

Appendix F - Access Management Strategy

Document Verification



Northwest Resorts Pty Ltd
Ningaloo Lighthouse Resort
 Transport Statement

Final Rev G | 2 June 2021

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This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Appendices

Appendix A

Proposed Site Plan

1 Introduction

Arup was appointed by Northwest Resorts Pty Ltd to prepare a Transport Statement for the proposed Ningaloo Lighthouse Resort, within the Shire of Exmouth. The Shire of Exmouth is the determining body for the site.

The Ningaloo Lighthouse Resort is planned as a tourist accommodation complex comprising the following accommodation types and additional facilities:

- 60 hotel rooms;
- 34 villas;
- 7 lodge cabins;
- 28 tent/camping lots;
- 62 caravan lots;
- Staff accommodation units;
- Administration/reception facilities;
- Surf shop;
- Dining and pavilion facilities; and
- Conference facilities.

Guest parking is proposed adjacent each accommodation unit, as well as day-use parking in the vicinity of the common-use areas for non-staying visitors.

This Transport Statement has been prepared in accordance with the Ningaloo Lighthouse Holiday Park Local Development Plan which requires an access management strategy. The Transport Statement also documents the review and assessment of the site layout with regard to traffic and transport arrangements, including intersection spacing, parking provision, sightline assessment and swept path analysis.

1.1 Locality Plan

The site is located on Lots 2 and 557 Yardie Creek Road, North West Cape, approximately 18 km north of Exmouth. The site is bounded by Yardie Creek Road to the north and undeveloped land to the east, south and west as shown in **Figure 1**.



Figure 1 – Locality plan

The existing site contains the Ningaloo Holiday Park, which has been developed in stages over the past 30 years, mostly in the 1990s. In September 2017 Northwest Resorts Pty Ltd purchased the site with the intention of continuing the existing tourism land use of the site by replacing the existing Holiday Park with a more contemporary development, incorporating a wider variety of accommodation and a greater range of facilities.

2 Applicable Planning Policy

The Exmouth Local Planning Strategy (April 2019) prescribes wider strategic objectives within the overall Exmouth region, while the Vlamingh Head Master Plan prescribes specific planning objectives for the Vlamingh Head area, including the development site.

In relation to tourist accommodation, the Exmouth Local Planning Strategy mentions the need to “*address the future provision of available tourism sites*” during recent increases in visitor numbers, stating that “*if no other supply is added by 2022, the annual occupancy rate for caravan parks is likely to exceed 65% and 85% for the hotel market.*” The strategy also states that “*Outside of the townsite, there is also demand for additional wilderness camping/ eco-tourist activities in remote areas...*”.

The Vlamingh Head Master Plan provides further local context, with one of the aims to “*retain the semi-remote experience of Vlamingh Head by establishing the framework for a land exchange, specifying a building envelope and limiting the type and scale of development, specifically 1020 beds, with 720 beds already operational on Lot 2.*”

Other regional and local planning frameworks including the Gascoyne Regional Planning and Infrastructure Framework and the Gascoyne Coast Sub-Regional Strategy identify Vlamingh Head Lighthouse as a tourism node.

The proposed development meets the above objectives by providing additional hotel, cabin, caravan and camping accommodation (including eco-camping options) to the North West Cape region with a total proposed peak occupancy of 726 persons, comprising 623 guests, 28 visitors and 75 staff (i.e. less than the 1020 bed limit stipulated in the Vlamingh Head Master Plan).

3 Existing Site and Transport Conditions

Lot 2 currently contains the Ningaloo Lighthouse Holiday Park, which provides a mixture of accommodation types including:

- 11 chalets;
- 9 bungalow units;
- 7 cabins;
- 168 powered caravan/camping sites; and
- 28 unpowered camping sites.

Lot 2 also contains the existing Vlamingh Head Lighthouse Keepers’ Quarters, which are listed on the Shire of Exmouth’s Municipal Heritage Inventory and are also listed as a Permanent Entry on the State Register of Heritage Places . It is intended that this building will remain and be used to house various facilities as part of the resort development.

Lot 557 is currently vacant with the exception of an unsealed vehicle track.

3.1 Pedestrians and Cyclists

There are currently no dedicated cycle facilities along Yardie Creek Road however cyclists can use the existing sealed carriageway. Informal pedestrian paths are present within the existing Holiday Park, as well as informal paths between the Holiday Park and the Vlamingh Head Lighthouse. A pedestrian path also links the existing Holiday Park to the Indian Ocean, crossing Yardie Creek Road.

3.2 Public Transport

The site is not serviced by regular public transport; however it is likely that private tourist bus services operate in the area to transport tourists to and from Yardie Creek and other attractions along Yardie Creek Road (including the existing Holiday Park).

3.3 Road Network

Yardie Creek Road is a two-lane, two-way roadway under the care and control of the Shire of Exmouth and is classified as a local distributor under the Main Roads WA functional road hierarchy. The road comprises a sealed pavement width of 6.0 m with approximately 5.0 m wide gravel shoulders. The general rural speed limit of 110 km/h applies along the road, decreasing to a sign posted limit of 80 km/h for approximately 1.5 km adjacent the existing Holiday Park.

Yardie Creek Road is currently gazetted for use by Restricted Access Vehicle (RAV) Tandem Drive 2, 3 and 4 vehicles (i.e. tandem-drive prime movers, B-Doubles and B-Triples up to 27.5m in length), and Tri-Drive vehicles up to 19m,

with approval from the Shire of Exmouth. Information obtained from the Main Roads WA Traffic Map indicates that the road currently carries up to 400 vehicles per day.

