

Client
Town Planning Studio

Date
15 April 2024

Planning

Transport

Urban Design

Waste

Transport Impact Assessment

Proposed Padel Courts

46 Melaleuca Drive, Byron Bay
NSW

ratio:

ratio.com.au

Project
46 Melaleuca Drive, Byron Bay

Prepared for
Town Planning Studio

Our reference
20992T

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Acknowledgement of Country

We acknowledge the Traditional Owners of the land we work, live and travel on, and appreciate the rich cultures of the Aboriginal and Torres Strait Islander Peoples and their enduring connection to country.

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1. Introduction

1.1. Overview

Ratio Consultants have been engaged by Town Planning Studio Pty Ltd to prepare a Transport Impact Assessment of the proposed construction of three (3) padel courts and the addition of 13 car spaces (a total of 33 car spaces) on the land at 46 Melaleuca Drive, Byron Bay.

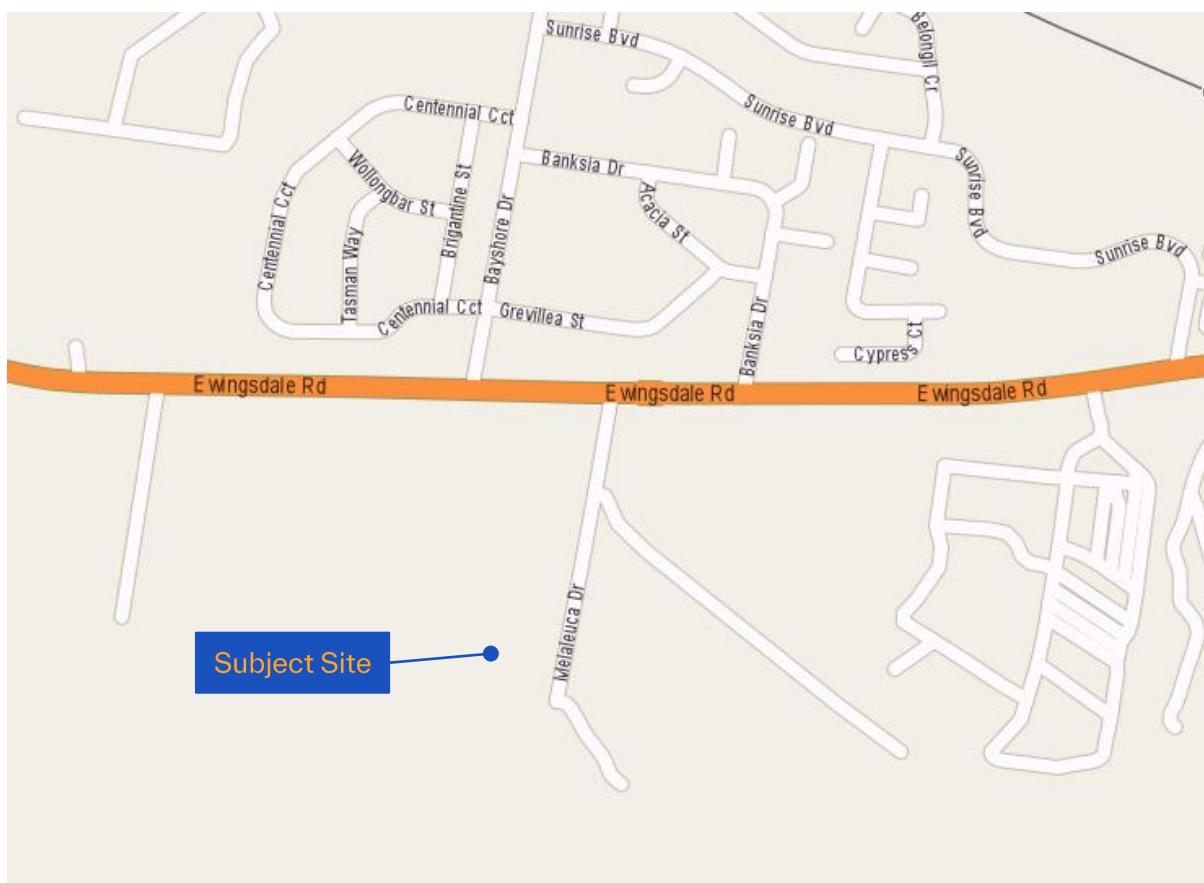
This report has been prepared to address the parking and traffic needs of the proposed development.

