



**gtk consulting**  
traffic management  
and car parking solutions

# **Car Parking & Vehicle Access Assessment**

## **981 Barrenjoey Road, Palm Beach**

**Version 2**

**January 2020**

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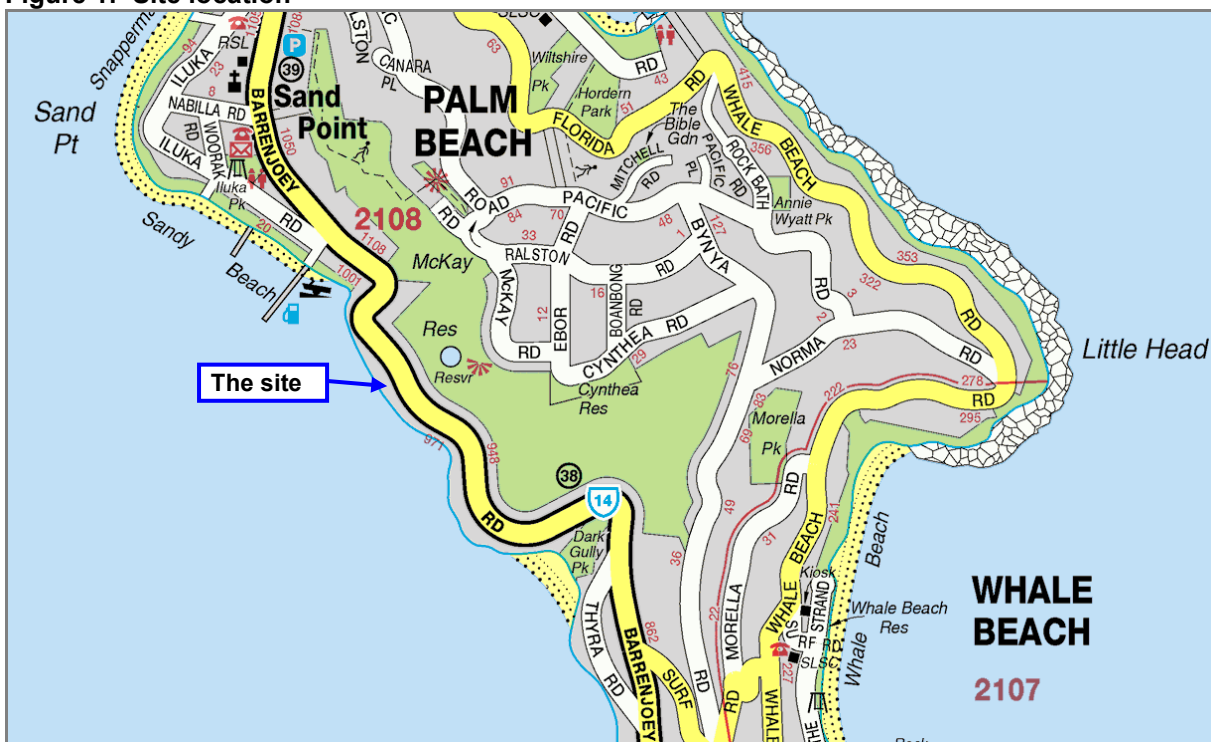
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# 1 INTRODUCTION

gtk consulting has been engaged by Mr Morris Symonds to undertake an assessment of a proposal to reconstruct a vehicle access driveway and provision of a vehicle turntable at 981 Barrenjoey Road, Palm Beach (**Figure 1**).

This assessment was undertaken by Garry Kennedy, Director gtk consulting pty ltd. Garry has extensive (46 years) experience in Traffic Engineering, Road Safety and Car Parking. Garry chaired a Local Traffic Committee for seventeen years at a major metropolitan Council. In 2006 Garry established gtk consulting and since that time has undertaken traffic and car parking assessments and studies for Local and State Government Agencies and private developers. Garry provides expert evidence in the NSW Land and Environment Court, Local Magistrates Court and District Court. Garry’s court experience covers a wide range of traffic activities, such as, the suitability of development proposals, traffic accident liabilities, heavy vehicle prosecutions, parking offences and many other offences under the Local Government Act and the Roads Act.