4 Proposed Development

The subject site comprises a total area of 45.54 ha, with the proposed accommodation complex split into a northern (main) precinct and a southern (caravan park) area.

The resort is proposed to comprise the following accommodation components as shown in **Table 1**.

Table 1 – Proposed Accommodation Units

Accommodation Type	Proposed Units	Bedrooms
1-bedroom Hotel units	60 rooms	60
2-bedroom Villas	34 villas	68
4-bedroom Lodges	7 lodges	28
1-bedroom Eco-tents	28 tents	28
Caravans	62 lots	62
Total	191 accommodation units	246

Other proposed buildings and facilities for the main resort site include an administration/reception building (including a surf shop), entrance and assembly pavilions, restaurant, ablution facilities and staff accommodation. The existing Powell House building will also be utilised, accommodating reception, conference and office uses. A total formal parking provision of 200 bays (including 120 guest bays and 80 visitor bays) are proposed for the main resort precinct.

The caravan park to the south of the site will comprise 62 caravan lots, as well as 11 parking bays for boat trailers. A petrol station will also be constructed at the southwest corner of the caravan park, adjacent the park access.

It is important to note that a realignment is proposed for Yardie Creek Road to the south of the site, to divert through traffic travelling between Yardie Creek and Exmouth. This will improve safety for drivers, cyclists and pedestrians within the proposed resort. It is acknowledged that this is subject to a separate State Government approval process and timeframe, and this proposed development is not reliant upon this proposed future alignment. This report therefore addresses the interim scenario whereby Yardie Creek Road remains on its existing alignment, with a new internal road constructed (to eventually form part of the realigned Yardie Creek Road) to access the caravan park and service station. As a

result of the proposed future realignment, the existing Yardie Creek Road, subject to relevant approvals, is proposed to be severed to the northwest of the site by a cul-de-sac arrangement, with no access between the cul-de-sacs (apart from emergency vehicles).

Figure 2 illustrates the proposed site layout. A larger version of the plan is shown in Appendix A.



Figure 2 – Proposed site layout (source: Kerry Hill Architects Site Master Plan , 2021)

4.1 Vehicle Access and Internal Circulation

Vehicular access to the site is highlighted in Figure 3:



Figure 3 – Vehicular Access to Site

The proposed internal road configurations are shown in **Figures 4 and 5**, indicating the various one-way roads (with direction of travel), two-way roads and road widths. It is of note that although the 4.0m width of the dead-end two-way roads leading to villas is less than the required 5.5m for two-way movement under AS 2890.1:2004, the expected low number of traffic movements associated with these roads and the presence of gravel shoulders will make two-way movement acceptable with this layout. Similarly, the 3.5m roadways in the vicinity of the eco-tent camping area provide passing opportunities of 6.0m width. It is recommended that a clear width of at least 6.0m be provided along these roads (i.e. unobstructed from trees and other high vegetation), while passing areas of 6.0m width could also be considered for the villa access roads.

Additionally it is recommended that the internal service road between the resort and the caravan park be widened to 6.0m to allow full 2-way movement, as indicated in **Figure 4**.

A review has been undertaken of the intersection spacing on Yardie Creek Road between the caravan park access road (i.e. the future alignment of Yardie Creek Road) and the eastern access to the main accommodation precinct, currently proposed at approximately 80m which is potentially sub-standard based on a 110km/h speed zone.

Austrroads Guide to Road Design Part 4: Intersections and Crossings - General provides access spacing guidelines to minimise the risk of potential conflicts between turning movements at each access point (conflict overlap).

Under the guidelines, the access spacing for Left-turn conflict overlap is recommended to be 135m min for 80 km/h with a stopping sight distance of

114m. However, if a lower speed limit of 60 km/h is adopted on this section of Yardie Creek Road (as also recommended in Section 4.2 below) the required spacing distances reduce to 80m for left-turn conflict overlap and 73m for stopping sight distance. It is therefore recommended that the existing 80 km/h section of Yardie Creek Road be reduced to 60km/h such that the proposed intersection spacing will comply with Austroads guidelines. Separate approvals from the Shire of Exmouth and Main Roads WA will be sought for any proposed speed limit decrease proximate to the development site.

