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TRAFFIC AND PARKING IMPACTS REPORT FOR A DEVELOPMENT APPLICATION FOR A PROPOSED RESIDENTIAL DEVELOPMENT AT No. 1 - 5 BROWN STREET, NORTH PARRAMATTA NSW 2151

| Property address | 1-5 Brown Street, North Parramatta NSW 2151 |
|------------------|--|
| Client | LSB Architects |
| Prepared by | O. Sannikov, MEngSc (Traffic Engineering), MIEAust, PEng, FAITPM |
| Date | 05/06/22 |
| Job No. | 21123 |
| Report No. | 21123 Rep 01 |
| | |

| Item | Report | | | | |
|-------------------------|--|--|--|--|--|
| Site location • | Refer to Figure 1. | | | | |
| | | | | | |
| Existing land | Three (3) single storey residential dwellings | | | | |
| use | | | | | |
| Proposed development | Two (2) storey seniors living redevelopment under SEPP (Housing) 2021 | | | | |
| | • 12 units | | | | |
| | 6 one-bedroom units | | | | |
| | 6 two-bedroom units | | | | |
| | 9 car parking spaces | | | | |
| | Including two (2) space for people with disabilities | | | | |





Figure 1. Site location.



| Item | Report |
|---------------------------|---|
| | Existing traffic and parking situation |
| Street characteristics | Refer to Figure 2. |
| | The key roads around the proposed development are described below. |
| | • Brown Street |
| | Local road |
| | 2 travel lanes and parking opportunities on both sides |
| | • Irwin Street |
| | Local road |
| | 2 travel lanes and parking opportunities on both sides |
| | • Jeffery Avenue |
| | Local road |
| | 2 travel lanes and parking opportunities on both sides |
| | • Bourke street |
| | Local road |
| | 2 travel lanes and parking opportunities on both sides |
| | • Iron street |
| | Local road |
| | 2 travel lanes and parking opportunities on both sides |
| | • Prince street |
| | Local road |
| | 2 travel lanes and parking opportunities on both sides |
| | Other streets in the surrounding area are local/local collector roads. Street condition are typical for a residential area, with low to moderate traffic volumes. |
| | Public Transport |
| Bus | • There are five (5) bus stops within short walking distance (approximately 220, 250, 290 300 and 450 m from the site). The closest bus stop is located on Bourke Street. Refer to |

• Bus Route 609

Figure 3.

• Parramatta to North Parramatta(Loop Service)

- 1 service operate during the morning peak hours.
- 6 services operate during the afternoon peak hours.
- The morning peak was considered to be between 6:30 a.m. and 9:30 a.m. and the afternoon peak was considered to be between 3:30 p.m. and 6:30 p.m.





Figure 2. Street characteristics.





Figure 3. Public transport.



