Ref: 0686r01v02

2/12/2022

Melwood Avenue
3 Pursell Avenue
Mosman NSW 2088

Attention: Antoine Gittany

RE: 69 MELWOOD AVENUE, FORESTVILLE
DEVELOPMENT APPLICATION FOR A PROPOSED SENIORS LIVING HOUSING DEVELOPMENT
TRAFFIC IMPACT STATEMENT

Dear Antoine,

PDC Consultants has been commissioned by Melwood Avenue to undertake a traffic impact assessment for the Development Application (DA) relating to a proposed seniors living development for the site at 69 Melwood Avenue, Forestville. Specifically, the DA seeks consent for the demolition of all existing structures and construction of a seniors living development, incorporating:

- Seven (7) seniors living units comprising of five (5) three-bedroom units and two (2) two-bedroom units;
- A total of 13 car spaces provided on Level 1;
- A 5.5-metre-wide combined entry / exit driveway onto Melwood Avenue.

Having regard for the above, it is evident that the development is not of a scale that requires referral of the DA to Transport for NSW (TfNSW), under the provisions of the State Environmental Planning Policy (Transport and Infrastructure) 2021.

The site is located in the Northern Beaches local government area (LGA), however a consolidated Development Control Plan for the Northern Beaches LGA is yet to be adopted. The proposed development has therefore, been assessed in accordance with the Warringah Local Environmental Plan 2011 (WLEP 2011) and Warringah Development Control Plan 2011 (WDCP 2011). Reference has also been made to the State Environmental Planning Policy (Housing) 2021 to assess the development.

LOCATION AND SITE

The subject site is located at 69 Melwood Avenue, Forestville, being approximately 4.5 kilometres north-east of the Chatswood Railway Station and approximately 11.8 kilometres north of the Sydney CBD. Specifically, the site is located on the eastern side of Melwood Avenue between its intersections with Lanford Avenue at the south and Cannons Parade at the north.

The site is formally identified as Lot 1, DP 208183. The site is rectangular in configuration with an area of approximately 1,430m^2. It has a single street frontage being Melwood Avenue to the west, having a length of approximately 28 metres. The northern, eastern and southern boundaries border neighbouring residential dwellings, having lengths of approximately 52 metres, 28 metres and 52 metres respectively.

The site currently accommodates a single residential dwelling. Vehicle access is provided via a 2.6-metre-wide combined entry / exit driveway onto Melwood Avenue serving a hardstand parking area.

Figure 1 and **Figure 2** provides an appreciation of the site in a local and broader context respectively.

ROAD NETWORK

The road hierarchy in the vicinity of the site is shown by **Figure 2**, with the roads that are considered important summarised in **Table 1.**

Table 1: Existing Road Network

	Warringah Road	Melwood Avenue	Cannons Parade
ROAD CLASSIFICATION	Classified state (MR328)	Local	Local
ROAD ALIGNMENT	Southwest– Northeast	North – South	East - West
CONNECTING / INTERSECTING ROAD[1]	Southwest Pacific Highway Northeast Pittwater Road	North: Warringah Road South: Slarkey Street	East: Ends near 44 Cook Street West: Melwood Avenue
SPEED ZONING	70km/h	50km/h	50km/h
NO. TRAFFIC LANES	Three (3) lanes of traffic in each direction	One (1) lane of traffic in each direction	One (1) lane of traffic in each direction
ROAD WIDTH[2]	21 metres	10 metres	9 metres
KERBSIDE PARKING & RESTRICTIONS	No	Yes	Yes
KERBSIDE PARKING RESTRICTIONS	No Stopping (both kerbsides)	Unrestricted (both kerbsides)	Unrestricted (both kerbsides)
FORMS SITE FRONTAGE	No	Yes	No

[1]: *Connecting / intersecting road at ends of subject road.*

[2]: *Approximate width.*

PUBLIC & ACTIVE TRANSPORT SERVICES

Public Transport

Figure 3 shows the public bus services that operate in the vicinity of the site. As can be seen from **Figure 3**, the site is situated within 400 metres of bus stops located along Melwood Avenue and Cannons Parade which are serviced by two (2) bus routes. Residents and visitors of the development can therefore utilise these bus services for access to and from the site.

As also indicated on **Figure 3**, the site is situated approximately 4.5 kilometres north-east of Chatswood Railway Station. Whilst Chatswood Railway Station falls outside the typical 800 metre walking catchment area, it is expected that a proportion of future residents and visitors of the development would utilise these services as part of a multi-modal trip (bus and train).

Cycle Network

As shown on **Figure 3**, site has excellent access to the bicycle network with on-road cycle paths provided along Melwood Avenue and Warringah Road to the west. The cycle path provides direct connections to the broader cycle network.

EXISTING TRAFFIC GENERATION

The existing development currently accommodates a residential dwelling, which generates a trip rate of 0.95 trips / dwelling / hour during the 7-9am (AM) peak period and 0.99 trips / dwelling / hour during the 4-6pm (PM) peak period, under the *RMS Guide to Traffic Generating Developments Technical Direction TDT 2013/04a* (RMS Guide Update). Application of these rates to the existing residential dwelling results in the following traffic generations:

- 1 vehicle trip / hour (0 in, 1 out) during the AM peak period;
- 1 vehicle trip / hour (1 in, 0 out) during the PM peak period.

The above assumes a 20% inbound and 80% outbound split during the AM peak period, noting that most residents would typically depart for work in the weekday morning, and vice versa for the weekday PM peak period.