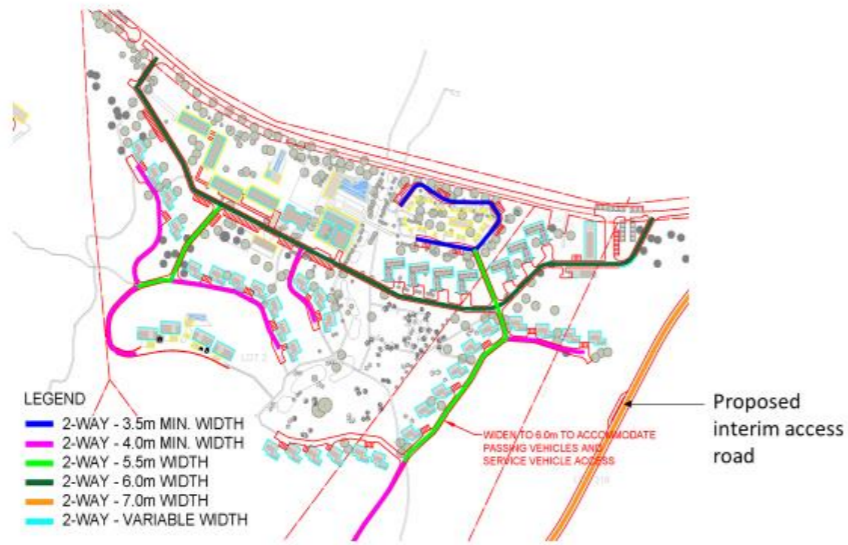


Figure 4 – Internal Road Configuration – Resort Precinct

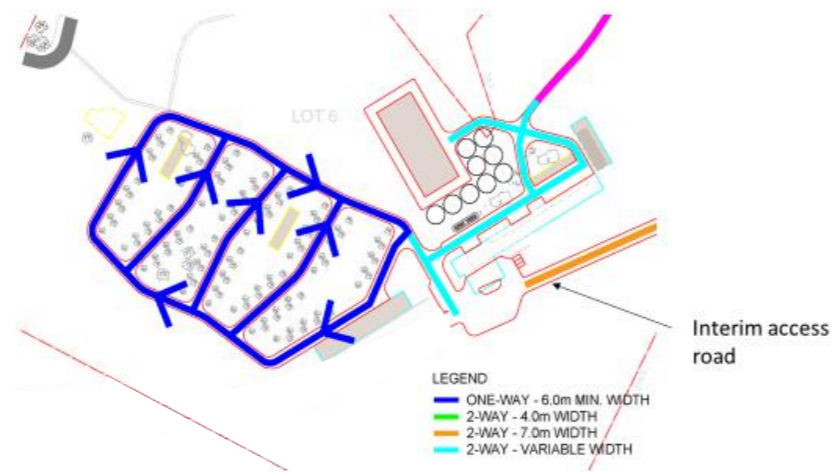


Figure 5 – Internal Road Configuration – Caravan Park

4.2 Pedestrian Access

The existing informal pedestrian links to the Indian Ocean will remain as shown in **Figure 6**. As this link involves a crossing of the existing Yardie Creek Road, it is recommended that the existing 80 km/h speed limit on the section of road adjacent the site should be reduced to 60 km/h in order to improve pedestrian safety while still providing for efficient vehicle travel. It is also recommended that visual cues such as warning signage be provided on Yardie Creek Road and on the pedestrian approaches to the crossings, to alert drivers of the upcoming pedestrian crossing and vice versa. Separate approvals from the Shire of Exmouth and Main Roads WA will be sought for any proposed traffic treatments or signage within the road reserve proximate to the development site.

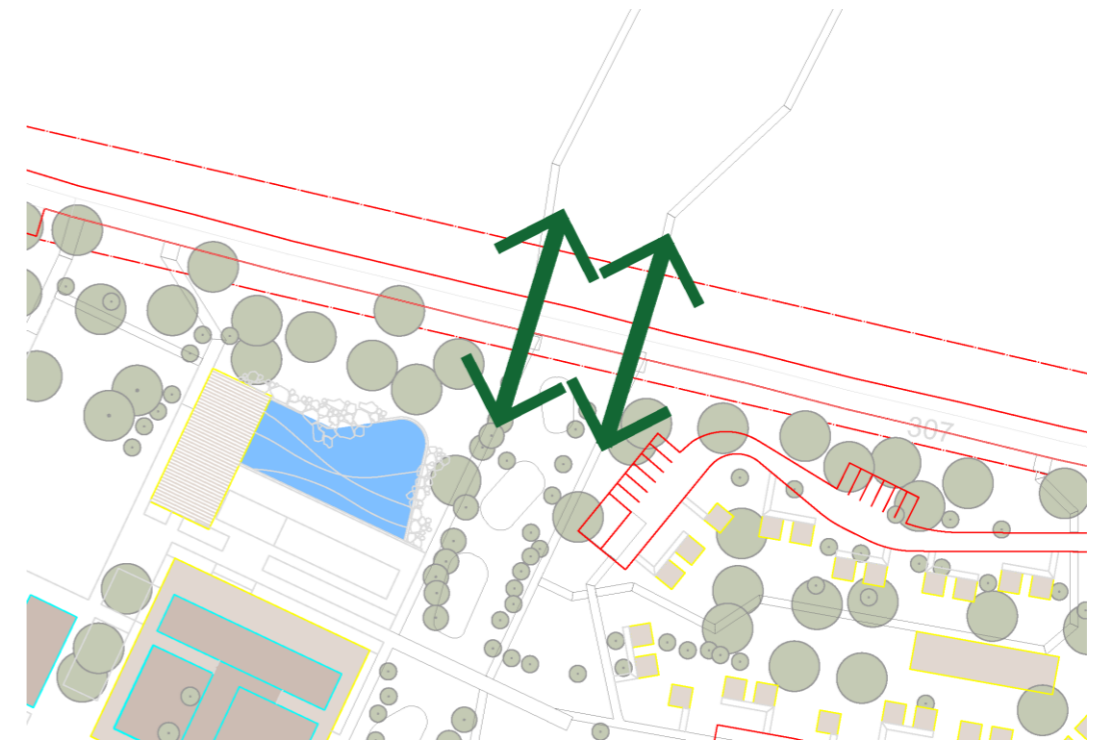


Figure 6 – Pedestrian links across Yardie Creek Road

5 Parking

5.1 Parking Supply Requirements and Provision

5.1.1 Accommodation Units

The Shire of Exmouth Local Planning Scheme No. 4 prescribes parking provision rates for both Tourist Development and Caravan Park land uses, with relevant accommodation rates as shown in **Table 2** and further rates discussed in Section 5.1.2.

