6 Water Management Strategy

Stormwater management is proposed to be undertaken consistent with DWER's recommended water sensitive design practices for the northwest of Western Australia and the Onslow Local Water Management Strategy.

The main aim for stormwater management for the site is to mimic, as closely as possible, the pre-development environment post-development. This will be achieved by maintaining, where possible, the natural topography of the site. Runoff throughout the site will be conveyed via overland flow, using the natural topography, to depression storage within site.

6.1 Stormwater Management

A stormwater management strategy has been developed, which demonstrates that the site can effectively manage stormwater generated during minor and major rainfall events and meet design criteria CS1 to CS3.

The drainage design will aim to achieve the following objectives:

- Maximise retention of stormwater generated from the site during frequently occurring events
- Ensure serviceability of the site during the 20% AEP event
- Provide safe conveyance of stormwater during the 1% AEP storm event from the site.

The site will provide permanent resort-style FIFO accommodation with an oval located in the site's northwest corner. The natural landforms of the site will be retained where possible. An engineering design plan has been provided in Appendix B.

The first 10 mm of runoff from roads and car parks will be treated and infiltrated at the source. All other runoff from the site will be conveyed via the natural landforms as overland flow to natural depression storage within site.

6.1.1 Post-development modelling

Post-development stormwater catchments are shown in Figure 7, with the land use breakdown within each catchment summarised in **Table 6**.

For the post-development modelling, only areas of the site that the development has altered have been modelled. The cultural heritage area (to the south of the site) and some of the boundaries of the site where no development is proposed, no runoff from site will be conveyed, or the natural landforms have been maintained, have not been modelled.

Three catchments were developed for the post-development model, each with a natural storage depression. The total area of the catchments is 12.45 ha. The eastern portion of the site drains to a depression (Storage A) with an invert of 7 m AHD. A southern, eastern portion of the site drains to two connected depressions (Storage B) with an invert of 5 m AHD. The remainder of the site, and the total developed area to the north, drains to the largest of the three depressions

(Storage C) to the south, and during major storm events will overflow downstream to further depression storage located within the cultural heritage area.

Australian Rainfall and Runoff Guidelines (ARR) (Geoscience Australia 2019) guide the choice of loss parameters across Australia. There are no recommendations for design losses for arid areas with mean annual rainfalls less than 350 mm.

Infiltration testing, conducted by part of the LWMS (hyd20 2012), indicated infiltration rates across the entire structure plan area ranged from 5 m/day to 20 m/day, with higher rates observed in the lower elevation areas. Infiltration rates on the edge of the site (hyd2o 2021) were recorded as 16.4 m/day.

GHD used a constant rate of 72 mm/hr for modelling in the *Shire of Ashburton Report for Onslow Drainage Assessment, Review of Stormwater Drainage System in Onslow* (GHD 2010).

For consistency with the previous modelling undertaken for the area, a constant rate of 73 mm/hr has been adopted for the natural landforms. In addition, following the recommendation made in the LWMS, a rate of 10 m/day (hyd2o 2012) was adopted for the depression storage.

In accordance with ARR guidelines, all building and hardstand areas were modelled with an initial loss of 1 mm and no continuing losses.

Table 6: Post-development Catchments

Catchment	Land use				Total area (ha)
	Buildings and Hardstand (ha)	Roads (ha)	POS (ha)	Natural ground (ha)	
Catchment A	0.1	na	na	2.9	3
Catchment B	0.1	na	na	2.0	2.1
Catchment C	1.65	0.8	0.8	4.1	7.35

6.1.2 Small Event (63.2% AEP)

The LWMS recommends that the first 10 mm from roads are to be retained and treated. All runoff from the roads and car park will be treated at the source or as close as possible.

All other runoff from impervious areas within Catchment C will be directed, via overland flow paths, to Storage C. The modelling results indicate that there will be 0.14 m of ponding in Storage C during the small event.

Due to the high infiltration rates of the native soils, there will be no runoff from pervious areas of Catchment A and B during the small rainfall event.

6.1.3 Minor Event (20% AEP) and Major Event (1% AEP)

Minor (20% AEP) and major (1% AEP) rainfall events will be managed via safe overland flow to the natural depressions. Three natural depressions will be used for storage and infiltration. Modelling for the site indicates that all Catchments will produce ponding during the 1% AEP event. Catchment C will produce ponding during the 1%, 20%, 63.2% AEP events. Results from the modelling suggest Storage C will overflow during the 1% AEP event to depression storage located downstream in the cultural heritage area.

The extents of inundation in the 20% and 1% AEP events are shown in Figures 8 and 9. The maximum flood depths, storage volumes, topwater levels (TWL), overflow rates and volumes, for the 20% AEP and 1% AEP events are shown in **Table 7.**

Table 7: Rainfall runoff storage

Storage	Depth (m)	Volume (m^3)	TWL (m AHD)	Overflow (m^3/s)	Overflow Volume (m^3)
20% AEP					
Storage C	1.5	3,172	5.5	na	na
1% AEP					
Storage A	0.3	467	8	na	na
Storage B	0.9	1156	5.9	na	na
Storage C	1.9	4,974	5.9	0.9	8,510

Elevated accommodation pods and boardwalks will be used throughout the site to ensure a minimum 0.5 m clearance from maximum TWLs of flood storage.

Roads have been designed to be passable in the minor events with water flowing to vegetated swales and downstream depressions storage.

6.2 Groundwater Management

6.2.1 Groundwater Levels

Use of fill or excavation will not be undertaken at the site. The site's floor levels will be required to be raised to a minimum elevation of 6.4 m AHD, which will provide enough clearance to the AAMGL plus sea-level rise (approximately 2.7 m). Therefore, subsoil drainage is not proposed.

6.2.2 Groundwater Quality

The proposed stormwater management practices will ensure that groundwater quality will be maintained.

The two key strategies include infiltrating the first flush of rainfall at the source and minimising the development footprint to replicate current (pre-development) conditions and natural groundwater recharge. Other critical strategies for managing groundwater quality at the site include:

- Maximising native and waterwise vegetation within landscaped areas
- Fertiliser and pesticide use on-site to be minimised through waterwise and or native landscaping, minimal community open space and private gardens due to development style.

6.2.3 Acid Sulphate Soil Management

ASS investigations are commonly required as part of the conditions of subdivision application. As moderate to low risk of ASS (Figure 5) have been identified at the site's southern portion, and the natural landform is to be used (i.e. no excavation or earthworks will be required) an ASS management plan will not be required.

6.3 Flood Management

The overland flow will be safely conveyed to the natural depressions, and the site will use natural flow paths.

Figure 9 shows the maximum flood depth for the Storage A, B and C depressions in the 1% AEP storm event. A clearance of 0.5 m to habitable floor levels from the 1% AEP will need to be accounted for to provide the minimum clearance requirement under DWER flood management policy.

Hence, the site's development floor level has been designed to be at a minimum of 8.5 m AHD (at Storage A) and 6.4 m AHD (at Storage B and C). These provide an adequate freeboard to the 1% AEP return period cyclonic storm surge allowing for climate change as specified in the coastal strategy (MP Rogers & Associates Pl, 2011).

7 Implementation Plan

The success of the water management strategy relies on the implementation throughout all stages of development, including construction and post-development.

The commencement of the project construction phase is expected to be in November 2021. The site is scheduled to be completed and ready for use as early as August 2022. Approximately nine months of construction has been proposed, and high-water demand is expected during this phase. However, it has been anticipated that water demand would drop and reach an equilibrium in 2023 when the site's residential condition enters into a steady state. MRL will provide a monthly forecast of water demand to the Water Corporation when construction phasing details, scheduling and implementation are determined. However, the following sections detail implementation practices to be followed during construction and after development completion.

7.1 Construction Phase

During the project's construction phase, water management requires considering direct impacts from any construction activities and maintaining the pre-development hydrological regime at post-development.

7.1.1 Management of Construction Activities

Potential impacts from construction activities related to the water cycle include:

- Dust generation during bulk earthworks and building construction
- Erosion of exposed surfaces.

All of these potential impacts are manageable through appropriate engineering design and site management practices.

Contractors and staff will be notified of the requirement to implement management practices to limit any potential impacts resulting from these activities.

The timing of the construction activities will be dependent on several factors not related to water management. Where possible, the construction schedule should allow for work to be undertaken when impacts on the water cycle are minimised. These include completing civil works during summer or autumn. MRL intends to initiate works in November 2021.

7.2 Post-Development

After completing construction activities, maintenance of any stormwater management infrastructure and assessment of their performance will be required. As there is no drainage pipes and pits system constructed on-site, swales near roads and car parks would be the critical maintenance features.

7.2.1 Maintenance

The operation and maintenance of the stormwater management infrastructure will be the responsibility of the site managers. The stormwater management infrastructure will remain private and will not be ceded to the Shire for management or maintenance. The following measures will be undertaken to ensure the infrastructure functions correctly:

- Street sweeping to reduce the particulate build up on road surfaces
- The ongoing removal of debris and liter from the swales and the natural depressions to guarantee their designed life cycle
- Maintaining the landscape feature to ensure effective infiltration and protect the site from surface erosion.

7.2.2 Roles and Responsibilities

Table 8 details the roles and responsibilities for water management during the construction phase of the development and post-development.

Table 8: Roles and Responsibilities

Role	Responsibility	Description
Construction		
Dust suppression	Site managers	Scheduled water uses for dust suppression with effective watering technique.
Street Sweeping	Site managers	Carry out street sweeping of roads, car parks, and hard surfaces during construction to prevent sediment and other pollutants mobilisation. This is to be carried out as required throughout the construction phase.
Post Construction		
Stormwater infrastructure	MRL	Manage and repair/replace infrastructure as required.
Maintenance	MRL	Undertake maintenance of the stormwater infrastructure (swales), oval and landscaping. Activities include removing sediment build-up, frequent maintenance during the established period of plants. Inspections are to be completed every six months during the first year of operation.

8 Limitations

This report is produced strictly in accordance with the scope of services set out in the contract or otherwise agreed in accordance with the contract. 360 Environmental makes no representations or warranties in relation to the nature and quality of soil and water other than the visual observation and analytical data in this report.

In the preparation of this report, 360 Environmental has relied upon documents, information, data, and analyses ('client's information') provided by the Client and other individuals and entities. In most cases where the Client's information has been relied upon, such reliance has been indicated in this report. Unless expressly set out in this report, 360 Environmental has not verified that the Client's information is accurate, exhaustive, or current, and the validity and accuracy of any aspect of the report including, or based upon, any part of the Client's information is contingent upon the accuracy, exhaustiveness, and currency of the Client's information. 360 Environmental shall not be liable to the Client or any other person in connection with any invalid or inaccurate aspect of this report where that invalidity or inaccuracy arose because the Client's information was not accurate, exhaustive, and current or arose because of any information or condition that was concealed, withheld, misrepresented, or otherwise not fully disclosed or available to 360 Environmental.

Aspects of this report, including the opinions, conclusions, and recommendations it contains, are based on the results of the investigation, sampling and testing set out in the contract and otherwise in accordance with normal practices and standards. The investigation, sampling and testing are designed to produce results that represent a reasonable interpretation of the general conditions of the site that is the subject of this report. However, due to the characteristics of the site, including natural variations in site conditions, the results of the investigation, sampling and testing may not accurately represent the actual state of the whole site at all points.

It is important to recognise that site conditions, including the extent and concentration of contaminants, can change with time. This is particularly relevant if this report, including the data, opinions, conclusions, and recommendations it contains, are to be used a considerable time after it was prepared. In these circumstances, further investigation of the site may be necessary.

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Figures



Legend

- Survey Area Boundary
- Cadastral Lines

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS
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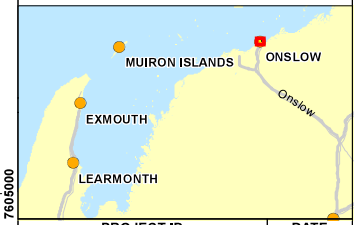
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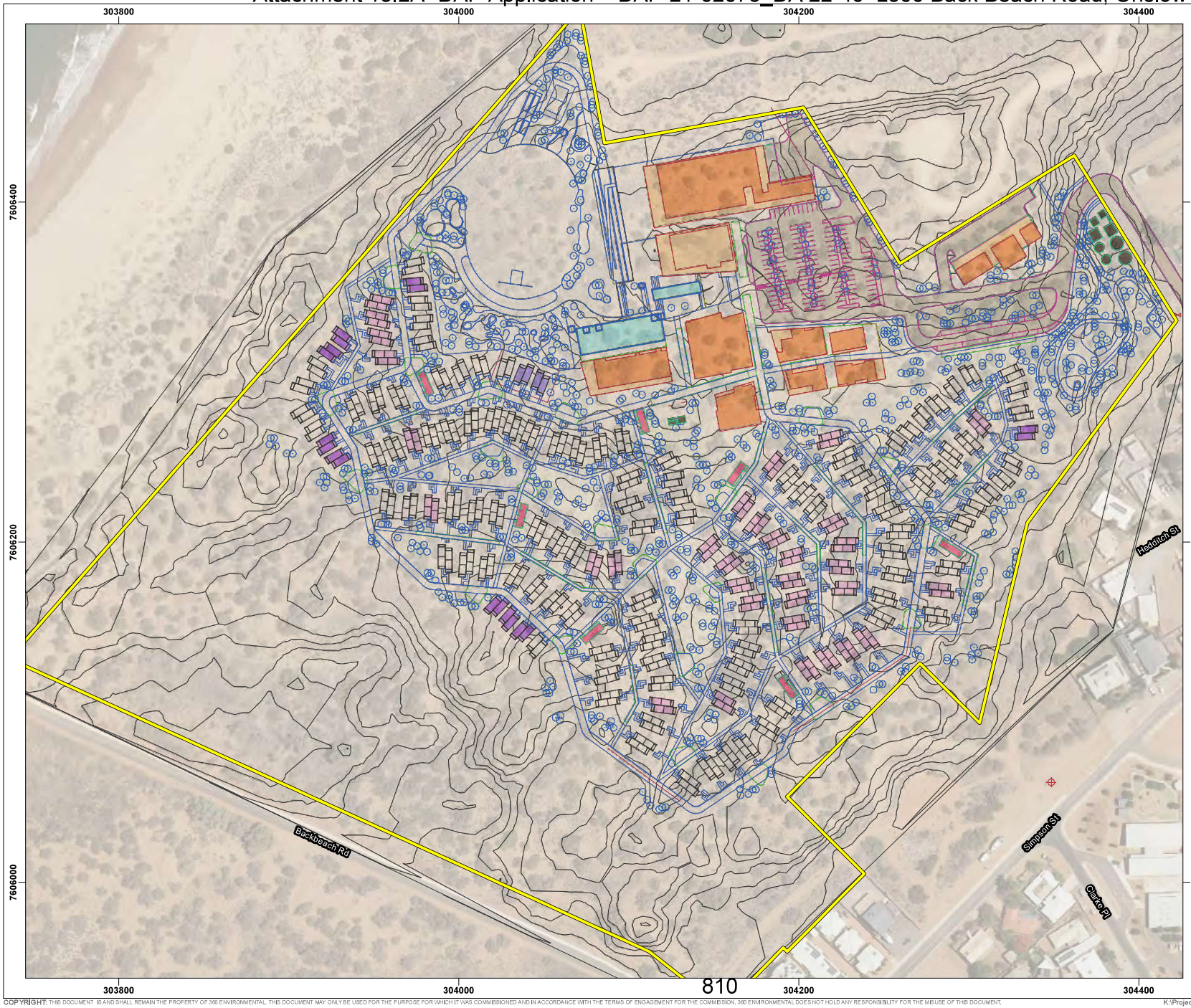
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Urban Water Management Plan

Figure 1
Survey Area

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Legend

- Survey Area
- BUILDING
- COVERED OUTDOOR SPACE
- SERVICES
- WATER BODY
- ROAD/CAR PARK
- FIELD STORE (WITH LAUNDRY)
- ACCOMMODATION PODS (SLEEPS 4)
- ACCOMMODATION PODS (SLEEPS 2)
- ACCESSIBLE ACCOMMODATION PODS (SLEEPS 2)

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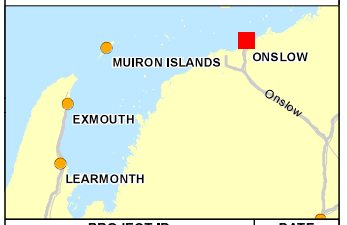
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Figure 2
Conceptual Master Plan

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- Survey Area Boundary
- Cadastral Lines
- Topographic Contour (mAHD - 2m Interval)

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Figure 3
Topography

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- Survey Area Boundary
- Cadastral Lines

Soil Land System

- 201Du: Dune fields supporting soft spinifex and minor hard spinifex grasslands.

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Figure 4
Geology

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Legend

- Survey Area
- Cadastral Lines

Acid Sulfate Soils Risk

- High to moderate risk
- Moderate to low risk

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Figure 5
Acid Sulfate Soil

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- Survey Area Boundary
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WIN Bores

- Groundwater Bore
- Surface Water Bore

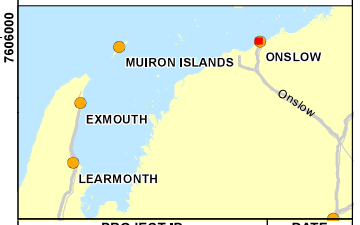
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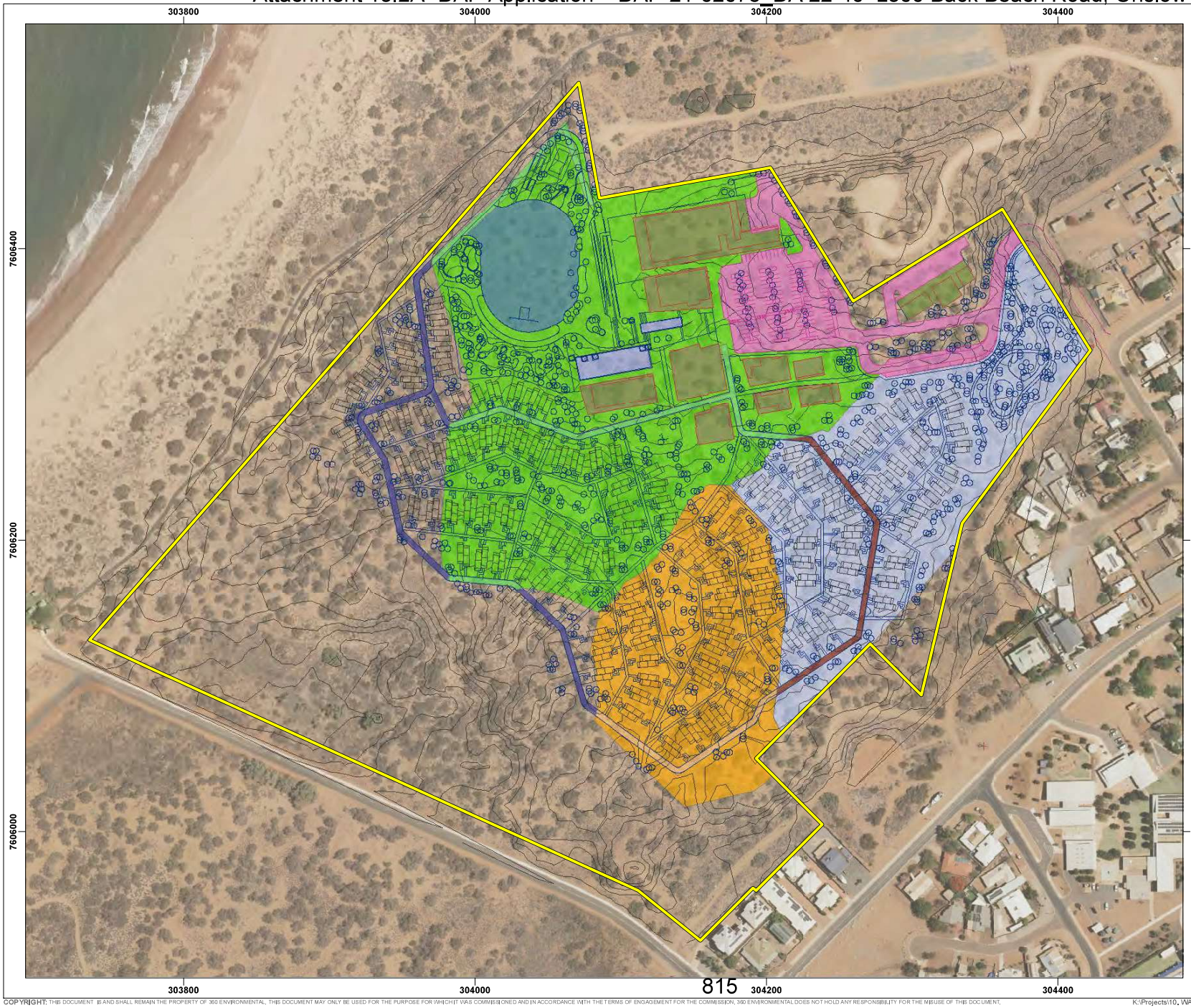
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Figure 6
Groundwater

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Legend

- Survey Area Boundary
- Catchment A
- Catchment B
- Catchment C

Sub Catchments

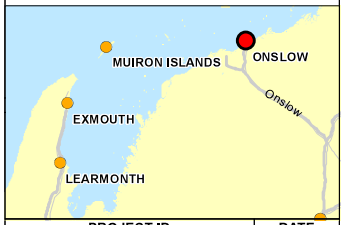
- Access Track
- Building
- Oval
- Road
- Road A
- Road B
- Road C
- Swimming Pool

