# wastewater activity plan

# Why we do it

To provide environmentally safe, efficient and sustainable collection, treatment and disposal of water borne waste and by-products.

# What we do

The wastewater activity comprises the collection, treatment and disposal of wastewater treatment and disposal of wastewater from the three urban areas of Rotorua (Ngongotaha, city and eastern suburbs) as well as identified rural lakeside communities (at present Mourea, Marama Point and Okawa Bay/Duxton Hotel). The serviced area is programmed to be extended to include Brunswick, Rotokawa, Okareka, Okere, Otaramarae, Whangamarino, Tarawera, Hamurana, Gisborne Point/Hinehopu, Rotoma and Mamaku.

# The functions required for the provision of these services include:

- strategic planning and improvement of wastewater networks to provide for growth within the district.
- planning and implementation of renewal work to ensure infrastructure is maintained.
- developing of maintenance, levels of service and quality standards.
- management and maintenance of assets and services including monitoring of flow and wastewater treatment effluent quality.
- developing of emergency and contingency plans to ensure service is maintained during adverse events.
- provision of information and education to the public regarding wastewater services and systems.
- development of funding policies and systems to enable continuing provision of the service into the future.

### Rotorua's key wastewater assets are summarised as follows:

- 1 central wastewater treatment plant
- 1 composting plant
- 1 land effluent disposal system
- 68 pumping stations
- 7,270 manholes
- 418km of sewer gravity and rising mains
- 20.300 lateral connections

Services under the wastewater activity areas are provided because the community expects council to make provision for the removal of sewage and liquid trade wastes from communities, to promote public health and minimise the impact of communities on the environment. Council has the resources and knowledge to provide leadership in this area.

Legislation, such as the Local Government Act, Resource Management Act and Health Act, also requires Council to provide this service.

Moreover, the community expects that council will ensure through strategies and sound planning, that these services are available to areas of the district in which growth and development is expected, and also to developed areas which are in close proximity to lakes and streams

# Community outcomes

Community Outcome	How the Council contributes
Environment	By protecting the environment and lake water quality through wastewater treatment.
Health Health	By providing a sanitary wastewater collection and treatment service.
Facilities & Services	By providing good, quality infrastructure for the future.



# What does the council plan to do in the future

What is the Council currently doing?	What will we do in years 1 to 3?	What will we do in years 4 to 10?	How will we know if we achieve our objective? (key result areas)	
Renewal and replace	cement of pipelines and plant at the end of thei	r serviceable lives.	Reduced blockages, overflow incidents and non-occurrence of public health issues.	
Investigation and design of Wastewater Treatment Plant upgrade.	Upgrading Wastewater Treatment Plant to increase capacity		Reduced nutrient discharge.	
Design of community sewerage schemes in rural areas and unserviced urban areas.	Implementation of urban/rural/lakes	Implementation of urban/rural/lakeside community sewerage schemes.		
Investigating beneficial use of sewage sludge	Implementing works to ben	Landfilling of sludge discontinued.		

# Measuring our achievements

Level of Service	Performance measures	Current	Performance targets									
		performance	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Implementation and management of schemes to minimise the impact on the	% compliance with air, land and water discharge requirements.	99%	99%				100%					
environment.	Completion of new sewerage schemes.*		Brunswick/ Rotokawa	Okareka Okere/ Otaramarae/ Whangamarino	Hinehopu/ Gisborne Point	Hamurana /Rotoma		Tarawera		Mamaku		
Provision of an efficient collection and disposal service.	Number of overflows to waterways.	3				< 2						
	Total number of overflows caused by network faults (per 100km of mains).	14				<14						
	% of customers satisfied with wastewater services as measured by annual NRB survey.	99%				99%	,					

 $<sup>\</sup>ensuremath{^{\star}}$  Subject to Resource Consent and other planning constraints.