**Figure 1: Site location**



Source: UBD Australian City Streets v7.0 (licensed to gtk consulting)

## 2 THE SITE AND SURROUNDS

The site (refer **Figure 2**), located on the western side of Barrenjoey Road approximately 700 metres south of Sand Point, is occupied by a detached two-storey residential dwelling. The site is zoned *E4 – Environmental Living* and surrounding properties consist of one and two storey detached dwellings, the majority of which are provided with off-street parking (most located directly adjacent to Pittwater Road).

The site has an existing access driveway on Barrenjoey Road leading to a single space carport (**Photo 1**). A section of the driveway, existing retaining wall, carport and landscaping are located within the road reserve of Barrenjoey Road. The existing driveway intersects the nature strip and road at an acute angle (**Photo 2**). This angle prevents vehicles from turning left into the driveway when approaching from the south and the current practice is to stop, wait for following vehicles to pass and then reverse into the driveway. Alternatively, vehicles can proceed past the premises and U-turn in a side street further towards Sand Point, return and drive forward into the driveway, however, this requires vehicles to reverse back onto Barrenjoey Road. The current arrangement, therefore, does not allow a vehicle to enter and leave the site in a forward direction. The carriageway width on Barrenjoey Road is 6.0 metres between edge lines and is designated two-way (**Photos 3 and 4**). There are double white barrier lines in front of the site.

**Figure 2: Aerial view of site**



Source: Six Maps 2019

Barrenjoey Road has a speed zone of 60 km/h and is a classified State Arterial road under the care, control and responsibility of the NSW Roads and Maritime Services.

