



Traffic & Parking Impact Assessment
Middle Head Oval Amenities Building,
Mosman

ARCHER OFFICE



Traffic Engineering

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Revision History

Issue	Date	Comments	
A.02	06/06/2024	Updated Based on Council Comments	
A.01	06/05/2024	Issued for Submission	
DRAFT	22/03/2024	Issued as Draft to Client	
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Date and Time Printed: 6/06/2024 10:39 AM			

Table 1: Revision History

Executive Summary

The proposed development is for the redevelopment of the Middle Head Oval Amenities Building which includes a new community space, a shelter to the existing tiered seating, and a drop-off zone along Middle Head Road, Mosman.

The Traffic Impact Assessment has found that the:

- Anticipated traffic impact to Middle Head Road and the surrounding road network is negligible with the proposed development being ancillary to the existing use of the oval and therefore not expected to generate additional traffic.
- Proposed development does not require additional parking spaces.
- Service vehicle access will be improved and will remain at its current location at Penguin Close.
- Proposed service vehicle access design complies with AS 2890.1.
- Proposed drop off zone complies with AS 2890.5.
- Refuse collection will continue to occur on-street.
- Proposed development is within 50m to a bus stop.

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References

Australian Standard 2890.1 – Off-Street Car Parking

Australian Standard 2890.5 – On-Street Parking

Transport for NSW Guide to Traffic Generating Developments

Middle Head Management Plan 2017

Middle Head, Mosman Transport and Access Management Plan (Stantec, 2023)

Middle Head/ Gubbuh Gubbuh Master Plan (Sydney Harbour Federation Trust, 2023)

1 Introduction

1.1 Overview

Headway Traffic & Transport (HTT) has been engaged by Archer Office on behalf of Mosman Council to develop a Traffic Impact Assessment (TIA). The TIA determines the traffic and transport impacts associated with the proposed redevelopment of Middle Head Oval Amenities Building, Mosman and verifies that any parking and access satisfies the relevant standard and can be integrated into the future master plan of the area.

Section 71 of the Sydney Harbour Federation Trust Act 2001 covers “**excluded State Law.**” This states that certain state laws do not apply to the Trust or to the property (including Trust Land) covering, but not exclusive of, matters of town planning, powers and functions of local Councils, standards applicable to the design, or manner of construction, of a building, structure or facility and the protection of the environment or of the natural and cultural heritage. Although for completeness and if there is a lack of Commonwealth guidance, NSW laws or standards in these matters have been assessed and reviewed as required.

This report forms part of the development application for Middle Head Oval Amenities Building, Mosman and should be read in conjunction with all provided documentation.

1.2 Report Structure

The report has been prepared to address all traffic and transport aspects associated with the project. The report structure is as follows:

- Section 1** Provides a concise background of the project and information on the parties involved.
- Section 2** Pinpoints the project site, describes the study area and the surrounding land use characteristics, and presents the surrounding road network.
- Section 3** Describes the existing development and provides an overview of the existing traffic and transport conditions.
- Section 4** Provides a brief description of the proposed development.
- Section 5** Assesses vehicle parking demands and access arrangements and critical Australian Standard design requirements.
- Section 6** Assesses the traffic demand and impact to the area.
- Section 7** Provides a summary of the Traffic Impact Assessment findings.

Table 2: Summary of Report Structure

2 Profile of the Study Area

2.1 Location and Site Description

The Middle Head Oval Amenities Building is located southwest of the oval at northeastern corner of Middle Head Road – Chowder Bay roundabout in Middle Head, Mosman. Middle Head is a nationally significant headland located at the easternmost section of the Mosman Council Local Government Area (LGA).

The Amenities Building forms part of Middle Head Precinct of Headland Park. The precinct is bounded by HMAS Penguin Naval Base to the west, Sydney Harbour National Park to the east and Chowder Bay and Georges Heights to the south. Aside from the oval and the amenities building, the precinct houses the former Australian School of Pacific Administration (ASOPA) which is currently occupied by small scale commercial and retail tenancies, Middle Head Café, and abandoned timber barracks and single storey structures formerly used as army transport depot, training facility and accommodation.

An aerial photograph of the vicinity of the site obtained from Middle Head/ Gubbuh Gubbuh Master Plan is shown in **Figure 1**.



Figure 1: Site Vicinity – Source: Middle Head/ Gubbuh Gubbuh Master Plan 2023

2.2 Road Network

The closest state roads are Military Road and Spit Road connecting the area to the surrounding suburbs and to Sydney CBD. The roads immediate to the development include Middle Head Road, Chowder Bay Road and Penguin Close.

The state and regional road networks are shown in **Figure 2**.