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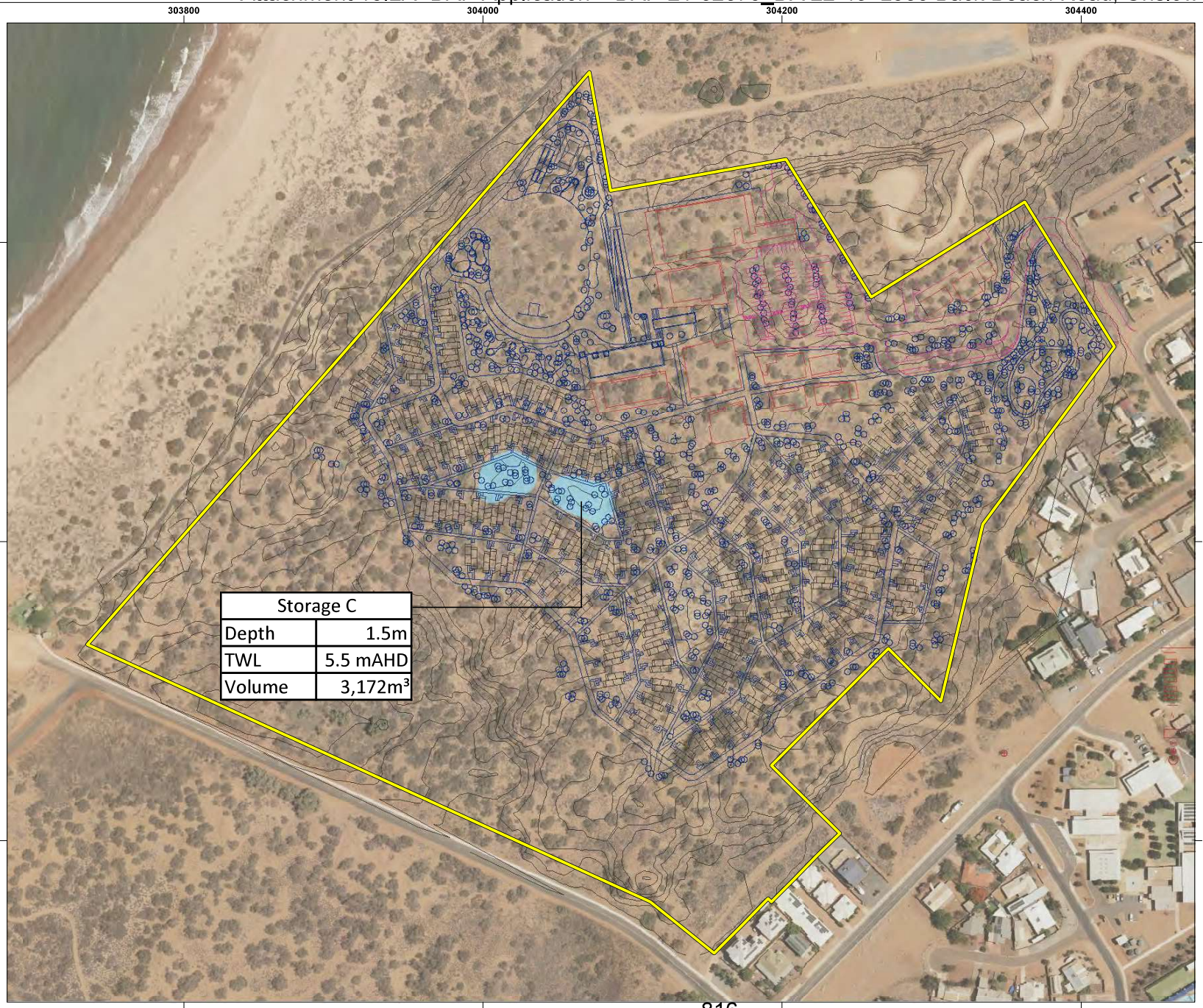
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Urban Water Management Plan

Figure 7
Modelled Catchments

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- Survey Area Boundary
- Storage C 20%AEP Inundation Extent

Indicative Site Master Plan

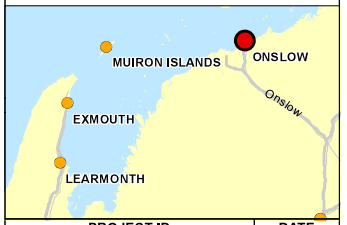
- Access and Parking
- Landscaping
- Accomodation Pods
- Buildings
- Topographic Contour

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GDA 1994 MGA Zone 50

CREATED	CHECKED	APPROVED	REVISION
LF	NC	NC	0

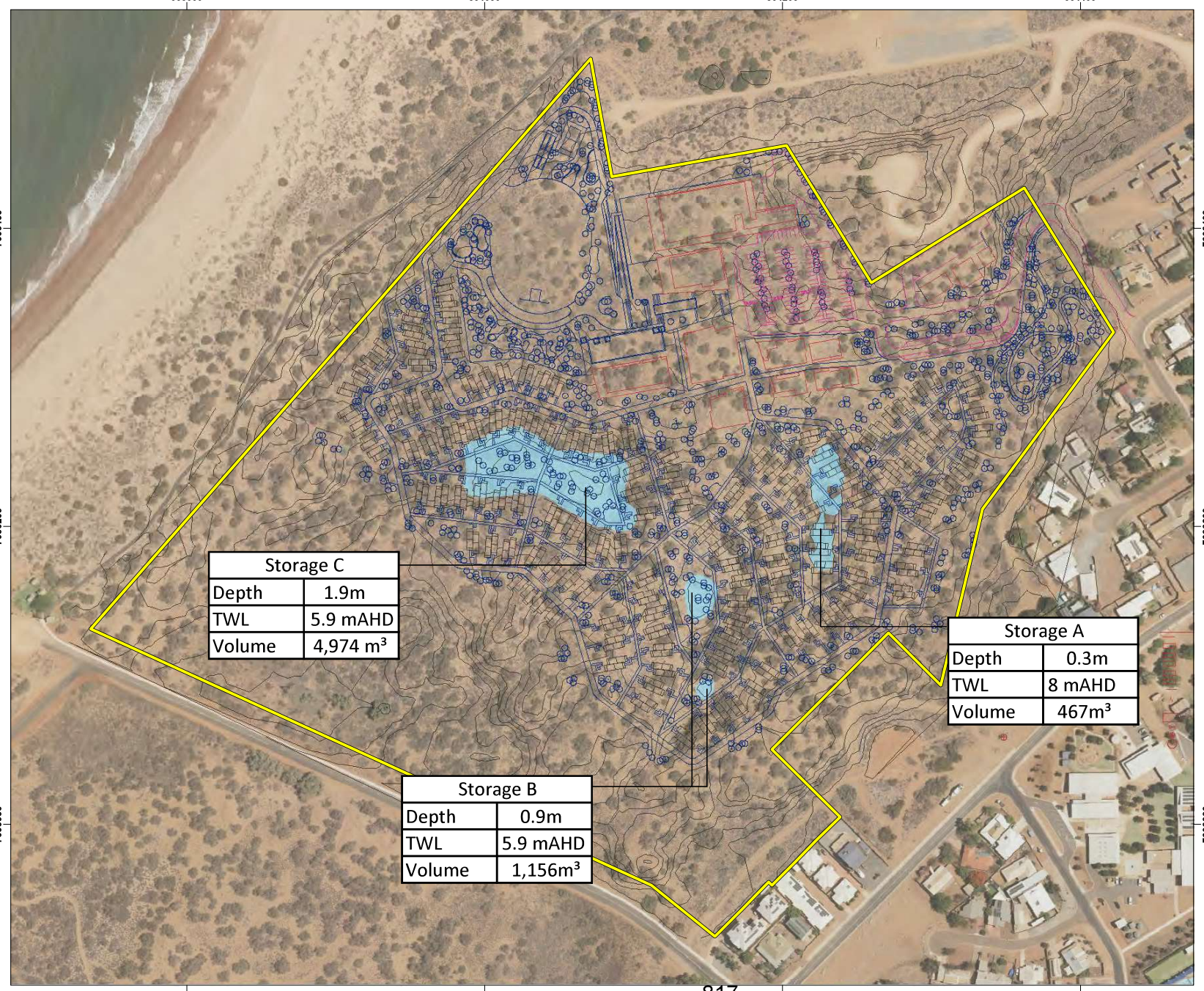
Rowe Group c/o Mineral Resources Limited
Lot 300 Back Beach Road, Onslow

Urban Water Management Plan

Figure 8
20% AEP Inundation Extent

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Legend

- Survey Area Boundary
- 1%AEP Inundation Extent

Indicative Site Master Plan

- Access and Parking
- Landscaping
- Accomodation Pods
- Buildings
- Major Topographic Contour

360 environmental
a 10 Bermondsey St, West Leederville, 6007 WA
t (08) 9388 8360
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w www.360environmental.com.au

0 40 80 120 Meters
1:3,500 @ A4

N

LOCALITY MAP



PROJECT ID	DATE
4757	27/08/2021

HORIZONTAL DATUM AND PROJECTION
GDA 1994 MGA Zone 50

CREATED	CHECKED	APPROVED	REVISION
LF	PD	PD	0

Rowe Group c/o Mineral Resources Limited
Lot 300 Back Beach Road, Onslow

Urban Water Management Plan

Figure 9
1% AEP Inundaton Extent

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Appendices

Appendix A
Landscape Plan

ONSLOW TOWNSHIP VILLAGE LANDSCAPE

Mineral Resources Limited
PER21030.00



ASPECT Studios

ONSLOW TOWNSHIP VILLAGE

Prepared by:
ASPECT Studios
L1 / 191 St Georges Tce
Perth, WA, 6000

Prepared with:
Millieu Creative
L1 / 488 Stirling Highway
Peppermint Grove, WA, 6011

Prepared for:
Mineral Resources Limited
1 Sleat Rd,
Applecross WA 6153

Document Control

Job Number:	PER21030.00
Report Title:	Onslow Iron Ore Project
Revision:	B
Date Issued:	24.08.2021

ASPECT Team

Nicola Marunczyn
Tom Lucey
Jonathon Marshall
Tom Griffiths
Michael Rowlands



Contents

01. Introduction
02. Landscape Plans
03. Landscape Quality - Materials and Finishes
04. Planting Strategy

1.0 Introduction

The landscape design for the Onslow Township Village, has been prepared by ASPECT Studios in collaboration with Milieu Creative. The design responds to the scale, form and function of the architecture and local context in order to create a dynamic and engaging sequence of landscape spaces.

With the striking Pilbara landscape as a backdrop, the landscape design will showcase a mix of natives, exotic, and sensory plant species to support the proposed accommodation, sports fields, play, recreation and amenity spaces.

The landscape concept responds to the site's larger contextual relationship to the coastal landscape situated adjacent to Onslow Township , celebrating the vibrant, textured tones and layered vegetation.

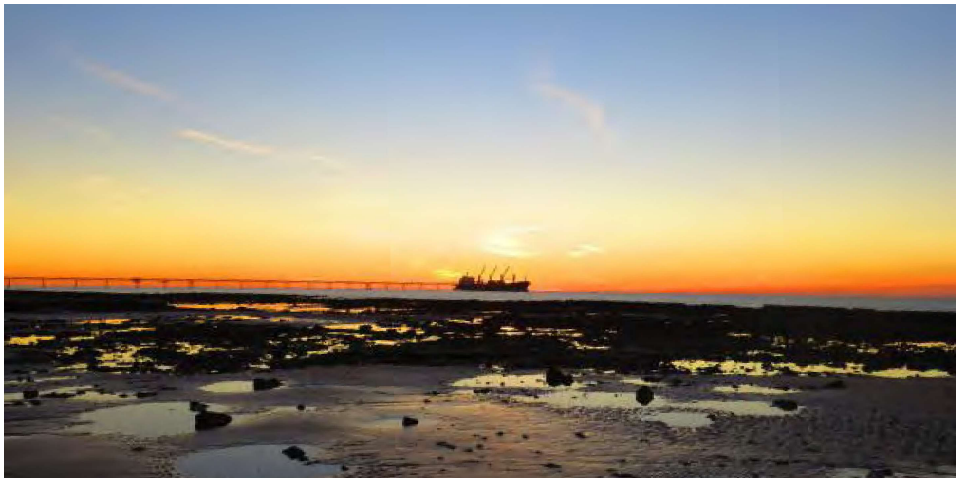
The public landscape spaces have been designed to provide a place where the community can gather for play and recreation catering for the needs of residents, visitors and the broader community.

The following general principles form the landscape approach to the site:

- Use high quality landscape design to integrate the proposed sporting development with broader active and passive recreational offerings;
- Develop a legible network of spaces that fully integrate with and connect to the surrounding context;
- Create spaces with varying characters and identities.
- Design spaces that will become activated and vital.
- Maximise opportunities for social interaction through arrangement of seating and views.
- Create a robust landscape made from proven materials and planting species, integrating bold forms that can be managed and maintained.
- Selection of local and native plant species that benefit surrounding ecologies.
- Ensure structural elements read as an extension of the architectural material palette and are integrated with the planting compositions.

The design of landscape considers the architectural design by Milieu Creative in both concept and materiality, with the intention of creating a cohesive transition from internal to external spaces.





1.1 Vision

Set on the western edge of Australia, Onslow Township Village will be a world class accommodation facility that contributes to the community and economic growth of the region.

The village will be designed as a high quality facility that sets a new benchmark for accommodation that promotes a healthy, active and sustainable lifestyle for workers and the local community.

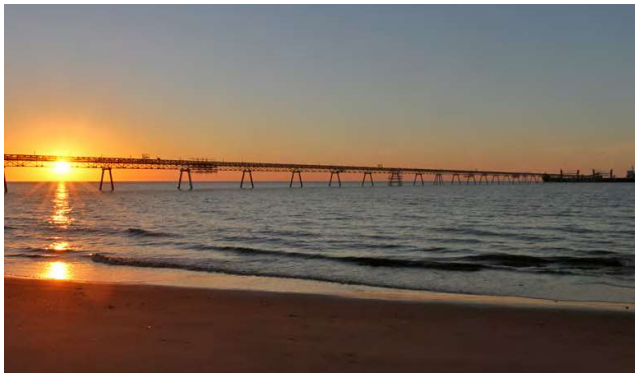
Inspired by the unique coastal landscape and sense of place the village will be designed to respond to the future vision of Onslow Town Centre and leave a lasting legacy for future generations.













1.3 Landscape Principles

The following design principles have been developed to guide the design of the village and surrounding landscape. Throughout the design process these principles will continue to inform and develop the landscape repsonse.

Celebrate the Site

- Celebrate the unique character of the site.
- Maximise visual, physical and symbolic connectivity to the local context.
- Touch the ground lightly

Connecting Community

- Create strong connections to community and the environment.
- Design to support social interaction and relationship building.

Healthy Active by Design

- Design comfortable and safe connections to promote incidental physical activity and access to nature.
- Provide formal or informal, natural and man-made landscape areas to support recreational, sporting and social activities.

Leave a Legacy

- Contribute to the "... Community vision that Onslow be a vibrant, sustainable and prosperous place for work, living and leisure - for both residents and visitors."
- Future proof the site for the next generation of users.

1.4 Landscape Approach

The landscape approach responds to the immediate context of the development area. A series of strategies have been developed that focus the development of the landscape design around key views, local character, the existing topography and integrating the architecture into the landscape.

Celebrate the Views

- Maximise the sites existing topography to retain the best views out to the horizon.
- Develop a strategy to ensure the accommodation and the common-use amenity retain views to significant vistas

Respond to the Local Character

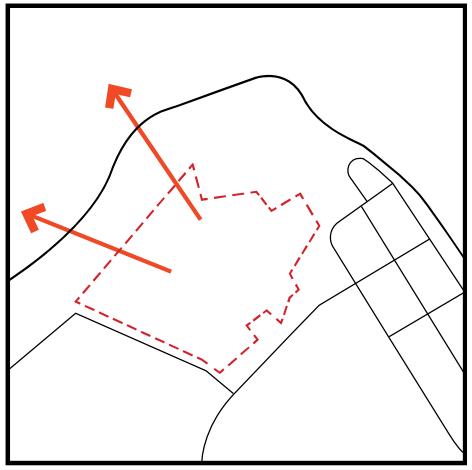
- Respond to the immediate social and environmental influences surrounding the site. Including the beach, Onslow townsite and cultural histories.

Touch the ground lightly

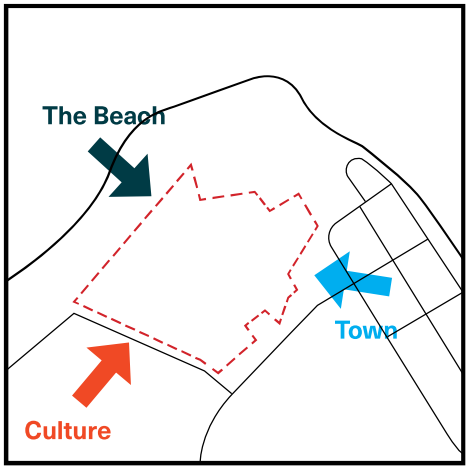
- Develop a strategy for pedestrian networks, accommodation pods and built amenity to minimize disturbance to the existing natural topography and ecologies of the site.

Integrate Landscape and Architecture

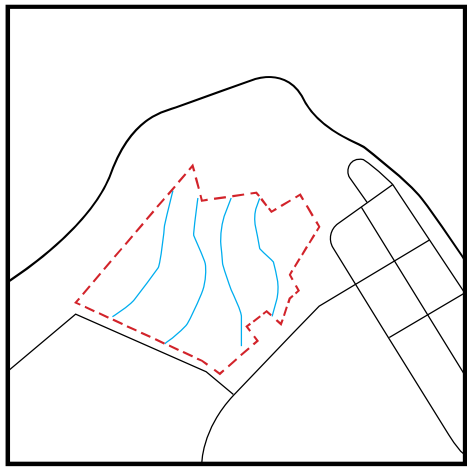
- Create a landscape-driven site response that informs the siting and location of proposed built infrastructure within the site.



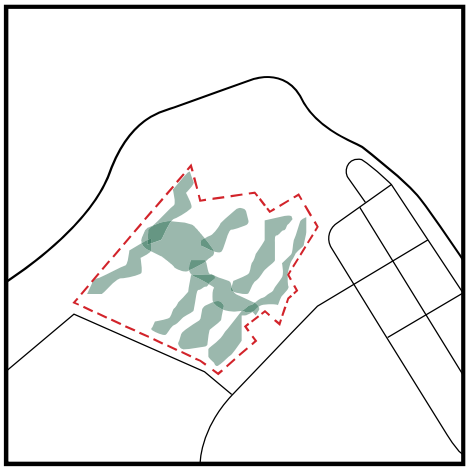
Celebrate the views



Respond to local character



Touch the ground lightly



Integrate landscape and Architecture

2.0 Landscape Plan

PROGRAM

1. Bus Stand (Pickup/Dropoff)
2. Sheltered Community Playground
3. Dedicated Dropoff (Small Vehicle, Short Term)
4. Terraced Entry Plaza
5. Water Feature
6. Recreation Turf
7. Outdoor Gym
8. Cricket Nets & Beach Volley Ball
9. Relax Zone (BBQ, Hammocks, Furniture, Shade Structure)
10. Mini Golf
11. Alfresco Deck With Terraced Embankment
11. Pedestrian / Maintenance Vehicle Access (with shade structures and comfort nodes)
12. Pedestrian Access (Boardwalk with shade structures and comfort nodes)
13. Security Fence
14. Entry Statement Wall

GENERAL

- Site Boundary

SURFACES

- Pedestrian Access Paving
- Plaza Paving
- Asphalt (Carppark)
- Asphalt (Maintenance Access)
- Composite Timber Boardwalk
- Fibre Reinforced Plastic Boardwalk
- Stabilised Gravel
- Pool

PLANTING

- Lawn
- Native Dune Mix Planting - Managed Sparse
- Native Swale Mix - Managed Sparse
- Native Shrub Mix - Managed
- Proposed Native Tree

- Refer to Civil Engineers drawings for grading plan



2.1 Community Playground & Entry

The entry road to the Onslow Township Village provides staff and guests with a high quality landscaped experience as they enter through a tree lined road. Water Sensitive Urban Design (WSUD) principles are incorporated into the design of the entry landscape, capturing water runnoff into the filtration garden beds and surrounding landscape.

South of the entry road and interfacing with the Onslow Townsite is the Community Playground. This space provides a publicly accessible parkland within the Onslow townsite. The park provides shaded recreation and play opportunities for locals and visitors to enjoy.

LEGEND	
1	Treed Arrival Plaza With Furniture
2	Universal Access Ramp
3	Footpath
4	Play Area
5	Entry Statement
6	Security fence / Entry Wall











2.2 Amenity and Recreation Areas

The Amenity and Recreation Areas are characterised by a mix of high quality landscape surface treatments and softscape palette that lead guests and staff through the main amenities areas. Key vistas out to the ocean are celebrated through elevated landscape terracing, alfresco areas and the entry plaza. The design of the carpark incorporates WSUD principles to ensure large planted areas with tree planting occurs.

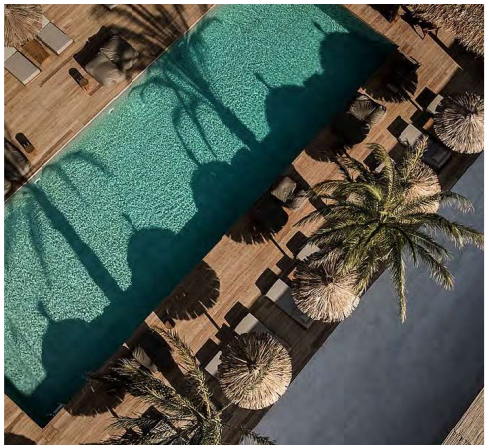
LEGEND

1	Carpark (Designed to Water Sensitive Urban Design principles)
2	Dropoff/Pickup Bays
3	Entry Plaza With Water Feature
4	Pool
5	Terraced Embankment With Universal Access
6	Alfresco Dinning
7	Access To Accommodation











2.3 Outdoor Amenity Areas

The outdoor amenities area provides guests and staff with a range of health and fitness opportunities in an outdoor setting. Universal access is provided through a network of high quality paved surfaces that link to the accommodation and administration areas.

The landscape design provides the following list of outdoor amenity;

LEGEND	
1	Outdoor Gym
2	Beach Volley Ball
3	Relax Zone (including hammocks and furniture in a garden setting)
4	BBQ and Shade Structures
5	Turf Kick-About Area
6	Cricket Nets
7	Mini-Golf
8	Pool











2.4 Accommodation Areas

The accommodation area has been designed to respond to the existing topography and ecology of the site. Minimising disturbance to the existing levels through a considered architectural and landscape response. An elevated boardwalk system extends through the area forming pedestrian circulation route that touches the ground lightly. Along the boardwalk network a series of comfort nodes are included to provide social spaces to experience the raw landscape in comfort. A hierarchy of boardwalks are achieved through primary access routes that provide direct linkages to the key extents of the accommodation, Secondary boardwalks provide more intimate linkages to guests accommodation.

A service and maintenance track doubles as a fitness and well-being loop for guests and staff to exercise by running or walking through the landscape.

