PO Box 215 Bondi NSW 2026 | ph.: +61 2 9332 2024 | fax.: +61 2 9332 2022 | mob.: +61 (0)4 1497 8067 | email: o.s@tefconsult.com.au | www.tefconsult.com.au

# TRAFFIC AND PARKING IMPACTS REPORT
# FOR A DEVELOPMENT APPLICATION
# FOR A PROPOSED RESIDENTIAL DEVELOPMENT
# At NO. 346 – 352 WHALE BEACH ROAD, PALM BEACH, NSW 2108

| | |
|---|---|
| **Property address** | 346 – 352 Whale Beach Road, Palm Beach, NSW 2108 |
| **Client** | The applicant C/ Tzannes |
| **Prepared by** | O. Sannikov, MEngSc (Traffic Engineering), MIEAust, PEng, MAITPM |
| **Date** | 01/03/2019 |
| **Job No.** | 18143 |
| **Report No.** | 18143 Rep 01 |

| Item | Report |
|---|---|
| **Site location** | • Refer to **Figure 1.** |
| **Existing land use** | • No.346<br>◦ Vacant lot<br>• No 348<br>◦ Vacant lot<br>• No 350<br>◦ A double storey residential dwelling and a<br>◦ Sauna<br>• No 352<br>◦ Vacant lot |
| **Proposed development** | • A three (3) storey residential dwelling on lot no. 350<br>◦ Details are depicted on architectural drawings prepared by Tzannes Associates (provided in **Appendix**)<br>▪ Including six (6) bedrooms,<br>▪ Various facilities including a pool, sauna and gym and a<br>▪ Garage which has<br>• Four (4) car parking spaces |


**Figure 1. Site location.**

| Item | Report |
|---|---|
| | **Existing traffic and parking situation** |
| **Street characteristics** | • Refer to **Figure 2.** |
| | • The main roads bounding the proposed development are described below. |
| | ◦ Whale Beach Road |
| | ▪ Local road |
| | ▪ Narrow two way road |
| | ▪ 2 travel lanes and a gravel shoulder parking on the eastern side of Whale Beach Road |
| | ◦ Rock Bath Road |
| | ▪ Local road |
| | ▪ Narrow single lane |
| | ▪ 1 travel lane and no parking lanes |
| | ◦ Pacific Road |
| | ▪ Local road |
| | ▪ 2 travel lanes and 1 parking lane |
| | ◦ Bynya Road |
| | ▪ Local road |
| | ▪ 2 travel lanes and no parking lanes |
| | ◦ Other streets in the surrounding area are local/local collector roads. Street conditions are typical for a residential area, with low to moderate traffic volumes. |
| | ▪ General speed limit is 40 – 50 km/hr on local streets around the site. |
| | **Public Transport** |
| **Bus** | • Refer to **Figure 3.** |
| | • The site has limited public transport provision with only two bus routes servicing the area. |
| | ◦ The bus stop is located on Florida Road which approximately 2 kilometres from the residential development. |
| | • Bus Route 199 |
| | ◦ Manly to Palm Beach |
| | ▪ Services operate approximately every 15-30 minutes during the morning and afternoon peaks. |
| | ◦ Palm Beach to Manly |
| | ▪ Services operate approximately every 15-30 minutes during the morning and afternoon peaks. |
| | • Bus Route L90 |
| | ◦ City Wynyard to Palm Beach (Limited Stops) |
| | ▪ 3 services operate during the morning peak. |
| | ▪ No services operate during the afternoon peak. |
| | ◦ Palm Beach to City Wynyard (Limited Stops) |
| | ▪ 1 service operates during the morning peak. |
| | ▪ 3 services operate during the afternoon peak. |
| | • 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. |

