

1

TO THE MAYOR AND COUNCILLORS OF THE MACKENZIE DISTRICT COUNCIL

MEMBERSHIP OF THE PROJECTS AND STRATEGIES COMMITTEE

Graeme Page (Chairman) Claire Barlow (Mayor) John Bishop Peter Maxwell Annette Money Graham Smith Evan Williams

Notice is given of a meeting of the Projects and Strategies Committee to be held on Tuesday 23 April 2013 following the Finance Committee meeting

VENUE:

Council Chambers, Fairlie

BUSINESS: As per Agenda attached

WAYNE BARNETT CHIEF EXECUTIVE OFFICER

17 April 2013



PROJECTS AND STRATEGIES COMMITTEE

Agenda for Tuesday 23 April 2013

I APOLOGIES

II DECLARATIONS OF INTEREST

III MINUTES

Confirm and adopt as the correct record the Minutes of the meeting of the Projects and Strategies Committee held on 19 March 2013 including such parts as were taken with the Public Excluded. ACTION POINTS

IV REPORTS:

- 1. Asset Management Monthly Report April 2013
- 2. Transportation Activity Management Plan
- 3. Water Supply Activity Management Plan

MINUTES OF A MEETING OF THE PROJECTS AND STRATEGIES COMMITTEE HELD IN THE COUNCIL CHAMBERS, FAIRLIE, ON TUESDAY 19 MARCH 2013 AT 1:12PM

PRESENT:

Graeme Page (Chairman) Claire Barlow (Mayor) Crs John Bishop Annette Money Graham Smith Evan Williams Peter Maxwell

IN ATTENDANCE:

Bernie Haar (Asset Manager) Suzy Ratahi (Manager – Roading) (left Meeting at 1:45pm) John O'Connor (Utilities Engineer) Angie Taylor (Solid Waste Manager) (left Meeting at 2:37pm) Keri-Ann Little (Committee Clerk)

I <u>APOLOGY:</u>

There were no apologies.

II <u>DECLARATIONS OF INTEREST</u>:

There were no Declarations of Interest.

III <u>MINUTES:</u>

<u>Resolved</u> that the Minutes of the meeting of the Projects and Strategies Committee held on 5 February 2013, including such parts as were taken with the Public Excluded, be confirmed and adopted as the correct record of the meeting.

Annette Money/ Graham Smith

IV <u>REPORTS</u>:

1. ASSET MANAGER'S MONTHLY REPORT:

This report from the Asset Manager referred to Asset Management – Project Progress – Roading, Essential Services and Solid Waste

<u>Resolved</u> that the report be received.

Claire Barlow/ John Bishop

• Madam Mayor congratulated the Asset Department on the maintenance of pavement remarking completion with a \$20,000 saving achieved.

Roading

Mrs Suzy Ratahi, Roading Manager spoke to her report.

Lilybank Road Curve Realignment

A design was completed and provided to Nigel Blair for pricing. On further discussion with Nigel and the Land Owner it would appear that instead of the 100m section that was originally designed it was agreed that it would be desirable to extend the works by a further 100m which would effectively ease two corners and end up with a much better result. Due to the increase in length (100m turning into 200m) the price is outside of budget indicated in previous Minor Improvement funding budgets of \$35,000.00. Nigel Blair's price however is reasonable considering the extra length that could now be realigned.

Resolved:

2. That price for the 200m curve re-alignment from Blair Excavation Ltd be accepted for the Minor Improvement Works on Lilybank Road.

Annette Money/ Evan Williams

Corner Hamilton and Strathallan Roads

Mrs Ratahi, Roading Manager proceeded to update The Committee with the current situation on the Corner of Hamilton and Strathallan Roads and the Residents requesting 200 metres around their gate way be sealed. The Residents have been advised that this is not Council Policy and the Roading Manager has asked for an Elected Member to accompany her to the site in question and meet with the Residents. Cr Page stated he would be happy to attend and would also extend the invite to members of The Roading Committee.

Funding Assistance Rate Review (FAR)

Report circulated to Roading Committee members is also available online <u>www.nzta.govt.nz</u>. Mrs Ratahi, Roading Manager stated the NZTA are suggesting eight changes to the financial assistance rate. She also said the document is currently out for consultation with this period ending 31 May 2013. The Asset Manager said it is important Council Staff and Elected Members have a comprehensive look at this document with the view to Submit, with the option of workshops in the future for further understanding and consultation. Mayor Barlow also address Mr Haar, Asset Manager and stated that money be put in to this project so that correct information is received and investigated enabling Council to make informed submissions.

Reseals

Reseals have finished for the year and are 3% over budget.

<u>Resolved</u> transfer \$17,000 combined from Traffic Services Budget and Pavement Rehabilitation budget into The Seal Road Services Budget.

Essential Services:

Mr John O'Connor, Utilities Manger spoke to his report.

Resolved:

3. The Committee note and endorse the decision made by The Mayor and Councillor Page (who had delegated authority to do so) to award the Fairlie Water Supply 2013 Renewals contract to Menzies Group Ltd at a Contract price of \$182,023.

Annette Money/ Evan Williams

Fairlie Water Supply – Maintenance

Our charmed run of no major repairs in the reticulation came to an end in February with repairs totalling \$8,600 being required.

On 13 March the un-modified flow of the Opihi River at SH1 was 4.344 cumecs. From 1 January 2014 on, when the unmodified flow in the Opihi River at SH1 is between 2.5 cumecs and 8.1 cumecs, significant water restrictions come into force, including a limit of two hours of any hosing/irrigation per day per property. When the flow is at or less than 2.5 cumecs a total ban on hosing/irrigation comes into force.

Test pumping was carried out at two possible alternative sources for when the Opihi River is in flood and the existing source becomes turbid.

1. Water's Spring – A hole was excavated to the base sandstone at the spring, the drain was cleaned out, and water was pumped at a rate of approximately 40 l/sec for 48 hours. The relevant levels at and an assumed datum are:

•	Ground level beside Spring	9.02
•	Water level pre-pumping	7.88
•	Invert of hole (top of sandstone)	5.40
•	Stable water level second day of	7.75
	pumping	

The chemical analysis report has arrived and it looks good.

There appears to be the potential for this spring to be used as a permanent source for the Fairlie Water Supply. However, the turbidity at high draw-off when the river is in flood will need to be investigated.

2. Guerin's Well – Guerins well was pumped at approximately 25 l/sec for 48 hours. The pre-pump water-level was at 3.06m depth. On the second day of constant pumping the water depth settled at a depth of 4.18m. The well is 7.0m deep.

The chemical analysis for this water is not yet available.

There appears to be sufficient quantities of water available for this source to be used when the turbidity of the existing source is high. However, the turbidity of the well water when the river is in flood will need to be investigated.

• Cr Page Chairman suggested more discussion needed to be carried out and consultation with the Fairlie Community Board was required. Discussions on-going.

Solid Waste:

Angie Taylor, Solid Waste Manager spoke to her report.

Greenwaste

ESL has provided a proposal from Aoraki Contracting Ltd (Scott Aronsen) for greenwaste. In summary this includes the transport of greenwaste to a central location in Twizel and producing compost for sale in bags and in bulk. This proposal requires further consideration, particularly in terms of cost, timeframes and options for suitable locations and will be addressed at the upcoming sub-committee meeting.

Albury collection

ESL has provided an option for the Albury collection from Peter Brian. This would involve a Saturday collection of bags from four identified collection points; Mt Nessing Hall, Monavale Hall, corner Coalpit Road and Chamberlain Road, and Albury Hall. This would be for refuse, recycling and glass in the MDC bags. The cost of this service is \$300 plus GST.

- Annette Money recommended a meeting between The Solid Waste SubCommittee and ESL.
- A Solid Waste Committee Meeting is to be held tentatively on the 4th of April in Twizel.

Recycling income

There has been some discussion over the income from recyclables as it appeared this had been decreasing over the past year. The income from metals had been omitted from the overall income, which now appears to be more positive (as shown in the graph above). One factor that has decreased recycling income is a drop in the sale prices for a range of materials. The average sale price for recyclables in November 2011 was \$44 per tonne compared to \$16.10 per tonne in November 2012. Ways to improve the quality and volume of our recyclables is an on-going issue.

Digital TV changeover

I am finalising recycling options for TV's for the upcoming digital changeover on 28 April. MfE have funding available for a recycling scheme known as TV Take back and I am weighing up the advantages of this versus our current e-scrap recycling. Either way, we are able to accept TV's for recycling at all three recovery parks.

Bluewater

We are working with Bluewater and ESL to improve the separation of waste from the accommodation units and Peppers restaurant, and to improve the separation of refuse and recycling. Separate areas for bins for the units and the restaurant are being set up this week and I will monitor the quality of recycling following this.

Clinical Waste

There have been issues in Canterbury with the disposal of clinical waste from residential properties and businesses, such as veterinary clinics. This can present health and safety issues for waste handlers. The introduction of wheelie bins in the Mackenzie has reduced this hazard due to limited handling and ESL has reported that there have been no recent issues. Discussions are underway between Community & Public Health, ECan and TA's to develop a common message to the public for the correct disposal of clinical waste and I will continue to work with ESL on this issue.

3. STORMWATER AVTIVITY MANAGEMENT PLAN:

To provide adopt the Stormwater Activity Management Plan as the framework for the 2012 to 2021.

<u>Resolved</u> that the report be received.

Annette Money/ Evan Williams

Mr Haar spoke to the report; the document was handed out to all Committee Members.

Resolved:

2. That the Stormwater Activity Management Plan be adopted as policy for the future direction of that activity.

Annette Money/ John Bishop

4. FOUL SEWER ACTIVITY MANAGEMENT PLAN:

To provide adopt the Foul Sewer Activity Management Plan as the framework for the 2012 to 2021.

<u>Resolved</u> that the report be received.