LEGEND

1	Pod Accommodation
2	Primary Boardwalk With Shade Structures (3m wide)
3	Secondary Boardwalk With Shade Structures (2.5m wide)
4	Comfort Node with Furniture and Shade Structure
5	Laundry Service dropoff/pickup
6	Maintenance / Exercise Loop











3.1 Landscape Materials

Materials Strategy

A refined palette of robust and low maintenance materials are proposed that are in keeping with the project context and Architecture. The proposed landscape scheme will use a palette of high quality materials, selected to reinforce the identity of the spaces.

Materials have been selected that are sympathetic to the local context and are appropriate to their location and use. The materials detailed here form a structured palette that are coordinated to create visual unity and integrity within the landscape and the surrounding the Onslow neighbourhood.

The Material strategy will:

— Use materials that are sympathetic to the local context and are appropriate to their location and use.
— Create visual unity and integrity within the landscape but allow for variations in texture and colour that can be used to define function and character.
— Give consideration to long-term performance, durability and maintenance requirements.
— Consider impact on the environment and sourcing, cost and project sustainability.


Large format stone paver

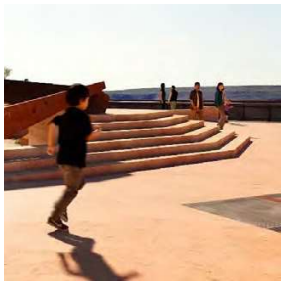

Concrete paving


Turf

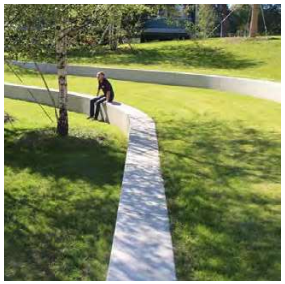

Stabilised pindan gravel


Composite timber


Stone boulders


Concrete steps


Asphalt


Concrete walls


RFP mesh boardwalk


Concrete inlay


Informal Seating

3.2 Planting Strategy

Planting Strategy

The planting scheme for the project is designed to add a strong well-vegetated character to the site and present a response that interfaces with neighbouring frontages and contributes to greater site ecologies. Landscape will be used to create identity through a series of contextually appropriate planting palettes. Guests and Staff will be able to experience the harshness and fragility of the Pilbara Coastal landscape through considered planting design.

Endemic plants will feature throughout the village which will help to restore and improve the health of degraded landscape areas within the development.

Entry and Recreation Areas

As guests enter the village they will be greeted with a tree lined access route that leads them to the arrival point at the administration and recreation area. Water Sensitive Urban Design principles are used throughout the entry and Recreation Areas and will feature low water demanding irrigated landscape areas. Bush fire Asset Protection Zones are strategical placed around the perimeter of the site with densities of trees, shrubs and ground covers in the locations designed to reduces the effect of bush-fires.

Accommodation Areas

The Accommodation areas are characterised by a mix of dunal vegetation that is characteristic of the immediate ecologies of the site. The planting intent is to restore the local vegetation complexes that exist within the dunal systems surrounding Onslow. This area will be irrigated with a mix of drip and spray irrigation. Other incentives within the accommodation areas include sswale planting within the low points of the site to maximise the filtration of overland water-flows

Low to mid-level planting to the perimeter of the site within the bush fire Asset Protection Zone will be designed to reduce the effect of bushfires while also blending the visual appearance between the development and the surrounding vegetation.

Water Efficient Irrigation System

Trees and plants will be irrigated by a water efficient irrigation system. The irrigation water demand volumes will not be excessive, however, a constant and uninterrupted supply must be maintained especially during dry and hot periods.

Where possible, plants will be hydro- zoned according to water requirements. This allows the reticulation to the endemic plantings to be separately controlled and greatly reduced following their establishment period.

The automated irrigation system can be designed to include monitors to detect malfunctions so that rapid response rectification can be programmed before the planting is detrimentally affected by a disruption to water supply.

A holistic irrigation strategy will be prepared for the project that aims to include the following initiatives:

- Aqua monitoring to record and display water usage
- Hydro-zoning of plants
- Waterwise planting and use of local species
- High quality and improved soils with good moisture and nutrient holding capacity







3.3 Planting

Indicative Species List

Endemic		
Key	**Botanical Name**	**Common Name**
TREES		
Taller than 10m		
	Acacia coriacea	Wirewood
	Adansonia gregorii	Boab
	Brachychiton obtusifolia	
	Eucalyptus camaldulensis	River Gum
	Eucalyptus vitrix	Smooth Bark Coolibah
	Eucalyptus xerothermica	
TREES		
Up to 10m		
	Acacia ampliceps	Salt Wattle
	Acacia citrinoviridis	Mulga Tree
	Bauhinia cunninghamii	Jigal Native Bauhinia
	Grevillea wickhamii	Wickham's Holly Grevillea
	Pittosporum phylliraeoides	Native Olive
LARGE SHRUBS		
Up to 4m		
	Acacia ancistrocarpa	Fitzroy Wattle
	Acacia bivenosa	Two Vein Wattle
	Acacia dictyophleba	Sandpaper Wattle
	Acacia trachycarpa	Minni Ritchi
	Capparis lasiantha	Spit Jack
	Capparis spinosa	Caper Bush
	Crotalaria cunninghamii	Green Bird Flower
	Eremophila fraseri	Varnish Bush
	Eremophila maculata	Spotted Emu Bush
SMALL SHRUBS		
Less than 2m		
	Acacia hilliana	Tabletop Wattle
	Acacia gregorii	Gregory's Acacia
	Eremophila cuneifolia	Pinyuru
	Eremophila microtheca	Heath-like Eremophila
	Indigofera monophylla	Indigo Plant
	Ipomoea yardiensis	Yardie Morning Glory
	Ptilotus exaltatus	Tall Mulla Mulla
	Ptilotus obovatus	Cotton Bush
	Scaevola crassifolia	Thick leaved Fan Flower
	Solanum lasiophyllum	Bush Tomato/ Flannel Bush
	Senna notabilis	Cockroach Bush
GROUND COVERS		
Less than 600mm		
	Gomphrena canescens	Bachelors' Buttons
	Ipomoea pes-caprae	Coastal Morning Glory
	Enchylaena tomentosa	Barrier Saltbush
	Ptilotus clementii	Tassel Top
	Solanum horridum	Wild Gooseberry
	Swainsona formosa	Sturt Desert Pea
	Swainsona maccullochiana	Ashburton Pea
Climbers		
	Canavalia rosa	Wild Jack Bean
	Ipomoea costata	Bush Potato
	Ipomoea pes-caprae brasiliensis	Goat's Foot Morning Glory
	Ipomoea muelleri	Poison Morning Glory
Grasses		
	Aristida contorta	Wind Grass
	Panicum decompositum	Native Millet









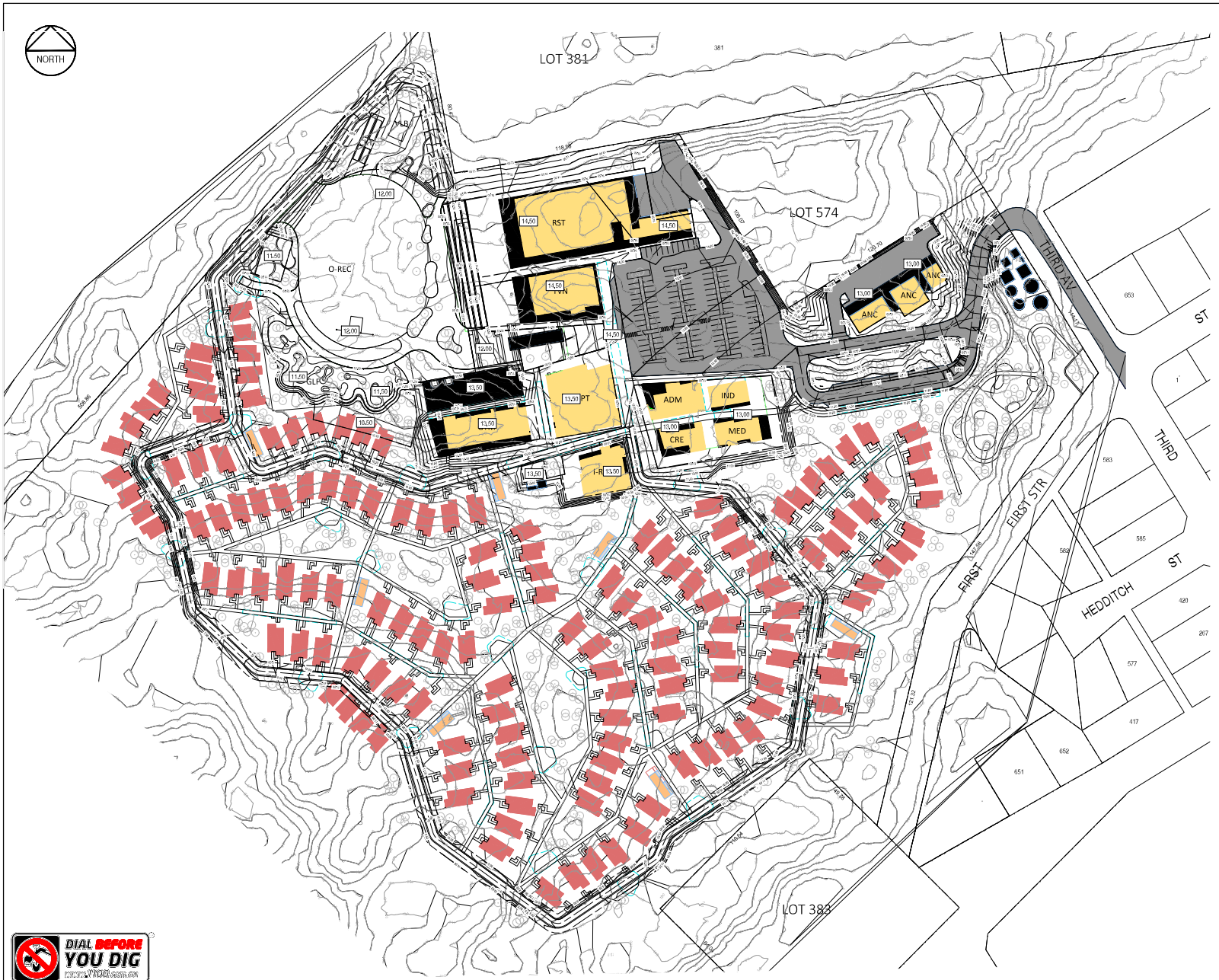









Appendix B
Engineering Design Plan



NOTES

1. ALL DIMENSIONS SHOWN ARE IN METRES U.S.O.
2. ALL CO-ORDINATES AND LEVELS SHOWN ON THIS DRAWING SHALL BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT WITH IN SEVEN DAYS.
3. SURVEY INFORMATION SUPPLIED BY BENCHMARK SURVEYS W.A..
4. ALL HEIGHTS ARE TO AUSTRALIAN HEIGHT DATUM (AHD) AND ALL LEVELS SHALL BE DERIVED FROM ESTABLISHED BENCHMARKS.
5. ALL BENCHMARKS ARE TO BE PROTECTED AND PRESERVED UNLESS NOTED ON PLANS.
6. FINISHED CONTOURS AND VOLUMES ARE TO ROAD BOXOUT.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND ALSO THE REQUIREMENTS OF THE SHIRE OF ASHBURTON.
8. THE CONTRACTOR SHALL LIAISE WITH ALL RELEVANT AUTHORITIES TO LOCATE ALL EXISTING SERVICES WITHIN THE CONTRACT AREA PRIOR TO THE COMMENCEMENT OF WORK. SERVICES INFORMATION SHOWN ON THE DRAWINGS IS INDICATIVE ONLY AND MAY NOT BE COMPLETE. WHERE EXISTING AND PROPOSED WORKS CONFLICT, LEVELS ARE TO BE TAKEN AND SUPPLIED TO THE SUPERINTENDENT IMMEDIATELY.
9. CONTRACTOR SHALL OBTAIN COUNCIL APPROVAL AND PAY ALL FEES/BONDS PRIOR TO COMMENCEMENT OF WORKS.
10. CONTRACTOR SHALL NOTE THAT NON-TRAFFICABLE SUBTERRANEAN STRUCTURES (SOAKWELLS ETC.) MAY EXIST ON SITE, PRIOR TO EARTHWORKS COMMENCING. CONTRACTOR SHALL LOCATE ANY SOAKWELLS, SEPTIC TANKS, DELETERIOUS MATERIALS AND OTHER SUBTERRANEAN STRUCTURES. THESE MATERIALS AND STRUCTURES ARE TO BE REMOVED AND THE LOCATION BACKFILLED IN ACCORDANCE WITH PROCEDURES SET OUT IN SPECIFICATION (IF APPLICABLE). THE SUPERINTENDENT IS TO BE ADVISED OF ANY UNUSED PIPE WORK ENCOUNTERED.
11. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING TO EXISTING LOTS AS REQUIRED.
12. THE CONTRACTOR SHALL PREPARE A DUST MANAGEMENT PLAN IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (D.E.C.) GUIDELINES SITE CLASSIFICATION 3 AND OBTAIN APPROVAL FROM THE LOCAL AUTHORITY FOR THE DUST MANAGEMENT PLAN.
    DUST SUPPRESSION METHODS SHALL BE APPLIED BY THE CONTRACTOR DURING EARTHWORKS OPERATIONS IN ACCORDANCE WITH THE APPROVED MANAGEMENT PLAN.
13. NO CLEARING TO OCCUR UNTIL SUPERINTENDENT HAS IDENTIFIED TREES TO BE RETAINED.
    13.a. ALL TREES TO BE RETAINED SHALL BE FENCED OFF FOR THE DURATION OF THE WORKS.
    13.b. ALL TREES AND VEGETATION NOT FOR RETENTION SHALL BE MULCHED AND STOCKPILED FOR REUSE OR REMOVAL AS NOTED.
14. THE CONTRACTOR SHALL MAINTAIN PROPER SITE DRAINAGE TO ALL AREAS THROUGHOUT THE CONSTRUCTION PERIOD AND SHALL BE RESPONSIBLE FOR MAINTAINING EXCAVATIONS IN A SAFE AND STABLE CONDITION AT ALL TIMES.
15. TOPSOIL IS TO BE STRIPPED AND MANAGED IN ACCORDANCE WITH THE SPECIFICATION OR AS NOTED ON THE DRAWINGS.
16. ALL ROOTS, BOULDERS AND ANY OTHER DELETERIOUS MATERIAL SHALL BE TOTALLY REMOVED TO A DEPTH OF 600mm BELOW THE LOWER OF THE NATURAL/CUT SURFACE.
17. MINOR AMENDMENTS TO THE EXTENT OF EARTHWORKS MAY OCCUR TO PRESERVE IDENTIFIED TREES.
18. ALL BATTERS TO BE NOMINALLY 1 IN 6, OR FLATTER, UNLESS SHOWN OTHERWISE (U.S.O.).
19. ALL FILL SHALL BE CLEAN AND BE FREE FROM DELETERIOUS AND/OR ORGANIC MATERIAL.
20. FILL MATERIAL TO BE TESTED BY A REGISTERED MATERIALS TESTING LAB AND RESULTS PROVIDED TO THE SUPERINTENDENT PRIOR TO THE IMPORTATION AND PLACEMENT OF MATERIAL.
21. PENETROMETERS USED FOR TESTING MUST BE CALIBRATED FOR SITE AND RECALIBRATED FOR IMPORTED FILL AS REQUIRED.
22. ALL FILL SHALL BE PLACED IN UNIFORM LAYER NOT EXCEEDING 300mm THICKNESS AND COMPACTED TO A DENSITY NOT LESS THAN 95% MAD.D.D. REFER TO SPECIFICATION FOR DETAILED INFORMATION.
23. CONTRACTOR TO COMPLETE ALL BACKFILLING AND EARTHWORKS REQUIRED TO ACHIEVE LEVELS SHOWN.
24. THE SITE IS TO BE LEFT CLEAN AND FREE OF RUBBISH/DEBRIS UPON COMPLETION OF WORKS.
25. TIE INTO ADJACENT BOUNDARIES AND FEATURES TO BE SEAMLESS.
26. 'AS CONSTRUCTED' DRAWINGS ARE TO BE PREPARED IN ACCORDANCE WITH THE SPECIFICATION AND PROVIDED TO THE SUPERINTENDENT PRIOR TO PROCEEDING TO THE NEXT STAGE OF WORKS.

LEGEND

- 15.00 — PROPOSED EARTHWORKS CONTOUR (1.0m)
- 15.50 — PROPOSED EARTHWORKS CONTOUR (0.50m)
- EXISTING SURFACE CONTOUR
- 5.60 — FINISHED PAD LEVEL

DIAL BEFORE YOU DIG www.1100.com.au The Essential First Step.

REV	DATE	DESCRIPTION	BY	CHKD
C	24/08/21	MINOR UPDATE	DL	AT
B	09/08/21	CONTOURS REVISED TO SUIT ARCHITECT COMMENTS	JS	AT
A	04/08/21	INITIAL ISSUE	JS	AT

pritchard francis
civil and structural engineering consultants

430 Roberts Road
Subiaco WA 6008
PO Box 2150
Subiaco WA 6904
Telephone: (08) 9382 5111
admin@pfeng.com.au

DRAWING STATUS: NOT FOR CONSTRUCTION

DATE: AUGUST 2021 | GRID: MGA | DATUM: AHD

DESIGNED: JS | DRAWN: JS | CHECKED: AT | APPROVED: AT .... / ... /...

TRANS.: N/A | SCALE (A1): 1:1000 @

PROJECT & JOB: MINERAL RESOURCES ONSLOW VILLAGE

TITLE: EARTHWORKS CONCEPT OPTION 2

SHEET SIZE: A1 | DRG No.: 21195-C9-SK-05 | REVISION: C

Appendix H
Urban Water Management Plan Technical Note for Lot 300 Back Beach Road, Onslow

Date	2 May2022	**Job Number**	4757
Project	Lot 300 Back Beach Road Onslow UWMP		
To:	Mineral Resources Limited Pty Ltd		
From:	Nick Cahill and Shuchen Li, 360 Environmental		
Subject	Lot 300 Back Beach Road Onslow UWMP – Technical Note: New Master Plan Design Stormwater Criteria Compliance		

This technical note provides a review of the updated master plan layout for the development of Lot 300 Back Beach Road, Onslow. The updated Master Plan is provided in Attachment A. The purpose of this technical note is to demonstrate that the changes to the master plan do not constitute significant changes to the site, that would require an update to the Lot 300 Back Beach Road, Onslow Urban Water Management Plan (UWMP) (360 Environmental, 2021), and to demonstrate further that the updated master plan will comply with the design criteria established within the currently approved Lot 300 Back Beach Road, Onslow UWMP (360 Environmental, 2021).

Background

Mineral Resources Limited (the proponent) commissioned 360 Environmental Pty Ltd (360 Environmental) to produce an Urban Water Management Plan (UWMP) to support the development of Lot 300 Back Beach Road, Onslow (the site) into a transient workforce accommodation and associated uses.

The site covers an area of 20.45 ha and is located in the Shire of Ashburton. Back Beach Road bounds the site to the south and the Indian Ocean coast to the west. Residential development borders the site to the east and the Onslow Memorial Park to the north.

A stormwater management strategy was developed, which demonstrates that the site can effectively manage stormwater generated during the small, minor, and major rainfall events.

The design criteria for the management of stormwater for the site are:

- Maximise the retention of stormwater generated from the site during frequently occurring events
- Establish storage invert levels no lower than seasonal maximum groundwater levels

- Use infiltration systems for frequently occurring events to minimise mosquito breeding opportunities
- Implement non-structural controls
- Design a road drainage system so that roads are passable in the 20% Average Exceedance Probability (AEP) storm event
- Provide safe conveyance during the 1% AEP storm event from the site
- Set the habitable building floor levels at 0.5 m above 1% AEP flood levels.

The stormwater criteria for the site were met through the following management approach:

- First flush from the roads and car park will be treated at source or as close to the source as possible, using Water Sensitive Urban Design (WSUD) throughout the car parks and paved areas
- All other runoff from impervious areas will be directed, via overland flow paths, to natural depression storage throughout the site, as shown in the Lot 300 Back Beach Rd, Onslow UWMP
- On-site depression storage will maintain a minimum 500 mm clearance from the top water level (TWL) in the 1% AEP to the minimum habitable floor level of 6.4 m AHD as shown in the Lot 300 Back Beach Rd, Onslow UWMP (360 Environmental, 2021).

Changes to the Master Plan

The master plan for the site is provided in Attachment A.

The red hatched areas in **Figure 1** identifies the areas of the site that were previously impervious (roofs, hardstand, etc.), which have been replaced with pervious areas of the site.The change to the land use areas of the site and the percentage difference is identified in Table 1.

Table 1: Impervious area comparison

Land use type	Approved plan (ha)	Updated plan (ha)	Difference (%)
Impervious	2.65	2.38	-12%
Pervious	9	9.27	3%

As identified in Table 1, there is a reduction in impervious surfaces across the site of 12% and a 3% increase in the previous areas of the site.

The green hatched areas in **Figure 1** identifies the areas of the accommodation pods amendment, of which 40 units have decreased.