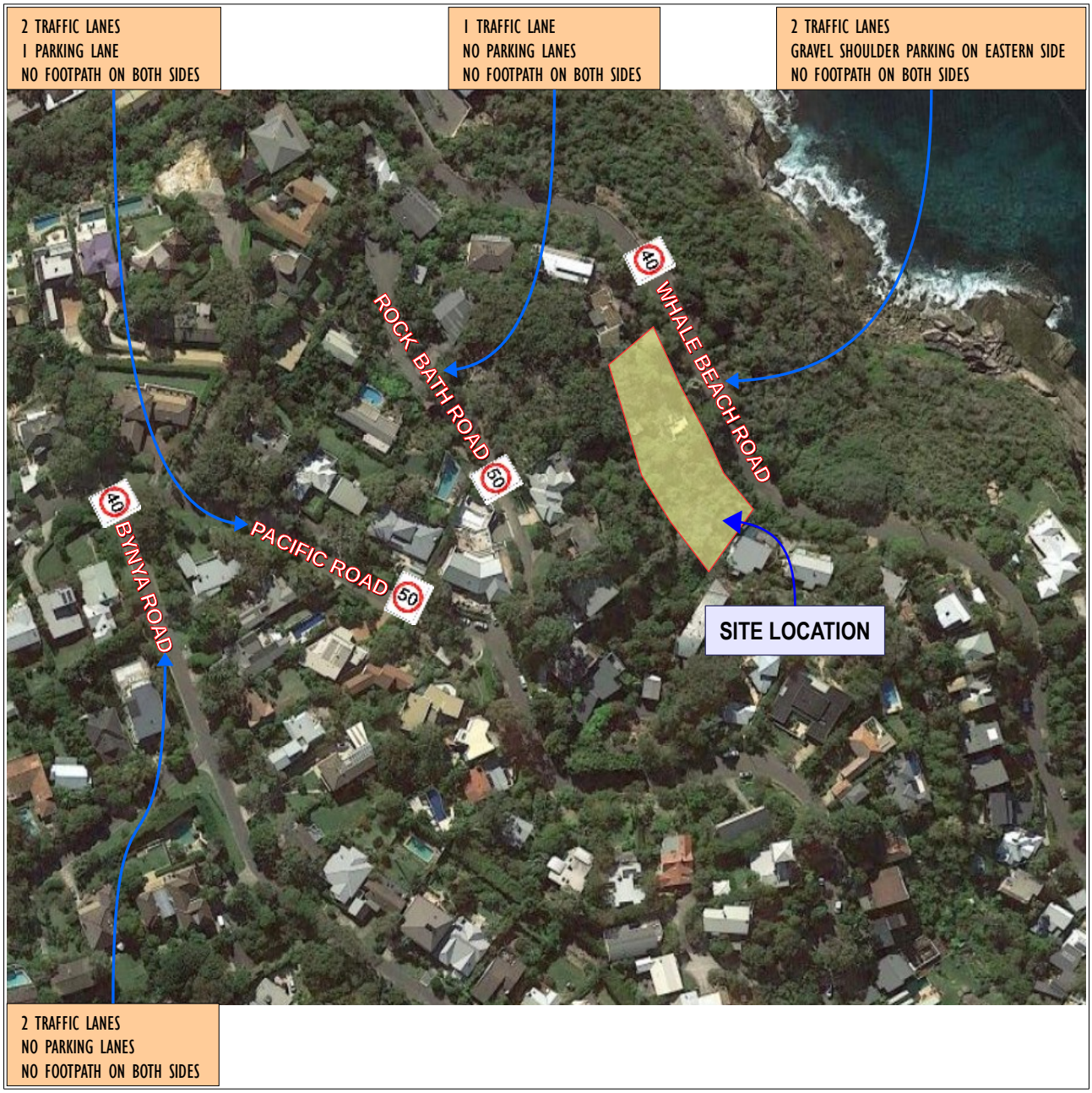


**Figure 2. Street characteristics.**

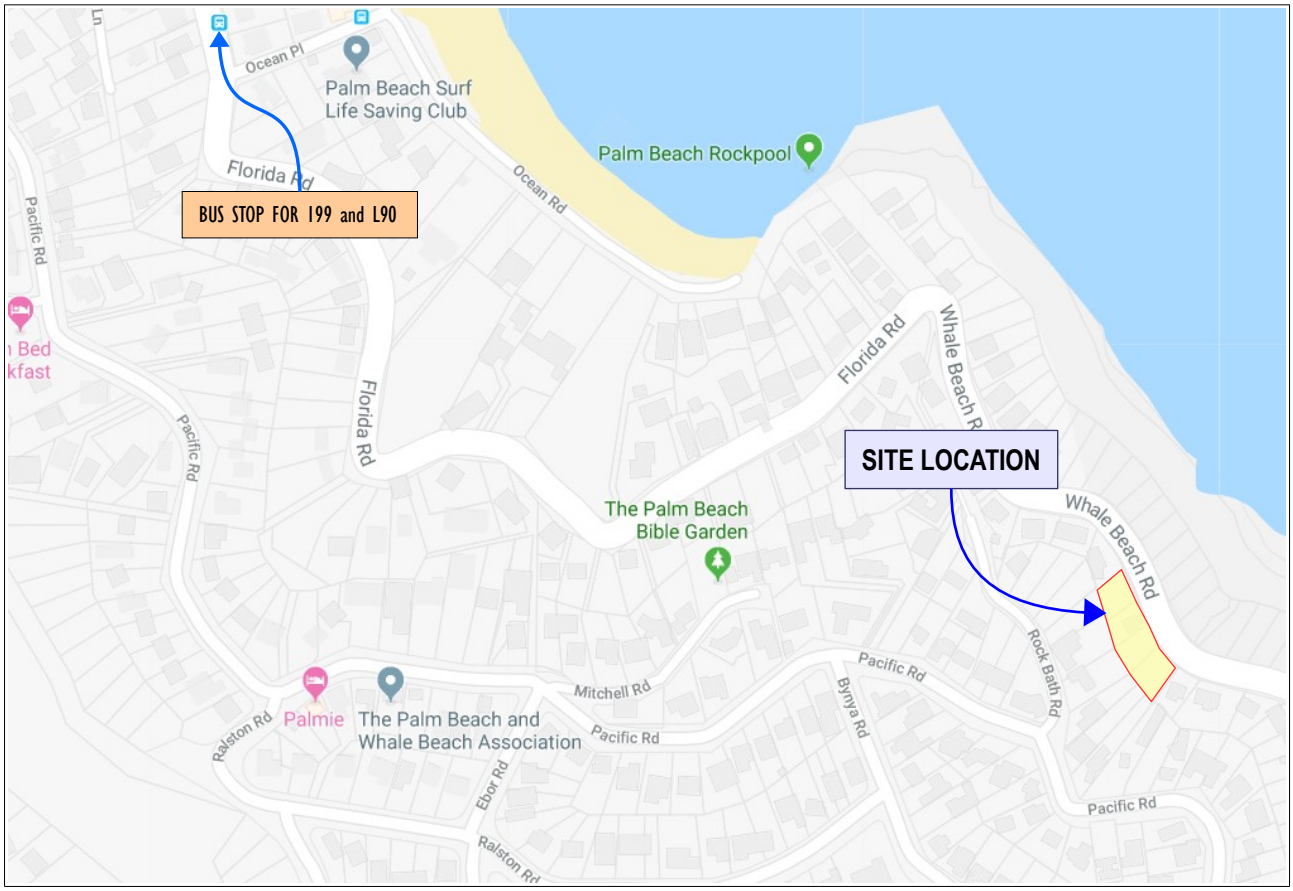


**Figure 3. Public transport.**

| Item | Report |
|---|---|
| **Planning control document** | • Northern Beaches Council<br>◦ Pittwater 21 Development Control Plan 2014 |

| Requirement | Compliance |
|---|---|
| **B6.1 Access driveways and Works on the Public Road Reserve** | |
| **General Requirements** | |
| An Access Driveway to the standards as set out below must be provided for: | |
| • any new development; | Complies |
| • any alterations and additions where the sum of the additional Gross Floor Area (GFA) of the dwelling exceeds 30 $m^2$; and | Complies |
| • where additional car parking spaces and/or garages are proposed. | Complies |
| **Access Driveway Design** | |
| The design of all Access Driveways shall be in accordance with the current edition of following Australian Standards: | |
| • Australian Standard AS/NZS 2890.1-2004: Parking Facilities – Part 1: Off-Street Car Parking. | Complies with AS/NZS 2890.1:2004 |
| • Australian Standard AS/NZS 2890.2-2002: Parking Facilities – Part 2: Off-Street Commercial Vehicle Facilities except as qualified in this control. | Complies with AS/NZS 2890.2-2002 |
| **Number of Access Driveways per Allotment** | |
| The number of permissible Access Driveways to an allotment is as follows: | |
| • where the frontage of an allotment to a local public road is less than 30m, one only access driveway. | Complies |
| • where the frontage of an allotment to a local public road is 30m or more, a second access driveway will be considered on merit. | Not applicable |
| • where the allotment has a frontage to a second local public road, one additional access driveway to the second local road frontage will be considered on merit, based on Council's consideration of the site constraints. | Not applicable |
| **Shared Driveways and Access Driveways located in front of adjoining properties** | |
| • Shared Access Driveways shared between adjoining private properties and Access Driveways located in front of adjoining properties will be considered on merit, based on Council's consideration of the site constraints. | Noted |
| **Access Driveway Location** | |
| Access Driveways shall be designed and located to provide adequate sight distance to maximise pedestrian and vehicular safety as follows: | |
| • minimum clear distance along the | Complies |

| Requirement | Compliance |
|---|---|
| road frontage edge of kerb of 50 metres for 40 and 50 kph speed limit roads measured from a point on the centreline of the driveway 2.5 metres from the face of kerb; and | As shown in TEF drawings 18143/03, the site distance for 40 km/h has been provided from the centreline of the driveway. The required sight distance has been achieved after the proper amendments have been made to the proposed design (cutting 1.23 metres from the wall). |
| • minimum clear distance along the frontage footway of 5 metres, measured from a point on the centreline of the driveway 2.5 metres from the edge of footway area closest to property boundary. | Complies<br>As above |
| • **Access Driveway Width** | |
| • The maximum width of an Access Driveway for dual occupancies, dwellings houses, secondary dwellings, exhibition homes, rural works dwellings and tourist and visitor accommodation shall be as follows: | Complies |

| Distance Building Line to Boundary | Width at Boundary | Width at Kerb |
|---|---|---|
| Nil to 3.5m | Width of car parking area or garage opening | Width of car parking or garage opening plus 0.5m |
| Greater than 3.5m to 6.5m | 4.0m | 4.5m |
| Greater than 6.5m | 3.0m | 3.5m |

