



Nowra Rifle Range Operational Impact Assessment

Warra Warra Road Development

Jervis Bay Town Planning

20 May 2026

→ The Power of Commitment



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1. Introduction

1.1 Project Context

A residential development is proposed at LOT 2 DP 1126288 & LOT 224 DP 755952 Warra Warra Road in Nowra, located approximately 170 km south of Sydney, and is subject to council rezoning approval. The proposed development site adjoins the gazetted Nowra Rifle Range and is required, under ministerial local planning direction, to achieve defined objectives pertaining generally to public safety, land use conflict, and issue identification when rezoning.

1.2 Purpose of this Report

The purpose of this report is to document and present the findings of the Nowra Rifle Range operational impact assessment.

The assessment was conducted to provide an evaluation of the residential development's potential impact to the Nowra Rifle Range operations as a result of the proposed rezoning.

1.3 Scope and Limitations

This report has been prepared by GHD for Jervis Bay Town Planning and may only be used and relied on by Jervis Bay Town Planning for the purpose agreed between GHD and Jervis Bay Town Planning as set out in Section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Jervis Bay Town Planning arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer Section 1.3 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

1.4 Assumptions

The operational impact assessment is based on the following assumptions:

- The assessment excludes acoustic engineering assessment (by others),
- The assessment is limited to desktop only (i.e., no site investigations),
- The development extents as per planning proposal maps (*Reference A*), and
- The approved ammunition natures as per range standing orders (*Reference B*).

1.5 References

- Reference A: *Warra Warra Road Planning Proposal Maps*, Jervis Bay Town Planning dated 13/02/2026
- Reference B: *Nowra Rifle Range Standing Orders*, Nowra Rifle Club INC. dated 20/02/2023
- Reference C: *Planning Circular PS11-0006*, NSW Government dated 11/02/2011
- Reference D: *Range User Guide*, NSW Police Force dated 10/11/2017

2. Assessment

2.1 Background

An assessment of the potential impacts to Nowra Rifle Range's operations is required for the re-zoning planning proposal submission (by others) and ultimately support the residential subdivision. The proposed development site (refer Figure 1) is comprised of two adjoining lots and shares a portion of the eastern boundary with the Nowra Rifle Range.



Figure 1 Development Site Context (Nearmap, 2026)

The Nowra Rifle Range is operated by the Nowra Rifle Club and features multiple outdoor live-fire ranges within the shooting complex, in particular the Fullbore classification range (800m) and Smallbore ranges (50m) which are in proximity to the proposed development site and feature a full Range Danger Area Safety Trace (RDAST).

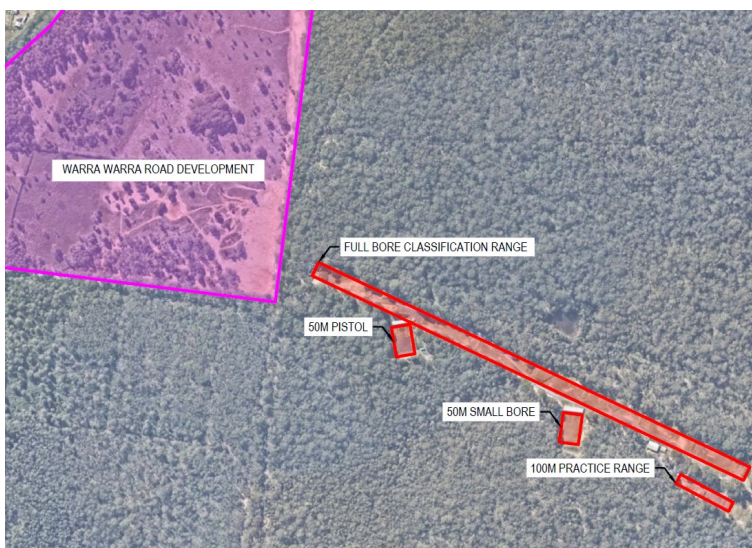


Figure 2 Nowra Rifle Range Site Layout

2.2 Methodology

2.2.1 Approach

The assessment investigates and considers the Nowra Rifle Range planning activities and operational requirements as detailed within the Range Standing Orders (RSO) (*Reference B*).