Table 2 – Applicable Car Parking Requirements – Accommodation Units

Land Use Component	Minimum Car Parking Requirement	Proposed Units	Minimum Number of Car Parking Bays
Tourist Development	1 bay per bedroom	168 bedrooms	168 bays
	1 visitor bay per 20 bedrooms	168 bedrooms	9 bays
Caravan Park	2 bays per chalet or cabin	N/A	0
	1 additional bay for every chalet/ cabin accommodating +6 persons	N/A	0
Total			177 bays

On the basis of the above, a minimum theoretical on-site provision of 177 bays (including 168 overnight guest bays and 9 visitor bays) would be required for the accommodation components of the site.

Given that there are no chalets or cabins within the caravan park site, and that all guests will be staying in their own caravans, it is not considered necessary to provide any additional dedicated car parking spaces for the caravan park component, with each caravan site providing parking for 1 caravan and 1 associated towing vehicle.

The proposed parking provision for accommodation units is therefore as shown in **Table 3**, illustrating a provision of at least 1 bay per bedroom in accordance with the LPS.

Table 3 – Proposed Car Parking Provision – Accommodation Units

Accommodation Type	Proposed Car Parking Provision Rate	Proposed Units/Persons	Bedrooms	Proposed No. of Car Parking Bays
1-bedroom Hotel units	1 bay per bedroom	48 rooms	60	60 bays
2-bedroom Villas	2 bays per villa	34 villas	68	68 bays
4-bedroom Lodges	4 bays per lodge	7 lodges	28	28 bays
1-bedroom Eco-tents	1 bay per eco-tent	28 tents	28	28 bays
Caravans	1 caravan bay and 1 towing vehicle bay per caravan lot	62 lots	62	62 caravan bays plus 62 towing vehicle bays
Total		174 accommodation units	230	308 bays

5.1.2 Other Components

The LPS also prescribes the following minimum requirements for associated facilities and components of tourist developments and caravan parks:

- 1 bay per 4 seats in public dining areas and 1 bay per 6m² public bar area.
- 1 bay per 2 staff members
- 1 bus bay per 40 persons accommodated

Due to the remote location of the site, it is not considered necessary to provide separate parking for the bar and dining areas on the site as these will cater primarily for overnight guests. However, a supply of visitor bays are proposed in the vicinity of the hotel and common resort facilities (66 bays) as well as adjacent the reception & administration building to the east (14 bays). It is expected that these will provide adequate parking for daytime visitors to the site.

With respect to staff parking, it is noted that the majority of staff will commute from Exmouth via a shuttle bus system operated by the resort, whilst a number of

staff will also live on site. The demand for on-site staff vehicle parking is therefore anticipated to be low. Notwithstanding this, the service compound adjacent the caravan park component of the site is proposed to accommodate parking for staff.

A bus embayment is provided at the main entry to the Resort, as indicated on the plans provided. As the majority of guests will drive their own vehicles to the site, it is not considered necessary to provide one bus bay per 40 occupants.

Additionally, given that all patrons will be arriving in their own caravan, bus parking in the vicinity of the caravan park is also not considered necessary.

It is therefore considered that the proposed on-site provision of 200 bays will satisfy the intent of the LPS.

5.2 Parking Specifications

As per the AS 2890.1:2004 standards for off-street parking facilities, User Class 2 has been adopted for all formal parking spaces within the proposed resort, with **Table 4** detailing the various design specifications.

It is recommended that parking bays within the site be widened to 2.5m in accordance with User Class 2 of the Standards.

Table 4 - Off-Street Parking Specifications

Specification	Minimum Requirements (AS2890.1, AS2890.5 & NCC)	Provided with Design (Kerry Hill Architects Concept Plans ¹)
Tenant Parking		
Car Parking Bays	2.5 x 5.4m	2.4 x 5.4m
ACROD Parking	1 in 100 bays	2
Aisle Widths	5.8m	5.8m min.
Access Driveway Widths	5.5m	6.0m min.

¹ Kerry Hill Architects Concept – A0001_21/08/19

6 Concept Plan Review

A review of the site layout in relation to external and internal vehicle access has been undertaken including swept-path analysis.

6.1 Service Vehicle Access

Figure 7 shows the swept path movements of a 12.5 Heavy Rigid Vehicle accessing the proposed loading area behind the service station at the southern end of the site. It can be seen in the Figure that the HRV will be able to enter the loading dock via a reverse manoeuvre and will be able to exit in a forward direction.

