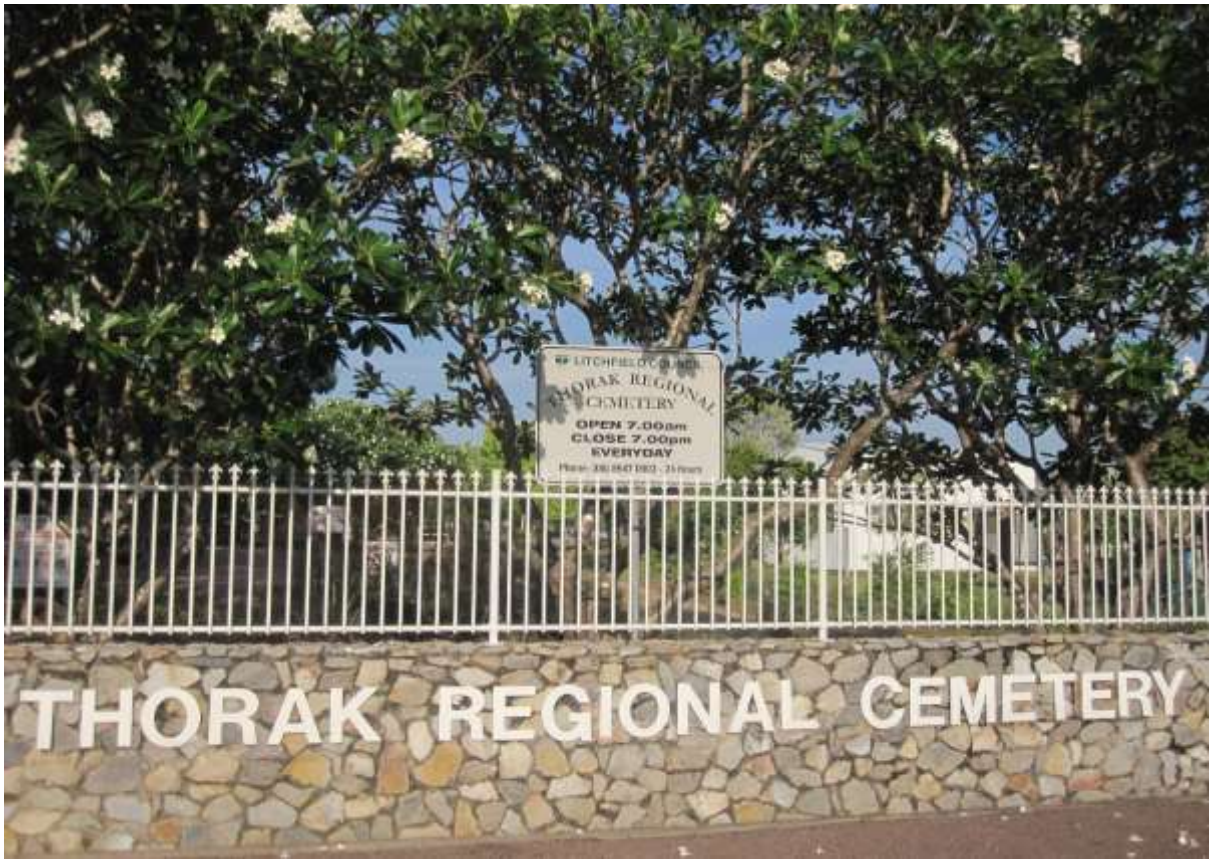
Litchfield Council

Thorak Regional Cemetery

Asset Management Plan



August 2018

Document Control	Asset Management Plan

Document ID : NAMSPLUS Concise Asset Management Plan Template_V2_170508

Rev No	Date	Revision Details	Author	Reviewer	Approver
1	Aug 2018	First AMP	NS	SM	Board
2					
3					
4					
5					
6					
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Responsibility Table

S.N.	Description of Job	Responsibility Officer	Due Date
1	Implementation of Plan	Manager TRC	After adopted by Board
2	Update of Cemetery Asset Management Plan	Asset Management Officer	October 2020
3	Enhanced awareness of Asset Management	Asset Management Officer	Throughout year
4.	Revaluation of Thorak Regional Cemetery Assets	Finance Manager	June 2021

Cover Photo: Thorak Regional Cemetery

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1 EXECUTIVE SUMMARY

1.1 The Purpose of the Plan

The purpose of the Thorak Regional Cemetery Asset management plan is to identify the required investment in assets to provide a financially sustainable level of service at an acceptable level of risk, within statutory and legislative requirements to present and future residents of the Greater Darwin Region.

Whilst the plan forecasts for the next twenty years to show the effect of asset renewal cycles, analysis in the plan focus on the financial and service level impact over the coming ten years.

1.2 Asset Description

The Thorak Regional Cemetery assets comprises:

- Building and Infrastructure
- IT Equipment
- Vehicles

These infrastructure assets have value estimated at $2,705,000. The cemetery asset management plan does not include the land on which the cemetery resides as this is the property of the Northern Territory Government.

1.3 Levels of Service

Thorak Regional Cemetery is serving the population of the Greater Darwin Region. The key issues and challenges are outlined below:

• Deteriorating financial income from cremations and burials over the last few years, due to a change in trend from burials to cremations;

• Establishment of a private enterprise cremator in the NT in 2011 seen Thorak's income drop by 65%, affecting revenue by approx. $180K per annum;

• The inability to finance renewal and upgrade of necessary assets in line with the Master Plan and continue to deliver service on an acceptable level in the long term;

• Absence of a funding model to contribute to the cost of running a regional service, to avoid Litchfield ratepayers having to subsidise a regional service through rates;

• Increased diversity in culture and religion of the population are increasing the need for new service deliveries;

• An increase in pressure on operation and maintenance budgets due to the decrease in income; and

• Changing environment of technology, legal, economy and burial practices.

1.4 Future Demand

The main demand for new services are impacted by:

- Diverse Population,
- Demographics,
- Economic factors,
- Access for all,
- Death ratio.

These will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand.

1.5 Lifecycle Management Plan

What does it Cost?

The projected outlays necessary to provide the services covered by this Asset Management Plan (AM Plan) include operations, maintenance, renewal and upgrade of existing assets over the 10-year

planning period is $13,629000 or $1,363,000 on average per year.

1.6 Financial Summary

What we will do

Estimated available funding for the 10-year period is $8,845,000 or $885,000 on average per year as per the long term financial plan and budget forecast. This equates to 65% of the cost to sustain the current level of service at the lowest lifecycle cost.

In cooperation with City of Darwin and City of Palmerston, Council is seeking assistance from the Northern Territory Government for the establishment of a ministerial board with funding provided by the Government to ensure this regional service can continue to be provided at an acceptable level.

What we cannot do

We currently do **not** allocate enough funding to sustain these services at the desired standard or to provide all new services being sought. Works and services that cannot be provided under present funding levels are new/replacement of assets as outlined in the Master Plan and major extensions of the cemetery to cater for the increased diversity of the Greater Darwin Region.

Managing the Risks

Our present funding levels are insufficient to continue to manage risks in the medium term.

The main risk consequences are:

- Increased exposure to liability and injury through outdated and/or unmaintained public assets,
- Increased costs to reinstate degraded assets, and
- A further decrease in income from fees and charges, due to an unacceptable service.

We will endeavour to manage these risks within available funding by:

- developing proactive, effective and efficient operational and maintenance programs,
- Increasing inspection frequency, and
- Focusing on advertisement and increasing exposure of cemetery services to the market.

1.7 Monitoring and Improvement Program

The next steps resulting from this asset management plan to improve asset management practices are:

- Continue development and implementation of data capture,
- Continue monitoring operation and maintenance budget and actual expenditure,
- Continue identifying operational efficiencies to free up funding for asset renewal and improvement,
- Review asset related data and long term financial plans,
- Develop and implement maintenance schedules for all assets.

2. INTRODUCTION

2.1 Background

This asset management plan communicates the actions required for the responsive management of assets (and services provided from assets), compliance with regulatory requirements, and funding needed to provide the required level of service over a 20-year planning period.

The asset management plan is to be read in connection with several Litchfield Council documents, including, but not limited to:

- Municipal Plan 2018-19
- Strategic Plan 2018-2022
- Long- Term Financial Plan 2017/18 to 2026/27
- Asset Management Policy INF01
- Thorak Regional Cemetery Master Plan dated 03/06/2015
- Thorak Regional Cemetery Service Review dated October 2016

The infrastructure assets covered by this Asset Management Plan are shown in Table 2.1.

