	4,760,881	4,847,482	4,938,039	5,029,768	5,131,326

Table 1: Population Change, North Sydney LGA and Greater Sydney (2012-2017)

Source: ABS Regional Population Growth, Australia

Population Growth, North Sydney LGA and Greater Sydney (2012-2017)

[2] SA2s are general-purpose medium-sized areas that typically represent a community that interacts together socially and economically (ABS Statistics, 2016).

	2012-13	2013-14	2014-15	2015-16	2016-17
North Sydney (A)	1.6%	1.7%	1.7%	1.3%	1.4%
Greater Sydney	1.7%	1.8%	1.9%	1.9%	2.0%

Table 2: Population Growth, North Sydney LGA and Greater Sydney (2012-2017)

Source: ABS Regional Population Growth, Australia

Despite growing slower than the greater metropolitan region, North Sydney grew at a faster rate than many other LGA's. Between 2012 and 2017, North Sydney was the 20th fastest growing LGA in New South Wales with a compound annual growth rate (CAGR) of 1.54%.

	Time	2012	2017	CAGR (%)
1	Camden	61,190	87,250	7.35%
2	Sydney	189,885	233,217	4.20%
3	Parramatta	208,363	243,464	3.16%
4	Bayside	148,155	170,279	2.82%
5	Lane Cove	33,762	38,782	2.81%
6	Strathfield	37,967	43,585	2.80%
7	Canada Bay	82,636	93,858	2.58%
8	Liverpool	191,921	217,736	2.56%
9	Maitland	72,093	81,235	2.42%
10	Blacktown	317,765	356,859	2.35%
11	Ryde	111,304	124,798	2.32%
12	Wollondilly	45,434	50,877	2.29%
13	Burwood	35,098	39,172	2.22%
14	The Hills Shire	149,906	167,296	2.22%
15	Cumberland	207,678	231,604	2.20%
16	Willoughby	72,173	79,574	1.97%
17	Penrith	187,314	204,785	1.80%
18	Randwick	139,949	151,993	1.66%
19	Georges River	144,203	156,440	1.64%
20	North Sydney	67,701	73,077	1.54%
21	Canterbury-Bankstown	340,522	367,519	1.54%
22	Cessnock	53,348	57,527	1.52%
23	Campbelltown	152,477	164,273	1.50%
24	Ku-ring-gai	116,498	124,898	1.40%
25	Byron	31,099	33,339	1.40%

Table 3: Population Growth, Sydney GCCSA LGAs (2012-2017)

Source: ABS Regional Population Growth, Australia

Although located within the North Sydney LGA, the OSD project is situated close to the junction of Lane Cove, Willoughby and North Sydney Councils, as shown in **Figure 11**.

Figure 11: LGA Boundaries

Source: NSW Planning Portal 2018

In order to provide a location-specific demographic profile of the Crows Nest OSD site, MacroPlan has analysed the socio-demographic characteristics of households living within a 1km radius of the subject site.

This 1km radius 'Crows Nest Catchment' represents a pedestrian/service catchment and recognises the primary aim of transport-oriented development to improve the amenity of stations and influence the increased use of mass public transport. The radius captures the entire suburb of Crows Nest, a proportion of the suburbs of St Leonards, Wollstonecraft and Naremburn and small parts of the suburbs of North Sydney, Cammeray and Greenwich.

The following profile description utilises information derived from the 1km radius catchment and other data sourced from the ABS SA2 area statistics where information is not available at the 1km radius level. **Figure 12** below presents both the CNWSA2 boundary and the 1km catchment boundary.

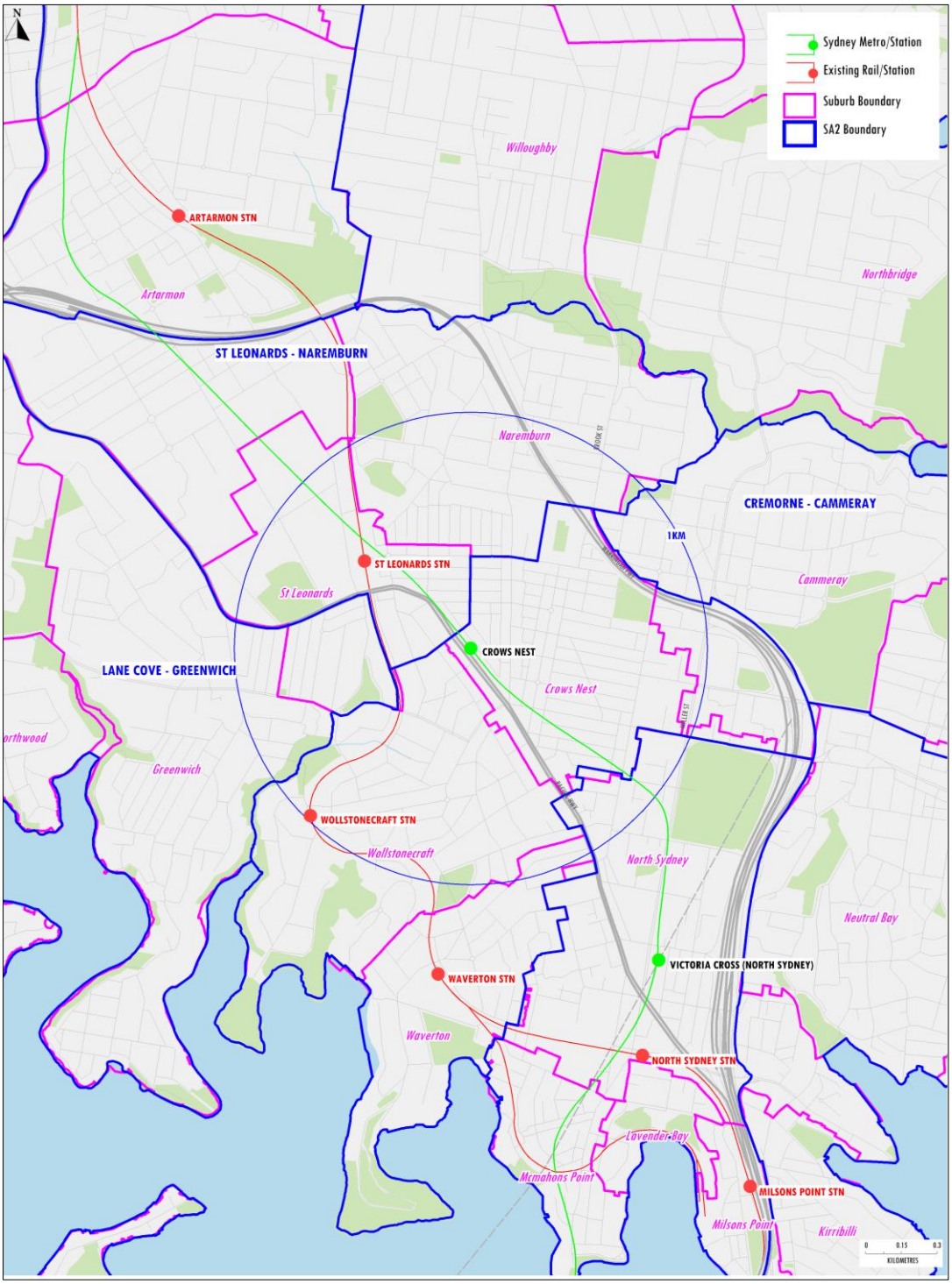


Figure 12: Crows Nest 1km Catchment

Population by Age

The 1km catchment has a population of more than 19,450 people and has an average household size of 2.1. The catchment's population is characterised by a large proportion of residents in the 20-39 age cohort (45.9%) as shown in **Figure 13** below. This compares to the Greater Sydney Metropolitan Area of 30.5%.

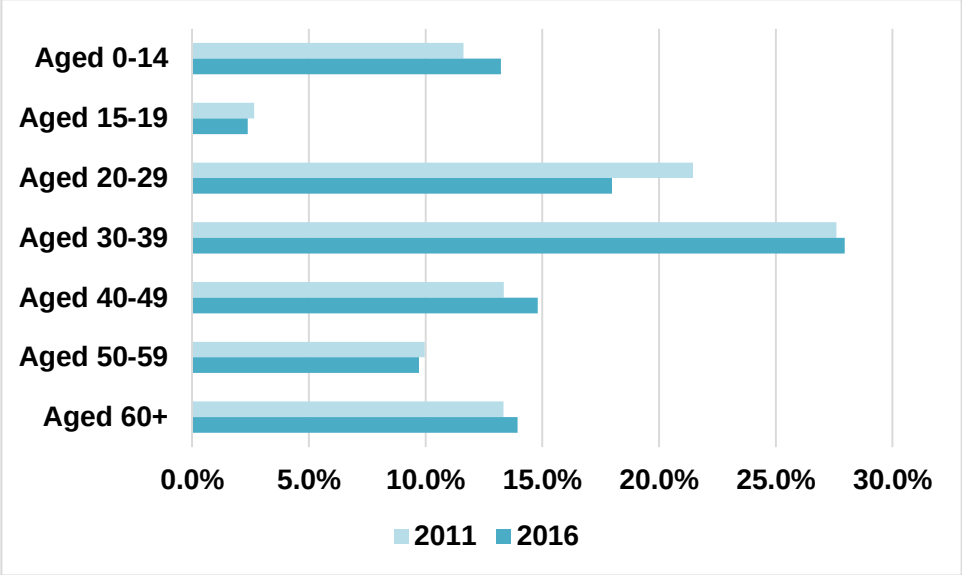


Figure 13: Crows Nest Catchment - Resident Population by Age 2011-16

Source: ABS Census Data, 2016

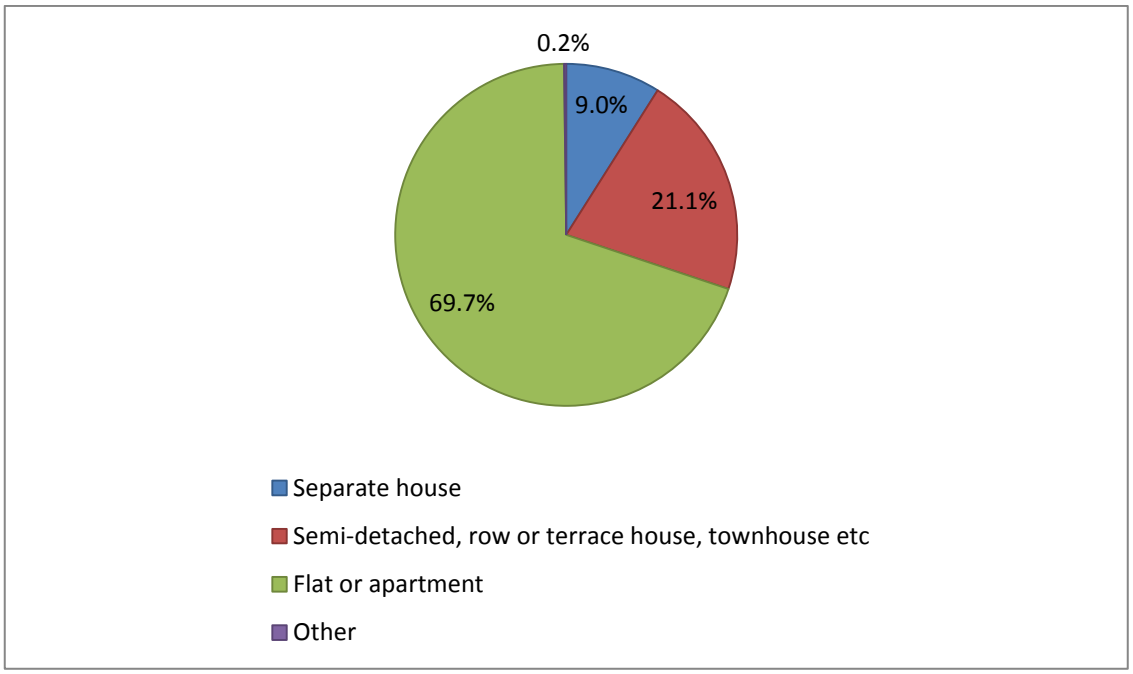
Population Origin

The catchment area has a slightly higher proportion of persons born overseas (45.6%) when compared to Greater Sydney (42.9%). Of those born overseas, major regions of origin include Asia (22.2%) and Europe (12.5%).

Dwelling Stock

ABS data for the Crows Nest - Waverton SA2 (CNWSA2) shows that, in 2016, 'apartments' were the dominant form of housing in the locality, accounting for almost 70% of the total dwelling stock (**Figure 14**).

This compares to Greater Sydney, where apartments make up only 28.1% of dwelling stock.



	Crows Nest - Waverton	Greater Sydney
Separate house	9.0%	56.9%
Semi-detached, row or terrace house, townhouse etc	21.1%	14.0%
Flat or apartment	69.7%	28.1%
Other	0.2%	0.6%

Figure 14: Dwelling Structure Composition, CNWSA2 & Greater Sydney (2016) *Source: ABS Census,2016*

Household Composition

In 2016 the dominant household composition in the 1km Crows Nest catchment was 'couple with dependent children', accounting for 36% of households, followed by 'couple families with no children' (33.1%), 'lone person households' (18.5%) and one parent families (4.8%).

	Crows Nest Catchment	Greater Sydney
Couple with dependent children	36.0%	48.5%
Couple with non-dependent children	3.5%	9.1%
Couple without children	33.1%	20.1%
One parent with dependent children	4.8%	7.9%
One parent with non-dependent children	2.5%	4.1%
Other family	1.6%	1.2%
Lone person	18.5%	9.2%

Table 4: Household Types, Crows Nest Catchment (2016)

Source: ABS Census

The share of 'couple with dependent children' households in the catchment grew over the 5 years to 2016 while the share of 'couple without children' fell by 1.5%. The only other household types that experienced growth over the 5-year period were 'couple with non-dependent children' and 'one parent with dependent children'.

Whilst 'couple with dependent children' was the dominant household type, these households made up a much smaller proportion of total households when compared to Greater Sydney. On the other hand, the SA2 has higher percentages of 'couple without children' and 'lone person' households.

	2011	2016	Change (2011-16)
Couple with dependent children	32.8%	36.0%	3.1%
Couple with non-dependent children	3.3%	3.5%	0.2%
Couple without children	34.6%	33.1%	-1.5%
One parent with dependent children	4.6%	4.8%	0.2%
One parent with non-dependent children	2.6%	2.5%	-0.1%
Other family	2.5%	1.6%	-0.9%
Lone person	19.6%	18.5%	-1.1%

Table 5: Change in Households, Crows Nest Catchment (2011 & 2016)

Source: ABS (2011, 2016)

Household Size

For the CNWSA2 area the number of persons per household for the most common dwelling structures are as follows:

Crows Nest – Waverton SA2 - 2016	
Dwelling Type	**Persons per Dwelling**
Separate House	2.8
Semi-detached	2.3
Flat/Unit	1.9

Table 6: Average Persons Per Dwelling (2016)

Source: ABS, 2016

The OSD project will comprise residential apartments. **Table 7** sets out the average household size for studios, and one, two and three-bedroom apartments within the Crows Nest - Waverton SA2:

Crows Nest / Waverton SA2 - 2016	
Apartment Type	**Persons per Dwelling**
Studio	1.25
1-bedroom	1.4
2-bedroom	2.0
3-bedroom	2.4

Table 7: Average Persons Per Apartment Type (2016)

Source: ABS

This data is relied upon to estimate the total population and age structure of the proposed OSD project at Crows Nest.

Household Income

In 2016, the catchment's average household income was $152,208, 22.6% higher than the Greater Sydney average ($124,129). This can be partly attributed to the large proportion of the catchment's households being couples with no children (two-income) and the larger proportion of professionals living in the region.

