

### **Wastewater Treatment Plant Upgrade**

The successful tenderer, CHB Contracting Ltd, have been given possession of the site starting 10th December but have only recently had a presence on site. They could not mobilise until all the various management plans and contractor's bond documentation had been received and signed off. The contractor originally wished to work over the holiday period to engage mainly in pre-clearing work and implementing sediment and erosion control systems. However, delays at the contractor's end due to bad weather and other commitments did not allowed this to take place.

Given this late possession it is anticipated that there will be a delay to the completion of this work potentially requiring a restart later in the year.

### **Mud Fish Habitat and Rehoming**

Greater Wellington Regional Council have signed off on the relevant conditions for the mudfish habitat and rehoming methodology.

Mud fish rehoming started on the 18 December in the existing habitat and has continued over the holiday period with a break between 24 December and 3 January. Volunteer assistance has been available with Council staff undertaking the necessary preparatory work with Wildlands Consultants. Council staff gave up their holiday leave to assist with work on the mudfish relocation along with the volunteers which was greatly appreciated. The Council will hold an event to recognise and thanks the volunteers.

### **Report from Audit and Risk Committee Meeting 20 February 2019 Page 3**

#### **WORKING WITH OUR CONTRACTORS**

We continue to engage with our Contractors and have provided council staff with a series of forms and suggestions regarding Contractor Agreements, Contractor Inductions and Contractor Audits.

There are always new Contractors coming on board and we are working hard to ensure that we have all the necessary health and safety information to satisfy ourselves that they understand their health and safety obligations, they know what they are doing and have competent employees doing it.

Our Waste Water Treatment Plant reservoir construction project has kicked off. The company doing the build for council Central Hawkes Bay Earthmovers, Carterton District Council staff, and Tonkin and Taylor staff got together for an onsite health and safety induction meeting and will continue to meet regularly to look at health and safety throughout the project.



20 February 2019

Audit and Risk Committee

### **Risk Register Update Report**

#### **1. PURPOSE OF THE REPORT**

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To advise the Audit and Risk Committee on changes to the Carterton District Council risk register.

## 2. SIGNIFICANCE

The matters for decision in this report are not considered to be of significance under the Significance and Engagement Policy.

## 3. RISK REGISTER

On the 23 November 2017 the Audit and Risk Committee was presented with the council's risk register. The Carterton District Council risk register has been regularly reviewed and updated when necessary (**see Attachment 1**).

The Register contains 31 identified risk items. Mitigation measures in place identify zero residual red or orange items, 14 yellow and 17 green items.

Risk Score	Level of Risk
	<b>Extreme risk</b>
	<b>Significant risk</b>
	<b>Moderate risk</b>
	<b>Low risk</b>

The latest review identified two changes listed below.

- Item No. 31 - Local body elections residual risk was reviewed to be green (low)
- Item No. 25 - The descriptor of the mitigated risk was updated. Previously it stated that there had been an Initiated investigation of new animal pound.

#### **4. RECOMMENDATIONS**

That the Committee:

1. **Receives** the report.