Annette Money/ Peter Maxwell

Resolved:

2. That the Foul Sewer Activity Management Plan be adopted as policy for the future direction of that activity.

Graham Smith/ Annette Money

5. FORESTRY BOARD QUESTION:

Cr Page, Chair of the Mackenzie Forestry Board asked Mr Haar, Asset Manager to what effect felling trees would have to the odour from the Oxidation Ponds next to the Plantation. Mr Haar responded to Cr Page's question stating if Oxidation Ponds are running well they will have very little odour, which is the case for these Ponds. Mr Haar also informed the Committee the tree felling would not cause an issue and would in fact help the odour allowing for wind to cross the Ponds helping raise dissolved oxygen levels off the pond effluent resulting in the aerator's not having to be run constantly, as is the case currently.

THERE BEING NO FURTHER BUSINESS THE CHAIRMAN DECLARED THE MEETING CLOSED AT 2:57 PM

CHAIRMAN

DATE

MACKENZIE DISTRICT COUNCIL

REPORT TO: PROJECTS AND STRATEGY COMMITTEE

FROM: ASSET MANAGER

SUBJECT: ASSET MANAGER'S MONTHLY REPORT

MEETING DATE: 23rd APRIL 2013

REF: WAS 1/1

ENDORSED BY: CHIEF EXECUTIVE OFFICER

REASON FOR REPORT

To update the Projects and Strategy Committee on the progress on various projects and also the normal operation of the department for the past month.

RECOMMENDATION:

1. That the report be received.

BERNIE HAAR ASSET MANAGER WAYNE BARNETT CHIEF EXECUTIVE OFFICER

ASSET MANAGEMENT

Work undertaken this month included the following:

- Various solid waste issues
- Budgets
- Asset management system review
- Princes Street, revised plans for consideration
- Asset Manager's vehicle replacement completed (Forester to be disposed of on Trade-me).

The Roading Manager and I attended a workshop in Timaru on the review of the Financial Assistance Rate for roading being conducted by The New Zealand Transport Agency. The workshop is part of the consultation process and we were able to get good information for the preparation of our submission.

The Utilities Engineer and Whitestone have progressed the Utilities Services Contract Negotiations a little further. They are still not as far advanced as we had hoped.

We had an initial workshop to set the framework for negotiations. John met with Whitestone staff to review the payment schedule and discuss "basis of Payment" clauses.

Whitestone are reviewing rates in light of those "basis of payment" discussions and have had various internal meetings.

Process from here:

- Complete review of the contract documents
- Discuss and confirm contract rates
- Report to Council for adoption
- Aim for completion by end of April to mid May.
- This may be delayed a bit as we blend in the Community Facilities negotiations.

A solid waste sub committee meeting was held in Twizel and Angie will report fully on this later in her report.

Al the Asset team have been extremely busy this month with one staff member left and critical work being shared around to meet statutory timeframes or customer expectations. By the time of the meeting we should have appointed a replacement.

I have also been inspecting the seal preparation on the Lochinver Stage 3 subdivision. There were some issues with the workmanship that I was not happy and the Developer's Engineers were not addressing adequately. If not fixed the project would have had issue when the Council was asked to take it over.

PROJECT PROGRESS - COUNCIL PRIORITY LIST

Roading

Activity Management Plan

Plan complete and will be handed out at the meeting for adoption in April.

Sewerage

Twizel Land Purchase Meeting arranged for early May.

Activity Management Plan Adopted by Council

Water Supply

Projects Water Supply Programme John O'Connor will cover off all these in his part of the report.

Activity Management Plan

Plan complete and will be handed out at the meeting for adoption in April.

Stormwater

Activity Management Plan Adopted by Council

ROADING

Environmental Maintenance

Most flooding related works are now completed with only some metalling still to be completed, along with box culvert replacement on Hamilton Road, concrete sleeper reinstatement on the Askins Road Ford along abutment repairs on Stoneleigh Bridge and the Raincliff bridge works remaining.

Vegetation growth throughout the district has finally slowed down, resulting in a reduction in mowing that would normally need to be carried out this time of year.

Financial Assistance Rate (FAR) Review

The financial assistant rate (FAR) review is currently being carried out by New Zealand Transport Agency, NZTA; we are in the first round of consultations. So far there is very limited information available from NZTA as to the effect any of the proposed changes will have on individual councils, this makes submitting on their suggestions difficult due to the ambiguity of most options. However, the likely best case scenario for Mackenzie District Council will be that the current formula used to work out the FAR would be the preferred option, perhaps with the removal/reduction of the minimum FAR applied to the bigger City Councils. A recent workshop held in Timaru and attended by most TLAs from the region tended to support this model. The 8 options proposed by NZTA appear to cost the rate payer considerably more in the Mackenzie District(and many other small districts). The larger City Councils that would receive a financial benefit due to the proposed changes but it is likely that these would be short term gains only (no rate rises for a few years) as the available national roading fund isn't going to increase, so there is unlikely to be any new approved works completed.

There is a "Road Efficiency Group" be meeting at Timaru District Council on the 18th of April, where the possibility of a joint submission with South Canterbury Councils will be discussed. A verbal report will then be given to the Project and Strategies committee after the Road efficiency group meeting discussions. This report will demonstrate the likely MDC position on the FAR review. This verbal report will include both the Mackenzie District Councils' individual view for submission and the potential South Canterbury Joint Submission. As timelines are tight to pull the submission it would be good to have a group of Council Members, with whom staff can meet with to discuss contents of our written submission prior to lodgement on Friday 3rd May.

Strathallan Road Dust Complaint.

At the time of writing this report a request for meeting with the Boultons and Roading Committee is being arranged to discuss the issues involved with the dust problem there. Council Staff are also currently reviewing the Council's "Sealing past houses policy" and looking at potential changes to the District Plan, under the upcoming review. Currently there is no provision in the 2013/14 Budget for seal extensions.

Maintenance

Braemar Road has been hit hard by Logging and rock carting operations, this has had a flow on effect on Mount Cook Station Road and Hayman Road respectively, increased number of trucks has meant we have had to grade the road more often. Also the increased trucks do cause a considerable dust nuisance to cyclists otherwise enjoying the scenic ride along-side Lake Pukaki on the Alps to Ocean cycle way. Logging operations have now been completed for the season with just a few trucks now carting the remaining trees that have been felled. At this stage it looks as if there will be no logging out of Mount Cook Station or DOC blocks for the 2013/14 year. Logging operations will likely be starting again in the 2014/15 financial year. The rock carting contract, which is being carried out by Meridian, to make repairs to Lake Pukaki shoreline, caused by high lake levels and nor'westers in January 2013, should be finished by the 19th of April. Leaving Alps to Ocean cyclists in relative peace for the next 18 odd months.

We have initiated a trial section on Braemar Road, from the Maryburn Gravel Pit down to the Maryburn Bridge (approx. 700m), with 200mm solid of rotten rock material, from the Mackenzie Pass slip being placed on that section. The bearing capacity of this compacted material is showing promising signs early on. Regular surveying will be carried out on the trial section to model deterioration and wear. There is some frustration with the size of solid rock outliers in the source material, so we are looking into cost effective ways of screening to remove this unwanted by product.



Braemar Road Approaching Maryburn Bridge



Slip Material at Mackenzie Pass

Minor Improvements

Plantation Road Curve Re-alignment – Works are completed.

Lilybank Road Curve Realignment – Nigel Blair is programmed to start works on the 22nd April

Grey Street, Fairlie Streetscaping - Works have been completed

Aorangi Drive, Lake Tekapo - Works have been completed

Market Place, Twizel Upgrade – Stage 2 – Contract let for Completion Date 30th November to Whitestone Ltd for \$73,773.31

Amaglamated Roading Budgets Graph Showing Percentage Share



Note: Graph includes reseals/footpath surfacing completed this financial year but not Minor Improvements. A further graph will be presented at completion of minor improvements projects this financial year.



Unsealed Road Grading (Cumulative)

Reiterating from last month;

Grading is tracking higher than last year due to the July/August Flooding, and using a slow repair mode to see what gravels we can win back from the shoulders at a lower cost for repair.

Also contributing to an increase is the fortnightly grading of Braemar Road when logging operations are carried out, this helps to protect the areas that only have a small amount of insitu base material.

Utilities Operation and Maintenance Report to 31 March 2013

FAIRLIE

Fairlie Water Supply

Operation and Maintenance expenditure is \$12,200 under YTD budget. The new supply line to Laycock's at Kimbell was installed and the chlorination plant was overhauled.

When preparing this report on 16 April the unmodified flow in the Opihi River at SH1 was 2.023 cumecs. From 1 January 2014 when it is less than 2.5 cumecs a total ban on hosing/irrigation comes into force.

The chemical analysis of water from both Waters' spring and Guerin's well indicate that the water quality is reasonably good. The pH of Guerin well was 6.8. The guideline value is 7.0 to 8.5. Waters' spring was 7.2, and the existing source is 7.0.

Fairlie Waste Water

Operation and Maintenance expenditure is \$5,100 under YTD budget, but anticipated work will bring expenditure up close to budget.

<u>TEKAPO</u>

Tekapo Water Supply

Operation and Maintenance expenditure is \$15,500 under YTD budget. There is also a budget of \$20,000 of planned maintenance to repair the reservoir. Two repair methods are being considered but all the information is not available and a decision has not yet been made.

Tekapo Waste Water

Operation and Maintenance expenditure is \$600 over YTD budget. There have been no issues lately.

<u>TWIZEL</u>

Twizel Water Supply

Operation and Maintenance expenditure is \$28,700 over YTD budget. Most of the overexpenditure is due to repairs/replacement of the secondary pumps. The pumps are past their economic life. We are currently investigating the installation of pressure release valves to reduce water hammer when pumps are cutting in and put. This was successful on the swimming pool pump.

The number of service connection renewals is greater than anticipated. Expenditure to date is \$7,200 over YTD budget.

Twizel Water Supply New Source Investigations

Two 150 mm diameter exploratory bores were sunk in the Ben Ohau Station Homestead area to ascertain if a full investigation is warranted at one or other of the sites.

Site 3

This bore is in "Alluvium in active river bed" beside the Fraser Stream. The alluvium material is entrenched in the Mt John glacial outwash.