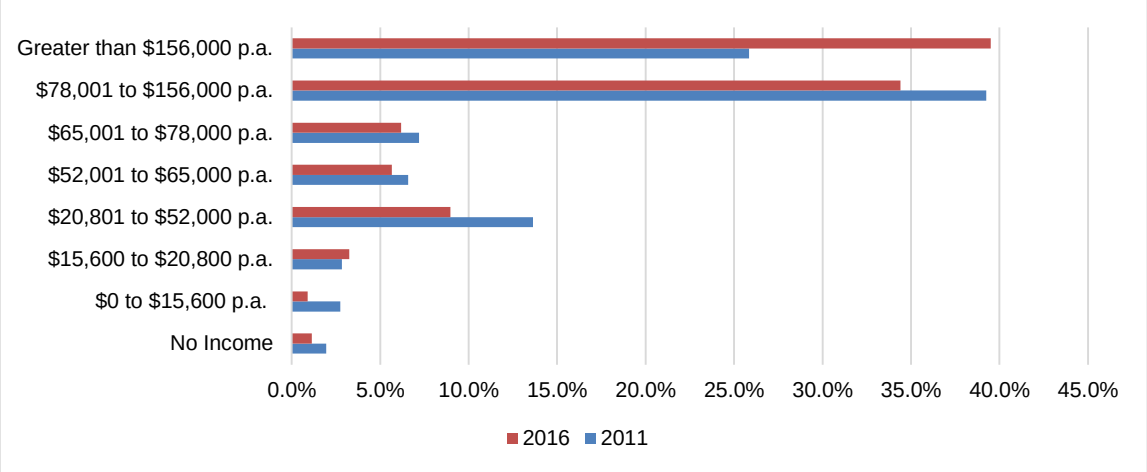


Figure 15: Household Income

Source: ABS Regional Population Growth, Australia & MacroPlan Dimasi

Employment

In 2016, the top three employing industries in the CNWSA2 were 'professional, scientific and technical services', 'health care and social assistance' and 'information, media and telecommunications'.

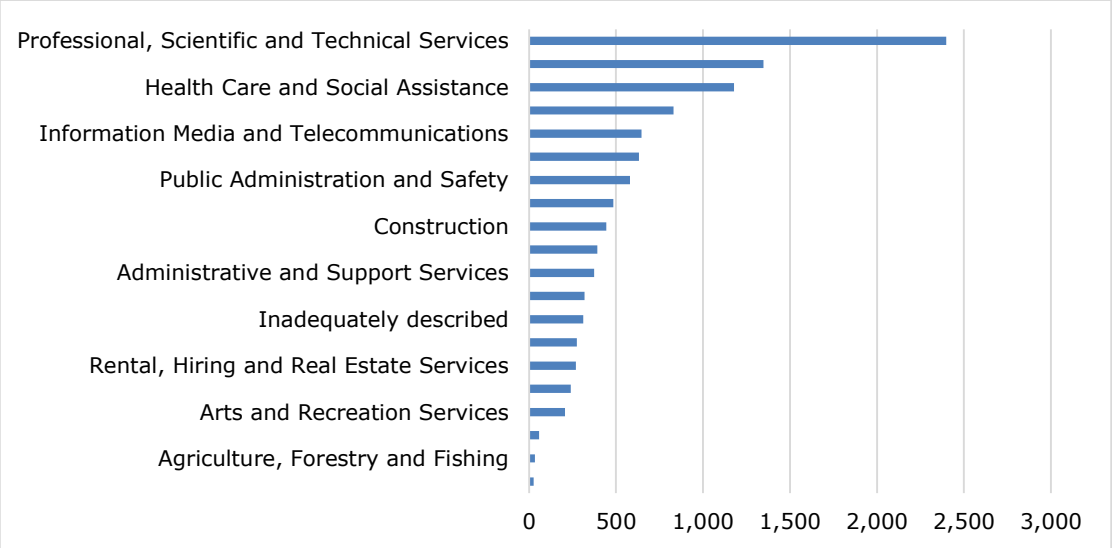


Figure 16: Employment by Industry, Place of Usual Residence 2016 – CNWSA2

Source: ABS Regional Population Growth, Australia & MacroPlan Dimasi

Summary of findings – Socio Demographic Profile

- *Crows Nest hosts a young family-oriented population. The area is comprised of a highly professional population, which can be expected to grow with improved transport to key employment hubs such as the Sydney CBD.*
- *The North Sydney LGA has experienced population growth above the Greater Metropolitan Sydney average. Notably, average household sizes are smaller than the Sydney Average which is explained by the housing mix. Apartments remain the dominant housing type followed by semi-detached housing.*
- *Household composition within the catchment differs to the established patterns of the Sydney metropolitan area, represented by a larger proportion of 'couple households' and a smaller proportion of single parent households. Family households with children represent the largest household group.*
- *Compared to Greater Sydney, the Crows Nest area has a greater representation of professional workers and is characterised by higher average household incomes.*

3.4 Existing and Required Community Infrastructure

An inventory of existing community-oriented infrastructure in the subject locality is provided at ***Appendix B*** of this report.

The inventory of existing supply has been developed through desktop analysis of the locality. It considers the following types of facilities and services:

Primary schools	Secondary schools	Tertiary: University and TAFE
Community health centres	GP medical centres	Children's Health Services
Hospital	Aged Care	Youth centres
Childcare facility	After school care facility	Library
Performing Arts / cultural centres	Ambulance services	Police services
Local community centres	Open space and recreation	Indoor swimming pool

In preparing the inventory, a 1km catchment area has been used, representing the range of facilities available within walking distance of the OSD site. As can be seen from the inventory, the immediate catchment is well serviced in terms of social infrastructure and services.

The inventory includes an assessment of the cumulative demand generated by the expected growth of the catchment's population over time and the additional demand specifically generated by the OSD resident population.

Through its provision of approximately 350 mixed residential dwellings, the Crows Nest OSD is estimated to accommodate a potential resident population of 593 persons. The immediate (1km) catchment in which the OSD is expected to accommodate around 21,000 persons by 2024, when the Crows Nest Station and its OSD development are expected to be operational[3]. The OSD project will comprise less than 3 percent of the catchment population.

[3] Population estimates are based on official State Government [DPE & Transport Performance and Analytics (TPA)] projections

3.5 New Community Infrastructure Approaches

Community infrastructure refers to the civil infrastructure, public domain and physical facilities that support the built environment and benefit the immediate and incoming population as well as the wider population that could be expected to visit an area.

There are various approaches to the planning and provision of community infrastructure in established areas. These include:

- A hierarchical approach (using a regional, local and state framework) – which allows provision to key market/ community catchments; or
- An integrated approach which seeks to combine different facilities, leveraging the benefits and synergies of all services.

This current study adopts a combined approach, recognising the benefits of community infrastructure hierarchy and a necessary consideration for co-location where possible to maximise return on investment and community benefit. For higher density areas, it is not uncommon for the provision of new community infrastructure to focus on the quality of provision, rather than merely meeting a numerical standard.

Community Infrastructure Principles

This assessment has regard for benchmark provisions across other Sydney-based urban renewal precincts. A set of principles have been developed to help guide the development of community infrastructure.

These include:

- Hierarchy of facilities/settings: Regional, district and local facilities each perform a different role - sizing and features will differ according to the population of the community.
- Hubbing/co-location: Combining facilities helps to leverage the benefits of each, improving activation, product offering and financial viability of provision.
- Multi use: These facilities are dynamic, making them more responsive to the needs and aspirations of the community.
- Flexibility (change function over time): Changing community expectations requires facilities to be flexible and adaptable. Facilities that are responsive will be used more intensively over their lifetime.
- Targeted: Every community is different and changes over time. Understanding and responding to the unique and individual circumstances of the community increases the appeal of community infrastructure.

- Activity generators (day/night) and active programming: Social and community infrastructure are places of action and activity. These include both passive and active forms of recreation and leisure. People are increasingly attracted to places where they can be active and experience new things. Infrastructure that meets these needs will be used more intensively.

- Access (disability access and transport): Easy access to facilities helps to ensure that a wider range of people are attracted to and can use facilities.

- Visibility (highly visible location): Visible facilities are more likely to be used and are better able to compete with other forms of leisure/social infrastructure.

- Safety/security (passive surveillance): The community expects that they and their children will be safe in their own facilities. Ensuring that this is the case (and perceived to be) will maximise their effective and efficient use.

- Avoid duplication: Minimising duplication helps to ensure that resources are utilised effectively and offer an attractive service to the community.

- Contributions to health, wellbeing and capacity: Social/community infrastructure fulfils a critically important role in serving the needs and aspirations of the community. Health and well-being are two basic needs. Maximising 'capacity' (or the potential of each person and the community as a whole) will ensure that everyone can be the best they can be.

- Social equity: A rapidly changing economy and society has meant that the gulf between people and communities has widened in recent years. Social / community infrastructure plays an important role in bridging this gap through a variety of means including through the establishment of networks and collaborative activity, decreasing isolation and promoting skills and education (through for example the use of the Internet and other technologies which helps to reduce the digital divide).

- Sustainable approaches to management, funding and maintenance (capital and operating) e.g. whole of life costs: Facilities that are sustainable in the long term are more likely to remain as key community assets and provide a better community service.

- Create local competitive advantage, uniqueness and identity: Reflecting and serving the local community is important in an age where competitive advantage, uniqueness and identity are increasingly found in local things and where regions and areas compete globally for knowledge, resources and workers. Dynamic and responsive community/social infrastructure can help set a local community apart and provide new opportunities at a state, national and international level.

These principles have been applied to the assessment of supply and demand that is included at ***Appendix B*** and underpin the evaluation provided in the following section.

3.6 Potential Demand - Social Infrastructure

Despite the rate of urban renewal that has occurred across Australia in recent years, there are no specific benchmarks that are uniformly adopted by state or local governments to determine demand and/or rates of provision. Many councils in built-up areas adopt different standards, reflecting the state of existing services. As stated, it is not uncommon for the provision of new community infrastructure to focus on the quality of provision, rather than merely meeting a numerical standard that may have more of a basis in greenfield locations.

In order to assess the demand for community infrastructure in the Crows Nest locality, a range of community infrastructure standards have been adopted, based on:

- Community infrastructure standards from a range of inner urban projects and the councils in which they are situated, as well as standards developed for Sydney's greenfield growth centres. The standards relate to a range of community infrastructure facilities.
- Demand/population projections (also noting the demand for services by specific age cohorts, e.g. 70+ age cohorts or children aged 0-4) in the precinct.
- Estimates of current and future supply of community/social infrastructure within a 1km radius of the site.

The OSD project's 350 apartments are estimated to add 593 people to the catchment population. Cumulatively, the background population of the catchment is projected to reach 21,000 persons by 2024, when the Crows Nest station and its OSD become operational, and to grow to over 23,000 by 2034.

The catchment population is forecast to evolve as displayed in the following table. The catchment's population spread will drive demand for certain infrastructure services, as spelled out at ***Appendix B***.

Age	2024	2029	2034
0-4	1,261	1,289	1,333
5-9	721	758	792
10-14	548	595	644
15-19	625	688	749
20-24	1,325	1,420	1,520
25-29	2,749	2,818	2,960
30-34	3,071	3,080	3,154
35-39	2,359	2,379	2,409
40-44	1,637	1,720	1,760
45-49	1,278	1,370	1,463
50-54	1,155	1,220	1,317
55-59	1,055	1,136	1,206
60-64	874	931	994
65-69	769	824	883
70-74	567	605	656
75-79	494	546	594
80-84	304	393	449
85-89	130	171	227
90-94	52	64	92
95-99	15	17	21
100	3	4	6
Total	**20,993**	**22,028**	**23,231**

Table 8: Population by Age, 1km Catchment

Source: DPE, MacroPlan Dimasi

The table below provides a benchmark for community facilities. Benchmark ratios are based on a variety of relevant sources, as stated in the table.

Item/Space/Facility	Urban Renewal Benchmarks*	Comments
Local Government – Open Space & Recreation		
Local open space	**2.83ha: 1,000 persons**	▪ Long-term local open space standard ▪ Includes passive & active areas
Local parks	**1: 3,000 households** (Parks and Leisure Australia & SOPA 2008 Facilities Strategy)	▪ All households within 400 metres/5-min' walk to open space ▪ Varied embellishment – court style, seating, active & passive
Playing fields	**1: 4,500 households** (City of Sydney urban areas) or **1: 10,000 persons** (GCC greenfield standard)	▪ Consider incorporation in catchment area or monetary contribution to existing facilities ▪ District provision to be considered
Indoor sports court	**1: 20,000 population** (City of Sydney urban areas) or **1: 10,000 persons** (GCC greenfield local standard)	
Indoor swimming pool	**1: 50,000-100,000 population** (City of Sydney urban areas) or 1: 100,000 population (GCC district standard)	
Integrated multipurpose facilities	**1: 20,000-30,000 population** (City of Sydney urban areas)	▪ 2,000-2,500 square metres per facility

Local Government – Community Centres and Libraries		
Library (Substantial branch library)	**1: 20,000-30,000 population** (NSW State Library standards) or, **sliding scale - square metres/population:** - 58 square metres/1,000 – up to 20,000 persons - 39 square metres/1,000 – 20,000-35,000 - 35 square metres/1,000 – 35,000-65,000 - 31 square metres/1,000 – 65,000-100,000 - 28 square metres/1,000 – 100,000+ person	▪ Libraries may be co-located within an integrated multi-purpose facility ▪ 1,400-1,500 square metres desirable minimum floor space per branch library (including co-located), increasing with the catchment population growth ▪ Possible incorporation on site or contribution to other facilities nearby ▪ Libraries to be developed in accordance with *People Places: A Guide for Public Library Buildings in NSW*
Local community centre / multi-purpose facility	**1: 20,000-50,000 persons** (for large centre, GHD benchmark study) or **3-4: 20,000-30,000 persons** (for meeting spaces /activity provisions – based on City of Sydney urban areas standard)	▪ Need to consider the potential to increase capacity of existing centres/space ▪ 400-500 square metres minimum floor space per new community centre, increasing with the catchment's population growth. ▪ Up to 1,000 square metres for large multi-centre ▪ Minimum size of 60 square metres recommended for one activity room ▪ Provision of local community facilities on site is considered appropriate
Youth facility/centre	**1: 20,000 young people**	▪ Youth centres can also be located in multi-purpose facilities.
Cultural space / centre	**1: 20,000-50,0000 persons** (district provision)	▪ Can be incorporated within multi-purpose community space / building

Local Government – Care		
Childcare	**1: 2 children aged 0-4 years** (City of Sydney & Sydney Olympic Park standard) **1: every 75 workers** (City of Sydney & Sydney Olympic Park standard) **OOSH: 1:5 children / 5-11 yrs.**	▪ Benchmark standards vary substantially across LGAs ▪ 29-44 places (on average) per centre ▪ Typically provided by market per demand ▪ Outside school hours care also to be considered
State Government - Education		
Primary schools	**1: 500 students** (City of Sydney urban areas) **1: 2,000-2,500 dwellings** (Sydney Olympic Park standard) **1: 1,500 dwellings** (GCC greenfield standard)	▪ Provision in accordance with DET's *Planning New Schools, School Safety & Urban Planning Advisory Guidelines* ▪ 3ha minimum requirement (greenfield standard) ▪ 2.3ha if joint use ▪ Lesser area required in built-up areas – dependent on land availability and density of site development
Secondary schools	**1: 1,200 students** (City of Sydney urban areas) **1: 6,000-7,500 dwellings** (Sydney Olympic Park standard) **1: 4,500 dwellings** (GCC greenfield standard)	▪ Provision in accordance with DET's *Planning New Schools, School Safety & Urban Planning Advisory Guidelines* ▪ 6-10ha minimum requirement (greenfield standard) ▪ Lesser area required in built-up areas ▪ Need to consider existing school capacity and/or potential to amalgamate boys/girls or as K-12 provision
TAFE	**1: 300,000-500,000 population** (City of Sydney urban areas)	
University	**1: 150,000 population** (City of Sydney urban areas)	

State Government – Health and Care		
Before and after school care	**1: 25 children (5-12 years)** (City of Sydney urban areas) or **1: 5 children aged 5-11 years** (GHD benchmark study)	▪ Typically provided by market according to demand
Hospitals	**2 beds: 1,000 population** (GCC greenfield standard)	
Community health centre (primary healthcare, including mental health)	**1: 50,000 population** (City of Sydney urban areas) **1: 60,000 population** (GCC greenfield standard)	
GP medical centres	**1 (GP): 4,000 population** (City of Sydney urban areas)	▪ Typically provided by market per demand ▪ Potential provision within allocated commercial floorspace
Children's health services	**1 nurse: 2,000 children** (City of Sydney urban areas)	
Aged care	**88 places: 1,000 (70+ years)** (City of Sydney urban areas) or **40 beds: 1,000 (70+ years)** (GCC greenfield standard)	▪ Typically provided by market per demand ▪ Need to consider existing supply / demand provision
State Government – Emergency Services		
Ambulance services	**1 station:105,000 population** (City of Sydney urban areas)	
Fire services	**1:60,000 population**	

	(City of Sydney urban areas)	
Police	**1:108,000 population** (City of Sydney urban areas)	
** All benchmarks subject to discussion/clarification with relevant responsible authorities/agencies. Benchmarks sourced from current literature/studies, including:* *- GHD, Parramatta Road Urban Transformation Strategy Social Infrastructure Analysis Report, Vol 1, November 2016* *- Growth Centres Commission, North West & South West Growth Centres Development Control Plans* *- Various Studies and Section 94 Plans for City of Sydney (Green Square); Sydney Olympic Park; Rhodes Precinct: Wolli Creek; Ashmore Precinct and Parramatta CBD*		

3.7 Social Impact Conclusion

The OSD project will provide an anchor transit-oriented development that will create a viable, liveable and sustainable place to work, live, visit, shop and play. The OSD proposal includes provision for a 50-place (long day care) child care centre, indoor and outdoor community facilities and landscaped public open space on the podium roof above the station. A station forecourt and retail space will also be provided as part of the station delivery.