Dave Gittings

**Planning and Regulatory Manager**

**Attachment 1: Carterton District Council Risk Register (Doc ID 39844).**

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
1) Reputational damage	<ul style="list-style-type: none"> <li>Poor communication</li> <li>Poor performance</li> <li>Misinformed public</li> <li>Poor media relationship</li> <li>Conflicts of interest or perception of conflicts not managed</li> <li>Inappropriate behaviour of staff</li> </ul>	<ul style="list-style-type: none"> <li>Code of Conduct and/or appropriate policies</li> <li>Leadership by example</li> <li>Media training</li> <li>Appointment of media liaison advisor</li> </ul>		
2) Lapses of health and safety	<ul style="list-style-type: none"> <li>Contractors carrying out work on Council's behalf without correct health and safety plans</li> <li>Event Centre venue hirers without health and safety plans</li> <li>Staff working alone in remote working areas</li> <li>Staff interacting with troubled or difficult people who may react badly</li> <li>Equipment misuse/failure</li> </ul>	<ul style="list-style-type: none"> <li>Health and Safety requirements instigated across Council</li> <li>Create evacuation guide to be given to hirers and placed in main areas of high visibility</li> <li>Adequate training for staff in high risk areas</li> <li>Equipment is maintained and regularly serviced</li> <li>Personal camera for animal control</li> <li>Policy not to work alone where possible danger exists</li> </ul>		
3) Poor natural disaster response (Lack of preparation)	<ul style="list-style-type: none"> <li>Council overwhelmed in a major incident</li> <li>Inappropriate decisions being made</li> <li>Lack of compliance with policies and processes</li> <li>Lack of capability, knowledge and ability</li> <li>Lack of well-defined or practiced processes</li> <li>Lack of community resilience</li> </ul>	<ul style="list-style-type: none"> <li>Emergency Management planning and practices</li> <li>Regular adequate training</li> <li>Policies and procedures in place and followed</li> <li>Good relationship with WREMO and other Councils</li> <li>Ensure staff are aware of what is required and what their role is</li> <li>Asset Infrastructure resilience (purchasing of pipe work, joints and introduction of practices that have shown to be more resilient in the Christchurch earthquakes)</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
		<ul style="list-style-type: none"> <li>• On-going relationship with 'Resilient Carterton'</li> <li>• Public information and education</li> <li>• Focus on potential earthquake prone buildings within the district</li> </ul>		
4) Data management system loss	<ul style="list-style-type: none"> <li>• Sole source of information coming from data management system</li> <li>• Information not captured</li> <li>• Information and data not restored after loss</li> </ul>	<ul style="list-style-type: none"> <li>• Firewalls, passwords, and other security measures</li> <li>• Back up processes</li> <li>• Disaster recovery processes in place and working</li> <li>• Use of MagiQ Documents</li> <li>• Use of authorised systems only</li> </ul>		
5) Loss of key employees	<ul style="list-style-type: none"> <li>• Small Council with limited human resources resulting in a single staff member in key Council areas</li> <li>• Serious accident</li> <li>• Prolonged illness (non-accident)</li> <li>• Retirement</li> <li>• Disaffected staff resigning</li> </ul>	<ul style="list-style-type: none"> <li>• Cross training for some work items with the wider team.</li> <li>• Contract availability from outside agencies</li> <li>• Operations manuals/Desk Files</li> <li>• Job Descriptions</li> <li>• Document extraordinary tasks</li> <li>• Duplicate training across staff</li> <li>• Succession plans where appropriate</li> <li>• Availability of Contractors and/or Consultants</li> <li>• Investment in our people</li> <li>• Regular communication with staff</li> <li>• Engaged staff</li> <li>• Keeping jobs interesting</li> <li>• Upskilling</li> </ul>		
6) Poor building security	<ul style="list-style-type: none"> <li>• Break-ins</li> </ul>	<ul style="list-style-type: none"> <li>• Secure locking systems of all buildings and CCTV</li> <li>• Alarms installed in key buildings</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
<b>Human Resources</b>				
7) Industrial action	<ul style="list-style-type: none"> <li>• Unhealthy organisational culture</li> <li>• Autocratic management style</li> <li>• Workplace practices</li> <li>• Poor employment practices</li> <li>• Lack of communication</li> <li>• Legal action against Council</li> </ul>	<ul style="list-style-type: none"> <li>• Education and awareness of rights</li> <li>• Managing conflict and resolving disputes in the workplace</li> <li>• Effective communication with staff</li> <li>• Bargaining parties effectively represented</li> <li>• Organisational commitment to effective/peaceful bargaining</li> <li>• Demonstrating respect</li> <li>• Good communication with staff</li> </ul>		