Results of Changes to the Master Plan

The results of the reduction in impervious areas of the site will be to:

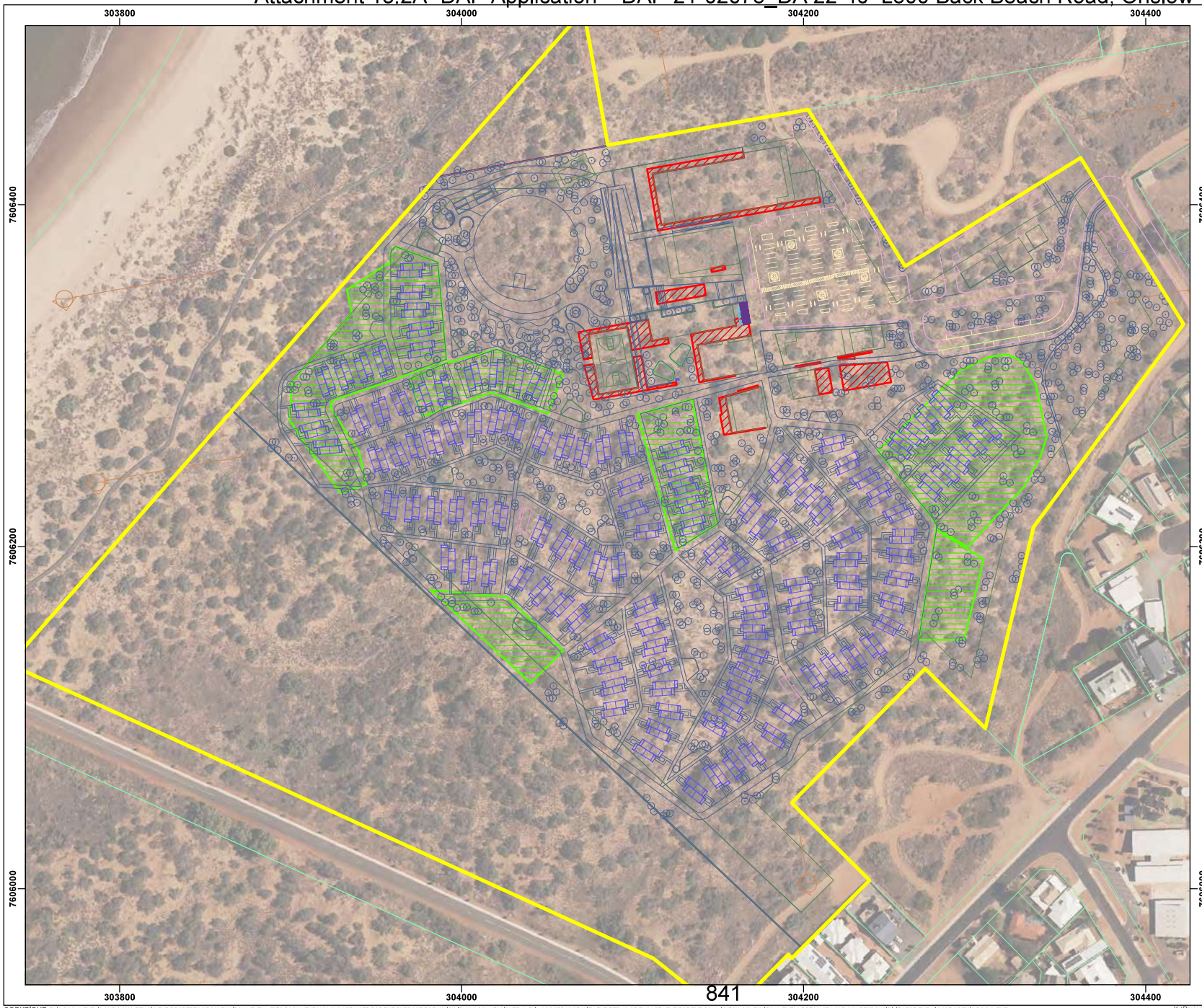
- Reduce runoff
- Increase infiltration at source

- Reduce TWLs in natural depression storage across the site
- Reduce the volume of overflow from natural depression storage to the downstream receiving environment during the major storm event
- Reduce flow rates from the natural depression storage to the downstream receiving environment during the major storm event.

Conclusion

Based on the analysis of the changes to the master plan for the proposed development at Lot 300 Back Beach Road, Onslow, the site will still comply with the stormwater design criteria stipulated in the approved Lot 300 Back Beach Road, Onslow UWMP (360 Environmental, 2021). Therefore, no proposed changes or updates to the existing approved UWMP are recommended.

Attachments
Figure 1 Conceptual Master Plan Comparison
Attachment A Site Master Plan



Legend

- Site Boundary
- Recreation Amendment
- Residential Amendment

New Conceptual Plan

- 210729_Traffic_dwg _2_
- 210809_Lot Boundaries_dwg
- 220304_Landscape_dwg
- A-DETL
- A-DETL-THIN
- A-GENM
- A-GLAZ-CWMG
- A-ROOF
- C-PROP-LINE
- G-ANNO-SYMB
- I-FURN
- L-SITE

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS
- LOCALITY MAP SOURCED LANDGATE 2020
- OTHER DATA SOURCED LANDGATE 2020
- AERIAL PHOTOGRAPHY SOURCED LANDGATE 2020 (© Western Australian Land Information Authority 2020)

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1:3,000 @ A4

N

LOCALITY MAP



PROJECT ID	DATE
4757	29/04/2022

HORIZONTAL DATUM AND PROJECTION
GDA 1994 MGA Zone 50

CREATED	CHECKED	APPROVED	REVISION
CL	LSC	LSC	0

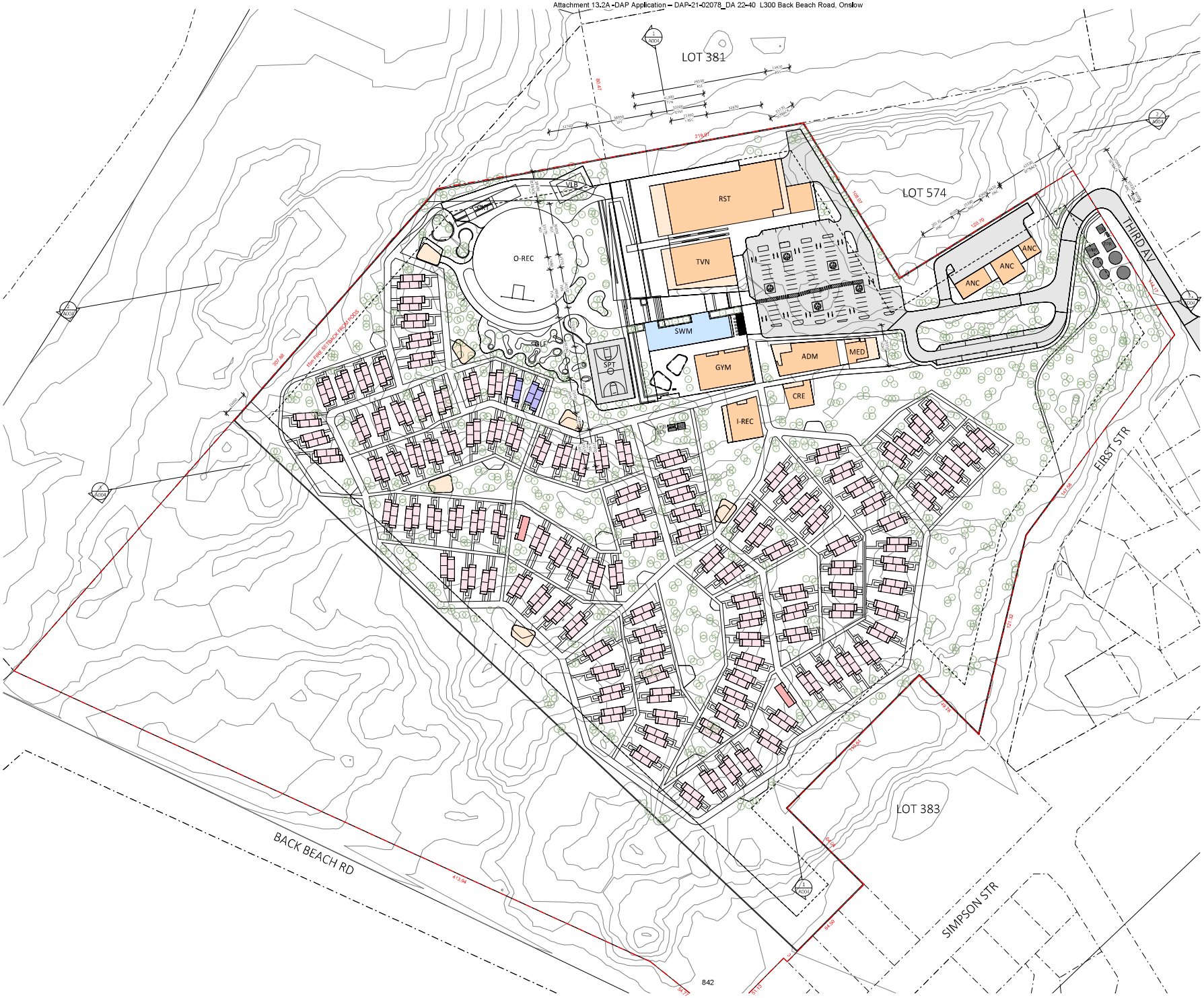
Rowe Group c/o Mineral Resources Limited
Lot 300 Back Beach Road, Onslow

Urban Water Management Plan
Technical Note

Figure 1
Conceptual Master Plan Comparison

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K:\Projects\10_WAM\4757 Lot 300 Back Beach Rd, Onslow\4757 Plan Coparison.mxd



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SYMBOL LEGEND

- SITE BOUNDARY
- BUILDING
- COVERED OUTDOOR SPACE
- UNCOVERED OUTDOOR SPACE
- SERVICES
- WATER BODY
- ROAD/CAR PARK
- FIELD STORE (WITH LAUNDRY)
- ACCOMMODATION PODS (SLEEPS 4)
- ACCESSIBLE ACCOMMODATION PODS (SLEEPS 2)
- EXISTING WATER CONNECTION POINT
- EXISTING SEWER CONNECTION POINT
- PLANTING - REFER LANDSCAPE DRAWINGS FOR DETAILS
- 15m FIRE SETBACK FROM PODS

CODE LEGEND

ADM	ADMINISTRATION
AMN	AMENITIES
ANC	ANCILLARY - GATE HOUSE, SURVEILLANCE HUT & STORES
CET	OUTDOOR CRICKET
CRE	CRECHE & COMMS
FBC	FIRE BOOSTER CABINET
FPR	FIRE PUMP ROOM
GEN	GENERATOR
GLF	MINI GOLF
GYM	GYM/AGILITY & SWIMMING FACILITY
IND	TRAINING & INDUCTIONS
IRM	INTAKE RING MAIN
I-REC	INDOOR RECREATION
LDR	LAUNDRY, CLEANING & STORE
MED	MEDICAL & WELLNESS
O-REC	OUTDOOR RECREATION
RST	RESTAURANT
SMSB	SITE MAIN SWITCH BOARD
SPT	MULTI-PURPOSE COURTS
SUT	STEP UP TRANSFORMER
SWM	SWIMMING POOL
TVN	TAVERN
VLB	OUTDOOR VOLLEYBALL
WPR	WATER PUMP ROOM

NO.	DATE	DESCRIPTION
K	08/03/22	REVISED DA ISSUE
J	17/01/22	REVISED FOR VALUE ENGINEERING
I	11/01/22	REVISED FOR VALUE ENGINEERING
H	17/12/21	ISSUE FOR INFORMATION
G	08/12/21	ISSUE FOR STAGING
F	24/11/21	REVISED FOR DEVELOPMENT APPLICATION
E	31/09/21	DA ISSUE
D	20/09/21	ISSUE FOR INFORMATION
C	10/09/21	ISSUE FOR PRICING
B	10/08/21	DRAFT DA ISSUE
A	04/08/21	ISSUE FOR INFORMATION

ISSUE

DEVELOPMENT APPLICATION

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PROJECT
LOT 301, BACK BEACH ROAD
ONSLOW WA 6710

PROJECT NAME
ONSLOW TOWNSHIP VILLAGE

DRAWING
SITE MASTER PLAN

DRAWN	SCALE	DATE	REVISION
Author	1 : 1000	03/12/21	K
CHECKED	SHEET	PROJECT NO	
Checker	A1	21060	

DA002

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ONSLOW TOWNSHIP VILLAGE LANDSCAPE

Mineral Resources Limited
PER21030.00



ASPECT Studios

ONSLOW TOWNSHIP VILLAGE

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Document Control

Job Number:	PER21030.00
Report Title:	Onslow Iron Ore Project
Revision:	D
Date Issued:	03.05.2022

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Contents

01. Introduction
02. Landscape Plans
03. Landscape Quality - Materials and Finishes
04. Planting Strategy

1.0 Introduction

The landscape design for the Onslow Township Village, has been prepared by ASPECT Studios in collaboration with Milieu Creative. The design responds to the scale, form and function of the architecture and local context in order to create a dynamic and engaging sequence of landscape spaces.

With the striking Pilbara landscape as a backdrop, the landscape design will showcase a mix of natives, exotic, and sensory plant species to support the proposed accommodation, sports fields, play, recreation and amenity spaces.

The landscape concept responds to the site's larger contextual relationship to the coastal landscape situated adjacent to Onslow Township , celebrating the vibrant, textured tones and layered vegetation.

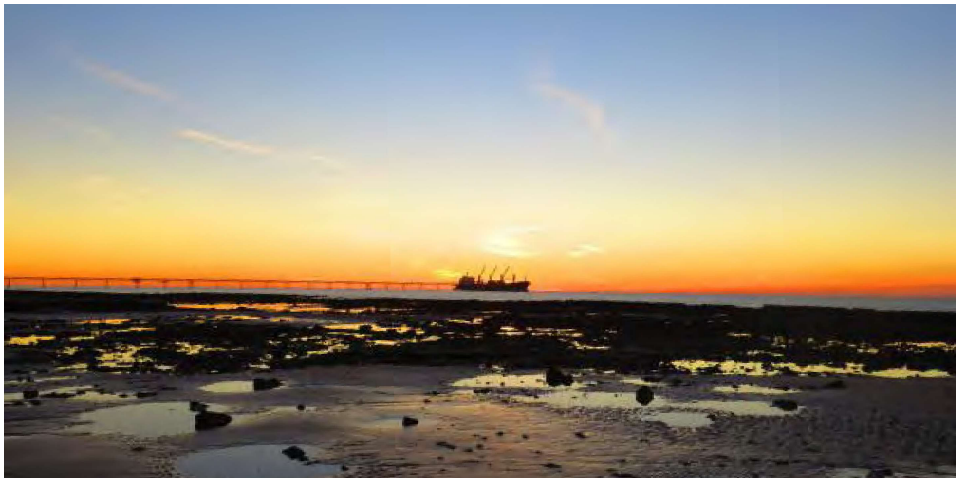
The public landscape spaces have been designed to provide a place where the community can gather for play and recreation catering for the needs of residents, visitors and the broader community.

The following general principles form the landscape approach to the site:

- Use high quality landscape design to integrate the proposed sporting development with broader active and passive recreational offerings;
- Develop a legible network of spaces that fully integrate with and connect to the surrounding context;
- Create spaces with varying characters and identities.
- Design spaces that will become activated and vital.
- Maximise opportunities for social interaction through arrangement of seating and views.
- Create a robust landscape made from proven materials and planting species, integrating bold forms that can be managed and maintained.
- Selection of local and native plant species that benefit surrounding ecologies.
- Ensure structural elements read as an extension of the architectural material palette and are integrated with the planting compositions.

The design of landscape considers the architectural design by Milieu Creative in both concept and materiality, with the intention of creating a cohesive transition from internal to external spaces.





1.1 Vision

Set on the western edge of Australia, Onslow Township Village will be a world class accommodation facility that contributes to the community and economic growth of the region.

The village will be designed as a high quality facility that sets a new benchmark for accommodation that promotes a healthy, active and sustainable lifestyle for workers and the local community.

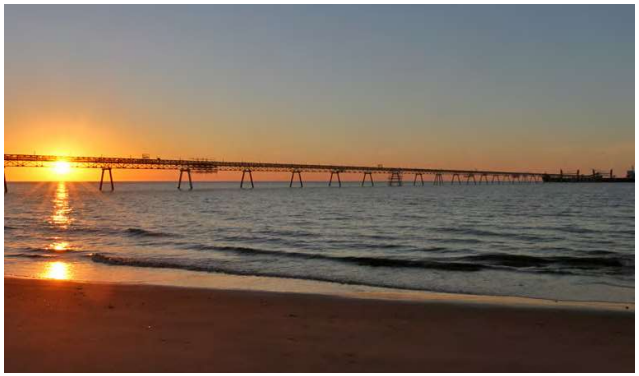
Inspired by the unique coastal landscape and sense of place the village will be designed to respond to the future vision of Onslow Town Centre and leave a lasting legacy for future generations.













1.3 Landscape Principles

The following design principles have been developed to guide the design of the village and surrounding landscape. Throughout the design process these principles will continue to inform and develop the landscape repsonse.

Celebrate the Site

- Celebrate the unique character of the site.
- Maximise visual, physical and symbolic connectivity to the local context.
- Touch the ground lightly

Connecting Community

- Create strong connections to community and the environment.
- Design to support social interaction and relationship building.

Healthy Active by Design

- Design comfortable and safe connections to promote incidental physical activity and access to nature.
- Provide formal or informal, natural and man-made landscape areas to support recreational, sporting and social activities.

Leave a Legacy

- Contribute to the "... Community vision that Onslow be a vibrant, sustainable and prosperous place for work, living and leisure - for both residents and visitors."
- Future proof the site for the next generation of users.

1.4 Landscape Approach

The landscape approach responds to the immediate context of the development area. A series of strategies have been developed that focus the development of the landscape design around key views, local character, the existing topography and integrating the architecture into the landscape.

Celebrate the Views

- Maximise the sites existing topography to retain the best views out to the horizon.
- Develop a strategy to ensure the accommodation and the common-use amenity retain views to significant vistas

Respond to the Local Character

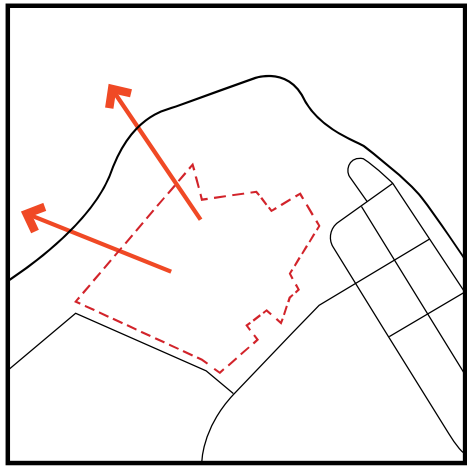
- Respond to the immediate social and environmental influences surrounding the site. Including the beach, Onslow townsite and cultural histories.

Touch the ground lightly

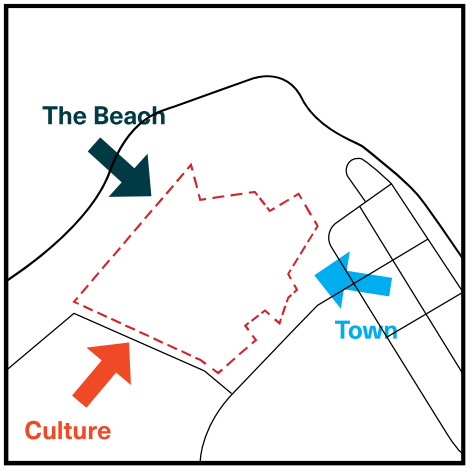
- Develop a strategy for pedestrian networks, accommodation pods and built amenity to minimize disturbance to the existing natural topography and ecologies of the site.

Integrate Landscape and Architecture

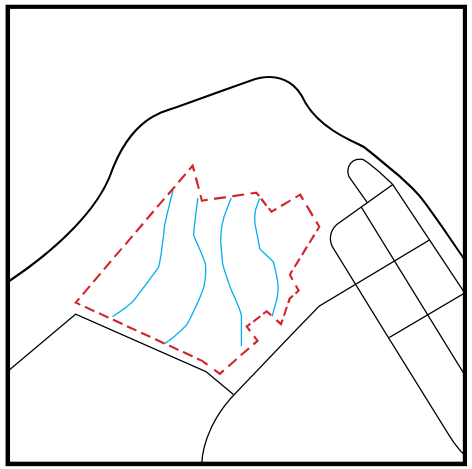
- Create a landscape-driven site response that informs the siting and location of proposed built infrastructure within the site.



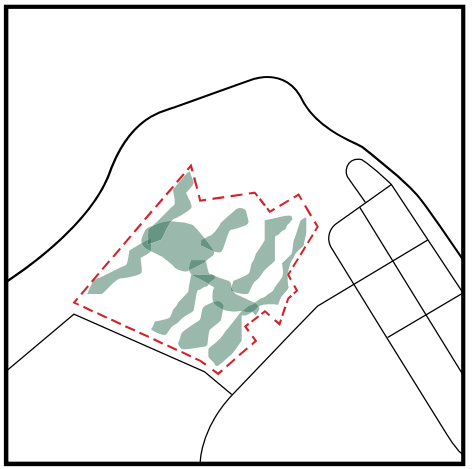
Celebrate the views



Respond to local character



Touch the ground lightly



Integrate landscape and Architecture

2.0 Landscape Plan

PROGRAM

1	Bus Stand (Pickup/Dropoff)
2	Dedicated Dropoff (Small Vehicle, Short Term)
3	Main Car Park
4	Terraced Entry Plaza
5	Pool
6	Recreation Turf
7	Outdoor Gym
8	Cricket Nets & Beach Volley Ball
9	Relax Zone (BBQ, Hammocks, Furniture, Shade Structure)
10	Mini Golf
11	Pedestrian / Maintenance Vehicle Access (with shade structures and comfort nodes)
12	Alfresco Deck With Terraced Embankment
13	Security Fence
14	Entry Statement Wall
15	Outdoor Sports and Recreation Zone - Basketball, Yoga, Gym, Furniture, Shade Structure

GENERAL

- Site Boundary

SURFACES

- Pedestrian Access Paving
- Plaza Paving
- Asphalt (Carppark)
- Asphalt (Maintenance Access)
- Composite Timber Boardwalk
- Stabilised Gravel
- Pool

PLANTING

- Lawn
- Native Dune Mix Planting - Managed Sparse
- Native Swale Mix - Managed Sparse
- Native Shrub Mix - Managed
- Proposed Native Tree

- Refer to Civil Engineers drawings for grading plan



2.2 Amenity and Recreation Areas

The Amenity and Recreation Areas are characterised by a mix of high quality landscape surface treatments and softscape palette that lead guests and staff through the main amenities areas. Key vistas out to the ocean are celebrated through elevated landscape terracing, alfresco areas and the entry plaza. The design of the carpark incorporates WSUD principles to ensure large planted areas with tree planting occurs.

LEGEND

1	Carpark (Designed to Water Sensitive Urban Design principles)
2	Dropoff/Pickup Bays
3	Entry Plaza
4	Pool
5	Terraced Embankment With Universal Access
6	Alfresco Dinning
7	Outdoor Sports and Recreation Zone - Basketball, Yoga, Gym, Furniture, Shade Structure











2.3 Outdoor Amenity Areas

The outdoor amenities area provides guests and staff with a range of health and fitness opportunities in an outdoor setting. Universal access is provided through a network of high quality paved surfaces that link to the accommodation and administration areas.

The landscape design provides the following list of outdoor amenity;

LEGEND	
1	Outdoor Gym
2	Beach Volley Ball
3	Relax Zone (including hammocks and furniture in a garden setting)
4	BBQ and Shade Structures
5	Turf Kick-About Area
6	Cricket Nets
7	Mini-Golf
8	Basketball Court











2.4 Accommodation Areas

The accommodation area has been designed to respond to the existing topography and ecology of the site. Minimising disturbance to the existing levels through a considered architectural and landscape response. An elevated boardwalk system extends through the area forming pedestrian circulation route that touches the ground lightly. Along the boardwalk network a series of comfort nodes are included to provide social spaces to experience the raw landscape in comfort. A hierarchy of boardwalks are achieved through primary access routes that provide direct linkages to the key extents of the accommodation, Secondary boardwalks provide more intimate linkages to guests accommodation.