2. Existing Conditions

2.1. Locations and Environment

The subject site is located at 46 Melaleuca Drive in Byron Bay, on the southwest side of Melaleuca Drive. The site location relative to the surrounding road network is shown in Figure 2.1

Figure 2.1: Subject Site and Surrounds



Source: street-directory.com.au

The subject site is irregular in shape with a frontage to Melaleuca Drive of approximately 12 metres and a maximum depth of approximately 159 metres, for an overall site area of approximately 9,972 square metres. Vehicle access to/ from the site is provided by an existing informal gravel accessway from Melaleuca Drive.

The site is subject to an Environmental Management Zone (C3) and is situated near a bushfire prone land.

An aerial view of the site and its surrounds is shown in Figure 2.2 below.

Figure 2.2: Aerial View of the Site and its Surrounds



Source: app.landchecker.com.au (image dated 02/03/2024)

2.2. Existing Uses On-Site

The site is currently occupied by a single dwelling and a hall serviced by an office and a shed. An unsealed car park is provided at the northeast corner of the site comprising 20 informal car parking spaces. Access to the car park is provided by a driveway from Melaleuca Drive.

The site has been operating as a spiritual and wellness centre.

2.3. Road Network

Melaleuca Drive is a council managed local road that runs in a north-south direction from Harvest Road in the north to its termination south of the subject site. Melaleuca Drive has an unsealed carriageway width of approximately 5 metres, accommodating two-way traffic.

A view of the Melaleuca Drive facing north and south is displayed in Figure 2.3 and Figure 2.4, respectively.

Figure 2.3: Maleleuca Drive Facing North



Source: google.com/maps (image dated: January 2010)

