



MASTER PLAN

KARRATHA CEMETERY

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EXECUTIVE SUMMARY

This master plan has been prepared to ensure the Karratha Cemetery is maintained at a level that meets community expectations and addresses concerns regarding the amenity and level of service.

Karratha Cemetery was opened in 1989 and is strategically positioned between Dampier and Karratha to provide service to both towns. The total area of the reserve is 6.9994 hectares, of which the current developed area is 3.0657 hectares. In total there are 735 single plots available under the current developed area, of which 116 have been allocated and 1 reserved (as at 27/12/2013). In addition there are 39 double plots and 27 family plots. Based on data collated for 2012 (12 burials) the current developed area can meet burial demand for the next 51 years.

Therefore given the extended period of time the cemetery will be operational it is prudent to not only address community concerns regarding the current condition and amenity of the cemetery but consideration should be given to implementing infrastructure upgrades to enhance and improve the functionality and amenity of the facility.

This report has been compiled with guidance from Council and in consultation with Parks & Gardens Department, Works Department, Technical Services Department and Community Services and also takes into consideration legislative requirements, guidelines and Australian Standards and provides recommendations for the following site elements:-

- [Entrance Area](#) - the primary importance of the entrance area is to create a sense of arrival at a special place. The entrance area should portray the significance and dignity of the cemetery without overpowering visitors
- [Roadway System](#) - the hierarchy of roads in the cemetery requires a divided two-lane road leading into a system of primary, secondary and internal roads. The roadway system should allow the funeral cortege to proceed in a forward direction wherever possible
- [Site furnishings](#) - the components of the site furnishings should coordinate with and complement each other and the cemetery as a whole. Site furnishing should include signage, benches, rubbish receptacles and perhaps flower container/water receptacles.
- [Interment Areas](#) – are those portions of the cemetery acreage that are developed for burials of caskets, they should generally conform to the existing terrain.
- [Planting](#)
- [Irrigation System](#)

The report is divided into two sections:-

- The first provides immediate recommendations for improving the general amenity of the cemetery, and
- The second provides options for permanent improvements and upgrades.

SECTION ONE

ENTRANCE AREA

Entrance to the cemetery is gained via the Dampier Highway. The driveway into the cemetery is sealed with a plantation of semi and mature native vegetation screening:-

- the sealed parking area on the right hand side, and
- the ablution block adjacent to the car park (also on the right hand side)

The driveway leads to an entrance statement consisting of iron gates with a feature rock wall on either side.

The overall impression of the entrance statement is good however with little expenditure it could be improved to create a more pleasing impression, particularly:-

- Driveway/car park – the existing road surface and kerbing is in sound condition and does not require any maintenance, however the general amenity would be improved by regular road sweeping. Consultation with Waste Department confirms this will occur on a quarterly basis once the new street sweeping contract begins.
- Native vegetation plantation – mow/brush cut grass and remove deadwood and non native vegetation. Replant with eucalypt trees.
- Entrance
 - the existing gates are in sound condition however the paint is faded and should be sanded and repainted.



ROADWAY SYSTEM

On entering the gates access to the interment areas is provided by formed perimeter roads that are sealed along the front and gravel along the side and back perimeters. Central Avenue is immediately in front of the entrance gates and is primarily gravel.

The existing interment roads are approximately 7 metres wide with a graded natural surface. The opportunity presents itself to improve the overall amenity of these roads with minimal costs by grading a more level surface. This can be achieved using existing Shire equipment.

Section 2 provides further detail on permanent improvements to the roadway system.

PLANTING

The landscape design at Karratha Cemetery is structurally sound and requires minimal maintenance to bring it up to standard. The entrance area issues have been discussed in an earlier section however after consultation with Parks & Gardens Coordinator, the following recommendations are made:-

Perimeter Roads:-

- Yellow flame trees line the internal and external boundaries of the perimeter roads, however a number are stunted or dead. These should be removed and replaced with trees that conform to the existing species.
- Maintenance pruning be undertaken to restore shape and form.
- All trees should be re-staked as required.