The above is considered to reflect the baseline traffic generation for the site. Notwithstanding, it is considered that the most relevant use of the above is to determine the net change in traffic generation as a result of the proposed development, as is discussed further below.

Figure 1: Site Plan

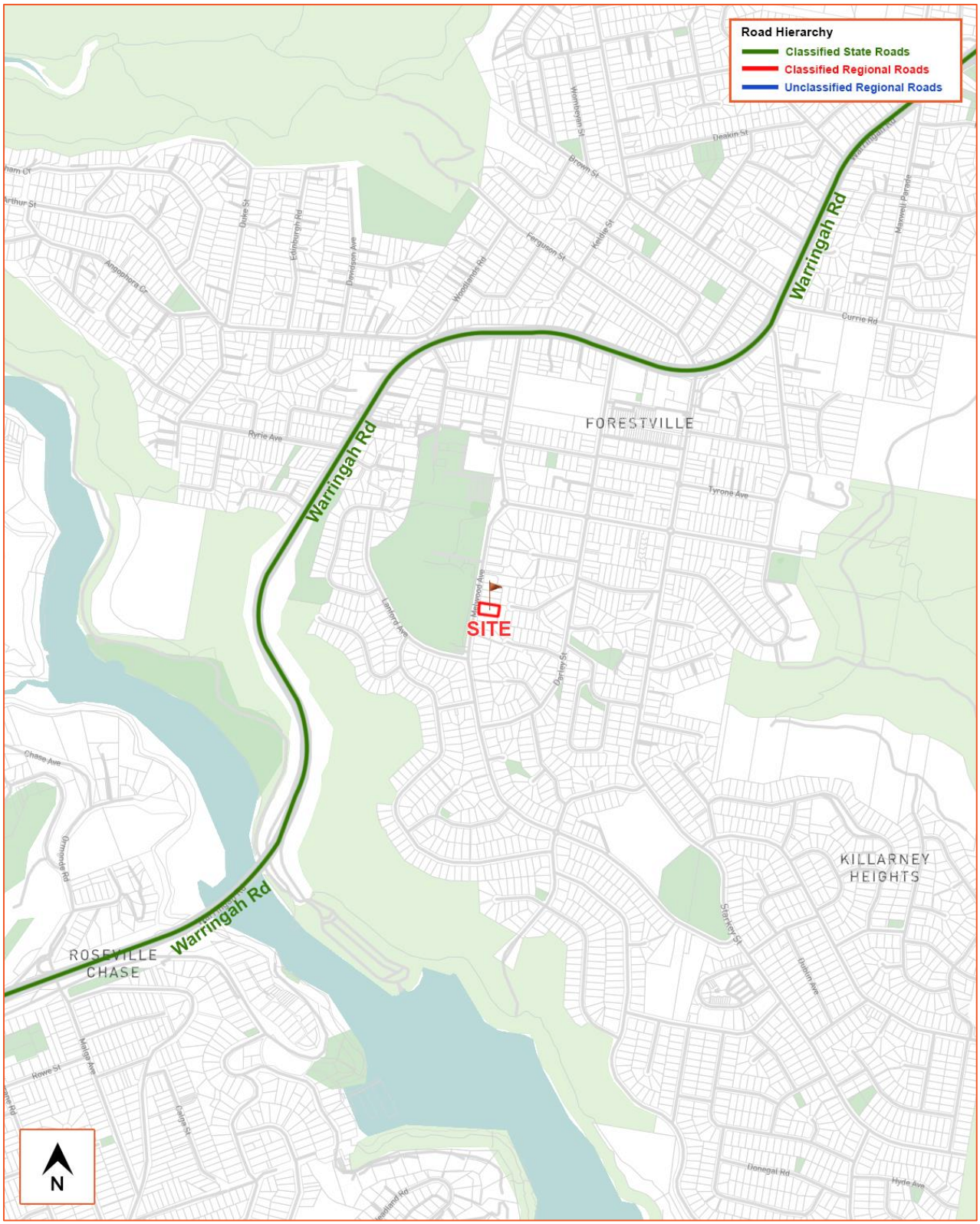

Figure 2: Location & Road Hierarchy

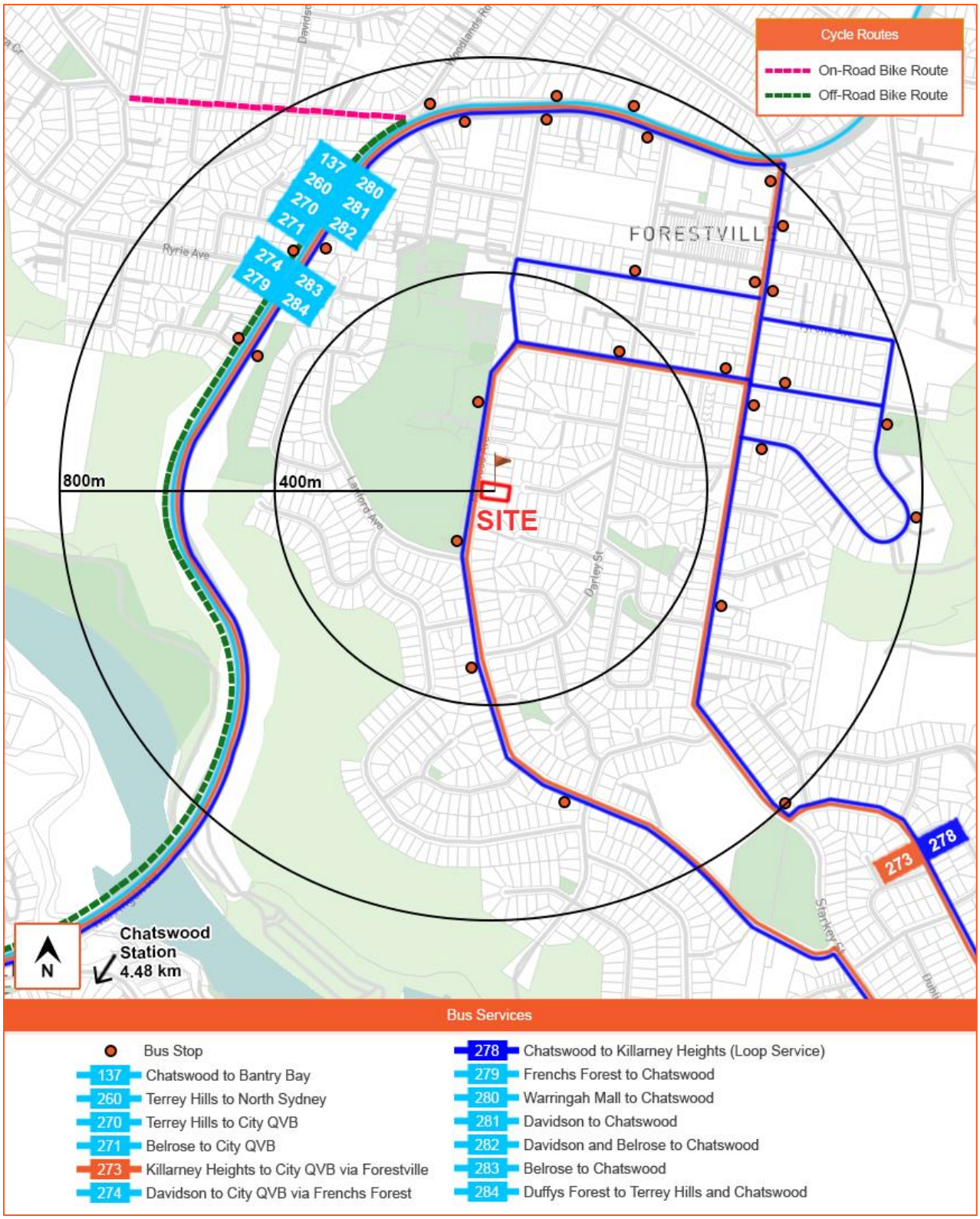

Figure 3: Public and Active Transport Services

PROPOSED DEVELOPMENT

A detailed description of the proposed development is provided in the Statement of Environmental Effects prepared separately. In summary, the DA seeks consent for the demolition of all existing structures and construction of seniors living development consisting of:

- Seven (7) seniors living units comprising of five (5) three-bedroom units and two (2) two-bedroom units;
- A total of 13 car spaces provided on Level 1;
- A 5.5-metre-wide combined entry / exit driveway onto Melwood Avenue.

A copy of the relevant architectural drawings, prepared by CD Architects are included in **Attachment 1**, for reference.

PARKING REQUIREMENTS

Car Parking

Clause 108 (2) of the Housing SEPP 2021 outlines the following car parking rates for independent units seniors living developments:

> *The following are non-discretionary development standards in relation to development for the purposes of independent living units—*
>
> *(j) for a development application made by, or made by a person jointly with, a social housing provider—at least 1 parking space for every 5 dwellings,*
>
> *(k) if paragraph (j) does not apply—at least 0.5 parking spaces for each bedroom.*

It is noted that the DA has not been made by a social housing provider and accordingly, the development is required to be assessed in accordance with the car parking rate outlined under Clause 108 (2) (k) of the Housing SEPP 2021. **Table 2** shows the car parking requirement for the development under the Housing SEPP 2021, and the proposed provision in response.