The OSD will deliver a range of residential, employment and community offerings to support an increased use of public transport, enhancing both the travel experience and the locality in which the station is situated. It intends to provide a substantial uplift in public amenity and service provisions that will be accessible to the immediate Crows Nest and a broader metropolitan population.

The social impact assessment considers the needs of the broader catchment to enable the identification of new community infrastructure that is required to address the specific needs of the project.

The modest increase in population generated by the OSD will increase demand for a range of community facilities and services, but not to a substantial degree.

In the majority of cases, for most service categories, the existing facilities in proximity to the OSD site have sufficient capacity to absorb the impacts of the project, without additional services being required.

The OSD location is however suited to the provision of a new child care centre which could be incorporated within the proposal, together with a multi-purpose community facility.

Construction of the OSD for its intended purposes will help to deliver:

- An enhanced interface between the site and adjoining/nearby land uses;
- A high-quality residential outcome that leverages the world class access to mass transit and other local transit options;
- Complementary retail and commercial floorspace that increases the employment density of the centre and provides an opportunity for future residents to live and work in a single location; and
- New job creation through construction activity as well as operational jobs in the retail /commercial component of the scheme (see section 5.1).

The demand for several types of social infrastructure is driven by market demand and as such, development of the site to allow mixed uses will anchor the future activation and growth of Crows Nest and provide opportunity for services to be provided.

The assessment undertaken at ***Appendix B*** identifies the specific types of community infrastructure that are required for a development of the scale proposed. Further discussions with service providers (i.e. Council and state agencies) will inform the nature of this provision.

4.0 Economic Impact Assessment

The following section provides estimates of the overall economic benefit that the OSD will create under two different development options including:

- **Option 1** (the preferred option): **Site A (**Residential, 37,500 square metres), **Site B** (Hotel, 15,200 square metres), **Site C** (Commercial, 2,700 square metres). More detailed plans show the development hosting a small retail offering, childcare and associated car parking.

- **Option 2: Site A (**Residential, 37,500 square metres), **Site B** (Commercial, approximately 15,200 square metres)[4], **Site C** (Commercial, 2,700 square metres), small retail offering, childcare and associated car parking.

A more detailed discussion concerning the methodology applied to derive the project's industry value-add (IVA) is included at ***Appendix C***.

4.1 Wider Economic Benefits

Based upon details provided, the construction value of the OSD development is expected to be up to $350 million. This development investment will generate (assuming a 3-year construction period) 280 full-time equivalent jobs per annum directly in the construction industry and a further 445 full-time equivalent jobs per annum indirectly (for example, jobs in transport, with concrete needing to be delivered to the site).

When operational the development will provide the community with further employment opportunities in retail, childcare, commercial and potentially the hotel industry. Based upon plans provided, if Option 1 is pursued, it is expected that when fully operational the site will employ an estimated 550 people (**Table 9** below), generating an Industry Value Add (IVA) of $64 million. Indirectly it will employ another 180 people.

If Option 2 is pursued, when fully operational the site will employ an estimated 930 people, generating an IVA of $75 million. Indirectly it will employ another 300 people.

The value of residential living will reflect the value which residents attach to this location. Whereas the average value-added per dwelling in NSW is $18,000 (2016/17), reflecting the higher rents in inner Sydney, for inner Sydney apartments, the average value-add is nearer to $30,000. However, given the frequency and speed of metro services, locations in proximity to metro stations are expected to attract a premium, and a higher premium than what would apply to normal rail stations. For market rents, this could add another 15%, lifting the value-added to more than $34,000 per dwelling.

[4] A commercial fit-out of the equivalent hotel area (under Option 1) is assumed for Option 2. An NLA of 14,100 square meters is estimated and used to assess the impact of this potential commercial office use.

In sum, if Option 1 is pursued, industry plus dwelling activity at the OSD will generate a value per annum of more than $85 million (in 2017/18 terms) whilst if Option 2 is pursued industry plus dwelling activity at the OSD will generate a value per annum of $98 million.

Property Mix	Option 1 – Direct Jobs	Option 2 – Direct Jobs
Commercial	120	870
Cafes / Restaurant	45	45
Childcare	15	15
Hotel	370	0
Total	550	930

Table 9: Future Direct OSD Jobs by Land Use

Source: MacroPlan

4.2 Expenditure

4.2.1 Residential Population & Spend

This section looks at the potential impact of the increase in the residential population which the OSD development in Crows Nest will generate. Based on the likely demographic profile of the resident population, and comparable areas, estimates of the income and spending capacity of future OSD residents is assessed. Based on those profiles, estimates are presented of the likely amount of money expected to be injected into the local economy.

4.2.1.1 Number and Characteristics of OSD Households

The expenditure impact of the Crows Nest OSD is a function of the increase in households and the likely composition of those households. **Table 10** shows the ratios of persons and workers per occupied dwelling (household) in the CNWSA2, applied to the projected number of dwellings to estimate persons and workers in the Crows Nest OSD.

Dwelling	No. of Dwellings	No. of Occupied dwellings#	Persons	Persons per dwelling	Workers	Workers per dwelling
Studio	53	51	65	1.26	51	1.00
1 Bed Unit	105	103	146	1.42	117	1.15
2 Bed Unit	158	154	300	1.94	207	1.33
3 Bed Unit	35	34	82	2.38	57	1.64
Total	350	343	593	1.75	432	1.28
# Assumes a 98% occupancy rate, consistent with long-term vacancy rate of about 2% for Sydney.						

Table 10: Crows Nest OSD Expected Dwelling Characteristics

Source: ABS Census and MacroPlan

Looking at the profile for other areas dominated by units near stations, and with a large component of new units, the age profile is distinctly different. A Crows Nest OSD proxy area is an area near St Leonards station with a high proportion of newer, high-rise unit dwellings which contains a mix of households which is likely to be similar to the mix of households which could be expected to occupy the Crows Nest OSD.

The key features to note in **Table 11** are low shares of the younger age cohorts (0-14 and 15-19) and older age cohorts (50+), and a high share of the young adult cohorts (20-29 and 30-39). In part, this reflects the transient nature of a portion of the population.

Age Distribution	Crows Nest OSD	SA2 Area	Sydney Metro Area	Australia
0-14	8.6%	12.9%	18.7%	18.7%
15-19	1.6%	2.3%	6.0%	6.1%
20-29	23.7%	17.0%	15.0%	13.8%
30-39	35.7%	25.7%	15.5%	14.0%
40-49	13.4%	14.9%	13.7%	13.5%
50-59	7.3%	10.6%	12.2%	12.7%
60+	9.7%	16.6%	18.9%	21.1%
Average Age	35.6	38.3	37.5	38.6

Table 11: Crows Nest OSD Expected Population Mix
Source: ABS Census and MacroPlan

4.2.1.2 Household Incomes

Retail spending reflects the type and age profile of households but is critically a function of household incomes.

Household incomes in the CNWSA2 are substantially higher than the mean for Sydney. Within the SA2, however, there is a sharp contrast between household incomes in unit dwellings versus detached dwellings, with incomes substantially lower for households living in units. For that reason, the Crows Nest OSD proxy area (discussed above) provides a reasonable benchmark of the likely income profile.

Table 12 shows that the income of these households is significantly higher than that of households living in units in the SA2 and, by chance, closer to the household incomes of all households in the SA2.

Adjusting for the different mix of units and allowing for a component of affordable housing households with lower incomes, the mean household income (in 2016 dollars) in the Crows

Nest OSD project is estimated at $140,000 per annum. In 2018 terms, that translates to about $146,000.

Dwelling	Mean Household Income – 2016 Census
SA2 - Studio	$73,780
SA2 - 1 Bed	$106,925
SA2 - 2 Bed	$126,608
SA2 - 3 Bed	$123,209
SA2 - Unit Average	$113,259
SA2 - All Households	$165,074
Crows Nest Proxy Area	$154,921
Sydney Metro	$122,199
Australia	$100,413
SA2 refers to Crows Nest-Waverton SA2	

Table 12: Crows Nest OSD Benchmarks for Expected Household Income
Source: ABS Census 2016 and MacroPlan

It should be noted that there is less variance in retail spending, than in household income. As household income rises, retail spending rises less than proportionately.

4.2.1.3 Aggregate Retail Spending

Retail spending includes a number of categories. MarketInfo data[5], which is set in **Table 13** below, categorises retail as:

- Take-home food, liquor and groceries (FLG) – goods typically sold in supermarkets and specialty fresh food stores
- Food catering – cafes, take-away outlets and restaurants
- Apparel – male and female apparel purchased
- Household goods - giftware, electrical, computers, furniture and homewares
- Leisure goods - newsagents, sporting goods, music, DVDs, games and books
- General Retail – pharmaceutical goods, cosmetics, toys, florists and mobile phones
- (Other) Retail Services – key cutting, shoe repairs, hair and beauty

[5] MarketInfo is developed by Market Data Systems (MDS) and utilises a detailed micro simulation model of household expenditure behaviour for all residents in Australia. The model takes into account information from a wide variety of sources including the regular ABS Household Expenditure Surveys, national accounts data, Census data and other information sources. The MarketInfo estimates for spending behaviour are widely used by a majority of retail and property consultants.

This measure includes some retail services. In addition, there are a range of other retail services which are provided by local businesses which have been included as additional categories (e.g. medical, dental and other health services; other professional services; and leisure services).

For comparative purposes, the retail spending data in **Table 13** is presented for Australia, the Sydney metro area, the CNWSA2 and the Crows Nest OSD Proxy. In aggregate, retail spending in the proxy area is only marginally higher than the Australian average, and marginally lower than the SA2 and Sydney metro. Lower spending reflects the different mix of households, with more smaller households. In terms of the mix of spending, the stand-out is the amount and share of spending accounted for by food catering – cafes, restaurants. This reflects the high household incomes and the younger age profile of the population.

Categories	Crows Nest Proxy		Crows Nest-Waverton SA2		Sydney Metro		Australia	
	$ per annum	% share	$ per annum	% share	$ per annum	% share	$ per annum	% share
Total Food	21,863	54.1%	24,037	51.4%	23,212	54.3%	20,689	53.9%
Total Non-food	18,525	45.9%	22,720	48.6%	19,527	45.7%	17,721	46.1%
Total Retail	40,388	100%	46,757	100%	42,739	100%	38,410	100%
Categories								
Food, Liquor & Groceries (FLG)	13,165	32.6%	15,405	32.9%	17,099	40.0%	16,153	42.1%
Food Catering	8,698	21.5%	8,632	18.5%	6,113	14.3%	4,536	11.8%
Apparel	4,059	10.1%	5,199	11.1%	4,409	10.3%	3,596	9.4%
Household Goods	5,726	14.2%	7,426	15.9%	6,903	16.2%	6,460	16.8%
Leisure Goods	1,935	4.8%	2,229	4.8%	1,709	4.0%	1,592	4.1%
General Retail	2,300	5.7%	2,784	6.0%	2,903	6.8%	2,769	7.2%
Medical and Health Care Services	1,933	4.8%	2,288	4.9%	1,708	4.0%	1,615	4.2%
Other Professional Services (e.g. Accounting)	486	1.2%	416	0.9%	264	0.6%	242	0.6%
Leisure Services	547	1.4%	468	1.0%	297	0.7%	272	0.7%
Other Retail Services	1,539	3.8%	1,910	4.1%	1,334	3.1%	1,175	3.1%

Table 13: Average Retail Spend by Area

Source: MarketInfo, ABS Census and MacroPlan

4.2.1.4 Share of Spending in the Local Area

It is estimated that 41% of total retail spending by OSD households will be undertaken in the local area, with the balance expected to be undertaken outside the local area (**Table 14**). The households in the Crows Nest OSD will, courtesy of the metro line, have ready access to the retail areas in North Sydney, the CBD (Pitt Street Mall and Barangaroo), and Chatswood. In addition, a high proportion will be expected to work in these locations which will give them daily access to these well-established retail areas offering a broad and deep range of retail services. Also, while car ownership will likely be lower than the average for the Sydney metro, car trips for major shops (where car is required for carrying purposes) are still likely to be a factor in retail decisions, and this will contribute to non-local shopping.

Estimates of the proportion of spending for the various categories are based on previous estimates of retailing in the Crows Nest and broader Northern Sydney area, which has provided considerable detail of the types of retail and non-retail uses of the area, and also looked at the sources of demand for particular retail businesses, i.e. local residents vs out-of-area residents. The expenditure shares in **Table 14** reflect the current retail presence in the Crows Nest area. Some allowance has been made for new retailing expected to be added in the near term (i.e. next 5 years). However, if the locational configuration of retailing in the Crows Nest area changes more substantially over the longer term, to one more skewed towards the Crows Nest station, this might be expected to lift the share of spending in the local area.

Retail Spending Per Annum	Per Household	% Local	Local Spend per HH	Local Spend
Food, Liquor & Groceries	$13,165	45	$5,924	$2,032,018
Food Catering	$8,698	60	$5,219	$1,790,048
Apparel	$4,059	20	$812	$278,447
Household Goods	$5,726	20	$1,145	$392,804
Leisure Goods	$1,935	35	$677	$232,297
General Retail	$2,300	35	$805	$276,115
Medical and Health Care Services	$1,933	50	$967	$331,510
Other Professional Services (eg Accounting)	$486	25	$122	$41,675
Leisure Services	$547	50	$274	$93,811
Other Retail Services	$1,539	50	$770	$263,939
Total Retail Spending	$40,388	41	$16,713	$5,732,662

Table 14: Crows Nest OSD Local Retail Expenditure Estimates
Source: MarketInfo, ABS Census and MacroPlan

The current projected 41% share of total retail spending will lead to spending of $5.7 million per annum (in 2018 dollars) in spending at local businesses in the Crows Nest area. Longer term, as the structure of local retailing adjusts to the presence of the Metro Station, this share could rise towards 45%, lifting the spend (by OSD households) to closer to $6.5 million

4.2.2 Employee Expenditure

During construction and operation, the OSD will provide both permanent and transient employment. External studies have estimated that the average Australian spends approximately $29.55 on going to work each day including expenditure on transport, food, grooming and clothing[6].