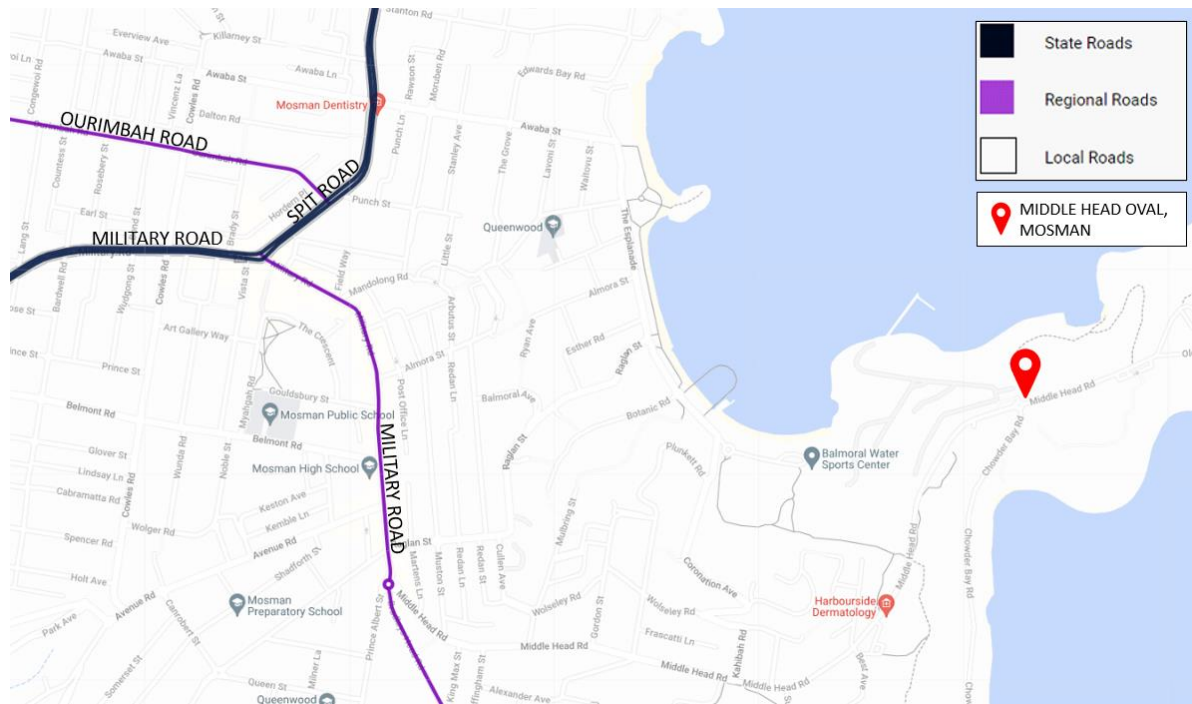


Figure 2: Road Hierarchy – Source: Adapted from <https://roads-waterways.transport.nsw.gov.au/classification/map/>

2.2.1 Middle Head Road – West of Chowder Bay Road

Road Classification	Local Road	Carriageway Width	6m
No. of Travel Lanes	2	Speed Limit	40 km/h
Alignment	E - W	School Zone	No
Carriageway Type	Single	On Street Parking	No
Bicycle Infrastructure	Yes	Parking Controls	No Stopping



Looking west on Middle Head Road from Chowder Bay Road

Figure 3: Middle Head Road (west) - Source: Google Street View

2.2.2 Middle Head Road – East of Chowder Bay Road

Road Classification	Local	Carriageway Width	5m
No. of Travel Lanes	2	Speed Limit	25km/h
Alignment	E - W	School Zone	No
Carriageway Type	Single	On Street Parking	No
Bicycle Infrastructure	No	Parking Controls	No Stopping



Looking east on Middle Head Road from Chowder Bay Road

Figure 4: Middle Head Road (east) - Source: Google Street View

2.2.3 Chowder Bay Road

Road Classification	Local	Carriageway Width	6m
No. of Travel Lanes	2	Speed Limit	40km/h
Alignment	N - S	School Zone	No
Carriageway Type	Single	On Street Parking	No
Bicycle Infrastructure	Yes	Parking Controls	No Stopping



Looking south on Chowder Bay Road

Figure 5: Chowder Bay Road - Source: Google Street View

2.2.4 Penguin Close

Road Classification	Private	Carriageway Width	12m
No. of Travel Lanes	2	Speed Limit	10km/h
Alignment	N - S	School Zone	No
Carriageway Type	Divided	On Street Parking	No
Bicycle Infrastructure	No	Parking Controls	No Stopping



Looking north on Penguin Close from Middle Head Road

Figure 6: Penguin Close - Source: Google Street View

3 Existing Conditions

3.1 Existing Development

The existing amenities building supports the over-all use of the oval by providing change rooms, club room, storage, and a small spectator area. Frequent users of the oval include HMAS Penguin for physical trainings and helicopter operations, Mosman Football Club, Mosman Swans Junior Australian Football Club and surrounding schools for sports and competitions. The schedule of use of the typical user groups varies daily which can start at 6am and end at 9pm.