The bore log indicates that the alluvium material is 29.4 m deep, which is deeper than I expected. The water quality is good, however the quantity of water is insufficient. At a flow of 16 l/sec, the drawdown was 10.88m.

Site 4

This bore is in the Mt John outwash plain, which is the most recent glacial outwash, and the one most likely to yield water. It is in a low area at the junction of the fans from Lake Ohau and Ben Ohau Range directions.

The bore was drilled to 70.8 m deep, where the material changed from sandy gravels to sand. At a pumping rate of 12 l/sec from this depth the drawdown was 21.0 m. The screen was in the sandy gravel which appeared to restrict the flow.

The casing and screen were then pulled up so that the bottom of the screen was at 63.82 m depth. This was in the area of large rounded gravels. When pumped at 23 l/sec from this level (which was at the pump capacity), the drawdown was 3.77 m. There could be sufficient quantity of water at this site.

However, the water has high levels of iron and manganese which would require considerable treatment.

We have gained significant additional information on the groundwater in the area, but we have not found an obvious source which we could pump from to a reservoir that would then supply Twizel by gravity.

Opus International Consultants recommend the following work:-

- 1. Water levels in the exiting Twizel wells during past high demand durations be checked to ensure that the additional water take can be met from the existing wellfield.
- 2. Design of water treatment for the existing Twizel water source be commenced.
- 3. A pilot treatment plant treating for iron and manganese removal be operated on the water from the bore at Site 4.
- 4. Updated cost estimates be prepared for:
 - a. Supply from existing Twizel water source, with treatment and pumped from distribution for existing and future water supply needs.
 - b. Supply from Ben Ohau Station water source, with treatment and gravity distribution for existing and future water supply needs.
 - c. Twizel water source/treatment/pumped distribution for existing Twizel Township, and Ben Ohau Station water source/treatment/gravity distribution for future developed areas of Twizel.

Twizel Waste Water

SOLID WASTE









Solid Waste sub-committee meeting

A sub-committee meeting was held on Thursday 4th April. Follows is a brief outline of the issues discussed.

Operational update from ESL

- Noted that an excellent safety record has been held since the start of the contract.
- Kerbside collection generally working well.
- RRP's have been cleaned up, currently a good team of staff and good staff retention.
- Still a high level of contamination in recycling work on kerbside bin auditing to be discussed between Council and ESL
- ESL is investigating an upgrade of the recycling line.
- ESL is considering installing a weigh bridge for the Twizel RRP and will provide a proposal.

Greenwaste

A greenwaste proposal was presented by Aoraki Contracting Ltd (Scott Aronsen). Further research is to be undertaken by Aoraki Contracting and ESL with a more detailed business case to be provided to the Council.

Albury collection

Discussion held on the options available for the Albury collection, no final decision reached. It was felt that this was decision that Council should make following discussion with the Ward member.

Solid waste charges and bin rate

Discussion on the current rates and charges and whether these need to be reviewed. ESL will provide a comparison on disposal charges verses revenue for individual items and this will be used to review gate charges. The solid waste charge to ratepayers will be reviewed at a later date. These need to be reviewed as part of the Annual Plan process. Discussion on whether recycling should be charged for when brought into the RRP's. Decided that charging for this is appropriate to cover processing and transport costs.

MACKENZIE DISTRICT COUNCIL

REPORT TO: PROJECTS AND STRATEGY COMMITTEE

SUBJECT: TRANSPORTATION ACTIVITY MANAGEMENT PLAN

MEETING DATE: 23rd APRIL 2013

REF: WAS 1/2

FROM: ASSET MANAGER

ENDORSED BY: CHIEF EXECUTIVE OFFICER

REASON FOR REPORT

To provide adopt the Transportation Activity Management Plan as the framework for the 2012-2022 LTP.

STAFF RECOMMENDATIONS:

- 1. That the report be received.
- 2. That the Transportation Activity Management Plan be adopted as policy for the future direction of that activity.

BERNIE HAAR ASSET MANAGER

WAYNE BARNETT CHIEF EXECUTIVE OFFICER

BACKGROUND

The Activity Management Plans were reviewed and re-written ahead of the production of the 2012-2022 LTP. This then became the basis for the long term projections for maintenance and capital expenditure for the period. It also sets the levels of service that are proposed to be delivered during that time.

On completion of the LTP process the AMP was further amended to reflect the outcome of the submission process and the approved long term funding strategy.

Councillors and the Mayor were given copies of the AMP in March 2013 for review and comment. I have attached the executive summary of the Transportation Activity Management Plan as a précis of it to avoid having to print of the whole document again. If any Councillor requires another copy then one can be provided.

EXECUTIVE SUMMARY

INTRODUCTION

This Activity Management Plan for Roading (AMP) has been developed to provide the Mackenzie District Council (MDC) with a long term management tool for the road asset. It sets out the current asset condition, what issues are currently and likely to impact on the asset and the costs associated with maintaining, operating, renewing, developing and disposing of the asset.

In terms of population, the Mackenzie District is the third smallest territorial authority in New Zealand with a normally resident population of approximately 4,000, with limited growth. In contrast to its small population, the area of the District is large, comprising 745,562 hectares. Fairlie, Lake Tekapo and Twizel are the main towns and there are villages at Albury, Kimbell, Burkes Pass and Mount Cook.

PURPOSE OF TRANSPORTATION ASSET MANAGEMENT PLANNING

The purpose of this AMP is to provide a tool combining management, planning, financial, engineering and technical practices to ensure that the level of service required by customers is provided at the lowest long term cost to the community. The plan is intended to demonstrate to customers that Council is managing the assets responsibly and that they will be regularly consulted over the price/quality trade-offs resulting from alternative levels of service.

PLAN LEVEL

MDC considers the required sophistication of their plan in the short to medium term need not progress beyond a "**Core**" planning level, as:

- the cost at this time to move to an advanced plan would provide little significant benefit to Council or its' customers
- the size, complexity and use of the assets is consistent with a rural sparsely populated district
- the risks associated with failure are low

This AMP is one of the Council's suite of plans that together describe the services and workload that the community sees as important for the Council to provide and sustain. They outline the basic methodologies Council will use to achieve the strategic objectives promoted in the MDC LTCCP 2009 – 2019 and thus move towards achieving the "outcomes" and the citizens' "vision" of the society they wish to be a part of.

SCOPE OF ASSET MANAGEMENT PLAN

This revision provides a full update to Version 3 of the AMP produced by Mackenzie District Council and its' consultants. It provides a medium to long term indication of asset management requirements and specific work programmes over the planning period from 1 July 2012 to 30 June 2021.

The plan will continue to be periodically reviewed to incorporate, as appropriate new asset information and improved knowledge of customer expectations. The objective is to optimise life cycle asset management activities and provide a greater degree of confidence in financial forecasts.

TRANSPORTATION ASSET MANAGEMENT ACTIVITY

Council is responsible for the management of road assets with an optimised depreciated replacement cost of \$74,529,788 (July 2010 valuation). For 2011/12 Council has budgeted to spend \$3.50M on maintaining, operating and renewing these assets (including staff and overhead costs).

The following list summarises the MDC Asset Management activities:

- Asset Management
- Safety Management
- Road Maintenance
- Road Data Management
- Project Management
- Environmental Management
- Network Inspections
- Legislative Compliance Management
- Network Management
- Customer Management

ASSET DESCRIPTION

LOCATION

Figure 1.1 shows the location of the district within the Canterbury Region.

Figure 1.1 – Map of Mackenzie District



The Mackenzie District is bounded in the north and east by the Timaru and Waimate Districts, in the south by the Waitaki District and to the West by the Southern Alps/ Westland District boundary. There are two wards: **Pukaki** which in effect takes in the Mackenzie Basin and **Opuha** being the remaining area to the west of a line following the upper reaches of the Hakataramea River through Burkes Pass to Mt Musgrove in the Two Thumb Range.

The backbone of the roading network in the district is provided by the following State Highways which are the responsibility of the New Zealand Transport Agency (NZTA).

State Highway 8	Timaru - Fairlie - Lake Tekapo - Twizel - Omarama
State Highway 79	Fairlie - Geraldine
State Highway 80	Twizel - Mt Cook Village

The Mackenzie District roading consists of a network of "Principal" and "Local" roads leading from the state highways to many remote localities and providing convenient access in and around the three main urban centres of Twizel, Lake Tekapo and Fairlie (Mt Cook Village is administered by the Department of Conservation). The network is predominantly rural (93%), unsealed (73%) and with light average daily traffic volumes (99% less than 500 vehicles per day).

THE ASSET

The transport asset includes all Council owned road reserve, roads, streets, bridges, footpaths and related infrastructure within the District as shown in Table 1.1.

Asset Description	Sub-Asset Description	Quantity
Land		1,395Ha
Roads	All roads	710.6km
	Urban - Sealed	46.2km
	Urban - Unsealed	5.2km
	Rural - Sealed	147.3km
	Rural - Unsealed	512.2km
Footpaths		62km
Drainage	Culverts	17.6km
	Catch Pits	304
	Side Drains	16.2km
	Soak Pits	40
	Earth Surface Water Channel	741km
	Kerb and Channel	61.8km
Bridges	Bridges	94
	Cattle stops	59
	Concrete Fords	20
Signage	Signs	5,638
	Posts	2,498
Lighting	Lanterns (include brackets)	791
	Columns	346
Features (gates, Inter	sections, Monuments, stockpile sites)	164

Table 1.1 – Trans	portation assets	included in	this plar	ſ
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Unformed roads are not included.

KEY STAKEHOLDERS AND CUSTOMERS

Key Stakeholders

The Council as the ultimate owner of assets and the Crown (through Ministry of Transport financial assistance) wish to ensure that their investment is secure and that the operational capability of the network is ensured. The Crown entity established to manage

Transportation activities is the NZ Transport Agency (NZTA). Other key stakeholders of the roading network include:

- Regional council
- Owners and operators of inter-connecting or co-located networks, including NZTA state highways
- Significant representative user-groups such as Road Transport Association (RTA)

Funding Partners

Funding is provided by several parties and in particular the following are significant contributors:

- NZ Transport Agency The District Transportation Programme is funded by NZTA in accordance with operational requirements set out in NZTA Programme and Funding Manual.
- Ratepayers Rates provide funding for non-subsidised activities and part of subsidised works

Customer Groups

MDC's customers fall into three different groups: associated service providers, users and the wider community. These are detailed in Table 1.2.

