



**murchisonshire**

*Ancient land under brilliant skies*

## **Asset Management Plan**

*Part of Council's Planning for the Future*

**24 August 2023**



## Preamble

Pursuant to s 5.56 of the Local Government Act 1995 a local government is required to plan for the future its district through the preparation and adoption of various plans in accordance with Division 3 of the Local Government (*Administration*) Regulations 1996 as shown below.

<b>Reg</b>	<b>Plan</b>
19C	<p>Strategic Community Plan</p> <p>The Community Plan Sets out the vision, aspirations and objectives of the community. It also</p> <ul style="list-style-type: none"><li>Covers a period of at least 10 years and to be reviewed every 4 years</li><li>Developed with regard to the capacity of current and anticipated resources, strategic performance indicators and demographic trends</li></ul>
19DA	<p>Corporate Business Plan</p> <p>The Corporate Business Plan</p> <p>Sets out consistently with any relevant priorities as set out in the Strategic Community Plan Council's priorities for dealing with the objectives and aspirations of the community</p> <p>Governs internal business planning by expressing priorities by reference to operations that are within Council's capacity</p> <p>Develops and integrate matters relating to resources including</p> <ul style="list-style-type: none"><li>Asset Management</li><li>Workforce Planning</li><li>Long-Term Financial Planning</li></ul> <p>Covers a period at least 4 years and to be reviewed annually</p>

This document covers the Corporate Business Plan Elements as highlighted above

## Introduction

The Local Government (*Administration*) Regulations 1996 require the Strategic Community Plan to cover a period of at least 10 Financial Years and be reviewed at least once every 4 years, whilst plans that make up the Corporate Business Plan are to cover a period of at least 4 years and be reviewed annually.

From a practical and operational perspective, Council considers that whilst the period of the Strategic Community Plan and associated priorities within the Corporate Business Plan and Workforce Plan may be appropriate, it is considered that a longer-term 20-year view be taken with respect the actual application of resources through the Asset Management Plan and Long-Term Financial Plan.

In part this will align with more contemporary practice and allows consideration of works that may be required beyond a 10-year period but also recognise as highlighted below under "Background that significant changes have occurred since 2017 when the Strategic Community Plan and Corporate Business were adopted; many of which were previously not on the horizon.

The basis of this approach is also to ensure that mid- and long-term matters are considered annually so that pre-emptive actions can be taken today to mitigate potential future impacts and ensure long-term sustainability, but also importantly and that intergeneration equity matters are considered.

The principle of intergenerational equity holds that, to promote prosperity and quality of life for all, institutions should construct administrative acts that balance the short-term needs of today's generation

with the longer-term needs of future generations. It integral to the operation of society, governments including local government.

In local government this can be highlighted by the way it funds and accounts for the actions that it undertakes.

For instance, in any one year whilst operational cost are paid for by the community of the day some of the costs of replacement of assets should be paid and accounted for in the budget of the time as the residents and ratepayers have enjoyed the benefits of those assets and thereby not overly burden the future local community when assets need to be replaced. Similarly, current residents and ratepayers should not necessarily be required to pay entirely for future works which they have yet to benefit from.

Accordingly, both the Asset Management Plan and Long-Term Financial Plan are to address a period of 20 years each respective plan being prepared on the basis that it will be reviewed each year with year one of the Long-Term Financial Plan, which incorporates asset management aspects, being identical to the actual budget.

As a result, the Long-Term Financial Plan becomes effectively a 20-year budget document and one that can be reviewed and updated as new information comes to light but with the overall aim that it influences and guides the thinking as well as overall operation of the Shire in an integrated manner.

Put simply have regard to “*yesterday*”, look “*today*” but always focus on “*tomorrow*”. This way the future “*today*” will be potentially better than it would have otherwise been, the community grow and develop as a result and the financial costs will be more equitably distributed across the years.

Clearly these aspects require balancing and judgment. The Asset Management Plan and Long-Term Financial Plan aims to improve this balance by highlighting “*yesterday*”, “*today*” and “*tomorrow*”.

As a result, the Corporate Business Plan includes elements based on the above overarching philosophy.

## **Background**

Since 2017 work has continued to develop the scope of works and in deliver a range of Capital Works identified in the Corporate Business Plan. However various significant changes have occurred as outlined below that need to be considered.

### **Murchison Settlement Redevelopment**

#### *Murchison Settlement Masterplan*

The adopted in August 2021 the Settlement Masterplan took around 18 months to be finalised and provides a detailed layout of the way the settlement is to be developed. Importantly the Masterplan includes the following “Project Vision” statement which encapsulates the relationship of the Settlement within the context of the broader Shire.

*“To ensure that Murchison Settlement is an attractive focal point that enables the Shire to function successfully and deliver a range of services that will underpin community, cultural and economic development within the Settlement and broader Shire”*

Design principles have been developed to help guide the development of the Murchison Settlement Masterplan.

- ~ To create an attractive activity hub for the community and visitors to Murchison that maintains the existing character, cultural and built qualities of the Settlement.
- ~ Provide functional pedestrian connectivity, improved access, and sight lines throughout the precinct.

- ~ Design a unified landscape character that maximises shade.
- ~ Create a consolidated sequence of spaces and activities for locals and tourists.
- ~ Allow space in design for Geo/Astro tourism and convey the idea of 'The Oasis'.

A range of projects identified (in no priority order) included Community Swimming Pool / Splash Pad, New -Caravan Park Ablution Block, New -Caravan Park 2 Ensuite Units, General Settlement Amenity Improvements, and Playground Upgrade. An Interpretive Centre was also identified but required further scoping and development

### *Murchison Settlement Roadhouse Precinct Detailed Concept Design*

In 2020/21 it was realised that Roadhouse and Caravan Park layout needed a supplementary review to further develop desired expansion that would dovetail into the wider Settlement Masterplan. Work was undertaken to also review the overall operation of the roadhouse, with Council assuming operational control in March 2021. This included considering the need to provide suitable long-term accommodation for the Roadhouse Management, to improve the functionality of the Roadhouse Business and to explore opportunities for a potential Interpretive Centre.

### *Murchison Vast Sky Experience Business Case*

Adopted in February 2023 this Business Case evaluated opportunities from the emerging Mid-West space economy, with particular focus on the SKA and Mingenew Space Precinct. In many ways the development with potential transformative effect. It ticks an abundance of boxes such as strategically linking Vast Sky tourism, showcasing SKA / CSIRO, providing an accessible outback feel without camping out, increased GeoTourism and broader tourism within a regional context, purveying local history and pastoral influence, inclusion of local Wadjarri aboriginal development opportunities, improved discovery walking trails as well as enhancing recruitment and retention opportunities for the Shire in an improved visually attractive environment.