8) Unethical/inappropriate behaviour	<ul style="list-style-type: none"> <li>• Inappropriate computer use</li> <li>• Time misuse</li> <li>• Harassment and/or bullying of staff</li> <li>• Lack of policies or policies not enforced</li> <li>• Poor work place culture</li> <li>• Lack of effective procedures and systems</li> <li>• Theft and fraud and other illegal acts</li> </ul>	<ul style="list-style-type: none"> <li>• Create Code of Conduct and/or appropriate policies</li> <li>• Lead by example</li> <li>• Reinforce consequences</li> <li>• Show appreciate to employees</li> <li>• Create checks and balances</li> <li>• Hire for values</li> </ul>		
9) Unfair treatment of council staff	<ul style="list-style-type: none"> <li>• No framework in place to support pay, leave, overtime activities and transactions and benefits and/or bonuses</li> <li>• No formalised hiring processes in place</li> <li>• Unequal compensation and benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Training</li> <li>• Policies and procedures in place and followed</li> <li>• Checks and balances in place</li> <li>• Documented delegated authorities/signing authority</li> <li>• Multiple signatures required</li> <li>• Collective agreements in place</li> <li>• Council Drive for a positive culture</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
10) Hiring of unsuitable/ unsafe personnel	<ul style="list-style-type: none"> <li>• Discriminatory practices</li> <li>• Poor interviewing practices</li> <li>• Negligent reference checks</li> <li>• Hiring staff who lack capability and or knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Staff training in interviewing or accompanied by experienced interviewer</li> <li>• Employment Agreements comply with all employment law</li> <li>• Induction process in place and used</li> <li>• Trial/probationary period in place</li> <li>• Employees required to sign off on important policies and procedures</li> <li>• Set paperwork as required by law completed</li> <li>• Dedicated HR manager position</li> <li>• Hiring procedure in place</li> <li>• Collective Employment Agreements</li> <li>• Proactive culture that allows people to speak up</li> </ul>		
11) Breach of employment legislation	<ul style="list-style-type: none"> <li>• Lack of knowledge/ awareness of employment law</li> <li>• Applicable law not complied with</li> <li>• Required records not kept</li> </ul>	<ul style="list-style-type: none"> <li>• Managers assisted by human resource understand basic employment law</li> <li>• Managers briefed by HR staff when laws changes are made</li> <li>• Employment Agreements drafted that comply with all terms and conditions of employment required by law</li> <li>• Management non-compliance not tolerated</li> <li>• Managers are aware of the records that need to be kept</li> <li>• Managers and human resources monitor all staff to ensure working conditions are appropriate and are not exploitative.</li> </ul>		
<b>Operations</b>				
12) Water supply contamination	Multiple potential points of	• Sand filtration		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
	contamination: <ul style="list-style-type: none"> <li>• Failure of chlorine dosing and pH adjustment</li> <li>• Failure of UV disinfection</li> <li>• Contamination of treated water storage</li> <li>• Contamination of ground water bores</li> <li>• Frederick Street reticulation pressure pump contamination</li> <li>• Failure of any of the distribution system connections allowing contaminant ingress</li> <li>• Untrained/unsupervised or poorly trained staff</li> <li>• Lack of monitoring</li> <li>• Response delays</li> </ul>	<ul style="list-style-type: none"> <li>• Bag filtration</li> <li>• UV disinfection (x2)</li> <li>• pH adjustment</li> <li>• Chlorination</li> <li>• Daily monitoring</li> <li>• Weekly cleaning of filters</li> <li>• Drinking-water supply - Water Safety Plan</li> <li>• Supplementary supply</li> <li>• Ability to isolate sections of supply (contain contaminants)</li> </ul>		
13) Failure of asset/infrastructure (three waters)	<ul style="list-style-type: none"> <li>• Lack of investment in maintenance and renewal of assets</li> <li>• Lack of knowledge of asset state</li> <li>• Natural disaster (flood / earthquake) causing equipment breakage</li> <li>• Significant loss of IT or stored data not triggering warning alert</li> <li>• Loss of Power PLC / Telemetry</li> </ul>	<ul style="list-style-type: none"> <li>• Renewal programmes</li> <li>• Staff knowledge of asset condition</li> <li>• Reporting of faulty plant/equipment</li> <li>• Updated and adhered to asset management plans</li> <li>• Increased monitoring</li> <li>• Back-up water supply</li> <li>• Back-up generators</li> <li>• Use of more resilient materials and procedures in replacement and new pipework</li> <li>• Council investment in wastewater plant upgrade</li> <li>• Back-up computer server</li> </ul>		



COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
		<ul style="list-style-type: none"> <li>• Back-up of telemetry data</li> <li>• Regular updating of telemetry &amp; PLCs</li> <li>• Staff capable and trained to carry out repairs</li> <li>• Supplementary supply stocked up with chemical for a prolonged event.</li> <li>• Material in stock to carry out any foreseeable repairs</li> </ul>		
14) Wastewater plant failure	<ul style="list-style-type: none"> <li>• Lack of trained staff leading to asset break or environmental damage</li> <li>• pipe failure leading to environmental contamination</li> </ul>	<ul style="list-style-type: none"> <li>• Staff knowledge of asset condition</li> <li>• Reporting of faulty plant/equipment</li> </ul>		
15) Poor building/asset security	<ul style="list-style-type: none"> <li>• Theft or damage to assets</li> <li>• Theft or damage to critical machinery</li> </ul>	<ul style="list-style-type: none"> <li>• CCTV</li> <li>• Alarms fitted to vital buildings</li> </ul>		
16) Non-compliance with GWRC consents	<ul style="list-style-type: none"> <li>• Significant loss of IT or stored data or data telemetry</li> <li>• Lack of trained personal</li> <li>• Lack of systematic monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Regular monitoring as per consent requirements</li> <li>• Back up staff trained in sampling techniques</li> <li>• Back-up computer server</li> <li>• Back-up of telemetry data</li> </ul>		
17) Poorly run roading contracts and contracting process	<ul style="list-style-type: none"> <li>• In document contractual errors</li> <li>• No oversight on contractual work</li> <li>• Poor contractual service (delays / poor work)</li> <li>• Cost overruns</li> <li>• No or poor asset condition monitoring</li> <li>• Roads and footpaths not fit for</li> </ul>	<ul style="list-style-type: none"> <li>• Employment of CDC roading manager for project oversight</li> <li>• Asset engineer /roading manager/ops manager closer working relationship</li> <li>• Best practice contractual arrangements</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
	purpose leading to accident/injury			
18) Waste water treatment plant upgrade cost overrun or non-performance	<ul style="list-style-type: none"> <li>Lack of a detailed project plan</li> <li>Incorrect design</li> <li>Lack of Governance and project management oversight</li> <li>Project specific risks not identified and addressed</li> </ul>	<ul style="list-style-type: none"> <li>Project has Governance Group, project management, design detail, and risk register.</li> </ul>		
<b>Reserves and Buildings</b>				
19) Unsafe Council buildings or grounds in use	<ul style="list-style-type: none"> <li>Failure of specified systems (air conditioning system, fire detection, fire suppression etc.)</li> <li>Disturbance of asbestos in or on the building without appropriate safety procedures</li> <li>Failure of fire evacuation procedures</li> <li>Earthquake prone buildings in use</li> <li>Uncontrolled building access</li> </ul>	<ul style="list-style-type: none"> <li>Building warrant of Fitness closely monitored</li> <li>All suspected asbestos material identified and tested</li> <li>Regular fire evacuation procedures practised for events centre and administration building</li> <li>Any EQP buildings operated under Legislative requirements</li> <li>CCTV in place and used</li> <li>Register of all access keys and fobs in development</li> </ul>		
20) Injuries/death at the swimming pool	<ul style="list-style-type: none"> <li>Uneven /wet surfaces causing slips and falls</li> <li>Oversubscribed admission to the pool overtaxing life guards</li> <li>Incorrect dosing of chlorine pool water (poor water quality)</li> <li>Untrained or undertrained lifeguards</li> </ul>	<ul style="list-style-type: none"> <li>Safety matting provided</li> <li>Manhole covers flush with surrounding paths</li> <li>Chemical handling certificates and training in pool dosing for all staff undertaking the work</li> <li>Contracted trained lifeguards</li> </ul>		
21) Injuries at council parks	<ul style="list-style-type: none"> <li>Children play equipment becoming or installed as unsafe</li> </ul>	<ul style="list-style-type: none"> <li>Play equipment checked 6-monthly</li> <li>Clear signage of intended use</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