Table 2: Car Parking Requirement & Provision

TYPE	NO.	SEPP PARKING RATE	SEPP REQUIREMENT	PARKING PROVISION
Bedrooms	19	0.5 spaces / bedroom	10	13
		TOTAL	***10***	***13***

It is evident from **Table 2** that the development requires a minimum of 10 car parking spaces under the Housing SEPP 2021. In response, the development provides a total of 13 car spaces and therefore satisfies the minimum requirements of the Housing SEPP 2021. The proposed car parking provision is therefore considered acceptable and will ensure that all car parking demands are accommodated on-site, with no reliance on on-street parking.

Accessible Car Parking

Schedule 4, Part 1 Section 5 of the Housing SEPP 2021 stipulates the following to guide the provision of accessible parking spaces for independent units seniors housing developments:

(a) car parking spaces must comply with the requirements for parking for persons with a disability set out in AS 2890.6, and

(b) 10% of the total number of car parking spaces (or at least one space if there are fewer than 10 spaces) must be designed to enable the width of the spaces to be increased to 3.8 metres, and

The project's access consultant confirms that the proposed development is required to provide two (2) accessible parking spaces. In response, the proposed development provides two (2) accessible parking spaces and is therefore considered to be acceptable.

Motorcycle Parking

Neither the Housing SEPP 2021 nor the WDCP 2011 stipulate a rate for the provision of motorcycle parking for seniors living developments and, in any event, it is considered that the proposed development would generate a negligible demand for motorcycle parking. Accordingly, the development does not provide any on-site motorcycle parking facilities, and this is considered acceptable.