The entire business case should be seen as being complimentary to the Murchison Settlement Masterplan and Roadhouse development plans that have already been undertaken. Stage 1 spend is around \$10.4m with further stages foreshadowed totalling \$11.5m over around a 10-year period. Business Case shows a profitable operation after 2 years. Significant levels of external funding will be required with any delivery will likely be very long term without significant external investment.

### *Murchison Settlement Infrastructure*

Works previously identified to provide a Chlorinator for the Water Supply have been reassessed to include a major upgrade of the supply itself and provision of a new ring main unit to also separate drinking water from parks and gardens irrigation. A significant upgrade of the power supply on top of a planned solar microgrid upgrade also need to be considered.

### *Local Roads and Community Infrastructure Funds*

Commonwealth Funding from the Local Roads and Community Infrastructure Program is available in 2023/24 and potentially in 2024/25 which is applicable to Settlement Community related projects.

## **Significant Road Considerations**

### *Carnarvon-Mullewa Road Strategic Upgrade*

In February 2020 Council reviewed its strategic approach in the construction and sealing of the Carnarvon-Mullewa Road and varying from a 4.0m seal to a 7.2m seal.

In November 2022 the Shire finally completed sealing to 7.2m width the remaining 9.0km gravel section on the Carnarvon-Mullewa Road between the Murchison Settlement and the southern Shire boundary. Overall, the Shire has constructed and sealed to a 7.2m width 35.42km since 2021. In part this accelerated program was aided by additional road grants but also by a \$2.0m roadworks loan taken out in 2020/21 as part of a COVID19 Stimulus approach.

Construction and sealing of the remaining 27.6km within the City of Geraldton is still to be done an element that Council is encouraging the City to do. Rehabilitation and widening of existing 4.0m sealed

sections is planned. Further strategic work involving potential construction of some passing lanes in sections north of the Murchison Settlement in accordance with Main Roads WA Roads 2040 Strategy is also possible.

#### *Local Roads and Community Infrastructure Funds*

Significant increases in Commonwealth Road Funding from the Local Roads and Community Infrastructure Program have been received and applied upgrade works on the Carnarvon-Mullewa Road. This is programmed to continue for 2025/26 for rural, regional and outer suburban roads.

#### *Main Roads WA Regional Road Funds*

The Carnarvon- Mullewa Road is the only road within the Shire classified of such strategic importance to potentially attract funds Main Roads Regional Road Group Funds on a 2 for 1 basis for more than one road funding project per annum. Changes in scoring criteria provide increased scope to construct and or rehabilitate sections moving forward.

#### *SKA Route Works*

The Shire has been assigned the responsibility to undertaker works on the SKA Road Route to assist in the establishment of the SKA Project on Boolardy Station for a five-year period commencing 2022/23. Almost all of the roads affected are the responsibility of Council meaning that external funds are being provided on roads that would have otherwise had to be funded from Councils own revenue sources.

## Asset Management Plan

The Asset Management Plan is a long-term plan to manage a portfolio of Councils Assets. It as outlined as follows:

The Asset Management Plan comprises three separate plans comprising for Roads, Settlement Buildings and Facilities and Plant as summarised below.

Plan	Assets
Roads	Sealed Roads, Formed & Surfaced Roads, Formed Roads, Grids, Culverts, Signs
Settlement Building & Facilities	Shire Office Shire Depot & Sheds Community Centre Roadhouse Caravan Park Residential Houses Parks & Gardens and Sporting Facilities Airport Sealed Runway Taxiway Lighting and other infrastructure
Plant	Various items of major and minor plant
Other	Settlement Poer Supply Settlement Water Supply Other Infrastructure

Each has its own separate analysis and working model which can be readily updated and which are separately attached. The summarised results feed into the Budget and Long-Term Financial Plan

## Roads

### Background

Council's current Asset Management Plan for the period 2012/23 to 2031/32 was adopted by Council on 21 June 2013. When adopted it was noted that it future financial forecasts would be improved by

- ~ Updating the ROMAN roads data base to include useful asset condition assessments and signs, grids and floodways
- ~ A more detailed component level analysis of future renewal requirements
- ~ Continuation of the analysis of upgrade work needed to bring all assets to an agreed service level]
- ~ A review of assets that are underperforming or nearing the end of their useful life and
- ~ Continued breakdown of asset expenditure and future projections for maintenance and capital renewal

Whilst being legislative compliant, in reality the 2013 document, was a broad overview document and is not intended nor suited to year-to-year management of all assets, and particularly roads which make up such a significant portion.

Under the Financial Management Regulations Council is required to update it valuations for the purposes of its Annual Financial Reports. This task is required to be undertaken by licenced valuers for buildings and roads. This work has been undertaken in 2007 and most recently in 2022 for inclusion into the 2021/22 Financial Reports.

Whilst Council has detailed data bases for roads and a summary assessment for buildings, it is fair to say that thus far the data has not been used in any meaningful way in any replacement programs, nor cater for any new future or upgraded assets.

### *Revaluation Work*

As a prelude to the 2022 revaluation work in 2020 Greenfields were engaged to update the ROMAN roads data base with inclusion of information including asset condition assessments, signs, grids and floodways plus a more detailed component level analysis. Photos of the road conditions were also undertaken and may be particularly useful in establishing conditions for flood damage assessment. The 2020 information obtained has now been recently updated for inclusion in the 2022 revaluation.

A summary of Greenfield's work is attached. Although only the summary sheets of this work is shown it has been undertaken at a comprehensive level with each road element contained on its own specific spreadsheet as per the following summary.

<b>Road Element</b>	<b>No</b>	<b>Length (Km)</b>	<b>Area (m2)</b>
Unformed Subgrade	16	295.03	1,675,970
Formed Subgrade	619	1,644.86	14,973,706
Unsealed Pavement	539	907.39	6,448,771
Sealed Pavement	122	206.03	1,921,209
Surfacing	345	290.24	1,774,250
Floodways	727		
Culverts	121		
Stock Grids	153		
Signs	2,945		
Bridge	1		

Whilst this information provides a sound base to support asset valuations, the data it required a significant amount of adaptive work to provide for not just programming for replacement works but also to include new works that have been or will be identified. Work to consolidate this into an adjustable program that can be readily amended, expanded has been undertaken and underpins the plan. This involved the following.

