Halsall & Associates

Town Planning Consultants

SHIRE OF IRWIN
LOCAL PLANNING SCHEME NO.5

LOCAL DEVELOPMENT PLAN AND FORESHORE MANAGEMENT PLAN DONGARA TOURIST PARK

Part Lot 3000 / Reserve 32182 and Part Reserve 42150 Carnarvon Street / George Street Port Denison

Revised October 2016

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1.0 INTRODUCTION

Halsall and Associates Town Planning Consultants have been engaged by the owners of the Dongara Tourist Park which is under lease and forms part of Lot 3000 / Reserve 32182 George Street, Port Denison ('the site') to prepare this Local Development Plan (LDP). This document justifies and presents an LDP as required under the Local Planning Scheme (LPS) and in accordance with the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015.

The park has been developing steadily over the years with significant improvements and investment by the current owners (Ron and Sue Saulsman) also supported by the Council's decision to extend the lease which provides impetus and security for such investment. Further improvement and development is needed and desired by the owners and whilst the preparation of this Local Development Plan is a requirement, it is also a keen objective of the owners as this will set down future planning and goals for the park. It is important to ensure the park facilities meet visitor expectations and accommodation is provided responding to changes to the market. Once approved, the LDP will facilitate continued improvements without the need for further planning approval.

As evidenced in the parks online record of awards through trip advisor (excellence award 2013, 2014, 2015) and bookings.com (award for excellence 2013 and 2014), the facility is well respected and a very important part of the local tourism economy and provides a focal accommodation point for tourists in an excellent location.

The requirements of the Scheme, planning department and other relevant issues to development of the park are covered both in this report and the attached plan dealing with the park area itself, considering interrelationship with other uses and importantly the foreshore. It is considered this plan is well justified and in keeping with the relevant planning framework and other guiding legislation. Approval of the plan will allow further investment to allow the Dongara Tourist Park to be completed and become an even stronger tourism draw card for the local area and Shire in general.

2.0 THE SUBJECT SITE AND AREA

The site comprises the Dongara Tourist Park and associated immediately fronting portion of foreshore reserve forming part of Lot 3000 / Reserve 32182 and part Reserve 42150 Carnarvon / George Street, Port Denison ('the site'). A plan indicating the situation of the site is included in Figure 1 below.

Figure 1 – Site Situation Plan

Source : Shire of Irwin



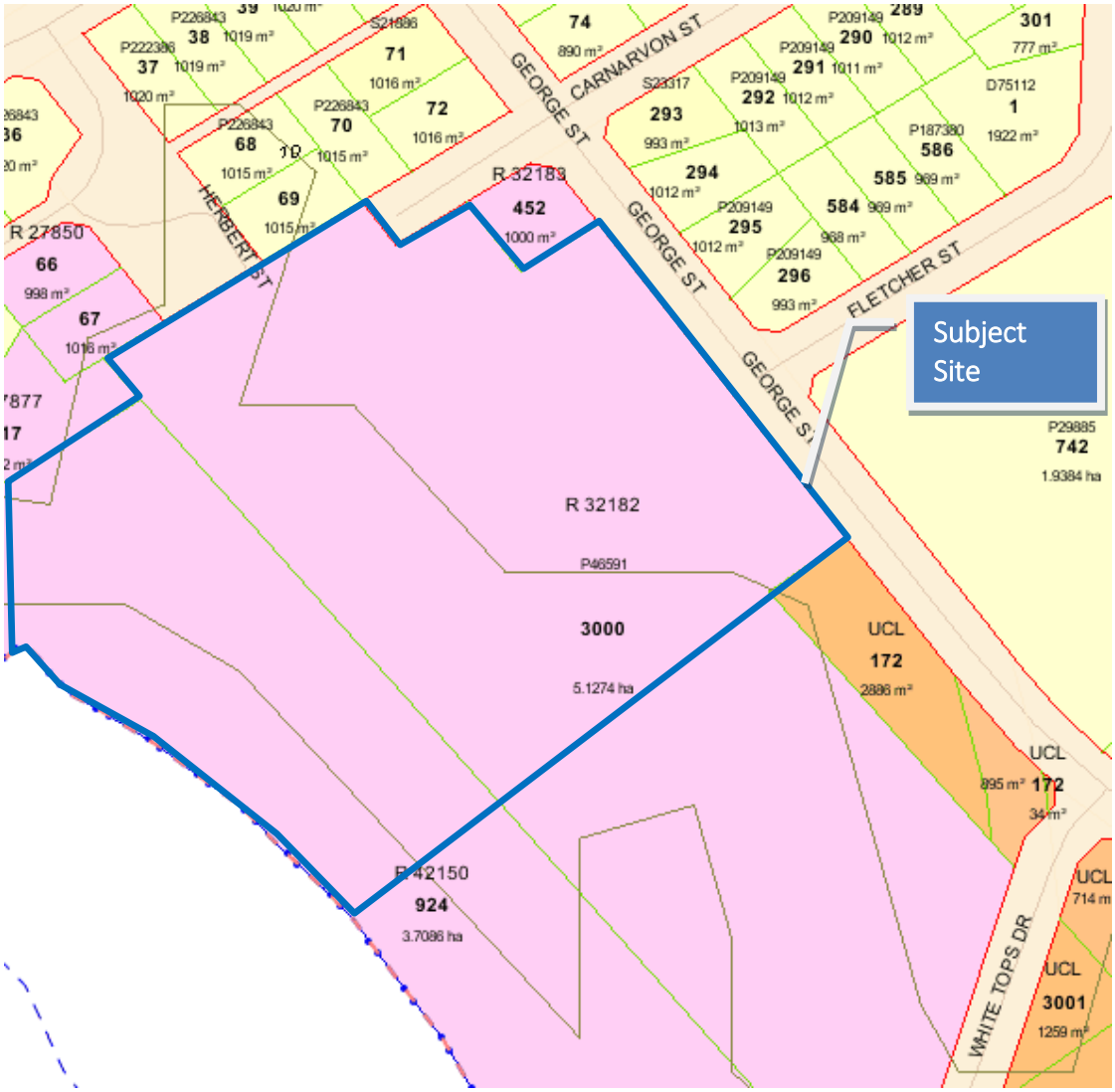
As evident above the site is situated adjacent to South Beach and close to the Fishing Boat Harbour in the locality of Port Denison.

The Shire required a defined portion of the foreshore reserve to the west of the site to be included within the LDP and the logical section across the frontage of the site has been indicated down to the point where the foreshore reserve ends (on the beach).

The area relevant to the proposed Local Development Plan including the lease area and foreshore area within the neighbourhood is evident in the specific site plan contained at Figure 2 below.

Figure 2 - Specific Site Plan

Source : Landgate



The site is accessed from Carnarvon Street via George Street and abuts residential and community uses to the north and east, unutilised vegetated portions of Lot 3000 / Reserve 32182 and UCL to the south and foreshore reserve and beach to the west. A small drainage reserve (serving a drainage function) also exists at the intersection of Carnarvon and George Streets adjacent to the park occupying a low point in the area.

The site is developed with a notable caravan park with associated amenities, chalets, managers' residence reception and shop, recreation facilities, access / parking areas and landscaped areas. There are currently 73 caravan and camping sites and 16 chalets therefore totaling 89 accommodation options. There are however notable underutilized areas throughout the park, particularly in the northern parts. The characteristics of the site and its surrounds are evident in the aerial photograph included at Figure 3 below.