# Negative effects

Negative effects	Mitigation options
Greater quantities of wastewater and sludge due to increasing population and business activity.	Ongoing asset and activity management planning to ensure infrastructure has the required capacity.
Environmental impact of wastewater on lake water quality.	Ongoing management and capital works to ensure that resource consent conditions are met.
Sewage overflows during wet weather.	Continual replacement, renewal and upgrade of pipework and infrastructure.
Odour from Wastewater Treatment Plant sludge.	Compliance with odour management plan.

# Funding considerations

# Who benefits from the activity?

- The community as a whole including domestic, commercial, institutional and industrial premises connected to the public wastewater reticulation system.
- Visitors to the District.
- Developers gain specific benefits.

# What is the period of benefit?

Benefits are intergenerational and ongoing as long as the infrastructure is maintained and the service continued.

# Who creates need for the activity?

- The community as a whole creates the need for environmentally safe and efficient treatment and disposal of wastewater.
- The need to undertake this activity is also created by legislation.
- The need to undertake this activity derives from households and businesses.

# Funding source

Funding is 100% from targeted rates.

# Asset management

# Key assets

- Buildings
- Land
- Gravity and pressure pipelines
- Structures (tanks, wet wells, manholes)
- Mechanical and electrical plant

# Maintaining our assets

Council Engineering and Castlecorp staff manage and carry out ongoing monitoring, replacement and repair work to ensure that the assets are maintained at a sustainable level of condition. Consultants and contractors are also engaged to provide specialist services where appropriate.



Lakes water quality has been falling in some Rotorua District lakes due to the entry of too much nutrients. As part of Rotorua's wastewater treatment system, effluent is pumped to the forest for land disposal, removing 80% of the nitrogen and 97% of the phosphorus. Council's Trade Waste Officer also helps to educate citizens about wastewater pollution and controls, and the relationship with lakes water quality. Examples of Council's contribution include:

- Upgrading the Wastewater Treatment Plan to increase capacity for population growth.
- Implementation of rural and lakeside community sewerage schemes.
- Encouraging residents to purchase more environmentally friendly dishwashing liquid and other chemicals.



# Major changes planned for assets

Reason for change	What will be done?	Year 1 (\$000s)	Year 2 (\$000s)	Year 3 (\$000s)	Year 4 - 10 (\$000s)
Renewals	Sewer main replacements	1,100	2,993	1,064	11,218
	Land Treatment System renewals	199	356	300	3,964
	Pump station plant renewal	951	156	188	4,028
	WWTP Renewals	367	744	392	8,252
	Network renewals	156	480	501	177
	Subtotals	2,773	4,729	2,445	27,639
Increased levels of service	New sewerage schemes at:				
	Okareka	2,280	6,667	-	-
	Gisborne Point/Hinehopu	650	1,651	5,320	4,886
	Hamurana/Awahou	651	516	4,788	10,047
	Rotoma	-	-	-	14,111
	Tarawera	-	-	-	15,712
	Mamaku	-	-	-	7,635
	Brunswick/Rotokawa	3,220	351	-	-
	Okere/Otaramarae/Whangamarino	3,135	6,799	4,880	-
	Capacity improvements of:				
	Land Treatment System	79	82	899	928
	Sewer Mains	546	1,522	1,585	559
	Treatment Plant	3,953	3,821	-	444
	Subtotals	14,514	21,409	17,472	54,322
	Totals	17,287	26,138	19,917	81,961