### *Existing Consolidation*

- ~ Consolidating recorded information including formation, pavement and sealed widths and construction dates on a road and SLK basis
- ~ Classifying each segment by way of Surface Type into Formed, Formed and Surfaced, Concrete and Sealed on a road and SLK basis
- ~ Incorporating all of the descriptive supporting information for each floodway section which is separately identified in each road plus identified replacement dates as recorded through Greenfield's analysis

### *Future Management*

- ~ 20-year management model on the same format as the current plant replacement program. This can be varied easily altered annually and includes options such as changing the start year and including inflation impacts
- ~ Provision of a variable upgraded works program that incorporates a variety of components for each section of road including road width standards and scheduled replacement dates, intended treatment, and costs that can distinguish between our costs and those of contractors.
- ~ Provision of a schedule of variable rates for unit costs, asset lives that can be adapted as required
- ~ Matching of capital road expenses with matching expenditures requirements as required by the grant for Main Roads WA and SKA Route Work.



## *Replacement Works*

### *Gravel Resheet Programs*

Replacements are based on a life of the asset. With an unsealed road network assessments can vary widely and to a certain extent are blurred within normal maintenance activities and flood damage repairs which for all intents and purposes can often restore the drivability of a road and extend its life. There is inbuilt degree of elasticity. A broad-brush assessment, whilst sufficient for an asset valuation purposes, needs to be modified according to local circumstances and conditions, as well as the degree of risk associated with each particular segment of road. Having a conservative approach will overstate the situation.

The Plan makes allowance for a “local” condition assessment in part by segmenting each road into small segments and having options for varying levels of intervention such with the Works Manager being able to use local knowledge to assess features such as location, traffic, availability of gravel and water, road classification etc.

The result of this approach should see a more realistic assessment which will most likely vary from that derived through the revaluation process and which will become in effect a de facto service level.

### *Floodways*

To a large extent the treatment of floodway areas will perhaps have most critical impact on the road network as these sections will in many instances will more or less determine whether a road is open or closed. There are some 727 recorded but a number of others need to be added. Each floodway has its own construction elements. The Plan makes provision for these variations by providing options for various treatments and variations to asset lives and where necessary adding in new floodways. It is also likely that these areas will be the ones with the earlier focus

### *Reseal Programs*

These are based on a life of the asset determined by a condition assessment. Unlike unsealed roads there are more potential risks associated with extending life of a reseal as this can have a detrimental effect on the quality of the surface and life of the pavement.

### *Rehabilitation of Existing Sealed Roads*

Those that are not subject to upgrade during life of the plan have not included as the scheduled replacements are beyond the plans 20-year window. As time moves on this will alter. Once a road is upgraded to seal the next replacement to be included will have a reseal treatment.

## *Upgrade Works*

### *Carnarvon-Mullewa Road*

Construction and sealing of the remaining 27.6km within the City of Geraldton is still to be done an element that Council is encouraging the City to do. Rehabilitation and widening of existing 4.0m sealed sections is planned. Further strategic work involving potential construction of some passing lanes in sections north of the Murchison Settlement in accordance with Main Roads WA Roads 2040 Strategy

The Carnarvon- Mullewa Road is the only road within the Shire classified of such strategic importance to potentially attract funds Main Roads Regional Road Group Funds on a 2 for 1 basis for more than one road funding project per annum. Changes in scoring criteria provide increased scope to construct and or rehabilitate sections moving forward.

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#### *New Sections of Sealed Roads*

Thus far upgrade and sealing on Mulga Crescent, Airport Access Road and Works Depot Road within the Settlement have been included. A section on the Beringarra-Pindar Road adjacent to the Nookawarra Homestead has been previously identified by Council.

#### *Major Floodways*

Reconstruction, upgrade and widening of concrete floodways on the Meeberrie- Wooleen Road over the Murchison River and Carnarvon- Mullewa Road over the Wooramel River have been identified

#### *Other Works*

Other major works not yet identified and not already included in the above will need to be considered as they come to light.

#### *General*

Unlike the June 2013 Asset Management which has really not been used in any meaningful way since, this Plan is intended to be an ongoing piece of work that is reviewed and updated on an annual basis. Whilst a 20-year period seems well into the future, annual reviews should identify any major issues well ahead so that that any adjustments and potential funding issues can be phased in over time.

### **Settlement Buildings & Facilities**

APV Valuers were engaged to undertake a revaluation of the Shires Building and Assets located within the Murchison Settlement. Data from this revaluation was used to determine scheduled replacements. More detailed work will be required to refine this work.

New and expanded facilities as identified through the Murchison Settlement Masterplan Report, Murchison Roadhouse Precinct Redevelopment Detailed Concept Design and Vast Sky Experience Business Case have also been addressed. Various other infrastructure and building works have also been identified

### **Plant**

The Shire updates its Plant Replacement Program annually

*Enc    Road Asset Management Program  
      Settlement Building and Facilities Program  
      Plant Replacement Program*

### **Financial Implications**

Financial implications associated with delivering the Asset Management Plan are outlined in the Asset Long Term Financial Plan and Annual Budget which also includes projections for a 4-year period.

### **Previous**

28 September 2017



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## **Road Asset Management Plan**

