



TRAFFIC GENERATION & ON-SITE PARKING ASSESSMENT

PROPOSED SELF STORAGE PREMISIES AND SIGNAGE

**12 WILLIAMS STREET
BROOKVALE NSW**

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TABLE OF CONTENTS

1.0	INTRODUCTION.....	3
2.0	SCOPE OF REPORT	3
3.0	EXISTING CONDITIONS.....	3
3.1	SITE DESCRIPTION	3
3.2	ROAD NETWORK	5
3.3	TRAFFIC FLOWS	6
4.0	DEVELOPMENT SCALE	7
5.0	SELF STORAGE PREMISES ON-SITE PARKING ASSESSMENT	8
5.1	CAR PARKING REQUIREMENTS FOR FACILITY.....	8
6.0	VEHICULAR ACCESS	9
7.0	ON-SITE PARKING LAYOUT AND DESIGN	9
8.0	TRAFFIC GENERATION	11
8.1	ROAD NETWORK.....	11
8.2	SITE TRAFFIC GENERATION	13
9.0	CONCLUSION	15

1.0 INTRODUCTION

This report has been prepared by ATB Consulting Engineers as commissioned by Design Workshop Australia (DWA) Architects to provide on-site parking assessment for a proposed storage units which includes self-storage premises and provision for parking on ground floor at 12 Williams Street, Brookvale.

This report reviews the relative traffic, parking, access, and road safety operational aspects of self-storage premises development proposed for the subject site, as it impacts the road network.

The report has been prepared in conjunction with architectural plans by Design Workshop Australia (DWA) Architects.

2.0 SCOPE OF REPORT

This Traffic and Parking Assessment Report is based on Stantec “Parking and Traffic Study” commissioned by (SSAA) Self-Storage Association of Australia PTY LTD. Due to the current publication by Northern Beaches Council (NBC) within WDCP 2011, Chapter C3 does not as of current provide a specific Parking/Traffic requirements for Self-Storage Premises (SSP). SSP requirements not being included within the DCP it is required by NBC to base parking/traffic requirements based on survey similar therefore survey was completed and outlined within this Traffic and Parking Assessment Report.

3.0 EXISTING CONDITIONS

3.1 SITE DESCRIPTION

The subject site is located on Williams Street currently occupied by a single one-story residential dwelling. It is located within an E3 zone which is classified as ‘Productivity Support Zone’. The site area is 517.30m² and approx. 100.0m from Pitt Water Road.

Land use surrounding the proposed development site is predominantly commercial with Residential dwellings perpendicular to the site.

Further the area is well served by public transport with a major B1 bus line interchange at the corner of Willam Street & Pittwater Road.



Figure 1: Development site location (source RMS)