Figure 3 - Aerial Photograph



An important feature of the park is the chalets which have been developed particularly in the south western parts. These provide an excellent option for accommodation with views along South Beach and northwards towards to the 'obelisk'. A hard edge to the chalet environment has been provided by a grassed area, limestone retaining walls and low key fencing and paved areas are provided about. This is a quality aspect of the park and this is evident in the photographs depicting this below.

Photographs indicating limestone and fencing hard edge to the foreshore



As evident above and below, an important feature of the park has been to define the edge of the foreshore and dunal areas to the south by fencing and retaining. This thread is proposed to be continued through further expansion of the park so that there is a clear delineation between natural areas and the park itself. This will therefore encourage visitors to stay within the park boundaries and only visit the beach area via

designated pathway which is situated centrally to the park in the west. Additional photographs depicting this are provided below.

Photographs Depicting the Pathway to the Beach



The park has recently been the subject of considerable work to improve caravan and camping sites particularly in the southern parts which included bitumen roads, kerbing, concrete pads and landscaping with appropriate vegetation to provide screening and shade. Photographs depicting these improvements including lighting are evident below.

Photographs of Quality Development Areas



Other caravan and camping sites in the north are generally currently more informal in their presentation and some of the road network is still gravel and grassed areas with less landscaping although this does function effectively. Photographs depicting this infrastructure are evident below.

Pictures of the More Informal Areas







The above representation of current infrastructure is only a small part of the work that has been undertaken by the current landowners to improve the park and its presentation.

The contours of the site are representative of the coastal dunal system that occupies the area. The western fringe of the park adjacent to the foreshore reserve represents high areas in the south and north adjacent to the boundary with an AHD level of approximately 11.5m. From this ridge of dune there is a lower point in the central west where a beach path has been established commencing from point around 9m AHD. Eastwards from this ridge the levels drop gradually with a range from 7 – 8m above AHD generally through the centre of the park decreasing around 5 – 4.5m to the central north. As stated previously, the levels within the drainage reserve in the north east are the lowest in the area at approximately 3.5m AHD. Naturally drainage from the area moves in this direction if it does not infiltrate into the groundwater table first. The location of the two storey dwelling and shop associated garage is slightly raised at approximately 7m AHD in the central north.

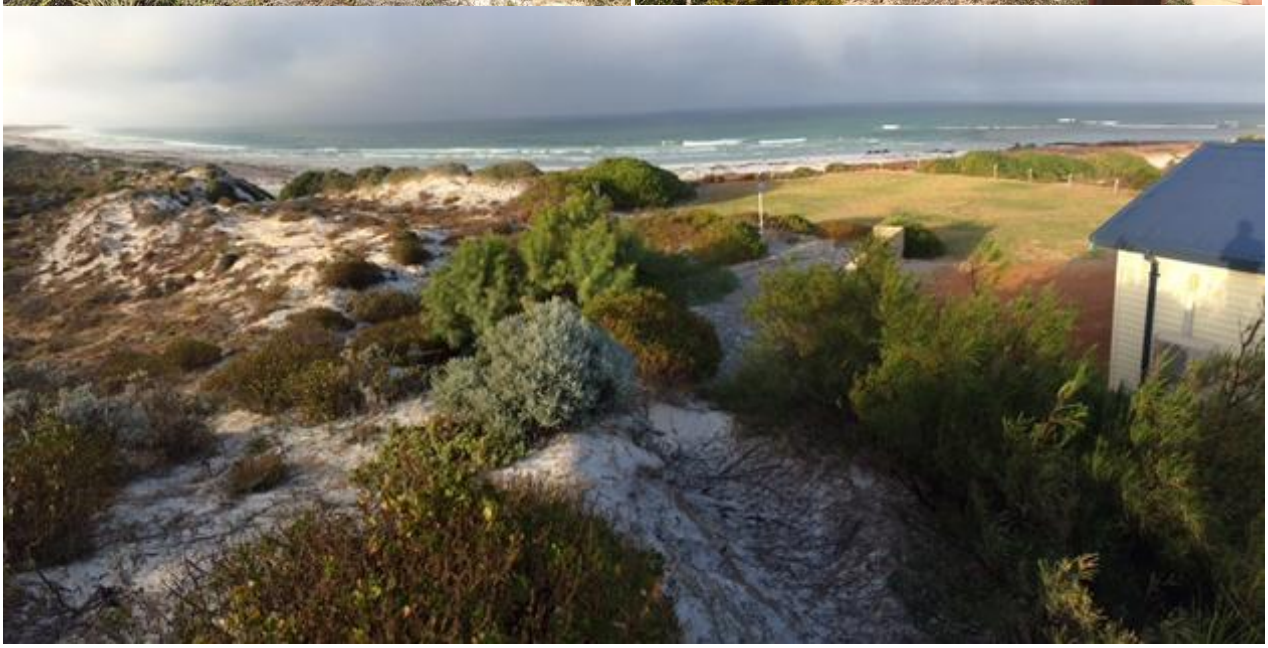
Beyond the site to the west the contours generally vary but decrease down to the beach and contours evidently show a variety of coastal dunes and this is also evident to the south of the site.

The coastal environment is typically dunal with associated vegetation both to the west and the south and images depicting the contour and nature of the vegetation and landscape are evident in the photographs provided below.

Photographs of Dunal Systems Adjacent to the Park







The current owners have been undertaking some foreshore works associated with the dunal areas to the west and south of the site. This includes retaining walls in limestone, low key fencing with post and wire or post and rope and signage has also been erected to direct users away from dunal areas and vegetation. Brush rehabilitation has also occurred within blow outs and informal tracks throughout the dune area. The beach conditions across the frontage of the site an in particularly northwards are subject to high tides to the edge of the dune system and accumulation of significant areas of weed which is deep and unfavorable to traverse. There are also rockier outcrop areas to the north which are also not conducive to beach goers.

The desirable location for access to the beach is southward to South Beach which is developed as a coastal day use area with a car park, ablutions and associated facilities. This car park is also serviced by a footpath along Whitetops Road back to George Street and services pedestrian / residential access to the beach.

Foreshore management planning has been incorporated in this proposal and is dealt with in a later section.

3.0 THE PROPOSAL

The proposal is to establish a Local Development Plan for the subject site which is detailed in nature to show closely the proposed development for the site which is essentially an improvement of existing areas, provision of additional amenities and a combination options to make better use of the site and increase the profile of the park. As explained previously, the subject site is a caravan park with caravan and camping sites and chalets with a total of 89 combinations of sites available. The proposal if implemented will result in the following:

- caravan and camping sites – 66;

- chalets with ensuites – 35;

- chalets with disability access – 3;

Therefore total number of sites is 104.

The proposed Local Development Plan including the Foreshore Management Plan elements is provided at Attachment 1. It should be noted that the plan includes a table describing compliance with Caravan and Camping Grounds Regulations. Further, there is an indicative site layout showing concrete slabs for caravan, annex and parking. Landscape planting recommendations are included on the plan along with plant species noted on the plan.

The Local Development Plan also incorporates the provisions which guide the implementation of the plan. In summary, the provisions serve to ensure the following:

- That the plan sets the framework for future development and therefore no further need for planning approval if generally consistent with the plan.
- Ensuring that foreshore management objectives are implemented within reasonable timeframes.
- Indicates that drainage will be managed by onsite sumps given the porous nature of the soils at a rate of 1 cubic metre of sump per 100sqm of impervious area.
- Ensuring that landscaping is to be generally implemented in accordance with the plan.
- Car parking, swimming pool and fencing, Caravan and Camping Ground Regulations, building license requirements and Caravan and Camping Legislation licensing are also addressed separately. It is also noted that road services are to be bitumen sealed and chalets are indicative and could vary slightly

at building license stage. It is envisaged that the provisions should serve to ensure the plan can operate effectively.