The existing driveway is at Penguin Close, providing access to the storage area. An open tiered seating area is located east of the amenities building.

The Middle Head Management Plan 2017 has identified the amenities building as a visually intrusive element as it obstructs views to Middle Harbour when entering the precinct along the roadways.

The existing amenities building also contains non-compliances and general departures from best practice to the point where refurbishment of the existing facility would require extensive modifications and would likely result to compromised outcomes.

Issues associated with the existing amenities building include the:

- Non-provision of accessible change-rooms and amenities,
- Non-availability of accessible paths to the facility from the street or towards the oval,
- Spectator area not in a suitable position for watching games,
- Extreme level changes towards the storage area created by steep driveway,
- Very small spectator area, and
- Small function space with no outlook towards the field.

3.2 Site Access

Access to the oval and the amenities building, as well as to HMAS Penguin and Chowder Bay Road, from Mosman Centre is via Middle Head Road. It has been reported that the roundabout experiences congestion due to improper use of HMAS Penguin entry and the approaches of the roundabout by oval users when conducting pick-up and drop-off and when spectating from within vehicles.

3.3 Car Parking

Several car parking areas are available within the Middle Head precinct which are used by visitors and staff. The Middle Head/Gubbeh Gubbeh Master Plan 2023 determined that the precinct holds 206 car parking spaces that service the oval and the other developments within the precinct. 72 additional spaces can be utilised as overflow parking.

A map of existing parking areas within the precinct adapted from the master plan is provided in Figure 7.



Figure 7: Existing Parking – Adapted from Middle Head/Gubbeh Gubbeh Master Plan (2023)

3.4 Public Transport

The development is located within proximity to bus services, providing convenient and accessible transportation options for visitors and staff. With bus stops conveniently located within a short walk from the oval, users can connect to various destinations within the local area and beyond.