**Photo 1: Existing driveway leading to carport at No.981**



Source: gtk consulting 2019

**Photo 2: Showing angle of driveway leading to carport at No.981**



Source: gtk consulting 2019

**Photo 3: Barrenjoey Rd looking south from driveway No.981**



Source: gtk consulting 2019

**Photo 4: Barrenjoey Rd looking north from driveway No.981**



Source: gtk consulting 2019

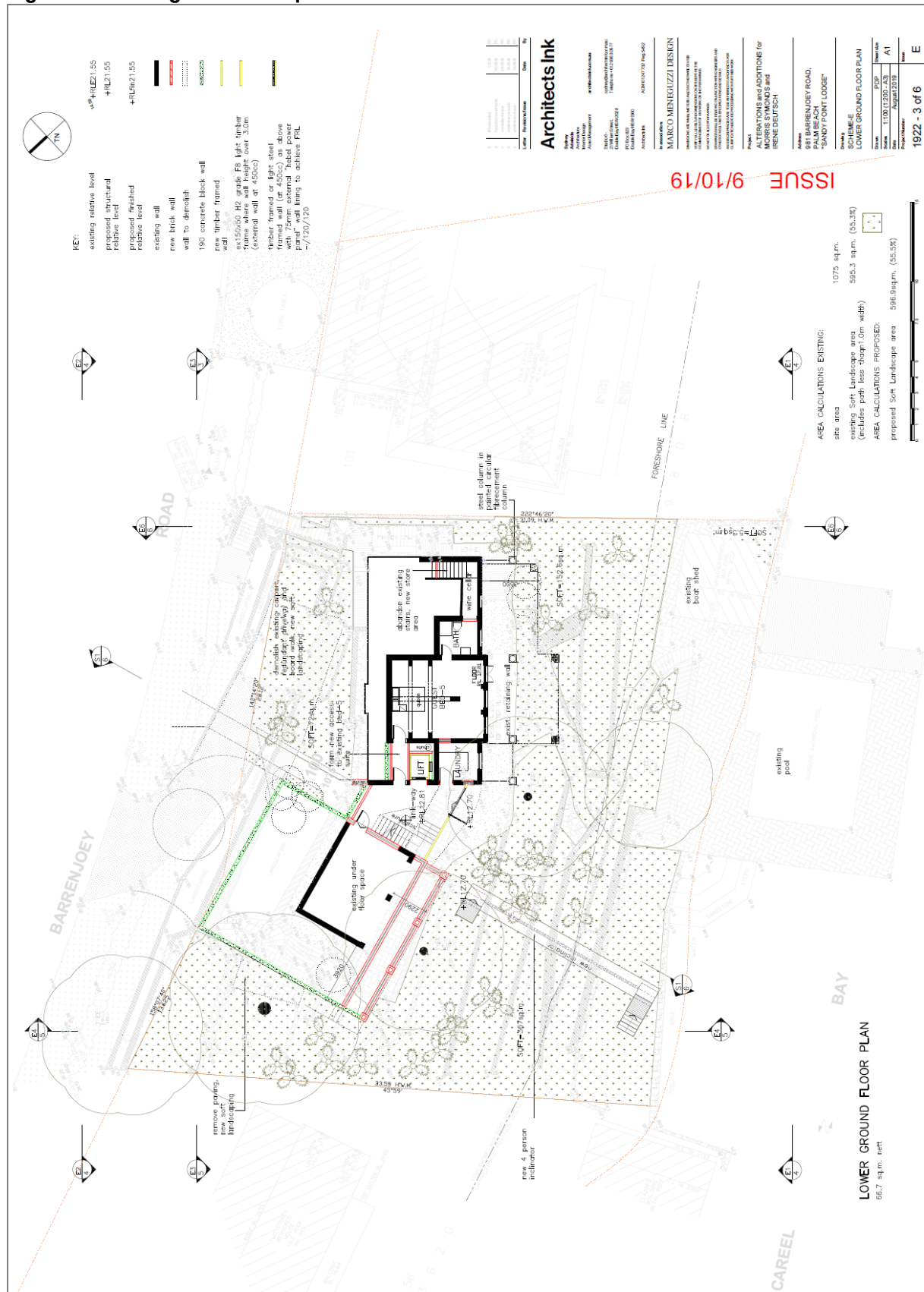
### 3 THE PROPOSAL

The proposal is to carry out alterations and additions to the existing residence at 981 Barrenjoey Road, Palm Beach. This assessment deals with the aspect of the proposal to demolish the existing single carport, construct a new 2 car carport, reconstruct the existing vehicle access driveway and provide a new vehicle turntable located wholly within the property boundary. The car parking spaces within the proposed carport are 5.4 metres long and 2.4 metres wide (an additional 0.3 metres is provided adjacent to the side wall). Preliminary plans of the proposed carport, driveway and turntable have been prepared by Architects Ink (refer **Figures 3, 4 & 5**).

A vehicle accessing the parking space adjacent to Barrenjoey Road will enter the driveway in a forward direction and exit by reversing back into the aisle and leave the site in a forward direction. A vehicle accessing the second space adjacent to Bedroom 1 will enter the driveway in a forward direction and, using the turntable, reverse into the space. The vehicle is then able to exit the space and drive forward onto Barrenjoey Road in one movement without use of the turntable. The proposed layout and turntable, therefore, allows vehicles to enter and leave the site in a forward direction which is considered a significant safety improvement on the existing access arrangements.

The proposed reconstructed driveway will be located wholly within the road reserve of Barrenjoey Road and, in accordance with Section 138 of the *Roads Act 1993*, consent from the Roads Authority, i.e. Road and Maritime Services, is required.