Access Driveway width can be varied subject to a merit based consideration.

| | |
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| **Access Driveway Profile and Gradient** | |
| Access Driveway profiles shall conform to the profiles as illustrated in Appendix 10 – Driveway Profiles. | Complies with the illustrated Access Driveway profiles shown in Appendix 10 |
| All Access Driveways shall be constructed with an impervious pavement and gutter crossing construction. | Capable of compliance at the construction stage |
| Gutter crossings are to be in plain concrete. | Capable of compliance at the construction stage |
| Access Driveways are to match with the adjacent constructed footpaths or alternatively adjacent constructed footpaths are to be adjusted to provide a continuous surface with no trip points with a maximum 1:14 (V:H) transition. | Complies |
| The Access Driveway is to be structurally adequate for its intended use. | Complies |
| **Access Driveway and Public Utilities Cost** | |
| The cost for Access Driveways construction and maintenance and adjustment of any utility service is the responsibility of the Applicant. | Noted |
| **B6.2 Internal Driveways** | |
| An Internal Driveway must be provided for in: | |
| • any new development; | Complies |
| • development where additional car parking spaces and/or garages are required by Council's plans or policies; | Not applicable |
| • any alterations and additions where the sum of the additional Gross Floor Area (GFA) of the dwelling exceeds 30 $m^2$; and | Complies |
| • development where additional car parking spaces and/or garages are | Complies |

| Requirement | Compliance |
|---|---|
| proposed. | |
| Internal Driveways are to be designed and constructed to provide safe access and shall have a maximum gradient of 1:5 (V:H). Recommended maximum gradient of an Internal Driveway for a distance of 2m on the approach to a garage, parking area or carport is 1:20 (V:H). There must be a minimum 2 metre long transition between the driveway and the garage/parking area/carport in accordance with the standards. | Complies |
| Driveway width for dual occupancies, dwellings, secondary dwellings, exhibition homes, rural works dwellings and tourist and visitor accommodation. | |
| The Internal Driveway shall be contained within the driveway corridor. The minimum width of the driveway corridor (i.e. impervious pavements together with grassed shoulder area) shall be as follows:<br>• Single Dwelling: 3.0 metres minimum.<br>• Dual Occupancy: 3.0 metres minimum.<br>• Combined driveway for more than 2 dwellings: 3.0 metres minimum except where the driveway length exceeds 40 metres, a passing bay to an overall minimum width of 5.0 metres for a length of 10 metres with suitable transitions to the adjacent narrow driveway. | Complies |
| Turning movements are to be in accordance with the turning paths for a B85 vehicle (Australian Standard AS/NZS 2890.1-2004: Parking Facilities – Part 1: Off-Street Car Parking). | Complies with AS/NZS 2890.1:2004 |
| **B6.3 Off-Street Vehicle Parking Requirements** | |
| The minimum number of vehicle parking spaces to be provided for off-street parking is as follows for dual occupancies, dwelling houses, secondary dwellings, exhibition homes, rural workers' dwellings and tourist and visitor accommodation: | Complies |

| Number of bedrooms per dwelling but not a secondary dwelling | Parking requirements per dwelling |
|---|---|
| 1 bedroom | 1 space |
| 2 bedrooms or more | 2 spaces |

| Parking required | Parking proposed |
|---|---|
| **Dwelling House** | |
| • 2 or more bedroom dwellings | 4 spaces are proposed. |
| ◦ There are a total of 2 dwellings and 2 spaces per dwelling are required. | Complies |
| ▪ 2 x 2 = **4 spaces** | |
| **Garbage collection** | It is proposed that garbage collection occur on-street, same as for other developments along Whale Beach Road. |

| Item | Report | |
|---|---|---|
| | **Requirement** | **Compliance** |
| | Minimum dimensions of internal space for on-site parking are: | Complies |

| | |
|---|---|
| Single car parking spaces on hard stand and Single Carport | 2.4 metre x 5.5 metre with 0.3m minimum clear space each side for access to doors |
| Enclosed garage(internal dimension) | 3.0 metre x 6.0 metre, with 2.4 metre minimum width entry |
| Multiple side by side carport and enclosed garage(internal dimension) | 5.7 metre x 6.0 metre for 2 adjacent vehicles + 2.7 metre width for each additional vehicle with, 2.4 metre minimum width entry per vehicle space |

| | | |
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| | **On-Site Car Parking Facilities** | |
| | The design of all parking areas shall be in accordance with the current edition of the following Australian Standards: | |
| | • Australian Standard AS/NZS 2890.1-2004: Parking Facilities Part 1: Off Street Car Parking; | Complies with AS/NZS 2890.1:2004 |
| | • Australian Standard AS/NZS 2890.2-2002: Parking Facilities – Part 2: Off-Street Commercial Vehicle Facilities; | Complies with AS/NZS 2890.2-2002 |
| | • Australian Standard AS/NZS 2890.3-1993: Parking Facilities Part 3: Bicycle Parking Facilities; and | Complies with AS/NZS 2890.3-1993 |
| | • Australian Standard AS/NZS 2890.6-2009: Parking Facilities – Part 6: Off-Street Parking for People with Disabilities except as qualified in this control. | Complies with AS/NZS 2890.6:2009 |
| | **Residential Car Parking for Residential Flat Buildings, Shop Top Housing, Mixed Use Development, Multi Dwelling Housing and Seniors Housing** | |
| | The following are applicable in respect of residential car parking areas: | |
| | • Where there are dwellings with two (2) or more bedrooms in a development, tandem parking spaces may be permitted where all of the following criteria are met: | Noted |
| | • two (2) parking spaces have been allocated per two (2) or more bedroom apartments; | Complies |
| | • the proportion of tandem parking spaces does not exceed 10% of the total residential parking for two (2) or more bedroom units; and | Does not comply<br>Satisfactory due to very low number of movements on each level of tandem parking. |
| | • it can be clearly demonstrated that vehicles parked are directly associated to a single dwelling/unit and that such vehicles do not restrict or impede the parking, manoeuvring or access of other vehicles; | Complies |
| | • parking spaces are to be located as close as possible to their respective dwelling; | Complies |
| | • rows of multiple garages and long driveways, particularly those that create a "gun barrel" effect are avoided; | Not applicable |
| | • visitor parking spaces are to be easily accessible and clearly marked | Not applicable |