Figure 2.4: Maleleuca Drive Facing South

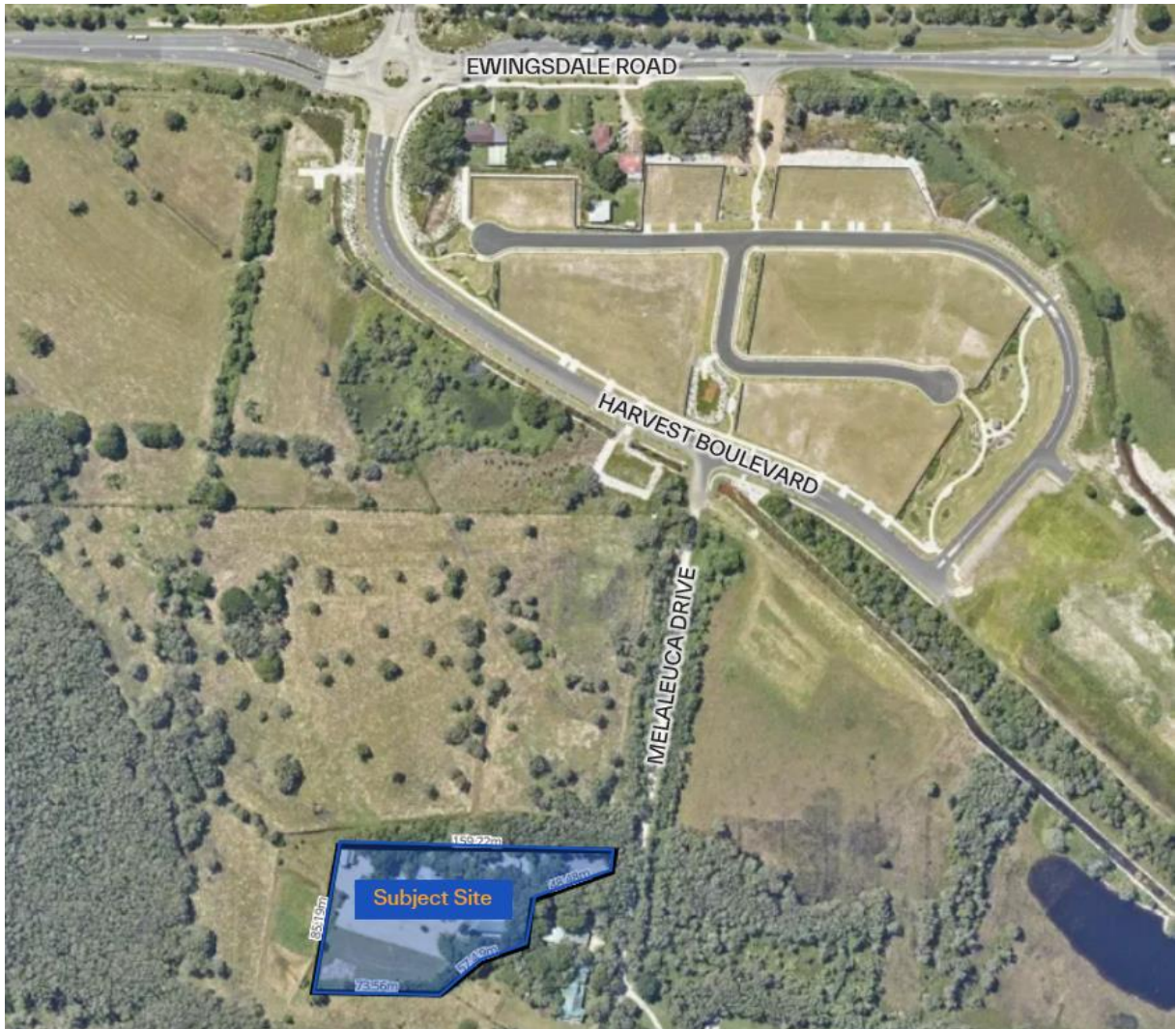


Source: google.com/maps (image dated: January 2010)

Harvest Boulevard is a recently constructed road currently running in a northwest-southeast direction from the roundabout intersection with Ewingsdale Road/Bayshore Drive in the north and currently terminates southeast of its intersection with Melaleuca Drive.

An aerial view of Harvest Boulevard and its connections to the wider road network are illustrated in Figure 2.5.

Figure 2.5: Aerial View of Harvest Boulevard & Wider Road Network



2.4. Sustainable Transport

Public Transport

The site has access to the public transport network with bus services operating within proximity to the subject site. The bus routes and their nearest stop to the site are outlined in Table 2.1.

Table 2.1: Public Transport Service

Service	Route Number	Route	Nearest Stop	Walking Distance
Bus	610	Lismore	Ewingsdale Road at Melaleuca Drive	550 metres (7 minutes)
	637	Byron Bay		
	640	River Tce at Burringbar Street		

641 Bangalow Public School, Byron
 Street

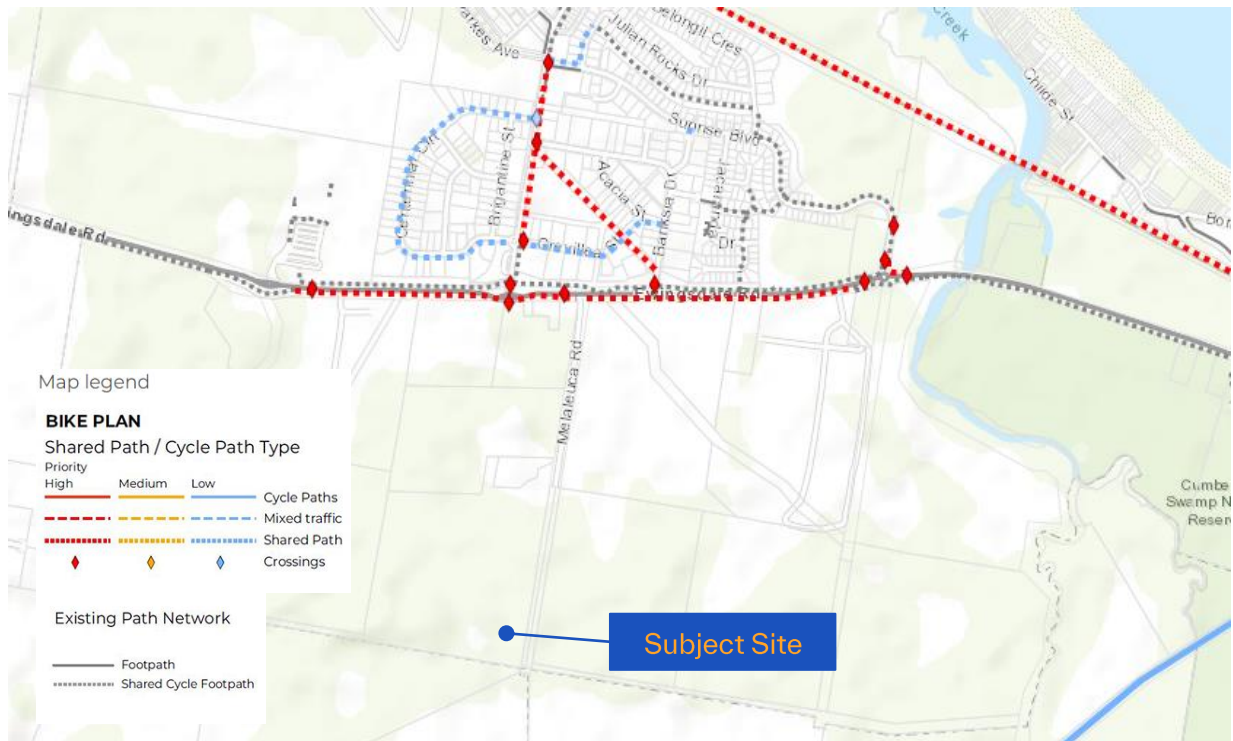
641X Southern Cross Uni, Rifle Range
 Road