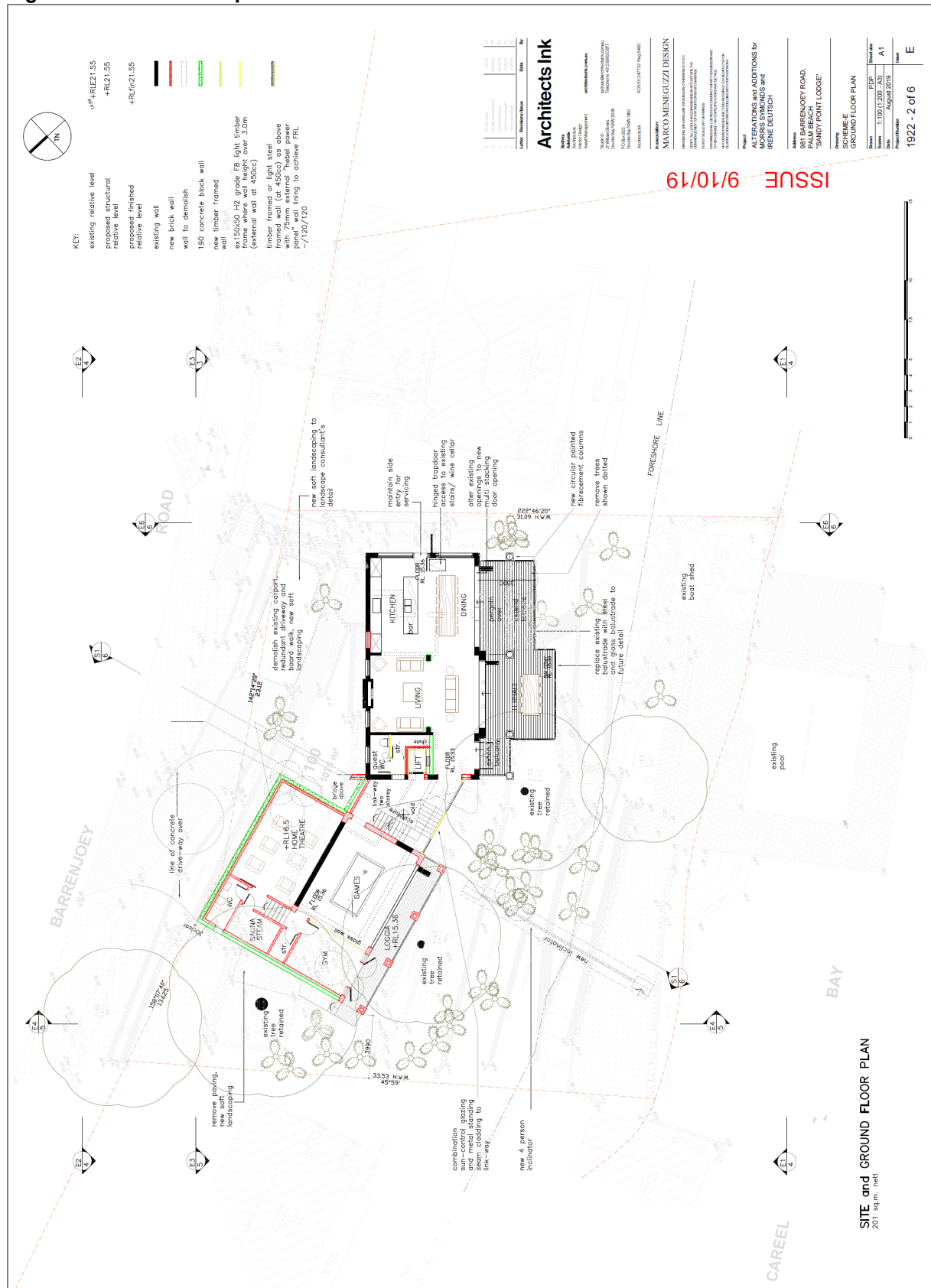
Figure 3: Lower ground floor plan



Source: Architects Ink 2019

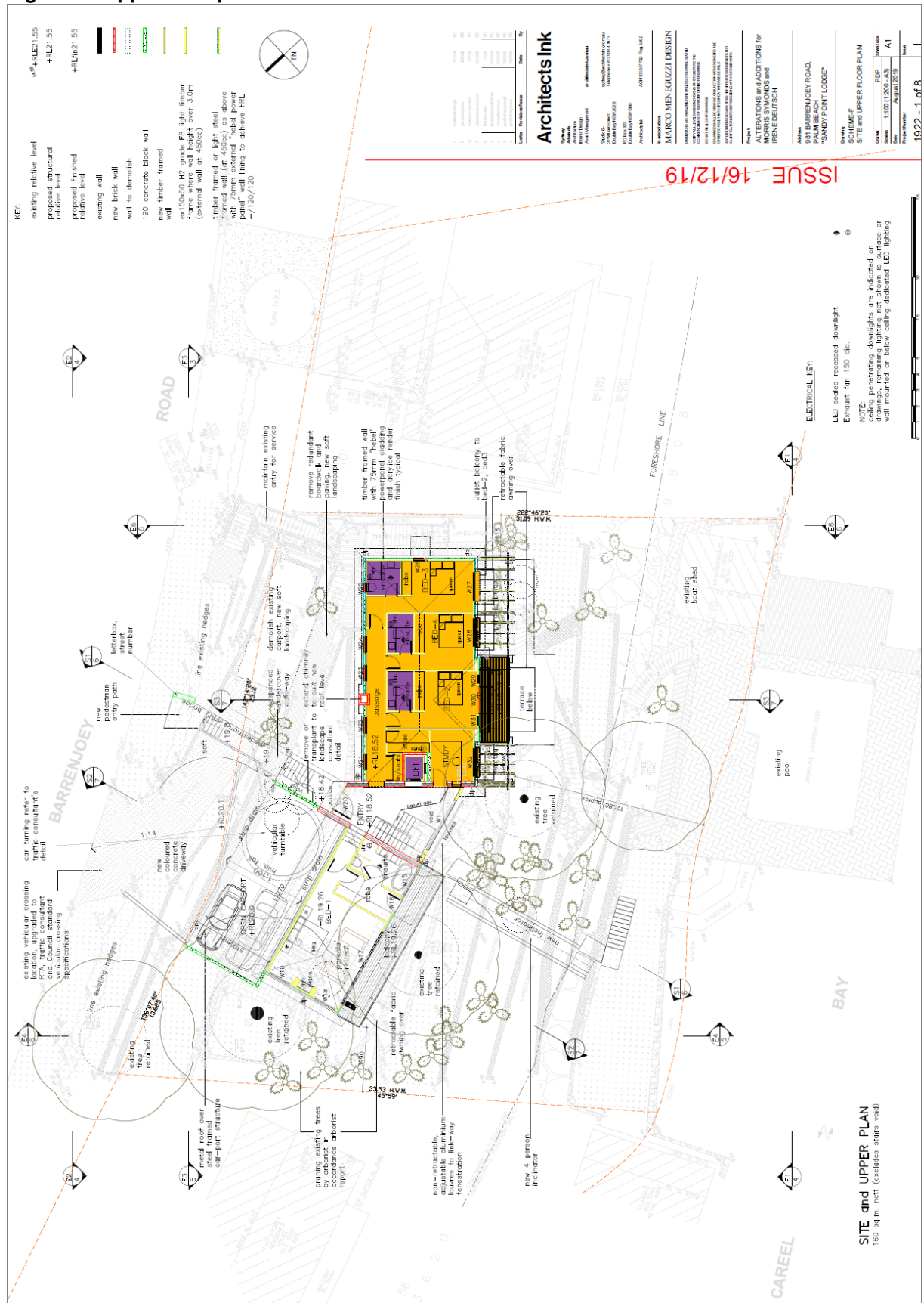


Figure 4: Ground floor plan



Source: Architects Ink 2019

Figure 5: Upper floor plan



Source: Architects Ink 2019

## 4 VEHICLE ACCESS AND INTERNAL CIRCULATION

### 4.1 VEHICLE ACCESS

The minimum requirement in assessing the safety of the proposed driveway on Barrenjoey Road is the need to provide sufficient sight distance for drivers to observe a possible conflict with other vehicles and allow for sufficient time to take evasive action should it be required.