| Requirement | Compliance |
|---|---|
| "Visitor"; | |
| • for developments resulting in 10 or more dwellings, Control C1.18 Car/Vehicle/Boat Wash Bays also apply; and | Not applicable |
| • Parking spaces for people with disabilities must be appropriately signposted and in accordance with Australian Standard AS/NZS 2890.6-2009: Parking Facilities – Part 6: Off-street Parking for People with Disabilities. | Complies with AS/NZS 2890.6:2009 |
| **Alternative Design** | |
| The design of off-street parking facilities may alternatively be in accordance with the current edition of the following Australian standard based on turning paths for a B85 vehicle:<br>• Australian Standard AS/NZS 2890.1-2004: Parking Facilities – Part 1: Off-Street Car Parking | All car parking spaces are in compliance with the requirements of the AS/NZS 2890 series. |
| | A swept path analysis program was used to demonstrate how vehicles would enter and exit the garage (refer to **Appendix**). |
| **B 6.6 On-Street Parking Facilities Requirements** | |
| On-street parking facilities must also comply with the following requirements: | |
| • A fully constructed and sealed road pavement with kerb and street drainage is to be provided to accommodate on-street parking facilities. | Complies |
| • A footpath on public road reserve is to be provided around the on-street parking facilities for public access along the road and to the development. | Complies |
| • On-street parking facilities are to provide for the safety and amenity of pedestrians, vehicles and other transport modes. | Complies |
| • Adequate street lighting, signs and traffic facilities are to be provided. | Capable of compliance at the construction stage |
| **B6.7 Transport and Traffic Management** | |
| Where development generates pedestrian, cyclist, traffic and transport requirements in excess of the capacity of the existing road and transport network, the capacity of the surrounding public infrastructure and transport network is required to be upgraded to at least match the additional demands generated by the development | Not applicable<br>The proposed development will generate minimal additional traffic. The surrounding transport network is more than adequate to cater for the minor increase in traffic. |
| Any improvement works external to the development site, required to ensure the development complies with this control, must be provided as part of the development at the full cost to the applicant. | Noted |
| All traffic assessments are to be undertaken in accordance with the Roads and Maritime | Complies |

| Item | Report | |
|---|---|---|
| | **Requirement** | **Compliance** |
| | Services Guidelines for Traffic Generating Developments or similar guidelines. | |
| | All proposed traffic facilities must comply with the Roads and Maritime Services and/or relevant Australian Standards. | Complies |
| | An assessment of the impact of traffic generated by the proposed development on the local street system must be undertaken. | Complies |
| | Adequate vehicular entrances to and exits from the site are to be provided so that vehicles using those entrances and exits will not endanger persons using adjoining roads. | Complies<br><br>Refer to design checks for vehicle entry/exit manoeuvring. |
| | Adequate space is to be provided within the site of the building or development for the loading, unloading or fuelling of vehicles, and for the picking up and setting down of passengers. | Complies |

| Item | Report |
|---|---|
| | **Traffic impacts** |
| **Traffic generation** | • Base traffic generation rates<br>◦ RMS (2002) Guide to Traffic Generating Developments (as amended by TDT 2013/04a)<br>• Existing traffic generation<br>◦ Dwelling houses<br>▪ peak hour vehicle trips = 0.95 – 0.99 trips per dwelling<br>• 0.99 × 1 = 1 one way trip<br>• Traffic generated by the proposed development<br>◦ Dwelling houses<br>▪ peak hour vehicle trips = 0.95 – 0.99 trips per dwelling<br>• 0.99 × 1 = 1 one way trip<br>• It is noted that the above calculations are based on an average dwelling house with typical car parking provision for 1 or 2 cars.<br>• The existing dwelling is likely to generate 1 one way trip in the peak hour.<br>• The proposed development will have the same number of one way trips in the respective peak hour which is not expected to have any impact on the existing road operation.<br>◦ The proposed development provides car parking in one underground garage and access via one driveway. |
| **Conclusion** | • The proposed trip generation from the site is expected to remain the same as at present.<br>• There will be no impact on existing traffic conditions. |

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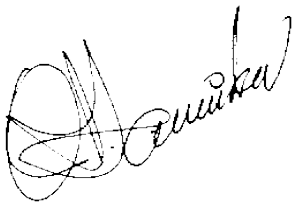
| **Conclusions** | • Proposed parking provision<br>◦ Complies with Council's Development Control Plan requirements in terms of design and car parking requirements.<br>• Traffic impacts<br>◦ It is estimated that traffic generation from the proposed development will remain at the existing levels. There will be no impacts on street network operation.<br>• Design of access, car parking and servicing facilities<br>◦ Complies with the relevant Standards.<br>• The proposed development is supportable on traffic and parking grounds. |



Oleg I. Sannikov

Director

MEngSc (Traffic Engineering)

MIEAust, PEng

MAITPM

**References:**

Pittwater 21 Development control Plan (DCP) 2014

RMS (2002) Guide to Traffic Generating Developments

RMS (2013) Technical Direction TDT 2013/4a

AS/NZS 2890.1: 2004: Parking Facilities Part 1: Off Street Car Parking

AS 2890.2 – 2002: Parking Facilities – Part 2: Off Street Commercial Vehicle Facilities

AS 2890.3 – 2015: Parking Facilities Part 3: Bicycle Parking Facilities

AS/NZS 2890.6: 2009: Parking Facilities – Part 6: Off Street Parking for People with Disabilities