Customer Group	Description	Customers
Associated Service Providers	These are other service providers who rely on the transportation network	 Contractors Utilities service providers – use the road corridor to access their assets Transport operators Emergency Services
Users	Those who directly use the service	 Private drivers Commercial road users Drivers of public and other transport services (e.g. tourist buses) Pedestrians and cyclists
The Wider Community	Non-users that are affected if the service is not provided	 Citizens Tourists Residents who live beside the roads Local businesses – requiring access

Table 1.2 – MDC Roading Customer Groups

Other Parties

Other parties with an interest in MDC's AMP include Council employees, consultants and contractors who manage and work on the asset.

LEVEL OF SERVICE

Council's current and target levels of service as defined in the 2009-2019 LTCCP are summarised in Table 4.1 and are summarised below.

- Smooth roads support the local economy reducing travel times and vehicle wear
- Council provides good quality roads, safe roads, appropriate for all road users including tourists, farmers.
- Council provides a safe and efficient roading network.
- Roading work is undertaken to high standards.
- Deliver the works programme signalled in this plan.
- Ready access is provided around the District except in extreme weather conditions.
- Set achievable budgets for available resources and complete what we plan each year
- The roading network is trafficable

These show how levels of service contribute to the community outcomes and provides a technical measure that enables Council to monitor current levels of service against target levels of service.

The current LOS are documented as a combination of:

- LTP LOS documentation based on real or perceived customer feedback
- Contract processes which describe some elements of the quality of service provided, mainly travelling surfaces and intervention levels

The current LOS can be improved by:

- Augmentation of existing information e.g. clearer relationships between alternative service levels for roughness, street lighting etc. and their associated costs.
- Utilisation of a LOS model defining quality, quantity, location, and timeframe. This would be based on the IIMM and define the transport service in terms of Accessibility, Health and Safety, Quality, Reliability and Responsiveness, Sustainability, Functionality.

FUTURE DEMAND

The Mackenzie District Roading network caters predominantly for low volume rural traffic on unsealed roads. Only 7% of the network is urban and approximately 0.6% caters for a traffic loading greater than 500vpd. The districts population of approximately 4,000 is low and the growth at approximately 2.3% (since the 2001 census) is well below the national average of 7.8%.

Future demand on the network will be driven by tourism and land use changes brought about through changes to irrigation within the district.

Tourism makes up a large component of transportation demand within the district. The Ministry of Tourism states that total visits by travellers to Mackenzie RTO (Mackenzie District) are forecast to rise from 960,377 in 2009 to 1,075,079 in 2016 - an increase of 11.9% or 1.6% per annum. An example of the impact on the network it the Roundhill Ski area on Lilybank Road. The Ski traffic of up to 400vpd on a road designed to take its normal loading of under 50 vpd to farms. This increased loading impacts the pavement at the worst possible time of the year.

Over the last eight years there has been a move towards converting land for dairy use. In this period there have been 10 Dairy conversions and there are currently two more in planning stage. Potentially there could be another four conversions over the next 10 year period. This is a significant change in land use that can impact the road network in terms

of increased heavy vehicle volumes. MDC needs to assess the overall impacts that diary conversion are having on network demand.

In order to better predict network requirements based on future demand, Council needs to complete improvement plan items to further understand these demands and the associated impacts on the network.

RISK MANAGEMENT

Risk management is "the systematic application of management policies, procedures and practices to the task of identifying, analysing, evaluating, treating and monitoring those risks that could prevent a Local Authority from achieving its strategic or operational objectives or plans, or from complying with its legal obligations".

There is currently no formal Risk Management process being implemented for the roading activity within council. This in itself is a significant risk. A risk management strategy has been described in Section 8 of this AMP. The use of this strategy as outlined in the Improvement Plan should be completed with high priority. In particular issues surrounding emergency management and insurance require full review and inclusion in this plan.

LIFE CYCLE MANAGEMENT PLANS

Life cycle management plans outline what is work planned to keep the assets operating at the current levels of service defined in Section 4 while optimising lifecycle costs. The overall objective of the Life Cycle Management Plan is:

To maintain performance measures to ensure that the current strategies do not consume the asset leading to an unexpected increase in maintenance/renewal expenditure in the future.

In this AMP the lifecycle management plan has been separated into asset groups. Each Lifecycle Management plan covers the following:

- **Background Data** including current capacity and performance, current condition and historical data including costs.
- **Operations and Maintenance Plan** covering planning for on-going day to day operation and maintenance to keep assets serviceable and prevent premature deterioration or failure.
- **Renewal/Replacement Plan** covering Major work which restores an existing asset to its original capacity or its required condition (e.g. resurfacing, rehabilitation or footpath reconstruction).
- Asset Development Plan covering the creation of new assets (including those created through subdivision and other development) or works which upgrade or improve an existing asset beyond its existing capacity or performance in response to changes in usage or customer expectations (e.g. forestry harvesting routes).
- **Disposal Plan** covering activities associated with the disposal of a decommissioned asset.

ASSET CONDITION AND PERFORMANCE

The basis of the lifecycle management plans is the current condition and performance of the asset. This allows comparison with the prescribed level of service, and from this a gap analysis can be completed to determine future work requirements.

Currently MDC undertakes limited condition and performance analysis of the network relying on the practical experience and knowledge of the engineering staff to provide a gauge of the networks overall performance. This knowledge is used extensively for planning purposes. Although adequate for the purpose, MDC needs to build in a means of succession planning by being more objective in its planning methodology. Regular condition surveys of the asset components need to be undertaken and results recorded within RAMM. Intermediate and long term planning of asset renewal should then be based on the results of these surveys, the performances obtained compared to that desired, the remaining expected life of the asset component and the decision making processes outlined (see appendix VI) within this plan.

Asset Condition

Specific condition for each asset is not currently measured. There is reasonable condition information for sealed roads but these only make up 23% of the network. Figure 1.2 shows the condition over time for this portion of the roading network. This shows that over the last three years there has been a reduction in Pavement Integrity Index (PII) and Surfacing Condition index (CI), albeit small at less than 2%. Roughness has decreased by 0.9% corresponding to an improvement in STE, and has remained at or below 2% over the last 10 years. Condition data is not currently collected for unsealed roads, which form 73% of the road network length.





Safety Performance

The Briefing Notes Crash Analysis Canterbury Region 2006 to 2010, outlines crash statistics for Mackenzie District local roads. Between 2006 and 2010 in Mackenzie District,

there were 33 injury crashes on local roads. Table 1.3 shows the number of injuries resulting from these crashes by rural or urban areas. Rural is defined as an area with a speed limit of 80km/h or more. 71% of injuries were caused by crashes on rural roads.

	Fatalities	Serious Injuries	Minor Injuries	Total
Rural	2	2	28	32
Urban	0	3	10	13
Total	2	5	38	45

Table 1.3 –	Iniuries	resulting fro	m crashes	on Mackenzie	District Roads	2006 to 2010
	injunes	resulting no		OII Mackelizie	District Noaus	

Figure 1.3 shows that loss of control crashes represent 100% of fatal and serious crashes and 94% of all injury crashes. The three most common types of crashes are: When there is a 'loss of control turning right at a bend' (12 crashes), followed by a 'loss of control turning left at a bend' (7 crashes) and a 'loss of control towards the left on a straight road' and a 'loss of control towards the right on a straight road' (both equal) (4 crashes each).





21% of all injury crashes and 14% of serious and fatal crashes were related to road factors.

The most common type of crash involves loss of control on a bend which may indicate a lack of appropriate signage, poor gravel maintenance on unsealed roads or driver related issues may be primary factors influencing crashes. Road width and specifically lack of shoulders could be a concern on sealed roads.

Within the MDC road safety outcomes are influenced by the following:

- community safety programmes
- road engineering improvements, Minor Improvement Programme, delineation, signage
- road maintenance programme (grading, re-metalling, drainage improvements)

• Regional Safety Programmes in conjunction with TDC

→ The outcomes that these programmes are focused on are varied but the overall aim is to reduce the number and cost of crashes on the District's roads as reported each year by NZTA. The Mackenzie District Council, Waimate District Council and Timaru District Council all belong to the South Canterbury Joint Road Safety Committee which is tasked with delivering community road safety initiatives. Each Council makes a financial contribution towards the employment of a Road Safety Coordinator for South Canterbury.

ROUTINE MAINTENANCE PLAN

Council staff manages the roading network with some assistance from consultants. The maintenance on the network is maintained through a competitively tendered multi-year contract. Other works such as resealing and large renewal projects are let as competitively priced contracts on an annual basis.

To ensure activities are providing the best efficiencies possible, work is generally clustered in such a way that works are carried out within set corridors. The new maintenance contract encourages a joint approach to solve roading issues for the lowest whole of life cost.

Current practice is to apply a combination of "reactive" condition driven and network lifecycle depreciation techniques to determine the work necessary to maintain the network within pre-determined financial constraints (see charts in Appendix VI). The majority of maintenance is reactive so budgets have been based on historical expenditure. Increases to costs for some asset groups are projected in future due to increased asset quantity or levels of service requirements.