# Financial summary (plan 2009/10 and forecast 2010/11 to 2018/19)

Wastewater (\$000s)	Actual 2007/08	Annual Plan 2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating Expenses												
Direct Costs	5,402	6,181	5,874	6,280	6,131	6,410	6,481	6,655	6,841	7,033	7,230	7,464
Financial Costs	516	1,094	517	763	1,288	1,415	1,552	2,170	2,429	2,288	2,263	2,330
Depreciation	4,488	4,235	4,181	4,513	5,024	5,302	5,963	6,508	6,449	6,515	6,932	7,280
Other	-	-	-	-	-	-	-	-	-	-	-	-
Total Costs	10,406	11,510	10,572	11,556	12,443	13,127	13,996	15,333	15,719	15,836	16,425	17,074
Revenue												
Capital Revenue	319	4,571	6,671	10,641	10,504	10,499	12,873	6,826	3,746	4,926	5,034	3,820
Fees and Charges	180	20	20	21	21	22	23	23	24	25	25	26
Investment Income	373	450	382	280	94	193	282	364	861	1,392	1,882	2,248
Subsidies and Grants	-	-	-	-	-	-	-	-	-	-	-	-
Targeted Rates	9,652	10,441	10,691	10,976	14,758	16,396	13,730	12,534	15,980	16,169	15,287	16,470
Total Revenue	10,524	15,482	17,764	21,918	25,377	27,110	26,908	19,747	20,611	22,512	22,228	22,564
Internal Recoveries												
Internal Recoveries	3	1	942	956	971	983	991	1,003	1,016	1,027	1,036	1,046
Total Internal Recoveries	3	1	942	956	971	983	991	1,003	1,016	1,027	1,036	1,046
Net Cost of Service	(121)	(3,973)	(8,134)	(11,318)	(13,905)	(14,966)	(13,903)	(5,417)	(5,908)	(7,703)	(6,839)	(6,536)
Capital Costs												
Renewals	-	-	2,786	4,729	2,445	2,206	6,015	1,508	2,146	3,520	5,612	6,632
Growth	-	-	14,421	21,331	17,472	17,957	21,510	7,010	606	3,339	3,890	-
Backlog	-	-	79	76	-	-	-	-	-	-	9	-
Level of Service	-	-	-	-	-	-	-	-	-	-	-	-
Total Capital	4,137	16,626	17,286	26,136	19,917	20,163	27,525	8,518	2,752	6,859	9,511	6,632
Operational Funding												
Net Cost of Service			(8,134)	(11,318)	(13,905)	(14,966)	(13,903)	(5,417)	(5,908)	(7,703)	(6,839)	(6,536)
Plus Capital Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Less Depreciation	-	-	(4,181)	(4,513)	(5,024)	(5,302)	(5,963)	(6,508)	(6,449)	(6,515)	(6,932)	(7,280)
Add back Depreciation Funded by Rates	-	-	-	-	-	-	-	-	-	-	-	-
Self Funding/DC Reserve Movements	-	-	12,314	15,831	18,929	20,267	19,866	11,925	12,357	14,218	13,771	13,816
Operations Funded by General Rates	-	-	-	-	-	-	-	-	-	-	-	-
Capital Funding												
Funding from Depreciation (Rates)	-	-	-	-	-	-	-	-	-	-	-	-
Loans from/(to) Corporate Fund	-	-	-	-	-	-	-	-	-	-	-	-
Capital Grants	-	-	4,968	7,991	7,494	8,235	10,755	3,505	303	1,670	1,728	-
Development Contributions	-	-	1,473	1,162	1,404	1,820	1,572	503	33	184	190	-
Reserves Net	-	-	10,846	16,984	11,019	10,108	15,197	4,509	2,416	5,006	7,593	6,632
Total Capital	4,137	16,626	17,287	26,137	19,917	20,163	27,524	8,517	2,752	6,860	9,511	6,632

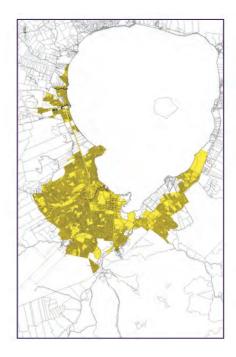
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Minor roundings may occur in above totals



# Rotorua Urban Sewerage Scheme

Approximately 20,300 lateral pipes connect drains at the property boundary to a network of 418 km of pipes. These pipes and 68 pump stations convey the wastewater to the Treatment Plant.