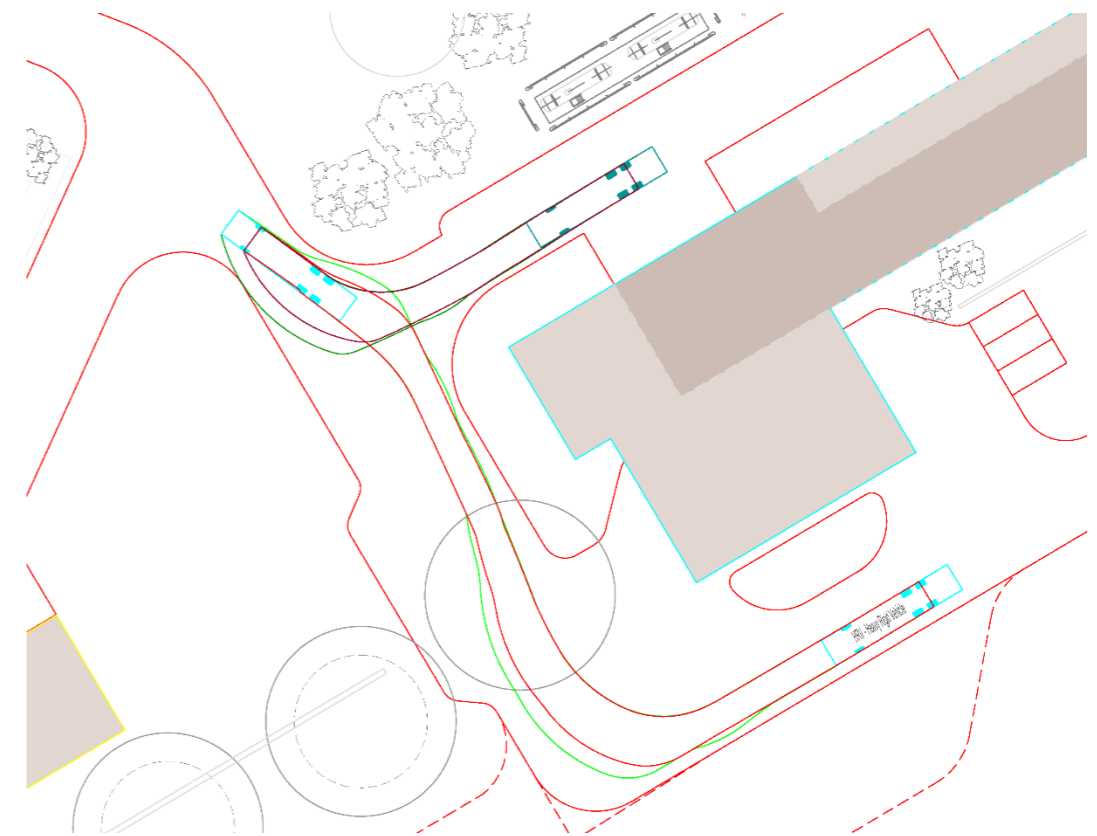


Figure 7 – 12.5m HRV accessing Service Station loading area

6.2 Fuel Tanker Access

Figures 8 and 9 show that a 26.0m B-Double fuel tanker will be able to access the proposed service station from the east, manoeuvring in either clockwise or anti-clockwise directions.