RENEWAL/REPLACEMENT PLAN

This plan recommends renewal works for most asset groups, however the significant renewal expenditure requirements are in the following areas:

- Sealed road resurfacing A preliminary Resurfacing FWP has been produced from RAMM data. This programme needs to be verified in the field, however it shows an average annual resurfacing amount of 10.8km. As part of the FWP exercise, the existing back log of resurfacing (i.e. where the existing seal age is older than the agreed default seal lives) has also been calculated. This shows there is theoretically 14.9km of back log. In order to clear the backlog over the next three years MDC will need to seal approximately 16km per annum for 2012-2015. The 10 year programme shows the need for Mackenzie District to spend a minimum of \$400,000 to \$500,000 per year for the next 10 years to enable completion of reseals at the end of their expected design life. There is also a move towards the use of more two coat seals due to recent failures caused by extreme climate conditions.
- Area Wide Pavement Treatments – The average pavement renewal required based on the assumed life of 75 100 years currently used in the asset valuation, is in the order of 1.9 to 2.6 km per annum. Council have programmed completion of a minimal AWPT programme each year (approx. 1.25km/yr.). MDC base the AWPT selection for the current year around failures that have occurred the previous winter. Due to frost heave occurring in different locations over different seasons it is difficult to determine the need for an AWPT in advance as you would a re-seal programme(RP locations etc). MDC have made substantial improvements to drainage in sections that are known to cause issues, this has abated the need

somewhat, but there is still a generally requirement to carry AWPT on sections of Haldon Road, Godley Peaks Road, Lilybank Road.

Unsealed road metalling – Wearing course application is budgeted on an annual • basis based on good historic records of renewals needs. Unsealed roads are prioritised yearly from Priority 1-3. Priority 1 condition is very poor and needs a full stabilisation treatment to be able to continue to function as a road safely trafficable at 70km/ph. Priority 3 is in average to poor condition showing corrugations and bony patches. Programmes over recent years have been very reactive and it has been identified that further funding will enable completion of P1 and intervention on P2 roads and begin a gravel replacement programme to counter gravel loss/migration. Council is working towards having a 3-5 yearly forward works programme instead of completely reactive maintenance. Yearly MDC complete 100-150mm approximately 5-10km of depth stabilisation and drainage improvements on our unsealed roads. These stabilisation areas are generally limited to Haldon Road, Lilybank Road and Braemar Road due to the heavy usage from, campers, ski field users, and army personnel/forestry respectively. It would be great to be able to focus on at least one other road per year to improve the network and reduce the grading requirements and reduce gravel migration.

Council should investigate appropriate mechanisms to obtain extra funding from the Round Hill Ski Field and also the NZ Army to compensate for the direct costs resulting from their operations.

• **Bridges** - MDC's Bridge Replacement Strategy lists the bridges which are to be replaced over the next 10 years. Eight bridges have been identified for replacement. These have been included under the Minor Improvements programme as detailed below.

Other renewal type works including sign replacement, street lighting replacement and footpath resurfacing are allowed for within the maintenance programme.

ASSET DEVELOPMENT PLAN

This plan recommends minimal capital improvements or acquisitions to the existing transport infrastructure. The works included are as follows:

- **Minor Improvements** improvements utilising subsidy at the renewal subsidy rate of 63% up to a budgeted expenditure amounting to 5% (\$140,000) of the total maintenance and renewal programme. Also due to changes in funding rules bridge replacements and other minor works must be funded out of our minor improvements budget. We have approximately \$962,440 costs forecast for bridge replacement over the period 2012-2020.
- Seal Extensions Prioritised sites for seal extension based on strategic importance and local knowledge have been identified however there is no provision for funding these in place at this time. Under the present NZTA funding regime and funding constraints it is unlikely that subsidy will be available in the foreseeable future. Council's current policy is to only complete seal extensions if NZTA subsidy is available. If Council is serious about further seal extensions a review of that policy should be considered.

ASSET DISPOSAL PLAN

Council has no specific plans for disposal of components of the roading asset. Asset disposal is dealt with on a case by case basis.

FINANCIAL FORECASTS

Roading Activity Funding Impact Statement - For the Year Ending 30 June 2022

	Annual Plan (\$000)	Budget 2012/13 (\$000)	Forecast 2013/14 (\$000)	Forecast 2014/15 (\$000)	Forecast 2015/16 (\$000)	Forecast 2016/17 (\$000)	Forecast 2017/18 (\$000)	Forecast 2018/19 (\$000)	Forecast 2019/20 (\$000)	Forecast 2020/21 (\$000)	Forecast 2021/22 (\$000)
SOURCES OF OPERATING	· · · ·	· · · ·	· · · · ·	· · · ·			· · ·	· · ·			
FUNDING											
General rates, uniform annual											
general charges, rates penalties	-	-	-	-	-	-	-	-	-	-	-
rate for water supply)	1 402	1 364	1 305	1 2 9 7	1 5 2 2	1 579	1 621	1 672	1 903	1 792	1 055
Subsidies and grants for operating	1,402	1,304	1,595	1,307	1,000	1,570	1,021	1,072	1,005	1,702	1,955
nurnoses	1 679	672	690	678	856	886	911	926	960	993	1 013
Fees charges and targeted rates for	1,070	012	000	010	000	000	011	020	000	000	1,010
water supply	-	-	-	-	-	-	-	-	-	-	-
Internal charges and overheads											
recovered	157	67	99	72	31	32	32	-	73	(2)	41
Local authorities fuel tax, fines,											
infringement fees, and other receipts	28	28	28	29	30	31	32	34	35	36	37
Total operating funding (A)	3,266	2,131	2,212	2,166	2,450	2,527	2,596	2,632	2,871	2,809	3,046
APPLICATION OF OPERATING											
FUNDING Developments to staff and suppliars	1.400	1.076	1.001	1 2 1 0	1 506	1 667	1 500	1 6 1 0	1 750	1 720	1.020
Figure costs	1,430	1,270	1,334	1,312	1,506	1,557	1,598	1,019	1,752	1,732	1,839
Internal charges and overheads	-	-	-	-	-	-	-	-	-	-	-
applied	315	79	112	84	44	45	45	13	86	10	55
Other operating funding applications	-	-	-	-		-	-	-	-	-	-
Total applications of operating											
funding (B)	1 751	1 355	1 446	1 396	1 550	1 602	1 643	1 632	1 838	1 742	1 894
Surplus (deficit) of operating	1,101	1,000	1,110	1,000	1,000	1,002	1,010	1,002	1,000	.,	1,001
funding (A-B)	1.515	776	766	770	900	925	953	1.000	1.033	1.067	1.152
	7			-				,	,	,	, -
SOURCES OF CAPITAL FUNDING											
Subsidies and grants for capital											
expenditure	-	800	800	800	909	931	956	966	996	1,024	1,035
Development and financial											
contributions	20	-	-	-	-	-	-	-	-	-	-
Increase (decrease) in debt	-	-	-	-	-	-	-	-	-	-	-
Gross proceeds from sale of assets	-	-	-	-	-	-	-	-	-	-	-
Lump sum contributions	-	-	-	-	-	-	-	-	-	-	-
lotal sources of capital funding	00	000	000	000	000	004	050	000	000	4 00 4	4.005
(C)	20	800	800	800	909	931	956	966	996	1,024	1,035
APPLICATIONS OF CAPITAL											
Capital expenditure											
To meet additional demand	-	-	-	-	-	-	-	-	-	-	-
To improve the level of service	_	-	_	-	_	-	-		-	_	-
To replace existing assets	1.752	2.148	1.716	1.850	1.808	1.854	2.301	1.966	2.030	2.102	2.154
Increase (decrease) in reserves	(215)	(572)	(150)	(280)		2	(392)	-	(1)	(11)	33
Increase (decrease) of investments	-	-			-	-		-			-
Total applications of capital											
funding (D)	1,537	1,576	1,566	1,570	1,809	1,856	1,909	1,966	2,029	2,091	2,187
Surplus (deficit) of capital funding											
(C-D)	(1,517)	(776)	(766)	(770)	(900)	(925)	(953)	(1,000)	(1,033)	(1,067)	(1,152)
Funding balance ((A-B) + (C-D))	-	-	-	-	-	-	-	-	-	-	-

The 10 year National Land Transport Programme (NLTP) for Mackenzie District is based on targeted maintenance of the existing roading infrastructure paired with an escalation in renewal programmes. Over the 10 year period cost increases are generally based on inflation.

The forecast total Mackenzie District National Land Transport Programme for 2012/13 for operations, maintenance and renewals totals \$2.97M (inclusive of all administration costs and professional service fees). 47% (\$1.41M) of this forecast is to be spent on maintenance and operation with 53% (\$1.55M) to be spent on renewals. An additional \$250,000 has been requested for minor improvements to address structures replacements and safety issues. The full budget and forecast are shown in Appendix III.

Funding for the management and maintenance of the road network is provided from the District roading rate and subsidy received from NZTA. Funding for improvements is provided from NZTA subsidy, financial contributions paid by developers and the roading rates.

In determining the projects to be undertaken the benefit/cost ratio is the governing criteria used with preference being given to projects which can be shown to be economically justified, attract subsidy and have the necessary Council funding available.

As at 1 July 2010 the total optimised replacement cost of the Roading Infrastructure was assessed to be \$109,520,545. The total optimised depreciated replacement cost was assessed to be \$74,529,788. The annual depreciation or decline in service potential has been determined to be \$1,571,081 per annum.

A check of the annual renewal expenditure against the Annual Depreciation (AD) for each asset component gives an indication whether the renewal expenditure is appropriate for the age and condition of the network. For asset components nearing the end of their expected lives a figure greater than the depreciated costs would be expected to be spent. For situations where the asset component is new or only partially through the expected life the budgeted expenditure would be expected to be less than the AD with the balance banked so as funding will be available when required. Table 1.5 shows the 2012/13 forecast renewal expenditure compared to the AD.

Tal	ble	1.5	-	Compariso	n between	Forecast	Expenditure	and	Annual
Deprecia	atior	ו							
	_								

Asset Type	2012/13 Renewals Forecast	Annual Depreciation Cost
Pavement	\$1,065,929	\$943,673
Footpaths	\$123,295	\$88,834
Structures	\$25,686	\$268,089
Drainage	\$43,189	\$181,243
Traffic Services	\$74,196	\$89,242

From the comparison shown in Table 1.5, it can be seen that expenditure is probably appropriate for most assets in relation to the Annual Depreciation. However, underinvestment is indicated for Structures and Drainage assets. Council and roading staff will also need to assess the budgeted expenditure level and ascertain whether this is an appropriate level given the current age and condition of the network components.

