

<b>Date of Project Sheet Creation:</b> 22/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2018/2019 <b>Proposed Investment:</b> \$20,000	
<b>Project Name:</b> River Road Water Storage Tank	
<b>Asset Location:</b> River Road, Broadlands	
<b>Significant Decision:</b> No	
<b>Reason for the Project:</b> Provide a new water storage tank for the River Road water supply to meet the requirements of the fire code of practice.  The River Road supply requires 45m <sup>3</sup> of emergency storage to meet the fire code of practice. The current available storage excluding operational capacity is approximately 30m <sup>3</sup> . It is therefore proposed to build a 3 <sup>rd</sup> storage tank of identical size to the existing, 22.5m <sup>3</sup> .  The additional storage will improve capacity to take on additional water customers.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. The water pressure within the water supply networks shall be maintained to comply with the New Zealand Fire Service Fire Fighting Water Supply Code of Practice.	
<b>Project Scope:</b> Construction of the water tank (capacity approx. 22.5 m <sup>3</sup> ) including site preparation, pipework and valves, reservoir, electrical and instrumentation.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide 24hrs emergency storage of treated water during the peak use period (we use the average day of the peak month average). This is in excess of the normal operational capacity.	
<b>Options and Analysis:</b> Status Quo – no increase to water storage capacity. Emergency storage remains less than required under the code of practice. New storage – Construct a new storage tanks which will provide sufficient water storage for emergencies.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>	

<b>Recommended Option:</b> Construct a new 22.5m <sup>3</sup> water storage tank at River road.											
<b>Legal Considerations:</b>											
<b>Policy Considerations:</b>											
<b>Risks:</b> Risk to the River Road water supply in an emergency event i.e. a large fire											
<b>Option Lifecycle Analysis:</b>											
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.											
<b>Funding Sources:</b> New capex projects are loan funded.											
<b>Consent Requirements:</b> Building consent for the water storage tank will be required.											
<b>Land Purchase / Land Designation Requirements:</b> Nil											
<b>Renewal Component of Project:</b> 0%											
<b>Growth Component of Project:</b> 50%											
<b>Communication Requirements:</b>											
<b>Project Implementation Considerations:</b> Detailed reservoir design will be required to refine the cost estimates.											
<b>Significant Assumptions:</b> Nil											
<b>Time lines and costs for proposed project phases:</b>  <b>The total project cost is \$5,800,000.</b>											
Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											
Consenting											
Designation											
Land purchase											
Consultation											
Design											
Construction	20k										20k
Commissioning and Handover											
ANNUAL	20k										20k

TOTAL											
<p><b>Local Government Act Funding Consideration Requirements.</b>  <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i>  <i>(a) in relation to each activity to be funded,-</i></p> <p><b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b></p> <ul style="list-style-type: none"> <li>• <b>Economy</b> Our communities prosper in thriving local economy with a diverse range of rewarding employment opportunities.</li> <li>• <b>Environment</b> A shared responsibility for places we are proud of</li> <li>• <b>Engagement</b> Council is connected with its communities, advocating for their social and cultural well being. Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc. Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.</li> </ul>											
<p><b>s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals</b>  The benefits will be to the River Road water supply both due to confidence of sufficient supply for fire fighting and to provide some further capacity for growth.</p>											
<p><b>s101(3)(a)(iii) period in or over which those benefits are expected to occur</b>  A polyethylene storage tank can be expected to last 25+ years.</p>											
<p><b>s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity</b>  Nil</p>											
<p><b>s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities</b>  For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Taupo water supply system.</p>											

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

“to meet the current and future needs of communities for good-quality local infrastructure, local public services and regulatory functions in a manner that is most cost effective for households and businesses”

Good quality = effective, efficient and appropriate to the present and future anticipated circumstances

Effective – producing the desired or intended result<sup>1</sup>

Efficient – working productively with minimum wasted effort or expense<sup>1</sup>

Appropriate to present and future needs of the community – meets the needs of the community now and in the future

**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 22/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2021/2022 <b>Proposed Investment:</b> \$760,000	
<b>Project Name:</b> Tauhara Ridge Falling Main to WEL	
<b>Asset Location:</b> Taupo South	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Provide a new water supply falling main to connect the existing medium zone reticulation in Taupo South to the higher contour areas of the Wharewaka East Ltd (WEL) development.  This is a new development within the Taupo South catchment that Council have agreed to provide with a water supply.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Design and construction of the pipeline including site preparation, pipework and valves, testing and commissioning.	
<b>Relationship with other Projects:</b> As demand from the development increases an additional reservoir is to be built which will be required to feed sufficient water through this new pipeline. <ul style="list-style-type: none"> <li>• Tauhara Ridge Reservoir Land Purchase 2026/27</li> <li>• Tauhara Ridge Reservoir Construction 2026/27</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo – No water supply to new subdivisions in the medium pressure zone of the Taupo South area. New Falling Main – Construct a new falling main to supply water to the medium pressure zone for WEL in Taupo South.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> New falling main to be funded by developer contributions.	

<b>Recommended Option:</b> Construct a new falling main to supply water to the WEL development.											
<b>Legal Considerations:</b>											
<b>Policy Considerations:</b>											
<b>Risks:</b> Risk if the WEL development occurs sooner or later than planned resulting in either a need to fast track or delay the project, or spend occurring prior to the need.											
<b>Option Lifecycle Analysis:</b>											
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.											
<b>Funding Sources:</b> Developer funded.											
<b>Consent Requirements:</b> Possibly a consent from NZTA will be required for working on/near the state highway.											
<b>Land Purchase / Land Designation Requirements:</b>											
<b>Renewal Component of Project:</b> 0%											
<b>Growth Component of Project:</b> 50%											
<b>Communication Requirements:</b>											
<b>Project Implementation Considerations:</b> Detailed design of pipeline will be required. In particular modelling of the network to ensure sufficient water can be provided prior to building of the reservoir, planned for 2026.											
<b>Significant Assumptions:</b> Moderate growth will continue in Taupo South.											
<b>Time lines and costs for proposed project phases:</b>											
<b>The total project cost is \$760,000.</b>											
Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											
Consenting											
Designation											
Land purchase											
Consultation											
Design											
Construction				760k							760k

Commissioning and Handover											
ANNUAL TOTAL				760k							760k

**Local Government Act Funding Consideration Requirements.**

*s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-  
(a) in relation to each activity to be funded,-*

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

- **Economy**

Our communities prosper in thriving local economy with a diverse range of rewarding employment opportunities.

- **Environment**

A shared responsibility for places we are proud of

- **Engagement**

Council is connected with its communities, advocating for their social and cultural well being.

Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc.

Council’s response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the Taupo water supply, primarily to those on the water scheme in Taupo South.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical (valves, hydrants etc.), 50+ years for civil work (pipes). The benefits will continue beyond initial equipment life so long as the required maintenance and renewal is carried out as required.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

The progress of WEL in their development planning and construction will confirm delivery timeframe of project.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Taupo water supply system.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_



<b>Date of Project Sheet Creation:</b> 22/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2026/2027 <b>Proposed Investment:</b> \$2,300,000	
<b>Project Name:</b> Tauhara Ridge Reservoir Land Purchase and Construction	
<b>Asset Location:</b> Northern side of Waikato River	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Provide a new water supply reservoir for the medium pressure zone of Taupo South.  Currently the medium pressure zone in Taupo South area is serviced by the Botanical reservoir however construction of a new reservoir is required to meet security of supply, and growth in this area.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Purchase of the land required for the reservoir site. Construction of the reservoir (capacity approx. 1,500 m <sup>3</sup> ) including site preparation, pipework and valves, reservoir, electrical and instrumentation.	
<b>Relationship with other Projects:</b> Two projects: <ul style="list-style-type: none"> <li>• Tauhara Ridge Reservoir Land Purchase 2026/27</li> <li>• Tauhara Ridge Reservoir Construction 2026/27</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide 24hrs emergency storage of treated water during the peak use period (we use the average day of the peak month average). Storage for Taupo overall is acceptable however there is a significant population and some growth on the Northern side of the Waikato River and there is no reservoir in this area.	
<b>Options and Analysis:</b> Status Quo – Insufficient water storage for the medium zone of the Taupo South area. Will affect supply to growth areas New reservoir – Construct a new storage reservoir which will provide water storage to the medium zone of Taupo South.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>	

<b>Recommended Option:</b> Develop a new reservoir to supply 24 hours emergency storages for Taupo South.											
<b>Legal Considerations:</b>											
<b>Policy Considerations:</b>											
<b>Risks:</b> Risk to the Taupo South growth areas that will not receive the water supply service level without the reservoir.											
<b>Option Lifecycle Analysis:</b>											
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.											
<b>Funding Sources:</b> New capex projects are loan funded.											
<b>Consent Requirements:</b> Building consent for the reservoir will be required.											
<b>Land Purchase / Land Designation Requirements:</b> Land purchase will be required.											
<b>Renewal Component of Project:</b> 0%											
<b>Growth Component of Project:</b> 50%											
<b>Communication Requirements:</b>											
<b>Project Implementation Considerations:</b> Detailed reservoir design will be required to refine the cost estimates.											
<b>Significant Assumptions:</b> Moderate growth will continue in Taupo South.											
<b>Time lines and costs for proposed project phases:</b>											
<b>The total project cost is \$2,300,000.</b>											
Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											
Consenting											
Designation											
Land purchase									500k		500k
Consultation											
Design											
Construction									1800k		1,800k
Commissioning and											

Handover											
ANNUAL TOTAL										2,300 k	2,300 k

**Local Government Act Funding Consideration Requirements.**

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- **Economy**

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Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc.