The Thorak Regional Cemetery is placed on 26 hectares and is the only open cemetery in the Greater Darwin Region. The current service provision occupies around just under 50% of the complete site, approximately 13 hectares. It opened in 1988 and the crematorium facility was first built in 1990. The small office building and workshop shed are located at the entrance of the cemetery. Furthermore, at the entrance to the cemetery a residential dwelling is located, which had been established originally as a caretaker facility. The chapel and crematorium are located in the centre of the site. Several roadways and car parks as well as footpaths are making up the internal network. Overall, the major infrastructures on site include;

Table 2.1: Assets covered by this Plan

Asset Category	Quantity	Replacement Value
Building and Infrastructure (two bores, water tanks, office building, shed, dwelling, roads, cross road culverts, side drains, footpaths, gardens, irrigation reticulation, chapel, cremator, gate, fence, beams and kerbing)	42	$2,403,600
IT equipment (Staff ICT, Chapel Audio-Visual system)	4	$3,450
Vehicles & Equipment (cars, trailer, digging equipment)	9	$298,095
TOTAL		**$2,705,000**

2.2 Goals and Objectives of Asset Ownership

Our goal in managing infrastructure assets is to meet the defined level of service (as amended from time to time) in the most cost effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Providing a defined level of service and monitoring performance,
- Managing the impact of growth through demand management and infrastructure investment,
- Taking a lifecycle approach to developing cost-effective management strategies for the long-term that meet the defined level of service,
- Identifying, assessing and appropriately controlling risks, and
- Linking to a long-term financial plan which identifies required, affordable expenditure and how it will be allocated.

Other references to the benefits, fundamentals principles and objectives of asset management are:

- International Infrastructure Management Manual 2015 [1]
- ISO 55000[2]

[1] Based on IPWEA 2015 IIMM, Sec 2.1.3, p 2| 13
[2] ISO 55000 Overview, principles and terminology

3. LEVELS OF SERVICE

3.1 Customer Research and Expectations

Council is currently providing two distinctive services on the side of the Thorak Regional Cemetery. In line with Section 184 of the Local Government Act NT, Council is required to operate the side as a public cemetery due to side being within the Litchfield Municipality boundaries. Council is providing this service in line with all legislative requirements for public cemeteries. Ancillary services are provided from the chapel hire and sales of burial related accessories.

Furthermore, Council is providing a service in the form of the cremator, which is a commercial operation on the same site. Council is not required to provide this service by legislation but has to follow legislative requirements in providing this service.

In the public domain the two services are not distinguished and provided under the same entity, being the Thorak Regional Cemetery. Council believes it is necessary to assess the services together at this point in time to establish a plan for the site in the first instance.

The Litchfield Council 2018 Community Survey measured residents level of satisfaction with various Council services. The community survey reported satisfaction levels for Cemetery services as follows:

Table 3.1: Community Satisfaction Survey Levels

Performance Measure	Importance Level
	% Very Important and Somewhat Important
How important are the cemetery services in your area?	61.67%

Performance Measure	Satisfaction Level	
	% Excellent & Good	% Not Good & Poor
How satisfied are you with the cemetery services in your area?	96%	4%

Compared to the results of the Community survey undertaken in 2017 the importance for residence has increased by 3.85% (57.82 % in 2017) but the satisfaction of the service has reduced with 1% increase of residents judging the service as Not Good or Poor (3.01% in 2017).

This is an indication for a perceived reduction in service level by residents, which could be influenced by the aging infrastructure.

Community satisfaction information is used in developing the strategic plan and in the allocation of resources in the budget. The community survey is available on Council's website.

3.2 Strategic and Corporate Goals

This asset management plan is prepared under the direction of the Litchfield Council's vision and major roles.

The vision is for a place where personal, social and community wellbeing that stem from four unique attributes which are rarely, if ever, found together:

1. Family-friendly and Connected: We are a community where it is easy to get to know people and be around them, where it is ideal for family living with plenty of activities, and where it is safe.

2. Natural and Scenic: We have large blocks, with attractive scenic outlooks, lots of native wildlife, and we take pride in our places being beautiful and clean.

3. Spacious, but close to everything: While we have plenty of space to grow, you can get around easily and everything you need is close by.

4. Opportunity and prosperity: We are one of the most productive parts of Australia, with almost full employment, strong industries and business, and it is never too far to travel to work.

Council's six (6) major roles and how these are addressed in this asset management plan are:

Table 3.2: Major roles and how these are addressed in this Plan

Major Roles	How Council's major roles are addressed in AM Plan
Service Delivery	Meet the social and community interest
Advocate	Survey of major services
Fund	Planning of budget as per necessity
Regulate	Develop and review of Council policies
Work with Community	Welcoming and providing safe environment
Partner	Work with other agencies

3.3 Legislative Requirements

There are many legislative requirements relating to the management of assets. These include:

Table 3.3: Legislative Requirements

Legislation	Requirement
Local Government Act NT	Sets out role, purpose, responsibilities and power of local government including the preparation of long term financial plan supported by asset management plans for sustainable service delivery.
Cemeteries Act and Regulation NT	Sets out roles and responsibilities of Cemetery Management in NT.

Legislation	Requirement
Building Code of Australia	Enable the achievement of nationally consistent, minimum necessary standards of relevant safety, health, amenity and sustainable objectives efficiently.
Disability Discrimination Act (Commonwealth)	Aims to eliminate, as far as possible, discrimination against persons on the ground of disability in the areas of access to premises and the provision of facilities and services.
Planning Act NT	Adequate management, development and conservation of natural resources.
Australian Standards	To ensure infrastructure provides service for all.
Work Health and Safety Act	Provide a safe work environment for workers on the site.
Environment Protection and Biodiversity Conservation Act (Commonwealth)	Responsibility not to cause environmental harm (e.g. noise pollution, contamination of water).

3.4 Customer Levels of Service

Service levels are defined service levels in two terms, customer levels of service and technical levels of service. These are supplemented by organisational measures. The customer levels of service are presented in table below;

Table 3.4: Customer Level of Service

	Expectation	**Performance Measure Used**	**Current Performance**	**Expected Position in 10 Years based on the current budget.**
Service Objective: Council ensures that community infrastructure is constructed in compliance with standards and is fit for purpose, safe and well maintained to meet the cultural and community service needs of all ages and abilities.				
Quality	Satisfaction of cemetery services in your area.	Community Survey	96% respondents rated the service as very good or good in the 2018 community survey	Decreased satisfaction due to the lack of investment in renewal, upgrade of existing assets and investment in new assets.
	Confidence levels		High	High
Function	Cemeteries are well performed to their intended purpose by Council	Community Survey	62% of respondents rated the service as very or somewhat important in the 2018 survey.	With an aging population the importance of this service will increase with time.
	Confidence levels		High	High
Capacity and Use	Cemetery has enough area for current and future use	GIS Mapping	Sufficient as outlined in the Master Plan for Thorak Regional Cemetery, currently using less than half of the site.	Enough area will be available for extension of operations.
	Confidence levels		High	High

3.5 Technical Levels of Service

Technical Levels of Service - Supporting the customer service levels are operational or technical measures of performance. These technical measures relate to the allocation of resources to service activities to best achieve the desired customer outcomes and demonstrate effective performance.

The technical levels of service to be provided under this AM plan will meet legislative, regulatory and contract specifications. These requirements are provided within resources available in the long-term financial plan.

Service and asset management plan, implement and control technical service levels to influence the customer service levels.[3]

Technical levels of service have not been set at this stage and will be developed as part of the next revision of this asset management plan.

It is important to monitor the service levels provided regularly as these will change. The current performance is influenced by work efficiencies and technology, and customer priorities will change over time. Review and establishment of the agreed position which achieves the best balance between service, risk and cost is essential.

[3] IPWEA, 2015, IIMM, p 2|28.

4. FUTURE DEMAND

4.1 Demand Drivers

Cemetery services need to be delivered with dignity and respect. Our society expects and requires that human bodies will be disposed of in a dignified manner and opportunity is given to different religious traditions to be catered for. Although Thorak Regional Cemetery is the only open cemetery in the region, and therefore burial services are a guaranteed market, the fact that the crematorium competes against a privately-operated facility is a revenue issue for the operation. Furthermore, the national trend in end-of-life-choices towards cremation and away from burials has impacted the cemetery income significantly. Drivers affecting demand include things such as diverse population, regulations, changes in demographics, seasonal factors, consumer preferences and expectations, technological changes, economic factors, environmental awareness, etc.

4.2 Demand Forecasts and Impact on Assets

The impact of demand drivers that may affect future service delivery and use of assets are shown in Table 4.2.