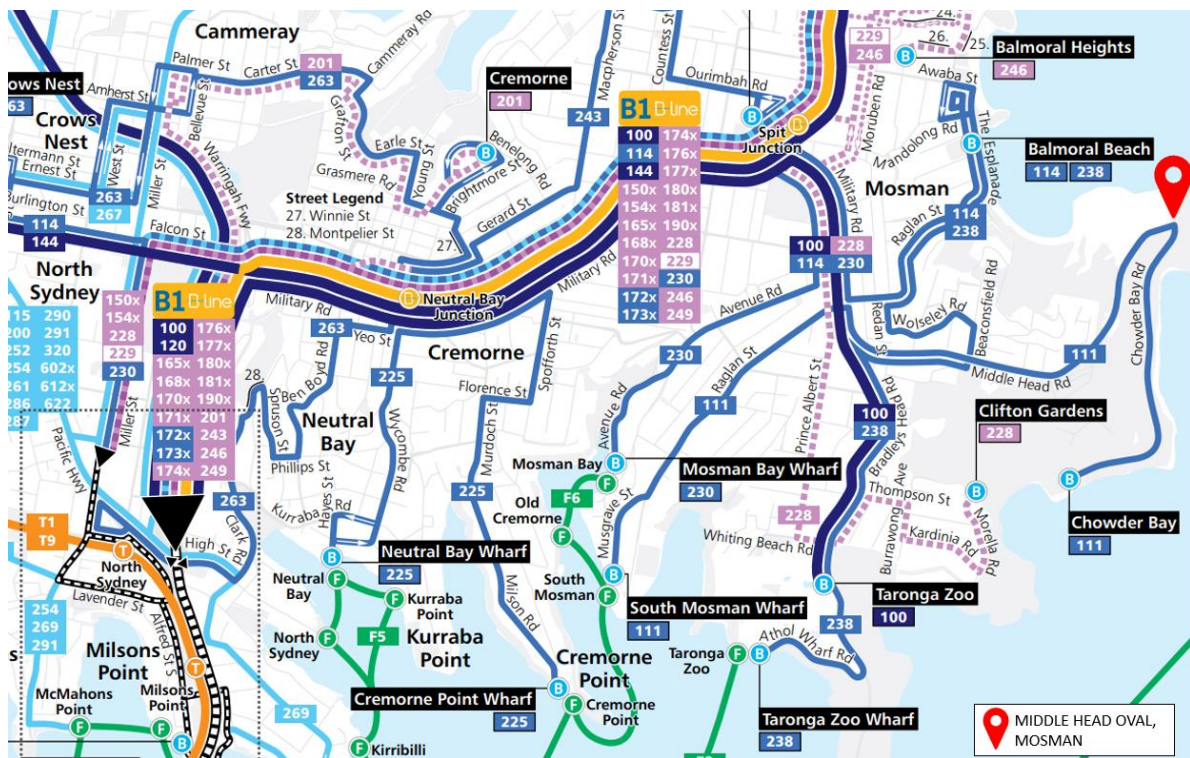


Figure 8: Public Transport - Source: Adapted from <https://transportnsw.info>

3.4.1 Bus Network

The most convenient bus stops are located at Middle Head Road immediately west of the Middle Head Road – Chowder Bay Road roundabout. The bus stops are approximately 50 and 100-meter walk from the development.

The oval and the rest of Headland Park is mainly serviced by Bus Route 111 connecting the area to Mosman centre and to South Mosman Wharf. The route provides opportunity of transfer at Military Road to several bus services providing connectivity across Sydney. The route runs at approximately every 30 minutes on weekday peak periods.



Figure 9: Location of Bus Stops

3.4.2 Train Network

The closest train station is North Sydney Station which is approximately 8km from the site. This accessibility to train services opens opportunities for travel along T1 North Shore & Western Line, T9 Hornsby to North Shore and CCN Central to Newcastle.

Train Station	Car	Bus	Bicycle
North Sydney	20 mins	40 mins	30 mins

Table 3: Vicinity of Train Station

3.4.3 Ferry Network

The closest wharfs are Mosman Bay and South Mosman, both approximately 4km from the proposed development. Both wharfs are accessible from the development via 8-min drive, 15-min cycling or Bus Route 111. This accessibility to ferry services offers an alternative mode of travel to Sydney CBD via Circular Quay.

3.5 Active Transport

3.5.1 Pedestrian Network

A refuge island is provided at site frontage to assist pedestrians when crossing Penguin Close. Whilst a wombat crossing is available at Middle Head Road west of the roundabout, the pedestrian footpath on the northern side of Middle Head Road leading to the wombat crossing has a gap leaving no alternative for pedestrians but to walk on the road or cross the road near the roundabout when walking to the bus stops.

The Middle Head/ Gubbuh Gubbuh Master Plan identified an opportunity for the section of Middle Head Road east of the roundabout to be converted into a shared zone. This will provide a pedestrian/cyclist link to the surrounding facilities and to the walking tracks to Sydney Harbour National Park, Cobblers Beach, and Obelisk Beach.



Figure 10: Pedestrian Facilities

3.5.2 Bicycle Network

A map of the bicycle facilities is provided in **Figure 11**. Starting from Middle Head – Chowder Bay roundabout, general roads where cyclists share the road with vehicles are available providing connectivity to the rest of Mosman and surrounding suburbs.