Bicycle Parking

Similar to motorcycles, neither the Housing SEPP 2021 nor the WDCP 2011 policies stipulate a rate for the provision of bicycle parking, and it is considered that the proposed development would generate a negligible demand for bicycle parking. Accordingly, the development does not provide any on-site bicycle parking facilities, and this is considered acceptable.

Service Vehicle Parking & Waste Collection

Neither the Housing SEPP 2021 nor the WDCP 2011 policies stipulate a rate for the provision of service vehicle parking. Given the use and scale of the proposed development, it is expected that there would be a negligible demand for service vehicle parking. The development does not propose any on-site service vehicle parking facilities; however, service vehicles up to a B99 Design Vehicle would be able to use the visitor car parking space for short term parking and loading.

Additionally, it is considered appropriate that the waste collection of the development be undertaken on-street, along Melwood Avenue. To facilitate this, the bin holding area is provided on Level 2, near the site frontage, ensuring that private waste contractors will be able to safely and efficiently collect bins from the site, and eliminate the requirement for bins to be placed on the kerbside. This arrangement is considered acceptable.

TRAFFIC GENERATION & IMPACTS

Trip Generation

The updated trip generation rate for seniors living developments included in the RMS Guide Update was derived from surveys of ten (10) seniors living developments across the Sydney metropolitan area and regional areas of NSW and is considered appropriate for adoption. The RMS Guide Update stipulates a traffic generation rate of 0.4 trips / dwelling / hour during both the weekday morning (AM) and evening (PM) peak periods for seniors living developments. Application of this rate to the seven (7) seniors living units proposed, results in the following traffic generation:

- 3 vehicle trips / hour (0 in, 3 out), during the AM peak period;
- 3 vehicle trips / hour (3 in, 0 out), during the PM peak period.

The above is not a net increase in traffic generation, as it does not take into consideration the generation of the existing development. In this regard, the net increase in generation as a result of the proposed development is expected to be as follows:

- 2 vehicle trips / hour (0 in, 2 out), during the AM peak period;
- 2 vehicle trips / hour (2 in, 0 out), during the PM peak period.

Traffic Impacts

As discussed above, the proposed development will result in a net increase in traffic generation of 2 vehicle trips / hour during both the weekday AM and PM peak periods. This equates to one (1) additional vehicle trip every 30 minutes which will have no material impact on the performance of the external road network and accordingly, no external improvements will be required to facilitate the development.

Furthermore, computer modelling techniques available to analyse intersection performances are not sensitive to such small changes in traffic volumes and hence, such an assessment is not considered to be required. The traffic impacts of the proposed development are therefore considered acceptable.

DESIGN ASPECTS

The design of the traffic circulation and parking areas comply with AS 2890.1-2004 Off-Street Car Parking (AS 2890.1) and AS 2890.6 – 2009 Off-Street Parking for People with Disabilities (AS 2890.6) and the following comments are considered noteworthy:

Access Design

- With 13 car spaces of Class 1A, the proposed development requires a Category 1 Driveway under Table 3.1 of AS 2890.1, being a combined entry / exit driveway width of 3.0 to 5.5 metres. In response, the proposed development proposes a 5.5-metre-wide combined entry / exit driveway onto Melwood Avenue and complies with the minimum requirements of AS 2890.1.
- The proposed arrangements have also been assessed using swept path analysis, with the results included in **Attachment 2** for reference. These results confirm compliance with AS 2890.1 and that the proposed access arrangements will operate safely and efficiently.
- The driveway has a 1:20 (5%) grade for the first 6.0 metres inside the property boundary, and therefore satisfies the requirements of Clause 3.3 of AS 2890.1.
- The vehicular access has a minimum width of 5.5 metres for the first 6.0 metres inside the property boundary and will narrow to 3.0 metres between the kerbs internally. The ramp will therefore accommodate one-lane, two-way traffic flow, as demonstrated by the swept path analysis results included in **Attachment 2**. This arrangement complies with AS 2890.1 and is considered acceptable given the low traffic generation and tidal nature (i.e. most vehicles departing the site in the morning and arriving at the site in the evening).
- The driveway ramp has a maximum grade of 1:4 (25%) with 2.0-metre-long transitions of 1:8 (12.5%) at both ends of the ramp, thereby satisfying Clause 2.5.3 of AS 2890.1.

Internal Design

- The car parking spaces are provided in accordance with the User Class 1A requirements of AS 2890.1, having a minimum space width of 2.4 metres and length of 5.4 metres, with an aisle width of 5.8 metres at
- The accessible car parking spaces are provided with a minimum space width of 2.4 metres and length of 5.4 metres, with an aisle width in of 5.8 metres. Additionally, these spaces are located immediately adjacent to a 2.4-metre-wide and minimum 5.4-metre-long shared area, thereby satisfying the requirements of AS 2890.6.
- A 1.0 metre blind aisle extension has been provided beyond the last parking spaces, in accordance with Figure 2.3 of AS 2890.1.
- A clear head height of 2.2 metres is required above all traffic circulation and car parking areas in accordance with Clause 5.3.1 of AS 2890.1.
- A minimum clear head height of 2.5 metres is provided above the car parking space and shared areas, in accordance with Clause 2.4 of AS 2890.6.
- A 2.5 metre by 2.0 metre visual splay is provided on the egress side of the driveway, at the property boundary, in accordance with Figure 3.3 of AS 2890.1. This area is to be kept clear of all vertical obstructions with a height greater than 0.6 metres.