Table 4.2: Demand Drivers, Projections and Impact on Services

Demand drivers	Present position	Projection	Impact on services
Diverse Population (in the Greater Darwin)	As per ABS 2016 data 52.8% of residents in the Wider Darwin area have reported a religious belief with 37 different religions recorded.	The ABS data of 2016 shows a decrease in residents identified with religious belief of 6% yet an increase in diversity of religions recorded. It is assumed that this development will continue into the future.	Increase in demand for distinguished cemetery services with a diverse community profile. Different sections of the cemetery are expected to be opened for religious practices as shown over the past 10 years with the opening of the Muslim, Bahai, Greek Orthodox, Jewish sections and introduction of above-ground burial.
Demographics	148,293 residents in the Wider Darwin Area as per 30 June 2017 with 12.5% aged over 60.	3.3% (NT population projection, 2011) This projection will be influenced by a greater focus of the NTG on policies to retain aged residents in the NT	An aging population places greater demand on the cemetery service and the assets that support it. This will result in the consumption of burial rights more quickly. It will also increase the importance of appropriate service levels provided.

Demand drivers	Present position	Projection	Impact on services
Economic Factors	Thorak is financially unsustainable with operational income being lower than the operational expenses and allocation for asset renewals being funded out of financial reserves which are diminishing.	Cost is continuing to increase at the current service level due to contractual and legislative requirements.	Service Level will decrease as financial reserves are used up and Thorak Regional Cemetery cannot continue to self-fund its operations.
Access for all	Limited accessible paths especially through the wet season and limited accessibility to other amenities e.g. chapel.	Accessibility will become even more important with an aging population.	Additional funds required to upgrade assets and meet standards for accessibility.
Deaths	7.3 deaths per 1,000 standard population (ABS 2016).	Over the past 10 years, standardised death rate declined by 1.5 per 1,000 standard population (ABS 2016), yet an increase in population could balance this decline.	A declining death rate will impact the overall income that can be achieved and reduce the service level that can be delivered within financial means.

4.3 Demand Management Plan

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand. Demand management practices include non-asset solutions, insuring against risks and managing failures.

Non-asset solutions focus on providing the required service without the need for asset ownership and management actions include reducing demand for the service, reducing the level of service (allowing some assets to deteriorate beyond current service levels) or educating customers to accept appropriate asset failures[4]. Opportunities identified to date for demand management are shown in Table 4.3. Further opportunities will be developed in future revisions of this asset management plan.

Table 4.3: Demand Management Plan Summary

Demand Driver	Impact on Services	Demand Management Plan
Diverse Population Changes	Increase in demand for cemetery services with diverse community profile	Continue to work with community and stakeholders to understand expectations and needs and to prioritise them.

[4] IPWEA, 2015, IIMM, Table 3.4.1, p 3|89.

Demand Driver	Impact on Services	Demand Management Plan
Demographics	An aging population places greater demand on the cemetery service and the assets that support it.	Begin to plan for extension of cemetery.
Economic Factors	Thorak is financially unsustainable with operational income being lower than the operational expenses and allocation for asset renewals being funded out of financial reserves which are diminishing.	Ensure cemetery is managed in a way that minimises running costs and develop equitable & practical funding model.
Access for all	Additional funds required to upgrade assets and meet standards for accessibility.	Identify opportunities to ensure renewals and upgrades will meet current legislation.
Deaths	A declining death rate will impact the overall income that can be achieved and reduce the service level that can be delivered within financial means.	Keep monitoring the deaths in conjunction with the increase of aged population.

4.4 Asset Programs to meet Demand

The requirement for new assets in the cemetery asset management plan refers to the Thorak Cemetery Master Plan. The acquisition of additional land as space in cemetery is not an issue. Figure 1 represents the expected value of new assets that will be either contributed or will be constructed based on data provided in the growth section of the planned expenditures data entry.

Data is cumulatively represented with the yellow portion, if applicable, representing new assets attributed to growth and the blue section, if applicable, representing future expenditure as per Master Plan on new assets or upgrading/expanding current assets.

Figure 1: Upgrade and New Assets to meet Demand – (Cumulative)

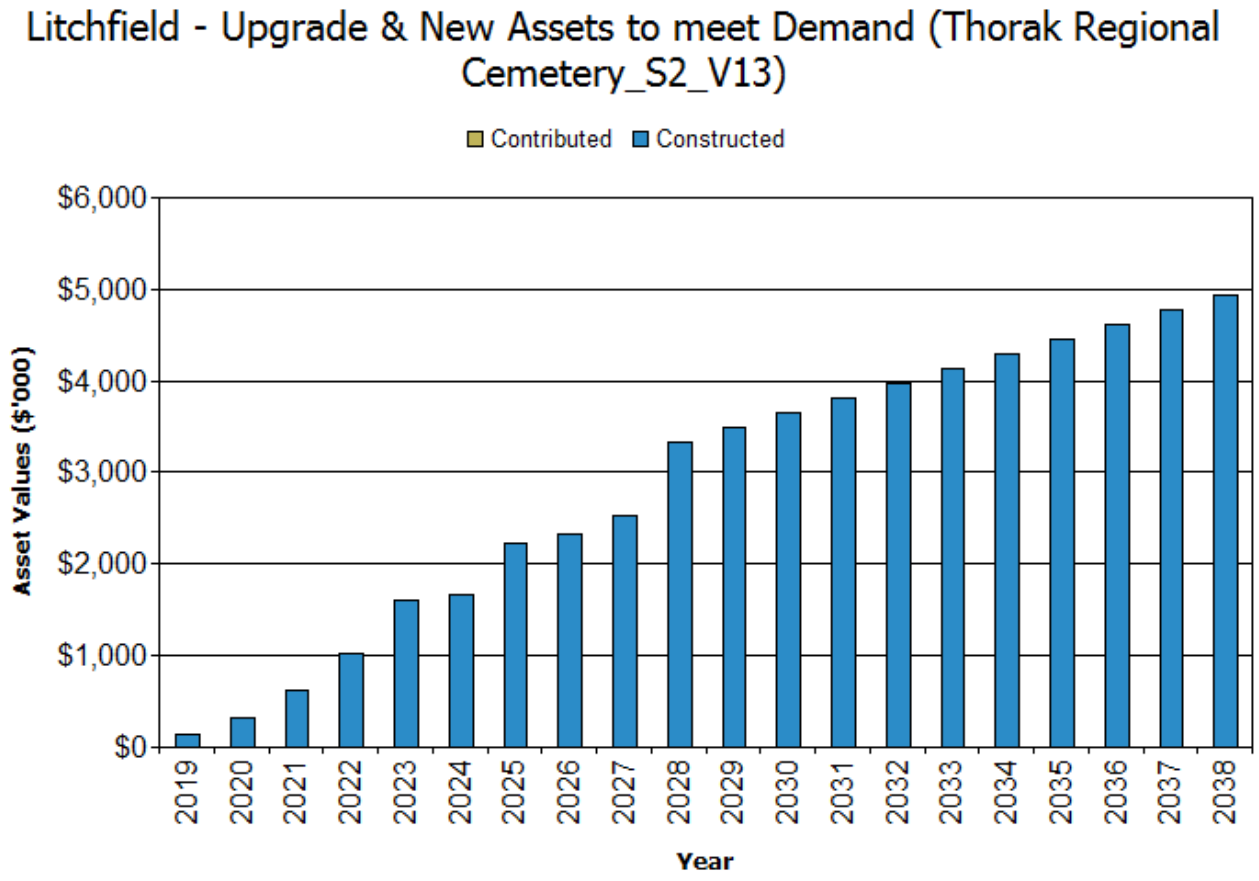


Figure Values are in current (2018) dollars.

Acquiring these new assets will commit ongoing operations, maintenance and renewal costs for the period that the service provided from the assets is required. These future costs are identified and considered in developing forecasts of future operations, maintenance and renewal costs for inclusion in the long term financial plan further in Section 5.

5. LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Litchfield Council plans to manage and operate the assets at the agreed levels of service (defined in Section 3) while managing life cycle costs.

5.1 Background Data

5.1.1 Asset capacity and performance

Assets are generally provided to meet design standards where these are available.

Locations where deficiencies in service performance are known are detailed in Table 5.1.1.

Table 5.1.1: Known Service Performance Deficiencies

Location	Service Deficiency
Irrigation Infrastructure	Does not cover all sections of Thorak Regional Cemetery
Wayfinding	Lack of orientation for visitors
Car park near Admin build	Rutting and damage of surface on car park
Shade installation	Lack of shade throughout the cemetery for visitors
Operations centre	Operations split across the site with too high visibility for visitors
Unused Land	Potential income of unused land
Garden of Angels	Aged asset infrastructure causes reduction in appropriate amenity provided to visitors
Car Parking, paths and seating	Provide wheelchair accessibility, benches for resting and more car parking for all weather access
Palm Garden	Lack of shade and aged paving providing hazards
Central pedestrian only road	Provide walk of memories and interment options
Office extension	Provision of family consulting room to ensure privacy and allow for confidential conversations.
Across the cemetery	Lack of shade provision through appropriate tree planting plans
Chapel	All weather access and disability access
Second Entry	Reduce traffic issues during large services
New chapel	Offer option of outdoor service

The above service deficiencies were identified in the Master Plan adopted by the Board.