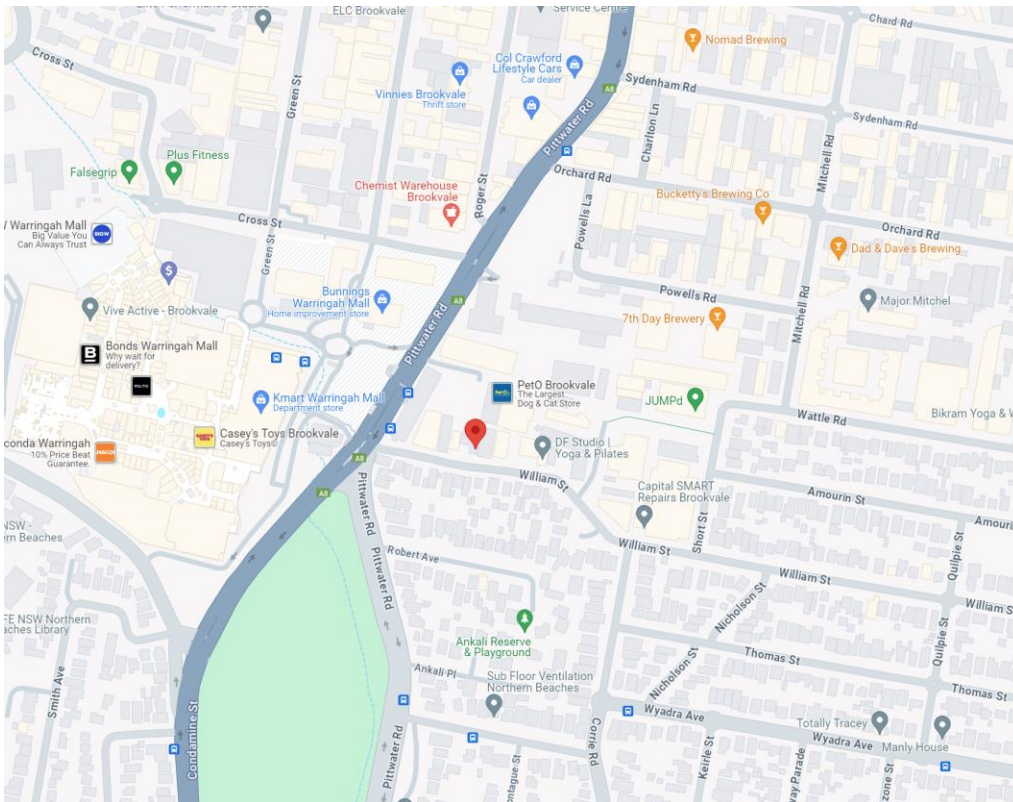


Figure 2: Development site location (source Google Maps)



Photo 1: Existing dwellings, 12 William Street Brookvale (source Google Maps)

3.2 ROAD NETWORK

WILLIAM STREET

William Street is designated as a local access road under the administration of Northern Beaches Council.

In the vicinity of the site the road is bitumen sealed (generally 13m wide carriageway), orientated generally east with kerb and gutter, concrete paved footpaths within the footway areas both sides of the road and serves the local access needs of the surrounding precinct. The road network is a single lane in both direction. Kerbside parking is permitted on both side of road.

The regulated speed limit of the road network is 50 km/hr.

Overhead street lighting is employed along the road commensurate with local collector/distributor road access street lighting standards.

Off-street parking is timed along the kerb, to the left (Adjacent to site) facing east bound a maximum station period of 1 hour and to the right (residential side) a maximum of 8 hours.

PITTWATER ROAD

Pittwater Road is designated as a State Road by the RMS and provides north-south road link in the area, linking Manly to Church Point. It typically carries three traffic lanes in each direction in the vicinity of the site, including dedicated Bus Lanes during peak commuter periods.

The regulated speed limit of the road network is 60 km/hr.



Photo 2: William Street looking West close to subject site

3.3 TRAFFIC FLOWS

Traffic flows along William Street has not been recorded, though are considered to be moderate especially during commuter AM and PM peak travel times and commensurate with a local access road traffic volumes serving a reasonably industrial precinct.

4.0 DEVELOPMENT SCALE

The proposed development is for the erection of a 4 Storey self-storage premises development with parking at ground floor.

The development proposes Eighty-four 84 Storage Lockers ranging from 7.5-18.2m².

Access of the site is provided from William Street via a new vehicle two-way driveway at the front end of the property.