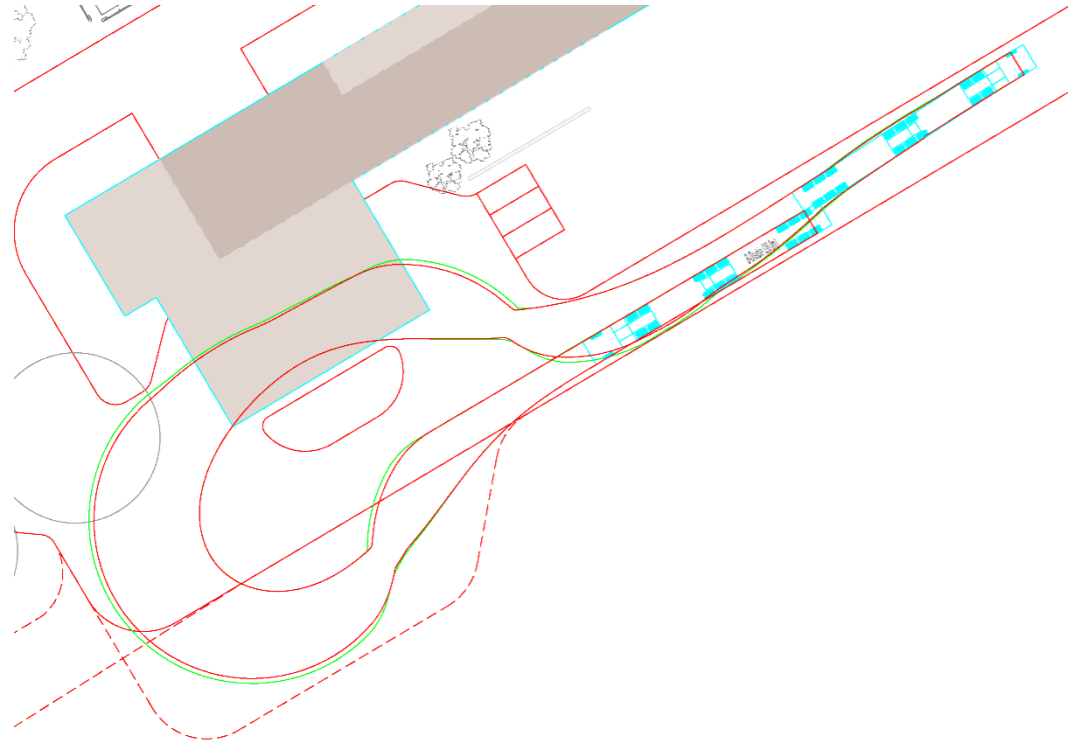


Figure 8 – 26.0m B-Double accessing Service Station – clockwise direction

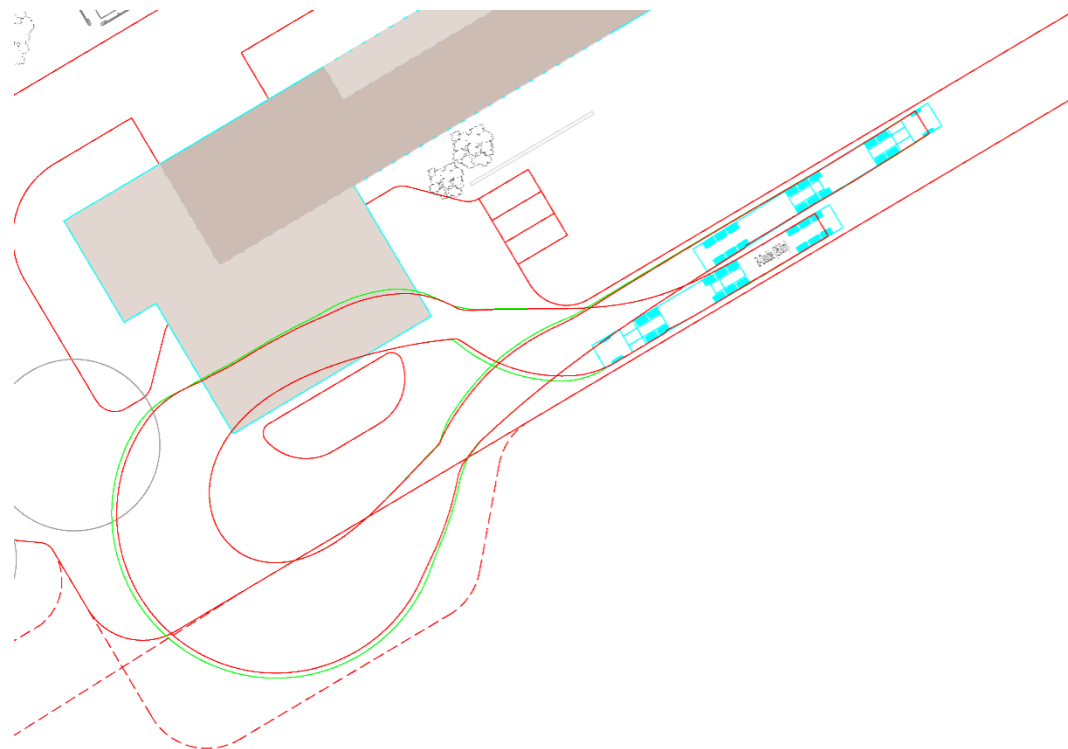


Figure 9 – 26.0m B-Double accessing Service Station – anticlockwise direction

6.3 Bus Access

The 12.5m HRV vehicle has also been used to model the swept path movements for a 12.5m bus accessing the major internal roadway through the northern resort precinct (as shown in Figure 10), confirming that the proposed layout will be able to accommodate the HRV movements.



Figure 10 – 12.5m HRV swept paths in northern precinct

6.4 Car & Trailer Access

Figure 11 shows the critical swept paths for a car and boat trailer accessing the resort and internal roadways within the site, confirming that these movements will be readily accommodated. Due to the expected low number of traffic movements at each dead-end internal roadway, it is not considered necessary for all turning movements to stay lane-correct, provided that a clear width of 6.0m is provided for vehicles to pass if necessary (as recommended in Section 4.1).

Similarly, Figure 12 shows the critical swept paths for a car and caravan accessing the one-way internal roadways of the caravan park, confirming that these movements will be readily accommodated within the site.