Source: cdcbus.com.au

PEDESTRIANS & BICYCLE NETWORK

The site has limited access to the bicycle network with no cycling path in the immediate vicinity of the site. The nearest proposed shared path is along Ewingsdale Road, connecting to Melaleuca Drive. Existing footpath is found along the entirety of the Ewingsdale Road. The location of the site relative to the nearby bicycle services is present in Figure 2.6.

Figure 2.6: Byron Shire Bicycle Infrastructure Map



Source: byron.nsw.gov.au

3. Proposal

The proposal seeks to expand the site at 46 Melaleuca Drive, Byron Bay. More specifically, the development considers the following:

- Construction of three (3) padel courts.
- Relocation of existing office. The office operation will be associated with the other uses on-site and will not operate as a separate entity.
- One (1) swimming pool adjacent to the office, for the users of the padel courts.
- Construction of an additional 13 on-site car parking spaces at the northeastern corner of the site, inclusive of 1 DDA accessible parking space.

Vehicle access to the site will be provided via the existing driveway to Melaleuca Drive, located at the eastern frontage of the site.

The development plan is shown in Figure 3.1 below.

Figure 3.1: Proposed Development Plan



Source: Ground Floor Plan (supplied by Kennon, on 12 April 2024)

4. Car Parking Assessment

4.1. Byron Shire Council DCP Requirements

Chapter B4: Traffic Planning, Vehicle Parking, Circulation & Access

Car parking requirements for new developments are set out under section B4.2.5 in which it is stated:

– *Unless otherwise specified elsewhere in this DCP, car parking is to be provided in accordance with the schedule contained in Table B4.1*

The relevant sections of Table B4.1 from the DCP have been presented against the proposal and are outlined in Table 4.1.

The assessment only relates to the additional uses and car parking spaces. The relocated office and swimming pool will be ancillary to the site's operation and therefore does not trigger an additional parking requirement.

Table 4.1: DCP Minimum Car Parking Provisions

Land Use	Use	No. of Courts	Statutory Parking Rate	Statutory Requirement
Recreation facility (outdoor)	Padel Courts	3	3 spaces/court	9

As such, the proposal triggers a requirement to provide an additional 9 car spaces on-site.

The proposal considers an additional 13 on-site car spaces, thereby exceeding the statutory requirement.

5. Access and Car Parking Layout

5.1. Parking Layout Standards (B4.2.2)

Section B4.2.2 of the Byron Shire Council DCP outlines the Parking Layout Standards.

The requirements are assessed against the proposal in Table 5.1.