Council’s response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the Taupo water supply, primarily to those on the water scheme in Taupo South but also to others on the Taupo supply as additional capacity will create spare reservoir capacity in Taupo reservoirs.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

A concrete reservoir can be expected to last 50+ years.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Taupo water supply system.

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b>	<b>22/02/2018</b>
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager  <b>Proposed Start Date:</b> 2019/20 <b>Proposed Investment:</b> \$500,000	
<b>Project Name:</b> Five Mile Bay Water Supply Connection to Taupo	
<b>Asset Location:</b> Five Mile Bay	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Council has been awarded a subsidy to connect Waitahanui residents to the Taupo water supply and with Five Mile Bay being on the pipe route it makes sense to provide water supply to the Five Mile Bay community.  Currently Five Mile Bay residents are on private water supplies.	
<b>Links to Levels of Service – as per AMP document</b> A water service is not currently provided to Five Mile Bay. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> The scope includes reticulation and connections within Five Mile Bay. Note: Additional cost has already been included in the currently progressing Waitahanui project to cover the increased pipe size from Taupo to Five Mile Bay.	
<b>Relationship with other Projects:</b> Waitahanui water supply project – currently progressing. Titoki falling main project (to ensure sufficient supply volume through network) – currently progressing	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Water Strategy - We provide good quality, clean drinking water that poses minimal risk to public health.	
<b>Options and Analysis:</b> Status Quo: Five Mile Bay is not provided with Council water supply.  Project proceeds: Water supply from the Taupo network is provided to Five Mile Bay residents.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> As part of the Waitahanui water supply project a supply connection point has been made accessible to the 5 Mile Bay.	

<p><b>Recommended Option:</b> Provide water supply to Five Mile Bay.</p>
<p><b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 in regard to TDCs existing Waitahanui water supply.</p>
<p><b>Policy Considerations:</b> Nil</p>
<p><b>Risks:</b> Community risk – the community does not want the service. Cost risk – costs will be better known after the detailed design and confirmed by tendering process.</p>
<p><b>Option Lifecycle Analysis:</b> If connected the community would pay water rates as per the Taupo water supply and this will cover the cost of maintaining the assets and supplying water.</p>
<p><b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.</p>
<p><b>Funding Sources:</b> Possibly Ministry of Health Subsidy (as per Waitahanui), Targeted special rate (loan)</p>
<p><b>Consent Requirements:</b> Possibly a consent from NZTA will be required for working on/near the state highway.</p>
<p><b>Land Purchase / Land Designation Requirements:</b> Not identified at this stage.</p>
<p><b>Renewal Component of Project:</b> Nil</p>
<p><b>Growth Component of Project:</b> Nil</p>
<p><b>Communication Requirements:</b> A significant consultation requirement with the Five Mile Bay community is required.</p>
<p><b>Project Implementation Considerations:</b></p> <ul style="list-style-type: none"> <li>• Kick off meeting (Leading of dialogue with all vendors and stakeholders)</li> <li>• Preparatory work for the establishment of site.</li> <li>• Project Manager - Adequate team member / counterpart Involvement (equal technical and administrative level for decisions to be taken)</li> <li>• Communication plan</li> <li>• Gathering and analysing feedback on level of motivation and support by vendors / stakeholders.</li> <li>• Involvement of stakeholders with active conflict or communication management</li> </ul>

- Explanation of tactical and operational plans for achieving the overall strategic goal
- Task and competence-driven planning of resources
- Hazard and operability study - Gap analysis
- Manage the process of prioritizing the project needs
- Project timeline monitoring

**Significant Assumptions:**

The project is proposed on the assumption the community support the project and are willing to contribute to the financial shortfall i.e. the sum not funded by the Ministry of Health.

We have made some assumption about the impact of the connection on the Taupo water network that will be validated through our network model.

**Time lines and costs for proposed project phases:**

**The total project cost is \$500,000**

Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											
Consenting											
Designation											
Land purchase											
Consultation											
Design		20k									20k
Construction			480k								480k
Commissioning and Handover											
ANNUAL TOTAL		20k	480k								500k

**Local Government Act Funding Consideration Requirements.**

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cultural well being.

Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc.

Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

This project will benefit the residents of Five Mile Bay.

There will also be some minor benefit to Taupo residents as more people will join the scheme increasing the scale of economy in running the water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical (valves, tobies etc.), 50+ years for civil work (pipes). The benefits will continue beyond initial equipment life so long as the required maintenance and renewal is carried out as required.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

The feedback from the Five Mile Bay community and subsequent Council decision will determine if the project progresses.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.

In this case 5 Mile bay residents will fund the capital works and joint the Taupo water supply and pay the Taupo water rate.



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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 26/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2018/2019 <b>Proposed Investment:</b> \$1,750,000	
<b>Project Name:</b> Taupo WTP Capacity Upgrade to 30MLD	
<b>Asset Location:</b> Taupo	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> The growth model for the Taupo water supply catchment predicts that we will need to increase capacity of the Taupo Water Treatment Plant from 25MLD to 30MLD. The project is to be delivered in 2018/2019 to ensure there is sufficient capacity for current peak demands and for connection of the Acacia Bay network to Taupo as planned for 2019/2020.  The capacity increase can be provided through purchase and installation of additional pumps, membranes, electrical and control.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Upgrade of the Taupo treatment plant from 25MLD to 30MLD including design, construction, testing and commissioning.	
<b>Relationship with other Projects:</b> <ul style="list-style-type: none"> <li>Acacia Bay DWSNZ Upgrade 2019/2020</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo – Plant not upgraded. Flow needs for growth not met. Water conservation measures needed. Plant Upgrade – Plant upgraded to 30MLD to meet growth needs for water supply.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>	
<b>Recommended Option:</b> Plant upgraded to 30MLD to meet growth needs for water supply.	

<b>Legal Considerations:</b>												
<b>Policy Considerations:</b>												
<b>Risks:</b>												
<b>Option Lifecycle Analysis:</b>												
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.												
<b>Funding Sources:</b> New CAPEX projects are loan funded.												
<b>Consent Requirements:</b> Nil												
<b>Land Purchase / Land Designation Requirements:</b>												
<b>Renewal Component of Project:</b> 0%												
<b>Growth Component of Project:</b> 50%												
<b>Communication Requirements:</b>												
<b>Project Implementation Considerations:</b> Detail design required.												
<b>Significant Assumptions:</b> Moderate growth will continue in Taupo. Acacia Bay connected to Taupo in 2019/2020. Water use remains at current levels.												
<b>Time lines and costs for proposed project phases:</b>  <b>The total project cost is \$1,750,000.</b>												
<table border="1"> <thead> <tr> <th><b>Year</b></th> <th><b>2018/2019</b></th> </tr> </thead> <tbody> <tr> <td>Works Costs</td> <td>1,022k</td> </tr> <tr> <td>Design</td> <td>153k</td> </tr> <tr> <td>Non-Works Costs</td> <td>153k</td> </tr> <tr> <td>Contingency</td> <td>422k</td> </tr> <tr> <td><b>TOTAL</b></td> <td><b>1,750k</b></td> </tr> </tbody> </table>	<b>Year</b>	<b>2018/2019</b>	Works Costs	1,022k	Design	153k	Non-Works Costs	153k	Contingency	422k	<b>TOTAL</b>	<b>1,750k</b>
<b>Year</b>	<b>2018/2019</b>											
Works Costs	1,022k											
Design	153k											
Non-Works Costs	153k											
Contingency	422k											
<b>TOTAL</b>	<b>1,750k</b>											
<p><b>Local Government Act Funding Consideration Requirements.</b>  <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i>  <i>(a) in relation to each activity to be funded,-</i></p> <p><b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b></p>												

- **Economy**

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Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc.

Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the community connected to the Taupo water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical equipment.