- Ensure any subsequent detailed stormwater management designs to support future development to be submitted prior to works commencing should have regard for the recommendations of the Stormwater Management Report as prepared for the site dated September 2016.

Recreation area as required under the Caravan and Camping Regulations is 10%. The current situation is 7.17% however, the proposal will facilitate 12.3% of the site provided as recreation space. Recreation areas will include two additional pools, barbecue areas, seated lookout adjacent to a proposed café and other focal points of interest based on Dongara's local history.

The intention is to provide a variety of chalet sizes to therefore cater for various parts of the accommodation market. Chalets are generally proposed to be in the western parts where views can be obtained but also where it less conducive to open camping (due to wind conditions). Camping areas will be retained in the more protected areas particularly in the central and eastern parts where contour is obviously lower and protected by the higher dunes and chalets.

A proposed café is intended to be established in the north west of the site again taking advantage of views but also providing additional incidental activity for visitors to the park being low key in nature. Only 10 tables / 40 seats will be provided and the scale and location of the café is clearly demonstrated to be incidental to the overall park area which with over 110 sites could accommodate a large number of people and therefore only a very small proportion could be accommodated within the café. The café is also not easily accessible to the general public supporting the incidental nature of the proposal. The café building will also be used for occasional educational seminars/conference activities for 'Caravan Park Management Training' and this again will be incidental to the Caravan Park and Chalet Park use.

Other features of the proposal include setbacks compliant with the Caravan and Camping Ground Regulations, entrance and internal road way widths in excess of requirements at 7.5m and 7m. The numbers of showers and toilets have been determined to be as required under the Caravan and Camping Ground Regulations as are laundry facilities and camper facilities (camp kitchen).

With respect to parking, the proposal intends to provide well in excess of parking as required with most provided on each site or adjacent to chalets. Additional visitor spaces include a total of 20 typical plus 2 disabled parking spaces again well in excess of requirements under the Regulations and the Town Planning Scheme.

As evident on the plan, there is also a secured boat trailer parking area adjacent to the entry to the park and a proposed games room central and adjacent to the existing barbecue area.

Another feature of the proposal is to embrace Shire requirements to undertake foreshore management planning and this will include the following general principles:

- Ensuring there is a hard edge to the park and foreshore areas.
- Providing one dedicated access track to the beach and directing all visitors to the park to this path.
- Providing signage adjacent to the park and beach areas indicating the importance of pedestrians to stay out of coastal dunes.
- Continuing rehabilitation of blow out and previously cleared or informal track areas within the coastal dune area and other aspects. This will be further explained in the Foreshore Management Plan section of this report.

The following table outlines the use and development provisions under the LDP:

LDP Development Provisions	
Uses Under LDP	**Requirement/Provision**
Caravan Park	P use
Chalet Park	P use
Camping Ground	P use
Café (incidental to Caravan Park use)	IP use
Educational/Conference centre use of Cafe - Caravan Park Management Training (incidental to Caravan Park)	IP use
Shop (incidental to Caravan Park and Chalet Park use)	IP use
Materials and Colours	**Materials** - All new structures/buildings will be portable and accordingly will be constructed with suitable materials. Specific materials will be determined at the time of construction and will be subject to building approvals by the Shire. **Colours** - Continue with the current colour scheme which includes green, yellow, blue, red, purple, pink, white, stone and cream including variations of shade of each colour however colour changes will be permitted.
Separation Between Chalets	Minimum 3 metres
Disabled Access	Café, Ablutions and 3x two bedroom chalets to have disability access
Signage	Foreshore management signage to be consistent in size and design to existing. Other new Signage requires assessment of

	the Shire prior to installation.			
Lighting	Lighting to be in accordance with the Caravan and Camping Regulations consistent with the ball lights or similar currently in place throughout the park.			
Carparking	Caravan Park and Camping ground use - In accordance with the Caravan and Camping Grounds = 66 caravan sites requiring 4 visitor parking spaces and one disabled parking space(total 5) The chalet park use requires 1 space per chalet plus 1 visitor space per 4 chalets (10 visitor spaces) Café / education/conference centre requires 1 space per 4 seats. Given more than 80% of users are expected from within the park only 2 additional spaces are required. Total number of disabled access spaces required is 3 for disabled access chalets and 2 additional for visitors			
Staging	0-2 years up to 17 Additional Caravan Camping Sites 0-8 years up to 10 chalets and café/educational use 8--20 years remainder of undeveloped area *Adjustments may occur subject to market forces			
Building Sizes and heights	**Building type**	**Dimensions meters**	**Area m2**	**Height m**
	Ablutions Existing	13 x 31	403	4
	Games room	8 x 10	80	4
	En suite	2.5 x 2	5	4
	One bedroom chalet	4 x 6	24	4
	Two Bedroom chalet type 1	12.1 x 4.9	60	4
	Two Bedroom chalet type 2	7.5 x 9.5	72	4
	Three bedroom chalet	9 x 11.5	104	4
	Cafe /Meeting area	10 x 28	280	4
Building Development	All buildings will be relocatable, as in accordance with the State Planning Policy 2.6 State Coastal Planning.			
	Prior to any development, the developer will contact the Water Corporation's Building Services department.			
	Prior to any development, the developer will contact Telstra, and Western Power's Dial Before You dig.			

Further explanation is provided below.

Uses within the development

The uses under the Scheme within the park are as specified as follows:

Caravan Park

Chalet Park

Camping Ground
Café (incidental to Caravan Park use)

Educational / Conference centre use of Cafe - Caravan Park Management Training (incidental to Caravan Park)

Shop (incidental to Caravan Park and Chalet Park use)

Maximum Floor Areas of the Buildings

The floor area per buildings are:

Building type	Dimensions meters	Area m2	Height m
Ablutions Existing	13x31	403	4
Games room	8x10	80	4
En suite	2.5x2	5	4
One bedroom chalet	4x6	24	4
Two Bedroom chalet	12.1x4.9	60	4
Two Bedroom chalet	7.5x9.5	72	4
Three bedroom Chalet	9x11.5	104	4
Cafe /Meeting area	10x28	280	4

Building Materials and Colours

All new buildings will be portable and accordingly will be constructed with suitable materials. Specific materials will be decided at the time of construction and will be subject to Building approvals by the Shire.

Colours; We will continue with the current colour scheme which currently includes green yellow, blue, red, purple, pink, white, stone and cream including variations of shade of each colour however we reserve the right to change colours if required.

Setbacks Between Chalets

The Caravan and Camping Regulations do not apply to the establishment of Chalets and setbacks between them nevertheless chalets will be separated by 3 metres.

Number of Buildings with Disability Access

The current ablutions have facilities for disabled, built in 2009. Three (3) x two bedroom chalets will have disability facilities in accordance with the Caravan and Camping Regulations. The Café/Education centre will also be provided with disabled access.

Signage and Dimensions

No Additional signage is anticipated at this time other than foreshore signage consistent with existing signage located as depicted on the plan.

Lighting

Lighting will be in accordance with the Caravan and Camping Regulations and will continue with the ball lights or similar currently in place throughout the park.