	<ul style="list-style-type: none"> <li>Incompatible activities on existing equipment</li> <li>Incorrect mower or power tool use around public</li> </ul>	<ul style="list-style-type: none"> <li>Training and supervision of inexperienced staff</li> </ul>		
22) Incorrect or delayed cemetery internments	<ul style="list-style-type: none"> <li>Internments in the wrong site</li> <li>Internment site unprepared on time</li> <li>staff and public falling into prepared graves</li> <li>Heavy machinery use in public area</li> </ul>	<ul style="list-style-type: none"> <li>Burial warrants sent to four different staff to ensure action</li> <li>Training and supervision of inexperienced staff</li> </ul>		
23) Improper chemical use	<ul style="list-style-type: none"> <li>Incorrect storage or use of chemical sprays</li> </ul>	<ul style="list-style-type: none"> <li>GroSafe handling certificate for staff</li> </ul>		
<b>Planning and Regulatory</b>				
24) Statutory non-compliance	<ul style="list-style-type: none"> <li>IT system providing false time keeping information</li> <li>Unable to complete all required statutory tasks</li> <li>Lack of resources to follow regulations</li> <li>Procedures inadequate or not followed</li> </ul>	<ul style="list-style-type: none"> <li>Close monitoring of time frames with contractual arrangements in place for overflow</li> <li>Regular in-house audits</li> </ul>		
25) Non-compliance of CDC animal facility	<ul style="list-style-type: none"> <li>Animal facility below MPI minimum code of welfare standards</li> </ul>	<ul style="list-style-type: none"> <li>Funding for new pound in Annual plan 2019/20 for approval</li> </ul>		
26) Poor regulatory decision making	<ul style="list-style-type: none"> <li>Inexperienced staff</li> <li>Lack of care and diligence</li> </ul>	<ul style="list-style-type: none"> <li>New staff closely supervised by competent staff</li> <li>Annual competency assessments of BCOs</li> <li>Peer review of technical decisions for each BCO</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
27) Operational below standard food establishment	<ul style="list-style-type: none"> <li>Lack of regular inspections by Environmental Health Officer (EHO)</li> <li>No competent EHO available in Council</li> </ul>	<ul style="list-style-type: none"> <li>Qualified EHO employed</li> </ul>		
28) Disease spread by poor animal management practices	<ul style="list-style-type: none"> <li>Placement of wandering diseased stock into areas that were disease free</li> </ul>			
<b>Corporate services</b>				
29) Inadequate financial controls	<ul style="list-style-type: none"> <li>Not following legislative or policy financial systems and processes</li> </ul>	<ul style="list-style-type: none"> <li>Separate passwords required for each approval stage</li> <li>Segregation of duties</li> <li>Source documentation retained</li> <li>Delegations policy</li> <li>Procurement policy</li> <li>Audit trails</li> <li>Budget holder review processes</li> <li>Dunning processes</li> <li>All receipts through Debtors</li> <li>Receipts given to all customers</li> <li>Subsidiary systems reconciled</li> <li>POs pre-numbered, sequential, and signed for</li> <li>System controls</li> <li>Invoices require manager approval</li> <li>Mileage claims through payroll</li> <li>Only 3 credit cards (Mayor, CE, CSM)</li> <li>Approval required before use</li> <li>Clear policy and guidelines</li> <li>Small number on payroll – everyone known to</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
		staff <ul style="list-style-type: none"> <li>• All changes reviewed and checked</li> <li>• Manager approves timesheets</li> <li>• Electronic timesheet approves annual leave in advance</li> <li>• Overtime authorised in advance</li> </ul>		
30) Unable to obtain loan funding	<ul style="list-style-type: none"> <li>• Loss of bank confidence</li> </ul>	<ul style="list-style-type: none"> <li>• strong financial management</li> <li>• relationship with account manager</li> </ul>		
31) Local Body elections	<ul style="list-style-type: none"> <li>• Electoral fraud</li> <li>• Errors in election process</li> </ul>	<ul style="list-style-type: none"> <li>• Employ appropriate elected service supplier</li> <li>• Security measures around voting booths</li> <li>• Elected officer declaration</li> </ul>		