Interment Areas:-

- To alleviate the stark and harsh appearance of the interment areas it is recommended that Poinciana's be strategically planted along the rows to provide visitors/mourners with shade and soften the general amenity of the area. These would provide an ideal location for additional benches.
- Pink trumpet trees be planted between the yellow flame trees, thus providing contrast to existing species and a more pleasing visual effect.

Memorial Niche Wall

It should be noted there are no facilities available within the Shire of Roebourne for cremations however Karratha Cemetery provides a niche wall for interment of ashes should residents wish to relocate ashes of loved ones.

The niche wall which is located at the end of Central Avenue provides a focal point when entering the cemetery. However the area surrounding the niche wall could be enlarged and enhanced to compliment the existing fauna. It is recommended:-

- Maintenance pruning of yellow flame trees occurs to provide symmetry.
- Expand the fauna area surrounding the niche wall.
- Mass planting of bougainvillea's to provide definition to the niche wall area.

IRRIGATION SYSTEMS

Karratha Cemetery has a fully automated irrigation system however the system was compromised during recent road works and requires maintenance to reinstate the flow of water. Additional irrigation lines will need to be installed to accommodate any plantings within interment areas.

SECTION TWO

SITE FURNISHINGS

Seating

Karratha Cemetery has several bench seats positioned throughout the cemetery, a number of which have been installed by members of the community. It is recommended:-

- Additional seating be located at strategic positions throughout the interment area to provide mourners with a place for quiet reflection.

Shade Structures

As rows within the interment areas become fully occupied thought should be given to a staged approach to planting Poinciana's strategically along the rows to provide visitors/mourners with shade and soften the general amenity of the area. These would provide an ideal location for additional benches.

Another option is to provide a fixed permanent shade structure at the end of Central Avenue. This structure would provide a focal point on entering the cemetery and also provide a shaded space under which services could be held. (Attachment A) Consideration was given to the provision of 240v power to the structure, however as there are a number of PA systems available that operate on battery power, it was considered the cost of supplying 240v power would be excessive.

Note: Due to operational requirements the location and permanent placement of seating/shade trees cannot be determined until each row is fully occupied.

Rubbish Receptacles

There are two rubbish receptacles and discussions with Waste Department indicate this number is sufficient for operational needs.

Signage

There is a place identification sign located on the Dampier Highway however there is no internal signage. Additional signage to be erected should include:

- Site Directory located at/near entrance.
- Directional signs indicating location of grave numbers.
- Burial Section markers to indicate individual graves.

INTERMENT AREA

There are two interment areas at Karratha Cemetery which are bordered by the perimeter roads and Central Avenue. Both interment areas have been utilized to some degree however the interment area to the left of Central Avenue has the greater number of graves.

Grave alignment

The area to the left of Central Avenue is primarily designated for single graves, however there are one or two double plots. A review of alignment techniques employed in other cemeteries has identified a “strip” footing of approximately, 400mm x 300mm, on which grave identification numbers can be stencilled and to which the **head** of graves abut on each side, as suitable for our purposes. Employing this technique would significantly improve the alignment and identification of graves.

The alignment of graves at Karratha Cemetery is not as problematic as Wickham-Roebourne Cemetery however the use of strip footings would aid in the identification of plots and ensure alignment issues do not arise in the future.

The interment area to the right of the Central Avenue contains a small number of single and family plots that are occupied. It is recommended that a similar treatment as used in the current area be adopted to aid with grave alignment, however this could be staged over a number of years.

Grave Identification

A review of the grave identification system currently employed at both cemeteries indicates the existing system is confusing and prone to errors. It is recommended that the system be replaced with a simple numbering system whereby each grave is given a sequential number and the current system of alpha/numeric identification cease. New numbering can be stencilled onto the proposed strip footing.