Table 5.1: Car Park Layout DCP Requirements

Requirement	Comments
<p>Car parking requirements, parking layout, driveway widths and vehicle manoeuvring areas are to be in accordance with the relevant sections of the current editions of Australian Standards 2890.</p>	<p>Satisfied – All car parking spaces are provided in accordance with the spatial requirements outlined in the Australian Standards with typical car spaces being 2.6m wide, 5.4m long and accessed from an aisle 7.8m wide.</p> <p>DDA parking space and adjacent shared area are provided at 2.4 metres in width and 5.4 metres in length.</p>
<p>All parking spaces in commercial and industrial developments must be available for unrestricted public access and employee use. There shall be no restriction on public parking in the required car park, other than car spaces set aside for any residential units approved on the site</p>	<p>Satisfied – Unrestricted public access to car park.</p>
<p>Access for the disabled and parking facilities are to be provided in accordance with the current editions of AS 2890 and the Building Code of Australia and the requirements of the Disability Discrimination Act, 1992 (Commonwealth).</p>	<p>Satisfied – DDA parking space and adjacent shared area are provided at 2.4 metres in width and 5.4 metres in length, as per AS 2890</p>
<p>Tandem or stacked parking is not generally favoured. However, in certain cases, the provision of a limited number of employee parking spaces may be provided in this way in circumstances where no inconvenience arises from its use and subject to the following guidelines:</p>	<p>N/A – No tandem or stacked car spaces proposed.</p>

5.2. Vehicle Access & Manoeuvring Areas (B4.2.3)

Section B4.2.3 of the Byron Shire Council DCP outlines the Vehicle Access and Manoeuvring Area requirements.

The relevant requirements are assessed against the proposal in Table 5.2.

Table 5.2: Vehicle Access & Manoeuvring Areas DCP Requirements

Requirement	Comments
Driveways and manoeuvring areas are to be designed and constructed in accordance with the requirements of the current editions of Australian Standard 2890, Austroads and the Northern Rivers Local Government Development & Design Manual.	Satisfied – Existing access to be retained. Car park layout accommodates manoeuvring in accordance with the relevant standards (AS 2890)
All parking and service areas shall be provided with sufficient manoeuvring areas to allow vehicles to enter and leave the site in a forward direction.	Satisfied – All vehicles can enter and exit the site in a forward direction
Designs for manoeuvring areas are to be in accordance with the current editions of Australian Standard 2890 and must include a swept path analysis for the relevant design vehicle	Satisfied – Swept path diagram attached demonstrating a 3-point turn can occur within the manoeuvring area (appendix Appendix A).

6. Bicycle Facilities

6.1. The Byron Shire Council DCP Requirements

Chapter B4: Traffic Planning, Vehicle Parking, Circulation & Access

Bicycle parking requirements for new developments are set out under Section B4.2.8 in which it is stated:

- *Development Proposals must make provision for bicycle parking in accordance with Table B4.1. The bicycle parking is also to be designed in accordance with the current editions of AS 2890 Parking Facilities, Austroads and the NSW RTA Bicycle Guideline 2005 as appropriate and as nominated under Chapter B5 Providing for Cycling.*

The relevant sections of Table B4.1 from the DCP have been presented against the proposal and are outlined in Table 6.1.

Table 6.1: DCP Bicycle Parking Requirement

Land Use	Use	No. of Employees/Area	Statutory Parking Rate	Statutory Requirement
Recreation facility (outdoor)	Padel Courts	20* employees, 215sqm per court	1 per 4 employees & 1 per 200sqm of GFA	8

**It is noted that the measurement control for bicycle provision includes a portion determined by employee numbers. Considering the operation of the site it is anticipated that no more than 20 employees will be on-site at any given time.*

As such, the proposal triggers a requirement to provide 8 bicycle spaces on-site (5 associated with employees and 3 associated with visitors).

The proposal considers providing 20 on-site bicycle spaces, thereby exceeding the statutory requirement associated with the development.

The bicycle layout has been designed in accordance with the spatial requirements of the Australian Standards (AS 2890.3) and aligns with the aspirations of Chapter B5 and 'NSW RTA Bicycle Guidelines 2005'.