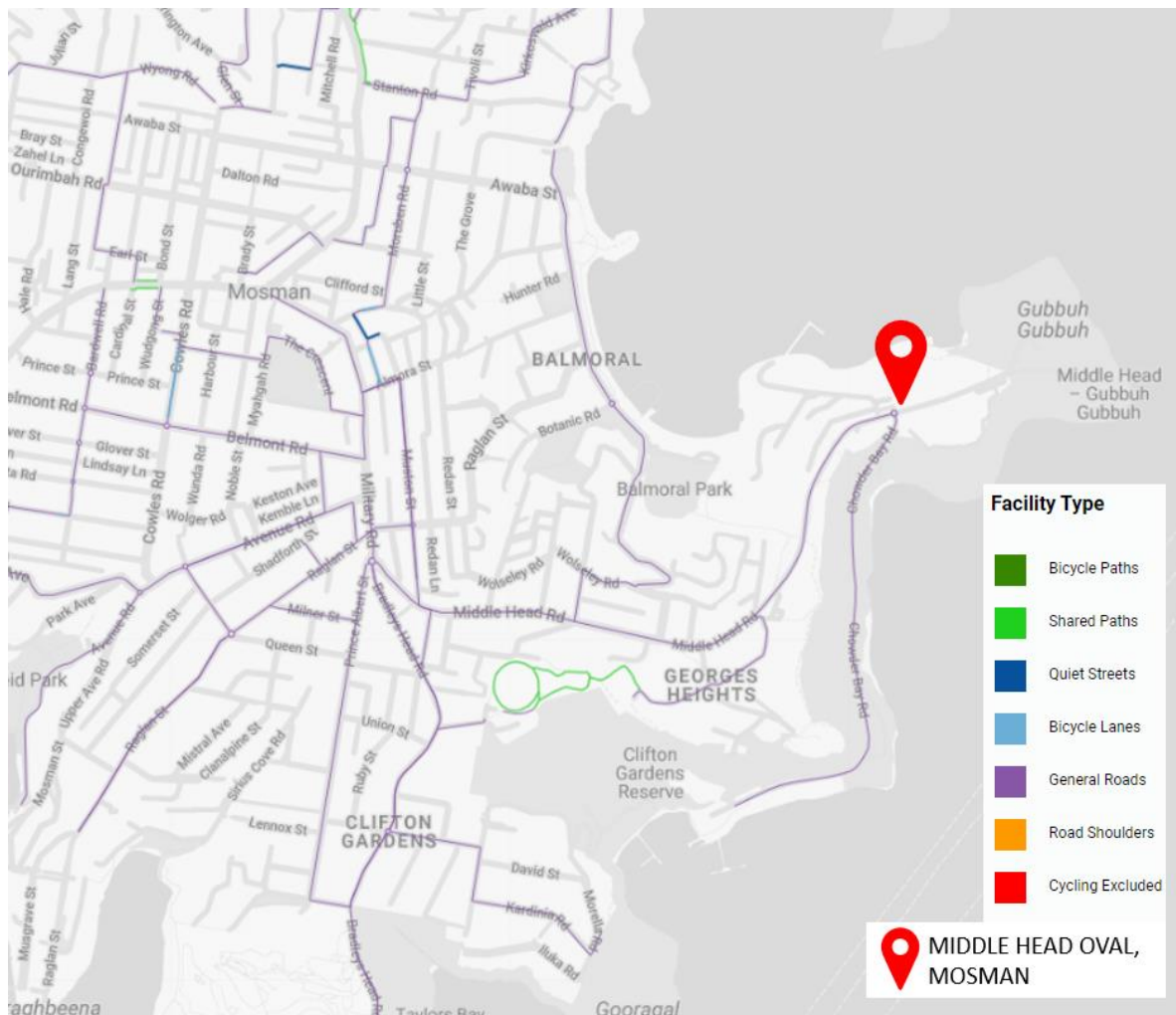


Figure 11: Bicycle Network – Adapted from Source: https://roads-waterways.transport.nsw.gov.au/maps/cycleway_finder/

5 Parking and Access Assessment

5.1 Parking Demand

Analysis of the car parking meter data spanning November 2020 to November 2022 as presented in The Middle Head/Gubbuh Gubbuh Master Plan 2023 indicates average demand of 40% across all car parks in the precinct with peak demand occurring on summer weekends at around 70%.

The proposed development is considered to replace and improve the existing amenities building, therefore, it is not expected to generate additional parking demand.

In consideration of the above, there is sufficient parking spaces to satisfy the parking demand within the precinct upon operation of the proposed development.

5.2 Service Vehicle Access

Service vehicle access has been maintained for a B99 vehicle to support general maintenance and deliveries to the amenities building and assessed to be in accordance with AS 2890.1.

On-street refuse collection will continue as waste generated from the site will likely be placed in waste containers provided around the amenities building area. Refuse vehicles will access the site outside of peak periods (i.e. weekends) and be able to utilise the proposed drop-off zone.

5.3 Pedestrian Access

The proposed development will improve access to the oval and its associated facilities including the amenities building. It will also improve pedestrian linkage to the rest of the Middle Head precinct east of the roundabout as shown in **Figure 12**.

5.4 Drop-off Zone

The proposed drop-off zone has been assessed to be in accordance with AS 2890.5. As shown in **Figure 13**, the drop-off zone can accommodate up to 3 vehicles at any time.