The benefits will continue beyond initial equipment life so long as the required maintenance and renewal is carried out as required.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Taupo water supply system.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

“to meet the current and future needs of communities for good-quality local infrastructure, local public services and regulatory functions in a manner that is most cost effective for households and businesses”

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Appropriate to present and future needs of the community – meets the needs of the community now and in the future

**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2023/2024 <b>Proposed Investment:</b> \$275,000	
<b>Project Name:</b> Tirohanga Water DWSNZ Upgrade	
<b>Asset Location:</b> Tirohanga	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007, Drinking Water Standards New Zealand.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Upgrade existing water treatment plant as required to meet DWSNZ requirements. This is likely to involve the installation of UV treatment.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements. There will be a cost benefit study to select the preferred treatment technology.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Tirohanga by upgrade of the existing water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>		
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary and detailed design stages		
<b>Option Lifecycle Analysis:</b>		
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.		
<b>Funding Sources:</b> New capital projects are loan funded.		
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.		
<b>Land Purchase / Land Designation Requirements:</b> Not required		
<b>Renewal Component of Project:</b> 0%		
<b>Growth Component of Project:</b> 0%		
<b>Communication Requirements:</b> Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required.		
<b>Project Implementation Considerations:</b> Technology used yet to be determined though UV treatment is the most likely outcome.		
<b>Significant Assumptions:</b>		
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$275,000</b>		
<b>Year</b>	<b>2023/24</b>	<b>2024/25</b>
Annual Spend	25k	250k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>		
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>		
<ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>		

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of the Tirohanga water scheme that utilize Council water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure.  
50+ years for civil infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.



**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2023/2024 <b>Proposed Investment:</b> \$275,000	
<b>Project Name:</b> Waihaha Water DWSNZ Upgrade	
<b>Asset Location:</b> Waihaha	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007, Drinking Water Standards New Zealand.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Upgrade existing water treatment plant as required to meet DWSNZ requirements. This is likely to involve the installation of UV treatment.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements. There will be a cost benefit study to select the preferred treatment technology.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Waihaha by upgrade of the existing water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>		
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary and detailed design stages		
<b>Option Lifecycle Analysis:</b>		
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.		
<b>Funding Sources:</b> New capital projects are loan funded.		
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.		
<b>Land Purchase / Land Designation Requirements:</b> Not required		
<b>Renewal Component of Project:</b> 0%		
<b>Growth Component of Project:</b> 0%		
<b>Communication Requirements:</b> Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required.		
<b>Project Implementation Considerations:</b> Technology used yet to be determined though UV treatment is the most likely outcome.		
<b>Significant Assumptions:</b>		
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$275,000</b>		
<b>Year</b>	<b>2023/24</b>	<b>2024/25</b>
Annual Spend	25k	250k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>		
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>		
<ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>		

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of the Waihaha water scheme that utilize Council water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure.  
50+ years for civil infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

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**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 26/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager  <b>Proposed Start Date:</b> 2026/27 <b>Proposed Investment:</b> \$500,000	
<b>Project Name:</b> Whakamoenga Point DWSNZ Upgrade	
<b>Asset Location:</b> Acacia Bay	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service:</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Upgrade the water supply to the Whakamoenga Point community to meet the Drinking Water Standards of NZ. The option being considered is: <ul style="list-style-type: none"> <li>• Connect the Acacia Bay/Taupo water supply to Whakamoenga Point and so supply DWSNZ compliant water to the community. This will require a rising main and pump station from Acacia Bay.</li> </ul>	
<b>Relationship with other Projects:</b> Acacia Bay DWSNZ Upgrade 2018/19	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade will mean TDC does not comply with the Health Act.  Connect Whakamoenga Point to the Acacia Bay/Taupo water supply to meet DWSNZ and Health Act. The estimated cost is 0.5 million dollars.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> A detailed cost analysis will be completed in the investigation stage of the project.	
<b>Recommended Option:</b> Connect Whakamoenga Point to Acacia Bay to Taupo.	
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Drinking Water Standards New Zealand.	
<b>Policy Considerations:</b>	

**Risks:**

Flouridation is currently completed at the Taupo supply but not at Whakamoenga Point or Acacia Bay and there may be public opposition if the supplies are joined. Reliance on the Taupo WTP, Waikato River crossings and current limited storage in Acacia Bay/Nukuhau (link to Poihipi Reservoir project) Requires upgrade of Taupo WTP to meet capacity requirements.

**Option Lifecycle Analysis:****Consultation: Already undertaken/required to be undertaken**

Will be part of the Ten Year Plan process.

**Funding Sources:**

New capex projects are loan funded.

**Consent Requirements:**

Building and Resource Consent are likely to be required.

**Land Purchase / Land Designation Requirements:**

Land purchase may be needed for a pump stations.

**Renewal Component of Project: 0%****Growth Component of Project: 0%****Communication Requirements:**

Communication with the community will be required to inform them what is happening and update on progress.

**Project Implementation Considerations:**

Detailed design needed.

**Significant Assumptions:****Time lines and costs for proposed project phases:****The total project cost is \$500,000**

Year	2026/27
Spend	500k

**Local Government Act Funding Consideration Requirements.**

*s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-*  
*(a) in relation to each activity to be funded,-*

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Whakamoenga Point connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure

50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.



**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approvals sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 06/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2021/2022 <b>Proposed Investment:</b> \$15,000	
<b>Project Name:</b> Districtwide Water IT Server Purchase	
<b>Asset Location:</b> Taupo	
<b>Significant Decision:</b> No	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007, Drinking Water Standards New Zealand.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Purchase of a new IT server to ensure we continue to meet all resource consent and DWSNZ requirements for data and reporting.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act.  New IT server; ensures we are able to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements.	
<b>Recommended Option:</b> Provide new IT server.	
<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>					
<b>Risks:</b>					
<b>Option Lifecycle Analysis:</b>					
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.					
<b>Funding Sources:</b> New capital projects are loan funded.					
<b>Consent Requirements:</b> Nil					
<b>Land Purchase / Land Designation Requirements:</b> Not required					
<b>Renewal Component of Project:</b> 0%					
<b>Growth Component of Project:</b> 0%					
<b>Communication Requirements:</b> Likely internal only.					
<b>Project Implementation Considerations:</b>					
<b>Significant Assumptions:</b>					
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$650,000</b>					
<table border="1"> <thead> <tr> <th><b>Year</b></th> <th><b>2021/22</b></th> </tr> </thead> <tbody> <tr> <td>Annual Spend</td> <td>15k</td> </tr> </tbody> </table>	<b>Year</b>	<b>2021/22</b>	Annual Spend	15k	
<b>Year</b>	<b>2021/22</b>				
Annual Spend	15k				
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>					
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>					
<ul style="list-style-type: none"> <li><b>Economy</b> Our communities prosper in thriving local economy with a diverse range of</li> </ul>					

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of the District.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

3 years for IT infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. This is a districtwide initiative so funding will be spread across schemes.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2021/2022 <b>Proposed Investment:</b> \$650,000	
<b>Project Name:</b> Hatepe Water DWSNZ Upgrade	
<b>Asset Location:</b> Hatepe	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007, Drinking Water Standards New Zealand.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Upgrade existing water treatment plant as required to meet DWSNZ requirements. This is likely to include filtration, UV disinfection and manganese removal.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act.  New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements. There will be a cost benefit study to select the preferred treatment technology.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Hatepe by upgrade of the existing water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>		
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary and detailed design stages		
<b>Option Lifecycle Analysis:</b>		
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.		
<b>Funding Sources:</b> New capital projects are loan funded.		
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.		
<b>Land Purchase / Land Designation Requirements:</b> Not required		
<b>Renewal Component of Project:</b> 0%		
<b>Growth Component of Project:</b> 0%		
<b>Communication Requirements:</b> Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required.		
<b>Project Implementation Considerations:</b> Technology used yet to be determined though preliminary design stages as the most likely outcome.		
<b>Significant Assumptions:</b>		
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$650,000</b>		
<b>Year</b>	<b>2021/22</b>	<b>2022/23</b>
Annual Spend	50k	600k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>		
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>		
<ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>		

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of the Hatepe water scheme that utilize Council water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure.  
50+ years for civil infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water	
<b>Proposed Start Date:</b> 2021/22 <b>Proposed Investment:</b> \$3,200,000	
<b>Project Name:</b> Omori Water Supply Upgrade to DWSNZ	
<b>Asset Location:</b> Omori	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Provide additional treatment at the Omori water treatment plant as required to meet DWSNZ requirements. The upgrade will provide water that complies with Priority 1 and 2 requirements including bacterial, protozoa and arsenic.	
<b>Relationship with other Projects:</b> Omori Water Pre-Treatment 2018/19	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> The most cost effective option regarding, water treatment technology etc... will be determined in the design phase.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Omori by construction of a new water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Compliance	
<b>Policy Considerations:</b>	

**Risks:**

Cost risk – Estimates to be improved at preliminary design stage

**Option Lifecycle Analysis:****Consultation: Already undertaken/required to be undertaken**

Required to be undertaken as part of the ten year plan

**Funding Sources:**

New capex projects are loan funded.

**Consent Requirements:**

Building and Resource consent (activity) are likely to be required.

**Land Purchase / Land Designation Requirements:**

Not required

**Renewal Component of Project:**

0%

**Growth Component of Project:**

0%

**Communication Requirements:**

Communication with the community will be required to inform them what is happening and update on progress.