An accepted approach to calculating the provision of safe and efficient access to and from the development is to ensure that there is sufficient sight distance to enable non-priority traffic (i.e. traffic turning into and out of the site) to carry out their turning movements without unduly interfering with mainstream traffic flow.

AS 2890.1:2004 *Parking Facilities – Off-street car parking* sets out the sight distance requirements for access driveways.

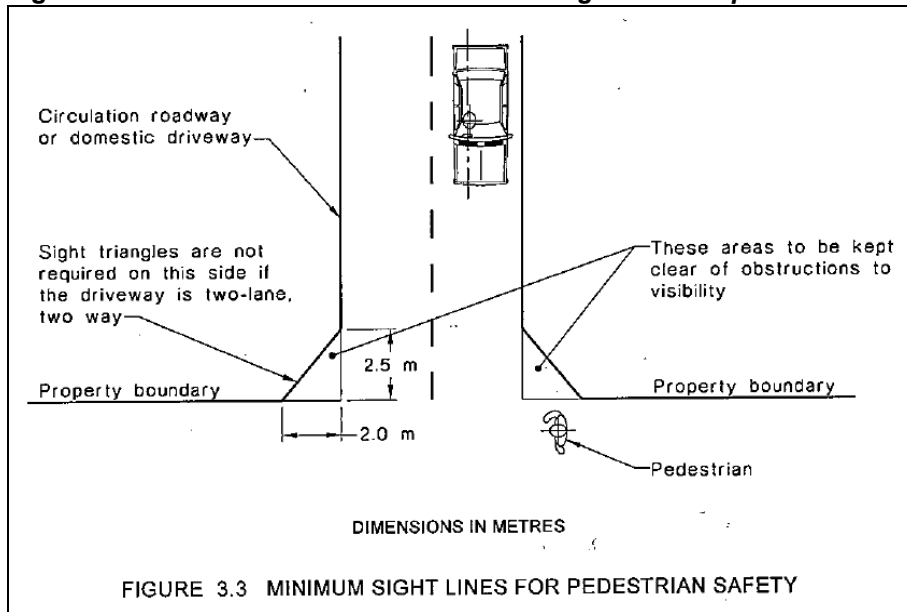
The speed zone on Barrenjoey Road is 60 km/h and sight distance from the location of the proposed access driveway is set out in **Table 1**:

**Table 1: Sight distance requirements for domestic properties**

Source	Sight Distance Required	Sight Distance Available
AS 2890.1:2004 (5 sec gap@ 60km/h)	55 metres (north)	73 metres
	55 metres (south)	90 metres

The sight distance from the proposed driveway on Barrenjoey Road, therefore, exceeds the requirements of AS 2890.1:2004.

In addition to sight distance requirements for vehicles entering and exiting the site, AS 2890.1: 2004 requires the provision of adequate visibility between vehicles leaving a car park and pedestrians on the road frontage footpath. As shown in **Figure 5 (Section 3)**, there are existing hedge plantings on both sides of the driveway. **Figure 6** below reproduces Figure 3.3 of the Standard and details the sight lines required for a vehicle exiting a driveway, i.e. a point 2.5 metres within the property to a distance of 2.0 metres either side of the exit driveway.

**Figure 6: Australian Standard 2890.1:2004 Sight Line Requirements**

The existing hedge plantings will be trimmed on either side of the driveway to comply with the pedestrian sight line requirements of AS 2890.1:2004.

## 4.2 INTERNAL CIRCULATION

Council, in its Pre-DA comments dated 3 December 2019, state:

*“A revised proposal should be investigated that involves a removal of the turning circle from the road reserve, whilst demonstrating that vehicles can enter and exit in forward motion. The swept paths are to be shown on the plans submitted with the application.*

*The design of all parking areas shall be in accordance with the current edition of the Australian Standards: Australian Standard AS/NZS 2890.-12004: Parking Facilities Part 1: Off Street Car Parking.”*

Swept path plans are used to assist in the design of car parking facilities in situations where there are deviations from the dimensions set out in Figure 2.2 of AS 2890.1:2004. Swept path plans are unnecessary where proposals meet the requirements of AS 2890.1:2004.

In accordance with Table 1.1 of AS 2890.1:2004 the car parking for the proposal is a Class 1A facility. The proposed traffic aisle accessing the car parking spaces is 5.8 metres in width and the car parking spaces are 5.4 metres long and 2.4 metres wide (an additional 0.3 metres is provided adjacent to the side wall of Bedroom 1). These dimensions comply with the requirements set out in Figure 2.2 of AS 2890.1:2004, however, the proposal uses a vehicle turntable to assist in exiting the space adjacent to Bedroom 1 in lieu of a ‘blind aisle’ extension as required by Clause 2.4.2 (c) of AS 2890.1:2004.

## 5 CONCLUSION


The proposed new carport, driveway and vehicle turntable at 981 Barrenjoey Road, Palm Beach has been assessed to determine compliance with the relevant Australian Standard and access to and from Barrenjoey Road.

Assessment of the proposal indicates that:

- The existing driveway does not allow a vehicle to enter and leave the site in a forward direction.
- The proposed driveway, car parking spaces and internal access dimensions comply with AS 2890.1:2004.
- A vehicle turntable is used for exiting the space adjacent to Bedroom 1 in lieu of a 'blind aisle' extension.
- The proposed driveway and turntable allows vehicles to enter and leave the site in a forward direction which is considered a significant safety improvement on the existing access arrangements.
- The sight distance from the proposed driveway on Barrenjoey Road exceeds the requirements of AS 2890.1:2004.
- The existing hedge plantings will be trimmed on either side of the driveway to comply with the pedestrian sight line requirements of AS 2890.1:2004.

The proposed new carport, driveway and vehicle turntable at 981 Barrenjoey Road, Palm Beach are considered to be acceptable for the reasons outlined in this assessment and, in the professional opinion of the author, the proposal is worthy of Council approval.

Garry Kennedy



Director