Number of Car and Camper spaces including disabled

The number of car parking bays has been designed in accordance with the Caravan and Camping Grounds Regulations of Western Australia. It states ;

Caravan Parks and Camping Grounds Regulations 1997 Schedule 7 Caravan parks and camping grounds page 58 Version 01-a0-06 As at 01 Jan 2005

A car park on a facility is to have at least one parking space per 20 caravan sites on the facility, and not less than 4 parking spaces in any event.

(4) In calculating how many parking spaces are required in a car park in a facility, 2 camp sites are equal to one caravan site.

Accordingly, the plan will have 66 caravan sites which will require 4 parking spaces and one disabled parking space.

The chalet park use requires 1 space per chalet plus 1 visitor space per 4 chalets

Café /education/conference centre requires 1 space per 4 seats (40 seats requires normally maximum 10). Given more than 80% of users are expected from within the park only 2 additional spaces are required.

Total number of disabled access spaces required is 3.

Set Dates for Staging of the Development

This question was asked at a Council forum and it was explained that the staging of the development will be in accordance with market demands and fundamental business planning principals.

It is the intent of the park owners to build 17 powered sites in the first year and further chalets and café in the shorter term. An indicative staging regime is indicated.

4.0 STATUTORY ENVIRONMENT

4.1 Shire of Irwin Local Planning Scheme No. 5 District Zoning Scheme ('LPS5')

Under the Shire of Irwin's Local Planning Scheme No. 5 the caravan camp site is zoned "Special Use". Clause 4.7 of the Scheme refers to Special Use zones and indicates that Special Use zones are set out in Schedule 4 and are in addition to the zones in the Zoning Table. Further a person must not use any land or any structural buildings on land, in a Special Use zone except for the purpose set out against that land in Schedule 4 and subject to compliance with any conditions set out in Schedule 4 with respect to that land.

Schedule 4 of the Scheme indicates that subject site as having the following permitted uses:

- Caravan/Chalet Park;
- Camping Ground;
- Incidental Uses to the permitted uses.

A specific condition of the Special Use zone is as follows:
"Development is to be generally in accordance with an adopted Development Outline Plan. The ODP shall define the coastal foreshore reserve consistent with SPP2.6 and include a Foreshore Management Plan."

The foreshore area adjacent to the park to the west is identified as a local reserve under the Scheme. Clauses 3.3 and 3.4 are relevant to this allocation and include a person must not use a local reserve or commence or carry out development on a reserve without first having obtained planning approval and in determining an application for planning approval the local government is to have regard to matters set out in the Scheme and the ultimate purpose intended for the reserve. In the case of land reserved for a public authority the Government is to consult with that authority.

It has been determined that the foreshore reserve is vested with the Shire of Irwin for the purposes of "Recreation". As such, the objectives of the Foreshore Management Plan recognise this purpose and primarily imposes protection of the foreshore area with a specific dedicated access to the beach which is obviously the prime recreational aspect of the reserve however, the favourable area for use is to the south.

The general definitions of the Scheme at Schedule 1 define the uses and this includes the following:

- Caravan Park has the same meaning as in the *Caravan and Camping Grounds Act 1995.*
- Chalets Park sites are to be *"occupied by individual self contained units usually comprising cooking facilities, ensuite, living area and one or more bedrooms designed to accommodate short stay guests, forming part of a tourist facility and where occupation by any person is limited to a maximum of 3 months in any 12 month period."*
- Camping ground is not defined however camping area means land used for the lodging of persons in tents.
- Incidental use is defined as "*means a use of premises which is ancillary and subordinate to the predominant use"*.

Much of the ancillary development within the park such as recreation areas, ablution facilities, laundry, barbecue areas and interpretative recreation space is clearly incidental and subordinate to the primary use of caravan park, chalet park and camping ground. The development of a small cafe which would accommodate very limited number of patrons relative to the maximum number of occupation of the site could likewise be considered as a suitable incidental use providing a facility for patrons which is clearly incidental and subordinate. The occasional educational use within the café is also incidental due to the sporadic nature of the activity and the related purpose of training for 'caravan park management.' This is similar to the existing shop which is within the reception building. The shire can therefore consider all of the uses indicated on the application plans under the Scheme and it should be noted that the site is identified specifically for three particular uses which are all provided for in the application. That is, there are distinct areas of chalet park, caravan park and camping areas.

4.2 Shire of Irwin Local Planning Strategy

The Shire of Irwin Local Planning Strategy was endorsed by the West Australian Planning Commission in June 2007. With respect to the Local Government objectives for the area, it is noted that the tourism industry is a key opportunity for the area and further recognition is given to the coastal environment and the need to protect and appreciate this important feature of the Shire.

The Strategy outlines other local government studies and strategies that have been adopted and takes into account their objectives in setting key issues and policies under the Local Planning Strategy.

Section 4.4.5 of the Strategy outlines comments in relation to the tourist industry and recognises that due to the coastal location the area is attractive to tourists. The location within 3.5 hours of Perth and the small boat harbour and safe recreational boat launching facilities also add to the attractiveness as do the pristine beaches as a draw card for tourists. It is recognised that the Shire of Irwin will continue to improve visitor facilities and encourage growth in tourist accommodation to make Dongara/Port Denison an end destination holiday location as in the past it has been more of a stopover.

The subject site falls within Policy Area B under the Strategies and Actions section which includes the need to concentrate development and make adequate provision for recreation and the needs of visitors. Strategies and Actions also make further reference to promotion of tourism within the policy area and proper use of natural recreational and serviced coast resource and developing a Tourism Strategy including tourist accommodation and tourist attractions.

The proposal is consistent with the objective of the Policy Area providing a focal tourism point of interest with additional facilities which will improve the experience. Coupled with this is an appreciation of the natural environment, protection of the foreshore reserve and access to the beach which is desirable. Points of interest within the park are also to be provided including interpretation of the history of Dongara and viewing opportunities.

The above appreciation demonstrates that the proposal is consistent with the objectives of the Shire's Local Planning Strategy and will assist in providing an improved end destination accommodation option.

4.3 Other Strategies

It should be noted that there are a number of other wider strategies that are relevant to the Shire and this includes but is not limited to the Shire of Irwin Coastal Development Strategy, Batavia Coast Strategy, Central Coast Regional Strategy and Geraldton Regional Plan. These strategies all promote the importance of tourism and coastal environmental protection which is embodied into the proposal and is therefore in keeping with the broader strategic framework.

4.4 SPP No. 2.6 State Coastal Planning Policy

The Scheme makes specific reference to the proposal having due regard for the Coastal Planning Policy particularly in relation to foreshore management. The objectives of SPP 2.6 include protecting, conserving and enhancing coastal values, provide public foreshore areas and access to these on the coast, ensuring and identifying appropriate sustainable use for tourism and to ensure the location of coastal facilities taking into account coastal processes, erosion, storm surge, tides and other related natural elements.

Policy measures include coastal foreshore reserves and planning considering physical environments and to protect these.

The implications of SPP 2.6 have been carried over into the Local Planning Strategy and other strategies which support the proposed Local Development Plan. In summary, the proposed Foreshore Management Plan objectives explained later in this report endeavour to protect the foreshore environment and rehabilitate areas that have been affected, direct public access at an appropriate location and southwards towards the South beach which is the obvious usable area of coast in this locality, implement a hard edge to the caravan park/chalet park activity and introduce signage. The strategies employed in the Foreshore Management Plan are therefore cognisant of SPP 2.6 and its recommendations.