**24 August 2023**







## Murchison Roads Asset Management Plan - Assumptions & Rates

Item	Treatment	Widths (m)	Measure	Raw Rate	Markup	Rate	Cost \$ per km	Life	Comments
<b>Seal / Concrete Surfacing Construction</b>									
Two Coat Seal Standard Width	Two Coat Seal	7.2	Cost per m2	9.50	13.0%	10.74	77,292		Sprayed Bituminous Initial Two Coat Seal
Reseal Standard Width	Reseal	7.2	Cost per m2	5.50	20.0%	6.60	47,520		Sprayed Bituminous One Coat Reseal
Concrete Standard Width	Concrete	8.0	Cost per m2	545.00	10.0%	599.50			Concrete Floodway
<b>Floodway Other Costs</b>									
Rock Protection One Side	Rock 1 Side		Cost per m	50.00	0.0%	50.00			Floodway with protection on one side
Rock Protection Two Sides	Rock 2 Sides		Cost per m	100.00	0.0%	100.00			Floodway with protection on two sides
Concrete Cut-off Wall One Side	Conc Wall 1 Side		Cost per m	100.00	0.0%	100.00			Floodway with cut-off wall on one side
Concrete Cut-off Wall Two Sides	Conc Wall 2 Sides		Cost per m	200.00	0.0%	200.00			Floodway with cut-off wall on two sides
Additional Culverts	Culverts		Cost per item	250.00	0.0%	250.00			Additional costs for major culverts associated upgrades
Major River Addition Works	River Wks		Cost per m	5,000.00	0.0%	5,000.00			Additional costs for major river upgrade crossings
Ballinyoo Bridge	Bridge		Item Cost	4,658,230.00	0.0%	4,658,230.00			
<b>Other</b>					0.0%	0.00			
Single Lane Grid Construction	3.8m Grid		Cost per Grid	15,000.00	0.0%	15,000.00			Single Lane Grid Construction
Two Lane Grid Construction	7.8m Grid		Cost per Grid	20,000.00	0.0%	20,000.00			Two Lane Grid Construction
Sign Small	Small		Cost per No	206.08	0.0%	206.08			
Sign Medium	Medium		Cost per No	303.72	0.0%	303.72			
Sign Large	Large		Cost per No	404.96	0.0%	404.96			

## Murchison Roads Asset Management Plan - Assumptions & Rates

Item	Treatment	Widths (m)	Measure	Raw Rate	Markup	Rate Cost \$ per km	Life	Comments
<b>PROGRAM USEFUL LIVES</b>								
Formed	Nil		No of Years				0	No resheet required
Gravel Resheet Cat A	Resheet Typ 1		No of Years				25	Standard Gravel Resheet Category A Road. Also cement stabilised sections
Gravel Resheet Cat B	Resheet Typ 2		No of Years				30	Standard Gravel Resheet Category B Road. Also cement stabilised sections
Gravel Resheet Cat C	Resheet Typ 3		No of Years				35	Standard Gravel Resheet Category C Road. Also cement stabilised sections
Gravel Resheet Cat D	Resheet Typ 4		No of Years				40	Standard Gravel Resheet Category D Road. Also cement stabilised sections
Gravel Resheet Cat E	Resheet Typ 5		No of Years				45	Standard Gravel Resheet Category E Road. Also cement stabilised sections
Gravel Floodway Resheet Cat A	Fwy Resheet Typ 1		No of Years				20	Gravel Floodway Resheet Category A Road
Gravel Floodway Resheet Cat B	Fwy Resheet Typ 2		No of Years				25	Gravel Floodway Resheet Category B Road
Gravel Floodway Resheet Cat C	Fwy Resheet Typ 3		No of Years				30	Gravel Floodway Resheet Category C Road
Gravel Floodway Resheet Cat D	Fwy Resheet Typ 4		No of Years				35	Gravel Floodway Resheet Category D Road
Gravel Floodway Resheet Cat E	Fwy Resheet Typ 5		No of Years				40	Gravel Floodway Resheet Category E Road
Pavement & Cem Pavement	Pave		No of Years				60	
Pavement & Cem Pavement	Stab		No of Years				60	
Formed or Unformed Roads	Nil		No of Years				0	Not Applicable
Reseal Pavement	Reseal Pave		No of Years				60	
Reseal	Reseal		No of Years				17	
Two Coat Seal	Pave		No of Years					Not Applicable
Concrete	Concrete		No of Years				80	
Bridges	Bridge		No of Years				80	
<b>WDV USEFUL LIVES</b>								
<b>General</b>								
Pavement			No of Years					As per Program Useful Lives
Reseal Pavement	Reseal		No of Years				60	
Seal	Reseal		No of Years				17	
Concrete	Concrete		No of Years				80	
Culverts	Culverts		No of Years				80	
Single Lane Grid Construction	3.8m Grid		No of Years				80	
Two Lane Grid Construction	7.8m Grid		No of Years				80	
Intersection Upgrade	Int Upgrade		No of Years				0	
Bridges	Bridge		No of Years				80	
Sign Small	Small		No of Years				20	
Sign Medium	Medium		No of Years				20	
Sign Large	Large		No of Years				20	



**Murchison Roads Asset Management Plan - Assumptions & Rates**

Item	Treatment	Widths (m)	Measure	Raw Rate	Markup	Rate	Cost \$ per km	Life	Comments
<b>Culverts</b>									
	300 RCP		No of Years	50.00	0.0%	50.00		40	Replacement costs are included in additional culvert costs within each
	375 RCP		No of Years	60.00	0.0%	60.00		40	Replacement costs are included in additional culvert costs within each
	450 RCP		No of Years	70.00	0.0%	70.00		40	Replacement costs are included in additional culvert costs within each
	500 RCP		No of Years	80.00	0.0%	80.00		40	Replacement costs are included in additional culvert costs within each
	600 RCP		No of Years	85.00	0.0%	85.00		40	Replacement costs are included in additional culvert costs within each
	900 RCP		No of Years	90.00	0.0%	90.00		40	Replacement costs are included in additional culvert costs within each
	1200 RCP		No of Years	100.00	0.0%	100.00		40	Replacement costs are included in additional culvert costs within each
	1500 RCP		No of Years	110.00	0.0%	110.00		40	Replacement costs are included in additional culvert costs within each
	450 Heli Corr		No of Years	20.00	0.0%	20.00		40	Replacement costs are included in additional culvert costs within each
	300 HDP		No of Years	30.00	0.0%	30.00		40	Replacement costs are included in additional culvert costs within each
	400 HDP		No of Years	35.00	0.0%	35.00		40	Replacement costs are included in additional culvert costs within each
	450 HDP		No of Years	40.00	0.0%	40.00		40	Replacement costs are included in additional culvert costs within each
	1270 HDP		No of Years	75.00	0.0%	75.00		40	Replacement costs are included in additional culvert costs within each