| ltem | Report | | | | | | | |
|------------------|--|--|--|--|--|--|--|--|
| Planning control | State Environmental Planning Policy (Housing) 2021 | | | | | | | |
| document 1 | Chapter 2 Affordable Housing | | | | | | | |
| | • Part 2 Development for Affordable Housing | | | | | | | |
| | Division 1 – In-fill affordable housing | | | | | | | |
| | 16 Development to which Division applies | | | | | | | |
| | (1) This Division applies to residential development if: | | | | | | | |
| | (a) the development concerned is permitted with consent under another environmental planning instrument, and | | | | | | | |
| | (b) at least 20% of the gross floor area of the building resulting from the development will be used for the purposes of affordable housing, and | | | | | | | |
| | (c) for development on land in the Greater Sydney region, Newcastle region or Wollongong region—all or part of the development is within an accessible area, and | | | | | | | |
| | (d) for development on other land—all or part of the development is within 400 metres walking distance of land within 1 or more of the following zones or an equivalent land use zone—Zone B1 Neighbourhood Centre, Zone B2 Local Centre or Zone B4 Mixed Use. | | | | | | | |
| | 18 Non-discretionary development standards—the Act, s 4.15 | | | | | | | |
| | (2) The following are non-discretionary development standards in relation to the carrying out of development to which this Division applies— | | | | | | | |
| | (f) for a development application made by a social housing provider for development on land in an accessible area— | | | | | | | |
| | (i) for each dwelling containing 1 bedroom—at least 0.4 parking spaces, or | | | | | | | |
| | (ii) for each dwelling containing 2 bedrooms—at least 0.5 parking spaces, or | | | | | | | |
| | (iii) for each dwelling containing at least 3 bedrooms— at least 1 parking space, | | | | | | | |
| | (g) if paragraph (f) does not apply— | | | | | | | |
| | (i) for each dwelling containing 1 bedroom—at least 0.5 parking spaces, or | | | | | | | |
| | (ii) for each dwelling containing 2 bedrooms—at least 1 parking space, or | | | | | | | |
| | (iii) for each dwelling containing at least 3 bedrooms—at least 1.5 parking spaces, | | | | | | | |
| | Car parking required Car parking proposed | | | | | | | |
| | For this development, the current applicant is a 9 spaces are proposed. social housing provider but the site is not located in an accessible area. | | | | | | | |
| | There are six one-bedroom units and six two- bedroom units: | | | | | | | |
| | • 6 x 0.5 = 3 spaces | | | | | | | |
| | • 6 x 1 = 6 spaces | | | | | | | |
| | Total: | | | | | | | |
| | • 3 + 6 = 9 spaces | | | | | | | |
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| Item | Report | | | | | | | | |
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| Planning control | City of Parramatta Council | | | | | | | | |
| document 2 | • Parramatta Development Contr | Parramatta Development Control Plan 2011 (PDCP) | | | | | | | |
| | Part 3 Development Principles | | | | | | | | |
| | 3.2 Building Elements | | | | | | | | |
| | 3.6 Movement and Circulation | | | | | | | | |
| | Requirement | Compliance | | | | | | | |
| | Part B - General Residential | | | | | | | | |
| | 3.2 Building Elements | | | | | | | | |
| | 3.2.6 Fences | | | | | | | | |
| | Objectives | | | | | | | | |
| | O.1 To ensure fences complement and conserve the visual character of the street and neighbourhood. | | | | | | | | |
| | O.2 To define the boundaries/edges between public and private land and between areas of different function. | | | | | | | | |
| | O.3 To contribute positively to the public domain. | | | | | | | | |
| | P.1 Fences should not be constructed in floodways. Where this is unavoidable fences are to be constructed of flood compatible and open type materials that will not restrict the flow of flood waters and be resistant to blockage. | To be addressed by others | | | | | | | |
| | P.2 Front fences are to be a maximum height of 1.2m. | Complies | | | | | | | |
| | P.3 Where noise attenuation or protection of amenity requires a higher fence, front fences may be permitted to a maximum height of 1.8m and must be setback a minimum of 1m from the boundary to allow landscape screening to be provided. Landscape species chosen should be designed to screen the fence without impeding pedestrian movements along the roadway. Front fences and landscape screening must not compromise vehicular movement sightlines. | Complies Please refer to the design assessment results in the Appendix | | | | | | | |
| | 3.6 Movement and Circulation | | | | | | | | |
| | 3.6.2 Parking and Vehicular Access | | | | | | | | |
| | Objectives | | | | | | | | |
| | O.1 To ensure that the location and design of driveways, parking spaces and other areas used for the movement of motor vehicles are efficient, safe, convenient and are integrated into the design of the development to minimise their visual impact. | | | | | | | | |
| | O.2 To ensure that adequate off-street parking is provided to serve the needs of development. | | | | | | | | |
| | Design Principles P.1 Vehicle access points and parking areas are to be: | Complies | | | | | | | |
| | easily accessible and recognisable to motorists undisruptive to pedestrian flow and safety | | | | | | | | |

• located to minimise traffic hazards



| Item | Report | | | | | | | |
|------|--|---|--|--|--|--|--|--|
| | Requirement | Compliance | | | | | | |
| | and the potential for vehicles to queue on public roads located to minimise the loss of on street car parking, and to minimise the number of access points. | | | | | | | |
| | P.2 Car parking and service/delivery areas are to be located so that they do not visually dominate either the development or the public domain surrounding the development. | Complies | | | | | | |
| | P.3 Parking and service/delivery areas and vehicular access points are to be located to minimise conflict between pedestrians and vehicles and to minimise impact on residential amenity. | Complies | | | | | | |
| | P.4 Development on arterial roads is to seek access via a secondary street where possible. | Not applicable, not arterial road | | | | | | |
| | P.5 Where properties have access to a rear lane or secondary street frontage (including desired lanes) parking and servicing access should be provided from the secondary street/lane. | Complies | | | | | | |
| | P.6 On site parking is to be provided at a rate sufficient for residents, employees, visitors and service vehicles as relevant to the development. | Complies with SEPP (Housing) 2021 | | | | | | |
| | P.7 Car parking spaces are to be designed to | Complies with AS/NZS 2890 series | | | | | | |
| | on-site. The standards of AS 2890 are to be complied with. | Please refer to the design assessment results in the Appendix | | | | | | |
| | P.8 Driveways are to be designed to avoid a | Satisfactory | | | | | | |
| | landscaping and variations in alignment. | The length of the driveway is only to satisfy the requirements of P.2 above | | | | | | |
| | P.9 Car parking areas and vehicle accessways are to be landscaped to integrate sympathetically with the development and the landscape character of the locality. Large car parking areas are to be broken up using landscaping. The design and layout of carparking areas must provide for suitable and safe pedestrian movements, including separate pedestrian access to buildings which are clearly defined and easily negotiated. | Complies with AS/NZS 2890 series | | | | | | |
| | P.1 The area between property boundaries and driveways, access ways and parking spaces is to be of sufficient width to enable landscaping and screen planting. | Complies | | | | | | |
| | P.2 Car parking at ground level is not to encroach within building setbacks. | Complies | | | | | | |
| | P.3 Reasonable provision is to be made for the parking needs of people with disabilities. | Complies | | | | | | |
| | P.4 Basement car parking is to be: | Not applicable | | | | | | |
| | P.5 Basement car parks and manoeuvring must comply with AS 2890. P.6 Vehicular ramps for all development types are to be designed with sufficient width for safe and efficient ingress and egress. | Not applicable | | | | | | |
| | P.6 Vehicular ramps for all development types are to be designed with sufficient width for safe and efficient ingress and egress. | Not applicable | | | | | | |