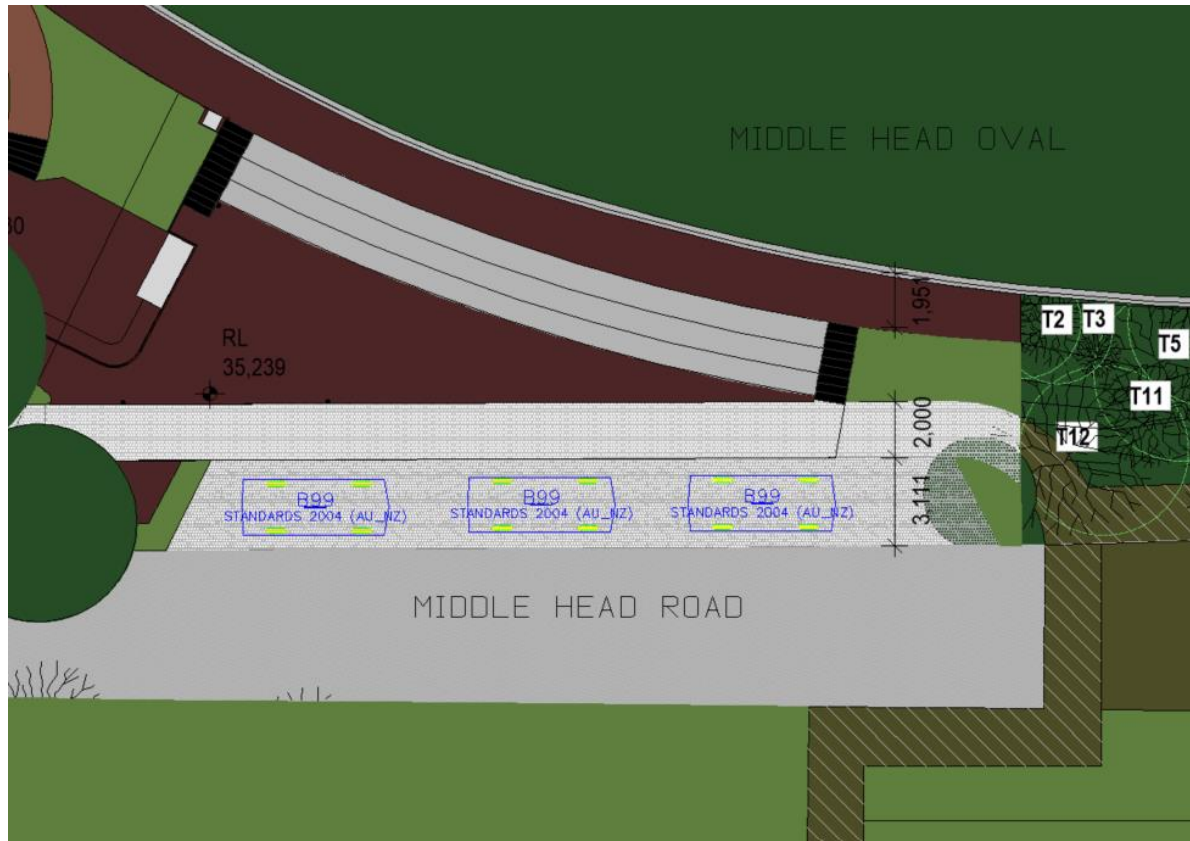


Figure 13: Proposed Drop-off Zone

6 Traffic Assessment

The proposed development is considered ancillary to the existing use of the oval. No significant changes to the use of the oval are expected to occur upon operation of the new amenities building. Therefore, changes to existing traffic volumes are considered negligible.

As discussed in **Section 5.4**, the proposed drop-off zone can accommodate up to 3 vehicles. Assuming 1 minute drop-off time and 30 minutes lead up time prior to a game or cool down time after a game, the zone can accommodate up to 90 drop-offs and pick-ups in between games. This will eliminate the existing congestion issue at the roundabout caused by oval users using HMAS entry and the roundabout approaches for pick-up and drop-off.

All vehicles, regardless of origin, will need to approach the zone from the roundabout. Vehicles coming from the carparks east of the roundabout for pick-ups will have to perform a U-turn at the roundabout. In this regard, there is no expected conflict among vehicles arriving from different approaches.

7 Conclusion

In summary, the proposed development can be supported in its current form as it satisfies relevant Australian Standards and State Policies. The key findings in this assessment are provided below.


- The proposed development is for the redevelopment of the Middle Head Oval Amenities Building which includes new community space, a shelter to the existing tiered seating, and a drop-off zone along Middle Head Road.
- The proposed development is considered ancillary to the use of the oval and therefore not expected to require additional parking nor induce changes to existing vehicle traffic volumes.
- Provision of the drop-off zone will aid in the elimination of the existing congestion issue at Middle Head Road – Chowder Bay Road roundabout caused by oval users when picking up or dropping off.
- The proposed development is accessible via Bus Route 111 which provides opportunities for transfer to other bus routes, train services and ferry services.
- The proposed development will provide accessible paths providing linkage to the facilities within the development. This will also improve linkages to the pedestrian facilities within Middle Head precinct and tie into any future capital works associated with the proposed shared zone of Middle Head Road.
- Service vehicle access will remain at its current location at Penguin Close.
- Refuse collection will continue to occur on-street.