**Waste water treatment plant costings updated**

The cost estimates for 2019/20 have been increased over the 10YP estimates by \$500,000. These now include costs associated with the control room, pumps and distribution pipelines, necessary for operations. The borrowing has been increased accordingly in the Draft Annual Plan. The impact is an increase in rates requirement of \$10,000.

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**Waste water treatment plant upgrade**

The waste water treatment plant upgrade is currently on track, but physical construction has 'unknown un-controllables'.

**Infrastructure and Services Committee Meeting 13 March 2019 Page 25-26**

**WASTEWATER**

Wastewater flows into the treatment plant were back to normal in January. We are treating and discharging to land at a greater rate than our incoming flows, therefore keeping on top of pond levels. Work has started on the installation of the new contra- sheer screen equipment which has arrived onsite at the Wastewater Treatment Plant.

A concrete pad has been poured and we are now waiting on the arrival of our supplier to install the equipment. This work should be completed by mid to late March. Contra-sheer concrete pad.

A new 1.4-meter-high fence has been erected along Dalefield Road in front of the No. 1 oxidation pond. The old fence needed repair, and it was decided that after the recent Gore wastewater tragedy, where a young boy drowned, it was necessary to replace the old seven wire fence to a higher than normal fence to ensure our ponds are secure.

**Ordinary Council Meeting 3 April 2019 Page 234**

**GIS - Aerial Imagery**

Imagery of the Waste Water Treatment Plant has been captured for the third successive year. This photography is now incorporated into the Wairarapa imagery that was taken in 2017 so that the immediate area for the Waste Water Treatment Plant is more current when viewed as a background on either the public or Council GIS viewer.

The Waingawa industrial area will be re-imaged as well, and four land developments in the urban area will be done using a fixed wing aircraft to capture new photography.

We have purchased a second-hand remotely piloted aircraft (RPA i.e. a drone). This was purchased off Masterton District Council. Previously we have borrowed it to fly a video of the earthworks of the Waste Water Treatment Plant upgrade. Three operators will be permitted to fly the RPA following CAA guidelines for Carterton District Council events, infrastructure inspections and promotional work.

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**3.8. Wastewater treatment plant upgrade**



### Storage Reservoirs Construction

CHB Contracting Ltd had pre-clearing and the sediment and erosion controls completed during the January/February period. Unsuitable cut waste removal (that was between the old drains) will be completed by the end of March. Trial compaction testing has been completed and the methodology for compaction testing is also completed. It is expected that the main cut to fill earthworks will commence during the first week of April, approximately 4 weeks behind program.

The main delay to the programme has been with the finalisation of mudfish translocation. This combined with late start of the contract means it is likely that there will be a delay to the completion of the project requiring a restart later in the year.

The delay will be weather dependent and is based on the forecast wetter Autumn months that may or may not eventuate.