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|------|--|---|--|--|--|--|--|--|
| | Requirement | Compliance | | | | | | |
| | P.1 Car parking areas within multi dwelling | Complies | | | | | | |
| | must be designed to minimise headlight glare onto the windows of dwellings within the site or neighbouring properties. | There is no ramp going up from the basement and therefore low risk of headlight glare. | | | | | | |
| | P.2 Visitor parking is to be marked or | Complies | | | | | | |
| | signposted to enable easy recognition. | Please refer to the design assessment results in the Appendix | | | | | | |
| | P.3 The design and layout of carparking areas | Complies | | | | | | |
| | movements, including separate pedestrian access to buildings which are clearly defined and easily negotiated | Please refer to the design assessment results in the Appendix | | | | | | |
| | P.4 Car parking is not to be used as storage space. | Capable of complying during operation | | | | | | |
| | P.5 Development must provide safe vehicle | Complies | | | | | | |
| | Development on arterial roads or development that is not a dwelling house must make provision for vehicles to leave the site in a forward direction. | Please refer to the design assessment results the Appendix | | | | | | |
| | Design Controls | | | | | | | |
| | Bicycle Parking | | | | | | | |
| | C.1 Residential flat buildings, business premises, office premises, retail and industrial developments are required to provide adequate, safe and secure bicycle parking. | Not applicable to this SEPP (Housing) 2021 development | | | | | | |
| | C.2 to C.8 | Not applicable | | | | | | |
| | Each on site car parking space must have the following dimensions: | | | | | | | |
| | C.9 Enclosed garage: 3.0 metres width x 5.4 metres length | Complies | | | | | | |
| | ineties length | Please refer to the design assessment results in the Appendix | | | | | | |
| | C.10 Disabled parking space must be in accordance with AS 2890.6 - 2009 Parking | Complies | | | | | | |
| | Facilities Off Street Parking for People with Disabilities | Please refer to the design assessment results in the Appendix | | | | | | |
| | C.11 Clearance above the general parking | Complies | | | | | | |
| | surface must be in accordance with AS 2070 | Please refer to the design assessment results in the Appendix | | | | | | |
| | C.12 Unenclosed parking spaces must be in | Complies | | | | | | |
| | | Please refer to the design assessment results in the Appendix | | | | | | |
| | C.13 The number of accessible carparking spaces to be provided as prescribed in Table D3.5 of the Building Code of Australia. | Complies | | | | | | |
| | Dwelling Houses and Dual Occupancies | Not applicable | | | | | | |
| | Multi Dwelling Housing | | | | | | | |
| | C.18 For townhouses and villas, a maximum of | Complies | | | | | | |
| | metres is permissible per two dwellings, or alternately two crossings every 18 metres. | Please refer to the design assessment results in the Appendix | | | | | | |
| | C.19 For attached dwellings, all car parking is to | Complies | | | | | | |
| | from a rear lane. | Please refer to the design assessment results in the Appendix | | | | | | |



| | Traffic Impacts | | | | | | |
|--------------------|---|--|--|--|--|--|--|
| Traffic generation | Base traffic generation rates | | | | | | |
| | From RMS (2002) Guide to Traffic Generating Developments | | | | | | |
| | Updated data from TDT 2013/04a | | | | | | |
| | Existing traffic generation | | | | | | |
| | Three (3) single story residential dwelling | | | | | | |
| | Weekday peak hour vehicle trips = 0.99 per dwelling | | | | | | |
| | 0.99 × 3 = 2.97, say 3 trips (during the respective peak hour) | | | | | | |
| | Traffic generated by proposed development | | | | | | |
| | • 12 units | | | | | | |
| | Smaller units and flats (up to two bedrooms): | | | | | | |
| | Weekday peak hour vehicle trips = 0.4 – 0.5 per dwelling | | | | | | |
| | 12 x (0.4 to 0.5) = 4.8 to 6.0, say 5 to 6 trips (during the respective peak hour) | | | | | | |
| | Additional traffic generated by proposed development | | | | | | |
| | (5 to 6) - 3 = 2 to 3, say 3 additional trips (during the respective peak hours) | | | | | | |
| Safety | Accident statistics | | | | | | |
| | Accident statistics from RMS NSW indicate 2 non-casualty (towaway) and 1 minor injury crash in 5 years. This crash does not have a direct correlation to vehicles entering nor exiting from any of the nearby developments. | | | | | | |
| | Safety risks are very low and do not preclude a residential development at the proposed location. | | | | | | |
| | Refer to Figure 4. | | | | | | |
| | It is also important to note that the proposed access to the site is not on the main road. | | | | | | |
| Conclusion | • The additional traffic generation of 3 trips per hour will have no discernible effect on the existing road network operation nor on the safety risks. | | | | | | |