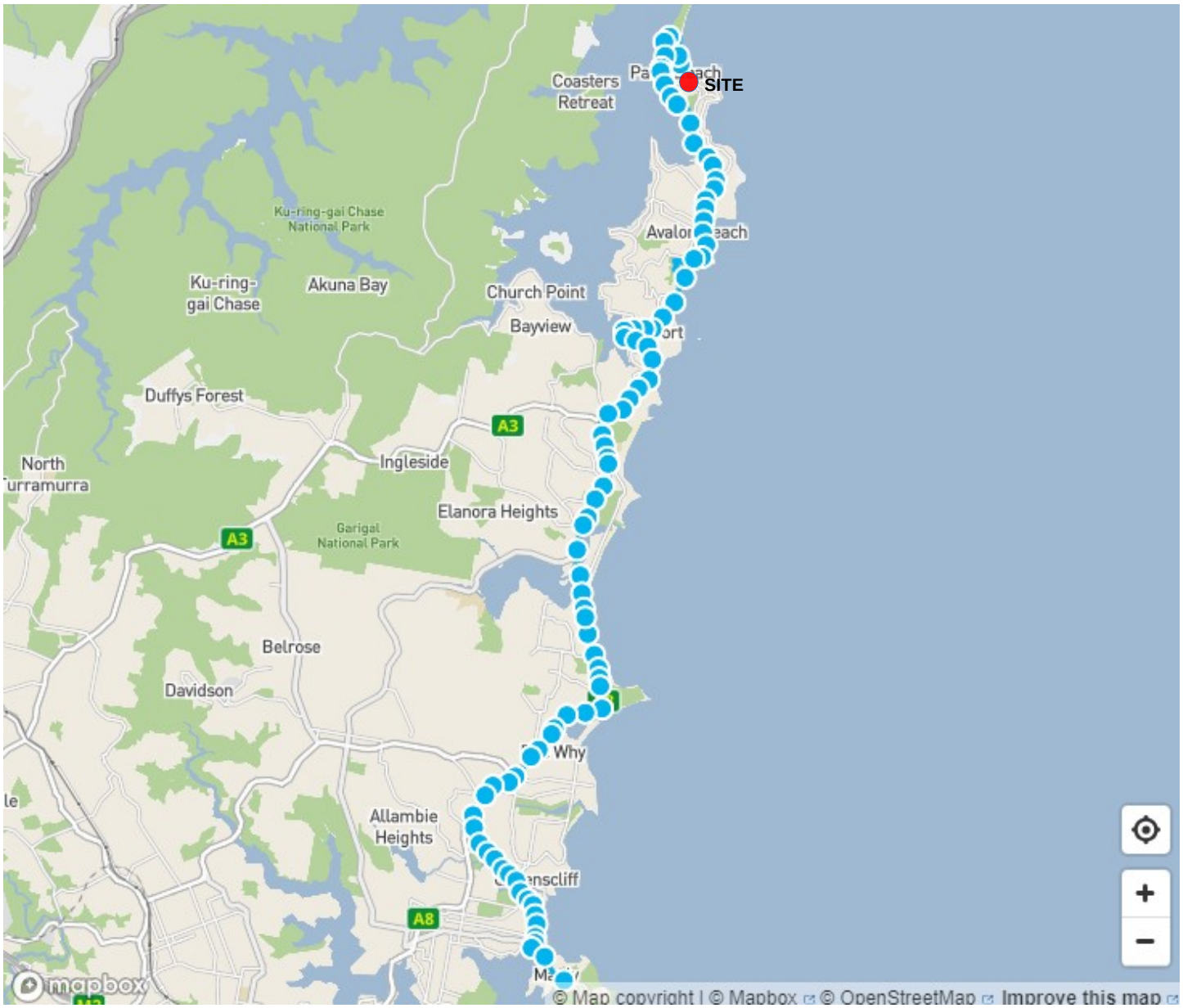
**Appendix**

**Bus routes**

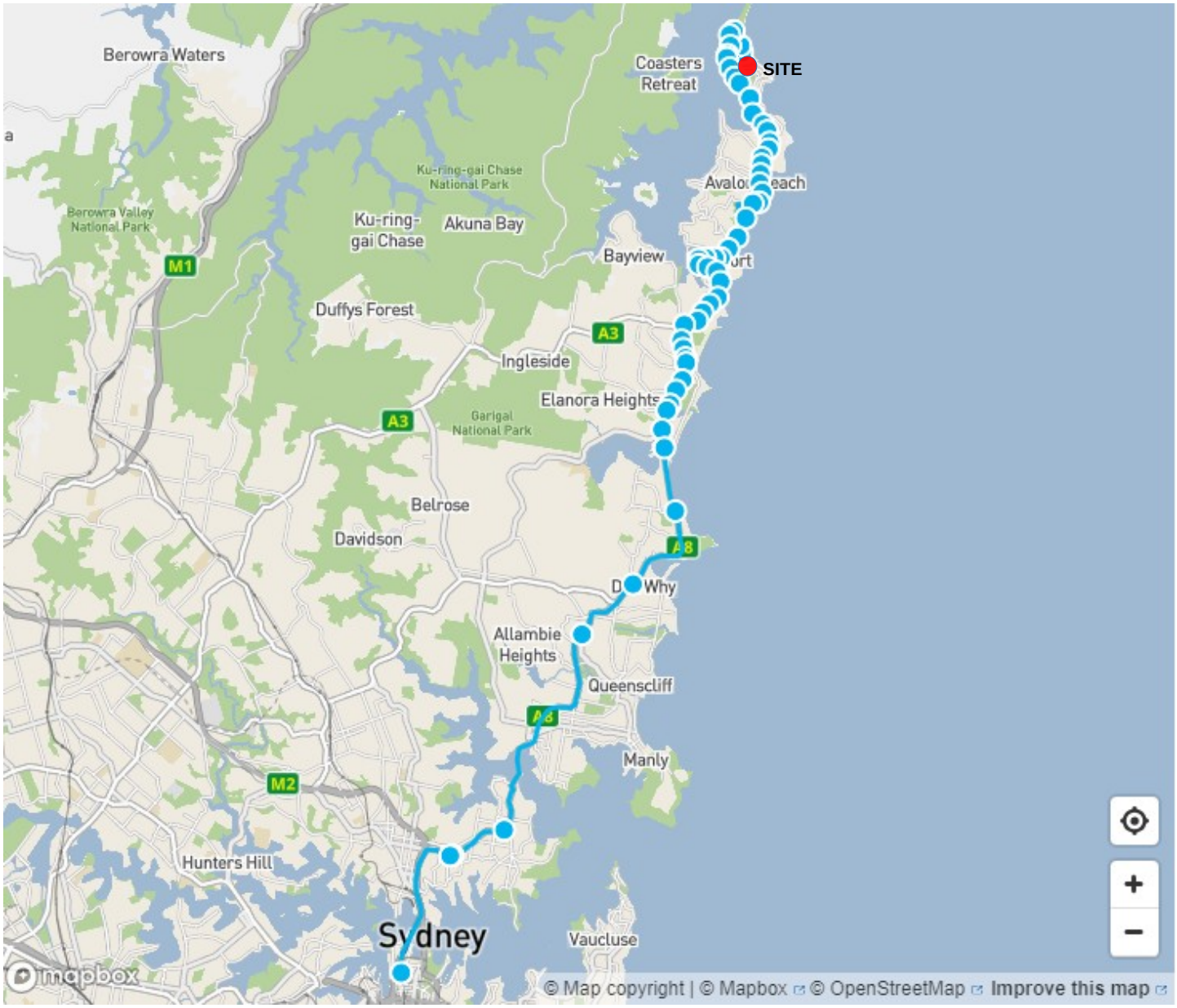
**Reduced copy of the architect's plan**

**Car park design checks and vehicle turning diagrams**

# Bus Route 199



# Bus Route L90




1 | Site Presentation
1 : 200


Tzannes

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NSW 2010 Sydney Australia




**Nominated Architects**
Alec Tzannes 4174
Jonathan Evans 6613
Mladen Pnjatovic 7468
Ben Green 7066
Chi Melhem 7754

**General Notes**

Verify dimensions on site prior to commencement of work. Check existing RL's on site. Advise Architect of any discrepancies before commencement. Allow for adjustments to suit discrepancies. Comply with relevant authorities requirements. Comply with Building Code of Australia requirements. Comply with relevant Australian Standards for materials and construction practice. Comply with Basix Certificate. Do not scale from drawings.

| Rev | Date | For |
|---|---|---|
| A | 21/01/19 | Consultant Issue |


**Quantity Surveyor**
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**Planner**
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**Ecologyst**
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**Legend**