Grave Site Maintenance

The Shire’s Cemetery Local Laws outline restrictions on the use of wood, private planting of trees/shrub and the removal of withered flowers etc. It does not however provide guidance for the personalization of graves or provide the Shire with the authority to apply a uniform standard to grave sites. It should be noted the Local Laws are currently under review by Corporate Compliance, and this issue is being considered.

It is understood that the adornment of grave sites is an extremely personal and emotive issue, however the current overall impression of grave sites is one of neglect. Due to the extremely dry climate some sites have suffered compaction and require backfilling, some are adorned with weathered artificial flowers or other sentimental items.

Given limited water availability it is not possible to “turf” the grave sites, as would occur in more clement environments, therefore a material ie: gravel mulch, could be used to provide a more uniform appearance to the grave sites and blend in with the surrounding landscape.

To implement this suggestion would be quite expensive and could prove to be contentious as it would involve the removal of all artefacts (except headstones) levelling of the grave site area and covering with gravel mulch. To retain the gravel mulch within each section semi mountable kerbing would need to be laid.

For this reason detailed quotes have not been obtained and Council is requested to consider whether it has an appetite to proceed with this recommendation. However indicative cost for supply and delivery of the gravel mulch are in the vicinity of \$27,600 (excluding labour for laying and removal of artefacts) and kerbing \$25,800.

Note: Due to operational requirements the laying of gravel mulch and kerbing can only occur once each section is fully occupied.



ROADWAY SYSTEM

Central Avenue and Perimeter Roads

The first portion of Central Avenue is sealed however the remaining length is gravel. The perimeter roads are sealed along the front and gravel along the side and back edges.

A number of road surface treatments have been considered however having regard to existing surfaces, climatic conditions and longevity of the road system it is recommended that all roads be treated with a two coat seal.

Interment Roads

As mentioned in the Executive Summary the roadway system should allow the funeral cortege to proceed in a forward direction wherever possible. Due to the location of several occupied grave sites within the interment section to the left of Central Avenue this is not possible, therefore turning circles should be incorporated into any internal road design.

Future planning for the interment section on the right of Central Avenue has addressed this issue and ensures a forward direction has been incorporated into the design.

Note: Due to operational constraints interment roads cannot be sealed until rows are fully occupied. Currently no interment roads at Karratha Cemetery can be sealed.

Councillors have recently indicated their wish that only Central Avenue be sealed at this stage therefore costings have only been obtained to accommodate this request.

Pathways

As mentioned above, alignment of several graves in the interment section to the left of Central Avenue makes it impossible to continue the road, thus providing a natural connection with Central Avenue. It is therefore necessary to install pathways to direct foot traffic from Central Avenue into the interment areas. This can be achieved by extending the two coat seal towards Central Avenue as and when each interment road is laid.

COSTINGS

Element	Expenditure
Vegetation/irrigation maintenance and upgrade	16,148.00
Renovation of entrance gates	2,800.00
Strip footings for grave alignment	160,000.00
Signage and seating	9,830.00
Two coat seal of Central Avenue	33,000.00
Supply and installation of shade structure	32,450.00
Total	254,228.00

IMPLEMENTATION

Vegetation/irrigation maintenance and upgrades - Parks & Garden Coordinator indicates these works will be carried out by contractors and will not have an impact on current work programs.

Refurbishment of the gates - will be carried out by a local contractor and can be undertaken on adoption of this Master Plan.

Signage and seating - Works Department have confirmed the installation can be incorporated into current work programs.

Strip footing/kerbing and two coat seal – work will be carried out by local contractors and can be undertaken on adoption of this Master Plan.

Shade structure – supply and installation will be undertaken by contractors and can be implemented on adoption of this Master Plan.

The figures quoted in the above table have been provided by contractors and are based on current rates. Additional costs for mobilisation/demobilisation may be incurred depending on contractor availability at time of engagement, however timing of works can be scheduled to minimise mobilisation/demobilisation costs.