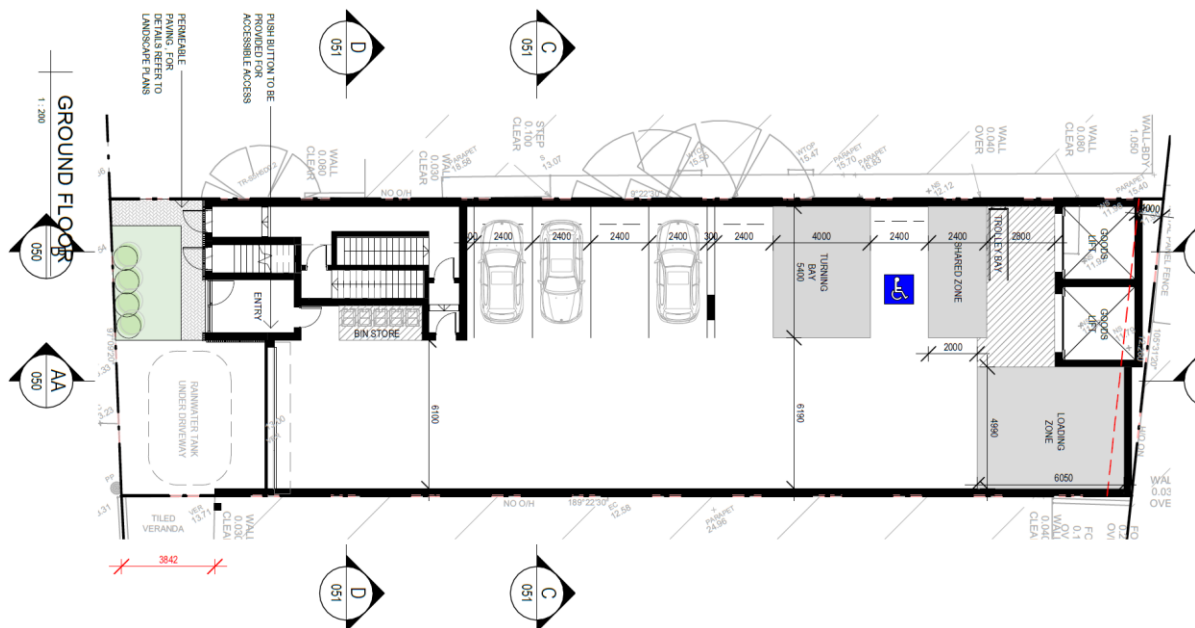


Figure 3: Proposed Ground floor plan (source DWA)

5.0 SELF STORAGE PREMISES ON-SITE PARKING ASSESSMENT

The following study “Parking and Traffic Study” conducted by Stantec on behalf of Self-Storage Association of Australia 2022/23. This reference will support that self-storage premises are to be considered light traffic impact as evidence by low trip volumes and sporadic trip generation patterns.

The study involved 32 self-storage premises around Australia including 10 in Sydney and was aimed to identify the lack of specific guidelines to assist business operators or local council authorities to determine the number of vehicular parking spaces required to adequately satisfy these types of developments. This will include an assessment of the likeliness of traffic implications of new self-storage facilities on the surrounding road networks.

The traffic and parking recommendations will be reproduced in the relevant sections of this report, and it can be generally appreciated that self-storage premises represent a very low intensity land use, particularly in terms of car parking and traffic generation. Parking requirements will be in accordance with the study that was conducted which includes the following.

5.1 CAR PARKING REQUIREMENTS FOR FACILITY

A summary within the study has concluded the following requirements for recommended parking rate provision and trip generation rates.

Facility Size	Number of Parking Spaces
Under 3,000 m ²	5 spaces
3,000 to 6,000 m ²	7 spaces
6,000 m ² +	7 spaces

Table 1: Recommended Parking Rate Provision (Source: Self Storage Facility Traffic and Parking Study)

The site facility is less than 3000m². The GFA of the facility 1812.83m² and MLA of 1259.6m² which shows that **5 spaces are required** on the premises. This has been met by **providing the 6 spaces** including one adaptable space.

6.0 VEHICULAR ACCESS

The proposed vehicular access to and from the on-site parking area will be via a two-way, driveway crossings to be located on the Eastern boundary of the site. The driveway crossing is 5.5m wide with additional 300mm clearances adjacent to any obstructions as per AS2890.1.

The location of the proposed driveway provides adequate sight distance and a clear vision of incoming traffic.

The proposed driveway access complies with council's standard vehicle entrance designs and is in accordance with the AS 2890.1 driveway requirements. The driveway is to have changes in grade to prevent vehicles scraping.

7.0 ON-SITE PARKING LAYOUT AND DESIGN

The carpark adopts dimensions consistent with AS2890.1.

The layout of the on-site car parking area and maneuvering arrangements have been designed so any vehicle which uses the area will be able to enter and leave the site in a forward direction without the need to make more than a three-point turn.

The development's car parking facilities include the following design features:

- Commercial Parking spaces for residents and visitors are typically 2.4m wide by 5.4m long.
- Aisle Width: 5.8m (minimum), additional 300mm needs to be provided where one side of the aisle is bounded by high obstruction (i.e. wall or column)
- 1m extensions have been provided at the end of blind parking aisles
- Parking bays adjacent to vertical obstructions have a provision of 0.3m clearance

Accessible Parking

All accessible parking spaces have been individually assessed against the requirements of AS2890.6. Accessible parking spaces are to be designed based on the following dimensions:

- Accessible Space: 2.4m x 5.4m
- Adjacent Shared Bay: 2.4m x 5.4m (with bollard)

All shared bays and accessible spaces shall be installed in accordance with AS2890.6, including the installation of bollards and relevant pavement markings. A

minimum height clearance of 2.5m is to be maintained above all accessible and shared bays.

Headroom Clearance

Headroom clearances must be provided in accordance with the minimum requirements of AS2890.1 and AS2890.2.