A service and maintenance track doubles as a fitness and well-being loop for guests and staff to exercise by running or walking through the landscape.

LEGEND

1	Pod Accommodation
2	Primary Access - asphalt on grade (4m wide)
3	Secondary Boardwalk (2.5m wide)
4	Comfort Node with Furniture and Shade Structure
5	Comfort Node with Furniture - No Shade Stucture
6	Laundry Service dropoff/pickup











3.1 Landscape Materials

Materials Strategy

A refined palette of robust and low maintenance materials are proposed that are in keeping with the project context and Architecture. The proposed landscape scheme will use a palette of high quality materials, selected to reinforce the identity of the spaces.

Materials have been selected that are sympathetic to the local context and are appropriate to their location and use. The materials detailed here form a structured palette that are coordinated to create visual unity and integrity within the landscape and the surrounding the Onslow neighbourhood.

The Material strategy will:

— Use materials that are sympathetic to the local context and are appropriate to their location and use.
— Create visual unity and integrity within the landscape but allow for variations in texture and colour that can be used to define function and character.
— Give consideration to long-term performance, durability and maintenance requirements.
— Consider impact on the environment and sourcing, cost and project sustainability.


Large format stone paver

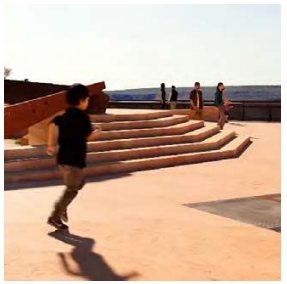

Concrete paving


Turf


Stabilised pindan gravel


Composite timber


Stone boulders


Concrete steps


Asphalt


Concrete walls


Concrete inlay


Informal Seating

3.2 Planting Strategy

Planting Strategy

The planting scheme for the project is designed to add a strong well-vegetated character to the site and present a response that interfaces with neighbouring frontages and contributes to greater site ecologies. Landscape will be used to create identity through a series of contextually appropriate planting palettes. Guests and Staff will be able to experience the harshness and fragility of the Pilbara Coastal landscape through considered planting design.

Endemic plants will feature throughout the village which will help to restore and improve the health of degraded landscape areas within the development.

Entry and Recreation Areas

As guests enter the village they will be greeted with a tree lined access route that leads them to the arrival point at the administration and recreation area. Water Sensitive Urban Design principles are used throughout the entry and Recreation Areas and will feature low water demanding irrigated landscape areas. Bush fire Asset Protection Zones are strategical placed around the perimeter of the site with densities of trees, shrubs and ground covers in the locations designed to reduces the effect of bush-fires.

Accommodation Areas

The Accommodation areas are characterised by a mix of dunal vegetation that is characteristic of the immediate ecologies of the site. The planting intent is to restore the local vegetation complexes that exist within the dunal systems surrounding Onslow. This area will be irrigated with a mix of drip and spray irrigation. Other incentives within the accommodation areas include sswale planting within the low points of the site to maximise the filtration of overland water-flows

Low to mid-level planting to the perimeter of the site within the bush fire Asset Protection Zone will be designed to reduce the effect of bushfires while also blending the visual appearance between the development and the surrounding vegetation.

Water Efficient Irrigation System

Trees and plants will be irrigated by a water efficient irrigation system. The irrigation water demand volumes will not be excessive, however, a constant and uninterrupted supply must be maintained especially during dry and hot periods.

Where possible, plants will be hydro- zoned according to water requirements. This allows the reticulation to the endemic plantings to be separately controlled and greatly reduced following their establishment period.

The automated irrigation system can be designed to include monitors to detect malfunctions so that rapid response rectification can be programmed before the planting is detrimentally affected by a disruption to water supply.

A holistic irrigation strategy will be prepared for the project that aims to include the following initiatives:

- Aqua monitoring to record and display water usage
- Hydro-zoning of plants
- Waterwise planting and use of local species
- High quality and improved soils with good moisture and nutrient holding capacity







3.3 Planting

Indicative Species List

Endemic		
Key	**Botanical Name**	**Common Name**
TREES		
Taller than 10m		
	Acacia coriacea	Wirewood
	Adansonia gregorii	Boab
	Brachychiton obtusifolia	
	Eucalyptus camaldulensis	River Gum
	Eucalyptus vitrix	Smooth Bark Coolibah
	Eucalyptus xerothermica	
TREES		
Up to 10m		
	Acacia ampliceps	Salt Wattle
	Acacia citrinoviridis	Mulga Tree
	Bauhinia cunninghamii	Jigal Native Bauhinia
	Grevillea wickhamii	Wickham's Holly Grevillea
	Pittosporum phylliraeoides	Native Olive
LARGE SHRUBS		
Up to 4m		
	Acacia ancistrocarpa	Fitzroy Wattle
	Acacia bivenosa	Two Vein Wattle
	Acacia dictyophleba	Sandpaper Wattle
	Acacia trachycarpa	Minni Ritchi
	Capparis lasiantha	Spit Jack
	Capparis spinosa	Caper Bush
	Crotalaria cunninghamii	Green Bird Flower
	Eremophila fraseri	Varnish Bush
	Eremophila maculata	Spotted Emu Bush
SMALL SHRUBS		
Less than 2m		
	Acacia hilliana	Tabletop Wattle
	Acacia gregorii	Gregory's Acacia
	Eremophila cuneifolia	Pinyuru
	Eremophila microtheca	Heath-like Eremophila
	Indigofera monophylla	Indigo Plant
	Ipomoea yardiensis	Yardie Morning Glory
	Ptilotus exaltatus	Tall Mulla Mulla
	Ptilotus obovatus	Cotton Bush
	Scaevola crassifolia	Thick leaved Fan Flower
	Solanum lasiophyllum	Bush Tomato/ Flannel Bush
	Senna notabilis	Cockroach Bush
GROUND COVERS		
Less than 600mm		
	Gomphrena canescens	Bachelors' Buttons
	Ipomoea pes-caprae	Coastal Morning Glory
	Enchylaena tomentosa	Barrier Saltbush
	Ptilotus clementii	Tassel Top
	Solanum horridum	Wild Gooseberry
	Swainsona formosa	Sturt Desert Pea
	Swainsona maccullochiana	Ashburton Pea
Climbers		
	Canavalia rosa	Wild Jack Bean
	Ipomoea costata	Bush Potato
	Ipomoea pes-caprae brasiliensis	Goat's Foot Morning Glory
	Ipomoea muelleri	Poison Morning Glory
Grasses		
	Aristida contorta	Wind Grass
	Panicum decompositum	Native Millet


















Onslow Township Village - Lot 300 Back Beach Road, Onslow

TRANSPORT IMPACT STATEMENT FOR AMENDED DEVELOPMENT APPLICATION

Uloth & ASSOCIATES

FINAL - 28 April 2022

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1. INTRODUCTION

Mineral Resources Limited is preparing for the Onslow Iron Project, which is located within the existing Pilbara Port Authority boundaries at the Port of Ashburton, approximately 12 kilometres south-west of Onslow. To accommodate the workers required for the proposed project, a 500-bed 'Resort Style FIFO Accommodation' facility is also proposed, at Lot 300 Back Beach Road, Onslow, which is located at the north-western end of the Onslow Townsite as shown in the Locality Plan in Figure 1.

A Development Application for the proposed 'Onslow Township Village' was conditionally approved by the Regional Joint Development Assessment Panel on 23 December 2021. However, an amended Development Application is now being prepared by the project team, and Uloth and Associates has been appointed to update the previous Transport Impact Statement (dated 25 November 2021), in response to the amended plans.

1.1 STUDY OBJECTIVES

The overall study objective is to identify the existing situation in the immediate vicinity of the proposed development site and to prepare a Transport Impact Statement to address the various traffic access, parking, and servicing requirements in support of the amended development application.



Locality Plan and Proposed Development Site

LOT 300 BACK BEACH ROAD, ONSLOW

FIG. 1

2. EXISTING SITUATION AND PROPOSED DEVELOPMENT SITE

Onslow is located approximately 1,400 kilometres north of Perth in the Pilbara region, within the Shire of Ashburton. The existing situation within and around the Onslow Townsite is described in this chapter, together with additional detail in the vicinity of the proposed development.

- It can be seen in the Locality Plan in Figure 1 (in Chapter 1) that access for the Onslow Townsite is to/from the south via Onslow Road (which links to North West Coastal Highway approximately 75 kilometres to the south-east). It can also be seen that Onslow Road continues north to the western end of the Townsite (along the Onslow ring road, which was constructed in around 2016), with the former alignment of Onslow Road (now McAullay Road) providing access to the eastern end of the Townsite.

- Onslow Road is a 2-lane undivided road, which is identified as a Primary Distributor Road under the Main Roads WA functional road hierarchy up to the intersection of Back Beach Road where it continues as Simpson Street, a local Access Road. It has a speed limit of 80 kilometres per hour from south of McAullay Road to approximately 400 metres south of Back Beach Road where it drops to the default built-up area limit of 50 kilometres per hour.

- Traffic counts obtained from the Main Roads WA Trafficmap website show that Onslow Road carried up to 500 vehicles per day in 2019, approximately 10 kilometres south of McAullay Road.

- McAullay Road is also a 2-lane undivided road, which was downgraded to an Access Road under the Main Roads WA functional road hierarchy after the continuation of Onslow Road. It has an initial speed limit of 80 kilometres per hour from Onslow Road but drops to 60 kilometres per hour as it approaches the Townsite once past Onslow Airport.

- Second Avenue, the main street through the commercial area of the townsite, is identified as a Local Distributor road under the Main Roads WA road hierarchy, while all other roads in Onslow are identified as Access Roads, with a speed limit of 50 kilometres per hour (except for Seaview Drive which has a speed limit of 70 kilometres per hour).

- The existing road network within the overall Townsite is shown in the aerial photograph in Figure 2, while further detail in the vicinity of the proposed development site is shown in Figures A.1 and A.2 in the Technical Appendix.

- It can be seen in Figure 2 that the proposed development site is conveniently located at the northern end of the Townsite, within walking distance of commercial and local community facilities. The site is currently vacant and is bordered by Back Beach Road at the southern end, Simpson Street, First Street and Third Avenue on the eastern end, and by coastline along the remaining property boundary. The site is currently classed as Conservation, Recreation and Nature Landscape Land Use under Shire of Ashburton's Local Planning Scheme No.7.

- Figure A.1 (in Chapter A.1 in the Technical Appendix) then shows that most roads in the vicinity of the site are sealed roads. However, First Street west of Third Avenue and Third Avenue north of First Street, are both currently unmade, as also shown in Figure A.2.

- Onslow is not serviced by regular public transport. However, there are footpaths on at least one side of most roads in the vicinity of the proposed development, as shown in Figure A.3 in the Technical Appendix, providing good walking connectivity throughout the Townsite and convenient access to local amenities.



Existing Road Network

OVERALL ONSLOW TOWNSITE

FIG. 2

3. ONSLOW TOWNSITE EXPANSION STRUCTURE PLAN

The Onslow Townsite Expansion Structure Plan was prepared in 2016, around the time of construction of the Onslow ring road (now Onslow Road), to facilitate a strategic long-term population target of 3,500 people.

- The overall Structure Plan is shown in Figure A.4 in the Technical Appendix, identifying growth areas for residential development between Onslow Road and McAullay Road, together with the proposed road hierarchy and pedestrian/cyclist paths throughout the overall Townsite.

- It can be seen in Figure A.4 that the currently proposed development site, at the northern end of the Structure Plan area, is identified as 'Area Subject to Further Investigation'.

- The plan also identifies the full length of Onslow Road plus Simpson Road up to Second Avenue as an Arterial/Primary Distributor Road, while McAullay Road and Second Avenue are both identified as Neighbourhood Connectors.

- It can also be seen that both Onslow Road - Simpson Street and Second Avenue are identified as part of the 'Shared Path Network', ensuring good pedestrian and cyclist accessibility throughout the Townsite.

4. PROPOSED DEVELOPMENT

Details of the proposed development are described in this chapter, together with calculations of overall parking requirements and trip generation.

4.1 OVERALL SITE PLAN

- The proposed Masterplan for the Onslow Township Village is shown in Figure A.5 in Chapter A.3 in the Technical Appendix, as prepared by architects Milieu Creative. Figure 3 then shows the proposed development plan superimposed on an aerial photograph, identifying the proposed development in the context of the adjacent road network. The proposal includes construction of 500 accommodation pods, plus Administration and Training facilities (including a Creche), a Medical Centre, a Restaurant and a Tavern, as well as recreational facilities including a Swimming Pool, Gym and Sports Hall.

- It can be seen in both Figure 3 and Figure A.5 that the accommodation pods are primarily located in the southern part of the site, while the administration and other facilities are located in the northern part adjacent to the proposed car park. Access for the site is proposed at the north eastern corner of the property, from the currently unmade extension of Third Avenue, following a detailed review of alternative access options affected by Aboriginal Heritage issues, risk of Coastal Inundation, and impacts on overland flow of stormwater.

- It can also be seen that on entering the site, the main access driveway curves around to provide direct access to the proposed car park, or to allow buses to proceed into the bus pick-up/drop-off area which then loops back onto the main access driveway. Paved walkways are then proposed throughout the various facilities, providing access also for motorised carts and maintenance vehicles (as well as for fire access), with elevated boardwalks providing further access into the accommodation areas.

- It is also important to note that to align with the Onslow Townsite Expansion Plan, it is proposed that both the Restaurant and Tavern will be made partially available to the local community.

- It is expected that the development will remain as Transient Workforce accommodation for a minimum of 20 years, for the duration of the mining project. Post operation, there is potential to convert the site into a permanent resort, reducing the number of accommodation pods to perhaps 100 units (with public access to on-site facilities continuing as currently proposed).

4.2 PROPOSED FACILITIES AND PARKING REQUIREMENTS

- Details of the proposed facilities are provided below in Table 1, together with calculations of Planning Scheme parking requirements and applied reductions to reflect the expected usage of each component. Initial parking requirements are based on the Table in Appendix 8 of Shire of Ashburton's Local Planning Scheme No. 8, except for the Public Recreation land uses, which have been based on detailed individual requirements currently utilised by City of Stirling (and deemed to be appropriate here).

- Parking calculations for the Restaurant and Tavern are both based on the Shire of Ashburton's requirement of 1 space per 6 square metres of Dining Space. However, taking into account the indicative seating arrangements shown in the floor plans, it is conservatively estimated that the indoor seating areas (for parking calculation purposes) equate to approximately 40 percent of the indoor 'Dining' areas and 50 percent of the outdoor 'Alfresco' areas (due to the layout of walkways, buffet tables, pool tables, etc).

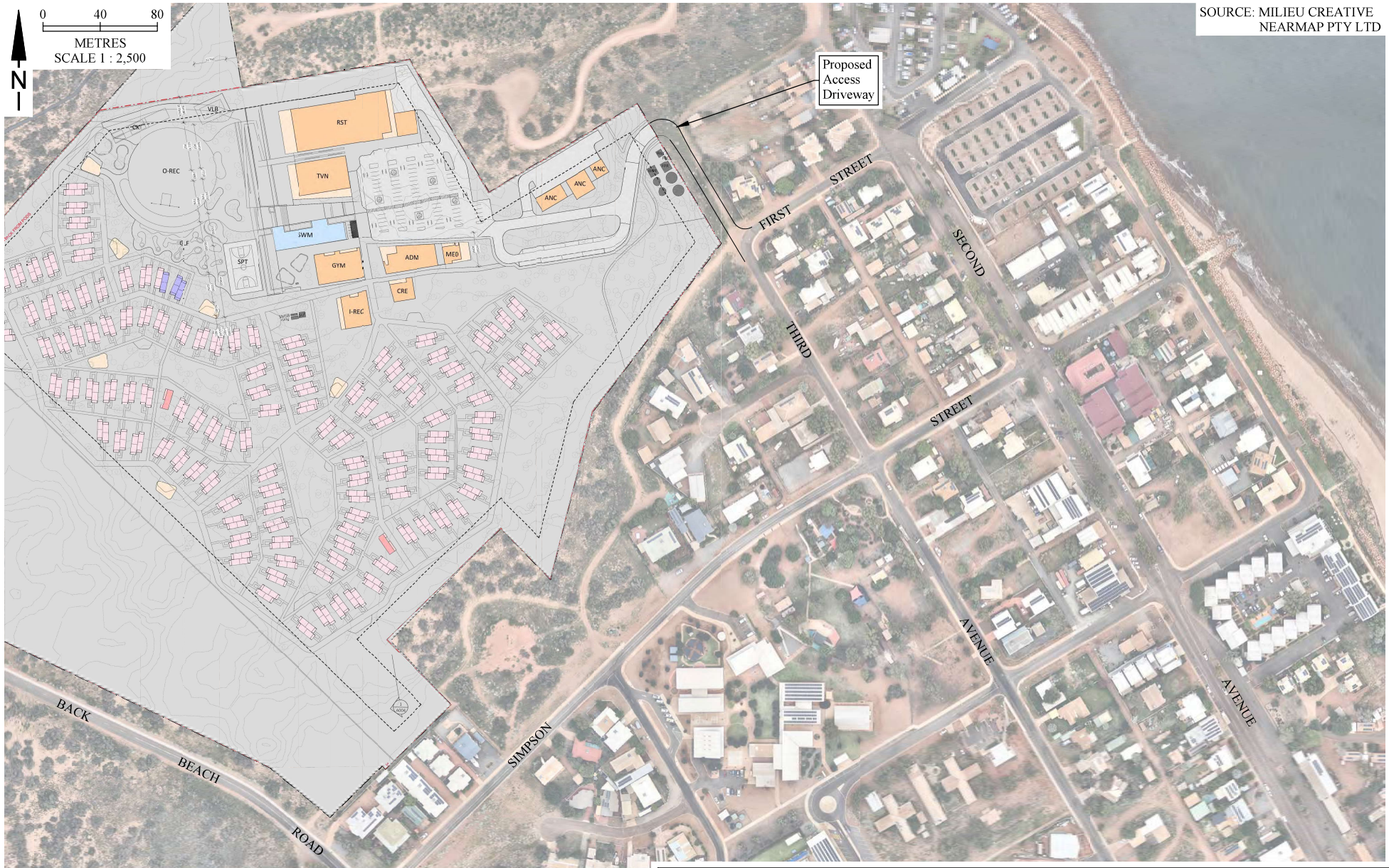
- It can be seen in Table 1 that an overall parking provision of 57 spaces is recommended, allowing for a 90 percent reduction for the accommodation units (to account for buses being used to transport most workers), a 70 percent reduction for Administration/Training and Medical Centre (to account for use predominantly by on-site staff, but allowing for some local staff) and a 70 percent reduction for the Restaurant and Tavern (to account for an intended 30 percent public-use for each of these facilities), and a 100 percent reduction for the Recreation facilities (as these will only service the on-site population). It is also assumed that the Creche will not contribute to any additional parking requirements, based on 100 percent usage by workers, staff and visitors.

TABLE 1
PARKING REQUIREMENT CALCULATIONS
PROPOSED ONSLOW TOWNSHIP VILLAGE

PROPOSED LAND USE	PLANNING SCHEME REQUIREMENTS		PARKING REQUIREMENTS	
	Parking Ratio	No. of Spaces	Assumed Operations	No. of Spaces to be provided
• Accommodation Units - 500 Units, but max. 250 occupied at one time	2 per 3 units + 1 Oversize Veh. per 10 units	167 car spaces + 25 oversize spaces	90 percent to travel only by Bus	17 car spaces + Bus/Coach spaces [1)]
• Administration and Training - 252m^2 [2)]	1 per 30m^2 NLA	8 spaces	70 percent reduction for on-site operations	3 spaces
• Medical Centre - Assume 3 Rooms, with 6 employees	4 per Room for 1st 2 Rooms + 1 per Room thereafter + 1 per max. employees on-site	15 spaces	70 percent reduction for on-site operations	5 spaces
• Restaurant - 352m^2 Dining Area [3)]	1 per 6m^2 of Dining area	59 spaces	70 percent reduction for on-site operations	18 spaces
• Tavern - 267m^2 Dining Area [3)]	1 per 6m^2 of Dining area	45 spaces	70 percent reduction for on-site operations	14 spaces
• Public Recreation [4)] - Swimming Pool: 618m^2 - Gym: 317m^2 - Sports Hall: 819m^2	1 per 4 Swimmers [5)] + 1 per 20m^2 public gym area + 1 per 20m^2 Sportshall GFA	81 spaces	100 percent reduction for on-site operations	0 spaces
Total Parking Requirements				57 car spaces + Bus/Coach spaces

Notes:
1) Assumed combination of 50-seat coaches and 22-seat buses, as advised by Mineral Resource Limited
2) Includes Reception, Managers Offices, Open Plan Office, Meeting Room and Kitchen/Staff Break Room, plus Training Rooms.
3) Dining Area equals 40 percent of Indoor Areas plus 50 percent of Outdoor Areas.
4) Car parking calculations based on City of Stirling requirements.
5) Assumes 72 swimmers maximum at any one time.

Source: Uloth and Associates, March 2022



Proposed Development Plan

ONSLOW TOWNSHIP VILLAGE - LOT 300 BACK BEACH ROAD, ONSLOW

FIG. 3

4.3 VILLAGE OPERATIONS AND RESULTING TRAFFIC GENERATION

Details regarding traffic generation for the proposed development are separated into 'Airport Transfers and Worksite Operations' and then 'Village Operations and Public Facilities'.

4.3.1 Airport Transfers and Worksite Operations

- All workers accommodated at the proposed Village will be Fly-in/Fly-out (FIFO) workers, with a maximum occupancy of 250 minesite workers plus 50 village staff accommodated at any one time.

- Transport to/from the Airport from the Village will occur 7 days per week, with staff from inbound flights arriving around 9am, and staff for outbound flights departing at around 4pm daily. Airport transfers will be serviced by one 22-seat bus plus one light vehicle for each flight, resulting in a total of 8 vehicle trips per day.

- The mining worksite will operate 24 hours per day, 7 days per week, with two 12-hour shifts each day. Of the 250 workforce, it is expected that 150 will work the day shift from 6 am to 6pm, with the remaining 100 working night shift from 6pm to 6am.