The above works will not impact on the Parks & Gardens work program and Works Department have confirmed the installation of signs and seating can be incorporated into the work program for 2014/15.

LEVEL OF SERVICE

The 2013/14 Budget provides a total of \$60,741.00 for maintenance **and** burials. This figure equates to five staff hours per week over the Karratha, Wickham-Roebourne and Roebourne Town cemeteries - a total of 1.66 hours per cemetery per week. Discussions with Parks & Gardens Coordinator indicate that to achieve the level of service recommended in the current Cemetery Operational Level of Service document, an increase to budget allocations will be necessary. To achieve the level of service outlined in the following pages, an additional hour per week per cemetery (total of 3 hours) will be required. This would result in an increase of approximately \$15,000 to the existing budget.

Under the current Cemetery Operational Level of Service document Karratha Cemetery has been identified as Type A asset with the following recommendations in regard to proactive and reactive inspection and maintenance regimes.

Asset	Type of Inspection	Detail of task	Frequency/Response Time			Performance Target
			Type A	Type B	Type C	
Proactive Inspection Regime:						
Cemetery	Routine Maintenance and compliance inspection to determine compliance with the approved intervention levels and to determine risks.	Inspections are carried out by Shire staff or contractor on a regularly basis to pick up the defects and to determine the works requirement so as to ensure that it is fit for purpose and safe to use.	Fortnightly	Monthly	Annually	80%
Reticulation	Routine Maintenance and compliance inspection to determine compliance with the approved intervention levels and to determine risks.	Inspections are carried out by Shire staff or contractor on a regularly basis to pick up the defects and to determine the works requirement so as to ensure that it is fit for purpose and safe to use.	Fortnightly	N/A	N/A	80%
Furniture, Fencing, Signs, Walkways and Miscellaneous assets	Routine Maintenance and compliance inspection to determine compliance with the approved intervention levels and to determine risks.	Inspections are carried out by Shire staff or contractor on a regularly basis to pick up the defects and to determine the works requirement so as to ensure that it is fit for purpose and safe to use.	Monthly	Monthly	Annually	80%
Water Services	Routine Maintenance and compliance inspection to determine compliance with the approved intervention levels and to determine risks.	Inspections are carried out by Shire staff or contractor on a regularly basis to pick up the defects and to determine the works requirement so as to ensure that it is fit for purpose and safe to use.	Fortnightly	N/A	N/A	80%

Asset	Type of Inspection	Detail of task	Frequency/Response Time			Performance Target
			Type A	Type B	Type C	
Reactive Inspection Regime:						
Cemetery	Response inspections of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Primary inspection for any defect or damage reported or work requests related to Cemetery areas for the type of tasks as listed below.				80%
		Mowing	5 Working day	5 Working days	5 working days	80%
		Brush Cutting	5 Working day	5 Working days	5 working days	80%
		Light Pruning	5 Working day	5 Working days	5 working days	80%
		Heavy Pruning & Tree Removal	5 Working day	5 Working days	5 working days	80%
		Grave Maintenance	1 Working day	1 Working days	1 working days	80%
		Litter Pickup	5 Working day	5 Working days	5 working days	80%
		Spraying	1 Month	1 Month	1 Month	80%
Reticulations	Response inspections of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Primary inspection for any defect or damage reported in relation to Reticulations which can affect the operation of the system.	1 Working day	N/A	N/A	80%
Furniture, Fencing, Signs, Walkways and Miscellaneous assets	Response inspections of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Primary inspection for any defect or damage reported for the Furniture, Fencing, Signs and Miscellaneous assets.	1 Working day	1 Working days	1 Working days	80%

Asset	Type of Inspection	Detail of task	Frequency/Response Time			Performance Target
			Type A	Type B	Type C	
Cemetery and related assets	Response inspections of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Primary inspection for any Cemetery and related assets damaged by graffiti or vandalism.	1 Working days	1 Working days	1 Working days	80%