In summary, the assessment includes:

- Desktop review and confirmation of relevant RSO, and
- Development of Range Danger Area Safety Traces (RDAST) in accordance with *Reference D*.

2.2.2 Template Planning

Review of *Reference B* identified the following ranges within the Nowra Rifle Range complex that have a potential to impact the proposed development:

- 100m Practice Range,
- 50m Smallbore Range, and
- 50m Pistol Range.

The following design ammunition natures have been adopted to enable the development of applicable range danger areas:

- Smallbore, up to .22 inch Long Rifle (LR).
- Centrefire rifle, up to 8mm.
- Centrefire pistol, up to .45 inch.

Desktop review of *Reference B* identified that the range utilised “the NATA 7.62 Rifle Range Danger Area Template”; however, *Reference D* does not contain data for a NATA template. As a result, the data contained in *Reference D* was used. A summary is provided in the table below.

Table 1 *Template Planning Data*

Range	Suitable Firearms	Max MV (m/s)	Max ME (m/s)	Down Range Distance (m)	Dispersion Angle (deg)	Ricochet angle (deg)	Maximum QE (deg)	Ricochet Distance (m)
Fullbore Classification Range	Centrefire and rimfire firearms and muzzle loading and percussion rifles and pistols	Not Applicable*						
100m Practice Range		1250	5675	2750	3	31	12	400
50m Smallbore Range	Rimfire rifle and pistol	610	434	1500	3	31	12	200
50m Pistol Range	Centrefire and muzzle loading and percussion rifles and pistols	509	1356	1550	3	31	12	400

Note:*Limited Danger Area (LDA) methodology may be used on a Classification Range, constructed to meet the standards set out in *Reference D*. It is understood that the Nowra Rifle Range Fullbore Classification Range meets these requirements and therefore, an LDA RDAST has been applied in accordance with Chapter 3 of *Reference D*. The dimensions of the LDA are shown in Figure 3 below.

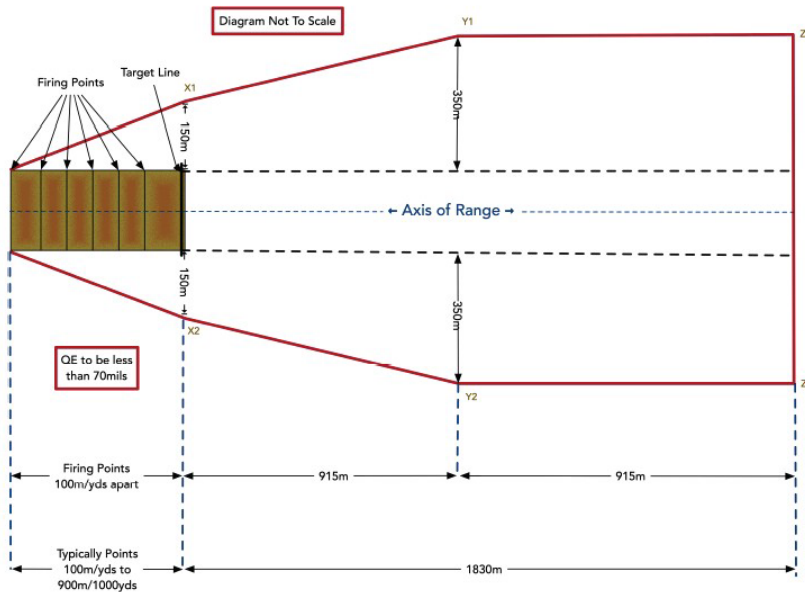


Figure 3 LDA Trace Methodology

2.3 Assessment

2.3.1 Assessment Criteria

GHD has undertaken an assessment of the ongoing range safety compliance to inform planning for the proposed development located north of Warra Warra Road adjacent to the existing Nowra Rifle Range. The assessment included a review of *Reference B* and *Reference C*.

In particular, GHD note that the key objectives of *Reference C* include:

- Maintain appropriate levels of public safety and amenity when rezoning land adjacent to an existing shooting range;
- Reduce land use conflict arising between existing shooting ranges and rezoning of adjacent land, and
- Identify issues that must be addressed when considering rezoning land adjacent to an existing shooting range.