- Provision has been made on site for pick-up and drop-off of workers via 4 coach sized Bus Bays (on the left-hand side of the 1-way Bus loop), in addition to 4 layover bus bays on the right-hand side. However, it is expected to utilise a maximum of two to three 55-seat coaches plus two to three 22-seat buses to transport workers to the work site for the start of each shift, before returning to the village with workers that just completed their shift. Together with an assumed 10 percent of workers driving ancillary vehicles, it is therefore estimated that a maximum of perhaps 70 to 80 vehicle trips per day will be generated by this component of the proposed development, with a proposed travel route via Third Avenue, Simpson Road and Onslow Road, as indicated in Figure 4.

4.3.2 Village Operations and Public Facilities

- In addition to Fly-in/Fly-out workers, it is also expected that the resort operational staff could include perhaps up to 10 staff that live locally, who will therefore travel to and from the site each work day for standard day-time shifts between 7am and 5pm.

- Service and delivery vehicles will also access the site, as follows:
  - General Waste Disposal: 1 Truck per Day
  - Other Waste/Recycling: 1 Truck per Week
  - Delivery Truck: 1 Truck, 2-3 times per Week
    (Food, General Supplies & Disposables)
  - Maintenance: 1 Light Vehicle, 2 times per Week
  - Resort Cleaning: 1 Light Vehicle per Day

- Public access to on-site facilities is proposed as follows, noting that the hours of public-use availability have now been reduced in response to community concerns:
  - Restaurant: Breakfast 8 - 10.30am, Lunch 12 - 3pm
  - Tavern: 9am - 5pm

- For traffic generated by members of the public using the on-site facilities, standard trip generation calculations have been carried out with a similar methodology to the parking calculations identified above in Table 1, including reductions to account for on-site operations.

- Based on industry-standard trip generation rates for 'High-turnover Sit-Down Restaurant' and 'Drinking Place', it is estimated that the external-use component of the proposed on-site facilities will generate a maximum of 41 vehicle trips (in and out combined) during the overall peak hour. This would typically translate to an estimated 460 vehicle trips per day under normal commercial operations. However, with the proposed restriction of public-use availability, it is estimated that the

maximum flow of 41 vehicle trips accessing the site during the overall peak hour will translate to a maximum of approximately 210 vehicle trips per day.

- The anticipated travel routes and estimated daily traffic flows accessing the proposed public-use facilities are therefore as shown in Figure 5, with a traffic distribution based on expected travel routes to and from the existing residential areas, noting that only 30 vehicles per day are expected to travel past Onslow Primary School (with most of these outside of School pick-up and drop-off times).

4.3.3 Total Trip Generation and Traffic Impacts

- On the basis of the above calculations and assumptions, the total trip generation for the proposed development is 330 vehicle trips per day, with 45 vehicle trips per day during the critical afternoon peak hour, broken down as follows:
  - To/from Airport: 10 vpd (4 in peak hour)
  - To/from Worksite: 80 vpd (0 in peak hour)
  - Locally-Based Staff: 20 vpd (5 in peak hour)
  - Service Vehicles: 10 vpd (0 in peak hour)
  - Public Use of Facilities: 210 vpd (41 in peak hour)
  - Total: 330 vpd (50 in peak hour)

- This also equates to an estimated total of 130 vehicle trips per day along Simpson Street adjacent to the school, including 12 vehicle trips per hour during the afternoon peak hour (or an average of just 1 vehicle per 5 minutes), which will not have any discernible impact on overall traffic operations or safety.

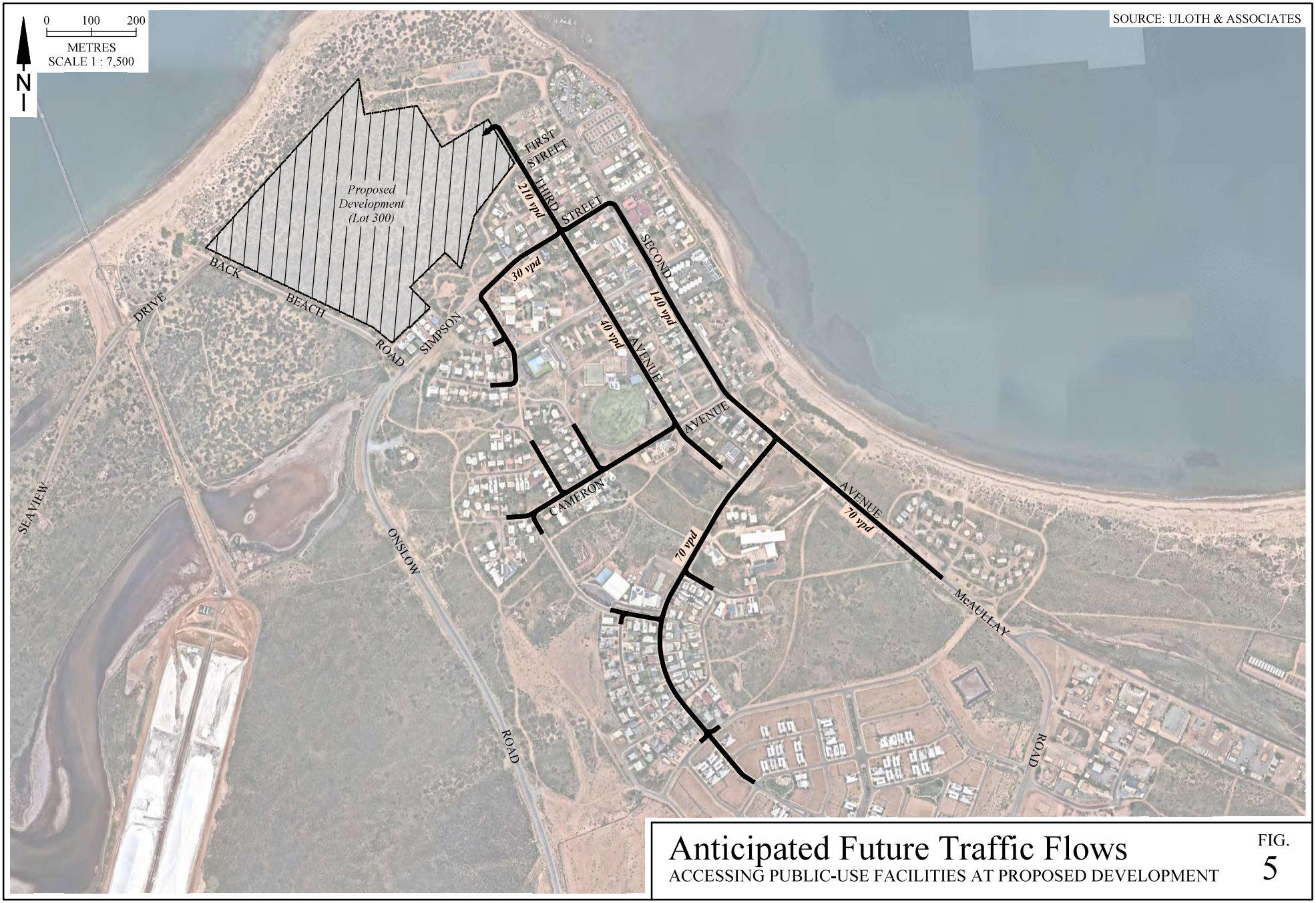
- Noting that the above calculations are based on just 10 percent of staff travelling to/from the worksite in private vehicles, a number of sensitivity tests have also been carried out. This analysis shows that if the proportion of staff travelling by private vehicle increases to 30 percent, then the overall trip generation of the site will increase to 430 vehicle trips per day (but still with just 50 vehicle trips during the critical PM peak hour, since there are no worksite trips during the peak hour).

- Even if the proportion of staff travelling via private vehicle increased to 50 percent, the total traffic generation of the overall site would only increase to 530 vehicle trips per day, but still with just 50 vehicle trips per hour during the PM peak hour.



Proposed Transport Route
TO AND FROM THE WORK SITE

FIG. 4



Anticipated Future Traffic Flows

ACCESSING PUBLIC-USE FACILITIES AT PROPOSED DEVELOPMENT

FIG. 5

5. ACCESS ARRANGEMENT, PARKING AND SERVICING

The recommended car park layout and access arrangement is shown in Figure 6 in Chapter 7 Overall Conclusions and Recommendations, while the recommended concept plan for access off Third Avenue is shown in Figure 7.

- Access to the development site is proposed via an extension of Third Avenue within the existing road reserve at the eastern edge of the development site. A 2-way internal road will then provide access to/from the centrally located parking area (with 76 car bays proposed), noting that the car park has been designed to allow all vehicles to both enter and exit all parking bays in forward gear, without the need to reverse. Access is also provided to a 1-way bus pick-up/drop-off area (on the south side) and a maintenance area (on the north side), as shown in Figure 6.

- Access to the proposed service yard, adjacent to the proposed restaurant at the northern end, is then also provided via the car park access road, which will also provide access to the proposed ambulance bay (adjacent to the Medical Centre), while also catering for Fire and Emergency Services access to the paved pathways that extend throughout the site.

- The recommended concept plan for access off Third Avenue (as shown in Figure 7 in Chapter 7) shows the layout required to accommodate a 12.5 metre Heavy Rigid Vehicle accessing the site at the same time as passing a B99 Car, as confirmed by the swept path diagrams in Figure A.6 in Chapter A.4 in the Technical Appendix.

- Figure A.7 in the Technical Appendix then shows the swept paths for Buses accessing the proposed pick-up/drop-off area, while Figure A.8 shows the swept path for a 12.5 metre Heavy Rigid Vehicle accessing the proposed service yard next to the restaurant, and Figure A.9 shows the swept paths for a 10-metre rubbish truck accessing the Bin Stores within both the service yard (next to the Restaurant) and the maintenance yard. Figure A.10 then confirms the swept paths for a Medium Rigid Vehicle accessing the proposed Maintenance Area and the Fire Access route via the internal pathways.

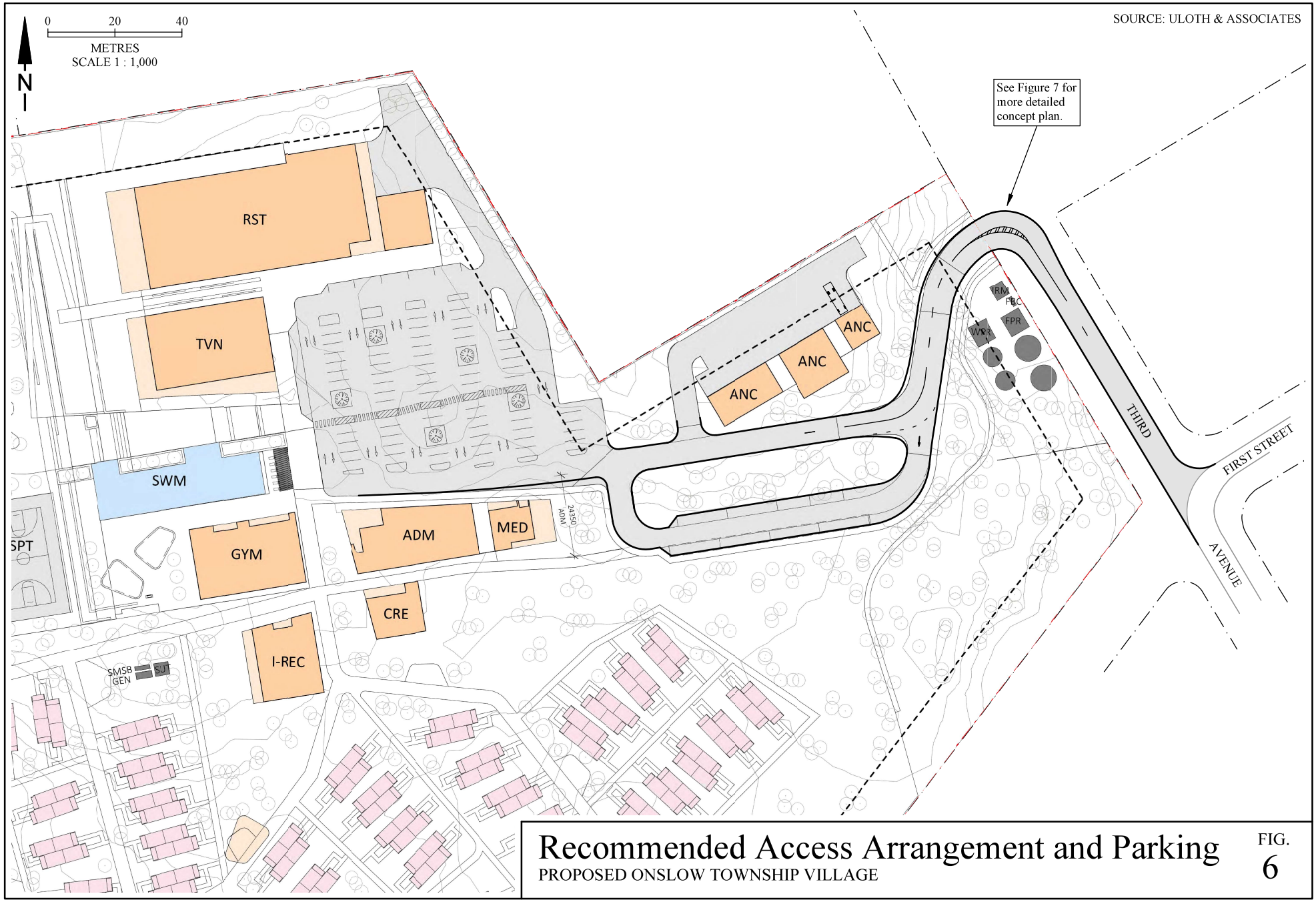
6. PEDESTRIANS AND CYCLISTS

To take advantage of the proposed development's proximity to the Onslow townsite, it is recommended to provide footpaths along the main access roadway and the extension of Third Avenue to connect with existing footpaths as identified in Figure A.3 (in Chapter A.1 in the Technical Appendix). It is also proposed to provide a footpath from the recreational buildings and accommodation areas to an alternative access at the corner of First Street and Third Avenue. The recommended future pedestrian/cyclist path network is therefore as shown in Figure 8 in Chapter 7, including connections to the 'future Shared Paths' identified within the Townsite Expansion Structure Plan.

7. OVERALL CONCLUSIONS AND RECOMMENDATIONS

The overall conclusions and recommendations regarding the proposed development are detailed in this chapter, on the basis of the study findings and conclusions presented and discussed above in Chapters 2 to 6, and the additional information in the Technical Appendix, as follows:

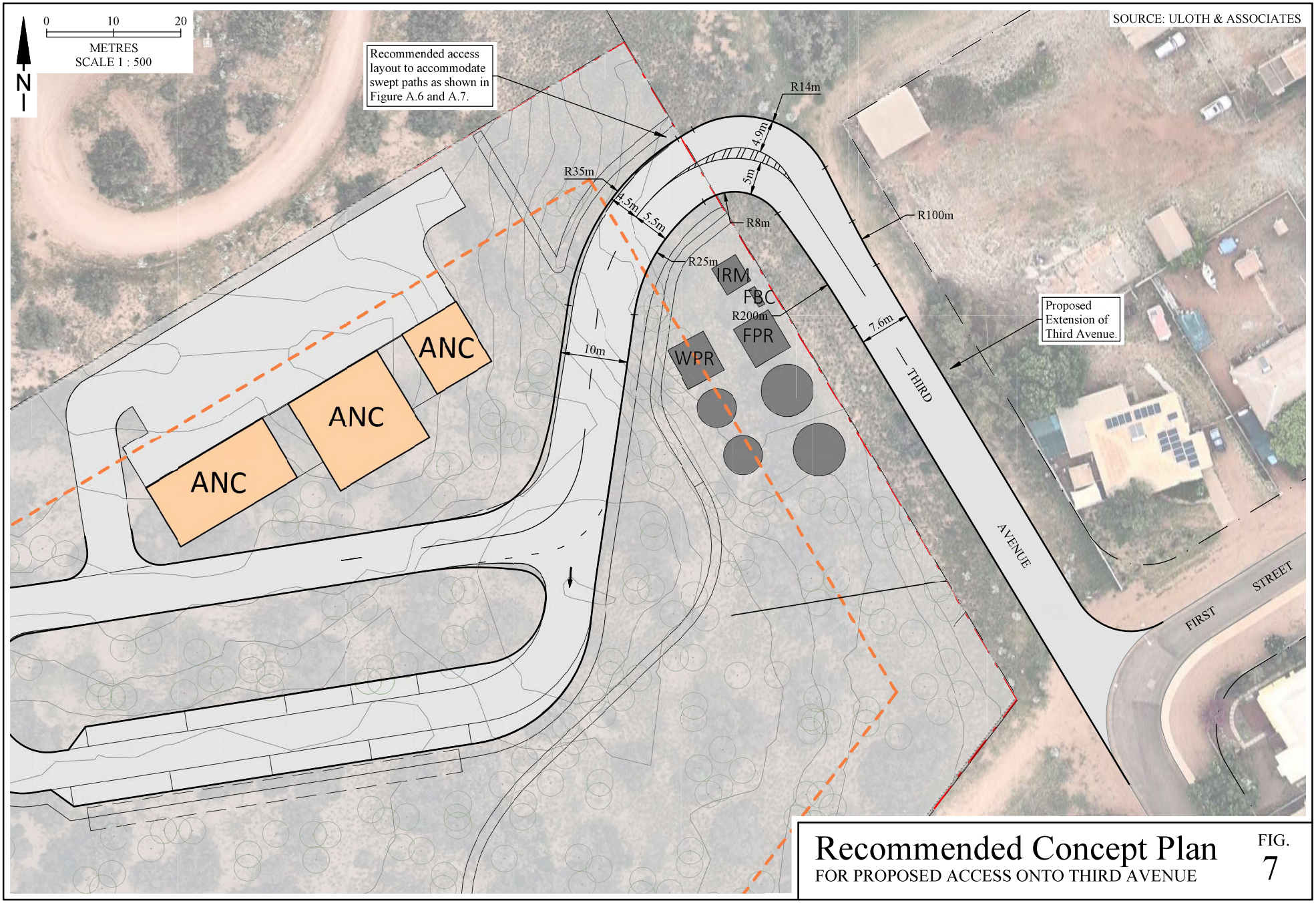
- It is recommended to provide a minimum of 57 car parking spaces for the proposed operation of the Onslow Township Village as calculated in Table 1 in Chapter 4, in addition to parking for Buses transporting workers to and from the worksite.
- The recommended car park layout and internal access roads are as shown in Figure 6, including the proposed Bus pick-up/drop-off area, and the proposed service yard and maintenance area.
- It is recommended to provide access to/from the site via an extension of Third Avenue north of First Street, as also indicated in Figure 6, with a more detailed layout as shown in the concept plan in Figure 7.
- It is recommended to also construct footpaths along the proposed extension of Third Avenue, to provide connections to the existing and proposed paths within the adjacent areas, resulting in the future pedestrian/cyclist path network as shown in Figure 8.
- With most of the workforce population to be transported to/from the work site by bus, the proposed workforce operations are only expected to generate up to 70 or 80 vehicle trips per day, which will not have any significant impact on the adjacent roads and intersections.
- Additional traffic will also be generated by members of the public accessing the shared on-site facilities, with an estimated maximum of 41 vehicle trips (in and out combined) during the overall peak hour, and an estimated maximum of 210 vehicle trips per day.



Recommended Access Arrangement and Parking

PROPOSED ONSLOW TOWNSHIP VILLAGE

FIG. 6



Recommended Concept Plan

FOR PROPOSED ACCESS ONTO THIRD AVENUE

FIG. 7



Future Pedestrian / Cyclist Paths

IN THE VICINITY OF THE PROPOSED DEVELOPMENT

FIG. 8

TECHNICAL APPENDIX

The Technical Appendix documents the existing situation and the Townsite Expansion Structure Plan, as well as the proposed development plan and swept path diagrams.

A.1 EXISTING SITUATION

Figure A.1 shows the existing situation in the vicinity of the proposed development site, while Figure A.2 shows the existing roads and intersections immediately adjacent to the site.

Figure A.3 then shows the existing footpaths in the vicinity of the proposed development.



Existing Situation

IN THE VICINITY OF THE PROPOSED DEVELOPMENT

FIG. A.1



Existing Roads and Intersections

ADJACENT TO THE PROPOSED DEVELOPMENT

FIG. A.2



Existing Footpaths

IN THE VICINITY OF THE PROPOSED DEVELOPMENT

FIG. A.3

A.2 OVERALL STRUCTURE PLAN

Figure A.4 shows the Onslow Townsite Expansion Structure Plan, as endorsed by Western Australian Planning Commission in 2016.

STRUCTURE PLAN REQUIREMENTS

Residential Precinct

a) The provisions of the Residential Design Codes of Western Australia (R-Codes) shall apply to residential development in this Precinct unless otherwise specified under a Loca Planning Policy or Residential Design Guidelines.

b) Development is to be in accordance with the density coding identified on the Structure Plan.

c) Sites identified as grouped housing sites as part of any subsequent subdivision applications may be developed to a maximum density of R40 and the Shire may require the preparation of a Local Development Plan (LDP) to be prepared prior to the development of that site.

d) No development or subdivision shall occur within the Waste Water Treatment Plant buffer until the buffer is removed or reduced.

e) All use, subdivision and development shall be in accordance with relevant Structure Plan.

f) In accordance with the EPA Guidance Statement No.3, for any subdivisions within the 500m of the Onslow Salt operations, notifications are to be placed on the certificate of title of each new subdivided lot to notify prospective purchasers of the potential noise impacts.

g) In accordance with the EPA Guidance Statement No.3, for any new dwellings within 1km of the Onslow Salt operations, the facades of the buildings fronting or perpendicular to the Onslow Salt operations are to incorporate architectural treatments to minimise noise impacts

Watson Drive Precinct

a) For the Watson Drive Precinct development standards are defined in Part A, section 4.1.2.1 of the Structure Plan report.

Large Live Work Lot Precinct

a) The development of the residential portion of the lot that faces a residential area in the Large Live-Work Lot Precinct shall be in accordance with the provisions of the Residential Design Codes of Western Australia (R-Codes) unless otherwise specified in this section.

b) The development of the non-residential portion of the lot that faces non-residential areas in the Large Live-Work Lot Precinct shall be in accordance with the provisions of the Home Business Standards under the Shire of Ashburton Scheme in regards to employment, amenity, vehicles and car parking and servicing needs.

c) Non-residential development in the Large Live-Work Lot Precinct shall be adequately landscaped and screened to maintain a lifestyle land use appearance as opposed to a commercial or industrial land use appearance.

d) A Local Development Plan (LDP) shall be prepared identifying basic design requirements within this precinct, including building envelopes, types of land uses etc.