5.1.2 Asset condition

Thorak Regional Cemetery is managed by Council staff and operation/maintenance works are carried out by both contractors and Council staff. It is required to develop an inspection regime to ensure safety of cemetery users and general condition of assets.

This is the first Asset Management Plan for Thorak Regional Cemetery. Previously, the Thorak Regional Cemetery has been monitored with a maintenance only methodology. The focus of this plan is on better defining operational, maintenance and renewal strategies and to improve asset

data knowledge, particularly in relation to asset condition. The condition rating of all assets has been undertaken by a qualified external valuer in 2018.

5.2 Operations and Maintenance Plan

Operations include regular activities to provide services such as public health, safety and amenity, e.g. cleaning, utilities costs and mowing around garden.

Routine maintenance is the regular on-going work that is necessary to keep assets operating, including instances where portions of the asset fail and need immediate repair to make the asset operational again, e.g. annual cremator maintenance.

Maintenance includes all actions necessary for retaining an asset as near as practicable to an appropriate service condition including regular ongoing day-to-day work necessary to keep assets operating.

Operations & maintenance expenditure is shown in Table 5.2.1.

Table 5.2.1: Operations & Maintenance Expenditure Trends

Year	Operations & Maintenance Budget $
2016/2017	$803,956
2015/2016	$952,675
2014/2015	$937,190

Operations and maintenance expenditure vary from year to year, particularly over the last three years. Where maintenance expenditure levels will result in a lesser level of service, the service consequences and service risks have been identified and service consequences highlighted in this AM Plan and service risks considered in the Infrastructure Risk Management Plan.

Summary of future operations and maintenance expenditures

Figure 2 shows the 20 year forecast of operating and maintenance expenditures in real (2018) dollar values. It reflects an increase over time due to the addition of new assets from increasing demand, growth and/or risk management control measures. According to the below graph, there is a shortfall based on the current funding provided by the Long Term Financial Plan. To sustain the current Service Level it will be required to adjust the current Long Term Financial Plan according to the projected expenditures.

Figure 2: Projected Operations and Maintenance Expenditure

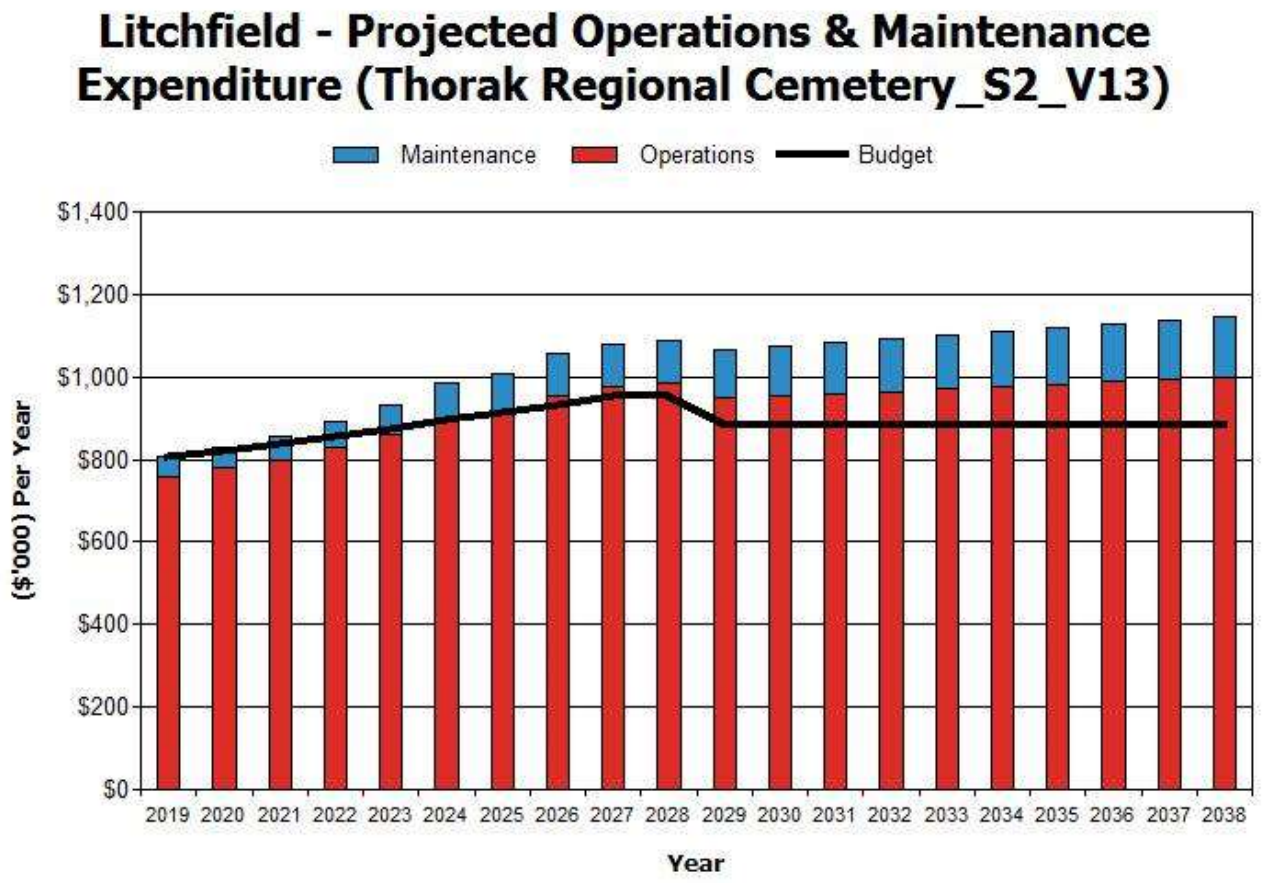


Figure Values are in current (2018) dollars.

There is a shortfall of budget in the above graph which is further discussed in section 5.4.3. Deferred maintenance, i.e. works that are identified for maintenance and unable to be funded are to be included in the risk assessment and analysis in the infrastructure risk management plan.

Maintenance is funded from the operating budget where available.

5.3 Renewal/Replacement Plan

Renewal and replacement expenditure is major work which does not increase the asset's design capacity but restores, rehabilitates, replaces or renews an existing asset to its original service potential. Work over and above restoring an asset to original service potential is considered to be an upgrade/expansion or new work expenditure resulting in additional future operations and maintenance costs.

Assets requiring renewal/replacement are identified by method 3, which is provided in the 'Expenditure Template'.

5.3.1 Renewal ranking criteria

Asset renewal and replacement is typically undertaken to either:

- Ensure the reliability of the existing infrastructure to deliver the service it was constructed to facilitate (e.g. replacing a bridge that has a 5 t load limit), or

- To ensure the infrastructure is of sufficient quality to meet the service requirements (e.g. roughness of a road).[5]

It is possible to get some indication of capital renewal and replacement priorities by identifying assets or asset groups that:

- Have a high consequence of failure,
- Have high use and subsequent impact on users would be greatest,
- Have a total value representing the greatest net value,
- Have the highest average age relative to their expected lives,
- Are identified in the AM Plan as key cost factors,
- Have high operational or maintenance costs, and
- Have replacement with a modern equivalent asset that would provide the equivalent service at a savings.[6]

The ranking criteria used as a guideline to determine priority of identified renewal and replacement proposals is detailed in Table 5.3.1.

Table 5.3.1: Renewal and Replacement Priority Ranking Criteria

Criteria	Weighting
Safety Issues	30%
Link to Council Municipal Plan	20%
Utilisation/Fit for Purpose	20%
Compliance Issues	30%
Total	100%

5.3.2 Summary of future renewal and replacement expenditure

Projected future renewal and replacement expenditures are forecast to increase over time when the asset stock increases. In the below graph, the blue colour indicates the renewal program at the end of useful life without a second renewal time during the 20-year period. If there are renewal expenditures for the same asset for a second time within this period, the expense is shown as Gen's 2+ in green colour. The expenditure is shown in Fig 3. In 2026, there is a higher amount of expenditure due to projected replacement of a backhoe (mechanical excavator). Note that all amounts are shown in current (real) dollars.

The projected capital renewal and replacement program is shown in Appendix B.

[5] IPWEA, 2015, IIMM, Sec 3.4.4, p 3|91.
[6] Based on IPWEA, 2015, IIMM, Sec 3.4.5, p 3|97.