Based upon the estimates of employment, this would mean that during the construction period local employee spend would be about $0.75 million each year over the 3-year period and, when operational, persons employed at the OSD would spend between $1.5 million (Option 1) and $2.5 million (Option 2) each year in the local area.

4.2.3 Hotel Guest Expenditure

The final component of economic expenditure assesses hotel guest expenditure. If Site B hosts a 260-room hotel, it is expected that on average rooms will host 1.5 guests and the average occupancy rate of the hotel will be 80% (the current occupancy rate in Sydney).

It is expected that:

- 100% of accommodation spend will be spent at the OSD;
- 30% of food spend will be spent within Crows Nest – Waverton SA2; and
- 10% of shopping spend will be spent within Crows Nest – Waverton SA2.

Using these assumptions, it is forecast that hotel guests will contribute a total of $21 million per annum to the local economy.

Guest Expenditure Per Annum	
Room Revenue	$17,082,000
Local Food Spend	$3,416,400
Local Shopping Spend	$569,940
Total Local Spend	**$21,067,800**

Table 15: Hotel Guest Local Expenditure

Source: MacroPlan, 2018

[6] Note: As transport costs (such as Opal card payments for Bus and Metro) go to the state government and not the local economy, these have been withheld from local expenditure estimates.

4.3 Time Saving

4.3.1 The economic benefits of reduced travel time

The Crows Nest development will provide housing for around 593 people, of which 432 will be workers. It is expected that 88 percent (380) of workers will commute to work outside the Crows Nest area and that approximately 70 percent (304) will use the metro station.

Given its proximity to Sydney's main job centres in the Sydney Metropolitan Area (SMA) - CBD, North Sydney, Chatswood and Macquarie Park – reduced travel times will be a significant benefit to those living in the OSD. For example, door to door, the commute time to a workplace near the CBD (Martin Place) will be about 15 minutes at peak-time from the OSD, of which 7 minutes will be on the train. This is a significant improvement from the current state which takes over 30 minutes either way from Martin Place to Crows Nest.

Figure 17: Crows Nest Time Saving (Minutes)
Source: Google Maps, MacroPlan 2018

In terms of the net benefit from reduced times, analysis has been conducted assuming that the housing for the 593 residents and 432 workers is constructed elsewhere (i.e. if the Crows Nest development did not proceed) and estimates what the travel times would be from those alternate locations. For workers with jobs in these central employment clusters, it is probable that they would find housing in other inner or middle ring suburbs. However, if the additional units were not built elsewhere in the inner or middle ring suburbs, this would displace other workers who would need to move further out to suburban precincts, therefore increasing their travel time to work.

In estimating the net benefit in **Figures 17, 18** & **19** it is assumed that the alternate housing is provided in a *greenfield* location, in the outer areas of the SMA. On the chance that the

development was to take place in these outer-ring areas, hypothetical travel times have been conducted to assess the potential monetary and time savings from the OSD project.

The travel times to the CBD for workers living in south Campbelltown (such as St Helens Park) is around 105 minutes and Leppington, around 68 minutes, compared to Crows Nest which is approximately 15 minutes in total (at peak times). The net time saving of living in the inner suburb of Crows Nest is 53-90 minutes each commute, or 106-180 minutes daily (to and from work). The financial value of this saving is $38-63 per day, comprising a monetary saving of $2 and time saving of $36-61 (time is valued at 50% of earnings, or 50% of $41[7] per hour equals $20.5 per hour[8].) The average saving is just over $50 per day. For these 320 workers, the annual saving is equal to $3.7 million per annum.

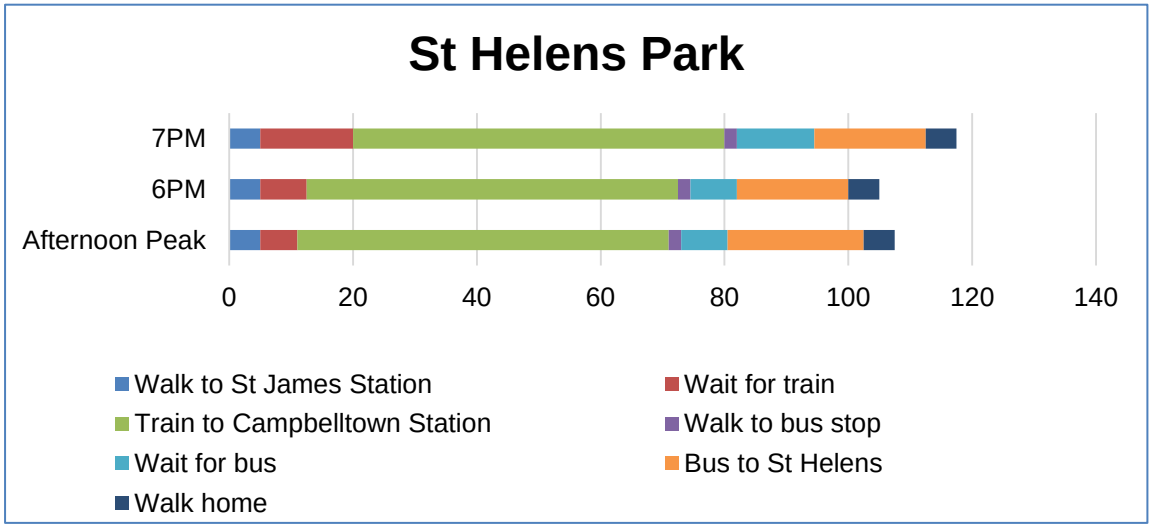


Figure 18: St Helens Park Time Savings (Minutes)
Source: Google Maps, MacroPlan 2018

[7] ABS 6302.0. Avg Weekly Earnings. NSW May 2018 is $1608
[8] ABS 6306.0. Employee Earnings and Houses. Avg work week: 39.2 hours

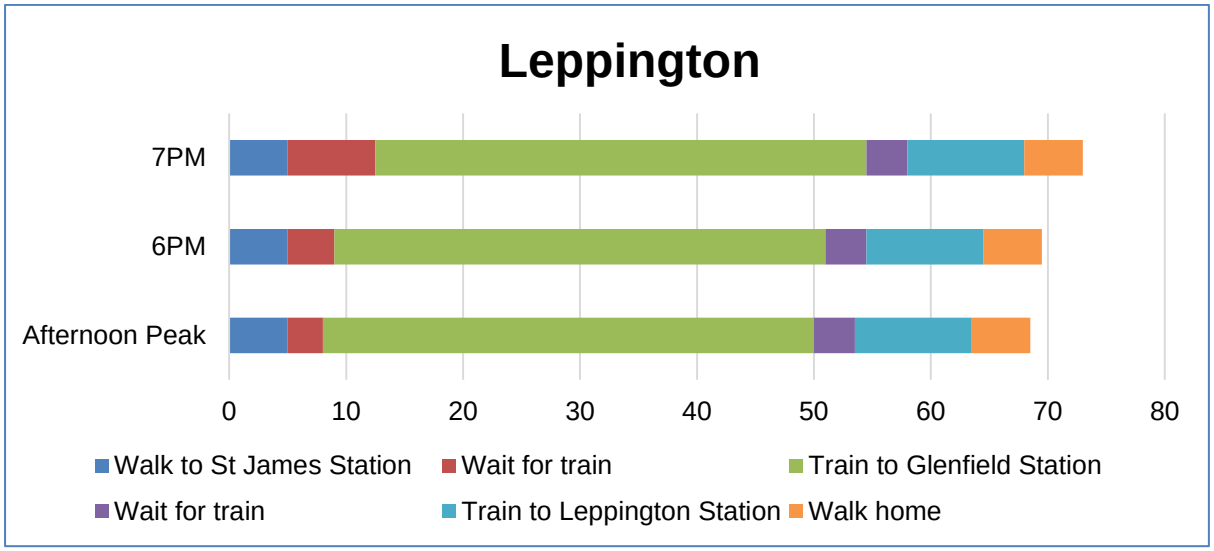


Figure 19: Leppington Time Savings (Minutes)

Source: Google Maps, MacroPlan 2018

Another possibility is that no additional supply of housing is provided, neither in Crows Nest nor the Sydney metropolitan area. In that case, the supply shortfall would lead to upward pressure on rents/prices. This would mean the net cost of not providing housing at Crows Nest would be higher than its cost of provision, representing a combination of higher travel costs and higher rents/prices.

4.4 Congestion

Greater Sydney's rapid rate of population growth coupled with a lack of necessary infrastructure spending over an extended period has created unprecedented levels of congestion. Urban congestion has negative impacts on both society as well as the economy with recent government spending at both a State (i.e. Sydney metro) and Federal (i.e. Urban Congestion Fund) level working to mitigate the growing issue.

Urban congestion impacts liveability, for example, through it imposing limitations on people's access to employment and services. It also impacts the wider economy, decreasing productivity by obstructing access to markets and ports and adding to operating costs. Urban congestion can erode natural advantages in Australian industries (particularly in the agricultural sector), as land transport costs are a large proportion of the market price of goods.

The construction of public transport is one measure being taken by Government to help decrease traffic congestion, increase accessibility and to support a productive economy.

4.4.1 The Cost of Congestion

A report prepared by the Bureau of Infrastructure Transport and Regional Economies (BITRE) in 2015 has analysed the rising congestion costs in Australian cities.[9] In the 10 years to 2015, BITRE (2015) estimates that, for Sydney, vehicle kilometres travelled (VKT) increased by 10% to 41 billion kilometres, while the cost of congestion increased by 144% to $6.1 billion (2018 dollars), highlighting the rising marginal cost of congestion as the number of vehicles on the road increases.

For Sydney in the period 2018-28, BITRE forecasts that the VKT will rise by 17% (low case) - 20% (high case), but that this will cause congestion costs to rise to $8–10.5 billion. This approximates to a cost of $6,900-$11,600 per annum for each additional 'vehicle year' (at 14,400 VKT per vehicle) projected to be added. Put another way, taking an average of the low-high scenarios, if a modal shift means one less car ('vehicle year') it will reduce congestion costs by $9,300 (in 2018 dollars).

BITRE's measure of congestion, referred to as the 'total avoidable social costs of congestion', is based on assessing the deadweight loss of congestion (DWL), or how much total social costs could be avoided if travel volumes were reduced to the economically most efficient level of traffic. The most efficient scenario requires that, each motorist choosing to enter already congested traffic has to take account of not only their personal travel time costs, but also the cost of all the extra delay that their entry into the traffic stream is likely to impose on others. BITRE's estimates measures time lost, cost of higher vehicle operating expenses and motor vehicle emissions.

4.4.2 Crows Nest OSD to generate a Modal Shift

The business case study for the Sydney Metro: City & Southwest indicated that the Metro line would mean 20,000 fewer cars on Sydney's roads at the morning peak by 2036. In part, that projected substantial modal shift was premised on new higher-density housing being located in proximity to the metro stations.[10] The Crows Nest OSD will contribute to the objective of shifting cars off the road and reducing congestion.

At present 59% of workers in Greater Sydney commute to work by motor car, while 16% commute by train and 9% by bus. Of workers commuting into the CBD, by contrast, about 52% commute by train, 20% by bus and only 12% by car. At Crows Nest OSD, it is expected that at least 60% of workers will work in the CBD or North Sydney[11], perhaps at most 20%, and potentially only 10%, of workers will commute by car, with 70% - 80% commuting by public transport, principally on the metro.

[9] BITRE (2015) "Traffic and congestion cost trends for Australian capital cities.' https://bitre.gov.au/publications/2015/files/is_074.pdf
[10] Sydney Metro: Sydney & Southwest Final Business Case SUMMARY October 2016 page 26 https://www.sydneymetro.info/sites/default/files/Sydney%20Metro%20CSW%20Business%20Case%20Summary.pdf
[11] Our analysis of comparable SA2 areas with stations indicates that about 210-220 workers living in the OSD would work in the CBD-North Sydney.

The 80% public transport/10% car scenario reflects the significant potential for a structural shift towards public transport.

Most workers living in OSD are expected to work in the CBD or North Sydney, but with the Sydney Metro-Southwest expected to generate significant jobs growth in the broader Global Economic Corridor it will serve, Crows Nest OSD will become a favourable location to a larger job catchment which will not require car travel.[12]

On face value, the Crows Nest OSD's probable low reliance on cars (10% vs 59% for Greater Sydney) would be equivalent to a modal shift of 50% or 216 workers shifting from cars to public transport for commuting to work.

As with the time-saving analysis above, ultimately this means fewer workers living at extreme distances from their place of work on the outer edges of Sydney, and fewer vehicle kilometres travelled at peak times.

4.4.3 Cost Saving of Congestion

At the high end, the modal shift would see 227 fewer vehicle years on the road. This would generate a saving on congestion costs of $2.1 million per annum. Allowing for some leakage, for example from weekend car travel and the likelihood that some OSD residents will already commute by rail, the likely reduction in traffic volume is expected to be more like, a still substantial, 100-150 vehicle years. This would generate savings on congestion of $0.9 - $1.4 million per annum.

4.5 Agglomeration Economies

4.5.1 Benefits of interconnected economies

The competitiveness of modern cities derives from the agglomeration economies which are a product of proximity. The addition of high speed/high frequency Metro stations create more space within proximity of the CBD. Exploiting that benefit requires allowing density at those stations, providing space for workers and businesses.

Moreover, changes to transport trickle down through the economy, thereby effecting local, regional and national economic development. Changes to transportation infrastructure directly affect labour markets via commuting and increasing accessibility. These changes can also positively affect regional production patterns, potential household income, dispersion and agglomeration and employment within the region.

The implications of these economic tendencies for Crows Nest include:

[12] Sydney Metro: Sydney & Southwest Final Business Case SUMMARY October 2016 page 69

- ***Productivity effects of increased density:*** increased proximity between firms has a positive effect on productivity, including access to larger labour markets, access to more suppliers and exchange of expertise
    - In order to support an '18-hour city', Crows Nest will need to take an approach that supports a diverse economy which will encourage a range of jobs and opportunities. This will increase inward investment due to the interconnectivity of the area.

- ***Increased labour supply***: Improvements to infrastructure can influence how employees value the balance between salary and travel disadvantages and contribute to increased employment and greater flexibility in the labour market. Moreover, infrastructure can create jobs, reduce journey times and minimise the costs associated with reaching employment centres. However, slow, costly and unreliable networks discourage participation and reduce labour productivity
    - Previous employment studies for Crows Nest have highlighted its highly qualified local skills base and a lack of corresponding employment opportunities. Enhanced access to the locality through the new Crows Nest metro station will expand the available labour pool, thereby providing additional opportunities for employment growth.

4.6 Other Benefits

In addition to the pecuniary benefits mentioned above, there are several other economic and social benefits that are difficult to quantify in monetary terms. To inform this discussion we have considered a range of overseas transport oriented development projects, the findings from which are summarised at ***Appendix D.***

The range of broader benefits associated with OSD projects is discussed below.

Economic KPIs

In understanding the economic importance of the OSD project, it is relevant to highlight the strong correlation of economic infrastructure with output growth, productivity, expenditure/ income, employment and private sector investment. Specific derived benefits include:

- Investment stimulus: e.g. enhanced private investment, increased land values, encouragement of landlords to redevelop neglected or underutilised property for higher and better use.
- Transport-related benefits: i.e. generated through a centralised population, reduced vehicle movements and enhanced commuter and community safety generated through 'activating' the station precinct, evening trading etc.

Social KPIs

Social considerations regarding the implementation of the development have been based on local issues such as impacts on actual and perceived levels of safety, and other social equity issues such as accessibility. Specific social benefits of the project are attributed to:

- Health, Wellbeing and Safety: e.g. a reduction in the level/ perceptions of crime, pedestrian and vehicle accidents as well as the health and wellbeing benefits promoted by the development.
- Accessibility and connectivity: e.g. enhanced pathways, connectivity, linkages between local precincts.
- Social cohesion: the benefits the development provides to enhancing connections and fostering a sense of belonging between members of the community.
- Safety: Activating the station precinct for 18 hours per day will help to provide both active and passive surveillance and reduce the incidence of crime.