4.5 Planning and Development (Local Planning Schemes) Regulations 2015

Under the above regulations which will become operative on the 19th October 2015, the provisions dictate the process and requirements for a Local Development Plan which will serve the function of an ODP as termed under the Scheme. The proposal takes into account these requirements which include setting out specific and detailed guidance for future development including site and development standards that are to apply and exemptions from the requirement to obtain development approval for development in the area to which the plan relates.

Information to be supplied with the Local Development Plan is in keeping with requirements of the Scheme and previous advice of the local government and it is considered the plan is also produced in an appropriate form.

The process identified for consideration of a Local Development Plan is noted and significant detail has been shown on the plan so that it can be assessed as appropriate for the purposes of carrying out development in the future without the requirement for a planning approval.

5.0 FORESHORE MANAGEMENT PLAN

Under the Town Planning Scheme No.5 a Foreshore Management Plan is required and this will also assist in defining the foreshore reserve. Advice from the Shire's Planning Department is that this plan should be incorporated into the overall Local Development Plan. A logical section of foreshore reserve to the frontage of the tourist park is therefore included on the plan and further detail provided in this report. The foreshore plan relates to a section of Reserve 42150 which is under the management of the Shire of Irwin for Recreation purposes.

Historical Rehabilitation to Date

In October 2003 the park was purchased by Ron and Sue Saulsman, at that time the park had very old infrastructure and sites where basically spaces carved out of the bush with the exception of ten small sites at the very front of the park that had small concrete slabs for the caravans' annexes. There were no recognisable boundaries; nor designated pathways to the beach. The aerial photograph of the park at that time shows a number of inter connected walkways from the park to the beach. The identifiable walkways disguise the number of smaller sedimentary tracks that interconnected these major walkways and are not easily distinguishable in the photo. Furthermore there were a number of "blow out" gullies that were very exposed to the erosion effects of the strong winds and pedestrian traffic which made natural re-vegetation almost impossible.

In 2005 the first five park homes were placed on the site located at the highest elevation in the park and fronting the ocean. It was then realised the extent of the sand drift occurring along the southern boundary of the park. This sand drift caused primarily by the lack of vegetation was having a negative effect on the cabins and the comfort of our guests.

The combination of blow outs, multiple tracks and walkways and strong winds made it imperative to improve the management of the coastal boundary, addressed in five ways:

1. Stabilising all sand dunes immediately on the boundary to stop the sand drift across the park

2. Stabilising the blow outs on the seaward facing slopes of the sand dunes immediately fronting our boundary

3. Forming natural barriers to limit and ultimately stop pedestrian traffic leaving the park creating random alternative pathways to the beach.

4. Build low impact barriers that controlled and directed movement of pedestrian traffic onto designated pathways through the park leading to the designated pathway to the beach.

5. Created a designated pathway to the beach and promote its use by our guests.

Methods and Outcomes

1. *Rejuvenation and Planting*

The stabilising of the worst erosion namely near and around the five cabins was achieved by importing truck loads of red loam, clay, red river sand and grass.

2. *Brush covering to Stabilise and Stimulate Growth*

The blow outs were more challenging because of their location. The steepness of the terrain and size of the blow outs meant the brush covering used to hold down the sand had to be deep and required countless trailer loads of cuttings to secure the area. Areas that had been covered were soon covered with sand again and had to be re brushed a number of times to gain the stability sought. Brush covering is a process that requires the material to be man handled into position and has proven to be successful and continues today.

3. *Brush Cover as a Deterrent*

To discourage guests and surrounding residents from using undesignated pathways to the beach, brush was used to cover these pathways with natural brush cover that was particularly dense and unforgiving if attempts were made to use the paths.

4. *Low Impact Barriers*

The areas in the park that had the greatest concentration of guests were identified and considered to be the most likely zones where guests may deviate from designated pathways. To encourage them to follow the pathways to the designated pathway to the beach, roped barrier fencing was erected. This acted as a soft marine themed deterrent barrier and worked well.

5. *Building Awareness*

Heightening and building awareness of the work to preserve and rejuvenate the dunes with guests is essential. A map of the park showing sites, cabins and facilities along with the ONLY pathway to the beach is provided to each guest at the time of check in. A brief explanation of how to get to the beach from their particular site is explained and guests are asked to remain on the designated pathways and to refrain from stay off the fragile dunes. This has become part of the check in procedure and it helps create an awareness of the work being done to manage the coastal frontage. This in itself is insufficient to ensure guests follow the directions given at check in and requires staff to remind guests (mainly children) to stay out of the dunes. This is another opportunity to explain why there is a need to protect the dunes and ask for their co-operation and support. This method of trying to gain collaborative support rather than policing infringements of park rules is proving to be most successful.

Coastal Management up to 2015

The southern boundary of the caravan park leads onto a natural reserve. This natural reserve links southward to the life saving club and South Beach which is the preferred beach for swimming because of the cleaner beach condition. Guest movement into the reserve area was noted. Guests and others were entering the southern reserve area to find alternative way to the beach, bypassing the immediate coastal frontage of the park. Children also frequented the southern reserve to play in the dunes and access the beach. The sites on the southern boundary of the park have now been developed. See figure below.



Southern boundary of the park developed with limestone wall and landscaping. A barrier to the southern reserve.

As part of the southern boundary development a 900mm limestone wall was constructed and above that the boundary was landscaped with closely planted Hibiscus trees, Grevilleas and Sheoak trees. This combination of wall and dense landscaping has stopped all pedestrian movement into the reserve.

The further development of cabin accommodation has seen the building of a brick paved walkway adjoining limestone steps cloistered with the use of low impact roped fencing and this has successfully managed guest movement from the cabins to the exit from the park to the beach. See figures below.





Rope fence barriers and brick paved pathways from cabins to beach access walkway

Coastal management is ongoing. Monitoring of the dunes and issues on the beach are part of the management plans of the park and as such are reviewed regularly as part of our maintenance and improvement reviews.

The southern and majority of the western boundaries have now been developed significantly reducing the possibility of access to the dunes and adjoining reserve from pedestrian traffic. The landscaping, walls, roped barriers and brush coverings protect the dunes from guests pedestrian traffic, consequently sand movement has be reduced sufficiently to allow native dunes vegetation to take hold and we are seeing re-growth in what were barren blow outs along both faces of this part of the park. See figures illustrating below.





Native dunes that were once bare of vegetation and badly eroded now secure and showing re-vegetation

Current Coastal Management Issues

The North Western section of the park has not been fully developed at this time. This boundary of the park joins Herbert Street which gives clear access to non guests accessing the beach through the park. Guests in the park are advised that this section of the park is not to be used and are reminded of this when they venture into this area.

The pathway from the park in this section follows the walkway along the cliff face rather than entering and exiting the beach which suggests that it is a pedestrian walkway used by others to ingress and egress this particular section of the coast.

Managing suburban pedestrian traffic along walkways that enter the park without permission meander through dunes and dune vegetation on reserve land is outside of our coastal management authority and responsiblities. The exit from these pathways up from the beach however is through the caravan park, likewise the entry onto these pathways from Herbert Street is also through the caravan park. The management of this pedestrian traffic onto the dunes will need to be done with positive collaboration with local authorities if a long term solution is to be found.