ASSET MANAGEMENT PRACTICES

MDC employ an Asset Manager, a Roading Manager and an Engineering Technician who are responsible for the management of the road asset.

Management planning is actioned in-house generally based on the knowledge of the Asset Manager/Roading Manager assisted by such planning tools as the RAMM database, associated Treatment Selection Algorithm software and excel spread sheets.

Occasionally elements of the management of the network may be competitively tendered to consultancy services.

Physical works are managed in accordance with the procedures documented in the flowcharts shown in Appendix VI. Routine maintenance is undertaken through a competitively tendered contract of normally 3 to 5 year duration. Other works such as resurfacing, road marking and large Pavement Rehabilitation (>500m in length), bridge renewals are generally let as competitively priced contracts on a year by year needs basis.

MDC accounts for revenue and expenditure on an accrual basis. All works are identified through a job cost ledger with appropriate breakdown level to be able to monitor and report on revenues and expenditure to NZTA and Audit NZ requirements. All external reports are prepared in compliance with Generally Accepted Accounting Principles.

ASSET MANAGEMENT PROCESSES

Council uses the LTP process to identify community concerns and issues which are incorporated into levels of service that are expressed by performance measures written into the professional services and physical works contracts. The satisfactory execution of these performance measures result in levels of service compliance that ensures the MDC's outcomes are achieved and the community vision of a district they wish to live in is accomplished.

Well documented standards and processes exist for an on-going inspection programme of pavements, surfacing and bridges (see appendix VI).

Maintenance and renewal costs are recorded against activities that relate to NZTA categories in the general ledger.

There is no formal risk management process.

ASSET MANAGEMENT SYSTEMS

The RAMM database is used as the inventory management system and should be the depository for all the available asset data. Basic information for footpaths, bridges and street lighting is stored on Excel spread sheets. This data should be loaded into the RAMM database in future.

The bridge asset is managed under a professional services contract. Only minimal bridge data (sufficient to allow valuation) is held in the RAMM database. A full inventory that is regularly updated is held in spread sheet form.

A regular counting programme is in place to monitor traffic volumes on the network. Traffic counts are completed primarily on roads that are targeted for improvement or are showing signs of accelerated failure. The 2010/11 count data in RAMM is based on actual count

data for roads surveyed and then estimated for other similar roads within the network that have not been counted that year giving consideration to the number of households using the road and the nature of the adjoining land-use.

Accident data is recorded from police reports to the CAS database held by NZTA. MDC obtains crash information, and other reports as required by direct request to NZTA.

Other systems operated by the Council are:

- ArcGIS Geographic Information System
- NCS Corporate financial management system
- Hardcopy plan filing systems

PLAN IMPROVEMENT AND MONITORING

This AMP has previously been reviewed and updates incorporated including improvements to move towards "Core" level Asset Management. Council is committed to a continual improvement as outlined in Section 10. A key objective is to dovetail the asset management planning process with the other key planning processes particularly the Community Plan (LTP).

The review and improvement of this AMP requires resource and budget in order to complete the selected improvement tasks. Table 10.1 outlines the items for improvement, relative urgency, resource, priority, budget and the authority sought to give approval to complete each item.

KEY ASSUMPTIONS AND CONFIDENCE LEVEL

There are a number of significant assumptions that have been made in the development of this AMP as outlined below.

ASSET DATA

In preparing the plan, data in the RAMM database as at September 2011 has been taken as the verified network asset. No validation checks were carried out on this data. It is known that some data such as bridges, retaining structures, footpath and kerb and channel data for example are not included in the RAMM database but are held on excel spread sheets. These spread sheets were obtained and used as inputs into the AMP.

Table 9.1 gives the assessed data confidence quality of the MDC RAMM and spread sheet data tables as described in the 2010 Roading Asset "Mackenzie District Infrastructure Revaluation" report.

LEVELS OF SERVICE

These have been based on Levels of Service (LOS) outlined in the 2012-2022 LTP. It is assumed that customer consultation completed as part of the LTP process has been taken into account in the development of these LOS.

Changes that may affect future LOS include:

- Changes in government requirements
- Continual drops in Funding Assistance Rate (FAR)
- Funding shortfalls caused by natural disasters, such as Canterbury Earthquakes

DEMAND

Although the population remains static within the district, other demand factors are based on limited information, including limited historical traffic count data. No specific consultation or research has been completed to determine future demand on the network. There is a moderate level of confidence in future demand based on limited input information.

LIFE CYCLE MANAGEMENT

The knowledge of the practitioners directly providing this activity, both on a day-to-day basis and historically, has been relied upon. These practitioners include Council's Roading Department staff, Council's consultants and staff of the various physical works contractors.

FINANCIAL FORECASTS

Key assumptions made in the financial forecasts are as follows:

- NZTA will continue to provide subsidised funding to Council for the road network
- Council will continue to fund the level of service currently set out in this AMP
- Some renewal costs are rough order of cost estimates that will need to be further researched and refined
- No account has been taken of the impacts related to the development, acceptance and implementation of the Risk Management Plan
- Assumptions made on Total Useful Life and Residual Useful Lives of the assets in relation to the asset valuation.
- The asset data is considered to be reliable and fit for the purpose for developing the long term financial forecasts.
- Funding Assistance Rate (FAR) reducing by 1% every 3 years for the next 3 years

MACKENZIE DISTRICT COUNCIL

REPORT TO: PROJECTS AND STRATEGY COMMITTEE

SUBJECT: WATER SUPPLY ACTIVITY MANAGEMENT PLAN

- **MEETING DATE:** 23rd April 2013
- **REF:** WAS 1/2
- FROM: ASSET MANAGER
- ENDORSED BY: CHIEF EXECUTIVE OFFICER

REASON FOR REPORT

To provide adopt the Water Supply Activity Management Plan as the framework for the 2012-2022 LTP.

RECOMMENDATIONS:

- 1. That the report be received.
- 2. That the Water Supply Activity Management Plan be adopted as policy for the future direction of that activity.

BERNIE HAAR ASSET MANAGER

WAYNE BARNETT CHIEF EXECUTIVE OFFICER

BACKGROUND

The Activity Management Plans were reviewed and re-written ahead of the production of the 2012-2022 LTP. This then became the basis for the long term projections for maintenance and capital expenditure for the period. It also sets the levels of service that are proposed to be delivered during that time.

On completion of the LTP process the AMP was further amended to reflect the outcome of the submission process and the approved long term funding strategy.

Councillors and the Mayor were given copies of the AMP in March 2013 for review and comment. I have attached the executive summary of the Water Supply Activity Management Plan as a précis of it to avoid having to print of the whole document again. If any Councillor requires another copy then one can be provided.

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

This Activity Management Plan for Water Supply (AMP) has been developed to provide the Mackenzie District Council (MDC) with a long term management tool for the Water Supply asset. It sets out the current asset condition, what issues are currently and likely to impact on the asset and the costs associated with maintaining, operating, renewing, developing and disposing of the asset.

In terms of population, the Mackenzie District is the third smallest territorial authority in New Zealand with a normally resident population of approximately 4,000, with limited growth. In contrast to its small population, the area of the District is large, comprising 745,562 hectares. Fairlie, Lake Tekapo and Twizel are the main towns and there are villages at Albury, Kimbell, Burkes Pass and Mount Cook.

1.2 PURPOSE OF WATER SUPPLY ASSET MANAGEMENT PLANNING

The purpose of this AMP is to provide a tool combining management, planning, financial, engineering and technical practices to ensure that the level of service required by customers is provided at the lowest long term cost to the community. The plan is intended to demonstrate to customers that Council is managing the assets responsibly and that they will be regularly consulted over the price/quality trade-offs resulting from alternative levels of service.

1.3 PLAN LEVEL

MDC considers the required sophistication of their plan in the short to medium term need not progress beyond a "**Core**" planning level, as:

- the cost at this time to move to an advanced plan would provide little significant benefit to Council or its' customers
- the size, complexity and use of the assets is consistent with a rural sparsely populated district
- the risks associated with failure are low

This AMP is one of the Council's suite of plans that together describe the services and workload that the community sees as important for the Council to provide and sustain. They outline the basic methodologies Council will use to achieve the strategic objectives promoted in the MDC LTCCP 2012-2022 and thus move towards achieving the "outcomes" and the citizens' "vision" of the society they wish to be a part of.

1.4 SCOPE OF ASSET MANAGEMENT PLAN

This revision provides an update to Version 3 of the AMP produced by Mackenzie District Council. It provides a medium to long term indication of asset management requirements and specific work programmes over the planning period from 1 July 2012 to 30 June 2021.

The plan will continue to be periodically reviewed to incorporate, as appropriate new asset information and improved knowledge of customer expectations. The objective is to optimise life cycle asset management activities and provide a greater degree of confidence in financial forecasts.

1.5 WATER SUPPLY ASSET MANAGEMENT ACTIVITY

Council is responsible for the management of Water Supply assets with an optimised depreciated replacement cost of \$16,181,593 (July 2010 valuation). For 2011/12 Council has budgeted to spend \$968,000 on maintaining, operating and renewing these assets (including staff, overhead costs and depreciation).

The following list summarises the MDC Asset Management activities:

- Asset Management
- Safety Management
- Water Supply Maintenance
- Water Supply Data Management
- Project Management
- Environmental Management
- Network Inspections
- Legislative Compliance Management
- Network Management
- Customer Management

1.6 ASSET DESCRIPTION

1.6.1 LOCATION

Figure 1.1 shows the location of the district within the Canterbury Region

Figure 1.1 – Map of Mackenzie District



The Mackenzie District is bounded in the north and east by the Timaru and Waimate Districts, in the south by the Waitaki District and to the West by the Southern Alps/ Westland District boundary. There are two wards: **Pukaki** which in effect takes in the Mackenzie Basin and **Opuha** being the remaining area to the west of a line following the upper reaches of the Hakataramea River through Burkes Pass to Mt Musgrove in the Two Thumb Range.