**Project Implementation Considerations:**

Technology used yet to be determined though membrane treatment is the most likely outcome.

**Significant Assumptions:**

No land purchase is required.

**Time lines and costs for proposed project phases:**

**The total project cost is \$3,200,000**

Year	21/22	22/23	TOTAL
Engineering	235k		235k
Preliminary & General	235k		235k
Construction		2,345k	2345k
Contingency	30k	35k	385k
<b>ANNUAL TOTAL</b>	<b>500k</b>	<b>2,700k</b>	<b>3,200k</b>

**Local Government Act Funding Consideration Requirements.**

*s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-*

*(a) in relation to each activity to be funded,-*

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

- **Economy**

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Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Omori connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure

50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

“to meet the current and future needs of communities for good-quality local infrastructure, local public services and regulatory functions in a manner that is most cost effective for households and businesses”

Good quality = effective, efficient and appropriate to the present and future anticipated circumstances

Effective – producing the desired or intended result<sup>1</sup>

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Appropriate to present and future needs of the community – meets the needs of the community now and in the future

**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager – Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2018/19 <b>Proposed Investment:</b> \$300,000	
<b>Project Name:</b> Omori Water Pretreatment	
<b>Asset Location:</b> Omori	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Improve intake water quality issues associated with high turbidity in storm conditions. Investigation is required into the form of treatment or upgrade that may be needed.	
<b>Relationship with other Projects:</b> Omori DWSNZ Upgrade	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; high turbidity intake water during storm conditions leading to compliance issues and/or inability to treat water. Security of supply issue.  Intake water protection through pretreatment or other means. Resilience of process improved.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> The most cost effective option regarding, water treatment technology etc... will be determined in the design phase.	
<b>Recommended Option:</b> The recommended option is to improve intake water quality through pretreatment or other means.	
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Compliance	

<b>Policy Considerations:</b>								
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary design stage								
<b>Option Lifecycle Analysis:</b>								
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as part of the ten year plan								
<b>Funding Sources:</b> New capex projects are loan funded.								
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.								
<b>Land Purchase / Land Designation Requirements:</b> Not required								
<b>Renewal Component of Project:</b> 0%								
<b>Growth Component of Project:</b> 0%								
<b>Communication Requirements:</b> Communication with the community will be required to inform them what is happening and update on progress.								
<b>Project Implementation Considerations:</b> Technology used yet to be determined.								
<b>Significant Assumptions:</b> No land purchase is required.								
<b>Time lines and costs for proposed project phases:</b>  <b>The total project cost is \$300,000</b>								
<table border="1"> <thead> <tr> <th>Year</th> <th>23/24</th> <th>24/25</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>ANNUAL TOTAL</td> <td>50k</td> <td>250k</td> <td>300k</td> </tr> </tbody> </table>	Year	23/24	24/25	TOTAL	ANNUAL TOTAL	50k	250k	300k
Year	23/24	24/25	TOTAL					
ANNUAL TOTAL	50k	250k	300k					
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>  <b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>								

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Omori connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure

50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.



**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager – Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 06/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager	
<b>Proposed Start Date:</b> 2027/28 <b>Proposed Investment:</b> \$1,500,000	
<b>Project Name:</b> Rakanui Road DWSNZ Upgrade	
<b>Asset Location:</b> Rakanui Road, Taupo	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service:</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Upgrade the water supply to the Rakanui Road community to meet the Drinking Water Standards of NZ. The options being considered are: <ul style="list-style-type: none"> <li>• Connect the Taupo water supply to Rakanui Road and so supply DWSNZ compliant water to the community.</li> <li>• Construct a new treatment plant at Rakanui Road</li> <li>• Provide point of use treatment at the sites requiring DWSNZ quality water</li> </ul>	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade will mean TDC does not comply with the Health Act.  Provide compliant water to Rakanui Road to meet DWSNZ and Health Act. The estimated cost is 1.5 million dollars.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> A cost analysis will be completed for all of the options in the investigation stage of the project.	
<b>Recommended Option:</b> Provide compliant water to Rakanui Road.	
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>				
<b>Risks:</b> Dependant on option chosen, flouridation is currently completed at the Taupo supply but not at Rakanui Road and increased reliance on the Taupo WTP.				
<b>Option Lifecycle Analysis:</b>				
<b>Consultation: Already undertaken/required to be undertaken</b> Will be part of the Ten Year Plan process.				
<b>Funding Sources:</b> New capex projects are loan funded.				
<b>Consent Requirements:</b> Building and Resource Consent are likely to be required.				
<b>Land Purchase / Land Designation Requirements:</b> Land purchase may be needed.				
<b>Renewal Component of Project:</b> 0%				
<b>Growth Component of Project:</b> 0%				
<b>Communication Requirements:</b> Communication with the community will be required to inform them what is happening and update on progress.				
<b>Project Implementation Considerations:</b> Optioneering and detailed design needed.				
<b>Significant Assumptions:</b>				
<b>Time lines and costs for proposed project phases:</b>  <b>The total project cost is \$1,500,000</b>				
<table border="1"> <tr> <td>Year</td> <td>2027/28</td> </tr> <tr> <td>Spend</td> <td>1,500k</td> </tr> </table>	Year	2027/28	Spend	1,500k
Year	2027/28			
Spend	1,500k			
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>				
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>				
<ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>				

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Rakanui Road connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure  
50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

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**Approvals sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2018/19 <b>Proposed Investment:</b> \$75,000	
<b>Project Name:</b> Tirohanga Water Intake Improvements	
<b>Asset Location:</b> Tirohanga	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Improve intake water quality issues associated with high turbidity in storm conditions. Relocate intake screen and modify weir structure.	
<b>Relationship with other Projects:</b> Tirohanga DWSNZ Upgrade	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; high turbidity intake water during storm conditions leading to compliance issues and/or inability to treat water. Security of supply issue.  Intake water structure improvement. Resilience of process improved.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>	
<b>Recommended Option:</b> The recommended option is to improve intake water quality through relocation of the intake screen and modification of the weir structure.	
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Compliance	
<b>Policy Considerations:</b>	

<p><b>Risks:</b> Cost risk – Estimates to be improved at preliminary design stage</p>				
<p><b>Option Lifecycle Analysis:</b></p>				
<p><b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as part of the ten year plan</p>				
<p><b>Funding Sources:</b> New capex projects are loan funded.</p>				
<p><b>Consent Requirements:</b> Resource consent (activity) is likely to be required.</p>				
<p><b>Land Purchase / Land Designation Requirements:</b> Not required</p>				
<p><b>Renewal Component of Project:</b> 0%</p>				
<p><b>Growth Component of Project:</b> 0%</p>				
<p><b>Communication Requirements:</b> Communication with the community will be required to inform them what is happening and update on progress.</p>				
<p><b>Project Implementation Considerations:</b> Detailed design required.</p>				
<p><b>Significant Assumptions:</b> No land purchase is required.</p>				
<p><b>Time lines and costs for proposed project phases:</b></p> <p><b>The total project cost is \$75,000</b></p> <table border="1"> <thead> <tr> <th>Year</th> <th>18/19</th> </tr> </thead> <tbody> <tr> <td>ANNUAL TOTAL</td> <td>75k</td> </tr> </tbody> </table>	Year	18/19	ANNUAL TOTAL	75k
Year	18/19			
ANNUAL TOTAL	75k			
<p><b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i></p> <p><b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b></p> <ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>				

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Residents of Tirohanga connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure

50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager – Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2021/2022 <b>Proposed Investment:</b> \$275,000	
<b>Project Name:</b> Whakamaru Water DWSNZ Upgrade	
<b>Asset Location:</b> Whakamaru	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007, Drinking Water Standards New Zealand.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Upgrade existing water treatment plant as required to meet DWSNZ requirements. This is likely to involve the installation of UV treatment.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements. There will be a cost benefit study to select the preferred treatment technology.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Whakamaru by upgrade of the existing water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>					
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary and detailed design stages					
<b>Option Lifecycle Analysis:</b>					
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.					
<b>Funding Sources:</b> New capital projects are loan funded.					
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.					
<b>Land Purchase / Land Designation Requirements:</b> Not required					
<b>Renewal Component of Project:</b> 0%					
<b>Growth Component of Project:</b> 0%					
<b>Communication Requirements:</b> Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required.					
<b>Project Implementation Considerations:</b> Technology used yet to be determined though UV treatment is the most likely outcome.					
<b>Significant Assumptions:</b>					
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$275,000</b>					
<b>Year</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>
Annual Spend				25k	250k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>					
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>					
<ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>					

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of the Whakamaru water scheme that utilize Council water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure.  
50+ years for civil infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

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Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2023/2024 <b>Proposed Investment:</b> \$275,000	
<b>Project Name:</b> Whareroa Water DWSNZ Upgrade	
<b>Asset Location:</b> Whareroa	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007, Drinking Water Standards New Zealand.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Upgrade existing water treatment plant as required to meet DWSNZ requirements. This is likely to involve the installation of UV treatment.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements. There will be a cost benefit study to select the preferred treatment technology.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Whareroa by upgrade of the existing water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>		
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary and detailed design stages		
<b>Option Lifecycle Analysis:</b>		
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.		
<b>Funding Sources:</b> New capital projects are loan funded.		
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.		
<b>Land Purchase / Land Designation Requirements:</b> Not required		
<b>Renewal Component of Project:</b> 0%		
<b>Growth Component of Project:</b> 0%		
<b>Communication Requirements:</b> Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required.		
<b>Project Implementation Considerations:</b> Technology used yet to be determined though UV treatment is the most likely outcome.		
<b>Significant Assumptions:</b>		
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$275,000</b>		
<b>Year</b>	<b>2023/24</b>	<b>2024/25</b>
Annual Spend	25k	250k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>		
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>		
<ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>		

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- **Engagement**

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Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc.

Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of the Whareroa water scheme that utilize Council water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure.  
50+ years for civil infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.



**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

“to meet the current and future needs of communities for good-quality local infrastructure, local public services and regulatory functions in a manner that is most cost effective for households and businesses”

Good quality = effective, efficient and appropriate to the present and future anticipated circumstances

Effective – producing the desired or intended result<sup>1</sup>

Efficient – working productively with minimum wasted effort or expense<sup>1</sup>

Appropriate to present and future needs of the community – meets the needs of the community now and in the future

**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 26/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager  <b>Proposed Start Date:</b> 2018/19 <b>Proposed Investment:</b> \$4,500,000	
<b>Project Name:</b> Acacia Bay Water DWSNZ Upgrade	
<b>Asset Location:</b> Acacia Bay	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service:</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Upgrade the water supply to the Acacia Bay community to meet the Drinking Water Standards of NZ. There are two options being considered: <ul style="list-style-type: none"> <li>• Connect the Taupo water supply to Acacia Bay and so supply DWSNZ compliant water to the community, or</li> <li>• Construct a new water treatment plant at Acacia Bay to comply with DWSNZ requirements.</li> </ul>	
<b>Relationship with other Projects:</b> <ul style="list-style-type: none"> <li>• Taupo WTP Upgrade to 30MLD</li> <li>• Poihipi Reservoir Project</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade will mean TDC does not comply with the Health Act.  New Water Treatment Plant; to meet DWSNZ and Health Act. The estimated cost is 6 million dollars.  Connect Acacia Bay to the Taupo water supply to meet DWSNZ and Health Act. The estimated cost is 4.5 million dollars.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> High level cost calculations indicated that developing a standalone treatment plant at Acacia Bay will be more expensive than connecting to Taupo. A more detailed cost analysis will be completed in the investigation stage of the project.	

<b>Recommended Option:</b> Connect Acacia bay to Taupo.				
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Drinking Water Standards New Zealand.				
<b>Policy Considerations:</b>				
<b>Risks:</b> Flouridation is currently completed at Taupo supply and not at Acacia Bay and there may be public opposition if the supplies are joined. Reliance on the Taupo WTP, Waikato River crossings and current limited storage in Acacia Bay/Nukuhau (link to Poihipi Reservoir project) Requires upgrade of Taupo WTP to meet capacity requirements.				
<b>Option Lifecycle Analysis:</b>				
<b>Consultation: Already undertaken/required to be undertaken</b> Will be part of the Ten Year Plan process.				
<b>Funding Sources:</b> New capex projects are loan funded.				
<b>Consent Requirements:</b> Building and Resource Consent are likely to be required.				
<b>Land Purchase / Land Designation Requirements:</b> Land purchase may be needed for a pump stations.				
<b>Renewal Component of Project:</b> 0%				
<b>Growth Component of Project:</b> 0%				
<b>Communication Requirements:</b> Communication with the community will be required to inform them what is happening and update on progress.				
<b>Project Implementation Considerations:</b> Detailed design needed.				
<b>Significant Assumptions:</b>				
<b>Time lines and costs for proposed project phases:</b>				
<b>The total project cost is \$4,500,000</b>				
Year	18/19	19/20	21/22	TOTAL
Spend	300k	2,100k	2,100k	4,500k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources</i>				

that the local authority determines to be appropriate, following consideration of,-  
(a) in relation to each activity to be funded,-

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

- **Economy**

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Acacia Bay and Mapara connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure

50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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Good quality = effective, efficient and appropriate to the present and future anticipated circumstances

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**Approvals sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager	
<b>Proposed Start Date:</b> 2027/28 <b>Proposed Investment:</b> \$1,500,000	
<b>Project Name:</b> Bonsahw Park DWSNZ Upgrade	
<b>Asset Location:</b> Bonshaw Park	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service:</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Upgrade the water supply to the Bonshaw Park community to meet the Drinking Water Standards of NZ. The option being considered is: <ul style="list-style-type: none"> <li>• Connect the Bonshaw Park water supply to Taupo and so supply DWSNZ compliant water to the community. This will require a rising main and pump station from Taupo.</li> </ul>	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade will mean TDC does not comply with the Health Act.  Connect Bonshaw Park to the Taupo water supply to meet DWSNZ and Health Act. The estimated cost is 1.5 million dollars.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> A detailed cost analysis will be completed in the investigation stage of the project.	
<b>Recommended Option:</b> Connect Bonshaw Park to Taupo.	
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Drinking Water Standards New Zealand.	
<b>Policy Considerations:</b>	

**Risks:**

Flouridation is currently completed at the Taupo supply but not at Bonshaw Park and there may be public opposition if the supplies are joined.  
Reliance on the Taupo WTP.

**Option Lifecycle Analysis:****Consultation: Already undertaken/required to be undertaken**

Will be part of the Ten Year Plan process.

**Funding Sources:**

New capex projects are loan funded.

**Consent Requirements:**

Building and Resource Consent are likely to be required.

**Land Purchase / Land Designation Requirements:**

Land purchase may be needed for a pump station.

**Renewal Component of Project:** 0%

**Growth Component of Project:** 0%

**Communication Requirements:**

Communication with the community will be required to inform them what is happening and update on progress.

**Project Implementation Considerations:**

Detailed design needed.

**Significant Assumptions:****Time lines and costs for proposed project phases:**

**The total project cost is \$1,500,000**

Year	2027/28
Spend	1,500k

**Local Government Act Funding Consideration Requirements.**

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*(a) in relation to each activity to be funded,-*

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Bonshaw Park connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure

50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

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**Approvals sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 19/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2023/2024 <b>Proposed Investment:</b> \$500,000	
<b>Project Name:</b> Brentwood Reservoir Land Purchase	
<b>Asset Location:</b> Northern side of Waikato River	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> To purchase land for the future construction of a new water supply reservoir for the Northern side of the Waikato river.  Currently the low zone in the Nukuhau/Brentwood area is serviced by the Tamatea reservoir via two water mains over and under the Waikato river. The high zone of this area is serviced by the Nukuhau and Woodward Street water pump stations.  The growth plan for the Northern side of the Waikato River is to establish two reservoirs; one in the Brentwood area (low zone) and one in the Poihipi Road (high zone) area.  This project is to purchase land in advance of the reservoir construction in 2047/48 on the northern side of Waikato River to meet security of supply, and growth in this area.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Purchase of the land required for the reservoir site.	
<b>Relationship with other Projects:</b> Brentwood Reservoir Construction 2047/48	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide 24hrs emergency storage of treated water during the peak use period (we use the average day of the peak month average). Storage for Taupo overall is acceptable however there is a significant population and some growth on the Northern side of the Waikato River and there is no reservoir in this area.	
<b>Options and Analysis:</b> Status Quo – no water storage on the northern side of the Waikato river for the Nukuhau/ Brentwood area. Emergency supply remains via two water mains across the Waikato river.	

New reservoir – Purchase land for construction of a new storage reservoir which will provide water storage on the northern side of the Waikato River.

**Financial Considerations**  
**Cost Benefit Analysis**

**Recommended Option:**  
Purchase land for development of a new reservoir to supply 24 hours emergency storage on the northern side of the Waikato River.

**Legal Considerations:**

**Policy Considerations:**

**Risks:**  
Risk to the Nukuhau water supply in an emergency event i.e. a major Taupo network failure or Waikato river crossing failure (mitigated by having two pipes but not full capacity in both) could affect supply to Nukuhau.