Location and Pictorial Account of Coastal Management Initiatives



Southern boundary showing hard edge finish with landscaping and no tracks leading from the park into the reserve

Western coastal boundary showing good vegetation and no pathways leading from these areas to the beach .

North West Boundary showing pathway leading to the cliffs and around to the marina taking pedestrian traffic from Herbert Street

Main walkway from Park to beach

ONGOING FORESHORE MANAGEMENT AS INDICATED ON THE LDP

The management of the foreshore in association with the park is important given the inter-relationship of caravan park activity and the coast and the desire of occupants to visit the beach particularly southward (to 'South Beach').

Identified issues relevant to foreshore management of this area include:

- recognising hazards and risks associated with extensive seaweed beds particularly across the frontage of the reserve and to the north and fragile cliff areas further north,
- noting the dunes are at the high water mark,
- recognising areas requiring rehabilitation either due to natural 'blow out' or through previous disturbance,
- direction of visitors to the park to one main point of access to the beach and strengthening this pathway system,
- continuing rehabilitation works which includes brushing and seeding of affected areas within the foreshore,
- implementing signage along the beach and adjacent to the edge of the park to advise persons to stay out of conservation areas and fragile dune systems and direct persons to the dedicated beach track,
- allocate signage and deposit visitors to the beach southward avoiding encouragement of beach users to the north where hazards exist and advising beach users to enter that their own risk,
- presenting a hard edge to the foreshore by way of low key fencing and limestone walls to define the edge of the reserve and;
- maintaining post and wire fences about the designated path to the beach to avoid visitors exiting the designated track prior to the beach.

These matters are explained in greater detail below.

Ongoing Rehabilitation

In the past, some areas have been disturbed outside the boundary of the park and there are also historic informal tracks and blow out areas which would benefit from rehabilitation. The owners of the park have had an ongoing program of introducing brush and seeding to promote stability of dunes and prevent unnecessary access to parts of the dune system which are not desirable and would cause further erosion.

These works are to continue and areas are indicatively shown within the foreshore reserve that would benefit from continued works of this nature. Further, sections specifically for rehabilitation either grassed or disturbed are also indicated in three specific locations across the frontage of the park. Rehabilitation will include placement of brush with appropriate species native to the area onto the dune system and working with local environmental groups to promote reseeding of native species within the designated areas. A photographs indicating the success already achieved in this regard are provided below.



Designated track to the beach

There is already a designated track to the beach which has some signage implemented to direct users to this track. The intent is to continue this with improved signage maintenance of post and wire fencing and deposit visitors to the beach at an appropriate location and direct them to the south. Signage at the beach can also advise of risks associated with weed and unstable areas to the north and encourage beach users to access the beach at their own risk and direct them southward to south beach which is better suited to recreational use.



Hard edge to the park/foreshore

A hard edge to the foreshore is proposed with limestone walls along the boundary, low key post and wire or similar fencing which will indicate the edge to the foreshore and prevent access to the foreshore inappropriately. This will also be aided with signage advising of coastal dune rehabilitation areas and directing park visitors to the designated park only. See photo examples below:



Signage

As indicated in the above sections, various signage will be implemented within the park edge to direct people away from coastal dune areas, direct them to the designated path, direct visitors to the south once on the beach and provide signage along the lower edge of the dunes near the high water mark again illustrating the coastal dune preservation area.

Given the higher water mark is essentially at the edge of the dunes no coastal fencing or path is proposed as this would be subject to inundation and erosion. See example below:







The current method being used now for stabilization and rejuvenation of the dunes adjoining the park is brush covering. This is a recognised methodology used along the coast to stabilise bare dunes subject to movement and blow outs due to wind and pedestrian traffic. It is a methodology that is very labour intensive but can relatively quickly create a stable environment for juvenile natural plants to take hold and create a micro environment for juvenile seedlings to reach maturity.

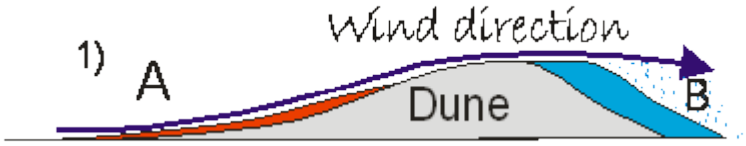
The success of this methodology at the Dongara tourist Park is observable and its significant difference can be demonstrated when comparing the frontal dunes adjoining the park to those dunes either side of the

area covered by the responsibilities of the caravan park. Inspection to confirm our assertions is invited and welcomed.

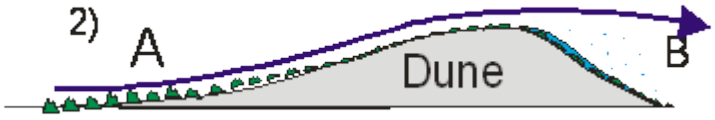
The theory behind the plan

There are many ways of stabilising a sand dune and the bottom line is to stop the sand from moving. If you can't or don't want to cover it in bitumen then the alternative is to slow down the wind close to the surface (a wind break). The material used to do this can be literally anything that will not blow away. If you care about the final appearance then something natural like vegetation is desirable but you have to protect it until it is established and can be its own wind break. If this fails then the sand moves, buries and kills the vegetation and the dune starts moving again. Human and stock (animal) activities on damaged and recovering dunes have a significant influence especially during summer.

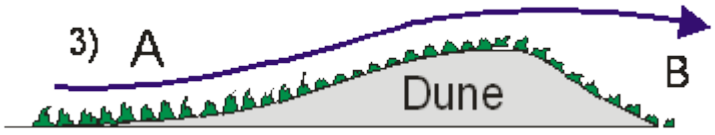
A simplified sand dune is shown in figure 1.



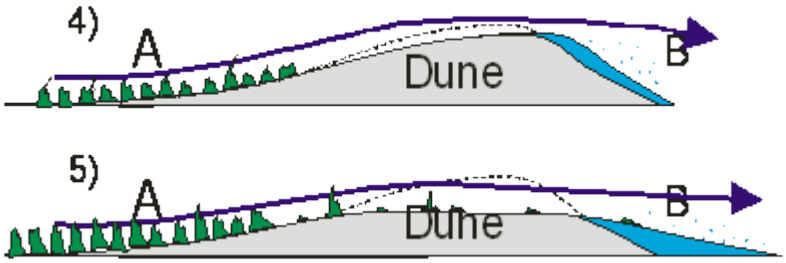
The dune moves or migrates with the prevailing wind by picking up sand from the tail (A) and depositing it on the leading edge (B). If you cover the dune with a layer of material (green) then the wind is forced away from the surface and little or no sand migrates to B as in figure 2.



If the layer is thick enough then the wind at the surface is not strong enough to pickup and move sand as in figure 3.



Ideally you want to cover the whole dune and stop it in its tracks. This requires significant effort and is only possible for small dunes like the one at the southern end of Grey. Larger dunes require a different strategy. The key is to cover the tail (A) as in figure 4. Part of the dune will still migrate but in doing so will take sand from the top of the dune and it will eventually slow down and flatten out as in Figure 5.



Planting if Required

Planning and Considerations

The establishment of any type of plant cover on bare sand requires proper planning. In the past the Shire of Irwin has attempted to plant in sand dunes and blow outs in areas adjoining the park with minimal success. The objective of a planting rehabilitation program must be clearly defined to ensure that re-vegetation is warranted and to determine timing and intensity.