Environment KPIs

The positive environmental impacts associated with a greater use of rail are more attributable to the broader Sydney Metro City-Southwest project, rather than explicitly linked to the Crows Nest OSD, e.g. the project's capacity to reduce energy consumption and a lesser reliance on fossil fuels. Importantly, however, at a local level, the project will encourage walkability and help to reduce traffic congestion and to improve air quality in the precinct.

In summary, the OSD will contribute positively to both the local and regional economy, generating economic activity and the provision of employment both during construction and during its operation. However, the project also provides benefits to society alleviating local social issues as well as supporting the environment locally and on a much broader scale (such as the through a reduction in congestion and related emissions). Overall the net benefit of the project provides support to both individuals and the wider community not only financially but socially.

5.0 Potential Project Disbenefits and Mitigating Measures

The development of the OSD provides the local and wider community with an array of benefits. However, the project may still be perceived as having some negative implications. These potential disbenefits are discussed below, along with commentary in relation to how such effects can be mitigated.

Effect on House Prices

One of the main objectives of the OSD is to provide a range of housing options in close proximity to transport infrastructure.

Urban renewal on a large scale can often stimulate a locality's house prices. The Crows Nest OSD project, however, is not a 'large-scale' urban renewal project, in the vein of a Green Square or Darling Harbour. It seeks to accommodate a range of land uses (employment-based and residential) atop of new transport infrastructure that will improve the connectivity of Crows Nest to broader Sydney. The project will incorporate a modest yet important contribution of new housing stock.

A majority of the OSD housing will be offered without an associated car parking space and will therefore attract a price discount. Overall, no negative effect on local house prices is expected as a result of the project. Indeed, the project will offer a much-needed mix of new housing (it is planned to include 15% studios, 30% one-bedroom apartments, 45% two-bedroom apartments and 10% three-bedroom apartments) thereby appealing to a broad market base and improving the housing choices of local residents.

Local Disruption

The successful delivery of the new Sydney Metro network will deliver new employment and housing opportunities across a number of new and existing station locations and bring change to these areas in terms of increased activity and vibrancy. For some existing residents, this change will be seen as a disruption. Overshadowing and overlooking matters will arise but can be dealt with through careful and sympathetic building design and the judicious placement of taller buildings. Other issues relating to an increased busyness of the local area are counterbalanced by an improved accessibility to jobs and transport services for local residents and the enhanced connectedness of Crows Nest to broader Sydney.

Traffic and Parking Implications

Limited on-site parking associated with the OSD project can have both positive and negative implications. For instance, it can reduce traffic flows and hence the overall congestion surrounding the OSD but may also generate local parking pressures.

Given the excellent connectivity to broader Sydney that is offered by the Metro service and the limited parking spaces it incorporates, it is highly likely that buyers and renters of the OSD's residential offer will be less inclined to own a motor vehicle. It is also understood that 'car share' parking areas will be provided within the project.

6.0 Conclusion

The Crows Nest Over Station development (OSD) will deliver a net economic and social benefit to society with the proposed development enabling a broad range of uses. It will increase opportunities for retail and commercial employment in support of a residential catchment which connects directly to the Sydney CBD.

The proposal has the capacity to provide a substantial uplift in public amenity and service provision and complements the North District Plan priorities of providing housing in close proximity to new public transport with good connections to the key employment centres of Macquarie Park, Chatswood, St Leonards, North Sydney and Sydney City.

The proposed OSD will increase demand for a range of community facilities and services, but not to a substantial degree and will be met by existing facilities. The demand generated by the growth in the broader catchment area will also in the majority of cases, be met from existing facilities, without additional services being required.

The preferred development mix for the OSD is expected to cost up to $350 million creating 280 direct FTE construction jobs per annum over three years. When completed, businesses will provide on-going work for 550-930 employees, generating industry value-add of $64-75 million per annum. This increases to $85-98 million per annum gross value-added when combined with the project's residential components.

The construction of the OSD will generate agglomeration economies, which will enhance the competitiveness of the Sydney economy. The addition of the high speed/high frequency Metro station accompanied by a commercial development will create more space within proximity of the CBD. Agglomeration economies benefit both individuals, by giving people greater access to job opportunities, as well as businesses with increased proximity between firms having a positive effect on productivity, including access to larger labour markets, access to more suppliers and exchange of expertise.

Resident, hotel guest and employee spending at local retail stores and service centres will further support local economic growth helping support small business and generate further local employment. In aggregate, the proposed combination of land uses could generate almost $30 million annually in local expenditure (including potential hotel room revenue).

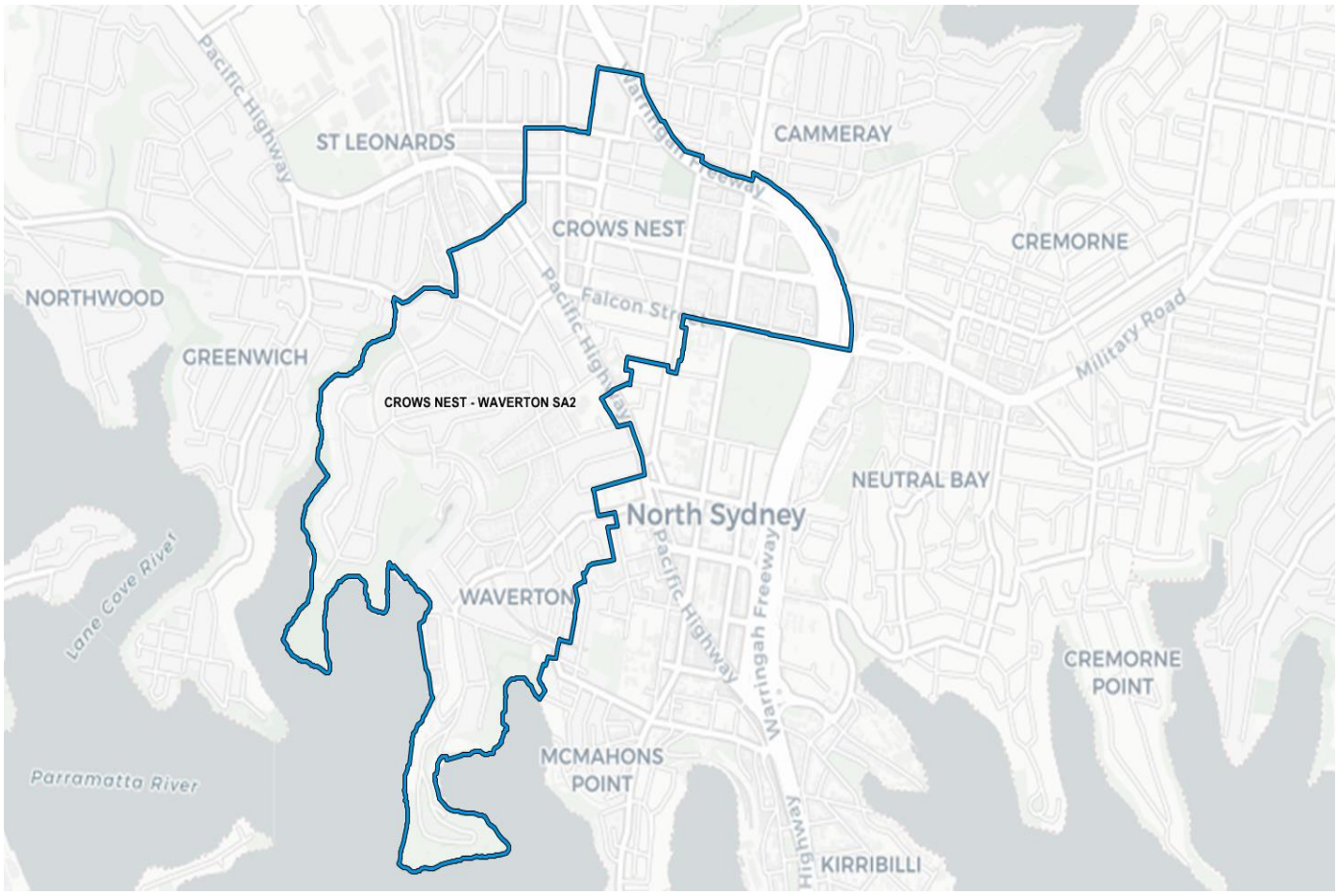
Whilst many economic benefits will result from expenditure, other benefits will also be generated from the savings to both society and individuals as a result of the construction of the OSD. These include time savings on daily commutes and the decrease in road congestion stemming from a modal shift away from cars.

Whilst some potential negative impacts may arise (local disruption and parking pressures) in general it is considered that the enhanced transport and social infrastructure that the project provides, and the increased investment into the local economy that it will generate, combine to deliver a net benefit to society.

Importantly, the OSD proposal for the Crows Nest Metro station is consistent with the mixed-use vision for locality as outlined in exhibited draft St Leonards and Crows Nest 2036 Plan (draft 2036 Plan). The project will help to secure some of the major objectives of the draft 2036 Plan, i.e. to create and deliver:

- An effective employment hub, strengthening area's commercial capacity;
- Transit-oriented development to leverage the increased transport capacity of the new Metro station; and
- A vibrant community, through an improved public domain in an accessible location.

Appendix A: SA2 Map



Source: ABS (OSM data), MacroPlan 2018

Appendix B: Social Infrastructure - Supply & Demand

1.1 Overview

This section discusses the current supply of social infrastructure in the Crows Nest catchment and the additional demand for such services that could be generated by the OSD project.

Through its provision of approximately 350 mixed residential dwellings, the Crows Nest OSD is estimated to accommodate a potential resident population of 593 persons[13]. The immediate (1km) catchment in which the OSD is situated is expected to accommodate 20,993 persons by 2024, i.e. when the Crows Nest station and its OSD are expected to be operational.

Given that many of the residents of the OSD project are likely to either not own or depend on a motor vehicle for daily travel a 1km pedestrian-based catchment has been used for the purpose of identifying existing social service facilities and for forecasting future demand.

The age profile for the 1km catchment for 2024, 2029 and 2034 is set out in the table below.

The demand assessment outlined in this appendix has regard for both the cumulative demand generated by the 1km catchment and the additional population generated by the OSD project, based on their respective anticipated age cohort characteristics

1.2 Methodology

The requirement for additional social infrastructure has been based on an economic model which seeks to understand the balance between:

- Demand / population projections (using specific age groups where relevant, for example 70+ or children aged 0-4) for the precinct, and
- Estimates of current and future supply of community /social infrastructure within a 1km catchment.

The derived 'need' for additional services is outlined in the following assessment of specific infrastructure types, with regard to the current and projected age characteristics of the locality.

[13] OSD population computed using a ratio of persons per apartment for the Crows Nest – Waverton SA2. This is then applied to the dwelling structure makeup of the OSD as well as the assumed occupancy following completion. This derives a figure for each dwelling type which is accumulated to provide a final figure of future OSD residents.

Age	2024	2029	2034
0-4	1,261	1,289	1,333
5-9	721	758	792
10-14	548	595	644
15-19	625	688	749
20-24	1,325	1,420	1,520
25-29	2,749	2,818	2,960
30-34	3,071	3,080	3,154
35-39	2,359	2,379	2,409
40-44	1,637	1,720	1,760
45-49	1,278	1,370	1,463
50-54	1,155	1,220	1,317
55-59	1,055	1,136	1,206
60-64	874	931	994
65-69	769	824	883
70-74	567	605	656
75-79	494	546	594
80-84	304	393	449
85-89	130	171	227
90-94	52	64	92
95-99	15	17	21
100	3	4	6
Total	**20,993**	**22,028**	**23,231**

Table 16: Population by Age, 1km Catchment, Inclusive of OSD population

Source: DPE, 2016, MacroPlan Dimasi, 2018

1.3 Scope of Community/ Supply Facility

A range of open spaces are located within the 1km catchment including the recreation areas of Gore Hill Oval, Newlands Park and a number of existing smaller parks and plazas scattered throughout. There are also several high-quality open spaces proposed including North Sydney Council's proposed upgrade of the Hume Street Park, located immediately north of the OSD site.

The Precinct has a relatively good supply of social infrastructure and is well serviced by regional health, educational and emergency services within or close to the 1km catchment.

For the purpose of this assessment the following facilities have been considered and assessed:

- Youth Centres and Local Community Centres
- Community Health Centres
- Libraries and Performing Arts / Cultural Centres

- Open Space and Recreation
- Indoor Swimming Facilities
- Childcare and Related Facilities
- Primary and Secondary Schools
- Tertiary: University and TAFE
- Ambulance, Fire and Police Services
- Medical Centres, Children's Health Services and Hospitals
- Aged Care

The location of existing services within the 1km catchment are mapped at the end of this appendix.

The specific demand generated by the OSD project itself has been estimated using the following expected resident population.

Age	OSD
0-4	32
5-9	13
10-14	7
15-19	9
20-24	35
25-29	106
30-34	124
35-39	87
40-44	46
45-49	33
50-54	24
55-59	20
60-64	18
65-69	16
70-74	8
75-79	6
80-84	4
85-89	2
90-94	2
95-99	-
100	-
Total	**593**

1.4 Youth Centres

Current and Future Supply

There is currently 1 youth centre in the 1km catchment radius, Planet X. There are also four other youth-related organisations/facilities within the 1km catchment area - Marist Youth Care, Taldumande Youth Services Inc, PCYC and Phoenix House Youth Services.

Youth Centres and Catchment	2024	2029	2034
Catchment Population (5-19)	1,893	2,042	2,185
Supply (0 -1 kms)	1	1	1
Benchmark Persons per Facility	20,000	20,000	20,000
Demand	0.1	0.1	0.1

Youth Centres and Additional OSD Population	2024
OSD Population (5-19)	29
Benchmark Persons per facility	20,000
Demand	0.002

Recommendation:

There is a sufficient supply of youth centre facilities out to 2036. The project will not generate additional demand to warrant further supply of these services .

1.5 Local Community Centres

There are currently 2 local community centres in the 1km catchment radius.

1.5.1 Current and Future Supply

Local Community Centre	2024	2029	2034
Catchment Population	20,993	22,028	23,231
Supply (0 -1 kms)	2	2	2
Benchmark Persons per Facility	20,000	20,000	20,000
Demand	1.05	1.1	1.2

Community Centre and Additional OSD Residents	2024
OSD Population	593
Benchmark Persons per Facility	20,000
Demand	0.03

Recommendation:

There is a currently a sufficient supply of community centres to cater for the current and future population of the OSD catchment. It is not expected that the delivery of the OSD will increase demand for additional centres.

1.6 Libraries

1.6.1 Current and Future Supply

There is currently 1 library located in the catchment. An examination of projects listed on Cordell Connect has revealed there are no new libraries proposed for the locality.

Library	2024	2029	2034
Catchment Population	20,993	22,028	23,231
Supply (0-1kms)	1	1	1
Benchmark Persons per Facility	30,000	30,000	30,000
Demand	0.7	0.7	0.8

Library and Additional OSD Residents	2024
OSD Population	593
Supply (0-1kms)	1
Benchmark Persons per Facility	30,000
Demand	0.02

Recommendation

The current provision of libraries within the catchment area is sufficient for the current and future levels of demand generated within the catchment following the completion of the OSD.

1.7 Performing Arts/ Cultural Centres

1.7.1 Current and Future Supply

There is currently 1 museum / cultural centre located in the catchment.

Performing Arts/Cultural	2024	2029	2034
Population	20,993	22,028	23,231
Supply (0 -1 kms)	1	1	1
Benchmark Persons per Facility	50,000	50,000	50,000
Demand	0.4	0.4	0.4

Recommendation

There is a sufficient supply of performing arts / cultural facilities in the 1km catchment. It is not expected that, following the completion of the OSD, demand for these facilities will increase to a point that warrants additional provision.