Public Open Space and Drainage

a) The size and location of public open space shall be in accordance with the Structure Plan.

b) The design of public open space areas shall assist in the protection and enhancement of indigenous and european heritage sites (where applicable).

c) The design of public open space areas shall ensure appropriate provision for stormwater drainage management.

d) The landscaping of public open space areas shall be suitable for an arid climate having regard to minimising maintenance and water use whilst providing areas of highly aesthetic and functional amenity.

e) The design of these areas shall maximise the provision of shading to enhance amenity and promote social capital and walkability.

Education

a) The development of the Education Precinct shall be in accordance with the meaning of an Education Establishment as defined under the Shire of Ashburton Local Planning Scheme.

b) The external frontages of the Education Precinct shall be developed to a standard consistent with adjacent residental areas with regards to bulk and scale, streetscape, setbacks and landscaping.

c) The architectural style of any proposed buildings within this precinct are to be reflective of the Onslow Vernacular.

Area Subject to Further Investigation

a) The provisions of the Residential Design Codes of WA (R-Codes) and Clause 4.1.1 of this report shall apply to areas suitable for residential development in this Precinct subject to approval of the Shire of Ashburton and WAPC

b) For areas not suitable for development in this Precinct the provisions of the Public Open Space and Drainage Precinct shall apply including:

i. The design of public open space areas shall ensure the protection and enhancement of indigenous heritage sites.

ii. The design of public open space areas shall ensure appropriate provision for stormwater drainage management.

iii. The landscaping of public open space areas shall be suitable for an arid climate having regard to minimising maintenance and water use whilst providing areas of highly aesthetic and functional amenity.

c) The area within the WWTP Buffer shall be subject to a Local Development Plan (LDP) being prepared to the satisfaction of the Shire, prior to any development.

Land Use Permissibility

Land use permissibility shall generally be in accordance with the Land Use Permissibility Table, as shown in Part A of the Onslow Townsite Expansion Structure Plan report.

Local Development Plans

A LDP may be required (by the developer, an owner of the land or the Shire) by Council prior to any subdivision and/or substantial development and used as the basis for the determination of all development applications to the Shire of Ashburton.

The LDP will enhance, elaborate and expand the details and provisions contained in this Part as well as supplement the provisions of the Scheme and the R-Codes. LDP's are required to address the following:

a) building envelopes;

b) setbacks;

c) interfaces with public open space and drainage areas;

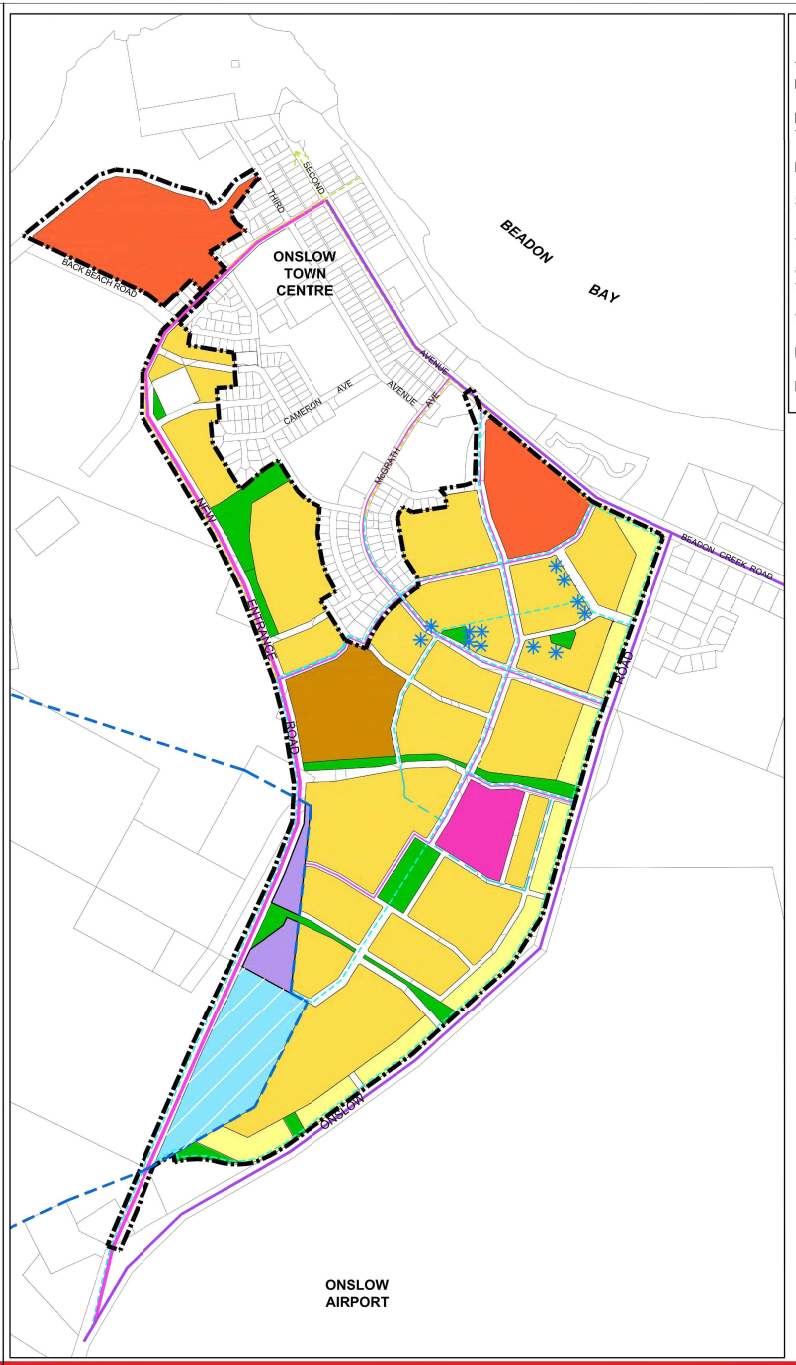
d) distribution of land uses within a lot (Large Residential Lifestyle lots);

e) vehicular access and parking;

f) loading and unloading areas, storage yards and rubbish collection closures;

g) the location, orientation and design of buildings and the space between buildings; and

h) such other information considered relevant by the Shire of Ashburton. Variations to the provisions of the R-Codes other than density shall be allowed.



CERTIFICATION OF STRUCTURE PLAN

This Structure Plan is prepared under the provisions of the Shire of Ashburton Town Planning Scheme No. 7

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

Date.....

Signed for and on behalf of the Western Australian Planning Commission:

.....

an Officer of the Commission duly authorised by the Commission pursuant to Section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:

Witness.....

Date.....

Date of Expiry.....

LEGEND		OVERALL YIELDS	
	STRUCTURE PLAN AREA	199.1363ha	100%
	RESERVE (PARKS, RECREATION & DRAINAGE)	10.1354ha	5.0%
	EDUCATION	4.7324ha	2.4%
	SPECIAL USE (WATSON DRIVE PRECINCT)	9.0000ha	4.5%
	SPECIAL USE (LARGE LIVE WORK LOTS)	14.0680ha	7.1%
	RESIDENTIAL R30	91.9028ha	46.1%
	AREA SUBJECT TO FURTHER INVESTIGATION	21.8990ha	11.0%
	AREA SUBJECT TO FURTHER INVESTIGATION - NON RESIDENTIAL	3.4960ha	1.8%
	RESERVE (INFRASTRUCTURE) - WATER CORP UTILITIES SITE COMPATIBLE LAND USES ONLY	10.7086ha	5.4%
	ROADS	33.1941ha	16.7%
	BUFFER FROM TOWN WWTP	N/A	N/A
	EXISTING CADASTRE	N/A	N/A
	TOTAL	199.1363ha	100%

ROAD HIERARCHY

- ARTERIAL/ PRIMARY
- NEIGHBOURHOOD CONNECTOR
- ACCESS STREET (HIGHER ORDER)
- GROUP HOUSING SITES

PEDESTRIAN AND CYCLE PATHS

- SHARED PATH NETWORK AND FOOTPATH
- FOOTPATH BOTH SIDES
- SHARED PATH NETWORK BY OTHERS

FIG.
A.4

ONSLOW TOWNSITE EXPANSION STRUCTURE PLAN

This concept has been prepared for the purpose of meeting client specifications. The drawing does not constitute an invitation,agreement or contract (or any part thereof) of any kind whatsoever.

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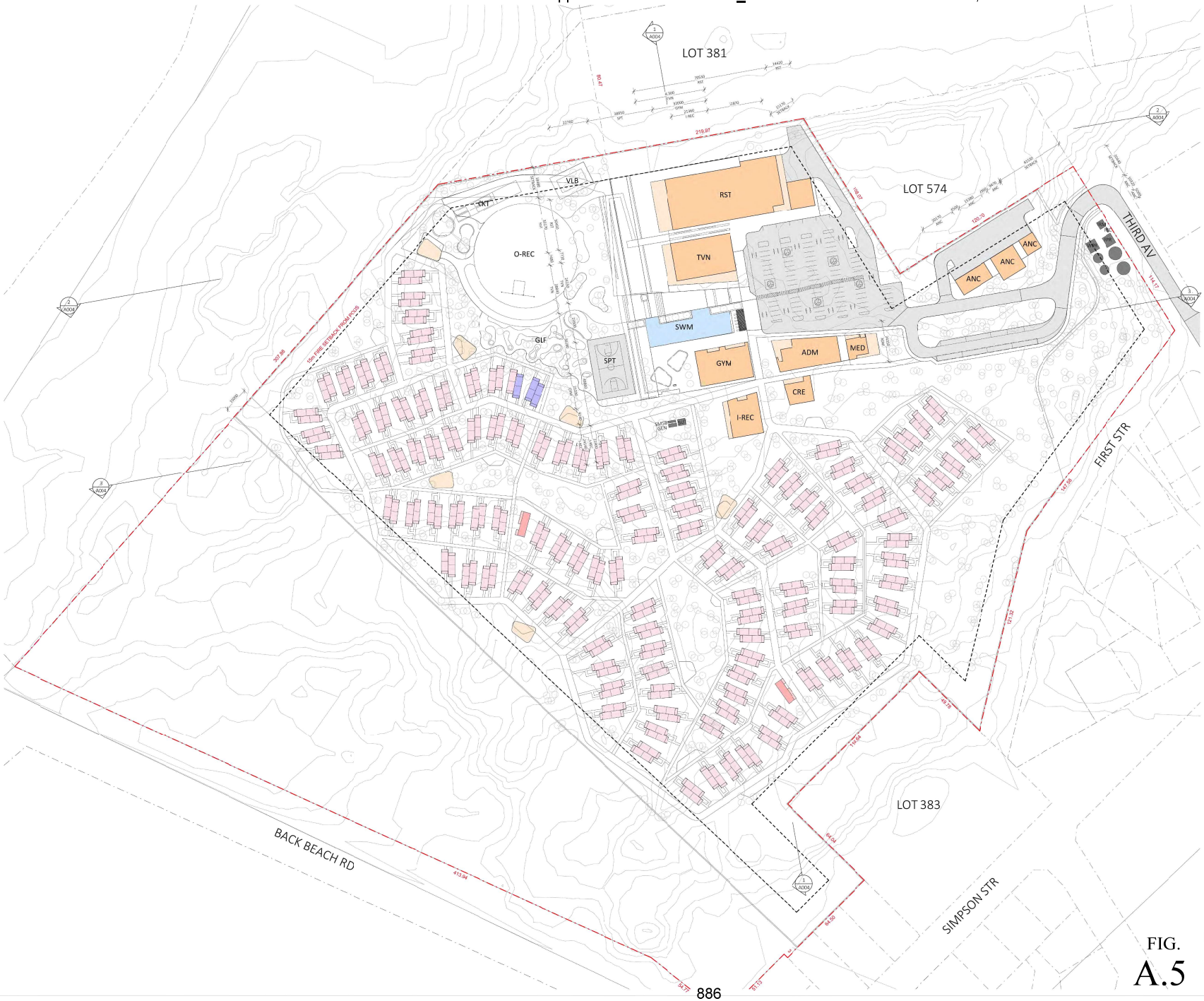
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0 250m 500 m

Level 1, 182 St Georges Terrace Perth Western Australia 6000 | PO Box 7375 Cloisters Square Perth Western Australia 6850 | Telephone +61 08 9289 6300 Facsimile +61 08 9321 4786 www.tpgwa.com.au | The Planning Group WA Pty Ltd ABN 39 097 273 222

A.3 PROPOSED DEVELOPMENT PLAN

Figure A.5 shows the overall Masterplan for the proposed Onslow Township Village, as prepared by Milieu Creative.



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SYMBOL LEGEND

- SITE BOUNDARY
- BUILDING
- COVERED OUTDOOR SPACE
- UNCOVERED OUTDOOR SPACE
- SERVICES
- WATER BODY
- ROAD/CAR PARK
- FIELD STORE (WITH LAUNDRY)
- ACCOMMODATION PODS (SLEEPS 4)
- ACCESSIBLE ACCOMMODATION PODS (SLEEPS 2)
- EXISTING WATER CONNECTION POINT
- EXISTING SEWER CONNECTION POINT
- PLANTING - REFER LANDSCAPEDRAWINGS FOR DETAILS
- 15m FIRE SETBACK FROM POS

CODE LEGEND

ADM	ADMINISTRATION
AMN	AMENITIES
ANC	ANCILLARY - GATE HOUSE, SURVEILLANCE HUT & STORES
CKT	OUTDOOR CRICKET
CRE	CRECHE & COWAYS
FBC	FIRE BOOSTER CABINET
FPR	FIRE PUMP ROOM
GEN	GENERATOR
GLF	MINI GOLF
GYM	GYMNASIUM & SWIMMING FACEITY
INS	TRAINING & INDUCTIONS
IRM	INTAKE RING MAIN
I-REC	INDOOR RECREATION
LDR	LAUNDRY, CLEANING & STORE
MED	MEDICAL & WELLNESS
O-REC	OUTDOOR RECREATION
RST	RESTAURANT
SMSB	SITE MAIN SWITCH BOARD
SPT	MULTI-PURPOSE COURTS
SUT	STEP UP TRANSFORMER
SWM	SWIMMING POOL
TVN	TAVERN
VLB	OUTDOOR VOLLEYBALL
WPR	WATER PUMP ROOM

NO.	DATE	DESCRIPTION
K	08/03/22	REVISED DA ISSUE
J	17/02/22	REVISED FOR VALUE ENGINEERING
I	31/01/22	REVISED FOR VALUE ENGINEERING
H	27/12/21	ISSUE FOR INFORMATION
G	08/12/21	ISSUE FOR STAGING
F	24/11/21	REVISED FOR DEVELOPMENT APPLICATION
E	31/08/21	DA ISSUE
D	30/08/21	ISSUE FOR INFORMATION
C	28/08/21	ISSUE FOR PRICING
B	10/08/21	DRAFT DA ISSUE
A	04/08/21	ISSUE FOR INFORMATION

ISSUE: DEVELOPMENT APPLICATION

milieū creative
L1, 446 STIRLING HIGHWAY, PEPPERMINT GROVE, WA 6011
milieucreative.com

PROJECT (LOT 300, BACK BEACH ROAD)
ONSLOW WA 6710

PROJECT NAME
ONSLOW TOWNSHIP VILLAGE

DRAWING
SITE MASTER PLAN

milieu

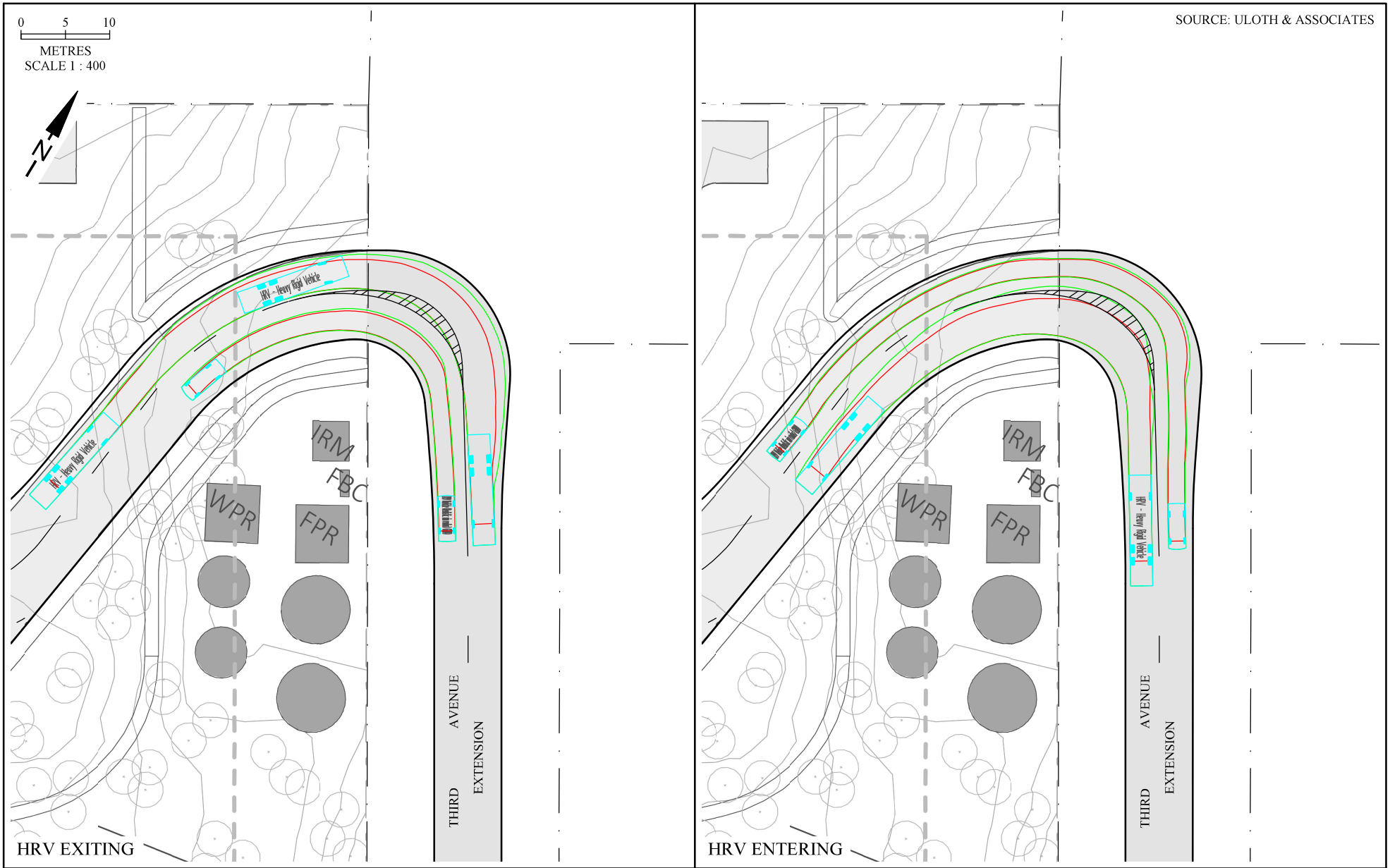
DRAWN	Author	SCALE 1 : 1000	DATE 03/31/22	REVISION K
CHECKED	Checker	SHEET A1	PROJECT NO 210803	DA002

FIG. A.5

A.4 SWEPT PATH ANALYSIS

Figures A.6 to A.10 show a number of swept path diagrams, confirming the overall access arrangements and servicing requirements for the proposed development, as follows:

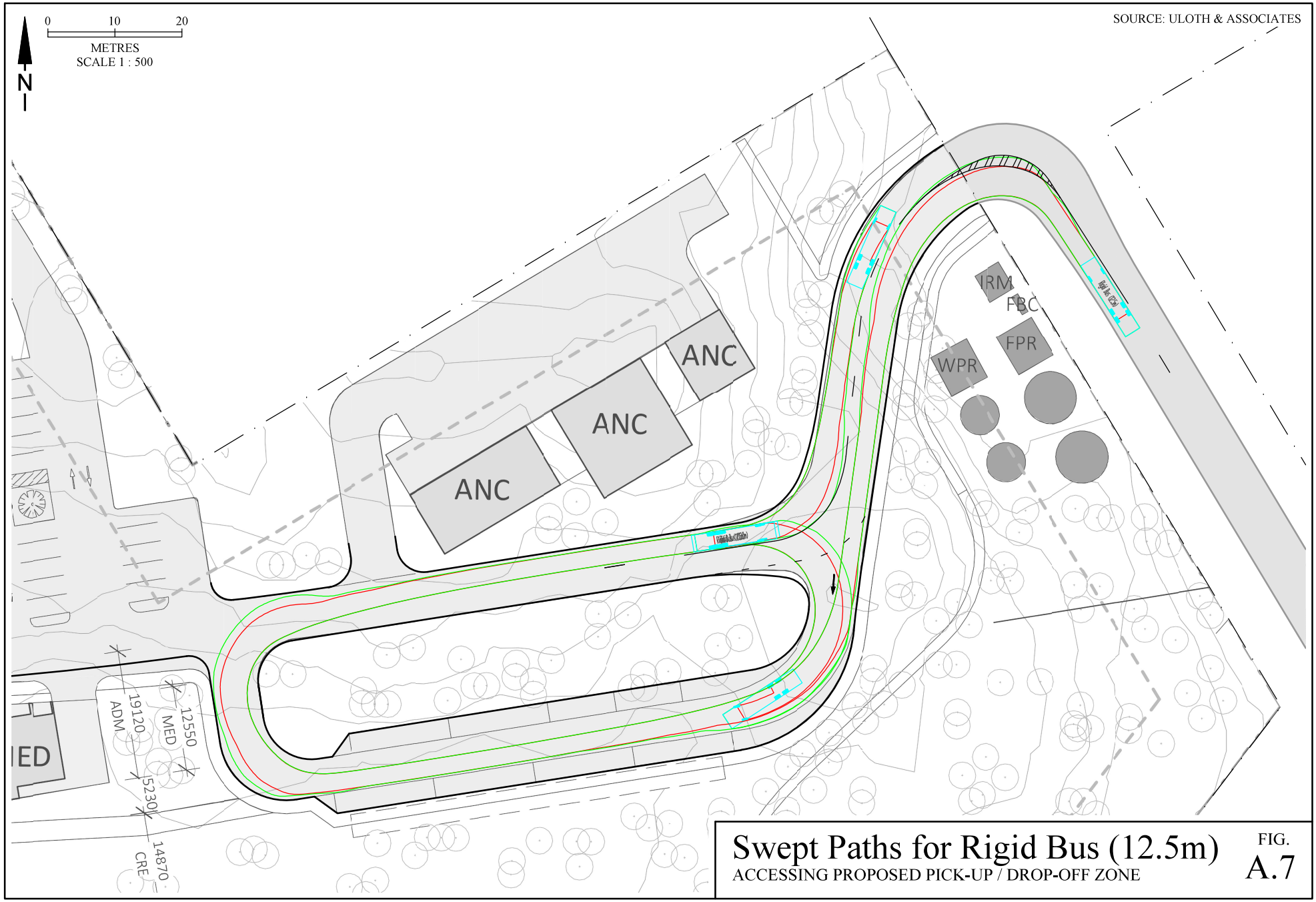
- Figure A.6 shows the swept paths confirming that the recommended concept plan for access off Third Avenue can accommodate a 12.5 metre Heavy Rigid Vehicle accessing the site at the same time as passing a B99 Car.
- Figure A.7 shows swept paths for a 12.5 metre Bus accessing and circulating around the proposed pick-up/drop-off zone, while Figure A.8 shows the swept paths for a 12.5 metre Heavy Rigid Vehicle accessing the proposed service yard and loading dock adjacent to the Restaurant.
- Figure A.9 then shows the swept paths for a 10-metre Rubbish Truck accessing the proposed service yard for bin collection adjacent to the Restaurant, before proceeding to the Maintenance Area for further collections.
- Figure A.10 then shows the swept paths for an 8.8 metre Medium Rigid Vehicle accessing the proposed Maintenance Area, and the proposed Fire Access route along the internal pathways.