- BOUNDARY LINES
- SETBACK LINES
- DEMOLISHED

Tzannes

NOT FOR CONSTRUCTION

**Scale** 1:200 @A1

**North**

0 2 4 6 8 10 m

**Project**
Palm Beach Residence

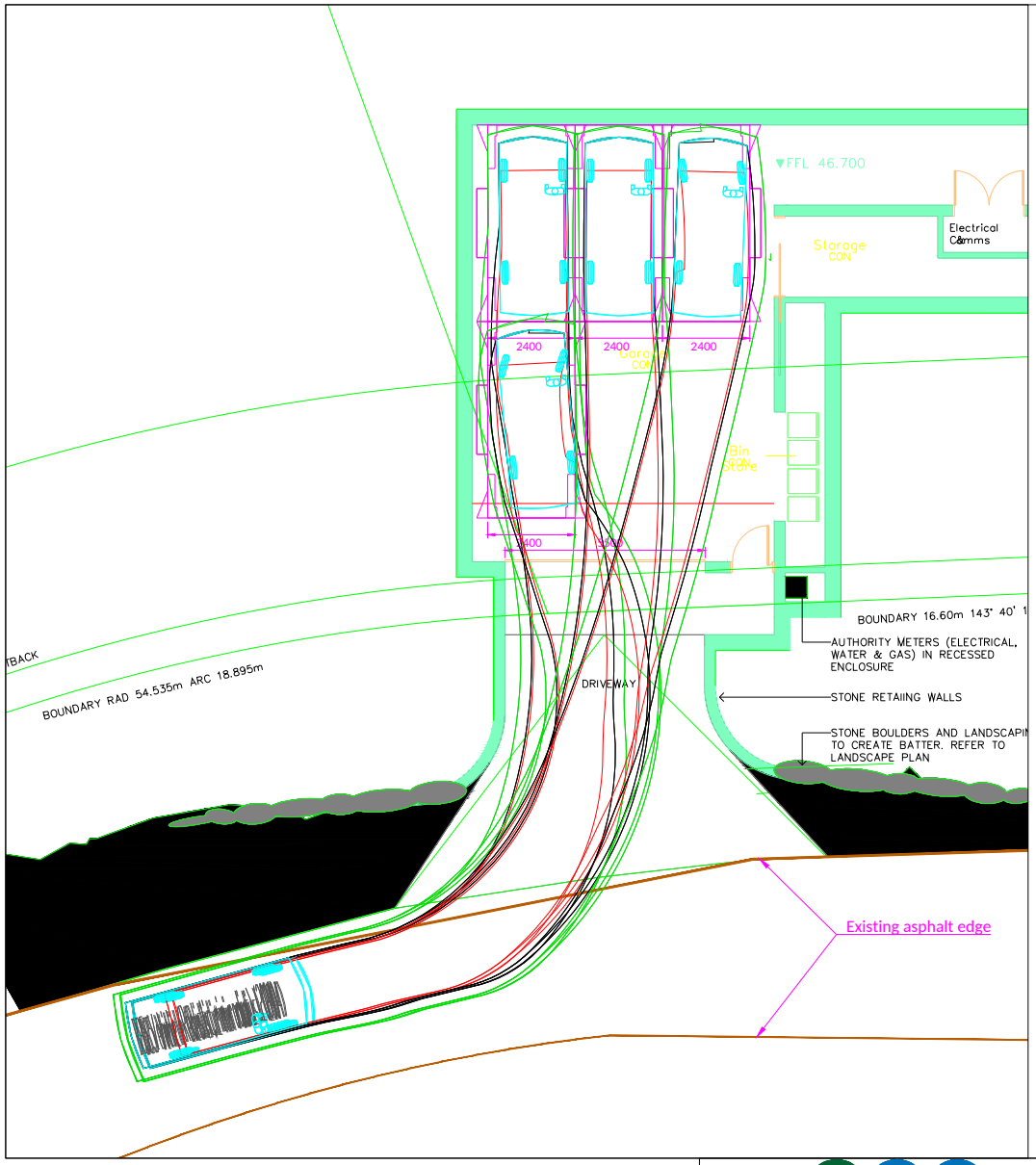
**Address**
346-352 Whale Beach Road, Palm Beach

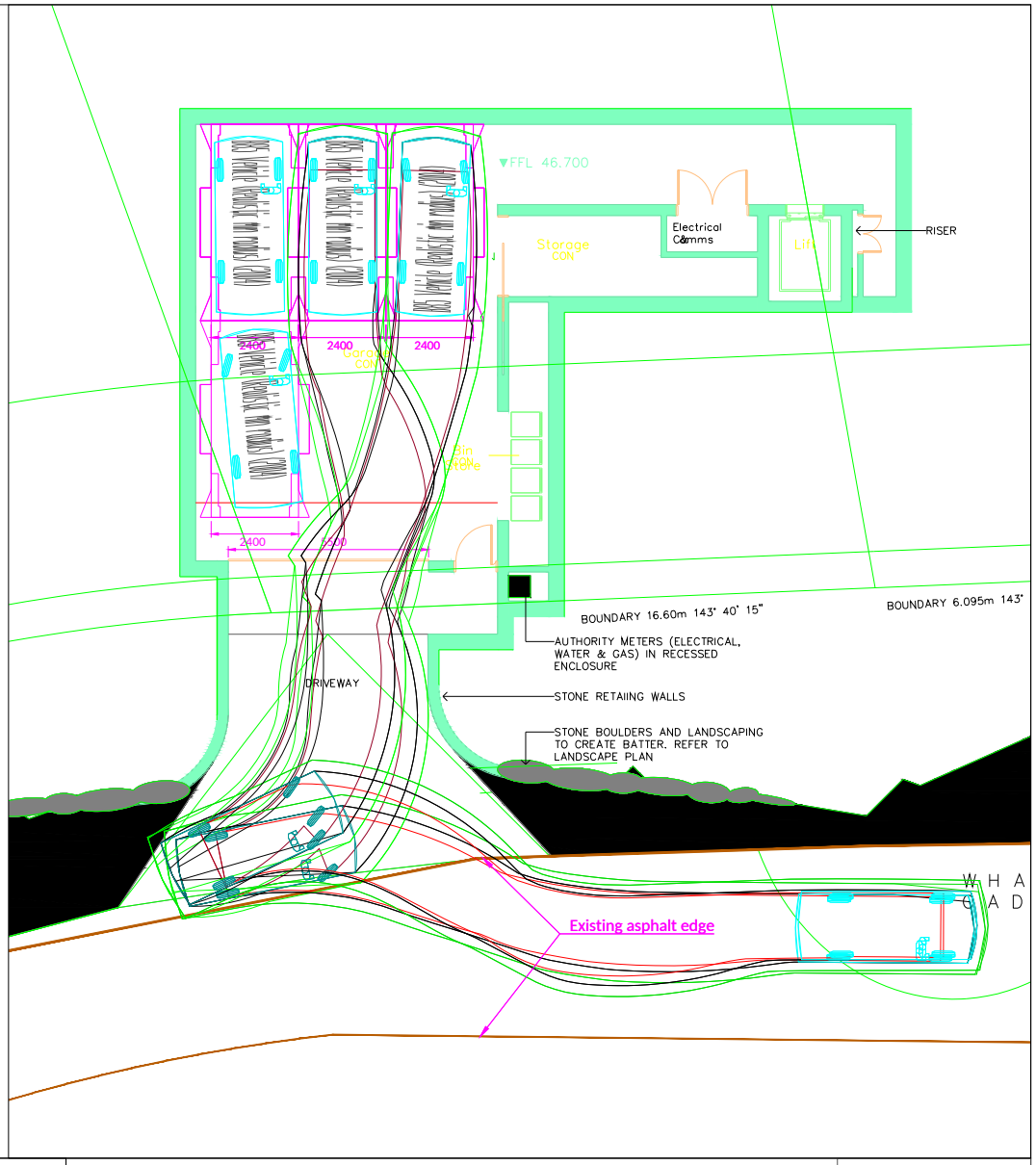
**Status**
DEVELOPMENT APPLICATION

**Drawing**
Site Plan Proposed

| Drawn | Checked |
|---|---|
| KD | TZ |

| Project No. | Drawing No. | Revision |
|---|---|---|
| 17018 | 0102 | A |

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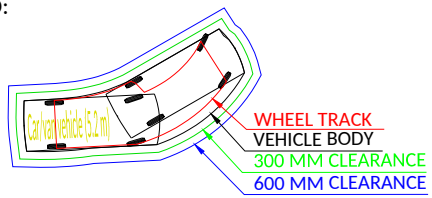