1.8 Open Space and Recreation Supply Assessment

1.8.1 Current Supply

Local parks and playgrounds are scattered throughout the catchment, providing the community with high accessibility.

There is one district park within the catchment - Gore Hill Oval. In addition, there are a series of district and regional parks surrounding the catchment, including Flat Rock Gully in Willoughby, Northbridge Park, Lane Cove Bushland Park and Ferndale Park. Generally, residents have a high accessibility to this type of facility.

Open space and sport/recreation facilities include:

- There are 3 neighbourhood parks within the 1km catchment, and
- 2 local sporting grounds
- 2 lawn bowls and 3 tennis court facilities
- 2 indoor sports facilities

1.8.2 Open Space

Open space is typically provided to serve both active and passive purposes. Open space should be equitably dispersed for the enjoyment of all residents. Preferably all residents should be within 1km of usable open space, including local parks, sports grounds, linear walking connections and/or accessible natural areas.

The standard benchmark of local open space provision is around 2-3 ha per 1,000 residents (for both passive and active purposes), although this standard is more applicable to greenfield areas than to inner city locations. In inner city locations, sufficiency is generally

measured by proximity to facilities and the quality of such, rather than the actual quantum of open space provided.

1.8.3 Recreation Facilities Future Supply

Local Sports Ground	2024	2029	2034
Supply	2	2	2
Demand	2	2	2
Local Tennis Facility	**2024**	**2029**	**2034**
Supply	3	3	3
Demand	2.1	2.2	2.3
Lawn Bowls	**2024**	**2029**	**2034**
Supply	2	2	2
Demand	2.1	2.2	2.3
Indoor Sports	**2024**	**2029**	**2034**
Supply	2	2	2
Demand	2.1	2.2	2.3

Recommendation:

The current provision of open space and sport and recreation amenity is sufficient to service the catchment area. The demand from the OSD population is modest and does not, in itself, contribute substantially to future demand. The OSD facility will incorporate indoor and outdoor community facilities and landscaped public open space on the podium roof above the station. A station forecourt will also be provided as part of the station delivery.

1.8.4 Indoor Swimming Facilities

There is currently 1 indoor swimming pool facility located in the 1km catchment radius.

Swimming Pool	2024	2029	2034
Population	20,993	22,028	23,231
Supply (0-1kms)	1	1	1
Benchmark Persons per Facility	100,000	100,000	100,000
Demand	0.2	0.2	0.2

Recommendation

There is an adequate supply of indoor swimming pool facilities in the catchment area. The demand from the OSD does not warrant additional facilities.

1.9 Childcare Facilities

1.9.1 Current and Future Supply of Childcare

There are currently 20 long day care (LDC) childcare facilities located in the 1km catchment radius with a total of 1,280 childcare places.

An examination of projects listed on Cordell Connect has revealed there are four new childcare facility projects in the pipeline to 2021. Collectively, the pipeline provides for development of a further 389 places to 2021. Further, the Crows Nest OSD will accommodate a childcare centre with approximately 50 places.

Childcare in Catchment	2024	2029	2034
Population (0-4)	1,261	1,289	1,333
Supply (0-1kms)	1,280	1,669	1,669
Benchmark Places per Child (0-4)	0.5	0.5	0.5
Demand	631	645	667

Childcare and Additional OSD Population	2024
Population (0-4)	32
Supply (0-1kms)	1,280
Benchmark Places per Child (0-4)	0.5
Demand	16

Recommendation:

An existing child care facility adjacent to the OSD site, at Hume park, will be displaced as part of plans to upgrade the park facility. The OSD project itself will incorporate a 50-place child care centre, effectively replacing the existing Hume Park service. This will sustain the current provision of childcare services in the catchment.

Whilst there is a more than sufficient 'local' supply, the demand for childcare services stems from a broader residential catchment than the 1km catchment measured. The provision of Metro services at Crows Nest will broaden its labour draw such that the provision of childcare services at the OSD is an appropriate use for the project.

NOTE: **Long day care (LDC)** centres are the predominant form of formal childcare. These facilities cater to children up to school age (i.e. up to 4-5 years). Long day care services are generally provided at a building specifically designed for childcare purposes but can also operate in office buildings, shopping centres and hospitals. They usually operate between 7.30am – 6.30pm. **Family day care** refers to child care services delivered at the home of the provider, and for smaller numbers. **Before/after school care and vacation care** is child care provided in locations such as schools and community halls, and which largely cater for primary school aged children.

1.9.2 Current and Future Supply of After-School Care

There are currently two after-school care facilities located in the 1km catchment radius. The benchmarks for after-school care places is 1 place for every 25 children aged 5-14.

After-School Care	2024	2029	2034
Population (5-14)	1,183	1,213	1,274
Supply – centres (0 -1 kms)	2	2	2
Benchmark Persons per Place	25	25	25
Demand (places)	47.3	48.5	51

*Note: Supply has been denoted by centre, however, the required provision is based on a number of places. Generally, these types of facilities cater for between 30-40 children.

After-School Care and Additional OSD Population	2024
Population (5-14)	20
Supply – centres (0 -1 kms)	2
Benchmark Persons per Place	25
Demand (places)	0.8

Recommendation:

There is a sufficient supply of after-school care facilities within both the immediate and surrounding catchments.

1.10 Primary and Secondary School Infrastructure

1.10.1 Primary School Current and Future Supply

There are currently 4 primary schools located within in the 1km catchment radius. **Naremburn School** and **St Marys Catholic Primary School** are also proximate to the Crows Nest catchment. **Anzac Park Public School** and **North Sydney Demonstration School** are also located slightly outside the 1km radius.

Primary Schools	2024	2029	2034
Dwellings	10,067	10,560	11,132
Supply (0 -1 kms)	4	4	4
Benchmark Dwellings per Facility	2,000	2,000	2,000
Demand	5.0	5.3	5.6

Primary Schools with Additional OSD Dwellings	2024
Dwellings	350
Benchmark Dwellings per Facility	2000
Demand	0.175

Note: as the benchmark is specified in terms of dwellings, and the primary school age population in the OSD per dwelling will be low, this overstates demand generated by the OSD.

Recommendation:

The additional demand generated by the OSD project in relation to school facilities is minimal, suggesting that such demand can be accommodated at existing schools or through the expansion of these facilities.

1.10.2 Secondary School Current and Future Supply

There are currently 4 secondary schools located in the 1km catchment. **North Sydney Girls High School** and **Cammeraygal High School** are located close to the subject in Crows Nest.

Cammeraygal High School will be expanding its facilities with the inclusion of a new senior high school campus by 2026 which is reflected in the supply projections seen below.

Secondary Schools	2024	2029	2034
Dwellings	10,067	10,560	11,132
Supply (0 -1 kms)	4	4	4
Benchmark Dwellings per Facility	6,000	6,000	6,000
Demand	1.7	1.8	1.9

Secondary Schools with Additional OSD Dwellings	2018
Dwellings	350
Benchmark Dwellings per facility	6000
Demand	0.06

Note: as the benchmark is specified in terms of dwellings, and the secondary school age population in the OSD per dwelling will be low, this overstates demand generated by the OSD.

Recommendation

According to the assessment, there is already a high level of supply of secondary schools in the area which will increase further by 2026 with the expansion of Cammeraygal High School. Based on current dwelling projections no additional secondary schools will be required following the completion of the OSD.

1.11 University and TAFE Facilities

1.11.1 Current and Future Supply

There are currently 2 tertiary facilities located in the catchment. These facilities include Australian Catholic University and TAFE St Leonards.

TAFE	2024	2029	2034
Population	20,993	22,028	23,231
Supply (0 -1 kms)	1	1	1
Benchmark Persons per Facility	300,000	300,000	300,000
Demand	0.1	0.1	0.1

University	2024	2029	2034
Population	20,993	22,028	23,231
Supply (0 -1 kms)	1	1	1
Benchmark Persons per Facility	150,000	150,000	150,000
Demand	0.1	0.2	0.2

University / TAFE and Additional OSD Population	2024
Population	593
Benchmark Persons per Facility (combined)	450,000
Demand	0.001

Recommendation

The additional demand generated by the OSD in relation to both universities and TAFEs is minimal. However, this does not mean that the OSD location is not suited to a tertiary education presence, particularly as it is connected to the Sydney Metro network which increases its accessibility and hence its potential demand draw from a broader Sydney market.

1.12 Emergency Infrastructure

1.12.1 NSW Fire Stations Current and Future Supply

There are currently 2 fire stations located in the 1km catchment radius.

Recommendation

Given current and future population demand following the completion of the OSD there is a sufficient supply of fire stations within the precinct. However, further consultation will need to occur with appropriate authorities for provision in the future as continued growth occurs.

1.12.2 NSW Ambulance Service Current and Future Supply

There is currently 1 ambulance station located in the 1km catchment radius.

Recommendation

There is a sufficient supply of ambulance stations in the catchment radius, although further consultation with appropriate authorities is recommended in relation to future needs.

1.12.3 NSW Police Service Current and Future Supply

There is currently 1 police service located in the 1km catchment radius.

Recommendation

There is currently a sufficient supply of police stations in the catchment radius that will be able to cater for the additional demand following the completion of the OSD.

1.13 GP Medical Centres

There are currently 14 Medical Centres located in the 1km catchment radius, contributing to a total of 48 GP's.

Medical Centres (GP's)	2024	2029	2034
Population	20,993	22,028	23,231
Supply of GPs (0 -1 kms) *	48	48	48
Benchmark Population per GP	4,000	4,000	4,000
Demand	5.2	5.5	5.8

Medical Centres (GPs) and Additional OSD Population	2024
Population	593
Benchmark Persons per Facility	4,000
Demand	0.15

Recommendation

The locality is well serviced by medical facilities given its proximity to Royal North Shore Hospital which anchors the precinct's desired future character as a 'Health and Education Super Precinct'.

1.14 Community Health Centre

1.14.1 Current and Future Supply

There is currently 1 Community Health Facility located in the 1km catchment radius.

Notably, **Royal North Shore Community Health Centre** is the local health practice located closest to the subject site within Crows Nest. The community health facility offers a range of care services including:

- *Aboriginal health*
- *Opioid Treatment Program (OTP)*
- *Adult community mental health*
- *Drug and alcohol service*
- *Child protection service*
- *Child and youth mental health service*
- *Child and family health*
- *Child speech pathology*
- *Child occupational therapy*
- *Child physiotherapy*
- *Child development*
- *Aged care*

Community Health	2024	2029	2034
Population	20,993	22,028	23,231
Supply (0-1kms)	1	1	1
Benchmark Persons per Facility	50,000	50,000	50,000
Demand	0.4	0.4	0.5

Community Health and Additional OSD Population	2024
Population	593
Supply (0-1kms)	1
Benchmark Persons per Facility	50,000
Demand	0.01

Recommendation

There is an adequate supply of community health centres, sufficient to accommodate the additional population generated by the OSD project.

1.15 Hospitals

1.15.1 Current and Future Supply

There are currently 3 hospitals located in the catchment.

Notably, the subject site is located within close proximity to the North Shore Health Precinct. A New Mental Health Hospital will also be constructed further increasing supply by 112 beds by 2021. North Shore Private Hospital will be expanding its facilities and will add an additional 313 beds by 2026.

Hospitals	2024	2029	2034
Catchment Population	20,993	22,028	23,231
Supply – beds (0-1kms)	996	1,124	1,309
Benchmark Ratio	1 bed: 500 pop	1 bed: 500 pop	1 bed: 500 pop
Demand	42.0	44.1	46.5

Recommendation

Based on the above, there is already a sufficient supply of hospitals and beds to accommodate growth in demand from increasing population up to 2036.

1.16 Residential Aged Care Places

Since July 2014, the distinction between high and low care in residential aged care was removed for all new and existing residents[14]. The approval for permanent residential aged care is not limited to a care level, but instead, approved on an 'ageing in place' basis.

1.16.1 Current and Future Supply

There is currently 1 existing residential aged care facility (RACF) located in the 1km catchment radius with 56 residential aged care places.

An examination of projects listed on Cordell Connect has revealed that there is 1 RACF project in the pipeline to 2021 which will provide for the development of 115 aged care places and lift supply to 171 beds.

Residential Aged Care	2024	2029	2034
Population (70+)	1,564	1,800	2,046
Supply (0-1kms)	171	171	171
Benchmark Beds per 1000 persons (70+)	88	88	88
Demand	138	158	180

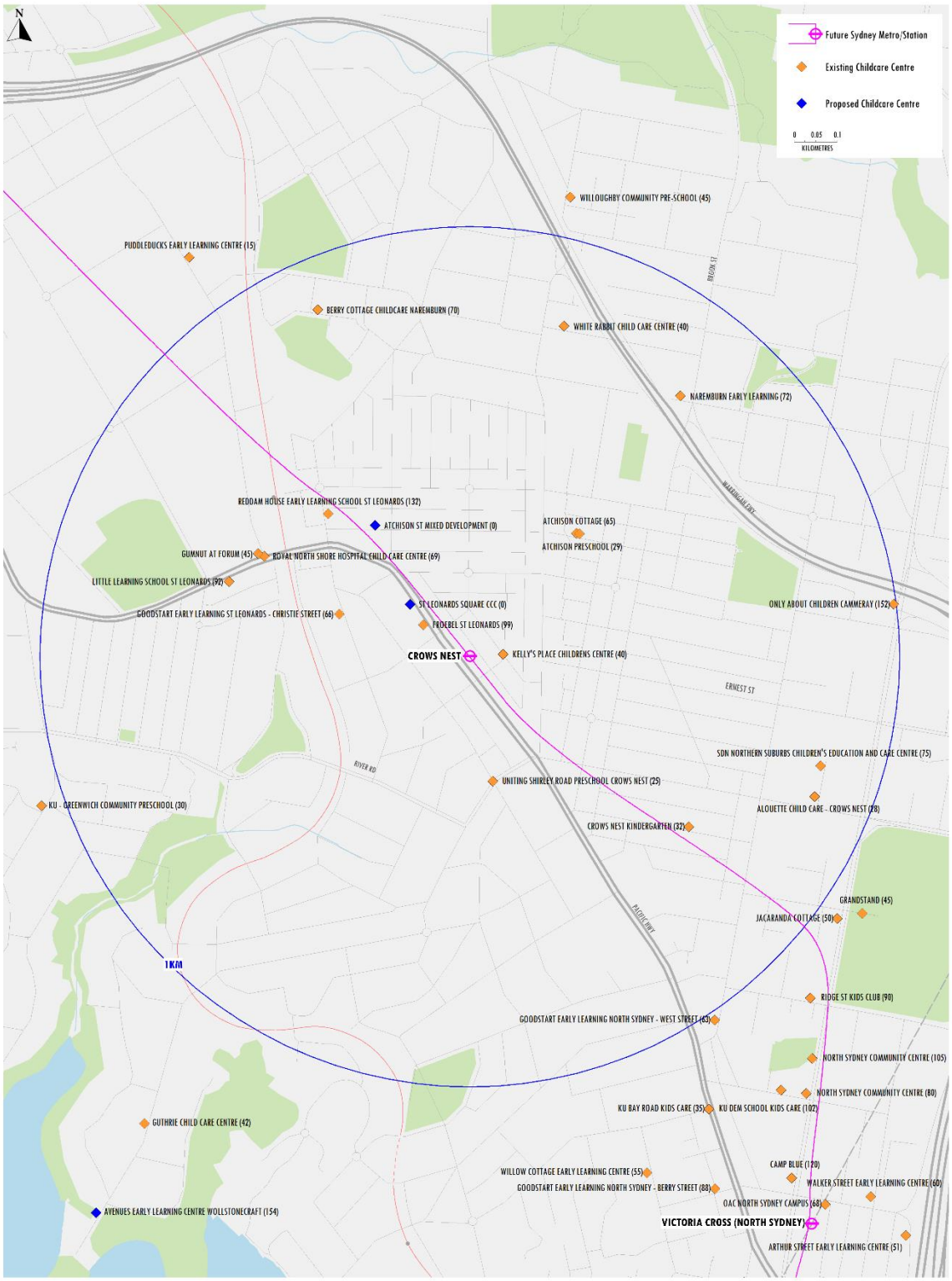
Residential Aged Care and Additional OSD Population	2024
Population (70+)	22
Supply (0-1kms)	56
Benchmark Beds per 1000 persons (70+)	88
Demand	2

Recommendation

A standard benchmark for a residential aged care facility is 88 beds per 1,000 people over 70. Additional residential aged care places will be required to accommodate the catchment's ageing population by 2036, although such provision is normally met by the private market or by not-for-profit providers. It is not expected that the OSD project itself will directly contribute to this provision. The project will offer a range of single bedroom and 2-bedroom units suitable to downsizers, many of whom will be elderly. The existing shortage in the market will be met by currently planned provisions.