Rotorua District Council Plan Number 11163. Sheet 2

# Description of Area

The Urban area of Rotorua City, including the Eastern Suburbs and Ngongotaha areas, as shown on RDC Plan No 11163, Sheet 2. Refer also to District Plan Maps 7 – 43, 104, 105. 107 & 108.

### History

Parts of Rotorua City have been served by a public sewerage system since 1892. This has been extended a number of times since then. Following the construction of the first Wastewater Treatment Plant, full reticulation was extended to all of the city, plus Eastern Suburbs and Ngongotaha in 1980.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

There are several areas within Rotorua Urban where service is not available. Council has budgeted to progressively service these areas over eight years from 2005/06.

# Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

# Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. The principles of this self funding account are as outlined below.

### Capital Works

The funding sources for the capital costs of upgrades for the urban sewerage system will be from a combination of urban sewerage development rate, lakes enhancement rate, targeted rates and Development Contributions.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Business Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

#### Legislation

Local Government Act 2002, Local Government (Rating) Act 2002. Health Act 1956. Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Hinemoa Point Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 8

# Description of Area

The community is within the Rotorua urban area as shown on RDC plan no. 11608, Sheet 8.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

### Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Hinemoa Point area scheme are as shown below:

Total Scheme Cost	\$1,433,307
Ministry for the Environment	-716,654
Development Contribution	-206,167
RDC general rates	-99,000
Cost to be recovered from Ratepayers	\$411,486

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

### Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

# Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

## **RDC Files**

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# History of Other Sewerage Schemes

In response to concern over the health of Rotorua's lakes and the effect of lakeside settlements, Council in 2004 commenced the establishment of rural sewerage schemes to remove effluent input into the lakes.

Approval has been given to commence design development and construction of eight new schemes known as Brunswick and Rotokawa Sewerage Schemes, Okere, Otaramarae and Whangamarino Sewerage Schemes, Okareka/Blue Lake, Gisborne Point/Hinehopu and Hamurana/Awahou Sewerage Schemes. Funding has been earmarked for Tarawera. Rotoma and Mamaku sewerage Schemes. The Mourea, Marama Point, and OkawaBay/Duxton Hotel schemes were completed in mid 2006.

# Rotokawa Area Sewerage Scheme



Rotorua District Council Plan Number 11608. Sheet 2

### Description of Area

A rural area to the east of Rotorua City, generally from the Airport to the SH 30/SH 33 intersection as shown on RDC Plan No.11608, Sheet 2. Refer also to District Plan Maps 44-51.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

# Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

# Fundina

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Rotokawa area scheme are as shown below:

Total Scheme Cost	\$6,348,115
Ministry for Environment	-3,174,057
Environment BOP	-1,104,457
RDC General	-277,500
Development Contribution	-1,354,391
Cost to be recovered from Ratepayers	\$437,710

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

### Legislation

Local Government Act 2002, Local Government (Rating) Act 2002. Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Brunswick Area Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 10



Rotorua District Council Plan Number 11608. Sheet 11

#### Description of Area

A rural area to the east of Rotorua City, generally from the junction of SH 30 and SH 33 to Banksia Place as shown on RDC Plan No.11608, Sheets 10 & 11. Refer also to District Plan Maps 44-51.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

## Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

# **Funding**

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below

#### Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Okawa Bay) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Brunswick area scheme are as shown below:

Total Scheme Cost	\$7,172,897
Ministry for Environment	-3,586,448
Development Contributions	-1,186,378
RDC General	-181,500
Cost to be recovered from Ratepayers	\$2,218,571

Brunswick Stages IV and VI will only contribute toward the trunk/local mains and WWTP upgrade as the internal reticulation was provided by the developer.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

#### Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

## **Related Documents:**

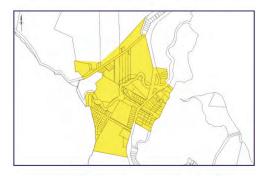
#### Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Mourea Sewerage Scheme



Rotorua District Council Plan Number 11163, Sheet 4

# Description of Area

An area enclosing the lakeside community of Mourea, as shown on RDC Plan No.11163, Sheet 4. Refer also to District Plan Maps 51 and 54.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

# Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

# Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Mourea scheme are as shown below:

Total Scheme Cost	\$3,263,607
Ministry of Health	-1,534,536
Environment BOP	-493,370
RDC General	-219,000
Development Contribution	-454,695
Cost to be recovered from Ratepayers	\$562,005

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

## **Related Documents**

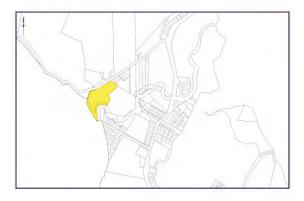
# Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Marama Point Sewerage Scheme



Rotorua District Council Plan Number 11163, Sheet 14

# Description of Area

An area enclosing the Marama Point area, as shown on RDC Plan No.11163, Sheet 14. Refer also to District Plan Maps 51 and 54.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

# Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Mourea scheme are as shown below:

Total Scheme Cost	\$1,101,997
Ministry of Health	-518,155
Environment BOP	-166,593
Advance Payment	-56,277
RDC General	-117,000
Development Contribution	-
Cost to be recovered from Ratepavers	\$243.973

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

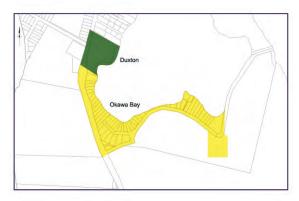
# Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Okawa Bay Sewerage Scheme / Duxton Hotel



Rotorua District Council Plan Number 11163, Sheet 5

#### Description of Area

An area enclosing the lakeside community of Okawa Bay, as shown on RDC Plan No.11163, Sheet 5. Refer also to District Plan Maps 51 and 54.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a single 100 mm diameter wastewater connection to the boundary of the property. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain. These properties, if not connected to the public sewer, are required to pay an availability charge.

# Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

# Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes. The principles of this are as outlined below.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Rotokawa, Okere, Otaramarae, Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

These amounts for the Okawa Bay scheme are as shown below:

	Okawa Bay	Duxton Hotel
Total Scheme Cost	\$791,177	\$595,441
Ministry of Health	-376,643	-270,655
Development Contribution	-14,970	-74,566
RDC General	-81,000	-93,000
Cost to be recovered from	\$318,564	\$157,220
Ratepayers		

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

# Legislation

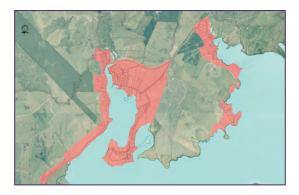
Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

 $85\,08\,010, 85\,08\,130$ 

# Okere Falls/Otaramarae/Whangamarino Sewerage Scheme



Rotorua District Council Plan Number 11608. Sheet 1

## Description of Area

An area on the shore of Lake Rotoiti from Mourea northwards, as shown on RDC Plan No.11608, Sheet 1. Refer also District Plan Maps 54, 55, 57 and 59.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

# Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6 Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source, such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area, will be set through a Funding Policy prior to the construction of the scheme.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which is available from the Engineering Department of Council.

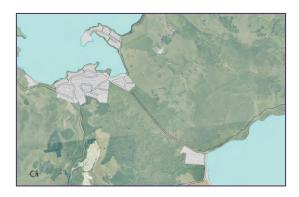
### **Related Documents:**

### Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Okareka/Blue Lake Sewerage Scheme



Rotorua District Council Plan Number 11608. Sheet 3

# Description of Area

An area on the shore of Lake Okareka consisting of the Okareka residential community as shown on RDC Plan No.11608, Sheet 3. Refer also District Plan Map 78.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

### Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the Wastewater System are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

# Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Tarawera Sewerage Scheme



Rotorua District Council Plan Number 11608. Sheet 4

# Description of Area

An area on the western shore of Lake Tarawera comprising the current residential development as shown on RDC Plan No.11608, Sheet 4. Refer also to District Plan Maps 79-82.

## Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

# Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

#### Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

## Financial/Technical Planning

Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

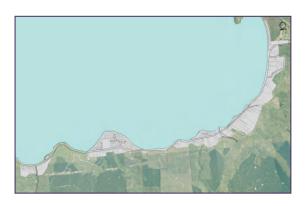
# **Related Documents**

#### Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Gisborne Point / Hinehopu Sewerage Scheme



Rotorua District Council Plan Number 11608. Sheet 5

# Description of Area

An area on the eastern shore of Lake Rotoiti from Gisborne Point to Hinehopu, as shown on RDC Plan No.11608, Sheet 5. Refer also to District Plan Maps 65-68.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

### Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme

### Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

### Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Hamurana/Awahou Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 7

# Description of Area

An area on the northern shore of Lake Rotorua encompassing the Hamurana residential area as shown on RDC Plan No.11608, Sheet 7. Refer also to District Plan Maps 4.6 and 7.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

### Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

### Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

### **Related Documents**

# Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.
Water Services and Trade Wastes Bylaw 2004.

#### **RDC Files**

# Rotoma Sewerage Scheme



Rotorua District Council Plan Number 11608, Sheet 6

# Description of Area

An area on the southern shore of Lake Rotoma, as shown on RDC Plan No.11608, Sheet 3. Refer also to District Plan Maps 72-75.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

### Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

# Financial/Technical Planning

Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

### Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

# RDC Files

85 08 010

# Mamaku Sewerage Scheme



Rotorua District Council Plan Number 11163, Sheet 16

# Description of Area

A rural area to the west of Rotorua as shown on RDC plan no. 11163, Sheet 16. Refer also to District Plan Maps 76-77.

#### Levels of Service

The following levels of service are those which Council will endeavour to maintain within the Wastewater Service Area. Every serviceable property is entitled to a wastewater connection. Council will maintain the sewer system in a state that will enable domestic type sewage to be carried away and treated by the system without blockages.

Note: Serviceable properties are those properties with some part of the land within 30 metres or the building within 60 metres of a public sewer main and are capable of being effectively connected, either directly or through a private drain.

### Effluent Quality

Council will treat all sewage discharged into its system in accordance with its Resource Consents.

### Funding

The Rotorua Urban Waste Water Scheme has historically been self-funding, with all costs and revenues identified in a separate stand-alone account. Council is currently proposing a new funding policy to take into account proposed rural waste water schemes.

# Capital Works

The funding services of the capital cost of the proposed sewerage schemes includes a 50% subsidy from Central Government through the Ministry of Health (Mourea, Marama Point, Okawa Bay/Duxton Hotel) and Ministry for the Environment (Brunswick, Brunswick Stages 4 & 6, Rotokawa, Okere/Otaramarae/Whangamarino, Okareka/Blue Lake, Gisborne Point/Hinehopu, Hamurana/Awahou and Hinemoa Point).

The remainder of costs will be funded by a combination of Environment BOP, grants, commercial users contributions, Rotorua District Council general rates, and individual ratepayers' contributions. Funding sources and proportions for the other proposed schemes are still under consideration.

The specific amounts for each funding source such as the Ministry for the Environment subsidy, Environment BOP subsidy, RDC General Rates, Development Contribution and cost to be recovered from ratepayers within the service area will be set through a Funding Policy prior to the construction of the scheme.

# Operating Expenditure

Operating costs incurred in all sewerage schemes discharging to the Urban Waste Water Treatment Plant are combined in the Rotorua Basin Waste Water Account. Other scheme operation costs will need specific consideration once more details of the capital and operating costs are known.

### Financial/Technical Planning

Key documents ensuring sound management of the wastewater system are the Annual Plan and the Asset Management Plan, which are available from the Engineering Department of Council.

# **Related Documents**

# Legislation

Local Government Act 2002, Local Government (Rating) Act 2002, Health Act 1956.

Water Services and Trade Wastes Bylaw 2004.

## **RDC Files**

85 08 010