Figure 11 – Car + Boat Trailer swept paths within resort precinct

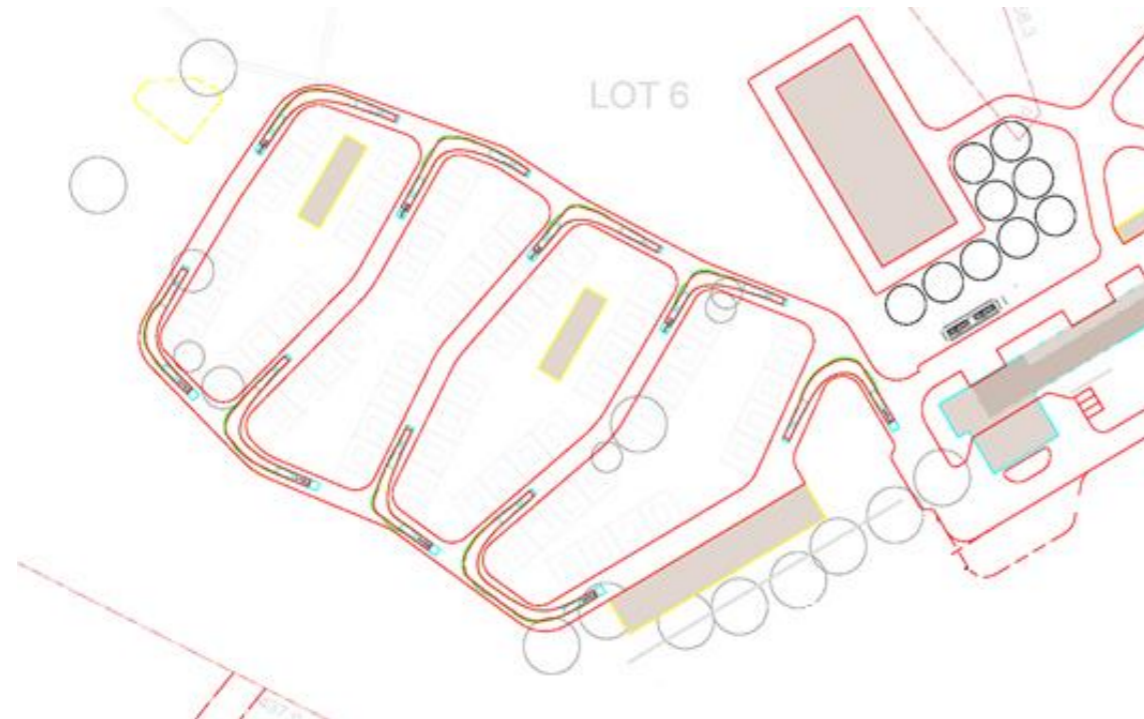


Figure 12 – Car + Caravan swept paths within Caravan Park

6.5 Fire Access

Fire vehicles will also require access to all internal roadways including the villas and eco-tents. Information obtained from the Department of Fire and Emergency Services (DFES) website indicates that the largest fire truck servicing the Exmouth area is the 3.4 Urban Tanker vehicle, with a length of 8.1 metres. An 8.8m Medium Rigid Vehicle has been modelled for this purpose throughout the main resort precinct, confirming that the proposed internal road layout will readily accommodate the vehicle. **Figure 13** shows the swept paths of critical movements for the Urban Tanker in the resort precinct. **Figure 14** then provides an example of the turnaround movements of the tanker at the dead-end villa roadways (utilising villa car parking bays and a turnaround area), while **Figure 15** shows the swept paths of the tanker within the caravan park.



Figure 13 – 8.8m MRV swept paths within resort precinct

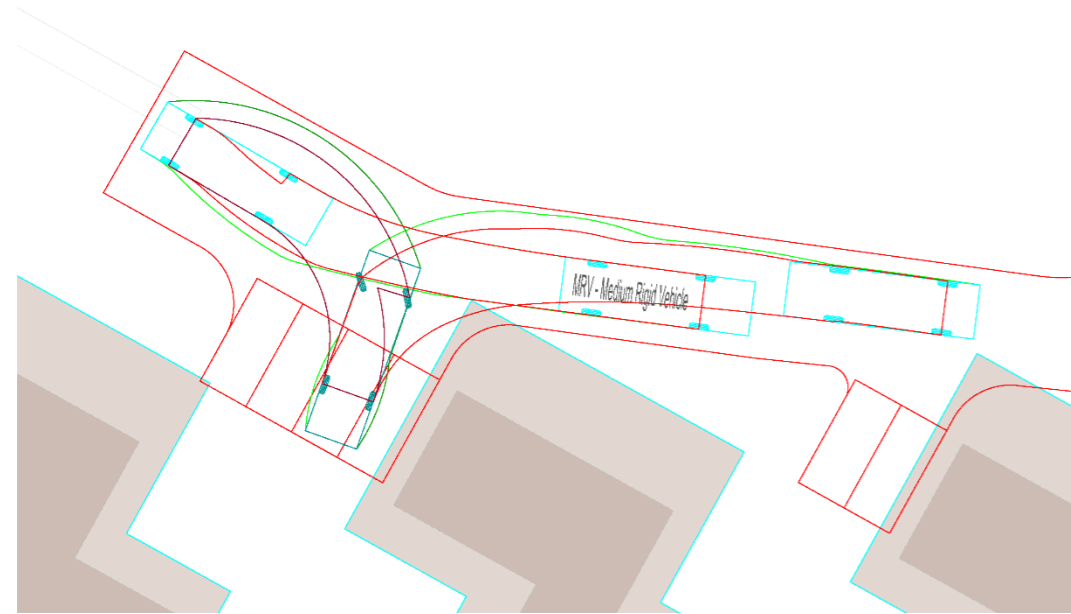


Figure 14 – 8.8m MRV swept path at villa turnaround area

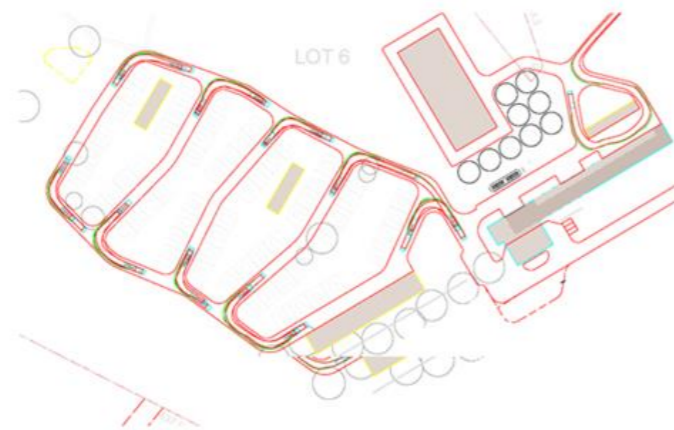


Figure 15 – 8.8m MRV swept paths within caravan park

6.6 Sight Lines

A review of driver sightlines has been conducted for all access points to Yardie Creek Road. **Figure 16** shows the required Safe Intersection Sight Distance sightlines for the existing speed limit of 80 km/h (i.e. 181 m) at each access point. It is recommended that these sightlines be kept clear of obstructions including high vegetation above 1 metre in height.



Figure 16 – Driver sightlines at site access points on Yardie Creek Road

Additionally, **Figure 17** shows the sightlines which provide the required pedestrian Crossing Sight Distance of 117 metres for a traffic speed of 80 km/h. It can be seen in **Figure 17** that these sightlines are currently provided with no obstructions.