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Dwg No 18143/01 | Rev. A | 24/01/2019

The applicant C/ Tzannes

346-352 Whale Beach Road, Palm Beach NSW 2108

SCALE 1:200@A4

Proposed car park layout
Design checks as per AS/NZS 2890 series

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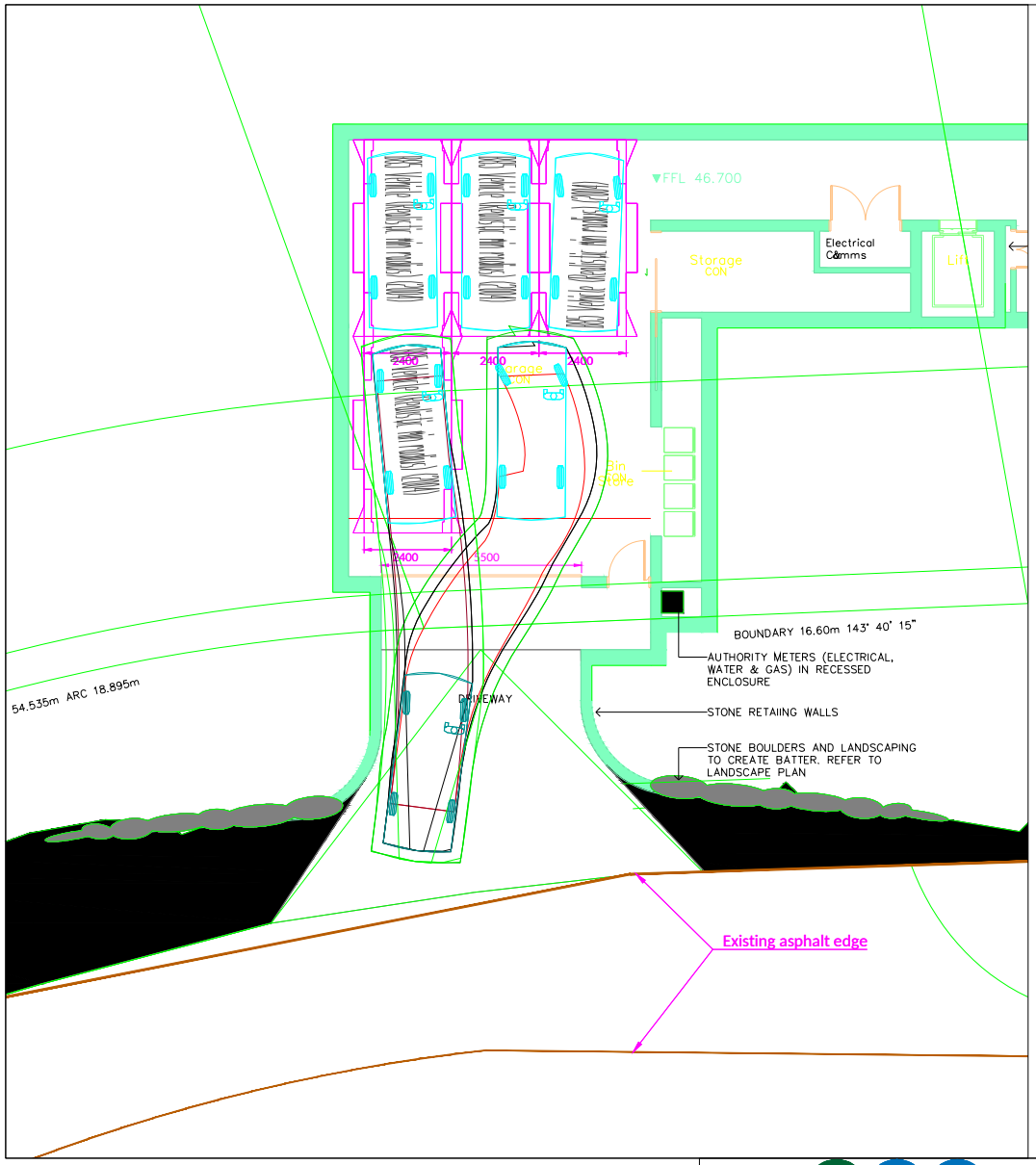