| Transport for NSW cerve for Based Safety | | | Cras | shes N | lap - Parra | amatta | | | | тожи | ARDS ZERO |
|--|-----------|-------------------------------|--|------------|--------------------|------------------|------------------|------------|--------------|----------------|---------------|
| Select your LGA | | | | | | | - | | | | 63 |
| Parramatta | I = I | Layers | × | | | | | | | | |
| Reporting year | | ✓ Coordinates | ۰۰۰ (| | | Bourke St | | | | | |
| All | | Degree of crash | | | | | | | | | |
| Depres of such | | Non-casua | ilty (towaway) | | | | | | | | |
| Degree of crash | Q | Moderate | Injury | | | | | | | | |
| All | × | Serieus Ini | | | | | | | | | |
| Type of crash | | Serious inj | ury | | | | | | | In St | Tet |
| All | × 10 | Minor/Oth | er Injury | - | | Inv | | | Bros | | fery |
| Speed limit | 521 | Fatal | 1 | S nor | | in St | | | | | Ave |
| All | ~ 🔹 | Other | | | | | Brown | st | 400 | | 1 Le |
| RUM code group | | - Umarra | The second secon | | | | h insin i | SIT | TE | | |
| All | ~ | | Seville St | | | | | | | | |
| Type of location group | | | | | | | | | | | |
| All | ~ | | | | vin S. | | | | | | |
| Speeding involved in crash | | | | | | | | | | Ave | esri |
| All | ~ | | | | | | | | | h | |
| Fatigue involved in crash | Report | ing year Crash Id | Degree of crash | RUM - code | RUM - description | Type of location | Natural lighting | Longitude | Latitude Num | ber killed Num | ber injured 🔨 |
| All | ~ 2016 | 1089486 | Minor/Other Injury | 30 | Rear end | T-junction | Daylight | 151.062778 | -33.811848 | | 1 |
| Poad classification | 2016 | 1089606 | Minor/Other Injury | 42 | Leaving parking | X-intersection | Daylight | 151.049886 | -33.782300 | | 1 |
| Road classification | 2016 | 1089681 | Non-casualty (towaway) | 10 | Cross traffic | T-junction | Daylight | 151.054680 | -33.848724 | | |
| All | 2016 | 1089792 | Serious Injury | /5 | Off rd rgnt => obj | 2-way undivided | Daylight | 151.014578 | -55.805353 | | 1 |
| | 2016 | 1089986 | Non-casualty (towaway) | 30 | Rear end | Divided road | Daylight | 150.999501 | -33,791131 | | |
| DATA AVAILABILITY | 2016 | 1090041 | Minor/Other Injury | 30 | Rear end | T-junction | Davlight | 151.000353 | -33.812833 | | 3 |
| Finalised data is available for | 2016 | 1090064 | Non-casualty (towaway) | 33 | Lane sideswipe | X-intersection | Davlight | 151.049798 | -33,782352 | | - |
| the 5 year period 2016 to 2020 | 2016 | 1090086 | Non-casualty (towaway) | 21 | Right through | X-intersection | Daylight | 151.011288 | -33.818962 | | |

Figure 4. Crashes map – near the site and in the area.



Conclusions

- Proposed parking provision
 - Complies with the relevant requirements of SEPP (Housing) 2021 and PDCP 2011
 - Traffic impacts
 - \circ $\,$ The additional traffic will be minimal and will have no negative impact on the existing traffic situation.
 - Design of access, car parking and servicing facilities
 - Complies with the relevant Standards.
 - The proposed development is supportable on traffic and parking grounds.

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References:

State Environmental Planning Policy (Housing) 2021 Parramatta Development Control Plan (PDCP) 2011 RMS (2002) Guide to Traffic Generating Developments AS/NZS 2890.1:2004: Parking Facilities – Off-street car parking AS 2890.3:2015: Parking Facilities – Bicycle parking



Appendix

Bus routes Car park design checks and vehicle turning diagrams