[14] Department of Veterans' Affairs

Catchment Provisions - Childcare



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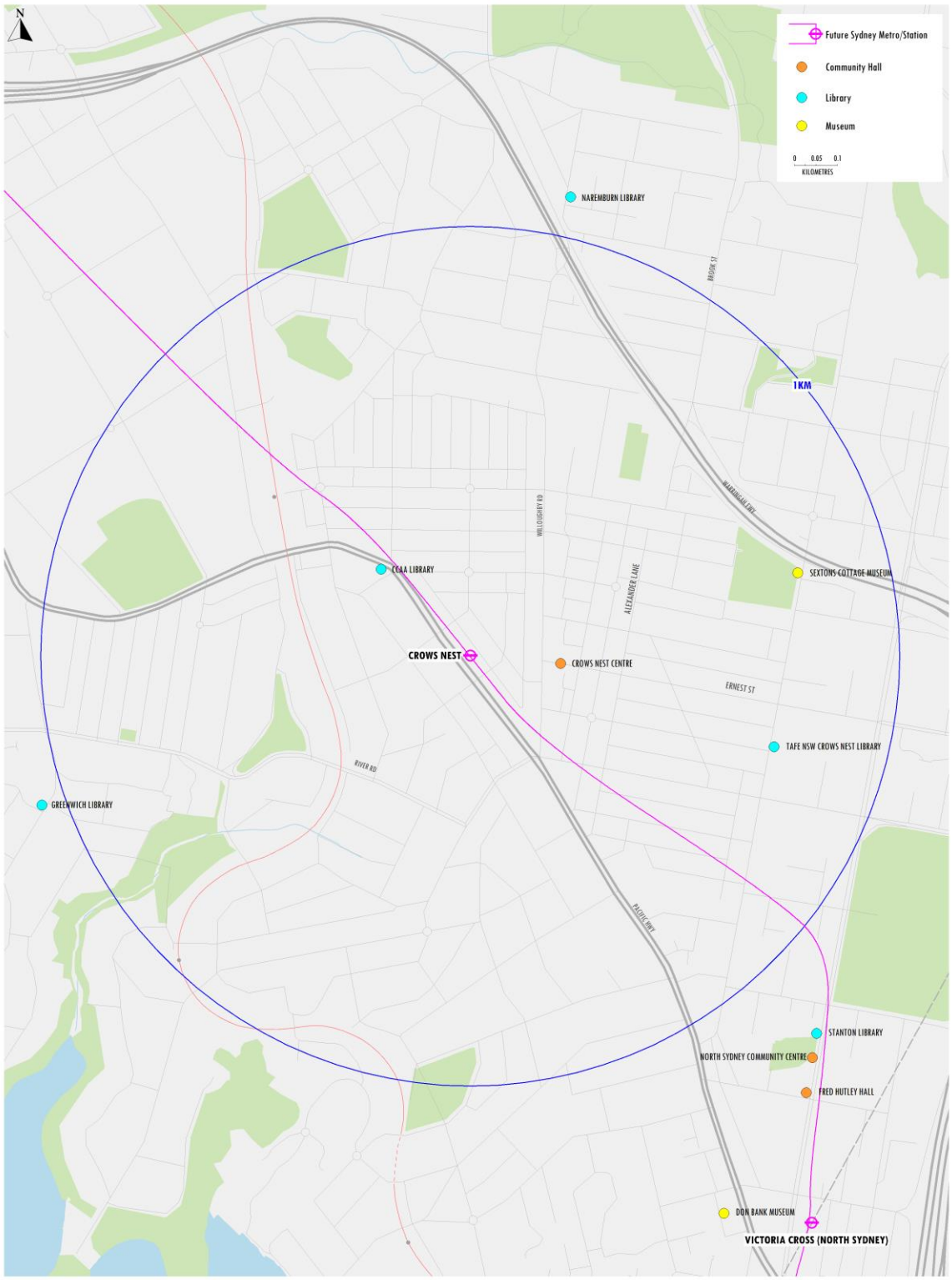
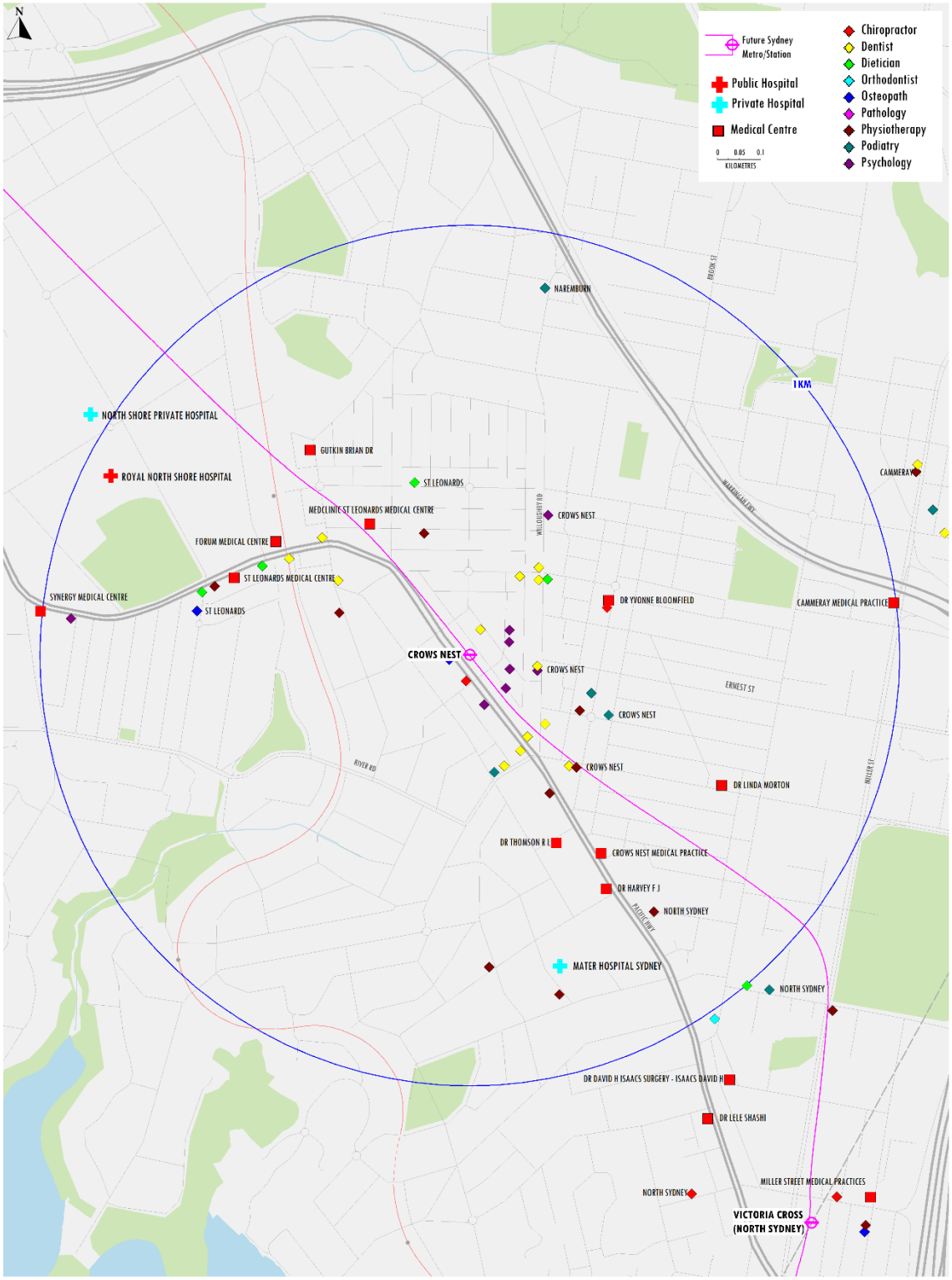
Catchment Provisions - Community Assets



Catchment Provisions - Medical and Hospital



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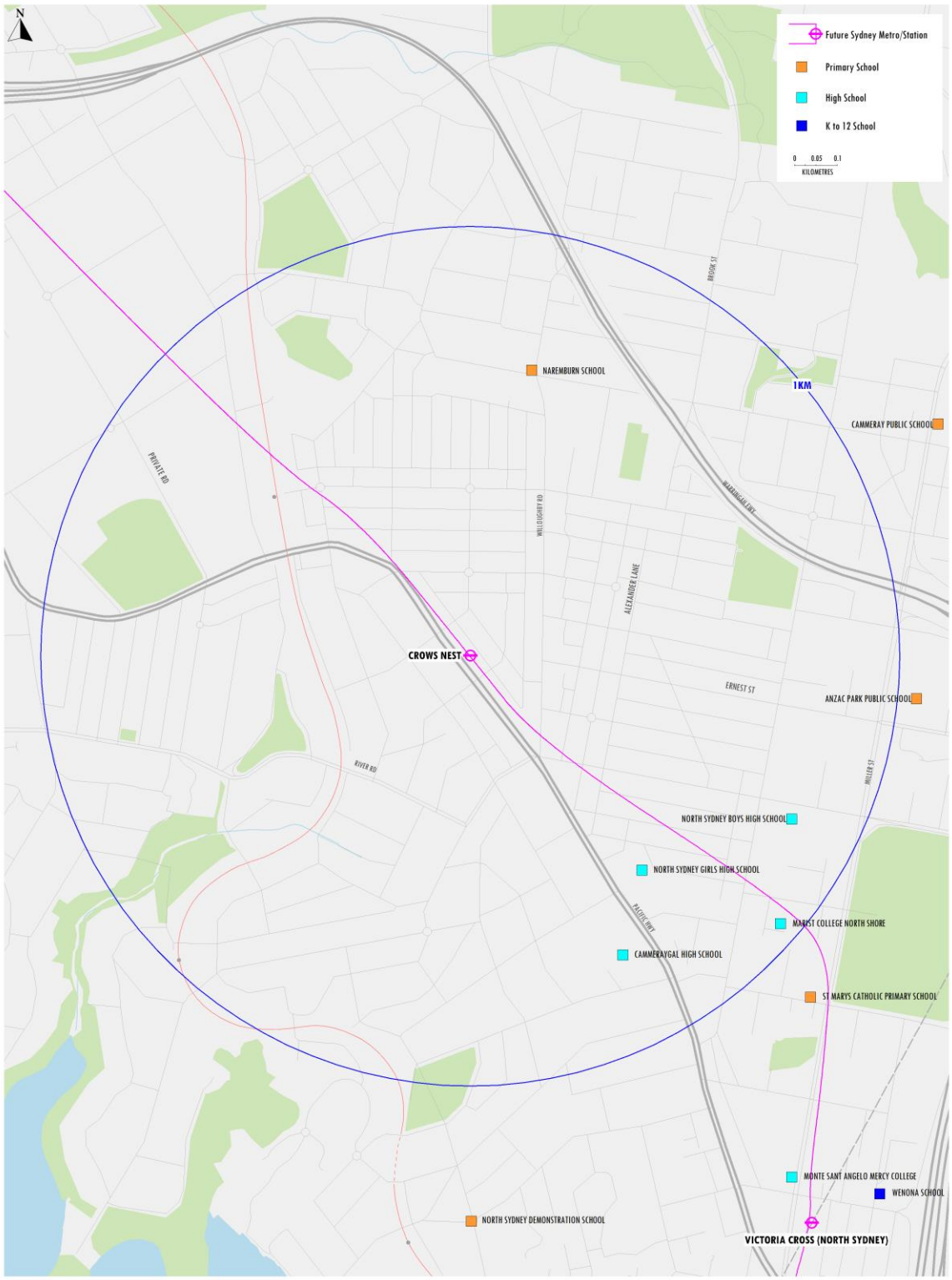
Catchment Provisions - Schools



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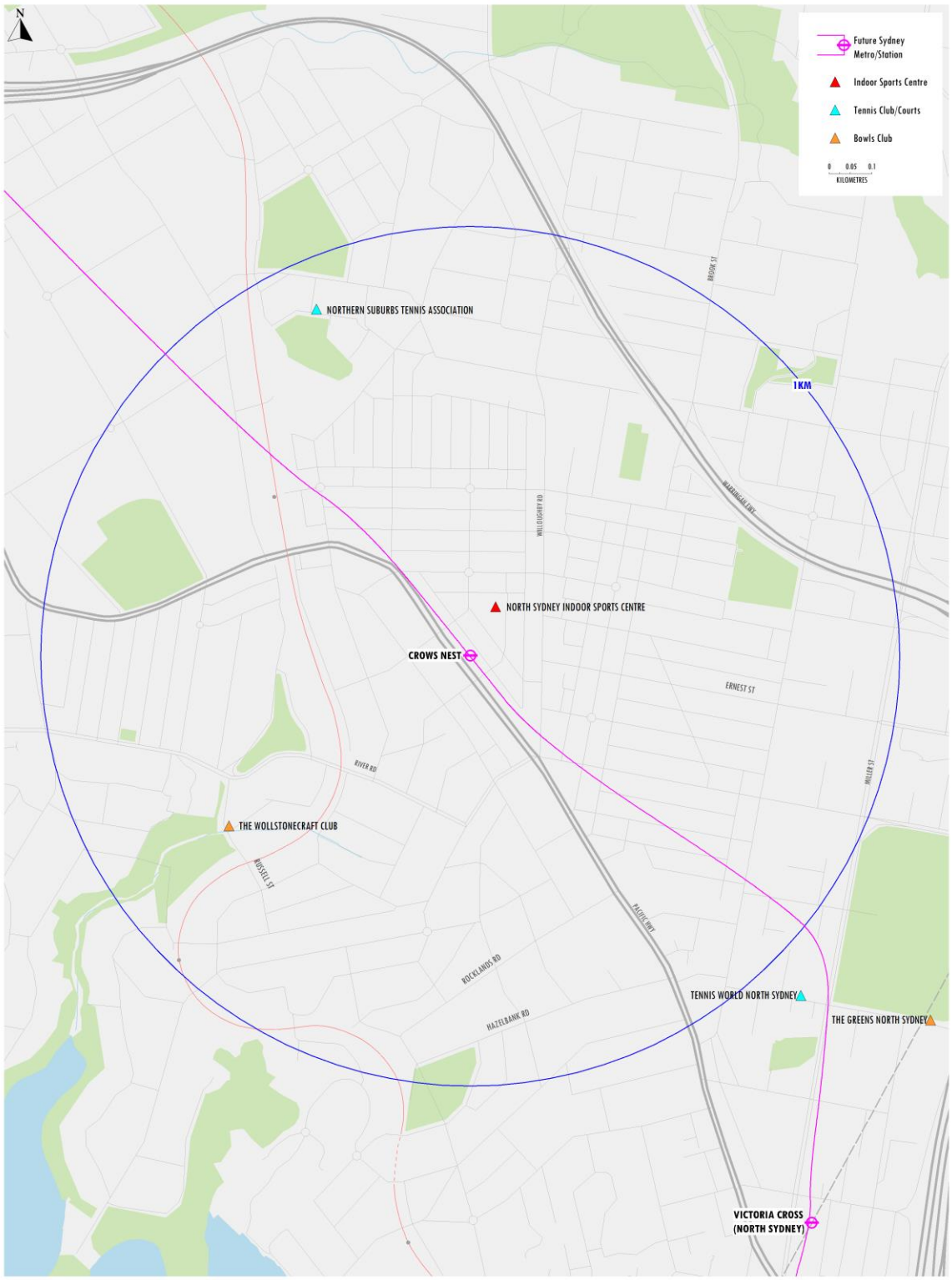
Catchment Provisions – Sports Facilities