7. Loading Requirements

Section B4.2.9 of the DCP outlines the requirements for loading bays and states:

- *Unless designed specifically for a nominated vehicle type or types appropriate to the use of the proposed development, loading bays should be provided in accordance with the schedule contained in Table B4.2.*
- *Where a proposed use is not represented in Table B4.2, the rates under the RMS Guide to Traffic Generating Developments (as amended from time to time by a superseding document prepared by RMS) will apply.*

An outdoor recreation facility does not trigger a requirement for a loading bay under either Table B4.2 of the DCP or under the RMS Guide to Traffic Generating Developments.

Loading operations associated with the padel courts are expected to be minimal and limited to activities which can be undertaken by small vans or equivalent.

Loading vehicles can access the padel courts from the car park via the driveway running along the northern boundary of the site. There is also adequate space within the car park for such loading operations to occur.

8. Traffic Assessment

8.1. Traffic Impact Assessment Requirements

Section B4.2.1 (Traffic Impact) of the DCP outlines the requirements for undertaking a traffic impact assessment for new developments and provides the following guide for deciding on the level of traffic assessment requirement.

- *Low Impact (generally less than 10 peak hour trips) – submit a safety assessment demonstrating satisfactory access location, sight distances and sightlines to pedestrians.*
- *Moderate Impact (10 – 50 peak hour trips) – Traffic Impact Statement required.*
- *High Impact (more than 50 peak hour trips) – Traffic Impact Study required.*

8.2. Traffic Generation & Distribution

The RTA Guide to Traffic Generating Developments (October 2002) suggests that tennis courts, typically generates 4 vehicle trips per court in the evening peak periods and a daily vehicle trip of 45 trips per court.

Applying a rate of 4 vehicle trips per court, the three (3) proposed padel courts would generate additional 12 vehicle movements in the PM peak hour.

Based on the existing road network (as illustrated in Figure 2.5) all traffic is anticipated to be distributed to/from the north on Melaleuca Drive, then westwards on Harvest Boulevard and to the wider network via the roundabout intersection with Ewingsdale Road and Bayshore Drive.

8.3. Traffic Impact Statement

The following statement has been prepared in accordance with the requirements of Section B4.2.1.

As stated above, the development is anticipated to generate up to 12 vehicle movements in the peak hours. While considered within the 'moderate impact' range as defined in the DCP, we note its towards the lower end (10-50 peak hour vehicle movements).

Section B4.2.1 states that a Traffic Impact Statement should include:

Analysis of the operation of the first intersection, as a minimum, on either side of the accesses.

Application of the above statement to this proposal would require an analysis of the intersection of Melaleuca Drive/Harvest Boulevard.

The proposed development's impact on the operation of the intersection is considered negligible as:

- Melaleuca Drive currently only provides vehicle access to two (2) other properties; 50 Melaleuca Drive (operating as an Air b&b) and 53 Melaleuca Drive (single dwelling).

- The traffic generation associated with these three (3) properties (inclusive of this development) will be low and within the environmental capacity of the recently constructed intersection.

9. Conclusion

It is proposed to construct three padel courts on land at 46 Melaleuca Drive in Byron Bay. The development will expand the number of car spaces on-site to 33.