**Option Lifecycle Analysis:**

**Consultation:**  
This will be required probably as a part of the 10 Year Plan process.

**Funding Sources:**  
New capex projects are loan funded.

**Consent Requirements:**

**Land Purchase / Land Designation Requirements:**  
Land purchase will be required.

**Renewal Component of Project:** 0%

**Growth Component of Project:** 50%

**Communication Requirements:**

**Project Implementation Considerations:**

**Significant Assumptions:**  
Moderate growth will continue on the Northern side of the Waikato River.

**Time lines and costs for proposed project phases:**

**The total project cost is \$500,000.**

Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											

Consenting											
Designation											
Land purchase						500k					500k
Consultation											
Design											
Construction											
Commissioning and Handover											
ANNUAL TOTAL						500k					500k

**Local Government Act Funding Consideration Requirements.**

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*(a) in relation to each activity to be funded,-*

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Council’s response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the Taupo water supply, primarily to those on the water scheme on the northern side of the Waikato river but also to others on the Taupo supply as additional capacity on the Northern side will create spare reservoir capacity in Taupo reservoirs.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

A concrete reservoir can be expected to last 50+ years.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Taupo water supply system.

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 21/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2018/19 <b>Proposed Investment:</b> \$75,000 PER SITE \$225,000 TOTAL	
<b>Project Name:</b> Burst Control Valves – Tamatea, Tauhara & Titoki	
<b>Asset Location:</b> Taupo	
<b>Significant Decision:</b> No	
<b>Reason for the Project:</b> To investigate, design and construct new burst control valves at three reservoir sites in Taupo, namely Tamatea, Tauhara and Titoki reservoirs. The objectives are to minimise: water loss from a pipe break (burst) or from a pipe failure associated with an earthquake or other natural disaster.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Investigate, design and construct burst control valves at each reservoir with all associated controls.	
<b>Relationship with other Projects:</b> Tamatea Reservoir Burst Control Valve 2018/19 Tauhara Reservoir Burst Control Valve 2018/19 Titoki Reservoir Burst Control Valve 2018/19	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Infrastructure Strategy is to design resilience in to the supply of services so if failures occur backup systems can be used and service can continue. In particular Council has acknowledged the need to ensure security of supply for water. The inclusion of burst control valves adds resilience to the supply.	
<b>Options and Analysis:</b> Status Quo – Risk of extended loss of supply following large water main burst or earthquake due to reservoir emptying. Burst Control Valves – Water storage maintained following large water main burst or earthquake allowing improved response time to restore supply to the community.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>	
<b>Recommended Option:</b> Install burst control valves on water supply reservoirs.	

<b>Legal Considerations:</b>											
<b>Policy Considerations:</b>											
<b>Risks:</b> Risk of extended loss of supply following large water main burst or earthquake due to reservoir emptying. If not setup correctly burst control valve could prevent supply to fire hydrant.											
<b>Option Lifecycle Analysis:</b>											
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.											
<b>Funding Sources:</b> New capex projects are loan funded.											
<b>Consent Requirements:</b>											
<b>Land Purchase / Land Designation Requirements:</b> None											
<b>Renewal Component of Project:</b> 0%											
<b>Growth Component of Project:</b> 50%											
<b>Communication Requirements:</b>											
<b>Project Implementation Considerations:</b>											
<b>Significant Assumptions:</b>											
<b>Time lines and costs for proposed project phases:</b>											
<b>The total project cost is \$75,000 PER SITE = \$225,000 TOTAL</b>											
Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation	30k										30k
Consenting											
Designation											
Land purchase											
Consultation											
Design	30k										30k
Construction	150k										150k
Commissioning and Handover	15k										15k
ANNUAL TOTAL	225k										225k

**Local Government Act Funding Consideration Requirements.**

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**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

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Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the Taupo water supply, primarily those in the areas fed from the reservoirs where burst control is proposed.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

Mechanical, electrical equipment can be expected to last 25+ years.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Taupo water supply system.



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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 26/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager  <b>Proposed Start Date:</b> 2018/2019 <b>Proposed Investment:</b> \$7,390,000	
<b>Project Name:</b> Kinloch Water DWSNZ Upgrade	
<b>Asset Location:</b> Kinloch	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> 1) Security of supply by increasing reservoir capacity at proposed site. 2) Legislative requirements; Health (Drinking Water) Amendment Act 2007.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Construct a new water treatment plant as required to meet DWSNZ requirements.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the security of supply and Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements. There will be a cost benefit study in two areas. 1; selection of the preferred site, 2; selection of the preferred treatment technology. Number 1 is currently in progress.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Kinloch by construction of a new water treatment plant.	

<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007					
<b>Policy Considerations:</b>					
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary and detailed design stages					
<b>Option Lifecycle Analysis:</b>					
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.					
<b>Funding Sources:</b> New capital projects are loan funded.					
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.					
<b>Land Purchase / Land Designation Requirements:</b> Required - The location is to be confirmed; some privately held sites are to be considered in the early stages of the project.					
<b>Renewal Component of Project:</b> 0%					
<b>Growth Component of Project:</b> 0%					
<b>Communication Requirements:</b> Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required.					
<b>Project Implementation Considerations:</b> Site selection (in progress), technology used yet to be determined though a membrane plant (i.e. like Taupo) is likely.					
<b>Significant Assumptions:</b>					
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$7,390,000</b>					
<b>Year</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>
Intake PS and Supply Main		123k	1,107k		
New WTP	150k	150k	4,200k		
Rising main WTP to Reservoirs			100k	930k	
Locheagles Rising main					490k
Water Main Boojum Dell to marina Terrace		140k			
TOTAL	150k	413k	5,407k	930k	490k
A further 730k is budgeted in 2033/34 for a future capacity upgrade of the treatment plant to align with growth forecasts.					

**Local Government Act Funding Consideration Requirements.**

*s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-  
(a) in relation to each activity to be funded,-*

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

- **Economy**

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- **Environment**

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- **Engagement**

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Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc.

Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Kinloch that utilize Council water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure.  
50+ years for civil infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

“to meet the current and future needs of communities for good-quality local infrastructure, local public services and regulatory functions in a manner that is most cost effective for households and businesses”

Good quality = effective, efficient and appropriate to the present and future anticipated circumstances

Effective – producing the desired or intended result<sup>1</sup>

Efficient – working productively with minimum wasted effort or expense<sup>1</sup>

Appropriate to present and future needs of the community – meets the needs of the community now and in the future

**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 23/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2017/2018 Project has started already. <b>Proposed Investment:</b> \$1,500,000	
<b>Project Name:</b> Kinloch Locheagles Reservoir	
<b>Asset Location:</b> Kinloch	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Provide a new water supply reservoir for the high pressure zone in Kinloch.  Currently the low zone in Kinloch area is serviced by the Whakaroa Low reservoir at Boojum Dell. Development in higher areas of Kinloch is underway and a new pump station and two small water storage tanks have been provided in the Locheagles subdivision to service these areas.  The storage tanks do not provide sufficient storage volume for the current or forecast development, or for emergency storage requirements.  This project is to construct a new water reservoir on the site of the existing storage tanks in the Locheagles subdivision to meet security of supply, and growth in this area.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Design and construction of the reservoir (capacity approx. 2,000 m <sup>3</sup> ) including site preparation, pipework and valves, reservoir, electrical and instrumentation. The design is to include potential for a second reservoir on the same site in the future to meet further growth.	
<b>Relationship with other Projects:</b> <ul style="list-style-type: none"> <li>• Kinloch Water DWSNZ Upgrade</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide 24hrs emergency storage of treated water during the peak use period (we use the average day of the peak month average). Storage for Kinloch is not currently acceptable inline with these requirements.	
<b>Options and Analysis:</b> Status Quo – Insufficient water storage for the high zone of Kinloch. Risk of loss of water supply and inadequate supply for emergencies. New reservoir – Construct a new storage reservoir which will provide appropriate	

water storage.
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>
<b>Recommended Option:</b> Develop a new reservoir to supply 24 hours storage for the high zone in Kinloch.
<b>Legal Considerations:</b>
<b>Policy Considerations:</b>
<b>Risks:</b> Risk to the Kinloch water supply in an emergency event i.e. a major water main break, fire or loss of supply. Access road to the reservoir is a private road.
<b>Option Lifecycle Analysis:</b>
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.
<b>Funding Sources:</b> New capex projects are loan funded.
<b>Consent Requirements:</b> Building consent for the reservoir will be required.
<b>Land Purchase / Land Designation Requirements:</b> Land has been purchased.
<b>Renewal Component of Project:</b> 0%
<b>Growth Component of Project:</b> 50%
<b>Communication Requirements:</b>
<b>Project Implementation Considerations:</b> Detailed reservoir design will be required to refine the cost estimates.
<b>Significant Assumptions:</b> Nil.

**Time lines and costs for proposed project phases:**

**The total project cost is \$1,500,000.** \*Initial spend of \$1,000,000 in 2017/18.

Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											
Consenting											
Designation											
Land purchase											
Consultation											
Design											
Construction	500k										500k
Commissioning and Handover											
ANNUAL TOTAL	500k										1,500k *

**Local Government Act Funding Consideration Requirements.**

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*(a) in relation to each activity to be funded,-*

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the Kinloch water supply, primarily to those in the high pressure zone but also to others on the Kinloch supply as additional capacity in the high zone will create spare reservoir capacity in the Whakaroa reservoir.