CONCLUSION

In summary:

- PDC Consultants has been commissioned by Melwood Avenue to undertake a traffic impact assessment for the Development Application (DA) relating to a proposed seniors living development for the site at 69 Melwood Avenue, Forestville. Specifically, the DA seeks consent for the demolition of all existing structures and construction of a seniors living development, incorporating:
    - Seven (7) seniors living units comprising of five (5) three-bedroom units and two (2) two-bedroom units;
    - A total of 13 car spaces provided on Level 1;
    - A 5.5-metre-wide combined entry / exit driveway onto Melwood Avenue.
- The traffic generation assessment confirms that the proposed development will generate 3 vehicle trips / hour during both the AM and PM peak periods. The net increase will be only 2 vehicle trips / hour during both peak periods, once the generation of the existing development is taken into consideration. This equates to one (1) additional vehicle trip every 30 minutes and will have no material impact on the performance of the external road network or on key intersections in the locality and accordingly, no external improvements will be required to facilitate the development. The traffic impacts of the proposed development are therefore considered acceptable.
- The development is required to provide a minimum of 10 car spaces under the Housing SEPP 2021. In response, the development provides 13 car spaces and therefore satisfies the minimum requirement of the Housing SEPP 2021. The proposed car parking provision is therefore considered acceptable and will ensure that all car parking demands are accommodated on-site, with no reliance on on-street parking.
- The proposed access and car parking arrangements comply with the relevant requirements of AS 2890.1 and AS 2890.6. Any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

The proposed development is therefore supportable on traffic planning grounds. Please contact the undersigned should you have any queries or require any further information.

Yours sincerely,

Jay Wu
Traffic Engineer, PDC Consultants

Email: jay@pdcconsultants.com.au

Attachments:
1) Architectural Drawings
2) Swept Path Analysis Drawings

Attachment 1

1 LEVEL 1 FLOOR PLAN

1 : 100 at A1 1:200 at A3

CAR PARKING SCHEDULE FOR WARRINGAH DCP 2011

UNITS (7)	RATE	REQUIRED	PROPOSED
RESIDENTIAL NON-ADAPTABLE (5 UNITS)			
3 BED (5)	1.5 SPACE / 1 UNIT	7.5	10
2 BED (2)	1.2 SPACE / 1 UNITS	2.4	2
VISITORS	1 SPACE / 5 UNITS	1.4	1
TOTAL		11.3	13

REFERENCES

DRAWINGS TO BE READ IN CONJUNCTION WITH BUT NOT LIMITED TO ALL STRUCTURAL ENGINEERS, STORMWATER ENGINEERS, LANDSCAPE ARCHITECTS, AND OTHER ASSOCIATED PLANS & REPORTS

REFER TO THE BASIX REPORT FOR ADDITIONAL REQUIREMENTS.

NOTES

ALL DIMENSIONS AND SETOUTS ARE TO BE VERIFIED ON SITE AND ALL OMISSIONS OR ANY DISCREPANCIES TO BE NOTIFIED TO THE ARCHITECT.
FIGURED DIMENSIONS TO BE USED AT ALL TIME.
DO NOT SCALE MEASUREMENTS OFF DRAWINGS.

PARKING SCHEDULE

RESIDENTIAL PARKING 2400x5400, U.N.O.

VISITOR PARKING 2400x5400

LEGEND

TREES TO BE REMOVED

TREES TO BE RETAINED

Rev.	Date	Description
P1	Date 1	Revision 1

Scale
m 0 1 2 4 6 8
1:100 at A1 1:200 at A3

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SYDNEY NSW 2000
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Project
SENIOR HOUSING DEVELOPMENT