If and when this methodology is required the Dongara Tourist Park will consider:

- What do you want to achieve?
- How urgent is the problem?
- What are the implications of undertaking no treatment, minimal treatment or full treatment?
- What is causing the vegetation decline, and how large is the area that needs to be revegetated?
- Will the area revegetate naturally once it has been stabilised, or are faster results required? Do particular species need to be reintroduced into the area?
- What funding is available/required?
- What is the level of community use of the area, both current and future?
- What local knowledge is available to assist with planning (e.g. nurseries, indigenous Australians, government agencies)?

A program of stabilisation and restoration will be planned according to the location and degree of degradation. Consideration of the plants that have the best chance of survival will be essential recognising that it may take a number of years to achieve a self-sustaining environment.

Use of local native plants is desirable as they are in harmony with each other and their environment. They provide essential food for local insects and other small creatures, and in turn support many local birds and

other animals. Local native plants are already adapted to the local climate and soil type, and as a consequence:

- no or minimal soil preparation is necessary
- watering is reduced to a minimum
- fertiliser requirements are lower or unnecessary.

The following plant types have been identified as most suitable by our advisor;

Halosarcia halocnemoides CHENOPODIACEAE

Shrubby Samphire Low shrub, to 50cm high. Flowers are in terminal spikes. Fruits are separated from each other by a constricted joint, which gives the spike an undulate outline. A widespread and variable species, which includes five subspecies. Flowering January-November Seeding January-March Propagation Seed or cuttings. Harvest mature fruiting segments and spread on ploughed soil a few weeks before wet season.

Halosarcia indica CHENOPODIACEAE

Samphire Low, spreading to robust erect shrub, 0.15-1.3m high. Flowers are in smooth, terminal spikes up to 4cm long. Fruiting spikes are leathery, spongy or corky. A widespread and variable species with three of the four subspecies occurring in Western Australia. Flowering August-November Seeding August-November

Spinifex longifolius POACEAE

Beach Spinifex A stout perennial grass which forms tussocks 1m high and 2m wide, with stems creeping at the base. Leaf blades are narrow, rigid, thick, up to 60cm long. Male and female flowers are borne on different plants. Male inflorescences have spikelets alternately arranged on clustered spikes. Female inflorescences are spherical in outline, up to 25cm across; seeds are clustered at the centre. Female inflorescences are straw coloured when mature, and break off from the stem to be blown away by the wind.

Sporobulus virginicus POACEAE

Marine Couch Tussock-forming, perennial grass with numerous, creeping stems that root at the nodes. Leaf blades are rigid, in rolled, 2-10cm long, with a fine sharp point. Inflorescences are erect, cylindrical in outline with densely grouped spikelets on the central stalk, and dark in colour. Waterlogging tolerant; suitable for lawns. Can be confused with couch Cynodon dactylon, a weed of similar form which has 2-7 digitate, purplish spikes of flowers, each 1-4cm long.

Carpobrotus virescens AIZOACEAE

Coastal Pigface Creeper. Leaves are succulent, thick and triangular in crossection. Attractive flowers have pink-purple petals which are white at the base. Distinguished from the introduced pigfaces C. aequilaterus which is not white at the base of the pink petals, and C. edulis which has yellow petals.

Scaevola crassifolia GOODENIACEAE

Thick-leaved Fanflower Low, spreading shrub, to 1m high and 3m wide. Leaves are thick, fleshy with serrated margins and usually have sticky stems. Flowers are in terminal spikes, blue or white with 5 fan-shaped lobes. Very hardy.

Olearia axillaris ASTERACEAE

Coastal Daisy Bush Medium, dense, rounded shrub, 1-2m tall. The silvery ornamental leaves, 12mm long and 2mm wide, are aromatic and covered in woolly hairs. Flowers are small and white. Adaptable, hardy, very lime tolerant.

GF Craig/ Dept of Agriculture.

Concluding comments

It is considered that the rehabilitation plan and recommended actions associated with foreshore activity will ensure that ongoing maintenance of the foreshore will occur and the intention is that the main elements of this will be implemented within two years of adoption of the Local Development Plan. This will deal with any potential informal use of dunal areas and direct guests appropriately to the beach at a designated location.

6.0 BUSHFIRE MANAGEMENT PLAN

Recent modifications to the Western Australian Planning Commission Policy for Bushfire Management and introduction of Regulations have resulted in designation of many areas of the state as bushfire prone. This has brought about the need to consider this issue for any proposal for development within proximity of vegetation. Although the subject site is already considerably developed, the extension of development and reconfiguration particularly in the north of the park requires justification and supporting information in relation to bushfire management. A 'Caravan Park' use is considered a vulnerable land use under relevant policy and bushfire management planning and evacuation plans are necessary.

Cognisant of this requirement, RUIC Fire have been engaged to inform the proposal and detailed investigations have occurred and this has resulted in design elements being incorporated into the proposed Local Development Plan to address fire management.

As stated previously, large areas of the park are already developed and are essentially to be unchanged. These areas are generally illustrated in the plan below.

Areas of park already essentially developed



The Bushfire Management Plan and Evacuation Plan are therefore more pertinent to the additional areas for consideration of development but recommendations for the overall park generally are incorporated. The Bushfire Management Plan which has informed this proposal is included at Attachment 2.

In summary, the Fire Management Plan considers the following:

- Accessibility throughout the park;
- A second fire escape to a second public road in addition to the existing entry at Carnarvon Street;
- Recognised turnaround locations within the park for fire tenders;
- Building Attack Level assessments informing establishment of buildings in a BAL29 or better situation (no new buildings are proposed within a BAL40 or FZ situation);
- Preparation of an Evacuation Plan and other recommendations.

It is considered the further improvements to the park and due regard to fire management planning has been given with this proposal and the attached Bushfire Management Plan should therefore be read in conjunction with the proposal as a suitable and responsible approach to the ongoing upgrade and development of the park.

7.0 STORMWATER MANAGEMENT REPORT

To support the Development Guide Plan associated with this proposal a Stormwater Management Report has been prepared by Calibre Consulting dated September 2016. The Stormwater Management Plan is appended for review at Attachment 4.

The objective of the stormwater management strategy will be to adopt best management practices with the objective of protecting and conserving the total water cycle of the local environment and the greater catchment. These practices will involve:

- Stormwater management that incorporates the latest water sensitive urban design elements;
- Opportunities for storm water and waste water harvesting and reuse;
- Protection and enhancement of ecosystems depended on water resources from the subject land; and
- Sustainable water servicing.