Fig 3: Projected Capital Renewal and Replacement Expenditure

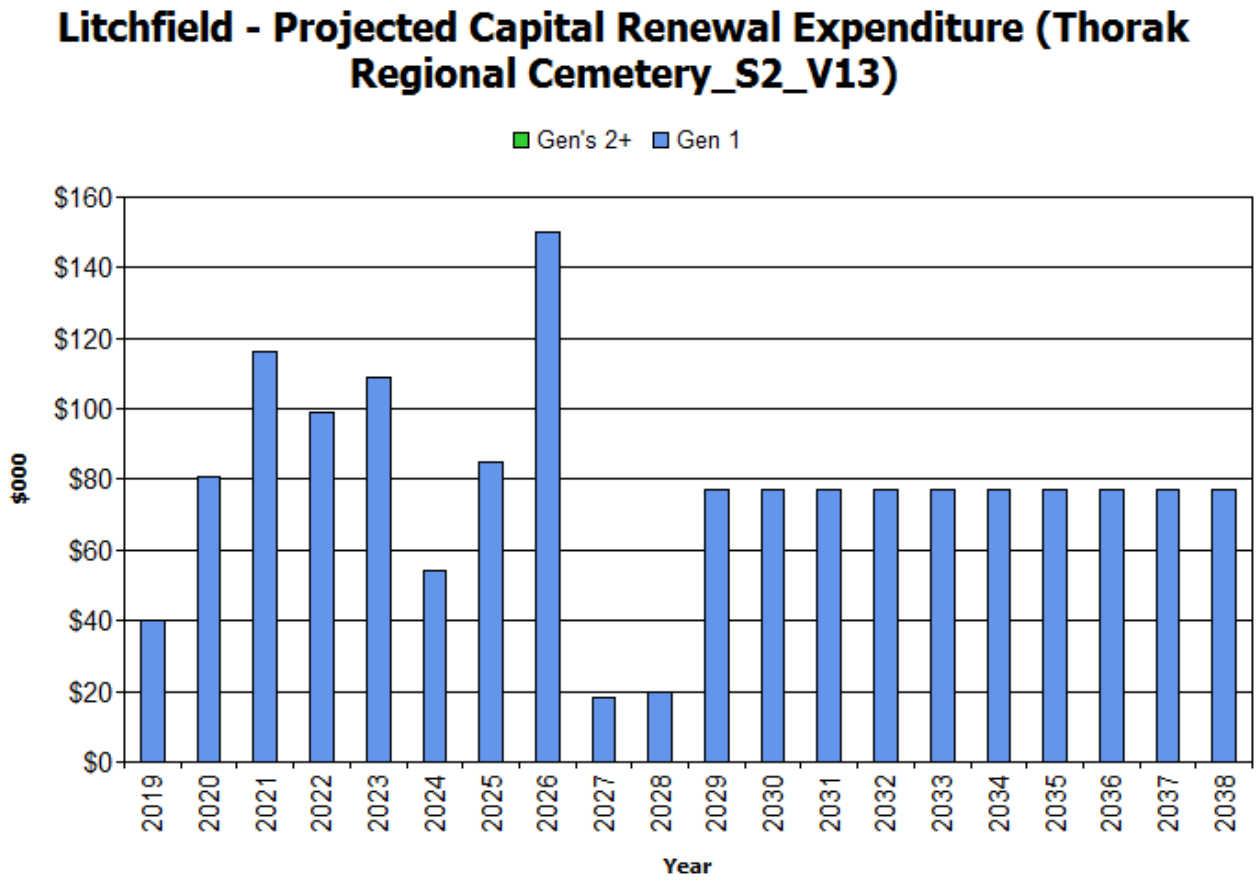


Figure Values are in current (2018) dollars.

Deferred renewal and replacement, i.e. those assets identified for renewal and/or replacement and not scheduled in capital works programs are included in the risk analysis process in the risk management plan.

Renewals and replacement expenditure in the capital works program will be accommodated in the long term financial plan. This is further discussed in Section 7.

5.4 Creation/Acquisition/Upgrade Plan

New works are those that create a new asset that did not previously exist or works which will upgrade or improve an existing asset beyond its existing capacity. They may result from growth, social or environmental needs. Assets may also be acquired at no cost. These additional assets are considered in Section 4.4.

5.4.1 Selection criteria

New assets and upgrade/expansion of existing assets are identified from Thorak Regional Cemetery Master Plan Report. The ranking criteria used as a guideline to determine priority of identified renewal and replacement proposals is detailed in Table 5.4.1.

Table 5.4.1: New Assets Priority Ranking Criteria

Criteria	Weighting
Strategic Plan	25%
Asset Failure or Unserviceable	35%
Legislative/ Compliance Issues	40%
Total	100%

5.4.2 Summary of future upgrade/new assets expenditure

Projected upgrade/new asset expenditures are summarised in Fig 4. The projected upgrade/new capital works program is shown in Appendix C. All amounts are shown in real values.

Fig 4: Projected Capital Upgrade/New Asset Expenditure

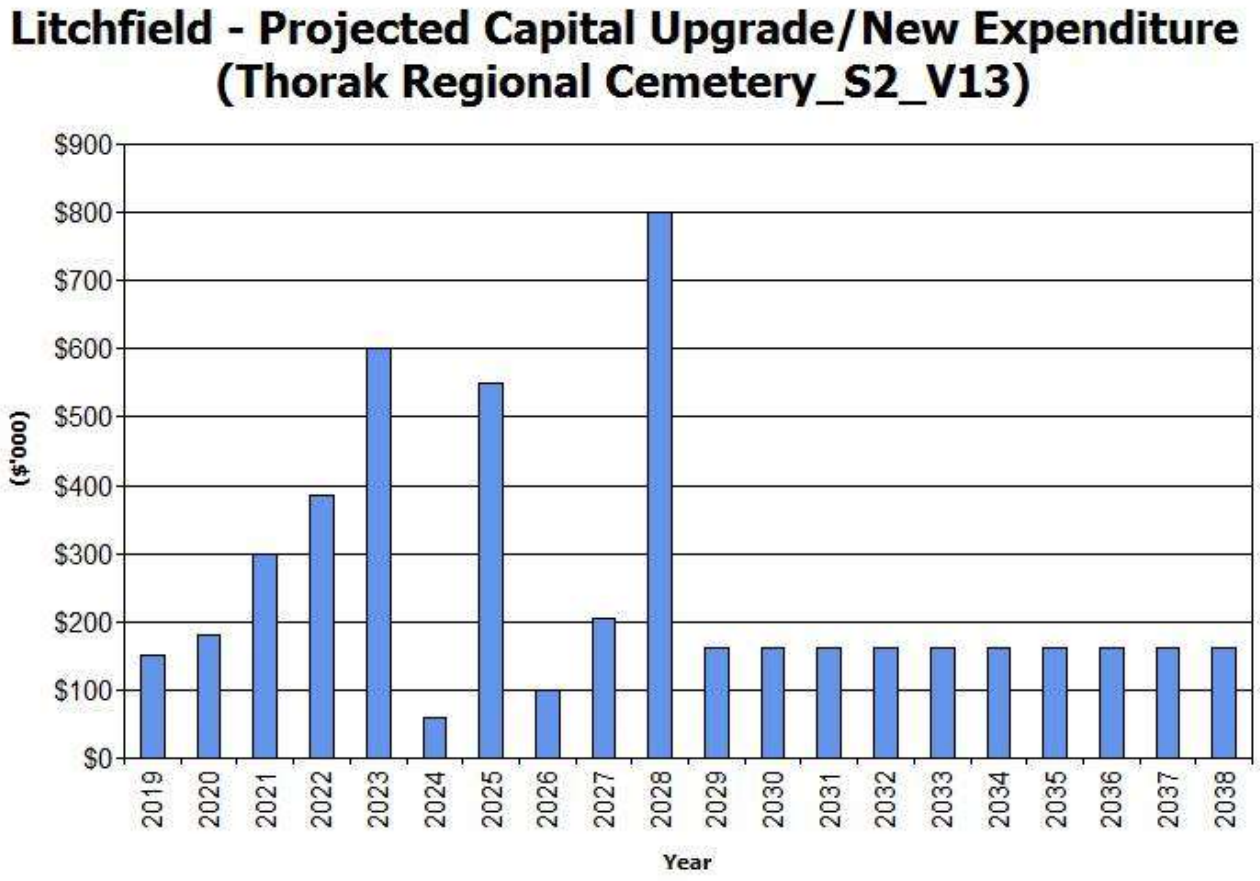


Figure Values are in current (2018) dollars.

The estimated expenditure for years 2029 to 2037 is based on average projected capital upgrade expenditure of the first 10 years.

Expenditure on identified new assets and services in the capital works program will be accommodated in the long term financial plan and subject to annual budget decisions.

5.4.3 Summary of asset expenditure requirements

The financial projections from this asset plan are shown in Fig 5 for projected operating (operations and maintenance) and capital expenditure (renewal and upgrade/expansion/new assets). Note that all costs are shown in real values.