Swept Paths for HRV (12.5m) and B99 Car (5.2m)

ACCESSING THE SITE OFF THIRD AVENUE

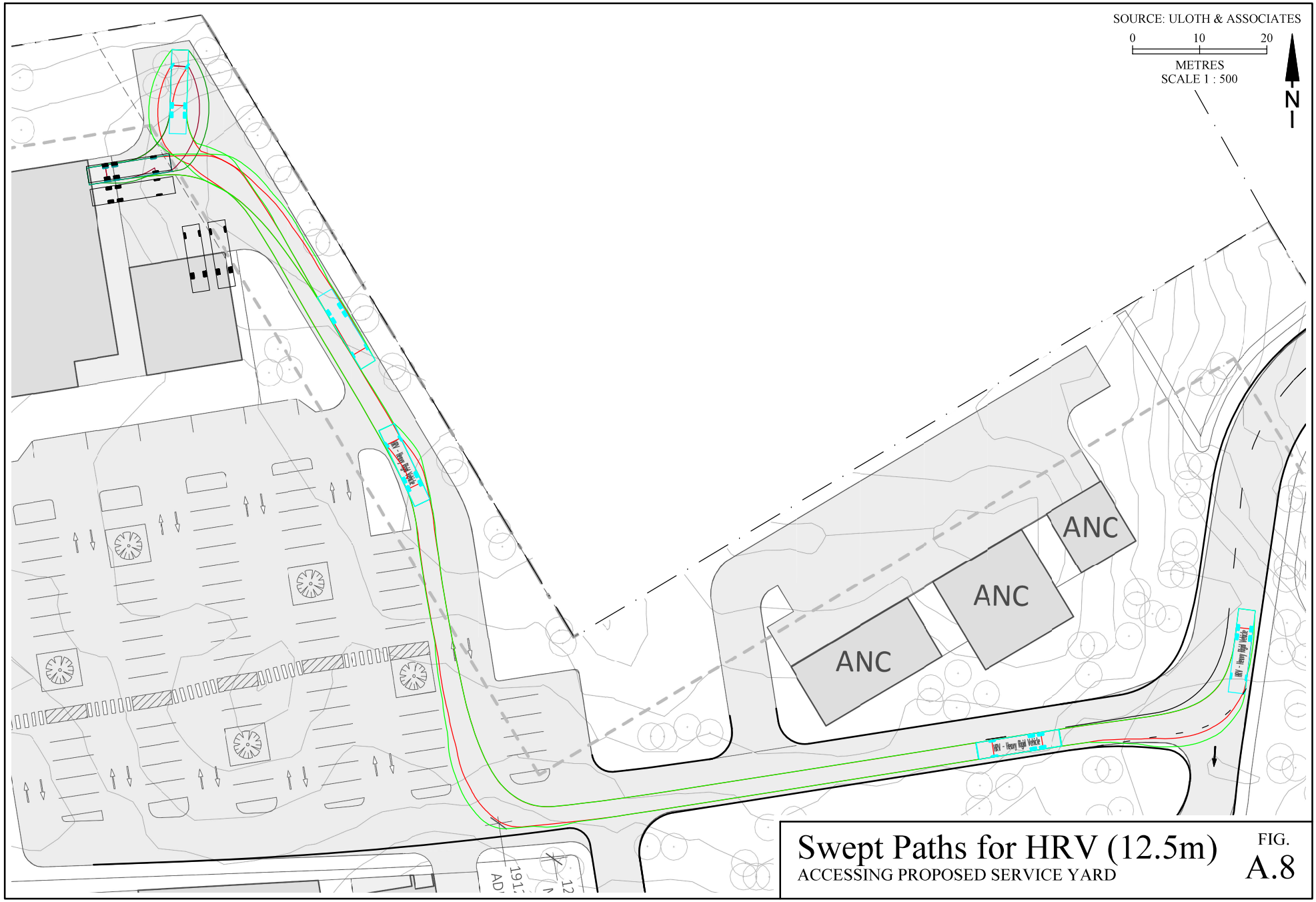
FIG. A.6

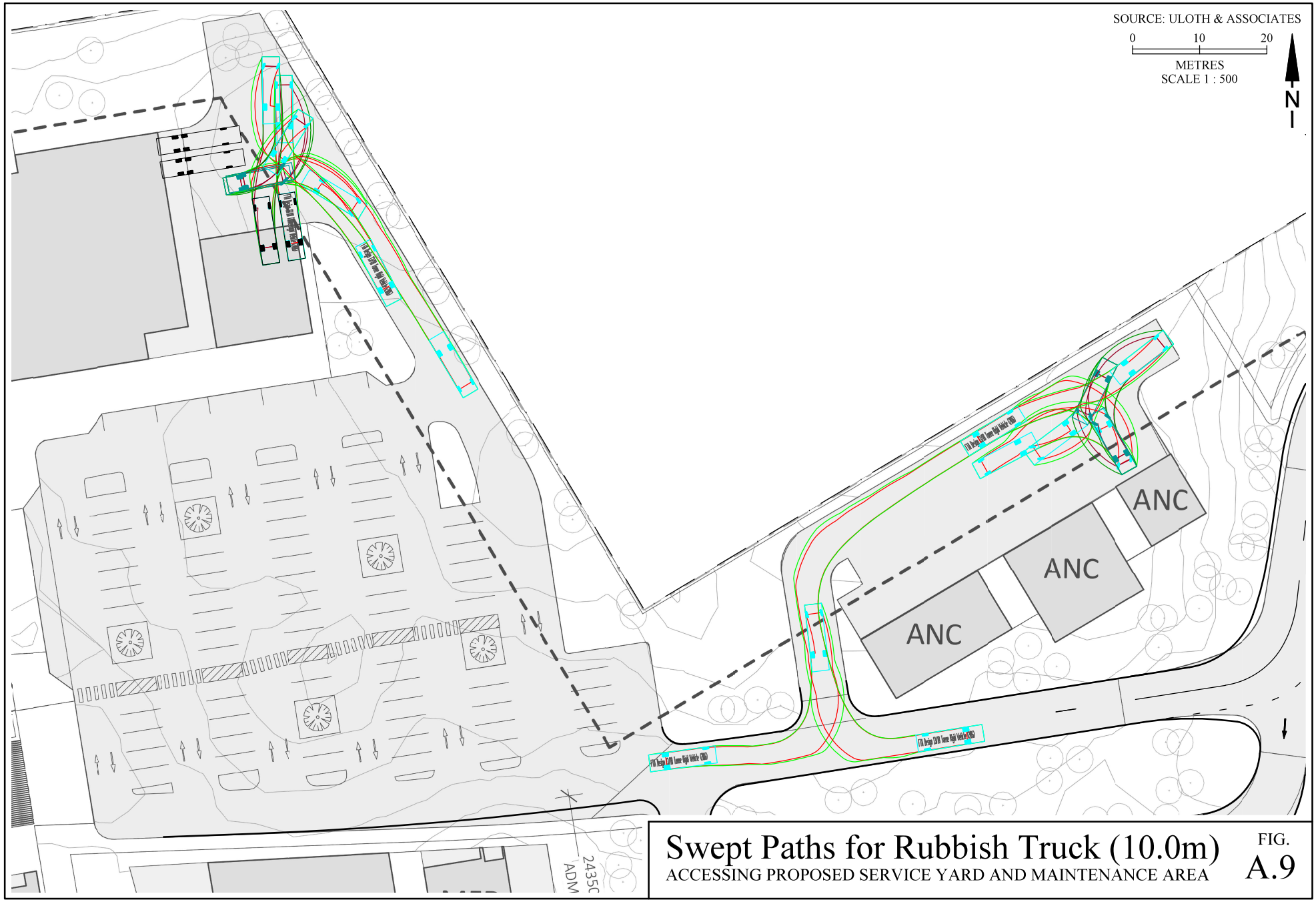


Swept Paths for Rigid Bus (12.5m)

ACCESSING PROPOSED PICK-UP / DROP-OFF ZONE

FIG. A.7

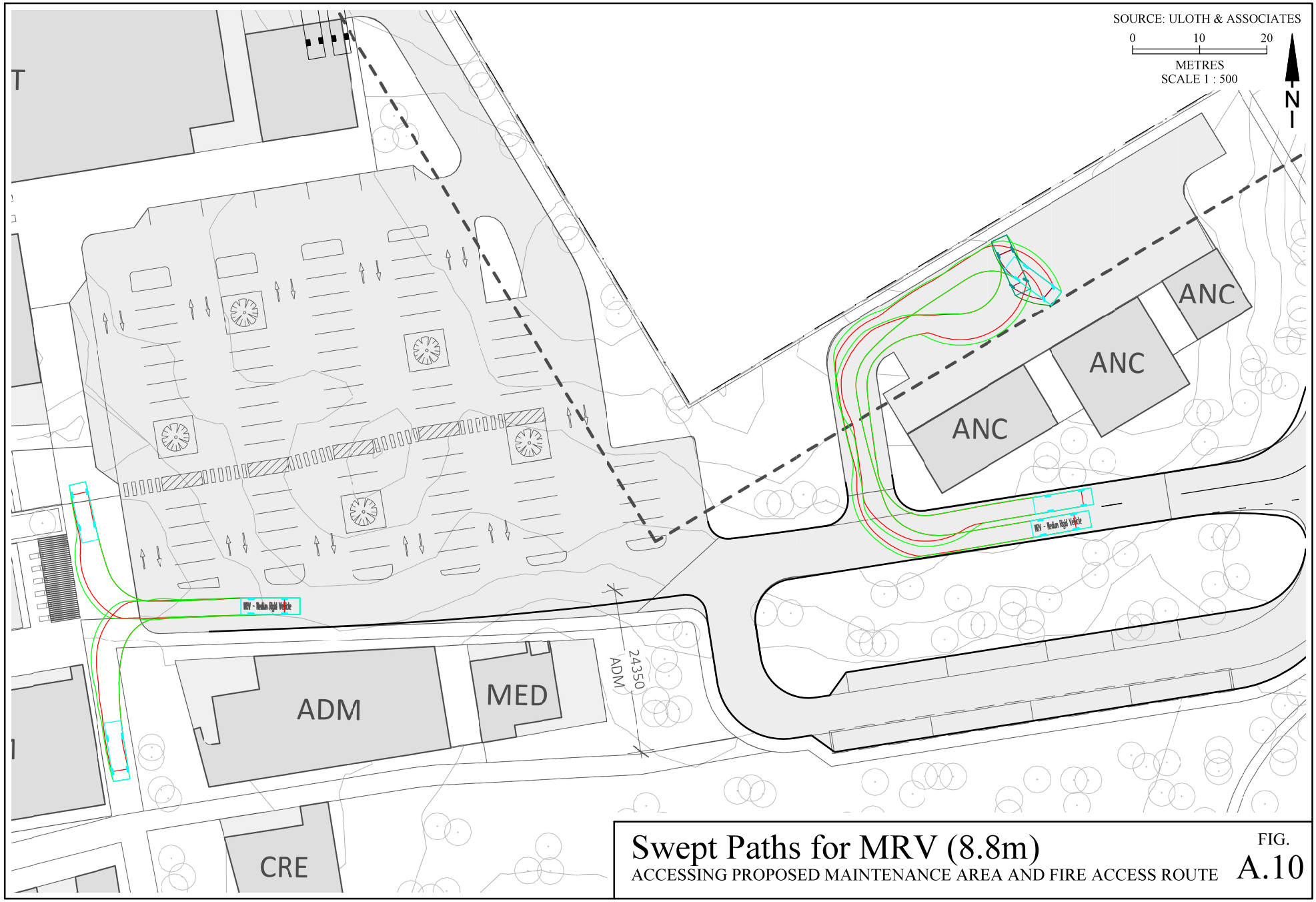

SOURCE: ULOTH & ASSOCIATES
0
10
20
METRES
SCALE 1 : 500
N
ANC
ANC
ANC
HRV - Heavy Rigid Vehicle
HRV - Heavy Rigid Vehicle
HRV - Heavy Rigid Vehicle
Swept Paths for HRV (12.5m)
ACCESSING PROPOSED SERVICE YARD
FIG.
A.8



Swept Paths for Rubbish Truck (10.0m)

ACCESSING PROPOSED SERVICE YARD AND MAINTENANCE AREA

FIG. A.9



Swept Paths for MRV (8.8m)

ACCESSING PROPOSED MAINTENANCE AREA AND FIRE ACCESS ROUTE

FIG. A.10

Level 3
369 Newcastle Street
Northbridge 6003
Western Australia

p:08 9221 1991
f: 08 9221 1919
info@rowegroup.com.au
rowegroup.com.au

Job Ref: 9419
1 June 2022

Chief Executive Officer
Shire of Ashburton
PO Box 567
TOM PRICE WA 6751

Attention: Mr Ben McKay – Manager Town Planning

Dear Mr McKay

Regulation 17 Amendments Application
Lot 300 (No. 5) Back Beach Road, Onslow (DAP/21/02078)

We refer to the abovementioned Development Application (DAP/21/02078) which was previously considered by the Regional Joint Development Assessment Panel ('RJDAP'). The RJDAP resolved to grant conditional approval at its meeting held on 23 December 2021.

Rowe Group acts on behalf of Mineral Resources Limited ('MRL'), the proposed developer of Lot 300 (No. 5) Back Beach Road, Onslow ('Site') with the input of the Buurabalayji Thalanyji Aboriginal Corporation ('BTAC'), the determined Native Title holders of the Site. As instructed by our Client, our office has prepared this request to amend approval conditions and aspects of DAP Approval DAP/21/02078 in accordance with Regulation 17(b) and (c) of the *Planning and Development (Development Assessment Panels) Regulations 2011* (the 'Regulations').

With respect to this request, please find enclosed the following documents for the City and RJDAP's consideration:

- A completed and signed DAP Form 2 and Shire of Ashburton Application Form for Development Approval;
- A copy of the current Certificate of Title; and
- A copy of the amended Development Application Plans and supporting sub-consultant reporting.

LOCATION AND SITE DESCRIPTION

The Site is located within the regional town of Onslow which forms part of the local government area of the Shire of Ashburton.

The Site is situated approximately 300m west of the centre of the Onslow Townsite and is bound by State owned 'Conservation, Recreation and Natural

Landscape' reservation to the north and north-west (forming Sunrise and Sunset Beaches), Back Beach Road to the south-west and residential land uses to the south and east.

The Site comprises one (1) freehold land parcel, being:

- Lot 300 on Deposited Plan 67927 on Certificate of Title Volume LR3160 Folio 90.

The Site has a total land area of 20.45ha, with a frontage of 467m to Back Beach Road and 114.17m to Third Avenue.

Refer to **Attachment 1 – Certificate of Title.**

At the time of lodging this Application, the Site is owned by Buurabalyji Thalanyji Aboriginal Corporation ('BTAC'). BTAC is also the Registered Native Title Body Corporate that holds those native title rights on trust for the Thalanyji people. Authorisation of the lodgement of this Application has been provided by BTAC accordingly.

PLANNING AND DEVELOPMENT (DEVELOPMENT ASSESSMENT PANELS) REGULATIONS

The ability to amend an approval granted by a DAP is outlined in Regulation 17 of the *Planning and Development (Development Assessment Panels) Regulations 2011* (the 'Regulations'). Regulation 17 of the Regulations states the following:

> *(1) An owner of land in respect of which a development approval has been granted by a DAP pursuant to a DAP application may apply for the DAP to do any or all of the following:*
>
> *(a) To amend the approval so as to extend the period within which any development approved must be substantially commenced;*
> *(b) To amend or delete any condition to which the approval is subject;*
> *(c) To amend an aspect of the development approved which, if amended, would not substantially change the development approved;*
> *(d) To cancel the approval.*

Regulation 17 (3) states that unless otherwise provided in this regulation, Regulations 10 and 13 apply to an Application made under Regulation 17 (1) as if the Application were a DAP Application. Accordingly, Regulation 12 (3) relates to the statutory timeframes for reporting by the Responsible Authority to the Western Australian Planning Commission ('WAPC') with sub-regulation (a) specifying a due date of 48 days from lodgement where advertising is not required and sub-regulation (b) effectively specifying 78 days where advertising is required.

In this regard, it is our view that advertising of this Application is not required in accordance with Regulation 12(3)(b) as:

- The proposed modifications do not alter the approved use at the subject site;
- The proposed modifications largely seek to alter the timing implications which arise as a result of the current wording of conditions of approval; and
- The proposed modifications to the external components of the development are minor in nature and do not involve variations to the bulk/scale/height which would potentially impact upon the surrounding properties.

This Application is therefore submitted and requested for approval under Regulation 17 of the Regulations for determination by the Regional Joint Development Assessment Panel.

Amendments to Approval Conditions

Further to the above, in accordance with Regulation 17(1)(b) a number of amendments to the current conditions of approval are proposed as part of this Application. The proposed modifications to the Conditions of Development Approval are enclosed in the attached table (with the requested modifications shown in red), with justification in support of the proposed rewording or deletion of the respective conditions provided for the RJDAP's consideration. Note, for completeness, this table contains the full list of Conditions for Development Approval for the development, as approved by the RJDAP on 23 December 2021.

Refer to **Attachment 2 – Proposed Modifications to Conditions.**

Amendments to Development Approval

In accordance with Regulation 17(1)(c) a number of minor modifications to the approved development are also proposed, as shown in the amended Development Application Plans provided at **Attachment 2**. For completeness, the accompanying sub-consultant reporting has also been updated to reflect the amended plans and is also contained in **Attachment 3.**

Refer to **Attachment 3 – Amended Development Application Plans and Consultant Reporting.**

The amendments to the approved development are summarised as follows:

- Building Changes
  - › Amendments to in-situ buildings to generally improve the function, flow and operation of the development – changes include adjustment to orientation, site location, size and access; and
  - › Change in roofing strategy to storage facility buildings and spots centre.

- Accommodation Pods
  - › Changes to improve and maintain consistent accommodation pods across the Site (consistent pod typology); and
  - › Reclassification of several accommodation pod typologies to suit building certifier requirements (i.e. universally accessible pods).

- Masterplan
  - › Amendments to outdoor facilities to improve function, flow and operation – changes include adjustment to orientation, site location, size and access; and
  - › Reorientation of accommodation pods, pathways and circulation routes to suit various site conditions.

With respect to the above, following a "needs" assessment of the development (as approved) it was recognised that a number of architectural and structural rationalisations could be made to improve the function, flow and use of the Site. It is noted that all amenities included in the approved Application have been maintained, with the amendments proposed being minor in nature, with no external and façade / material modifications.

Staged Development

Further to the above, given the nature and scale of the development, we wish to advise the Shire that it is anticipated that the development will be the subject of a number of building permit applications (i.e. the development will be staged in a manner to manage the construction of the development in a timely and efficient manner).

ASSESSMENT PROCESS

During the assessment process undertaken by the Shire of Ashburton prior to determination by the RJDAP, the proposal was subject to public consultation. As demonstrated in the above assessment, the amendments to the approved development are minor changes to the approved plans and do not result in the need for the Shire (or RJDAP) to apply additional discretion with respect to the statutory framework, nor would result in any additional potential impact to neighbouring properties. Given the minor nature of the Application (which does not materially alter the form or intent of the approved development) we request the Shire waive the requirement for the Application to be advertised as part of its assessment and reporting to the RJDAP.

CONCLUSION

The proposed modifications to the DAP Approval (DAP/21/02078) are consistent with Regulation 17 of the Regulations. The amended proposal will result in a more consolidated built form, with various improvements (refinements) proposed by way of condition amendments to allow for development to proceed in a timely manner.

We trust the above provides clarity with respect to our request, however, should you require any further information or clarification in relation to this matter, please contact Mr Greg Rowe or the undersigned.

Yours faithfully,



Adrian Dhue
Rowe Group

Encl.

Attachment One

Certificate of Title

REGISTER NUMBER	
300/DP422325	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
1	**2/2/2022**

WESTERN AUSTRALIA

VOLUME **4014** FOLIO **669**

RECORD OF CERTIFICATE OF TITLE

UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

BGRoberts

REGISTRAR OF TITLES

REGISTRAR OF TITLES WESTERN AUSTRALIA

LAND DESCRIPTION:

LOT 300 ON DEPOSITED PLAN 422325

REGISTERED PROPRIETOR:
(FIRST SCHEDULE)

BUURABALAYJI THALANYJI ABORIGINAL CORPORATION RNTBC OF 10 LYALL STREET SOUTH PERTH WA 6151

(TF P014310) REGISTERED 19/1/2022

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:
(SECOND SCHEDULE)

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.
* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.
Lot as described in the land description may be a lot or location.

----------END OF CERTIFICATE OF TITLE----------

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND:	DP422325
PREVIOUS TITLE:	LR3174-298
PROPERTY STREET ADDRESS:	5 BACK BEACH RD, ONSLOW.
LOCAL GOVERNMENT AUTHORITY:	SHIRE OF ASHBURTON