GHD's assessment focused solely on public safety as a result of shooting range operations. It does not consider amenity or conflicts unrelated to range safety.



Figure 4 Development Site vs. Range Danger Area Safety Traces

2.3.2 Assessment Outcomes

Based on GHD's assessment of the Nowra Rifle Range RDAST and RSO the following considerations have been identified:

- RDAST for existing ranges extend south and southeast from the proposed development.
- None of the existing Nowra Range RDAST conflict with the proposed development.
- The nearest point of any trace to the proposed development is the Fullbore Classification Range 800m firing mound which is approximately 80m from the eastern boundary of the proposed development firing in an east-southeast direction.
- Existing access controls outlined in *Reference B* are suitable to control access to the range and include locked gates, fencing, signage and indicator flags to prevent deliberate or accidental access to the potentially dangerous area.

2.3.3 Planning and Development Interface

The RDAST developed for the Nowra Rifle Range have been prepared using approved methodologies and conservative design ammunition natures consistent with range standing orders. When overlaid against the proposed development extents, no overlap or encroachment into any applicable RDA or LDA is identified.

Importantly, the proposed rezoning and subsequent residential development do not introduce new risk receptors within any area subject to ballistic risk from lawful range operations. On this basis, the development can proceed without imposing additional safety controls, operational restrictions, or modification requirements on the existing Nowra Rifle Range.

2.3.4 Consistency with Ministerial Planning Direction

This assessment has been undertaken having regard to the objectives of NSW Planning Circular PS11-0006, particularly the need to maintain public safety, manage land use compatibility, and identify issues associated with rezoning land adjacent to an existing shooting range.

Based on the outcomes of the operational impact assessment, no range safety-related issues have been identified that would preclude the proposed rezoning, provided the recommended boundary management and access considerations are appropriately addressed.

2.3.5 Recommendations

The following recommendations are made to ensure ongoing levels of public safety:

- The proposed development reviews the fence type and signage of the shared boundary with the Nowra Rifle Range to ensure ongoing suitability given the potential increase in traffic in the area.
- A review of Warra Warra Road access be undertaken to ensure ongoing safe range access during the construction stage. Warra Warra Road provides ambulance access to the range which is critical for safe operation.

3. Conclusion

GHD has undertaken a desktop operational impact assessment of the proposed Warra Warra Road residential development with respect to the ongoing safety and operation of the adjacent Nowra Rifle Range. The assessment was informed by relevant range safety documentation, including the Range Standing Orders, and undertaken in accordance with recognised range danger area and limited danger area methodologies.

RDAST were developed for the applicable ranges and assessed relative to the proposed development extents. Based on this assessment, no encroachment of the proposed development into any applicable RDA or LDA has been identified. Accordingly, no critical range safety conflicts are anticipated to arise as a result of the proposed rezoning or subsequent development.