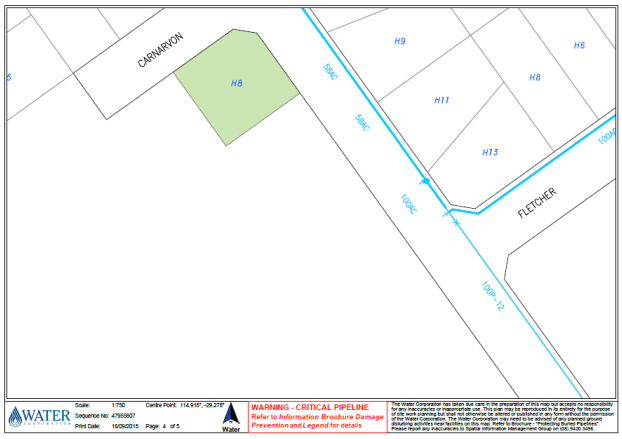
Discussions and recommendations identify that on a local scale there is potential to harvest and re-use a proportion of the rainwater runoff generated by the site. The report also identifies that an annotation be added to the Development Guide Plan referencing the Storm Water Management Report, such that any subsequent detailed storm water management design should be prepared in accordance with the following recommendations:

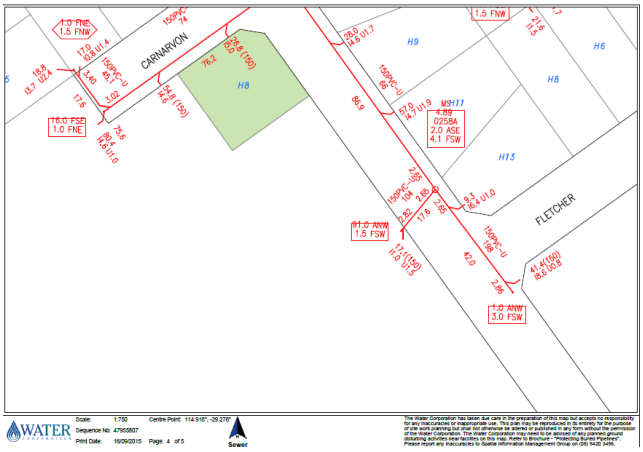
- Storm water from impervious area should be direct to soakwells/leach drains sized to accommodate no less than 1.0m3 of storage for every 62.5m2 of contributing impervious area.
- In the case of roof catchments, as an alternative to below ground soakwells, consideration should be given to the provision of eves tanks with suitable air voids and slow release outlets sized to accommodate no less than 1.0m3 of storage for every 62.5m2 of contributing impervious area.
- Overflows from the above formal on site storage and soakage facilities should be directed to swales and other suitable landscaped areas to take up any bypass flows in the critical 5 year ARI events, with capacities as outlined in Table 3 of the report.
- Overland flow paths should be designed to accommodate any bypass flows in the critical 100 year ARI events with capacities as outlined in Table 4 of the report.

The proposed Local Development Plan is provided at Attachment 1. The Local Development Plan incorporates the provisions which guide the implementation of the plan. In accordance with the report, a provision has been applied to the plan to ensure any subsequent detailed storm water management designs to support future development to be submitted prior to works commencing should have regard for the recommendations of the Stormwater Management Report as prepared for the site dated September 2016.

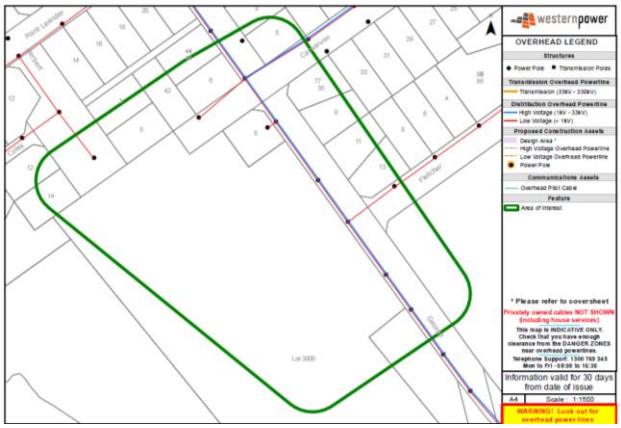
8.0 SERVICING

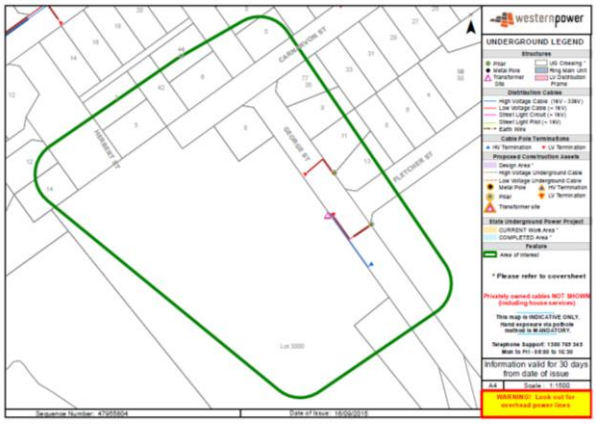
With respect to services, the subject site has available access to the Water Corporations reticulated water supply and various road reserves including George Street. Further, sewerage connection points are also provided from George Street and Carnarvon Street. Figures depicting these available services are provided below.





In relation to power supply and telecommunications this is also available via George Street overhead infrastructure which also is situated in Carnarvon Street. Below ground connection points are also provided at George Street and plans indicating this are provided below.





As evident above, the subject site is provided with all essential services and therefore there is no impediment provided in relation to future development of additional accommodation or activity within the site.

In relation to drainage, it should be noted that the subject site is developed over land that is essentially coastal dunal system. It should also be noted that the adjoining Reserve 32183 in the north east of the site is a Shire managed drainage reserve and a low point within the area. This provides a location where drainage could be directed although this is unlikely to be a major issue. Given the porous nature of the soils, drainage within the park has been with typical sumps and directed to green spaces provided to impervious areas and infiltration into the ground water table has been without complication. It is considered that this method of dealing with storm water in such porous soils can continue with typical drainage sumps and direction to green belts incorporated. Water sensitive urban design principles are employed in accordance with the Shire's Policy.

The existing drainage system on the site has been designed taking into account water sensitive urban design principles including sumps and pipe systems directed to green spaces and landscaping belts. A drainage plan was produced by GHD for the northern parts of the caravan and camping site development and Attachment 3 indicates how the drainage has been installed and connected to green belts and sumps. This thread of design will be carried over into the balance of the park with roads, sumps and green belts/swales utilised for disposal of stormwater. The porous nature of the soils are highly beneficial and any excess can be further directed to the Shire's drainage reserve in the north west of the site.

Stormwater will be contained onsite or directed to the Shire's drainage reserve at a rate no greater than pre-development flows and this will therefore be stemmed by sumps and drainage swales/green belts. Litter traps can also be installed prior to disposal into green areas.

Disposing of stormwater to green areas will effectively enable reuse of the water for landscaping purposes. The Stormwater Management Plan appended at Attachment 4 provides further detail in the management of stormwater associated with the site and an annotation on the Development Guide Plan will ensure that future development on site will have regard to the recommendations of this report.

9.0 CONCLUSION

The proposal is direct reflection of the zoning for the land which is clearly for caravan park, chalet park, camping ground and incidental uses. The requirement for a Local Development Plan is essentially to ensure that the park can be developed with one overall plan in mind taking into account the sites location and foreshore management interrelationship.

It is clear from the review of the strategic planning framework that the subject site has been identified as an important tourism site and it is an objective to promote enhancement of such facilities so that the townships of Dongara and Port Denison continue to be promoted more of an end destination for tourists. The improvements proposed with the Local Development Plan appended to this report will clearly complete the park with facilities that are to achieve this objective. The recent development by the owners shows an excellent example of the intentions for the site with redevelopment in the north particularly a feature.

The proposal includes provision of excellent recreation facilities and points of interest including look out and historical interpretation of the Dongara area.

Rehabilitation of the foreshore and directing access to an appropriate location with signage and a hard edge to the park will also be consistent with foreshore management objectives for the area.

The proposed Local Development Plan has been tailored to also be consistent with the *Caravan and Camping Regulations and Act.*

The proposal will be a significant investment for the owners and one that will ensure that the park continues to be an important asset for the Shire and a strong draw card for the tourism industry in an appropriately zoned location. Support for the Local Development Plan is respectfully requested accordingly.