Appendix A Proposed Development Plans

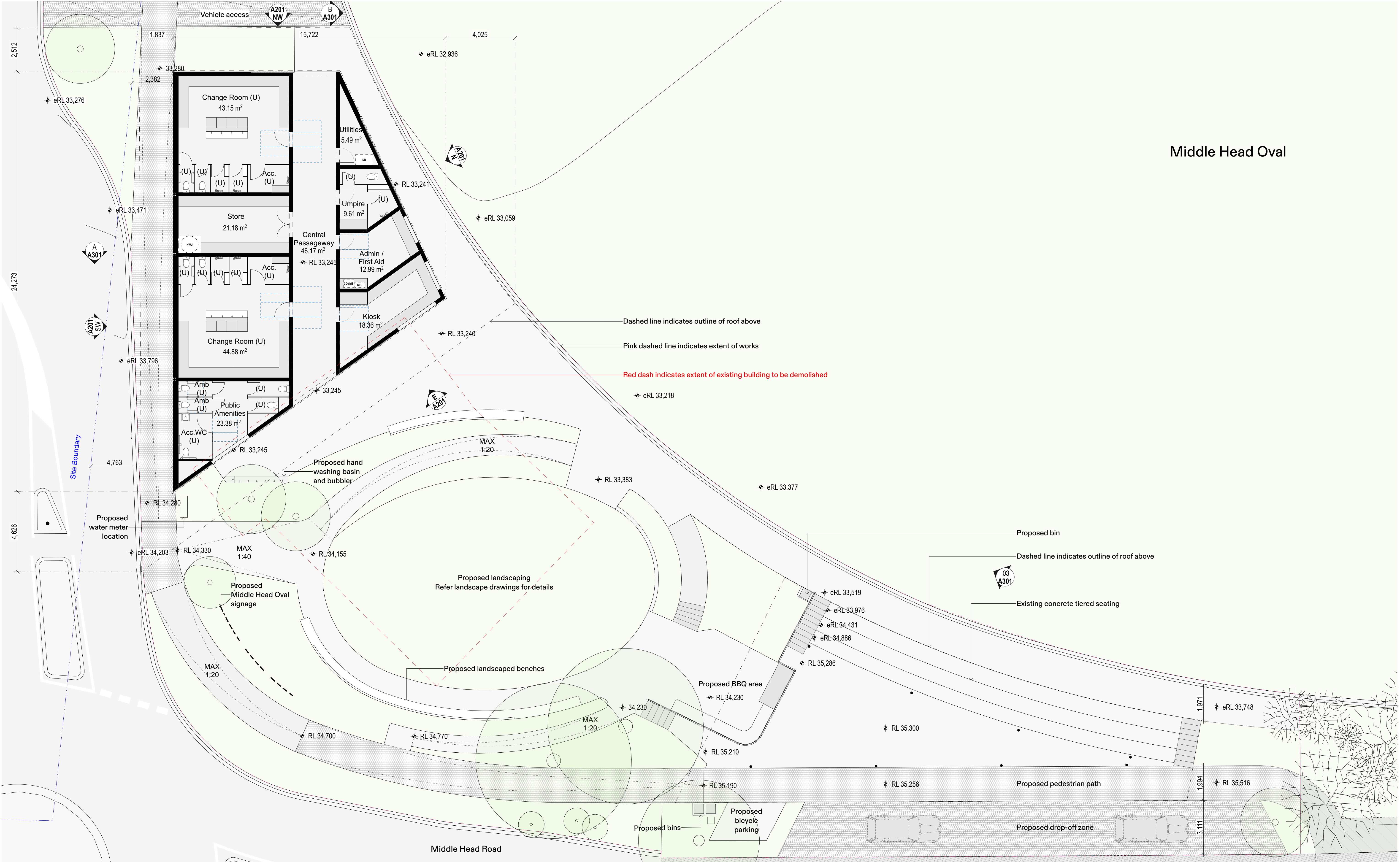
SITE PLAN
1:250

PRELIMINARY

Scale / North Point
1:250 @ A1



Drawing Number	Revision
A 100	A



Middle Head Oval

01

GROUND FLOOR PLAN
1:100

Notes

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL RELEVANT CONTRACTS, SPECIFICATION, REPORTS AND DRAWINGS. DO NOT SCALE DRAWINGS. DIMENSIONS GOVERN. ANY DISCREPANCIES OR CONCERNS SHOULD BE NOTIFIED IN WRITING ASAP. VERIFY ALL DIMENSIONS ON SITE BEFORE CONSTRUCTION. COPYRIGHT OF THIS DRAWING IS VESTED IN ARCHER OFFICE PTY LTD. TO USE THIS DOCUMENT FOR ANY PURPOSE WHATSOEVER IS RESTRICTED TO THE TERMS OF THE AGREEMENT.