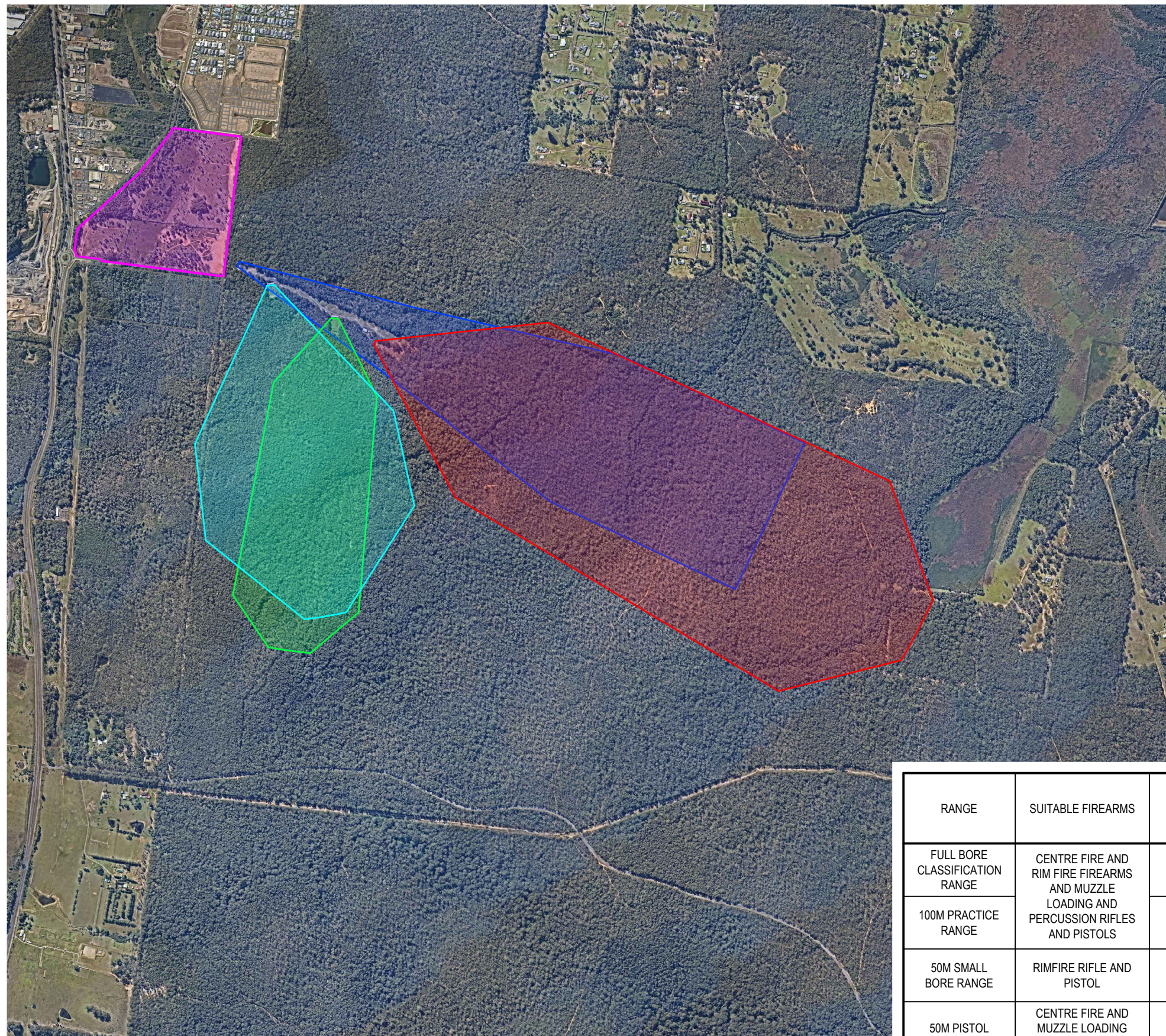
Consistent with NSW Planning Circular PS11-0006, the proposed rezoning maintains public safety, avoids land-use conflict with the existing Nowra Rifle Range, and does not introduce new safety risks, as confirmed by the Range Operational Impact Assessment.

The assessment demonstrates that the proposed development can be accommodated without introducing unacceptable public safety risks and without constraining the lawful operation of the existing Nowra Rifle Range. Subject to appropriate consideration of shared boundary fencing, signage, and maintenance of safe access along Warra Warra Road during construction, the proposed development is considered compatible with the ongoing operation of the range from a range safety and compliance perspective.