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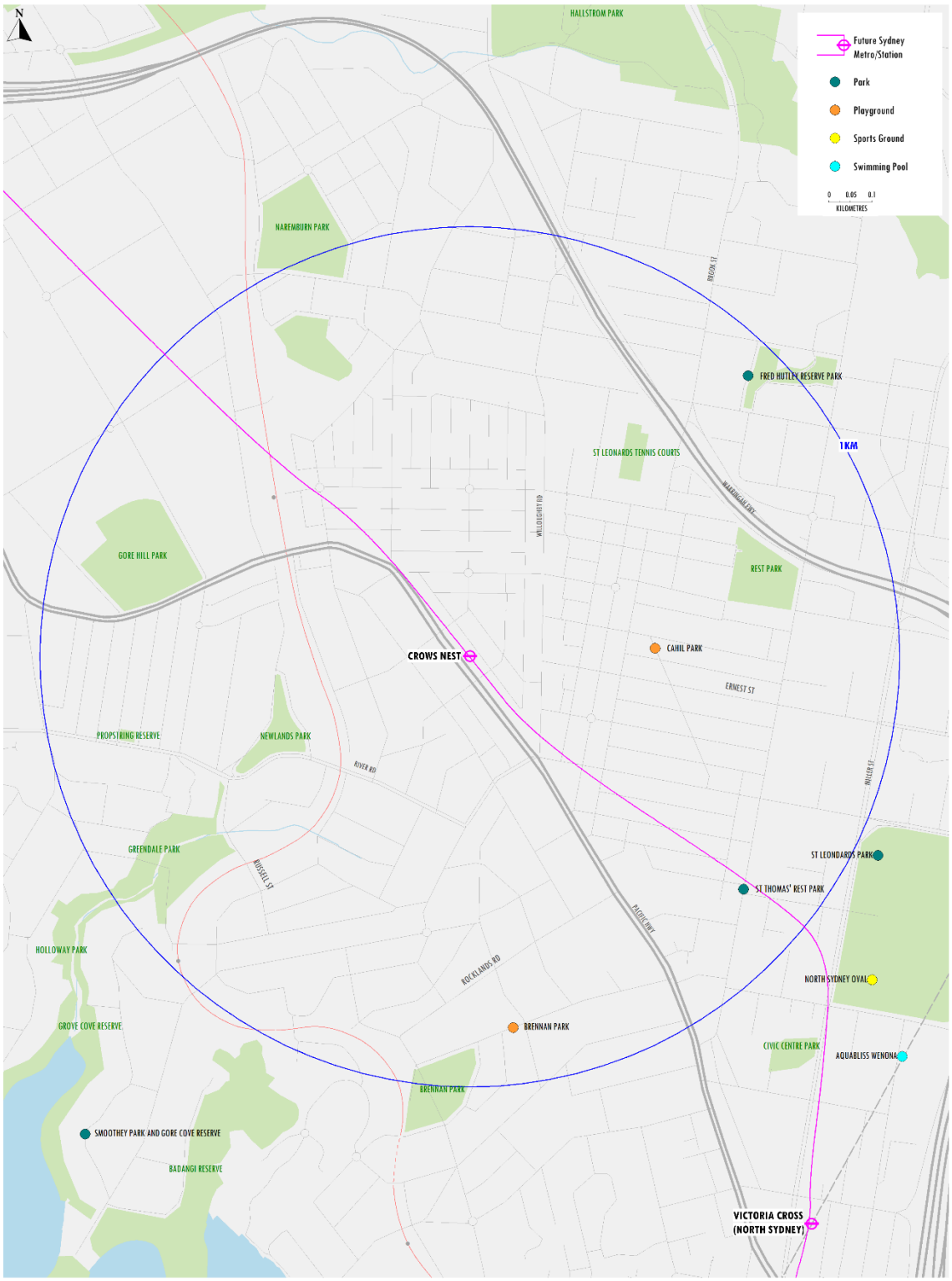
Catchment Provisions - Parks and Pools



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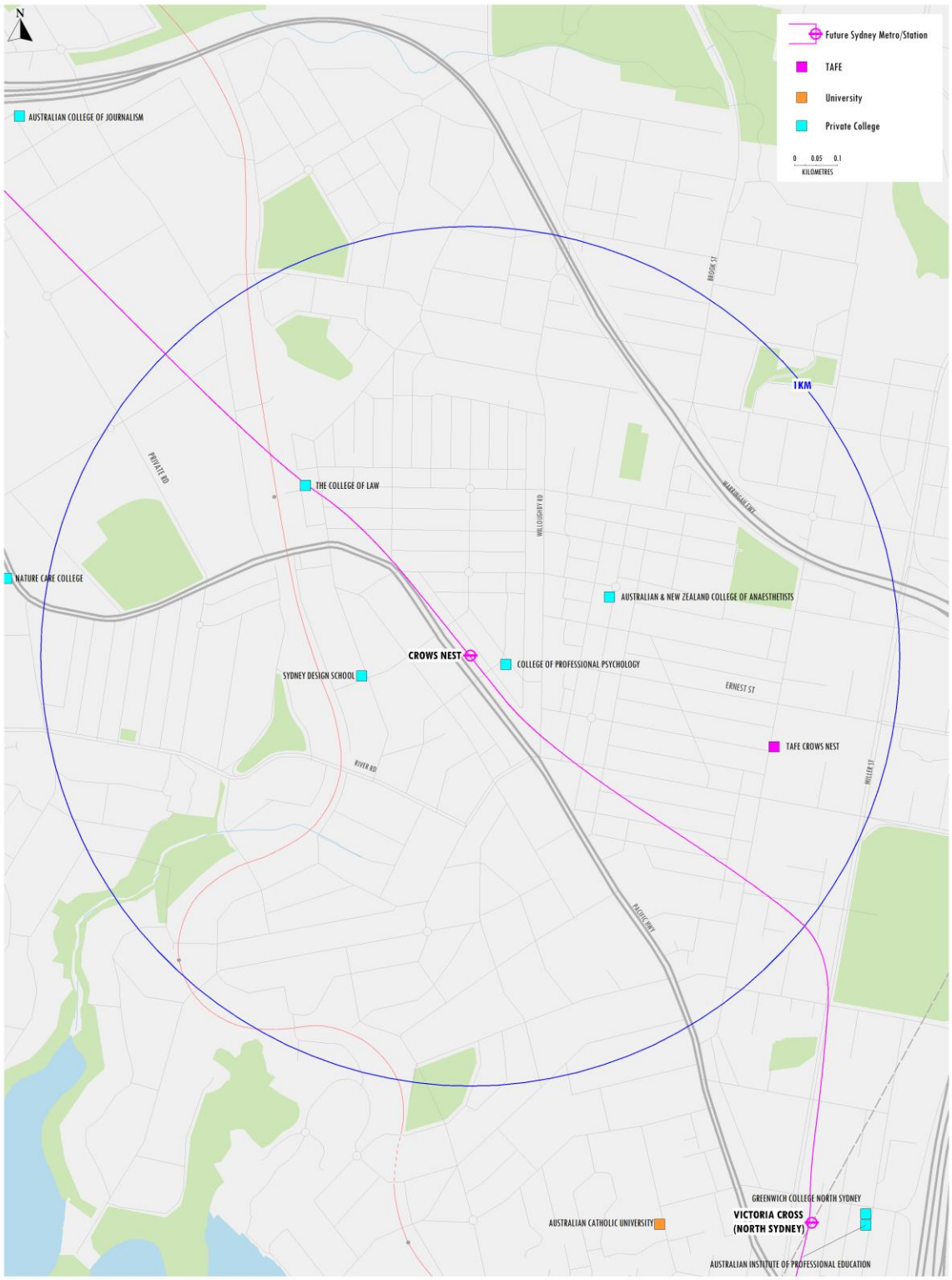
Catchment Provisions - TAFE and Universities



Appendix C: Wider Economic Benefits: OSD Methodology

The Australian Bureau of Statistics (ABS) constructs estimates of industry value-added (IVA) and gross regional product (GRP) for each of the States, but not at a regional or Local Government Area (LGA) level. There is insufficient data at the regional or LGA level for the ABS to assert a degree of confidence around IVA/GRP estimates, suggesting that estimates of IVA/GRP at the LGA or suburb level need to be treated with some caution.

With that qualification, the Office of the Chief Economist of Department of Industry, Innovation and Science (OCE) has published provisional estimates of regional GRP for 2014/15.[15] The methodology used by the OCE is set out broad terms in its 2016 Report. It uses partial data, relative employee compensation (vs labour value-added and capital value-added for State industries) in most instances, to determine ratios and a region's share of State industry value-added. The methodology is reasonable and defensible but (as the OCE would agree) the results need to be treated with caution.

This report has adopted the OCE methodology, to generate 'estimates' of output by regions in Australia, in this case for the OSD. Taking the estimates of floorspace by industry, we use standard measures of space per worker to derive a potential workforce if the floorspace were fully utilised. But high-density locations generally lead to higher productive use of space, or more workers per unit space, and we apply a 15% 'productivity' premium. Then, 'total factor income' per worker by industry for NSW is applied to the number of workers per industry to generate an estimate of total factor income for each industry. Total factor income incorporates income generated from capital – the methodology incorporates the assumption of the NSW capital/labour ratio for each industry. The aggregate is an estimate of industry value-added.

Residential living is also a source of economic activity in its own right, which is related to the rental income generated. For 2016/17, the average value-added per occupied dwelling in NSW was $17,900 per annum. The average rent was about $470 per week, but for inner Sydney, the average rental value is $780, and this indicates value-added of about $30,000 per annum. Given the frequency and speed of Metro services, locations in proximity to Metro stations are expected to attract a higher premium than would normally apply to rail stations. For market rents, this could be 10-20%, lifting the value-added to over $34,000 per dwelling.

The long-term vacancy rate for rental property in Sydney is about 2%. Allowing for 50% owner-occupied, and a lower vacancy rate in a prime location, a 1% vacancy rate is applied.

The estimates of industry value-added and the contribution of dwellings, together generate an estimate of gross regional product (GRP) for this small area, i.e. the OSD.

[15] Australian Industry Report 2016 https://industry.gov.au/Office-of-the-Chief-Economist/Publications/AustralianIndustryReport/industry-map.html

Appendix D: Case Studies

Euston Station & Greater HS2 Rail Case Study

- *Source: Super Stations: Lessons for Euston Station: how mixed-use developments can transform a community, Sydney & London Properties* (2012)

Figure 20: Euston (Current)

Figure 21: Euston (Planned)

- Abstract: Reference reports look at developments along the High-Speed Rail line within England and provide economic overviews for certain stations. These are then used to inform the development of the Euston rail station. Euston railway station is

located in central London and as such is surrounded by residential, commercial and retail tenancies. A core report used to draw certain figures was prepared by the UK Network Rail Authority, who operate the railway infrastructure in England, Wales and Scotland.

Key Figures

- Inward Investment injected back into economy is paramount:
    - The upfront capital invested into Sheffield Station in the north was valued at roughly £25 million pounds. The level of investment resulting from the additional employment and development of adjacent land added up to £75 million pounds. Accordingly, for every pound invested into the development of the station, the local economy received £3 back.
    - This was the same for Manchester Piccadilly: The station gave rise to £130 million of investment from an initial £62 million-pound investment. A return of £2.1 for every pound invested.

Key Findings

- Station developments generate jobs and economic growth both at the development site and the local area.
- There are broader effects to the local community that are induced from developments of this calibre:
    - Developers benefit from rental incomes due to increases in rental concessions
    - Local authorities enjoy higher council tax bases due to increases to value of land
    - The overall quality of the area improves and attracts further investment

Relevance to Crows Nest OSD

- The inward investment valued with the outward benefits to the local community is an important touchstone
- Benefits to key groups:
    - Developers receive rental incomes from retail concessions
    - Local residents receive higher values for their land and houses
    - Local authorities get increased tax bases due to the higher property values
- Broader benefits

- Accessibility, facilities, environment, removal of urban barriers and a reduction in crime rates

Leeds-Sheffield Case Study

- *Source: The Economic Case for High Speed 2: Leeds and Sheffield City Regions. Prepared by Edward O'Loughlin (WSP Group), 2013*

Figure 22: Leeds (Current)

Figure 23: Leeds: (Planned)

- Abstract: Reference reports primarily focused on the perceived benefits that the High-Speed rail development will bring to both Leeds and Sheffield cities following its completion in 2030. The report provides a lens in which to analyse the economic benefits that can be expected in the fields of industry and high-value businesses, helping to deliver employment and population growth within the area.

- The Leeds and Sheffield Stations are being redeveloped to better connect the northern cities of London. Leeds has a plethora of over station development already attached to it while Meadowhall Station (the proposed HS2 site in Sheffield) is flanked by brownfield lands and some retail provisions.

Key Figures

- A report by WSP civil engineering supposes there will be broader economic benefits to Leeds of £750 million and £20 million to the Sheffield City region due to the development.
- This same report relates productivity and employment density with a measure of connectivity to model the increased productivity and employment brought about by the station and above ground developments.

Key Findings

- There would be a 50% reduction in journey times to London from both Leeds and Sheffield central stations
- Substantial labour capacity increases between both northern cities and London

Relevance to Crows Nest OSD

- The ability for rail development to spur increased economic development within a local area. This is the case with Meadowhall Station that allowed for increased provisions of office space and met longer term housing needs.
- Substantial over station development has continued to occur within Leeds. Renewed redevelopment plans were released in 2017 that look to include more platforms, public spaces and external landscape that will allow for increased provisions of commercial, residential and leisure developments.
- Once completed these two developments will showcase transport's ability to increase the accessibility of an area and, in return. its economic connectivity. This will allow for increased productivity of firms and workers in the area that in turn allows for increased density provisions that are captured in the over station developments.

Shinkansen Case Study

- *Source: Features and Economic and Social Effects of The Shinkansen, Japan Railway & Transport Review (1994)*

Figure 24: Shinkansen Rail - Tokyo Station

Figure 25: Shinkansen Rail - Shin-Osaka Station

- Abstract: Reference reports look at how the impact of high-speed rail throughout Japan has benefitted the economy through decreased travel times, increased labour

mobility and the cultural effects of being easily able to see more cities within their country.

- The Shinkansen ('bullet train') is the network of high-speed railway lines in Japan. By connecting Tokyo with outer regions, this rail network was able to increase the economic growth and development of Japan.

Key Figures

- If 85% of those that use the Shinkansen transitioned from traditional rail, the annual time saving calculated from the difference is 400 million hours. By calculating the value of their time per hour from the GDP per capita, the value of the time saving is ¥500 billion a year (AUD $6.1bn).

Key Findings

- Since passengers visit Shinkansen stations for various purposes, commercial businesses and hotels can be run using the station site due to additional foot fall. As such, 3 of the 18 stations on the Tohoku Shinkansen (of which Tokyo is the major station) have large-scale urban hotels built above them
- The Shinkansen external economic effects:
    - Construction expenditure, travel time reductions, introduction of private investment and creation of employment due to influx of new industries and enterprises in areas along the line.

Relevance to Crows Nest OSD

- By converting the time savings compared with conventional transport into money we can deduce how much money will be saved by Sydney commuters. To appreciate the value added from the station and the additional overhead residential developments, we can compare train times from different city centres to see how much time and money the station will save.