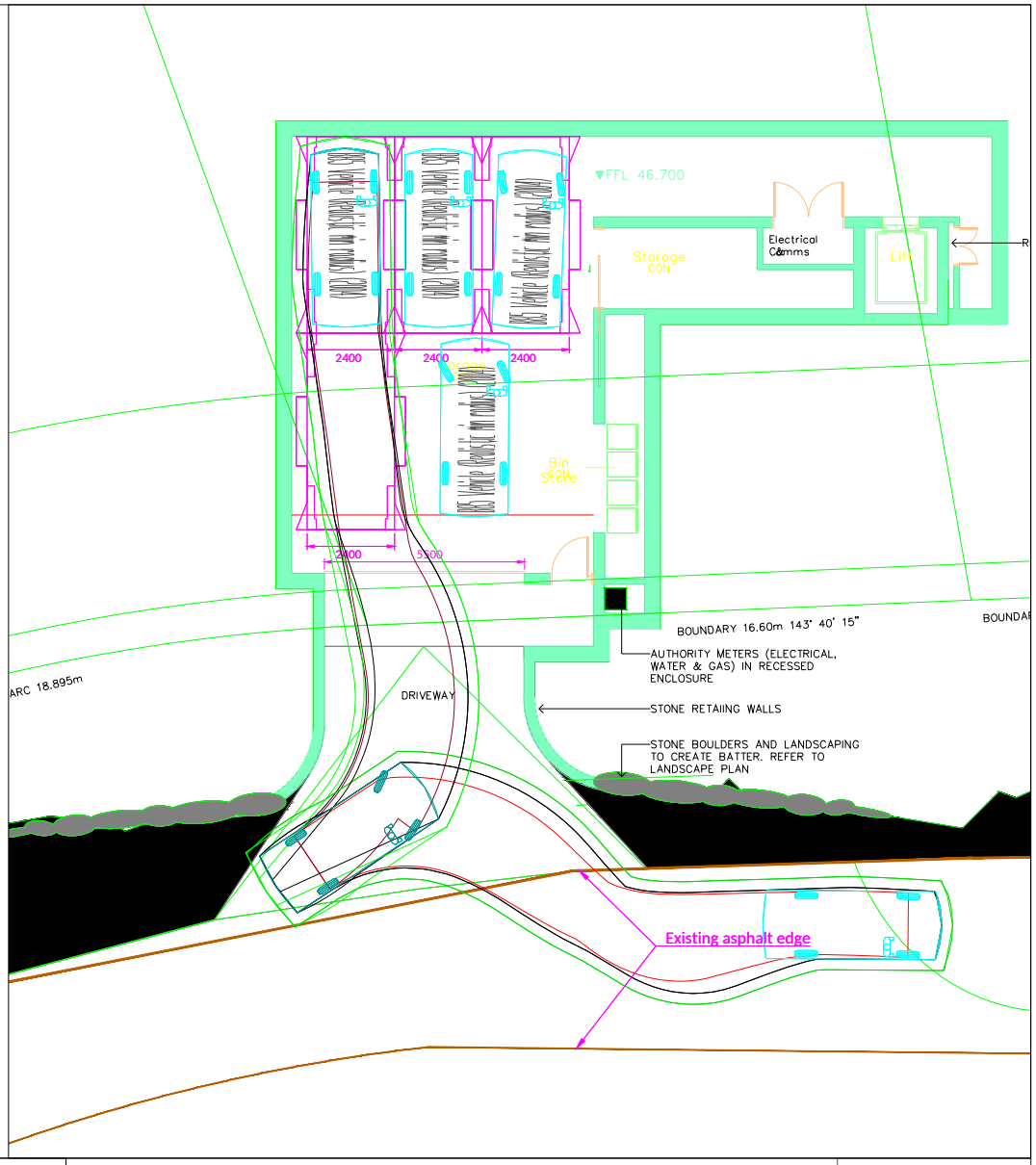


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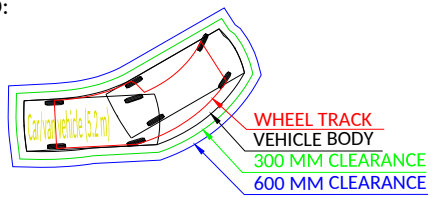


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| Dwg No 18143/02 | Rev. A | 24/01/2019 |
|---|---|---|

The applicant C/ Tzannes

346-352 Whale Beach Road, Palm Beach NSW 2108

SCALE 1:200@A4

Proposed car park layout
Design checks as per AS/NZS 2890 series

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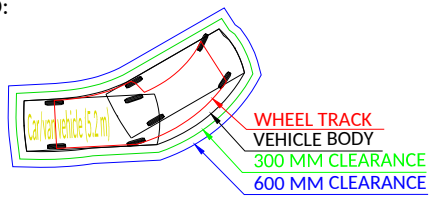


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| Dwg No 18143/03 | Rev. A | 24/01/2019 |
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The applicant C/ Tzannes

346-352 Whale Beach Road, Palm Beach NSW 2108

SCALE 1:500@A4

Proposed car park layout
Design checks as per AS/NZS 2890 series

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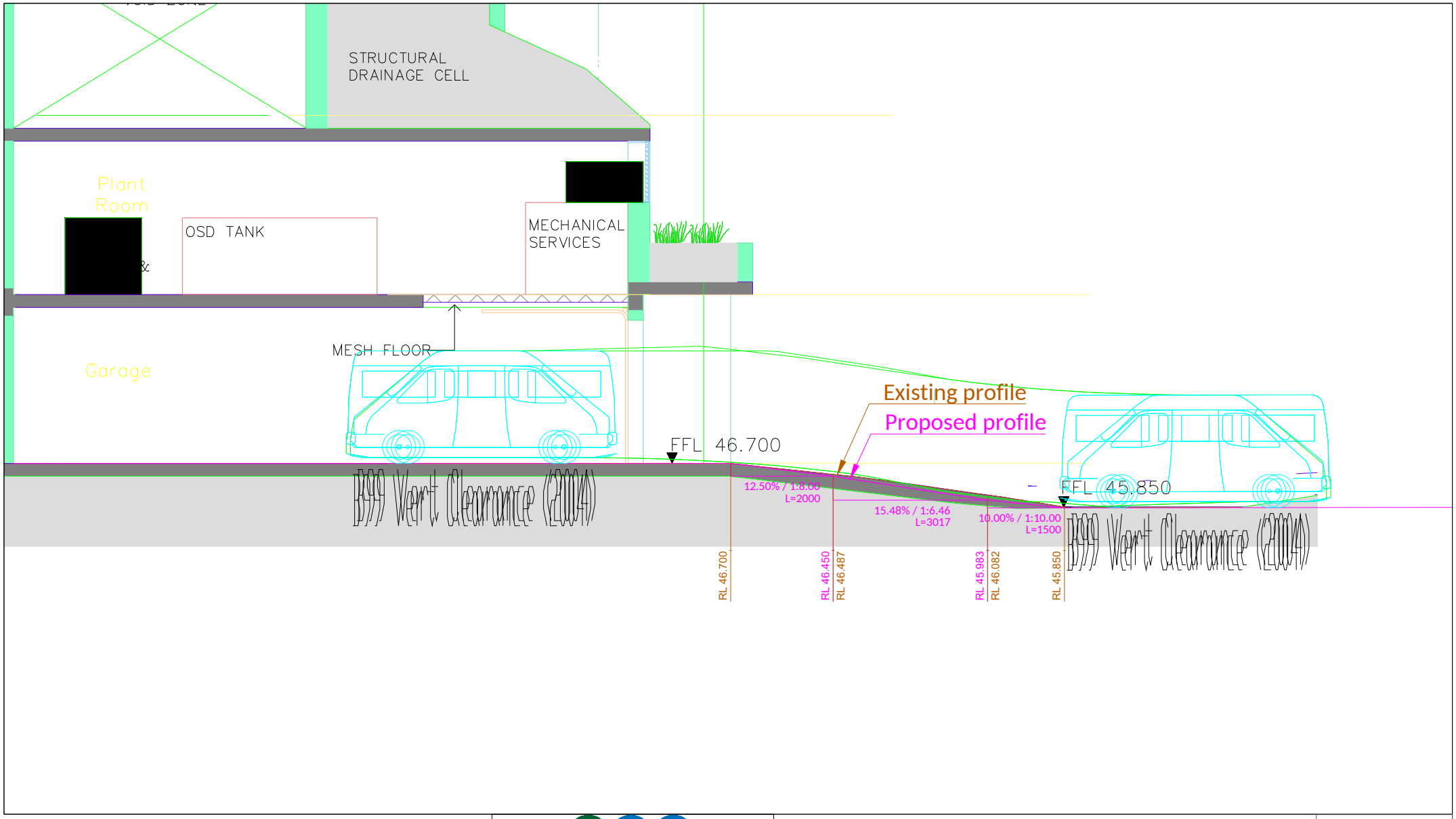


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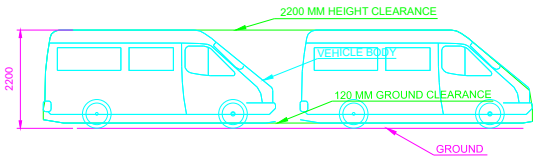


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| Dwg No 18143/04 | Rev. A | 24/01/2019 |
|---|---|---|

The applicant C/ Tzannes

346-352 Whale Beach Road, Palm Beach NSW 2108

SCALE 1:100@A4

Proposed car park layout
Design checks as per AS/NZS 2890 series

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