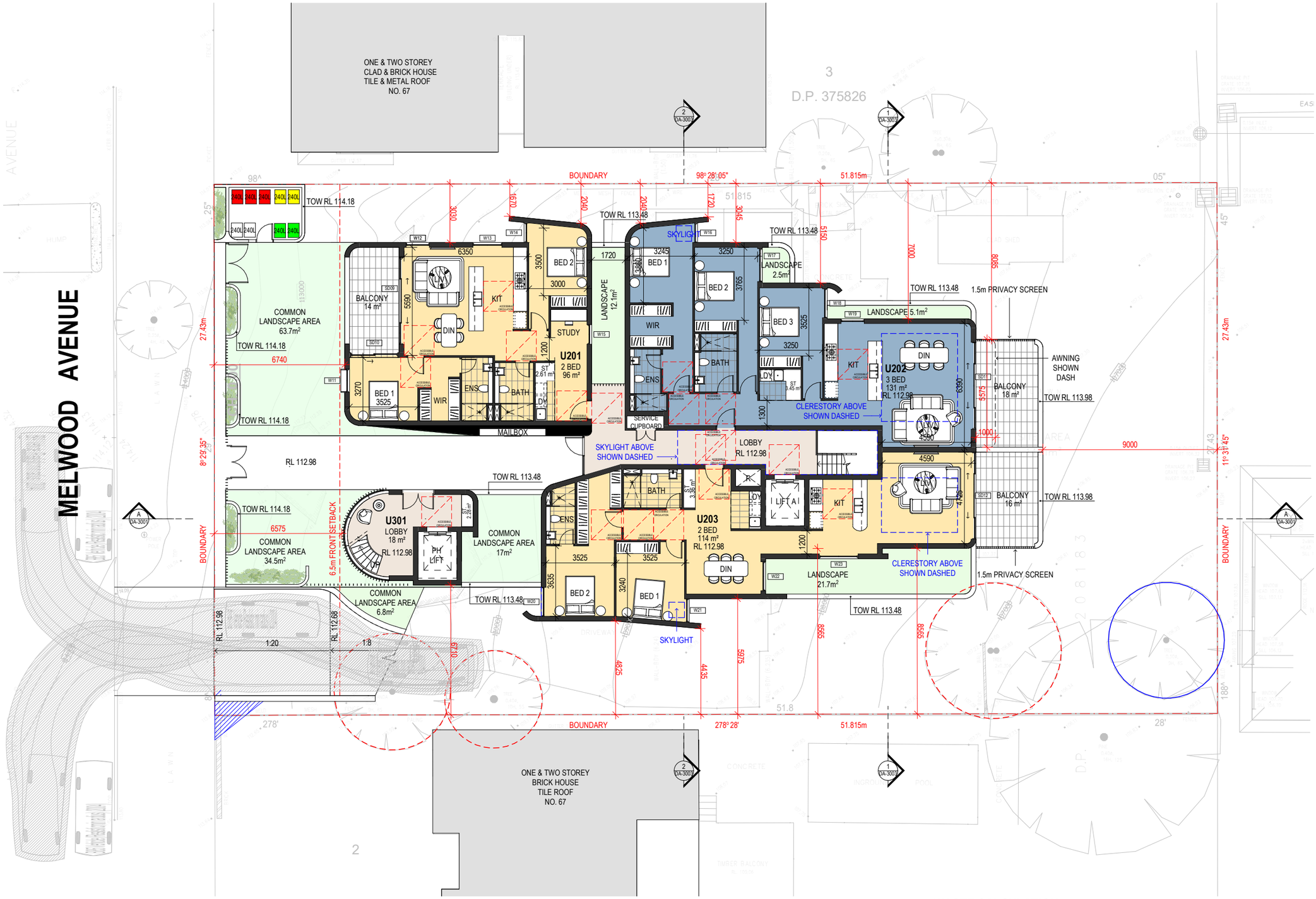
69 Melwood Avenue,
Forestville

Drawing Title
LEVEL 1 FLOOR PLAN

PRELIMINARY

Job no.	Drawing no.	Rev.
J22558D	DA 1102	P1

Drawn by	Checked by	Approved by	Date
HF	RJ	ZC	SEP. 2022



1 LEVEL 2 FLOOR PLAN

1 : 100 at A1 1:200 at A3

WASTE CALCULATION

	RATE OF WASTE	TOTAL WASTE	BIN SIZE	NO. OF BINS COMPLIANCE REQUIRED	NO. OF BINS PROPOSED
RESIDENTIAL (7 UNITS)					
WASTE	/	/	240L	3	3
RECYCLE	/	/	240L	2	2
GLASS	/	/	240L	2	2
VEGETATION	/	/	240L	2	2
PROPOSED TOTAL					9

GENERAL WASTE BIN | RECYCLE BIN | VEGETATION BIN | VEGETATION BIN

REFERENCES

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LEGEND

TREES TO BE REMOVED

TREES TO BE RETAINED

Rev.	Date	Description
P1	Date 1	Revision 1

Scale
m 0 1 2 4 6 8
1:100 at A1 1:200 at A3

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Project
SENIOR HOUSING DEVELOPMENT