## Murchison Roads Asset Management Plan - Assumptions & Rates

Item	Treatment	Widths (m)	Measure	Raw Rate	Markup	Rate	Cost \$ per km	Life	Comments
<b>Comparison with 2022 Roads Valuation</b>	Snapshot of a general comparison of various elements associated previous roads valuation work undertaken in 2022								
Subgrade Unformed	2022 Valuation		Cost per m2			0.46		Infinite	
	Shire		Cost per m2			0.46		Infinite	Same Assumption
Subgrade Formed	2022 Valuation		Cost per m2			2.36		Infinite	
	Shire		Cost per m2			2.36		Infinite	Same Assumption
Basecourse Unsealed	2022 Valuation		Cost per m2			3.92			
	Shire		Cost per m2			5.60			Conventional resheet
						7.00			Resheet involving additional drainage or bunding works
	2022 Valuation		No of Years					10	
	Shire		No of Years					25	Varies according to the nature of road and expected traffic. Construction widths also vary
								45	
Basecourse Sealed	2022 Valuation		Cost per m2			13.11			
	Shire		Cost per m2			8.13			250mm compacted thickness
						10.08			250mm compacted thickness. Mark up 30% higher for road realignments
	2022 Valuation		No of Years					40	
	Shire		No of Years					60	Program includes a significant program of construction and reconstruction works. Detailed pavement analysis undertaken in 2023 on the Carnarvon-Mullewa Road will further inform this assumption
Sealed Surface Two Coat Seal	2022 Valuation		Cost per m2			14.50			
	Shire		Cost per m2			10.74			
	2022 Valuation		No of Years					15	
	Shire		No of Years					17	
Reseal	2022 Valuation		Cost per m2			5.45			
	Shire		Cost per m2			6.60			
	2022 Valuation		No of Years					15	
	Shire		No of Years					17	
Unsealed Floodways	2022 Valuation		Cost per m2			10.61			
	Shire		Cost per m2			5.60			
	2022 Valuation		No of Years					10	
	Shire		No of Years					20	Varies according to the nature of road and expected traffic. Construction widths also vary
							40		
Cement Stabilised Floodways	2022 Valuation		Cost per m2			14.30			
	Shire		Cost per m2			7.80			
Concrete Floodways	2022 Valuation		Cost per m2			209.32			
	Shire		Cost per m2			599.50			
	2022 Valuation		No of Years					80	
	Shire		No of Years					80	



**Murchison Shire - Roads Program Summary**

RD	Description	Surface Type	Updated Surface Type	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
CARNARVON - MULLEWA RD	Resheet Works	Formed & Surfaced	Formed & Surfaced					7,560	15,060	538,704		185,012	468,215	24,638	152,727	14,558	943,783	1,580,989	550,861	167,684	241,005	349,423	128,887		1,090,707
CARNARVON - MULLEWA RD	Resheet Works	Formed & Surfaced	Formed & Surfaced										162,036					18,396	98,784						
CARNARVON - MULLEWA RD	Resheet Works	Sealed	Sealed															5,040							
CEMETERY RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
COODARDY - NOONDIE RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
COODARDY - NOONDIE RD	Resheet Works	Unformed	Unformed																						
COOLCALALAYA RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																			72,070			
COOLCALALAYA RD	Resheet Works	Formed	Formed																						
CUE - KALLI RD	Resheet Works	Formed & Surfaced	Formed & Surfaced									3,528		36,756				119,398				110,376			
CUE - KALLI RD	Resheet Works	Formed	Formed														168,084	641,844						11,872	
CURBUR HOMESTEAD ACCESS RD	Resheet Works	Formed	Formed																						
CURBUR WOOLSHED RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
CURBUR WOOLSHED RD	Resheet Works	Formed	Formed																						
CURBUR WOOLSHED RD	Resheet Works	Unformed	Unformed																						
ERONG RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																			19,796	1,568	26,813	230,300
ERONG RD	Resheet Works	Formed	Formed																						211,680
ERRABIDY BLUFF RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																			23,023			
ERRABIDY BLUFF RD	Resheet Works	Unformed	Unformed																						
ERRABIDY OUTCAMP ACCESS RD	Resheet Works	Unformed	Unformed																						
INNOUENDY RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																			7,826			
INNOUENDY RD	Resheet Works	Formed	Formed																						
JACK HILLS ACCESS RD	Resheet Works	Sealed Excluded	Sealed Excluded																						
KALLI - MILEURA RD	Resheet Works	Unformed	Unformed																						
KALLI - RODERICK RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
KALLI - RODERICK RD	Resheet Works	Unformed	Unformed																						
KURARA WAY	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
LAKE NERRAMYNE ACCESS RD	Resheet Works	Formed	Formed																						
LAKE NERRAMYNE RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
LAKE NERRAMYNE RD	Resheet Works	Formed	Formed																						
MANFRED RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
MANFRED RD	Resheet Works	Formed	Formed																						
MCNABB - TWIN PEAKS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced															8,488			18,242		62,916		
MCNABB - TWIN PEAKS RD	Resheet Works	Formed	Formed																			47,510			417,480
MEEBERRIE - WOOLEEN RD	Floodway Works	Concrete	Concrete			520,775																			
MEEBERRIE - WOOLEEN RD	Floodway Works	Formed & Surfaced	Concrete			1,010,095																			
MEEBERRIE - WOOLEEN RD	Reseal Works	Sealed	Sealed																						
MEEBERRIE - WOOLEEN RD	Resheet Works	Formed & Surfaced	Formed & Surfaced									6,024		261,576	578,844	7,056	126,756								
MEEBERRIE - WOOLEEN RD	Resheet Works	Formed	Formed											360,360	56,196	10,584									
MEEBERRIE ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced															20,160							
MEEBERRIE ACCESS RD	Resheet Works	Formed	Formed																						
MEKA - NOONDIE RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
MEKA - NOONDIE RD	Resheet Works	Unformed	Unformed																						
MEKA - NOONDIE RD	Resheet Works	Unformed	Unformed																						
MILEURA - MT HALE RD	Resheet Works	Unformed	Unformed																						
MILEURA - NOOKAWARRA RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
MILEURA - NOOKAWARRA RD	Resheet Works	Formed	Formed																						
MILEURA AIRSTRIP ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
MT NARRYER ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
MT NARRYER ACCESS RD	Resheet Works	Formed	Formed																						
MT NARRYER ACCESS RD	Resheet Works	Sealed	Sealed																						
MT WITTENOOM STAT ACCESS RD	Resheet Works	Formed	Formed																						
MT. WITTENOOM RD	Floodway Works	Concrete	Concrete																						
MT. WITTENOOM RD	Reseal Works	Sealed	Sealed																						
MT. WITTENOOM RD	Resheet Works	Formed & Surfaced	Formed & Surfaced							37,676				1,162,728	10,080					285,768					
MT. WITTENOOM RD	Resheet Works	Formed	Formed											373,968	87,696										
MUGGON RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																			37,982	2,184		