Attachments

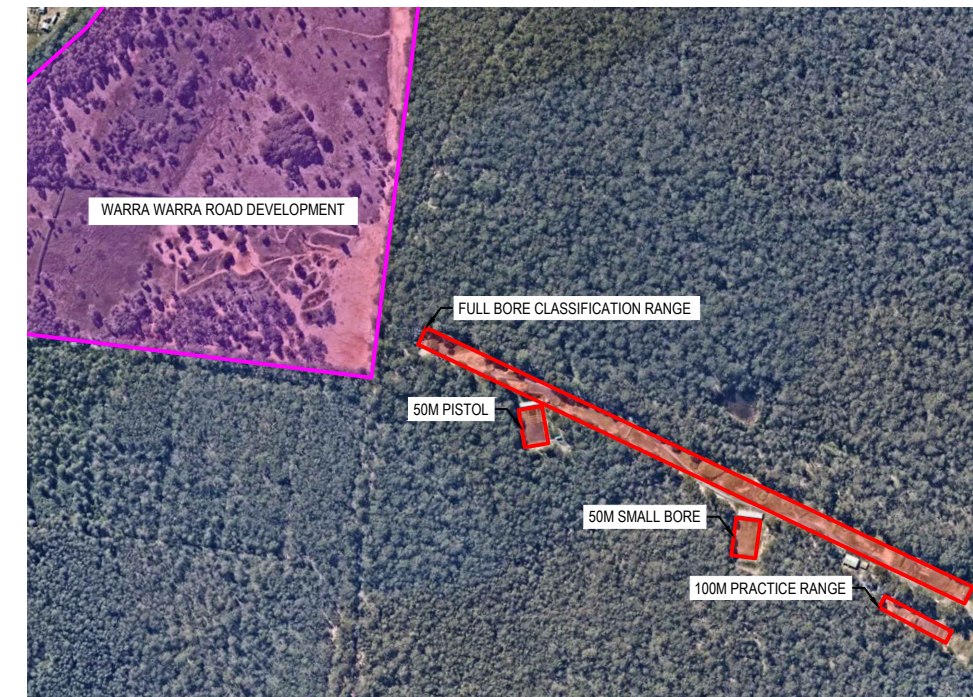
Attachment 1

**Nowra Rifle Range; Range Danger Area
(Combined)**



RANGE DANGER AREAS

SCALE 1:20,000



SITE LAYOUT

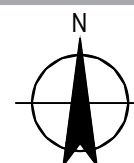
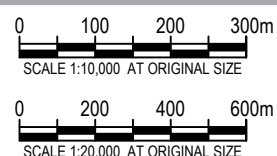
SCALE 1:10,000

NOTES:

1. RANGE DANGER AREA SAFETY TRACES HAVE BEEN DEVELOPED BASED ON THE FOLLOWING ASSUMPTIONS:
 - 1.1. CROSS LANE FIRING IS NOT PERMITTED
 - 1.2. FIRING ON THE MOVE IS NOT PERMITTED
 - 1.3. EMPLOYMENT OF STATIC TARGETS ONLY (LESS SHOTGUN RANGES)
 - 1.4. TEMPLATE DESIGN IS BASED ON SECTION 9 ANNEX B OF REFERENCE A
2. REFERENCES:
 - 2.1. REFERENCE A: *NSW POLICE FORCE RANGE USER GUIDE, 10 SEPTEMBER 2017*
 - 2.2. REFERENCE B: *NOWRA RIFLE RANGE STANDING ORDERS, 20 FEBRUARY 2023*
3. RANGE DANGER AREA SAFETY TRACES DEVELOPED FOR PLANNING PURPOSES ONLY BASED ON THE ASSUMPTIONS PROVIDED. TRACES ARE NOT TO BE USED FOR LIVE FIRING WITH VALIDATION BY APPROPRIATELY QUALIFIED RANGE OFFICES.
4. TEMPLATE PLANNING DATA (SOURCE: REFERENCE A):

RANGE	SUITABLE FIREARMS	MAX MV (M/S)	MAX ME (JOULES)	DOWN RANGE DISTANCE (M)	DISPERSION ANGLE (DEGREES)	RICOCHET ANGLE (DEGREES)	MAXIMUM QE (DEGREES)	RICOCHET DISTANCE (M)
FULL BORE CLASSIFICATION RANGE	CENTRE FIRE AND RIM FIRE FIREARMS AND MUZZLE LOADING AND PERCUSSION RIFLES AND PISTOLS	-	-	-	-	-	-	-
100M PRACTICE RANGE		1,250	5,675	2,750	3	31	12	400
50M SMALL BORE RANGE	RIMFIRE RIFLE AND PISTOL	610	434	1,500	3	31	12	200
50M PISTOL RANGE	CENTRE FIRE AND MUZZLE LOADING AND PERCUSSION RIFLES AND PISTOLS	509	1,356	1,550	3	31	12	400

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Project No. _____

Client	JERVIS BAY TOWN PLANNING
Project	WARRA WARRA ROAD PLANNING PROPOSAL
Status	PRELIMINARY

Drawing Title WARRA WARRA ROAD DEVELOPMENT
NOWRA RIFLE RANGE
RANGE DANGER AREA (COMBINED)

12694285-GHD-DWG-RP-0000

Plot Date: 1 May 2026 - 11:48 AM Plotted by: Tyler Blackbeard

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