The bars in the graphs represent the anticipated budget needs required to achieve lowest lifecycle costs, the budget line indicates what is currently available. The gap between these informs the discussion on achieving the balance between services, costs and risk to achieve the best value outcome.

Fig 5: Projected Operating and Capital Expenditure

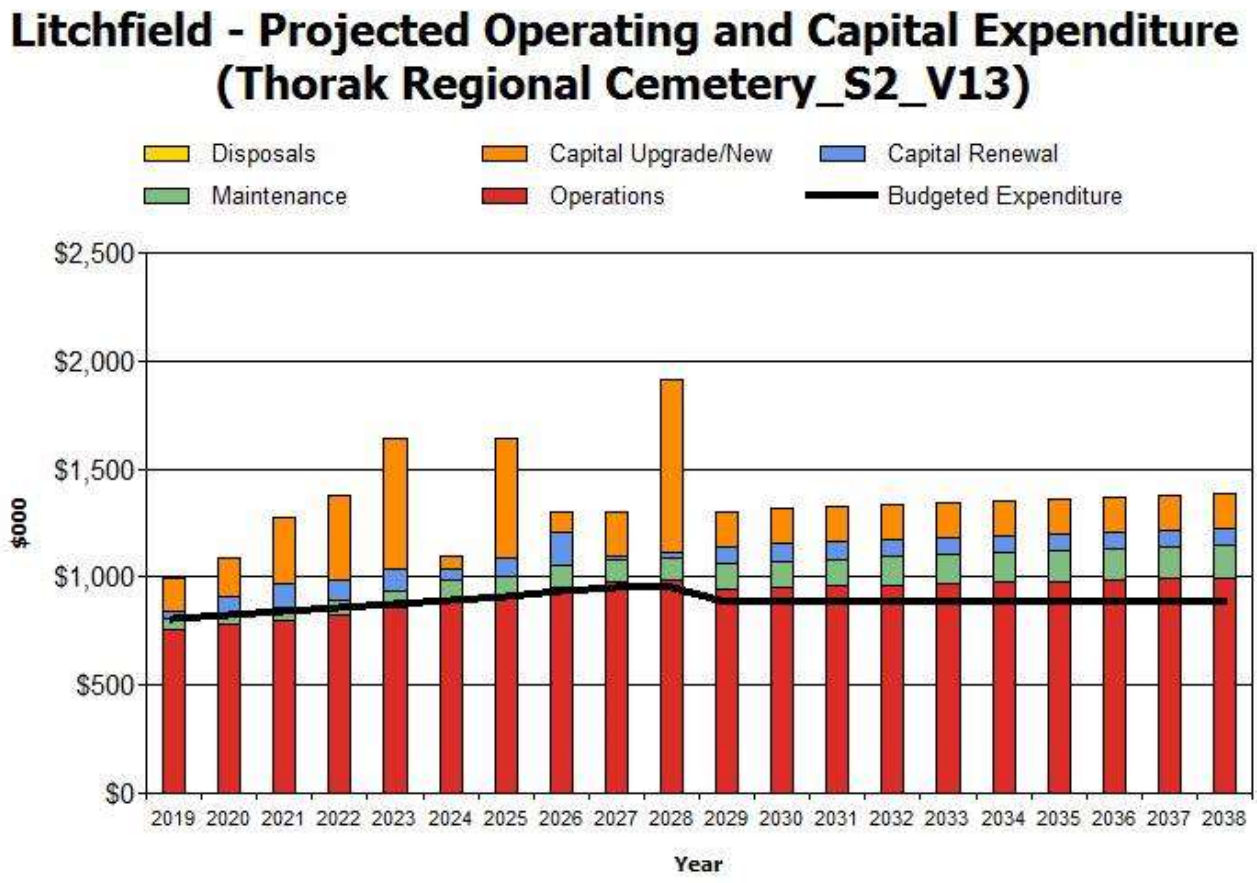


Figure Values are in current (2018) dollars.

The funding shortfall identified in the above figure comes from the projected expenditure based on current Long Term Financial Plan to maintain assets at the same level of service. It indicates that further work is required on reviewing service levels, revising the LTFP to eliminate funding gaps, where possible, and continue to focus on alternate funding models.

We will manage the gap by developing this asset management plan to provide guidance on future service levels and resources required to provide these services, and review future services, service levels and costs with the community.

5.5 Disposal Plan

Disposal includes any activity associated with the disposal of a decommissioned asset including sale, demolition or relocation. Assets identified for possible decommissioning and disposal are shown in Table 5.5, together with estimated annual savings from not having to fund operations and maintenance of the assets. These assets will be further reinvestigated to determine the required levels of service and see what options are available for alternate service delivery, if any. Any costs or revenue gained from asset disposals is accommodated in the long term financial plan.

Table 5.5: Assets Identified for Disposal

Asset	Reason for Disposal	Timing	Disposal Expenditure	Operations & Maintenance Annual Savings
Old Cremator	Disconnected with power due to availability of new one	2020	$30,000	$0.00

Removal of the above item will be considered in conjunction with the options of using the space for possible improvements to the chapel or ash interments.

6. RISK MANAGEMENT PLAN

The purpose of infrastructure risk management is to document the results and recommendations resulting from the periodic identification, assessment and treatment of risks associated with providing services from infrastructure, using the fundamentals of International Standard ISO 31000:2009 Risk management – Principles and guidelines.

Risk Management is defined in ISO 31000:2009 as: 'coordinated activities to direct and control with regard to risk'[7].

An assessment of risks associated with service delivery from infrastructure assets has identified critical risks that will result in loss or reduction in service from infrastructure assets or a 'financial shock'. The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

6.1 Critical Assets

Critical assets are defined as those which have a high consequence of failure causing significant loss or reduction of service. Similarly, critical failure modes are those which have the highest consequences.

Critical assets have been identified and their typical failure mode and the impact on service delivery are as follows:

Table 6.1 Critical Assets

Critical Asset(s)	Failure Mode	Impact
Road network	Physical failure e.g. formation of pot hole, rutting, crack	Increase chance of injury
Buildings	Natural disaster e.g. earthquake and cyclone	Increase cost to reinstate damaged assets
Cremator	Mechanical	Decrease level of income from fees and charges

By identifying critical assets and failure modes investigative activities, condition inspection programs, maintenance and capital expenditure plans can be targeted at the critical areas.

6.2 Risk Assessment

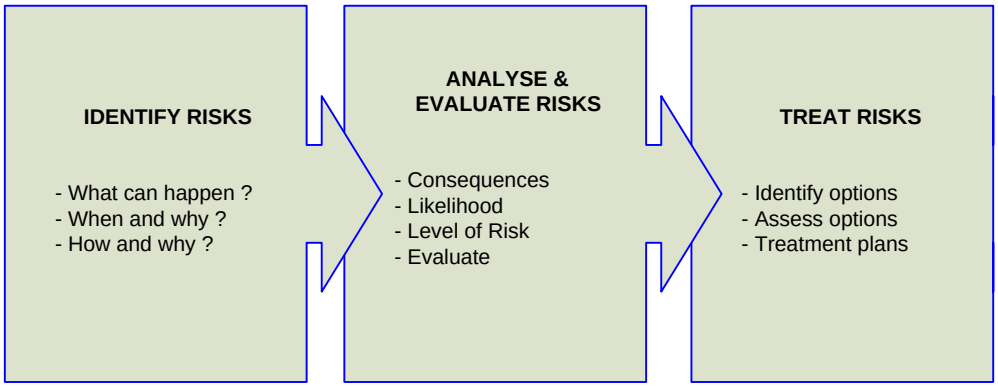
The risk management process used in this project is shown in Figure 6.2 below.

It is an analysis and problem-solving technique designed to provide a logical process for the selection of treatment plans and management actions to protect the community against unacceptable risks.

The process is based on the fundamentals of the ISO risk assessment standard ISO 31000:2009.

[7] ISO 31000:2009, p 2

Fig 6.2 Risk Management Process – Abridged



The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, develops a risk rating, evaluates the risk and develops a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery from infrastructure assets has identified the critical risks that will result in significant loss, 'financial shock' or a reduction in service.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment cost after the selected treatment plan is implemented is shown in Table 6.2. These risks and costs are reported to management and Council executive team.

Table 6.2: Critical Risks and Treatment Plans

Service or Asset at Risk	What can Happen	Risk Rating (VH, H)	Risk Treatment Plan	Residual Risk *	Treatment Costs
Road Network	Increase chance of injury	H	Allocate budget for periodic maintenance due to physical failure of assets	L	Maintenance cost
Buildings	Increase cost to reinstate damaged assets due to natural disaster	H	Increased resources for inspection and maintenance	M	Inspection & maintenance cost
Cremator	Decrease income level due to failure	H	Arrange annual maintenance of cremator	L	Annual maintenance cost

Note * The residual risk is the risk remaining after the selected risk treatment plan is operational.