**Murchison Shire - Roads Program Summary**

RD	Description	Surface Type	Updated Surface Type	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
MUGGON RD	Resheet Works	Formed	Formed																						
MUGGON STATION RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
MUGGON STATION RD	Resheet Works	Formed	Formed																						
MUGGON STATION RD	Resheet Works	Unformed	Unformed																						
MULGA RD	Reseal Works	Sealed	Sealed		7,623																	7,623			
MULGA RD	Formed & Surf Const	Formed & Surfaced	Sealed		243,577																				
MURCHISON AIRSTRIP ACCESS RD	Formed & Surf Const	Formed & Surfaced	Sealed		11,882																				
MURCHISON RDHOUSE ACCESS RD	Reseal Works	Sealed	Sealed																						
MURGOO HOMESTEAD ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																				2,160		
MURGOO HOMESTEAD ACCESS RD	Resheet Works	Formed	Formed																						
NEW FORREST - YALLALONG RD	Floodway Works	Concrete	Concrete																						
NEW FORREST - YALLALONG RD	Reseal Works	Sealed	Sealed																						
NEW FORREST - YALLALONG RD	Resheet Works	Formed & Surfaced	Formed & Surfaced														46,104					8,968	22,337		
NEW FORREST - YALLALONG RD	Resheet Works	Formed	Formed																						
NOOKAWARRA ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																1,176					16,464	
OFFICE RD	Reseal Works	Sealed	Sealed						2,376																
OFFICE RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
PIA WADJARRI ACCESS RD	Resheet Works	Unformed	Unformed																						
PINEGROVE - YALLALONG RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
PINEGROVE - YALLALONG RD	Resheet Works	Unformed	Unformed																						
PINEGROVE - YALLALONG RD	Unformed	Unformed	Unformed																						
PINEGROVE HOMESTEAD ACCESS	Reseal Works	Sealed	Sealed																						
PINEGROVE HOMESTEAD ACCESS	Resheet Works	Formed & Surfaced	Formed & Surfaced																				1,638		
REFUSE SITE ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
REFUSE SITE ACCESS RD	Resheet Works	Formed	Formed																						
RODERICK STREET	Reseal Works	Sealed	Sealed																						
RODERICK STREET	Resheet Works	Formed & Surfaced	Formed & Surfaced														3,830								
SHIRE DEPOT ACCESS RD	Formed & Surf Const	Formed & Surfaced	Formed & Surfaced		18,048																				
TARDIE - YUIN RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
TARDIE - YUIN RD	Resheet Works	Formed	Formed																						
TWIN PEAKS - WOOLEEN RD	Formed & Surf Const SKA	Sealed	Sealed																						
TWIN PEAKS - WOOLEEN RD	Formed & Surf Const SKA	Formed & Surfaced	Formed & Surfaced	52,920																					
TWIN PEAKS - WOOLEEN RD	Formed & Surf Const SKA	Formed & Surfaced	Formed & Surfaced	933,241	77,387	1,740,917																		48,290	
TWIN PEAKS - WOOLEEN RD	Formed & Surf Const SKA	Formed	Formed & Surfaced	504,328																					
TWIN PEAKS ACCESS RD	Resheet Works	Unformed	Unformed																						
TWIN PEAKS - WOOLEEN ROAD	Resheet Works	Unformed	Unformed						1,478,679																
WOOLEEN - MT WITTENOOM RD	Formed & Surf Const SKA	Formed & Surfaced	Formed & Surfaced	280,088																				13,230	
WOOLEEN - MT WITTENOOM RD	Formed & Surf Const SKA	Formed & Surfaced	Formed & Surfaced	682,668																					
WOOLEEN - MT WITTENOOM ROAD	Resheet Works	Formed & Surfaced	Formed & Surfaced							2,500,544															
WOOLEEN - MT WITTENOOM ROAD	Resheet Works	Formed	Formed & Surfaced							129,654															
WOOLEEN ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced												20,160										
WOOLEEN ACCESS RD	Resheet Works	Formed	Formed																						81,732
WOOLGORONG - YUIN RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																			2,016			
WOOLGORONG - YUIN RD	Resheet Works	Unformed	Unformed																						
WOOLGORONG RD	Resheet Works	Formed & Surfaced	Formed & Surfaced									3,864		11,676											
WOOLGORONG RD	Resheet Works	Formed	Formed																						
WREATH FLOWERS ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced												5,020		11,592								
WREATH FLOWERS ACCESS RD	Resheet Works	Formed	Formed														96,264								
YUIN HOMESTEAD ACCESS RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																						
YUIN HOMESTEAD ACCESS RD	Resheet Works	Formed	Formed												7,560										
YUNDA RD	Resheet Works	Formed & Surfaced	Formed & Surfaced																				19,292		
YUNDA RD	Resheet Works	Formed	Formed																						
<b>Totals</b>				<b>5,269,495</b>	<b>6,443,026</b>	<b>5,309,412</b>	<b>1,357,660</b>	<b>2,959,283</b>	<b>1,724,588</b>	<b>4,109,492</b>	<b>4,224,505</b>	<b>2,260,052</b>	<b>2,876,890</b>	<b>2,613,615</b>	<b>4,845,384</b>	<b>700,138</b>	<b>8,045,232</b>	<b>6,228,293</b>	<b>5,448,271</b>	<b>691,968</b>	<b>2,169,553</b>	<b>1,927,318</b>	<b>404,895</b>	<b>1,704,672</b>	<b>2,563,471</b>





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## **Settlement Buildings & Infrastructure**