69 Melwood Avenue, Forestville

Drawing Title
LEVEL 2 FLOOR PLAN

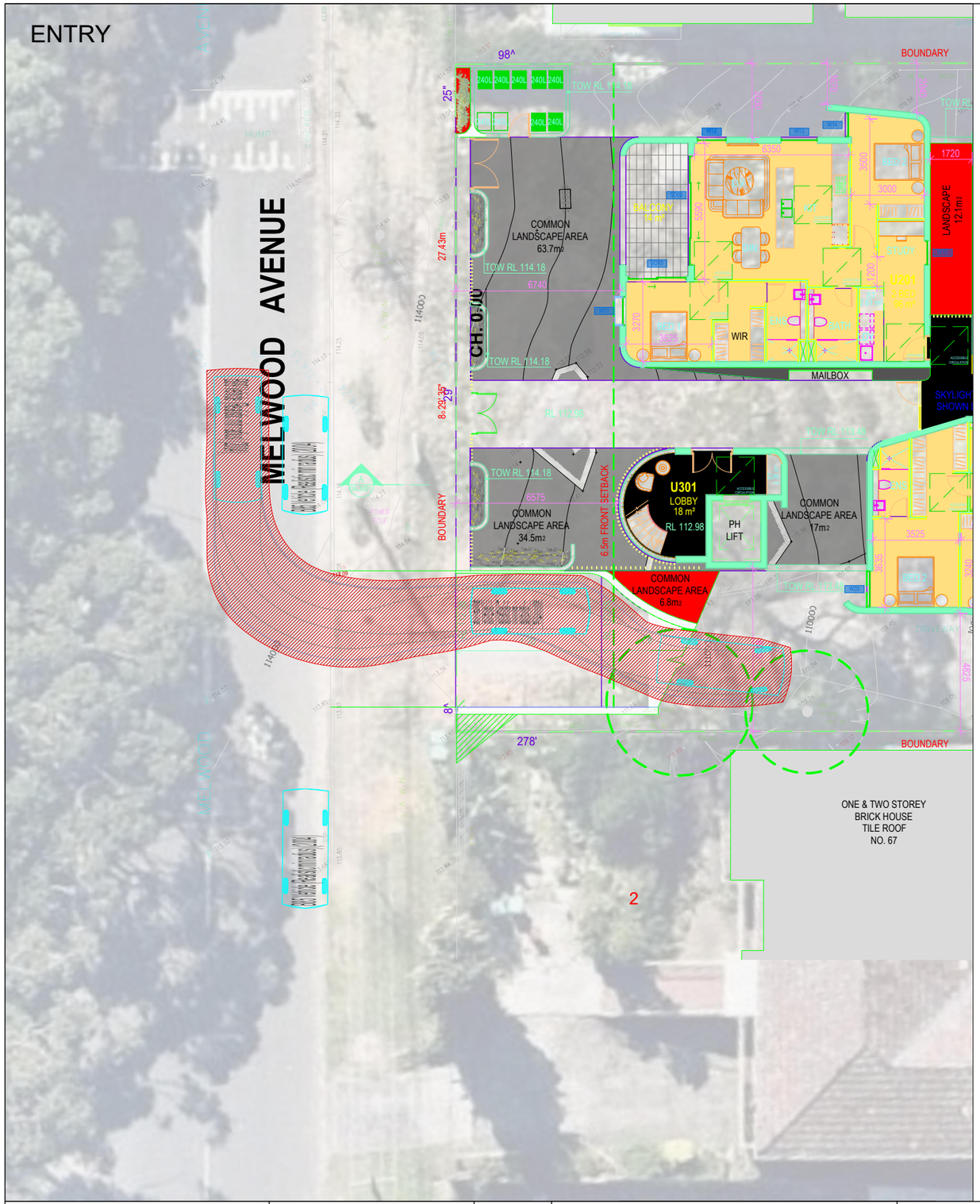
PRELIMINARY

Job no.	Drawing no.	Rev.
J22558D	DA 1103	P1

Drawn by	Checked by	Approved by	Date
HF	RJ	ZC	SEP. 2022

Attachment 2

ENTRY



EXIT

No.	Date	Description

Swept Path Key
- Vehicle Wheel Path
- Vehicle Body Envelope
- 300mm Vehicle Clearance

North

Drawing Prepared By

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Architect: CD Architects	Project: 69 Melwood Avenue, Forestville	Drawing Title: Level 2 Plan B99 & B85 Design Vehicle Swept Path Analysis Vehicle Entry & Exit Movements	Drawing No.: 001	Revision No.: -
Client: Antoine Gittany	Project No: 0686	Sheet Status: NOT FOR CONSTRUCTION	Drawn By: JW	Date: 02/12/2022
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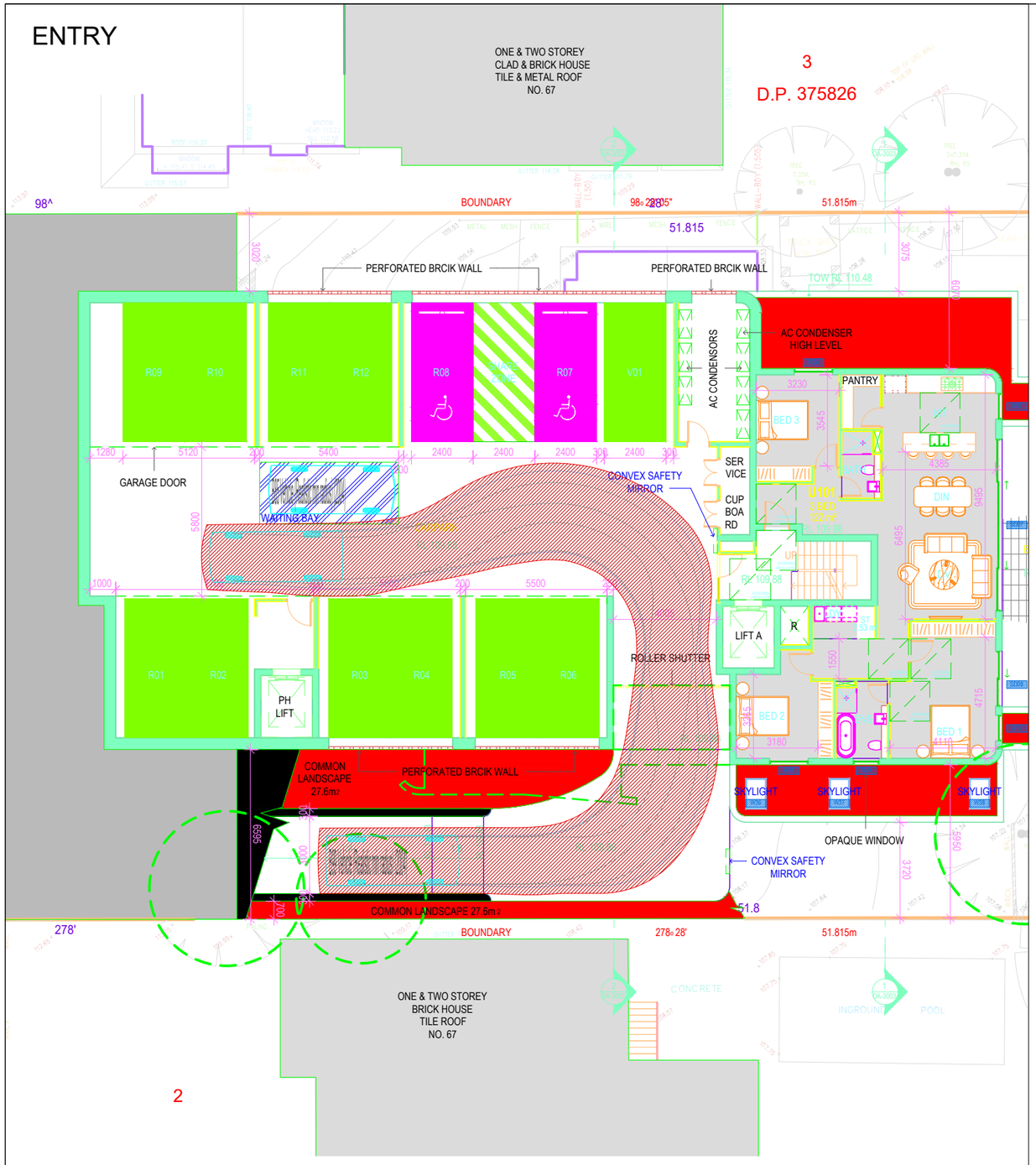