6.3 Service and Risk Trade-Offs

The decisions made in adopting this AM Plan are based on the objective to achieve the optimum benefits from the available resources.

6.3.1 What we cannot do

There are some operations and maintenance activities and capital projects that are unable to be undertaken within the next 10 years. These include:

- Providing funding to community generated ideas and projects that fall outside the resourcing
- Undertaking projects that do not have broad community benefit.

6.3.2 Service trade-off

Operations and maintenance activities and capital projects that cannot be undertaken will maintain or create service consequences for users. These include:

- Dissatisfaction from community with level of service,
- Reduce asset use,
- Decrease quality (using the asset beyond desired service level)
- Reduction in regular servicing (Operational and maintenance programs), which will result in lower use and capacity.

6.3.3 Risk trade-off

The operations and maintenance activities and capital projects that cannot be undertaken may maintain or create risk consequences. These include:

- Increase exposure to injury and liability
- Reactive and inefficient service delivery
- Higher reactive maintenance costs after extended period of use below service level
- Difficulty for delivery of services.

These actions and expenditures are considered in the projected expenditures.

7. FINANCIAL SUMMARY

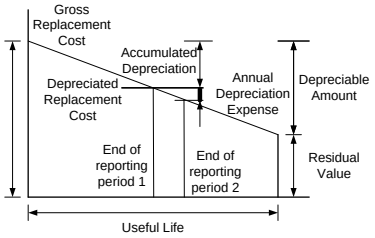
This section contains the financial requirements resulting from all the information presented in the previous sections of this asset management plan. The financial projections will be improved as further information becomes available on desired levels of service and current and projected future asset performance.

7.1 Financial Statements and Projections

7.1.1 Asset valuations

The best available estimate of the value of assets included in this Asset Management Plan are shown below. Assets are valued at current replacement cost.

Gross Replacement Cost	$2,705,000
Depreciable Amount	$2,234,000
Depreciated Replacement Cost[8]	$2,022,000
Annual Average Asset Consumption	$92,000



7.1.2 Sustainable of service delivery

Two key indicators for service delivery sustainability that have been considered in the analysis of the services provided by this asset category, these being the:

- asset renewal funding ratio, and
- medium term budgeted expenditures/projected expenditure (over 10 years of the planning period).

7.1.3 Asset Renewal Funding Ratio

Asset Renewal Funding Ratio[9] 0%

The Asset Renewal Funding Ratio is the most important indicator and indicates that over the next 10 years of the forecasting that we expect to have 0% of the funds required for the optimal renewal and replacement of assets. This relates to the current Long-Term Financial Plan not including any funding for asset renewal due to lack of operational income.

7.1.4 Medium term – 10 year financial planning period

This asset management plan identifies the projected operations, maintenance and capital renewal expenditures required to provide an agreed level of service to the community over a 10 year period. This provides input into 10 year financial and funding plans aimed at providing the required services in a sustainable manner.

These projected expenditures may be compared to budgeted expenditures in the 10 year period to identify any funding shortfall. In a core asset management plan, a gap is generally due to increasing asset renewals for ageing assets.

[8] Also reported as Written Down Value, Carrying or Net Book Value.
[9] AIFMM, 2015, Version 1.0, Financial Sustainability Indicator 3, Sec 2.6, p 9.

The projected operations, maintenance and capital renewal expenditure required over the 10 year planning period is $1,030,000 on average per year.

Estimated (budget) operations, maintenance and capital renewal funding is $885,000 on average per year giving a 10 year funding shortfall of $-145,000 per year. This indicates 86% of the projected expenditures needed to provide the services documented in the asset management plan. This excludes upgrade/new assets.

Providing services from infrastructure in a sustainable manner requires the matching and managing of service levels, risks, projected expenditures and financing to achieve a financial indicator of approximately 1.0 for the first years of the asset management plan and ideally over the 10-year life of the Long Term Financial Plan.

7.1.5 Projected expenditures for long term financial plan

Table 7.1.5 shows the projected expenditures for the 10 year long term financial plan.

Expenditure projections are in 2018 real values.

Table 7.1.5: Projected Expenditures for Long Term Financial Plan ($000)

Year	Operations ($000)	Maintenance ($000)	Projected Capital Renewal ($000)	Capital Upgrade/ New ($000)	Disposals ($000)
2019	$758	$48	$40	$150	$0
2020	$778	$52	$81	$180	$0
2021	$800	$56	$116	$300	$0
2022	$828	$63	$99	$385	$0
2023	$859	$73	$109	$600	$0
2024	$898	$86	$54	$60	$0
2025	$918	$88	$85	$550	$0
2026	$955	$100	$150	$100	$0
2027	$976	$103	$18	$205	$0
2028	$984	$107	$20	$800	$0

All dollar values are in ($'000)'.

7.2 Funding Strategy

Funding for assets is provided from the budget and long term financial plan.

The financial strategy of the entity determines how funding will be provided, whereas the asset management plan communicates how and when this will be spent, along with the service and risk consequences of differing options. (might be efficiency in operation cost).

At this point in time the financial reserves are diminishing due to operating expenses exceeding the operating income. The Board is responding to this with two main actions:

- identification and implementation of operating efficiencies to reduce the cost of the day-today running of the cemetery,
- improvement of operating income through review of pricing structure, increased marketing and extension of services to gain more income, and
- utilisation of grant opportunities for asset expenditures.

It is expected that this will only generate small amounts of funding for the renewal of assets and not address the overall shortfall of funding.

Council therefore with the cooperation of City of Palmerston and City of Darwin under a TOPROC resolution is approaching the Minister for Housing and Community Development for the establishment of a ministerial board and provision of government funding for this regional service.

7.3 Valuation Forecasts

Asset values are forecast to increase as additional assets are likely to be acquired to the asset stock from construction and acquisition of new assets.

Additional assets will generally add to the operations and maintenance needs in the longer term, as well as the need for future renewal. Additional assets will also add to future depreciation forecasts.

7.4 Key Assumptions Made in Financial Forecasts

This section details the key assumptions made in presenting the information contained in this asset management plan. It is presented to enable readers to gain an understanding of the levels of confidence in the data behind the financial forecasts.

Key assumptions made in this asset management plan are below;

Key Assumptions made in AM Plan

- Improved asset data knowledge of condition and useful life is considered,
- No significant change in future demand,
- No significant or unexpected deterioration to cemetery assets is considered,
- Renewal cost is considered based on external consultant replacement value.

7.5 Forecast Reliability and Confidence

The expenditure and valuations projections in this AM Plan are based on best available data. Currency and accuracy of data is critical to effective asset and financial management. Data confidence is considered to be reliable due to following reasons below;

- All data are captured from site visit,

- The long term financial budget is used to project future expenditures,
- The replacement cost of assets is used from external consultant report.

8. PLAN IMPROVEMENT AND MONITORING

8.1 Status of Asset Management Practices[10]

8.1.1 Accounting, financial and asset management data sources

Council has been using Civica Authority and Exponare Enquiry systems for accounting, financial and asset management data.

8.2 Improvement Plan

The asset management improvement plan generated from this asset management plan is shown in Table 8.1.

Table 8.1: Improvement Plan

Task No	Task	Responsibility	Resources Required	Timeline
1	Technical levels of service will be developed	DIO	External/ Consultant	June 2019
2	Continue monitoring operation and maintenance budget and actual expenditures	FM/TCM	In-house	Ongoing
3	Review community levels of service against community satisfaction results	DCCS	External/ Consultant	June 2019
4	Continue data capture on Council's asset register	AMO	In-house	Ongoing
5	Identify future works through review of Master Plan	TCM	External/ Consultant	September 2019
6	Continue enhanced AM awareness through Asset Management Working Group Meeting	AMO	In-house	Ongoing
7	Review the data of assets acquisition/renewal/upgrade	AMO	In-house	December 2019
8	Review asset useful life and condition assessment	AMO	In-house	June 2019
9	Undertake internal inspection of critical assets	TCM	In-house	Ongoing
10	Implement maintenance schedules	TCM	In-house	December 2018

[10] ISO 55000 Refers to this the Asset Management System

8.3 Monitoring and Review Procedures

This asset management plan will be reviewed during annual budget planning processes and amended to show any material changes in service levels and/or resources available to provide those services as a result of budget decisions.

The AM Plan will be updated annually to ensure it represents the current service level, asset values, projected operations, maintenance, capital renewal and replacement, capital upgrade/new and asset disposal expenditures and projected expenditure values incorporated into the long term financial plan.