**24 August 2023**







**Murchison Settlement Buildings & Infrastructure - August 2023**

<b>Report No</b>	<b>Reporting Description</b>	<b>Job No</b>	<b>Description</b>	<b>Comments</b>	<b>Ext Cost \$ (excl Inflation)</b>	<b>Year</b>
B16380	Staff Housing Buildings Improvements	C14226	Capex - Construct Staff Housing, Murchison	New Staff Housing	450,000	2026
B16390	Staff Housing Buildings Improvements	C14226	Capex - Construct Staff Housing, Murchison	New Staff Housing	450,000	2027
B16400	Staff Housing Buildings Improvements	RN10BK	CapEx - Renovation 10B Kurara Way	New Single Room Extension as per 10A Kurara Way	90,000	2030
B16410	Staff Housing Buildings Improvements	RN4AKU	CapEx - Renovation 4A Kurara Way	New Single Room Extension as per 10A Kurara Way	90,000	2030
B16420	Staff Housing Buildings Improvements	RN4BKU	CapEx - Renovation 4B Kurara Way	New Single Room Extension as per 10A Kurara Way	90,000	2030
B16430	Community Amenities Capital	C10002	D Capex - Community Centre Upgrade Stage 1	Refurbish existing Sports Club	750,000	2029
B16440	Community Amenities Capital	C14234	A Capex - Community Centre Upgrade Stage 2		400,000	2032
B16450	Sport & Rec Buldg & Improv	C11002	E Capex - Community Swimming Pool	Part LRCIP Funded	1,050,000	2024
B16460	Sport & Rec Buldg & Improv	C11003	J Capex - Playground Upgrade	Potential part Lottery West Funded	200,000	2026
B16470	Sport & Rec Buldg & Improv	C11004	Sports Club Access Upgrade	Relay Paving and extend grass areas	30,000	2024
B16480	Sport & Rec Buldg & Improv	C11006	Community Splash Pad	Part Lottery West Funded	350,000	2024
B16490	Sport & Rec Buldg & Improv	C11050	Other Rec & Sport Buldg & Improv General		0	0
B16500	Heritage Buildings & Improvements	C11640	Museum Build & Improv General	Extension following implementation Part of Vast Sky Business Works	0	0
B16510	Tour Area Prom Buildings & Improvements	C13005	F Capex - New Caravan Park Ablution Block		475,000	2024
B16520	Tour Area Prom Buildings & Improvements	C13010	Capex - Roadhouse Residence	New Accommodation for Roadhouse Manager	450,000	2025
B16530	Tour Area Prom Buildings & Improvements	C13015	Capex - Roadhouse Business Bldg.	Major refurbishment	500,000	2026
B16540	Tour Area Prom Buildings & Improvements		Cap Ex Ensuites to C/V Park Cabins	Defer at this stage and revisit if necessary	0	0
B16550	Tour Area Prom Buildings & Improvements	C13025	H Caravan Park Ensuites	New 3 Units	350,000	2029
B16560	Tour Area Prom Buildings & Improvements	C13026	K Interpretive Centre	Part of Vast Sky Business Case	0	0
B16570	Tour Area Prom Buildings & Improvements	C13027	Staff Accommodation Units	Initial two separate units	300,000	2025
B16580	Tour Area Prom Buildings & Improvements	C13027	Staff Accommodation Units	Part of Vast Sky Business Case Requirements	0	0
B16590	Water Infrastructure	C13670	Water Supply Capital	General Water Asset Replacement Works Post plan as majority new in 2024	0	0
B16600	Water Infrastructure	C13671	Irrigation Water Supply Capital	Replacements to be separately assessed as required	0	0
B16610	Water Infrastructure	C14720	Improvements To drinking Water reticulation	New Bores, Shed Pump House & Ring Main Unit	498,496	2023
B16620	Water Infrastructure	C14720	Improvements To drinking Water reticulation	New Bores, Shed Pump House Ring Main Unit & Connections	450,000	2024
B16630	Water Infrastructure	C14720	Improvements To drinking Water reticulation	New Chlorinator. Potential Infrastructure Development Funding	230,000	2025
B16640	Power Infrastructure	C13660	Power Supply Capital	Replace section underground power - Part 1	150,000	2028
B16650	Power Infrastructure	C13660	Power Supply Capital	Replace section underground power - Part 2	150,000	2036
B16660	Power Infrastructure	C13661	Power Supply Upgrade	Upgrade of Powerhouse. Potential Infrastructure Development Funding	350,000	2024
B16661	Power Infrastructure	C13661	Power Supply Upgrade	Upgrade of Powerhouse. Potential Infrastructure Development Funding	450,000	2025
B16670	Power Infrastructure	C13662	Solar Power Provision	Potential Grant or loan funded	1,000,000	2026
B16680	Administration Building & Improvements	C14001	Capex Minor Modifications to Council Building	Move Library, Refurbish & Extend Council Chamber to cover in verandah	600,000	2029



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## **Plant Replacement Program**