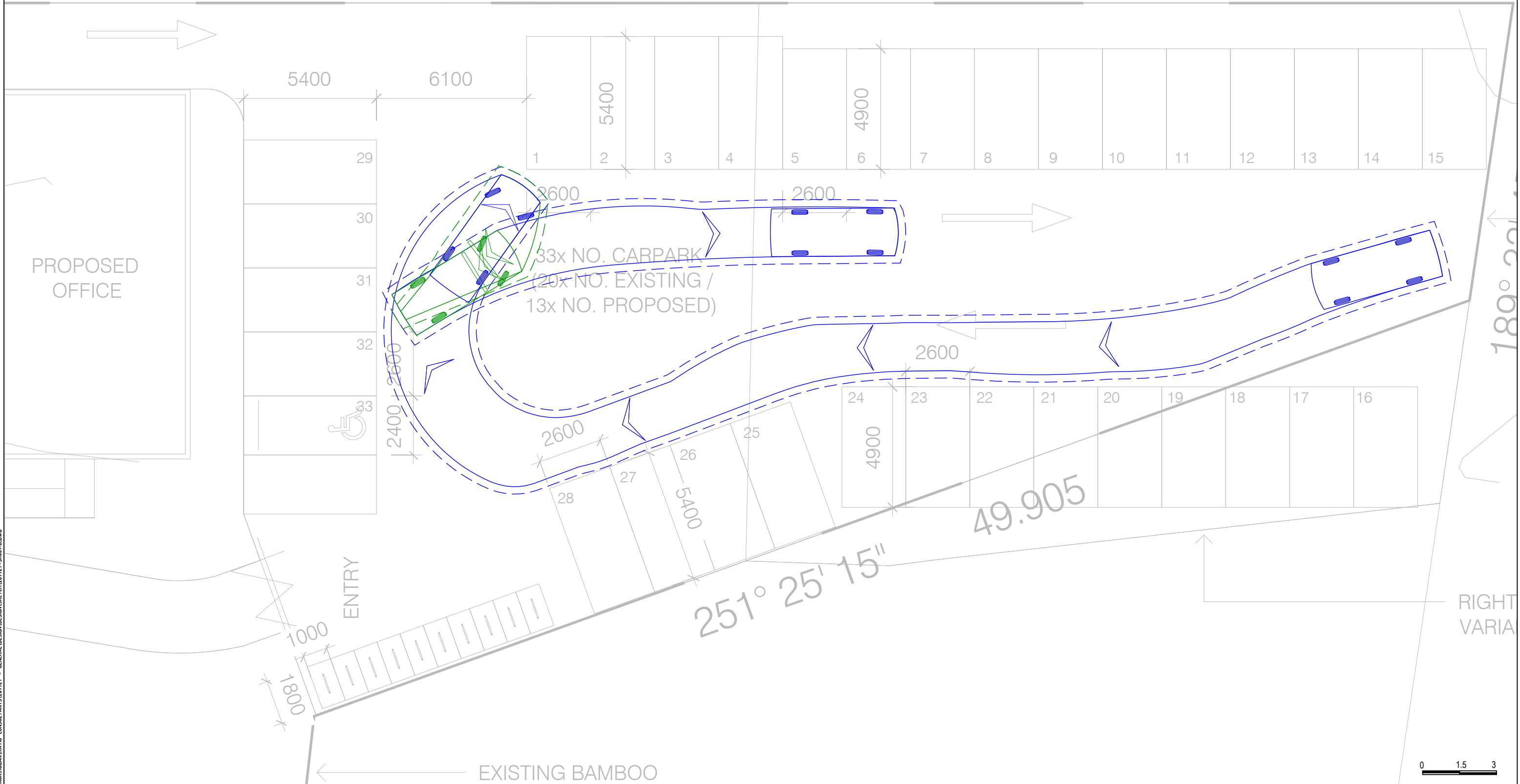
Based on the above assessment, it is concluded as follows:

- It is proposed to expand the existing on-site car park by 13 car spaces, resulting a total of 33 car parking spaces.
- The additional car spaces exceed the statutory requirement associated with the three padel courts.
- The proposed vehicle access arrangements, car parking and bicycle parking layout have been designed in general accordance with the objectives and requirements of Chapter B4 and B5 of the Byron Shire Development Control Plan and the relevant sections of AS/NZ2890.1:2004.
- The level of additional traffic generated by the proposed padel courts is relatively low in traffic engineering terms and is not expected to have a material impact the surrounding road network.

Overall, the proposed development is not expected to create adverse traffic or parking impacts in the precinct.

Appendix A Swept Path Diagrams

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B99 Vehicle (AS/NZS2890.1:2004)

	VEHICLE ENVELOPE (FORWARD)
	300mm CLEARANCE (FORWARD)
	VEHICLE ENVELOPE (REVERSE)
	300mm CLEARANCE (REVERSE)
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00 sec
Curb to Curb Turning Radius	6.30m

Proposed Addition of Padel Courts
46 Melaleuca Drive, Byron Bay
Swept Path Assessment

NOTE:
 1) Base Plan Supplied By Kennon
 2) Maximum Design Speed 10km/h

RATIO REFERENCE 20992T-SK001-B	SHEET No. 1 of 1	PREPARED BY C.L.H	SCALE 1:150@A3	DATE 12/04/2024
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