PRELIMINARY

Rev	App	Chk	Issue Name	Date
A	AOC		DEVELOPMENT APPLICATION	2/5/2024

Scale / North Point

1:100 @ A1

Acoustic Consultant Acoustic Logic	Arborist Earthscape Horticultural Services	BCA Consultant Design Confidence	Bushfire Consultant Blacklash Bushfire Consulting	Ecologist Slantec	Hazmat and Soil Contamination Tetra Tech Coffey	Heritage Consultant Heritage 21	Landscape Architect Studio Rewild with Emily Simpson	Lighting Consultant Electrolight
Planning Consultant Gyde Consulting	QS MBM	Services Engineer JHA Consulting Engineers	Stormwater Engineer JHA Consulting Engineers	Structural Engineer PMI Engineers	Surveyor Total Surveying Solutions	Traffic Headway Traffic and Transport	Visualisation Choi Render	Waste Elephants Foot

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Project Name
MIDDLE HEAD OVAL AMENITIES

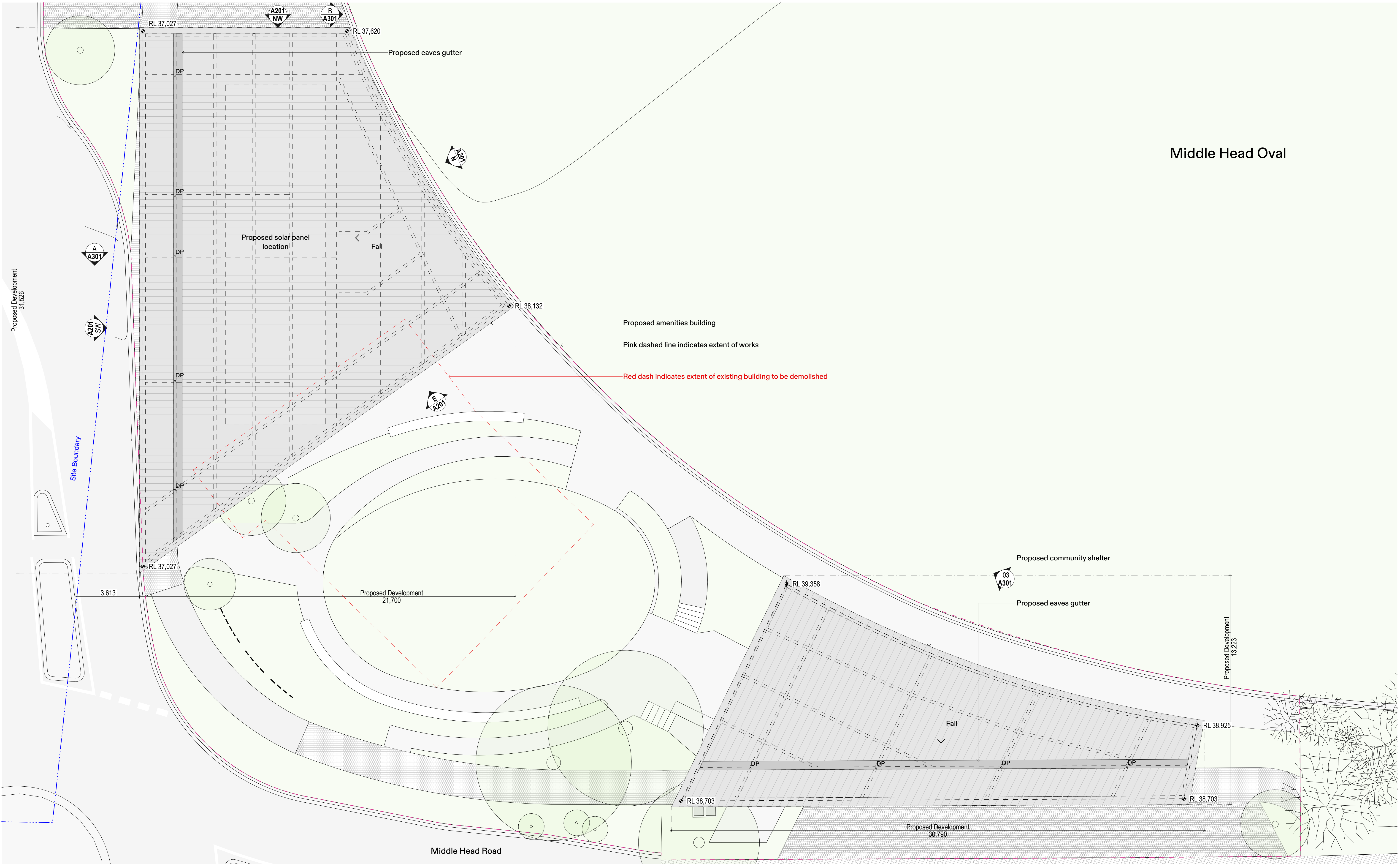
Drawing Name
GROUND FLOOR PLAN

Project Number
1903

Documentation Stage
DEVELOPMENT APPLICATION

Drawing Number
A101

Revision
A



Middle Head Oval