These requirements are stipulated below:

- Minimum 2.2m above all general spaces;
- Minimum 2.5m above all accessible spaces and adjacent shared bays; and
- Minimum 2.2m above all bicycle spaces.
- Parking bays adjacent to vertical obstructions have a provision of 0.3m clearance

All vehicles' maneuverings within the site have been designed and checked using the B85 design template. Please refer to Appendix A for the B85 swept path turning circles.

All car parking areas and driveway will be constructed of concrete pavement to Engineers' details and specifications.

All car parking areas will be permanently marked as detailed in AS 2890.1 Pedestrian entry/ exit is separated from vehicular entry/ exit points.

8.0 TRAFFIC GENERATION

8.1 ROAD NETWORK

The road network serving the site comprises:

- *Pittwater Road/Condamine Street* – a State Road and arterial route connecting between Spit Bridge and the Northern Beaches Peninsula
- *Warringah Road* – a State Road and arterial route connecting between Brookvale and Chatswood over the Roseville Bridge
- Cross Street – a minor collector road connecting between Pittwater Road and Old Pittwater Road
- Old Pittwater Road – a collector road connecting to Pittwater Road

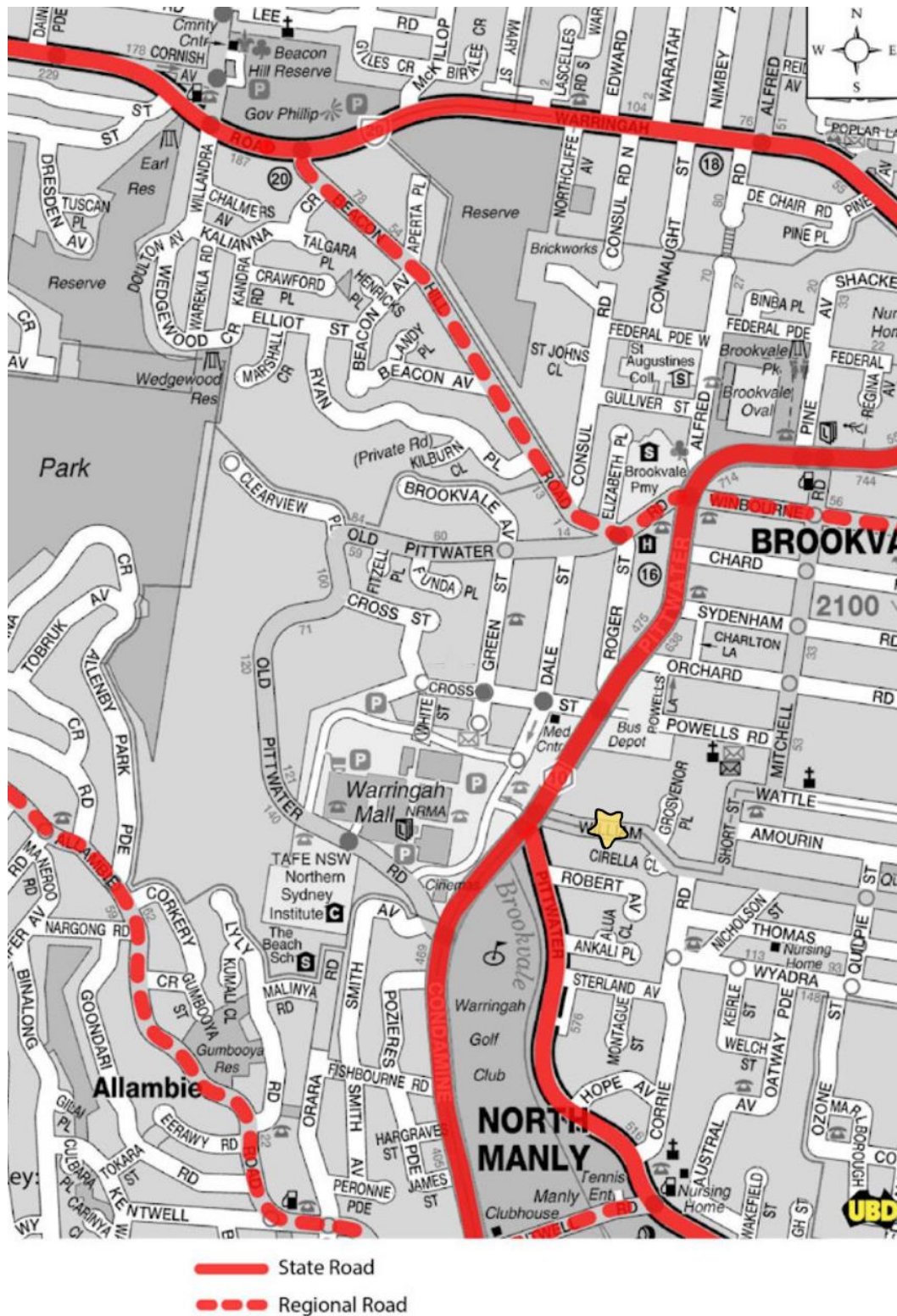


Figure 5: Road Network

8.2 SITE TRAFFIC GENERATION

EXISTING CONDITIONS:

An indication of the traffic generation potential of the development proposal is provided by reference to Guide to Traffic Generating Developments, RMS, TDT 2013/04a

Dwelling houses Rates

Daily vehicle trips = 7.4 per dwelling

Weekday evening peak hour vehicle trips = 0.78 per dwelling.

Weekday morning peak hour vehicle trips = 0.71 per dwelling.

Daily vehicle trips= $1 \times 7.4 = 7.4\text{dvt}$

Average evening peak hour vehicle trips = $1 \times 0.78 = 0.78 = 1\text{phvt}$

Average morning peak hour vehicle trips = $1 \times 0.71 = 0.71 = 1\text{phvt}$

PROPOSED CONDITIONS:

Regional Areas: Proposed Self Storage premises

An indication of the traffic generation potential of the development proposal is provided by reference to the Self-Storage Facility Traffic and Parking Study (2022/23) undertaken by Stantec Australia on behalf of the Self-Storage Association of Australia.

	Weekday		Weekend	
Facility	Peak	Daily	Peak	Daily
Under 3,000 m ²	6.6	63	5.5	47.2
3,000 to 6,000 m ²	8.9	95.9	8.7	82.5
6,000 m ² +	11.4	108.6	10.2	85.6

Table 2: Recommended Trip Generation Rates (Source: Self Storage Facility Traffic and Parking Study)

Based off table 2 the following rates are as follows.

Weekday:

Peak: 6.6 Trips

Daily: 63 Trips

Weekend:

Peak 5.5 Trips

Daily: 47.2 Trips

With all factors considered, the above rates give a reasonable estimate of per-dwelling type traffic generation for the purpose of traffic assessment.

The 2022/23 study undertook traffic surveys at 32 individual self-storage premises around Australia and revealed the following:

It is to note that the study has been omitted in this assessment due to the updated trip generation analysis only assessed the daily trip generation potential of those newly surveyed sites and did not reassess their traffic generation during the AM and PM hour.

As shown above, during the weekday peak period the traffic generated by the site equates to an estimated 1 (1) vehicle trips.

The impact of an additional five (6) trips (equivalent to 1 vehicle trip every 10 minutes) during the weekday peak commuter periods will have no noticeable impact on the surrounding residential amenity and intersection performance.

Intersection and road network capacity analysis is not sensitive to such minor changes in volumes and no impact is anticipated.

Adequate site distances are provided to and from the access point of the driveway and separated pedestrian access to the footway/roadway so as not to create a road safety issue.

9.0 CONCLUSION

Based on the foregoing analysis it is concluded that:

- It is proposed to redevelop the site for the purpose of a self-storage premises.
- The proposed development is to provide adequate carparking facilities for individuals requiring access to the storage units including parking required for the disabled.
- The proposed off-street car parking layout and circulation is adequate in accordance with the requirements of WDCP Chapter C3 and Australian Standard for Off-Street car parking AS/NZ 2890.1.
- The entry/exit have adequate site distances and will have no impact on existing street parking.
- The development will not impact on traffic movements or road user safety within William Street and the adjacent road network.
- Traffic generated by the proposed development will be only an additional 6 cars in hour, during the peak hours and considered to be only minor and have no impact on the operation of the adjoining road network when compared with the existing use of the site.
- Minimal impact on the existing road amenity and the vehicular access and parking provisions are considered satisfactory to accommodate anticipated traffic demand generated by the operation of the proposed development.

We therefore conclude that there are no traffic engineering grounds on which a permit for the Development Application should not be granted for the proposed Self Storage Premises Development on this site.

I trust the above information and recommendations are satisfactory when dealing with this matter. Should you require further information or clarification please contact me.

On Behalf of
ATB Consulting Engineers Pty Ltd



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APPENDIX A – STANDARD B85 & B99 VEHICLE SWEPT PATH TURNING CIRCLES