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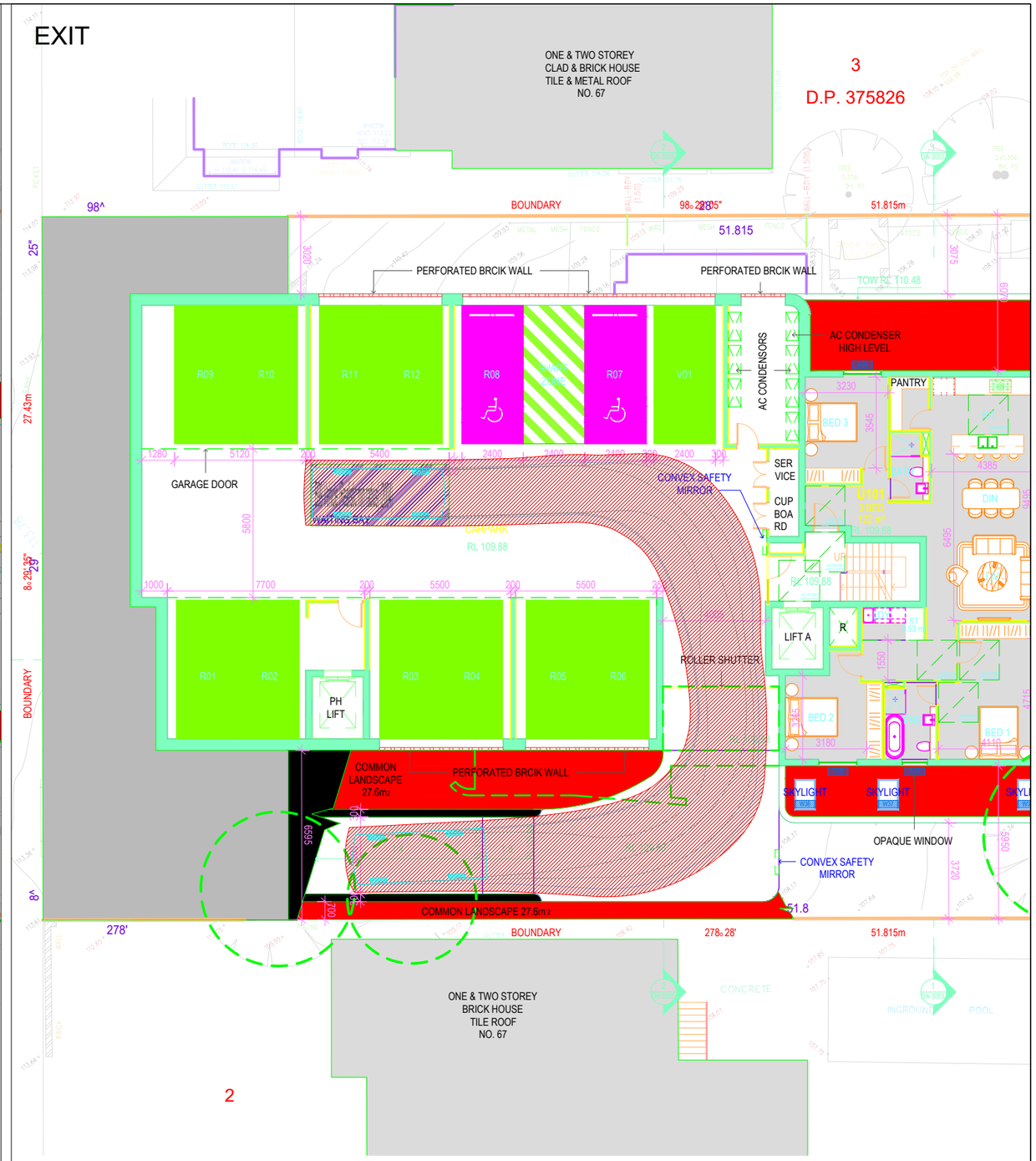

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Architect CD Architects	Project 69 Melwood Avenue, Forestville	Drawing Title Level 1 Plan B99 & B85 Design Vehicle Swept Path Analysis Vehicle Entry & Exit Movements	Drawing No. 002	Revision No. -
			Drawn By JW	Date 02/12/2022
Client Antoine Gittany	Project No 0686	Sheet Status NOT FOR CONSTRUCTION	Scale 1:200 @ A3 0m 2 4 6 8	