**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

A concrete reservoir can be expected to last 50+ years.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Kinloch water supply system.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 22/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2025/2026 <b>Proposed Investment:</b> \$15,000	
<b>Project Name:</b> Mapara Water Supply Pump Station Capacity Increase	
<b>Asset Location:</b> Mapara, Acacia Bay	
<b>Significant Decision:</b> No	
<b>Reason for the Project:</b> The growth model for the Mapara water supply catchment predicts that we will need to increase capacity of the Cherry Lane Water Pump Station from 12l/s to 16l/s by 2026. The capacity increase can be provided through purchase and installation of an additional pump to the existing pump set which has been designed for future expansion.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Purchase and installation of a third duty pump including testing and commissioning.	
<b>Relationship with other Projects:</b> <ul style="list-style-type: none"> <li>Mapara Water Upgrade of Blue Ridge Rising Main 2025/26</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo – Third duty pump not installed. Limitation to volume of water supply to Mapara scheme. Additional Pump – Third duty pump installed. Growth needs met for water supply.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>	
<b>Recommended Option:</b> Install third duty pump at Cherry Lane Water Pump Station.	
<b>Legal Considerations:</b>	

<b>Policy Considerations:</b>											
<b>Risks:</b> Risk if growth in the Mapara catchment occurs sooner or later than planned resulting in either a need to fast track or delay the project.											
<b>Option Lifecycle Analysis:</b>											
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.											
<b>Funding Sources:</b> New CAPEX projects are loan funded.											
<b>Consent Requirements:</b> Nil											
<b>Land Purchase / Land Designation Requirements:</b>											
<b>Renewal Component of Project:</b> 0%											
<b>Growth Component of Project:</b> 50%											
<b>Communication Requirements:</b>											
<b>Project Implementation Considerations:</b> Detail design to ensure pipeline capacity is sufficient prior to installation of new pump. Relationship with the upgrade of Blue Ridge Rising Main Project.											
<b>Significant Assumptions:</b> Moderate growth will continue in Mapara.											
<b>Time lines and costs for proposed project phases:</b>											
<b>The total project cost is \$15,000.</b>											
Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											
Consenting											
Designation											
Land purchase											
Consultation											
Design											
Construction							15k				15k
Commissioning and Handover											
ANNUAL TOTAL							15k				15k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i>											

*(a) in relation to each activity to be funded,-*

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the community connected to the Mapara water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical equipment.

The benefits will continue beyond initial equipment life so long as the required maintenance and renewal is carried out as required.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

The progress of development planning and construction will confirm delivery timeframe of project.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Mapara water supply system.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 22/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2025/2026 <b>Proposed Investment:</b> \$200,000	
<b>Project Name:</b> Mapara Water Upgrade of Blue Ridge Rising Main	
<b>Asset Location:</b> Mapara, Acacia Bay	
<b>Significant Decision:</b> No	
<b>Reason for the Project:</b> The growth model for the Mapara water supply catchment predicts that we will need to increase capacity of supply from 12l/s to 16l/s by 2026. The capacity increase will require upgrade of 1,000m of the network pipework from 100mm to 150mm diameter as well as installation of a third duty pump (separate project). The pipework requiring replacement is largely asbestos cement and hence there is a renewal component of the project.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Upgrade of 1,000m of the rising falling main to Blue Ridge Reservoir from 100mm to 150mm diameter.	
<b>Relationship with other Projects:</b> <ul style="list-style-type: none"> <li>Mapara Water Pump Station Capacity Increase 2025/26</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo – Pipework not replaced. Limitation to volume of water supply to Mapara scheme. Possibility of overpressure of existing network and resulting increased risk of water main burst. Upgrade Pipeline – Growth needs met for water supply.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b>	
<b>Recommended Option:</b> Upgrade pipeline.	

<b>Legal Considerations:</b>											
<b>Policy Considerations:</b>											
<b>Risks:</b> Risk if growth in the Mapara catchment occurs sooner or later than planned resulting in either a need to fast track or delay the project. Pipework failure rate increases prompting need to bring project forward.											
<b>Option Lifecycle Analysis:</b>											
<b>Consultation:</b> This will be required probably as a part of the 10 Year Plan process.											
<b>Funding Sources:</b> New CAPEX projects are loan funded. This project has a renewal component.											
<b>Consent Requirements:</b> Nil											
<b>Land Purchase / Land Designation Requirements:</b>											
<b>Renewal Component of Project: 50%</b>											
<b>Growth Component of Project: 50%</b>											
<b>Communication Requirements:</b>											
<b>Project Implementation Considerations:</b> Detail design of pipeline will be required.											
<b>Significant Assumptions:</b> Moderate growth will continue in Mapara.											
<b>Time lines and costs for proposed project phases:</b>											
<b>The total project cost is \$200,000.</b>											
Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping / Feasibility											
Investigation											
Consenting											
Designation											
Land purchase											
Consultation											
Design											
Construction							200k				200k
Commissioning and Handover											
ANNUAL TOTAL							200k				200k

**Local Government Act Funding Consideration Requirements.**

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the community connected to the Mapara water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical equipment valves etc. 50 years for pipelines.

The benefits will continue beyond initial equipment life so long as the required maintenance and renewal is carried out as required.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

The progress of development planning and construction will confirm delivery timeframe of project.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

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**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2022/23 <b>Proposed Investment:</b> 2,200,000	
<b>Project Name:</b> Motuoapa Water Supply Upgrade	
<b>Asset Location:</b> Motuoapa	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> The Motuoapa supply requires upgrade to meet the DWSNZ. The upgrade is likely to include membrane treatment to meet protozoa and chemical requirements of the drinking water standards.	
<b>Links to Levels of Service</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Provide additional treatment at the Motuoapa water treatment plant as required to meet DWSNZ requirements. The upgrade will provide water that complies with all requirements including bacterial, protozoa and arsenic.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> The more cost effective option, site selection etc... will be determined in the design phase.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to Motuoapa by construction of a new water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water Amendment) Act Compliance	
<b>Policy Considerations:</b>	

<p><b>Risks:</b>  WTP location risk – Site options to be reviewed  Cost risk – Estimates to be improved at preliminary design stage</p>																		
<p><b>Option Lifecycle Analysis:</b></p>																		
<p><b>Consultation: Already undertaken/required to be undertaken</b>  Required to be undertaken</p>																		
<p><b>Funding Sources:</b>  New capex projects are loan funded.</p>																		
<p><b>Consent Requirements:</b>  Building consent is likely to be required.</p>																		
<p><b>Land Purchase / Land Designation Requirements:</b>  Nil</p>																		
<p><b>Renewal Component of Project:</b>  0%</p>																		
<p><b>Growth Component of Project:</b>  0%</p>																		
<p><b>Communication Requirements:</b>  Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required</p>																		
<p><b>Project Implementation Considerations:</b>  Technology used yet to be determined though membrane treatment is the most likely outcome.</p>																		
<p><b>Significant Assumptions:</b></p>																		
<p><b>Time lines and costs for proposed project phases:</b></p> <p><b>The total project cost is \$2,200,000</b></p> <table border="1"> <thead> <tr> <th>Year</th> <th>22/23</th> <th>23/24</th> </tr> </thead> <tbody> <tr> <td>Engineering</td> <td>150k</td> <td></td> </tr> <tr> <td>Preliminary &amp; General</td> <td></td> <td>150k</td> </tr> <tr> <td>Construction</td> <td></td> <td>1,450k</td> </tr> <tr> <td>Contingency</td> <td>50k</td> <td>400k</td> </tr> <tr> <td><b>ANNUAL TOTAL</b></td> <td><b>200k</b></td> <td><b>2,000k</b></td> </tr> </tbody> </table>	Year	22/23	23/24	Engineering	150k		Preliminary & General		150k	Construction		1,450k	Contingency	50k	400k	<b>ANNUAL TOTAL</b>	<b>200k</b>	<b>2,000k</b>
Year	22/23	23/24																
Engineering	150k																	
Preliminary & General		150k																
Construction		1,450k																
Contingency	50k	400k																
<b>ANNUAL TOTAL</b>	<b>200k</b>	<b>2,000k</b>																
<p><b>Local Government Act Funding Consideration Requirements.</b>  <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i>  (a) <i>in relation to each activity to be funded,-</i></p>																		

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**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of Motuoapa connected to the water supply

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure

50+ years for civil infrastructure

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

This project is required for health act compliance.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

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**Approval sign off from Group Manager:**