The backbone of the roading network in the district is provided by the following State Highways which are the responsibility of the New Zealand Transport Agency (NZTA).

State Highway 8	Timaru - Fairlie - Lake Tekapo - Twizel - Omarama
State Highway 79	Fairlie - Geraldine
State Highway 80	Twizel - Mt Cook Village

The Mackenzie District Water Supply consists of a network of pipes and swales in the towns of Fairlie, Tekapo and Twizel. Water Supply is discharged either to ground or water after being flushed through treatment facilities. These are generally grassed swales or vegetated treatment areas.

1.6.2 THE ASSET

The Water Supply asset includes all Council owned pipelines, valves, hydrants, treatment facilities and related infrastructure within the District as shown in Table 1.1.

Asset Description	Sub-Asset Description	Quantity 228,353m 12,398m 4 84 418 258
Mains		228,353m
Service lines		12,398m
Break Pressure Tanks		4
Restricted Supply		84
Points		
Hydrants		418
Meters		258
Valves and Air Valves		729
Plant		97
Water Races		118,200m

Table 1.1 – Water Supply assets included in this plan

1.7 KEY STAKEHOLDERS AND CUSTOMERS

Key Stakeholders

The Council as the ultimate owner of assets. Other key stakeholders of the Water Supply network include:

- Regional council
- Owners and operators of inter-connecting or separate Water Supply networks.

Funding Partners

Funding is provided by several parties and in particular the following are significant contributors:

- Ratepayers Rates provide funding for maintenance and operation of the networks
- Developers By constructing infrastructure and vesting it in the Council plus providing the required financial contributions

Customer Groups

MDC's customers fall into three different groups: associated service providers, users and the wider community. These are detailed in Table 1.2.

Customer Group	Description	Customers					
Associated Service Providers	These are other service providers who rely on the Water Supply network	ContractorsCommercial operators					
Users	Those who directly benefit from the service	 Ratepayers Residents and holiday home owners Commercial properties Industrial users 					
The Wider Community	Non-users that are affected if the service is not provided	Ratepayer and residentsTouristsLocal businesses					

 Table 1.2 – MDC Water Supply Customer Groups

Other Parties

Other parties with an interest in MDC's AMP include Council employees, consultants and contractors who manage and work on the asset.

1.8 LEVEL OF SERVICE

Council's current and target levels of service as defined in the 2009-2019 LTCCP are summarised in Table 4.1 and are summarised below.

- Water supplies are available and reliable.
- Water is safe to drink
- Water quality is maintained or improved

These show how levels of service contribute to the community outcomes and provides a technical measure that enables Council to monitor current levels of service against target levels of service.

The current LOS are documented as a combination of:

- LTP LOS documentation based on real or perceived customer feedback
- Contract processes which describe some elements of the quality of service provided, mainly travelling surfaces and intervention levels

The current LOS can be improved by:

- Augmentation of existing information e.g. clearer relationships between alternative service levels for pipeline rehabilitation and their associated costs. Cost comparisons for greater or lesser irrigation water provision to the householder.
- Utilisation of a LOS model defining quality, quantity, location, and timeframe. This would be based on the IIMM and define the Water Supply service in terms of Accessibility, Health and Safety, Quality, Reliability and Responsiveness, Sustainability, Functionality.

1.9 FUTURE DEMAND

The Mackenzie District Water Supply network caters for the four towns of Fairlie, Tekapo, Twizel and Burkes Pass. The districts population of approximately 4,000 is low and the growth at approximately 2.3% (since the 2001 census) is well below the national average of 7.8%.

Future demand on the network will be driven by residential subdivision and commercial development.

These areas sustained considerable growth during the period 2003-2009, but since then have slowed down significantly. That period of growth created a large number of sections in Twizel that will take some time to develop.

In Tekapo planning during that period catered for large areas to be developed and infrastructure was designed and installed to cater for that. Resource consents were also obtained for that growth area. Therefore it is unlikely that there will be an increase in demand outside those already planned for.

1.10 RISK MANAGEMENT

Risk management is "the systematic application of management policies, procedures and practices to the task of identifying, analysing, evaluating, treating and monitoring those risks that could prevent a Local Authority from achieving its strategic or operational objectives or plans, or from complying with its legal obligations".

There is currently no formal Risk Management process being implemented for the water supply activity within council. This in itself is a significant risk. A risk management strategy has been described in Section 8 of this AMP. The use of this strategy as outlined in the Improvement Plan should be completed with high priority. In particular issues surrounding emergency management and insurance require full review and inclusion in this plan.

1.11 LIFE CYCLE MANAGEMENT PLANS

Life cycle management plans outline what is work planned to keep the assets operating at the current levels of service defined in Section 4 while optimising lifecycle costs. The overall objective of the Life Cycle Management Plan is:

To maintain performance measures to ensure that the current strategies do not consume the asset leading to an unexpected increase in maintenance/renewal expenditure in the future.

In this AMP the lifecycle management plan has been separated into asset groups. Each Lifecycle Management plan covers the following:

- **Background Data** including current capacity and performance, current condition and historical data including costs.
- **Operations and Maintenance Plan** covering planning for on-going day to day operation and maintenance to keep assets serviceable and prevent premature deterioration or failure.

- Renewal/Replacement Plan covering Major work which restores an existing asset to its original capacity or its required condition (e.g. pipeline replacement, replanting treatment facilities).
- Asset Development Plan covering the creation of new assets (including those created through subdivision and other development) or works which upgrade or improve an existing asset beyond its existing capacity or performance in response to changes in usage or customer expectations.
- **Disposal Plan** covering activities associated with the disposal of a decommissioned asset.

1.11.1 ASSET CONDITION AND PERFORMANCE

The basis of the lifecycle management plans is the current condition and performance of the asset. This allows comparison with the prescribed level of service, and from this a gap analysis can be completed to determine future work requirements.

Currently MDC undertakes some condition and performance analysis of the network relying on the practical experience and knowledge of the engineering staff to provide a gauge of the networks overall performance. This knowledge is used extensively for planning purposes. Although adequate for the purpose, it would useful to extend the new Asset Register in ArcGIS to record and analyse the condition and performance of the network to be more objective in its planning methodology.

Regular condition surveys of the asset components need to be undertaken and results recorded within the Asset Register. Intermediate and long term planning of asset renewal should then be based on the results of these surveys, the performances obtained compared to that desired, the remaining expected life of the asset component and the decision making processes outlined (see appendix I) within this plan.

1.11.1.1 Asset Condition

Specific condition for each asset is not able to be internally inspected like other pipe networks but as repairs are carried to various sections of the pipe network the condition is analysed and the results extrapolated out to form an opinion of the like pipes in the network. Number of breaks and repairs are a good indicator of condition. Random flow monitoring also gives a good guide on pipeline performance. There is good condition information for Water Supply assets with the majority of assets graded at 2 or better (89%). Only 3% of the network is graded as having a rating of 4 and no asset is graded as requiring replacement. However Fairlie has a programme to replace all the pipework installed in the 1940s as this has defective rubber sealing rings allowing significant leakage.



Figure 1.2 – Condition Data for Water Supply Assets

Notes: 1 = Very Good Condition - Only normal maintenance required

2 = Minor Defects Only - Minor maintenance required (5%)

3 = Maintenance Required to Return to Accepted Level of service - Regular maintenance (10-20%)

4 = Requires Renewal - Significant renewal/upgrade required (20-40%)

5 = Asset Unserviceable - Over 50% of asset requires replacement

1.11.2 ROUTINE MAINTENANCE PLAN

Current practice is to apply a combination of "reactive" condition driven and network lifecycle depreciation techniques to determine the work necessary to maintain the network within pre-determined financial constraints (see charts in Appendix I). The majority of maintenance is reactive so budgets have been based on historical expenditure. Increases to costs for some asset groups are projected in future due to vested assets from developers.

1.11.3 RENEWAL/REPLACEMENT PLAN

DWSNZ compliance is a major impact on water supplies across the district in the next 10 years.

- Tekapo- completed this year and part of next at a cost of \$210k
 - Twizel \$4.43m allowed in years 1 and 2 to complete the project
 - Find and develop a new source
 - Drill wells and install pumps, rising main etc
 - Construct new reservoir, access road and treatment plant
 - Construct new trunk water main from reservoir to existing town reticulation
- Fairlie \$2.27m allowed in years 4 and 5 to complete the project, this spreads the rating impact and the work flow.
 - Construct new reservoir and access road
 - Construct new treatment plant
- Allandale \$68k allowed in year 4 to complete the project
 - Install UV treatment? (Initially we are planning on UV treatment but it will all hinge on the Log credits we can get for the supply 3 or 4)
- Fairlie will complete the replacement programme of 1940s pipes, started in 2000. \$560k over four years.
 - Replace the trunk pipeline from the treatment plant to Kimbell in year 2 \$155k and upgrade the pipeline to the Industrial area on Allandale Rd to meet fire fighting requirements \$215k
- Tekapo It is likely that some of the AC pipework will require replacement depending on the deterioration modelling to be undertaken. \$93k in year 7
- Manuka Tce Allowance has been made for the completion of this project by the end of year 2. Capex cost for this are \$840k over two years. Once the scheme is commissioned, an annual operation cost, including loan repayments of \$62k pa have been budgeted for.

1.11.4 ASSET DEVELOPMENT PLAN

This plan is recommending improvement works to allow compliance with the Health (Drinking Water) Amendment Act 2007 as noted above.

1.11.5 ASSET DISPOSAL PLAN

In general Council has no specific plans for disposal of components of the Water Supply asset.

1.12 FUNDING IMPACT STATEMENT

As at 1 July 2010 the total optimised replacement cost of the Water Supply Infrastructure was assessed to be \$24,941,229. The total optimised depreciated replacement cost was assessed to be \$16,181,593. The annual depreciation or decline in service potential has been determined to be \$320,419 per annum.