Asset	Type of Inspection	Detail of task	Frequency/Response Time			Performance Target
			Type A	Type B	Type C	
Proactive Maintenance Regime:						
Cemetery	Routine maintenance of assets are carried out as a in order to comply with the legislation, keep the asset fit for purpose, make it safe or ensure safety for the user and maintaining the asset service levels at regular intervals.	Any proactive work carried out as a routine maintenance to keep the asset safe, fit for purpose and maintains the asset service levels and standards. It also reduces the possibility of a reactive maintenance.				
		Mowing	Monthly	As needed	As needed	80%
		Pruning	Bi-Annually	As needed	As needed	80%
		Brush Cutting	Monthly	As needed	As needed	80%
		Tree Planting	Yearly	As needed	As needed	80%
		Reticulation	Fortnightly	As needed	As needed	80%
		Litter Pickup	Fortnightly	As needed	As needed	80%
		Spraying	Quarterly	As needed	As needed	80%
		Grave Maintenance	Monthly	As needed	As needed	80%

Asset	Type of Inspection	Detail of task	Frequency/Response Time			Performance Target
			Type A	Type B	Type C	
Reactive Maintenance Regime:						
Cemetery	Response maintenance of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Any reactive work carried out as a consequence of customer request and/or findings from inspections in relation to Cemetery assets to keep the asset safe, fit for purpose and maintains the asset service levels and standards.	Take remedial action (erect appropriate barriers, signs) and/or undertake temporary repair and/or permanent repair as indicated below. Permanent repair can take long time as indicated and should not be always considered as mentioned below due to the constraints of resources and material in the remote area. All practical steps will be taken within this time frame to ensure that the asset is safe for general public to use. If the asset is deemed to be unsafe and can not be made safe within time frame mentioned below, it will be closed for general public to use.			
		Mowing	5 Working days	5 Working days	5 Working days	80%
		Brush Cutting	5 Working days	5 Working days	5 Working days	80%
		Light Pruning	5 Working days	5 Working days	5 Working days	80%
		Heavy Pruning & Tree Removal	5 Working days	5 Working days	5 Working days	80%
		Grave Maintenance	1 Working day	2 Working days	1 Week	80%
		Litter Pickup	5 Working days	5 Working days	5 Working days	80%
		Spraying	2 Months	2 Months	2 Months	80%

Asset	Type of Inspection	Detail of task	Frequency/Response Time			Performance Target
			Type A	Type B	Type C	
Reticulations	Response maintenance of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Any reactive work carried out as a consequence of customer request and/or findings from inspections for defects related to the Reticulations to keep the asset fit for purpose and maintain the asset service levels and standards.	Take remedial action (erect appropriate barriers, signs) and/or undertake temporary repair within 1 working day and/or permanent repair within 30 days depending upon the availability of materials and resources.			80%
Furniture, Fencing, Signs, Walkways and Miscellaneous assets	Response maintenance of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Any reactive work carried out as a consequence of customer request and/or findings from inspections for defects related to Furniture, Fencing, Signs and Miscellaneous assets to keep the asset fit for purpose and maintain the asset service levels and standards.	Take remedial action (erect appropriate barriers, signs), undertake temporary repair within 5 days. Permanent repair time depends on the availability of materials and resources.			80%
Cemetery and related assets	Response maintenance of assets are carried out as a consequence of the notification from stakeholders to verify compliance with maintenance standards, to determine the risk and working out the methodology to eliminate or to minimise the risk.	Any Cemetery and related assets related asset damaged by graffiti and vandalism.	Take remedial action and/or undertake temporary repairs within 24 Hours of inspection and/or undertake permanent repair within 48 Hours of inspection for offensive graffiti and 10 days for other graffiti.			80%

ATTACHMENT

ATTACHMENT A

Shade Structure



Attachment A