**24 August 2023**



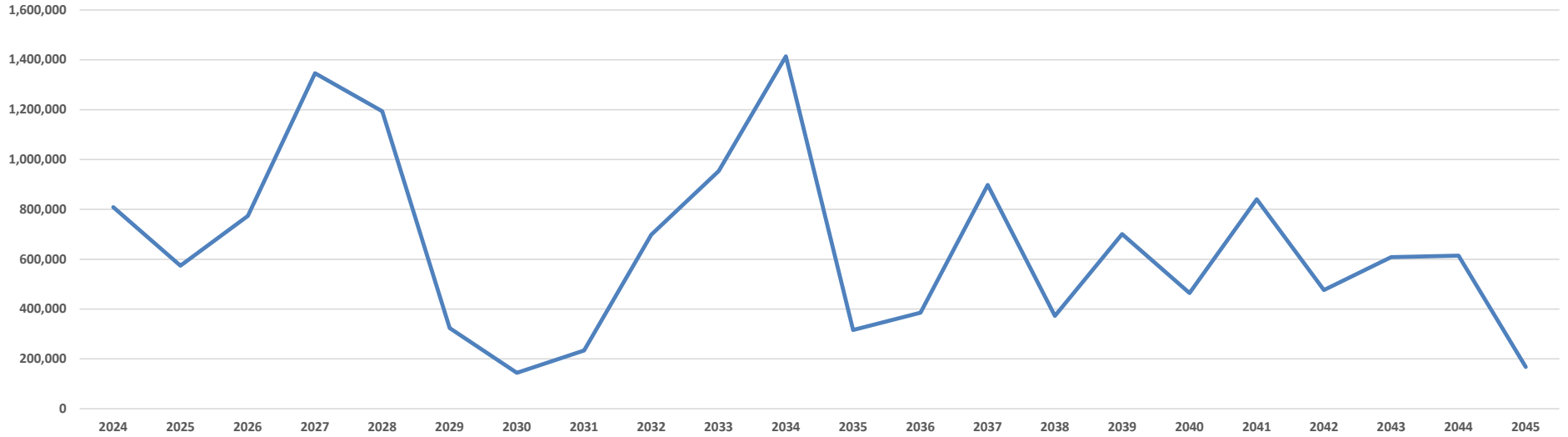
## Plant Replacement Program

Plant Type	Est Costs exl Inflation	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Bulldozers	Purchase																	450,000					
Caravans	Purchase			110,000							330,000	210,000				110,000		110,000	220,000				
Dollies	Purchase							30,000					30,000								90,000		
Fire - Fast Attack	Purchase							10,000															
Fire Trucks	Purchase							10,000															
Forklifts	Purchase							40,000								40,000							
Gen Sets Medium	Purchase						20,000	40,000			12,000		60,000		20,000	40,000			12,000		60,000		20,000
Gen Sets Small	Purchase							18,000								18,000							
Graders	Purchase	500,000				1,000,000	500,000		500,000				1,000,000	500,000		500,000				1,000,000	500,000		500,000
Loaders	Purchase						450,000						450,000				450,000						
Low Loader Floats	Purchase													187,000		187,000							
Mini Excavators	Purchase				16,000										16,000								
Misc	Purchase							20,000								20,000					70,000		
Ride On Mower	Purchase				12,000		12,000						12,000		12,000						12,000		12,000
Rollers	Purchase						223,510	466,000														223,510	466,000
Side-tippers & Trailers	Purchase						300,000									340,000		100,000				300,000	
Small Plant Items	Purchase							130,000					25,000		125,000	130,000							
Tractors	Purchase																				80,000		
Trailers Medium	Purchase												90,000				12,000				24,000		
Trailers Small	Purchase							10,000			12,000				20,000				12,000		12,000		
Trucks - Heavy	Purchase		335,000				335,000		100,000				335,000						100,000			335,000	335,000
Trucks - Light	Purchase							75,000		125,000	80,000							75,000		125,000	80,000		
Utes	Purchase	43,000				43,000	30,000	70,000		43,000			70,000	43,000					113,000				70,000
Vehicles Other	Purchase																	60,000					
Vehicles Admin	Purchase							140,000					140,000					140,000					140,000
<b>Plant Purchases</b>		<b>543,000</b>	<b>335,000</b>	<b>110,000</b>	<b>28,000</b>	<b>1,043,000</b>	<b>1,870,510</b>	<b>1,059,000</b>	<b>600,000</b>	<b>168,000</b>	<b>434,000</b>	<b>210,000</b>	<b>2,212,000</b>	<b>730,000</b>	<b>193,000</b>	<b>1,385,000</b>	<b>462,000</b>	<b>1,048,000</b>	<b>344,000</b>	<b>1,319,000</b>	<b>734,000</b>	<b>858,510</b>	<b>1,543,000</b>
<b>Plant Sales</b>		<b>100,000</b>	<b>100,000</b>	<b>10,000</b>	<b>500</b>	<b>190,000</b>	<b>300,702</b>	<b>179,600</b>	<b>90,000</b>	<b>32,000</b>	<b>40,000</b>	<b>20,000</b>	<b>463,500</b>	<b>100,000</b>	<b>5,000</b>	<b>160,000</b>	<b>90,000</b>	<b>112,000</b>	<b>20,000</b>	<b>205,000</b>	<b>115,500</b>	<b>114,702</b>	<b>346,600</b>
Road Plant Purchases	Purchase	543,000	335,000	110,000	16,000	1,043,000	1,838,510	701,000	600,000	168,000	422,000	110,000	1,960,000	730,000	116,000	1,177,000	462,000	848,000	344,000	1,295,000	580,000	858,510	1,371,000
Minor Plant Purchases	Purchase	0	0	0	12,000	0	32,000	218,000	0	0	12,000	100,000	112,000	0	77,000	208,000	0	60,000	0	24,000	154,000	0	32,000
Admin Vehicle Purchases	Purchase	0	0	0	0	0	0	140,000	0	0	0	0	140,000	0	0	0	0	140,000	0	0	0	0	140,000
Sale of Plant Assets	Trade	(100,000)	(100,000)	(10,000)	(500)	(190,000)	(300,702)	(129,600)	(90,000)	(32,000)	(40,000)	(20,000)	(413,500)	(100,000)	(5,000)	(160,000)	(90,000)	(62,000)	(20,000)	(205,000)	(115,500)	(114,702)	(296,600)
Admin Vehicle Sales	Trade	0	0	0	0	0	0	(50,000)	0	0	0	0	(50,000)	0	0	0	0	(50,000)	0	0	0	0	(50,000)
<b>Net</b>		<b>443,000</b>	<b>235,000</b>	<b>100,000</b>	<b>27,500</b>	<b>853,000</b>	<b>1,569,808</b>	<b>879,400</b>	<b>510,000</b>	<b>136,000</b>	<b>394,000</b>	<b>190,000</b>	<b>1,748,500</b>	<b>630,000</b>	<b>188,000</b>	<b>1,225,000</b>	<b>372,000</b>	<b>936,000</b>	<b>324,000</b>	<b>1,114,000</b>	<b>618,500</b>	<b>743,808</b>	<b>1,196,400</b>

## Plant Replacement Program

Plant Type	Est Costs exl Inflation	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
<b>Plant Reserve</b>																							
Opening Balance of Plant Reserve		1,251,758	808,758	573,758	773,758	1,346,258	1,193,258	323,450	144,050	234,050	698,050	954,050	1,414,050	315,550	385,550	897,550	372,550	700,550	464,550	840,550	476,550	608,050	614,242
Trans from Plant Res		(443,000)	(235,000)	(100,000)	(27,500)	(853,000)	(1,569,808)	(879,400)	(510,000)	(136,000)	(394,000)	(190,000)	(1,748,500)	(630,000)	(188,000)	(1,225,000)	(372,000)	(936,000)	(324,000)	(1,114,000)	(618,500)	(743,808)	(1,196,400)
Trans to Plant Res		0	0	300,000	600,000	700,000	700,000	700,000	600,000	600,000	650,000	650,000	650,000	700,000	700,000	700,000	700,000	700,000	700,000	750,000	750,000	750,000	750,000
Adjustment to Actual		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Closing Balance Plant Reserve		808,758	573,758	773,758	1,346,258	1,193,258	323,450	144,050	234,050	698,050	954,050	1,414,050	315,550	385,550	897,550	372,550	700,550	464,550	840,550	476,550	608,050	614,242	167,842

Plant Reserve Balance \$



Plant Reserve Balance	808,758	573,758	773,758	1,346,258	1,193,258	323,450	144,050	234,050	698,050	954,050	1,414,050	315,550	385,550	897,550	372,550	700,550	464,550	840,550	476,550	608,050	614,242	167,842
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**murchison**shire

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