	Annual Plan (\$000)	Budget 2012/13 (\$000)	Forecast 2013/14 (\$000)	Forecast 2014/15 (\$000)	Forecast 2015/16 (\$000)	Forecast 2016/17 (\$000)	Forecast 2017/18 (\$000)	Forecast 2018/19 (\$000)	Forecast 2019/20 (\$000)	Forecast 2020/21 (\$000)	Forecast 2021/22 (\$000)
SOURCES OF OPERATING FUNDING											
General rates, uniform annual general charges, rates penalties	-	-	-	-	-	-	-		-	-	-
Targeted rates (other than a	070	770	000	1 102	1 0 0 0	4 475	1 405	1 4 4 2	1 407	4 470	1 564
Subsidies and grants for	0/9	110	923	1,103	1,220	1,470	1,435	1,443	1,497	1,470	1,304
operating purposes	-	-	-	-	-	-	-	-	-	-	-
rates for water supply	78	81	84	87	90	93	97	100	104	108	112
Internal charges and overheads recovered	39	12	48	72	40	47	94	108	123	127	137
Local authorities fuel tax,					-		-				
other receipts	-	-	-	-	-	-	-	-	-	-	-
Total operating funding (A)	996	871	1,055	1,262	1,358	1,615	1,626	1,651	1,724	1,713	1,813
APPLICATION OF											
Payments to staff and	005	400	400	400	504	050	507	047	055	004	704
suppliers Finance costs	385	430	463	496 207	501 267	653 329	597 322	617 314	655 306	664 297	781 288
Internal charges and	100		100	201	201	020	022	014	000	201	200
overheads applied Other operating funding	183	66	123	160	165	1/5	236	242	232	222	211
applications	-	-	-	-	-	-	-	-	-	-	-
operating funding (B)	568	496	691	863	933	1,157	1,155	1,173	1,193	1,183	1,280
operating funding (A-B)	428	375	364	399	425	458	471	478	531	530	533
SOURCES OF CAPITAL FUNDING											
Subsidies and grants for capital expenditure	-	-	-	78	-	-	394	_	-	-	-
Development and financial											
contributions Increase (decrease) in debt	-	-	3 488	(64)	- 2 183	(114)	- (121)	(129)	(137)	(145)	(154)
Gross proceeds from sale of			0,100	(0.)	2,:00	()	(-=-)	(120)	()	(1.10)	(101)
assets Lump sum contributions	-	-	-	-	-	-	-	-	-	-	-
Total sources of capital											
funding (C)	-	-	3,488	14	2,183	(114)	273	(129)	(137)	(145)	(154)
APPLICATIONS OF											
Capital expenditure											
To meet additional demand	-	-	727	-	-	-	-	-	-	-	-
To improve the level of service	-	-	1 731	1 888	1 233	1 157	-	_	-	-	-
To replace existing assets	-	1,455	349	257	343	98	678	50	97	140	132
Increase (decrease) in reserves	428	(1,080)	1 045	(1,732)	1 032	(911)	66	299	297	245	247
Increase (decrease) of investments	-	-	-		-	-	-	-	-		-
Total applications of	400	275	2.050	440	2 600	244	744	240	204	205	
Surplus (deficit) of capital	428	(075)	3,852	(200)	2,008	(450)	(474)	(170)	(504)	(500)	379
Funding (C-D)	(428)	(375)	(364)	(399)	(425)	(458)	(471)	(478)	(531)	(530)	(533)
(C-D))	-	-	-	-	-	-	-	-	-	-	-

The forecast total Mackenzie District and Community Board expenditure Water Supply for 2011/12 for operations, maintenance renewals and development totals \$968,000 (inclusive of all administration costs and professional service fees). 45% (\$443,000) of budgeted expenditure is to be spent on maintenance and operation with \$992 to be spent on renewals. The remaining 55% is used to fund depreciation and administration costs. The full budget and forecast are shown in Appendix II.

A check of the annual renewal expenditure against the Annual Depreciation (AD) for each asset component gives an indication whether the renewal expenditure is appropriate for the age and condition of the network. For asset components nearing the end of their expected lives a figure greater than the depreciated costs would be expected to be spent. For situations where the asset component is new or only partially through the expected life the budgeted expenditure would be expected to be less than the AD with the balance banked so as funding will be available when required. Table 1.3 shows the 2011/12 renewal expenditure compared to the AD.

 Table 1.3 – Comparison between Forecast Expenditure and Annual Depreciation

Asset Type	2011/12 Renewals	Annual Depreciation Cost
New Treatment	\$992,000	\$400,000

1.13 ASSET MANAGEMENT PRACTICES

MDC employ an Asset Manager, a Utilities Engineer and an Engineering Technician who are responsible for the management of the Water Supply asset.

Management planning is actioned in-house generally based on the knowledge of the Asset Manager/Utilities Engineer assisted by the council's contractors and by such planning tools as the ArcGIS Asset Register software and excel spreadsheets.

Occasionally elements of the management of the network may be competitively tendered to consultancy services.

Physical works are managed in accordance with the procedures documented in appendix I. Routine maintenance is generally undertaken through a competitively tendered contract of normally 3 to 5 year duration.

MDC accounts for revenue and expenditure on an accrual basis. All works are identified through a job cost ledger with appropriate breakdown level to be able to monitor and report on revenues and expenditure. All external reports are prepared in compliance with Generally Accepted Accounting Principles.

1.13.1 ASSET MANAGEMENT PROCESSES

Council uses the LTP process to identify community concerns and issues which are incorporated into levels of service that are expressed by performance measures written into the professional services and physical works contracts. The satisfactory execution of these performance measures result in levels of service compliance that ensures the MDC's outcomes are achieved and the community vision of a district they wish to live in is accomplished.

Well documented standards and processes exist for an on-going inspection programme.

Maintenance and renewal costs are recorded in the general ledger.

There is no formal risk management process.

1.13.2 ASSET MANAGEMENT SYSTEMS

The MapInfo Geographic Information System database is used as the inventory management system and should be the depository for all the available asset data.

Other systems operated by the Council are:

- MapInfo Geographic Information System
- NCS Corporate financial management system
- NCS electronic plan record system
- Hardcopy plan filing systems

The Council has moved its GIS platform from Mapinfo to ArcGis from 24th October 2011. This is essentially the same type of system as Mapinfo and when staff are fully trained, will continue to provide a good Asset Register and have the ability to further enhance that.

1.14 PLAN IMPROVEMENT AND MONITORING

This AMP has previously been reviewed and updates incorporated including improvements to move towards "Core" level Asset Management. Council is committed to a continual improvement as outlined in Section 10. A key objective is to dovetail the asset management planning process with the other key planning processes particularly the Community Plan (LTP).

1.15 KEY ASSUMPTIONS AND CONFIDENCE LEVEL

There are a number of significant assumptions that have been made in the development of this AMP as outlined below.

1.15.1 ASSET DATA

In preparing the plan, data in the MAPINFO database as at November 2012 has been taken as the verified network asset. As a result of the recent revaluation and the move to ArcGis significant validation checks were carried out on the data.

Table 9.1 gives the assessed data confidence quality of the MDC Asset Register data tables as described in the 2010 Water Supply Asset "Mackenzie District Infrastructure Revaluation" report.

1.15.2 LEVELS OF SERVICE

These have been based on Levels of Service (LOS) outlined in the 2009-2019 LTCCP and updated in the 2011/12 Annual Plan. It is assumed that customer consultation completed as part of the LTP process has been taken into account in the development of these LOS.

Changes in government requirements in future may affect future LOS.

1.15.3 DEMAND

Although the population remains static within the district, other demand factors are based on limited information. No specific consultation or research has been completed to determine future demand on the network. There is a moderate level of confidence in future demand based on limited input information.

1.15.4 LIFE CYCLE MANAGEMENT

The knowledge of the practitioners directly providing this activity, both on a day-to-day basis and historically, has been relied upon. These practitioners include Council's engineering staff Council's consultants and staff of the various physical works contractors.

1.15.5 FINANCIAL FORECASTS

Key assumptions made in the financial forecasts are as follows:

(Inflation figures have been provided by Business and Economic Research Limited.)

	-12	-13	4	-15	-16	-17	-18	-19	-20	-21	-22
	ļuņ	Jup	İn	ļup	ļun	ļuņ	ļup	ļuņ	'n	ļuņ	Inn
	ģ	ģ	ģ	ģ	ģ	ģ	ģ	ģ	ģ	ģ	ģ
	.,			.,			.,			.,	
Deed	0.042	0.020	0.024	0.025	0.001	0.00	0.000	0.025	0.007	0.024	0.025
Road	0.043	0.038	0.031	0.035	0.031	0.03	0.032	0.035	0.037	0.034	0.035
Property	0.039	0.03	0.029	0.029	0.03	0.031	0.028	0.028	0.03	0.033	0.033
Water	0.045	0.042	0.039	0.035	0.037	0.038	0.035	0.035	0.038	0.041	0.041
Energy	0.055	0.048	0.047	0.047	0.05	0.051	0.046	0.045	0.05	0.054	0.054
Staff	0.026	0.025	0.024	0.024	0.026	0.026	0.024	0.023	0.026	0.027	0.027
Other	0.036	0.024	0.032	0.032	0.034	0.035	0.034	0.033	0.033	0.036	0.035
Earthmoving	0.055	0.041	0.034	0.029	0.03	0.033	0.035	0.038	0.041	0.043	0.044
Pipelines	0.057	0.052	0.044	0.037	0.038	0.042	0.045	0.048	0.052	0.055	0.057

Table 3 Adjustors: % per annum change

- Council will continue to fund the level of service currently set out in this AMP
- The dollar values shown in this Plan are November 2012 dollars adjusted for inflation applicable to this Activity.
- Some renewal costs are rough order of cost estimates that will need to be further researched and refined
- No account has been taken of the impacts related to the development, acceptance and implementation of the Risk Management Plan
- Assumptions made on Total Useful Life and Residual Useful Lives of the assets in relation to the asset valuation.
- The asset data is considered to be reliable and fit for the purpose for developing the long term financial forecasts.
- Any other specific assumptions