The AM Plan has a life of 4 years and is due for complete revision and updating within 12 months of each Council election.

9. REFERENCES

- IPWEA, 2006, 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM.
- IPWEA, 2008, 'NAMS.PLUS Asset Management', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/namsplus.
- IPWEA, 2015, 2nd edn., 'Australian Infrastructure Financial Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/AIFMM.
- IPWEA, 2015, 3rd edn., 'International Infrastructure Management Manual', Institute of Public Works Engineering Australasia, Sydney, www.ipwea.org/IIMM.
- IPWEA, 2012 LTFP Practice Note 6 PN Long Term Financial Plan, Institute of Public Works Engineering Australasia, Sydney
- Litchfield Council Municipal Plan 2017-2018'
- Litchfield Council 'Strategic Plan 2016-2020'.

10. APPENDICES

Appendix A Projected 10 year Capital Renewal and Replacement Works Program

Appendix B Projected 10 year Capital Upgrade/New Works Program

Appendix C LTFP Budgeted Expenditures Accommodated in AM Plan

Appendix A Projected 10-year Capital Renewal and Replacement Works Program

Year	Item	Description	Estimate
2019		**Network Renewals**	
	1	Cark Park Renewal at main Office (1321 sqm@$11.20)	$15
	2	Shift of External Generator	$25
2019		**Total**	**$40**

2020		**Network Renewals**	
	1	Bubbler at Chapel	$2
	2	Two Timber Footbridges (2@$5000)	$10
	3	Road at both End (3054.4 sqm@$11.20)	$34
	4	Middle Road (1114.8 sqm@$11.20)	$13
	5	Desktop Computer	$1
	6	Laptop Computer	$1
	7	ISEKI SXG326 CB24XO CEM	$20
2020		**Total**	**$81**

($000)

Year	Item	Description	Estimate
2021		**Network Renewals**	
	1	Polaris Utility Vehicle CB29ZX CEM	$15
	2	Chapel/ Crematorium - Internal Painting	$29
	3	Chapel/ Crematorium - Flooring Finishes	$24
	4	Cool Room - Internal Painting	$7
	5	4 Poly Water Tanks	$20
	6	Concrete Water Tanks - External Painting	$4
	7	Car parking opposite Chapel	$13
	8	Workshop Shed Painting	$3
	9	Desktop Computer	$1
2021		**Total**	**$116**

2022		**Network Renewals**	Estimate
	1	Dwelling - Internal Painting	$28
	2	Dwelling - Services - Air-conditioning	$17
	3	Chapel/ Crematorium - Services - Fire	$9
	4	Roads (Main Road from Deloraine Road to End)	$25
	5	Brick paved Path	$20
2022		**Total**	**$99**

($000)

Year	Item	Description	Estimate
2023		**Network Renewals**	
	1	Car parking at Chapel	$4
	2	Car parking at Columbaria	$7
	3	Hino Truck 920546 CEM	$50
	4	Road back of water tank	$5
	5	Hustler Super Duty Hyper Drive with 72inch deck	$28
	6	Main Office - Internal Painting	$11
	7	Concrete Water Tank - External Painting	$4
2023		**Total**	**$109**

2024		**Network Renewals**	
	1	Road Pathway 004	$10
	2	Workshop - Services - Electrical	$6
	3	Workshop - Services - Plumbing	$3
	4	Workshop - Services - Fire	$1
	5	Main Office - Services - Fire	$4
	6	Toyota Hilux - Dual Cab Thorak Cemetery CC51PU	$30
2024		**Total**	**$54**

($000)

Year	Item	Description	Estimate
2025		**Network Renewals**	
	1	Shipping Container	$4
	2	Dwelling - Internal Painting	$28
	3	Dwelling Services - Mechanical	$17
	4	Dwelling - Services - Plumbing	$35
	5	Desktop Computer	$1
2025		**Total**	**$85**

2026		**Network Renewals**	
	1	Backhoe SV3127 JCB Thorak	$150
2026		**Total**	**$150**

($000)

Year	Item	Description	Estimate
2027		**Network Renewals**	
	1	Dwelling - External Imps inc paving, pergola, carport	$13
	2	Electrical Distribution	$5
2027		**Total**	**$18**

2028		**Network Renewals**	
	1	Dwelling - Services - Electrical	$18
	2	HRU196M PBUX MNC Blade Brake Big Bag	$1
	3	UMK425 ULTUT Loop Handle Brush Cutter	$1
2028		**Total**	**$20**

Appendix B Projected Upgrade/New 10-year Capital Works Program

Year	Item	Description	Estimate
2019	1	Irrigation Infrastructure	$150
2019		**Total**	**$150**

($000)

Year	Item	Description	Estimate
2020	1	Garden of Angels Upgrade	$80
	2	Unused Land Express of Interest	$10
	3	Palm Garden Revitalisation	$40
	4	Walk of Memories	$50
2020		**Total**	**$180**

($000)

Year	Item	Description	Estimate
2021	1	Consolidated Operations Area	$300
2021		**Total**	**$300**

($000)

Year	Item	Description	Estimate
2022	1	Entry Configuration and Landscaping	$100
	2	Wayfinding	$60
	3	Car Parking, Paths and Seating	$100
	4	Tree Planting Structure	$125
2022		**Total**	**$385**

($000)

Year	Item	Description	Estimate
2023	1	Office Extension and Surrounds	$600
2023		**Total**	**$600**

($000)

Year	Item	Description	Estimate
2024	1	Shade Installation	$60
2024		**Total**	**$60**

($000)

Year	Item	Description	Estimate
2025	1	Chapel Upgrade	$550
2025		**Total**	**$550**

($000)

Year	Item	Description	Estimate
2026	1	Upgrade Entry Boulevard	$100
2026		**Total**	**$100**

($000)

Year	Item	Description	Estimate
2027	1	Periphery Buffer Planting	$25
	2	Reconfigure Chapel Car Park	$60
	3	Second Entry	$120
2027		**Total**	**$205**

($000)

Year	Item	Description	Estimate
2028	1	New Chapel	$800
2028		**Total**	**$800**

Appendix C Budgeted Expenditures Accommodated in LTFP

NAMS.PLUS3 Asset Management **Litchfield**

Thorak Regional Cemetery_S2_V13 — Asset Management Plan

First year of expenditure projections **2019** (financial yr ending)

Thorak Regional Cemetery

Asset values at start of planning period

Current replacement cost	$2,705 (000)	Calc CRC from Asset Register	$0 (000)
Depreciable amount	$2,234 (000)	This is a check for you.	
Depreciated replacement cost	$2,022 (000)		
Annual depreciation expense	$92 (000)		

Operations and Maintenance Costs for New Assets

	% of asset value
Additional operations costs	3.50%
Additional maintenance	1.96%
Additional depreciation	4.12%

Planned renewal budget (information only)

You may use these values calculated from your data or overwrite the links.

Planned Expenditures from LTFP

20 Year Expenditure Projections Note: Enter all values in current **2019** values

Financial year ending	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
	$000	$000	$000	$000	$000	$000	$000	$000	$000	$000
Expenditure Outlays included in Long Term Financial Plan (in current $ values)										
Operations										
Operations **budget**	$758	$773	$788	$806	$823	$841	$859	$877	$895	$895
Management **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
AM systems **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total operations	$758	$773	$788	$806	$823	$841	$859	$877	$895	$895
Maintenance										
Reactive maintenance **budget**	$48	$49	$50	$51	$53	$54	$55	$56	$57	$57
Planned maintenance **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Specific maintenance items **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total maintenance	$48	$49	$50	$51	$53	$54	$55	$56	$57	$57
Capital										
Planned renewal **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Planned upgrade/new **budget**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Non-growth contributed asset value	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Asset Disposals										
Est Cost to dispose of assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Carrying value (DRC) of disposed assets	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Additional Expenditure Outlays Requirements (e.g from Infrastructure Risk Management Plan)										
Additional Expenditure Outlays required and not included above	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $000	2025 $000	2026 $000	2027 $000	2028 $000
Operations	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Capital Renewal	to be incorporated into Forms 2 & 2.1 (where Method 1 is used) OR Form 2B Defect Repairs (where Method 2 or 3 is used)									
Capital Upgrade	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
User Comments #2										

Forecasts for Capital Renewal using Methods 2 & 3 (Form 2A & 2B) & Capital Upgrade (Form 2C)										
	2019 $000	2020 $000	2021 $000	2022 $000	2023 $000	2024 $000	2025 $000	2026 $000	2027 $000	2028 $000
Forecast Capital Renewal from Forms 2A & 2B	$40	$81	$116	$99	$109	$54	$85	$150	$18	$20
Forecast Capital Upgrade from Form 2C	$150	$180	$300	$385	$600	$60	$550	$100	$205	$800