Name: Alan Menhennet

Division: Corporate Infrastructure, Finance and Regulatory

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 19/02/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2021/2022 <b>Proposed Investment:</b> \$4,600,000	
<b>Project Name:</b> Poihipi Reservoir Land Purchase and Construction	
<b>Asset Location:</b> Northern side of Waikato River	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Provide a new water supply reservoir for the Northern side of the Waikato river.  Currently the low zone in the Nukuhau/Brentwood area is serviced by the Tamatea reservoir via two water mains over and under the Waikato river. The high zone this area is serviced by the Nukuhau and Woodward Street water pump stations.  The growth plan for the Northern side of the Waikato River is to establish two reservoirs; one in the Brentwood area (low zone) and one in the Poihipi Road (high zone) area.  This project is to construct a new water reservoir on the northern side of Waikato River to meet security of supply, and growth in this area.	
<b>Links to Levels of Service:</b> System adequacy - Sufficient capacity to meet current demands and future growth. Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand's drinking water standards for communities.	
<b>Project Scope:</b> Purchase of the land required for the reservoir site. Construction of the reservoir (capacity approx. 3,000 m <sup>3</sup> ) including site preparation, pipework and valves, reservoir, electrical and instrumentation.	
<b>Relationship with other Projects:</b> Two projects: <ul style="list-style-type: none"> <li>• Poihipi Reservoir land Purchase 2023/23</li> <li>• Poihipi Reservoir Construction 2024/25</li> </ul>	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide 24hrs emergency storage of treated water during the peak use period (we use the average day of the peak month average). Storage for Taupo overall is acceptable however there is a significant population and some growth on the Northern side of the Waikato River and there is no reservoir in this area.	
<b>Options and Analysis:</b> Status Quo – no water storage on the northern side of the Waikato river for the Nukuhau/ Brentwood area. Emergency supply remains via two water mains across	

<p>the Waikato river.          New reservoir – Construct a new storage reservoir which will provide water storage on the northern side of the Waikato River.</p>											
<p><b>Financial Considerations</b>  <b>Cost Benefit Analysis</b></p>											
<p><b>Recommended Option:</b>          Develop a new reservoir to supply 24 hours emergency storages on the northern side of the Waikato River.</p>											
<p><b>Legal Considerations:</b></p>											
<p><b>Policy Considerations:</b></p>											
<p><b>Risks:</b>          Risk to the Nukuhau water supply in an emergency event i.e. a major Taupo network failure or Waikato river crossing failure (mitigated by having two pipes but not full capacity in both).</p>											
<p><b>Option Lifecycle Analysis:</b></p>											
<p><b>Consultation:</b>          This will be required probably as a part of the 10 Year Plan process.</p>											
<p><b>Funding Sources:</b>          New capex projects are loan funded.</p>											
<p><b>Consent Requirements:</b>          Building consent for the reservoir will be required.</p>											
<p><b>Land Purchase / Land Designation Requirements:</b>          Land purchase will be required.</p>											
<p><b>Renewal Component of Project:</b> 0%</p>											
<p><b>Growth Component of Project:</b> 50%</p>											
<p><b>Communication Requirements:</b></p>											
<p><b>Project Implementation Considerations:</b>          Detailed reservoir design will be required to refine the cost estimates.</p>											
<p><b>Significant Assumptions:</b>          Moderate growth will continue on the Northern side of the Waikato River.</p>											
<p><b>Time lines and costs for proposed project phases:</b></p> <p><b>The total project cost is \$5,800,000.</b></p>											
Year	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27	27/28	PHASE TOTAL
Scoping /											

Feasibility											
Investigation											
Consenting											
Designation											
Land purchase						500k					500k
Consultation											
Design							300k				300k
Construction								3,800 k			3,800 k
Commissioning and Handover											
ANNUAL TOTAL						500k	300k	3,800 k			4,600 k

**Local Government Act Funding Consideration Requirements.**

*s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-  
(a) in relation to each activity to be funded,-*

**s101(3)(a)(i) community outcomes to which the activity primarily contributes**

- **Economy**

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- **Environment**

A shared responsibility for places we are proud of

- **Engagement**

Council is connected with its communities, advocating for their social and cultural well being.

Community Outcomes are taken into account when determining life cycle strategies, levels of service, etc.

Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

The benefits will be to the Taupo water supply, primarily to those on the water scheme on the northern side of the Waikato river but also to others on the Taupo supply as additional capacity on the Northern side will create spare reservoir capacity in Taupo reservoirs.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

A concrete reservoir can be expected to last 50+ years.



**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded. Cost and benefits are to those on the Taupo water supply system.

**s101(3)(b) the overall impact of any allocation of liability for revenue needs on the community**

“to meet the current and future needs of communities for good-quality local infrastructure, local public services and regulatory functions in a manner that is most cost effective for households and businesses”

Good quality = effective, efficient and appropriate to the present and future anticipated circumstances

Effective – producing the desired or intended result<sup>1</sup>

Efficient – working productively with minimum wasted effort or expense<sup>1</sup>

Appropriate to present and future needs of the community – meets the needs of the community now and in the future

**Approval sign off from Group Manager:**

Name: Kevin Strongman

Division: Group Manager - Operational Services

Signature: \_\_\_\_\_

Date:

Date	Description of Change	Changed by	Approved by

\_\_\_\_\_

<b>Date of Project Sheet Creation:</b> 05/03/2018	
<b>Project sheet completed by:</b> Tom Swindells <b>Position:</b> Asset Manager Water  <b>Proposed Start Date:</b> 2021/2022 <b>Proposed Investment:</b> \$275,000	
<b>Project Name:</b> River Road Water DWSNZ Upgrade	
<b>Asset Location:</b> River Road, Broadlands	
<b>Significant Decision:</b> Yes	
<b>Reason for the Project:</b> Legislative requirements; Health (Drinking Water) Amendment Act 2007, Drinking Water Standards New Zealand.	
<b>Links to Levels of Service – as per AMP document</b> Safe drinking water: We provide a safe and continuous supply of water that will over time meet New Zealand’s drinking water standards for communities.	
<b>Project Scope:</b> Upgrade existing water treatment plant as required to meet DWSNZ requirements. This is likely to involve the installation of UV treatment.	
<b>Relationship with other Projects:</b> Nil	
<b>Outcomes - Alignment with Council Policy/Plans:</b> Part of TDCs Water Strategy is to provide good quality, clean drinking water that poses minimal risk to public health and to plan for growth in future demand for potable water.	
<b>Options and Analysis:</b> Status Quo; no upgrade could mean TDC does not comply with the Health Act. New Water Treatment Plant; to meet DWSNZ and Health Act.	
<b>Financial Considerations</b> <b>Cost Benefit Analysis</b> This project is required to meet legislative requirements. There will be a cost benefit study to select the preferred treatment technology.	
<b>Recommended Option:</b> The recommended option is to provide DSWNZ compliant water to River Road by upgrade of the existing water treatment plant.	
<b>Legal Considerations:</b> Health (Drinking Water) Amendment Act 2007 Drinking Water Standards New Zealand.	

<b>Policy Considerations:</b>					
<b>Risks:</b> Cost risk – Estimates to be improved at preliminary and detailed design stages					
<b>Option Lifecycle Analysis:</b>					
<b>Consultation: Already undertaken/required to be undertaken</b> Required to be undertaken as a part of the Ten Year Planning process.					
<b>Funding Sources:</b> New capital projects are loan funded.					
<b>Consent Requirements:</b> Building and Resource consent (activity) are likely to be required.					
<b>Land Purchase / Land Designation Requirements:</b> Not required					
<b>Renewal Component of Project:</b> 0%					
<b>Growth Component of Project:</b> 0%					
<b>Communication Requirements:</b> Detailed communications plans will be developed in due course. Communication with Council, community, and any effected parties will be required.					
<b>Project Implementation Considerations:</b> Technology used yet to be determined though UV treatment is the most likely outcome.					
<b>Significant Assumptions:</b>					
<b>Time lines and costs for proposed project phases:</b> <b>The total project cost is \$275,000</b>					
<b>Year</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>
Annual Spend				25k	250k
<b>Local Government Act Funding Consideration Requirements.</b> <i>s101 (3) the funding needs of the local authority must be met from those sources that the local authority determines to be appropriate, following consideration of,-</i> <i>(a) in relation to each activity to be funded,-</i>					
<b>s101(3)(a)(i) community outcomes to which the activity primarily contributes</b>					
<ul style="list-style-type: none"> <li><b>Economy</b></li> </ul>					

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Council's response to the Community Outcomes acknowledged that managing growth is one of the biggest issues for TDC over the next 10 years, and in June 2006 published TD2050.

**s101(3)(a)(ii) distribution of benefits between the community as a whole, any identifiable part of the community, and individuals**

Residents of the River Road water scheme that utilize Council water supply.

**s101(3)(a)(iii) period in or over which those benefits are expected to occur**

25 years for mechanical and electrical infrastructure.  
50+ years for civil infrastructure.

**s101(3)(a)(iv) extent to which the actions or inaction of particular individuals or a group contribute to the need to undertake the activity**

Nil – legislative requirement.

**s101(3)(a)(v) costs/benefits, including transparency and accountability consequences, of funding activity distinctly from other activities**

For our water supplies the costs of the activities are applied to the scheme that benefits from the activity i.e. each scheme is ring fence funded.

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