Figure 17 – Pedestrian sightlines at Yardie Creek Road crossing locations

7 Summary

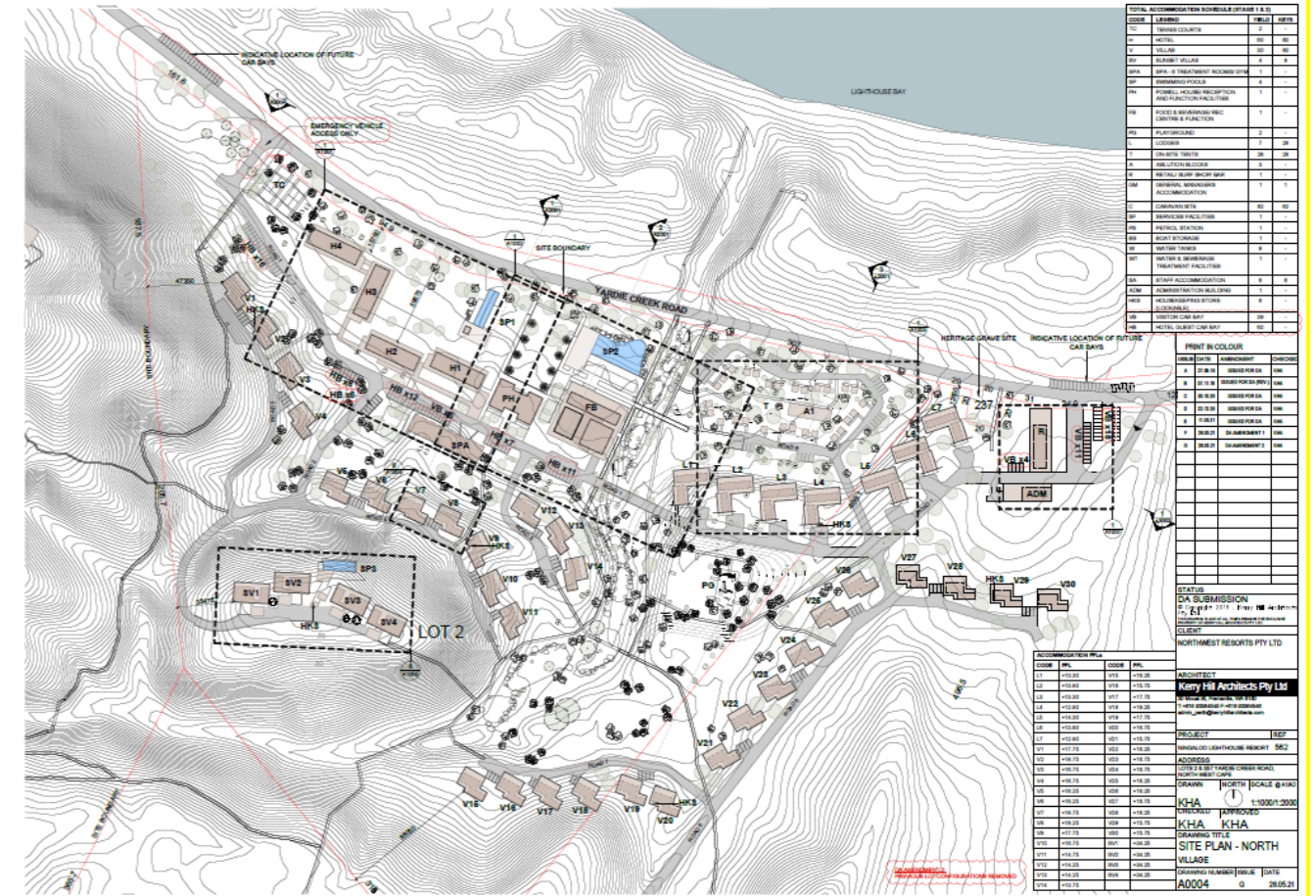
The development on Lots 2 and 557 Yardie Creek Road is proposed as a tourist accommodation complex replacing the existing Ningaloo Holiday Park and expanding the existing accommodation provisions in the area. A review of the proposal against relevant Australian Standards and related transport guidelines has been undertaken. Key conclusions and overall recommendations are as follows:

- As noted in Section 4.1, two vehicle accesses are proposed to the northern precinct off Yardie Creek Road, with the eastern-most section of the future Yardie Creek Road alignment to be constructed to provide access to the proposed separate caravan park and service station. It is recommended that the current 80 km/h section of Yardie Creek Road adjacent the site be reduced to 60 km/h.
- For internal circulation roads, it is recommended that 6.0m clear widths or regular passing bays be provided on the 4.0m roadways providing access to villas in the northern portion of the site, as also noted in Section 4.1. It is also recommended that the internal service road linking the resort to the caravan park be widened to 6.0m.
- The proposed parking provision satisfies the minimum requirements under the Shire of Exmouth Local Planning Scheme. As noted in Section 5.2 it is recommended that parking spaces within the site be at least 2.5m wide in accordance with the AS 2890.1.
- It is recommended that clear driver sightlines be provided at the access locations on Yardie Creek Road, as well as clear pedestrian sightlines at the Yardie Creek Road crossing locations, in accordance with Austroads guidelines.
- Swept path analysis confirms that the loading dock to the rear of the proposed service station will accommodate the swept paths of a 12.5m HRV.
- The swept path modelling also confirms that the service station will accommodate the swept paths of a 26m B-Double fuel tanker.
- Swept path modelling for a 12.5m HRV through the resort precinct has been used to account for movements of a 12.5m bus/recreational vehicle. The review confirms that these movements can be accommodated within the proposed road layout.
- The internal road layout of the main resort precinct and caravan park will also accommodate access for a 3.4 Urban Tanker fire vehicle.

Appendix A

Proposed Site Plan

Site Plan North



Site Plan South