### Wetlands

After care management procedures associated with the new wetlands habitat have yet to be finalised with the Greater Wellington. This may involve monitoring surveys at intervals to check the well-being of the new habitat. In addition, a wetland management protocol is being developed.

Some refurbish work is required in the wetland to minimise leakage as well as bund strengthening and tree planting. Council operations staff and resources can complete these tasks, the necessary clay and mud can be supplied by the contractor during stage two of the upgrade.

### Stage 3 Works

Preliminary concept design work for the conveyance and pumping infrastructure has been completed and is being reviewed by the project manager. It is anticipated Council will be able procure these works next summer providing connectivity with the storage reservoirs.

### **Website updates -Wastewater Treatment Plant project**

Major works are now underway at the Daleton Farm Wastewater Treatment Plant upgrade project and can be seen from SH2. There has been increased communication on Facebook in February and March to keep people updated on the progress through a series of photos and short descriptions of the work taking place.

A new page has also been created on the Carterton District Council website, with progress photos being grouped into monthly photo galleries which are updated regularly. The page can be found at <http://cdc.govt.nz/wastewater-treatment-plant-upgrade-project/>

This page will keep you up to date with all the latest progress updates and photos at our Daleton Farm Wastewater Treatment Plant.

Here's a sneak peek of what the site looked like at the beginning of 2019.



Click below for our drone videos and monthly photo galleries.

Latest Drone Videos

March 2019  
Wastewater  
Treatment Plant  
updates

February 2019  
Wastewater  
Treatment Plant  
updates

### March 2019

This month we have been working on the bulk filling of the existing Ephemeral watercourse. We also started ground water drainage and commenced with the installation of the collector manholes. The majority of unexcavated soil between the old drains has almost finished being removed. The existing drains have been checked to confirm there is no sediment contamination present. There was also some onsite compactor testing carried out, and the reservoir embankment earthworks were initiated.



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### Capital expenditure

The full-year budget in the Annual Plan is \$7,999,000. In the year to-date, no emergency capital expenditure has been approved by the Chief Executive. Carryforwards of \$1,425,000 capital expenditure from 2017/18 have also occurred to establish a total capital programme of \$9,424,000 for 2018/19. Total capital expenditure this year to date was \$1,541,000, or 16 percent of the year's budget.

At this stage, managers are expecting to complete the year's programme, with the notable exception of the waste water reservoirs, which is likely to be about 75 percent complete at year-end. Within the remainder of the sewerage and roading programmes there is forecast to be some unders and overs but no overall variance.

Currently the Council has twelve term loans held with the Bank of New Zealand totalling \$8,460,000 and five finance leases totalling \$47,000. The next loan to mature is the Eastside Stormwater in December 2019.

### Audit and Risk Committee Meeting 9 May 2019 Page 6-7, as part of Local Government Funding Agency Report Pages 1 - 10

### Benefits and costs for Carterton District Council joining the LGFA

The primary benefit for the Council of joining the LGFA will be savings in the cost of borrowing. In addition, the LGFA will provide an increased certainty of access to funding and terms and conditions (including the potential access to longer funding terms, e.g. ~10 years+).

Indications are that by borrowing from the LGFA, the Council would lower its borrowing cost by at least 1% p.a., or \$10,000 per million dollars of borrowing. At 30 June 2018 the Council had borrowings of 79150



\$9.3 million, and this is growing as the Waste Water Treatment Plant project advances. The benefits of joining the LGFA are potentially substantial.

Guarantors receive slightly better borrowing rates than non-guarantors. The margin is currently around 10 bp, or an additional \$1,000 per \$1 million of borrowing. Non-guarantors may not borrow more than \$20 million. The CDC 2018-28 Ten Year Plan projects borrowing by the Council to rise above \$20 million in 2027-28, although this is partially offset by a substantial projected cash position. It is not anticipated the \$20M limit will be a constraint for the Council within the life of the current Ten Year Plan. There is an initial set-up cost, of approximately \$20,000, and ongoing costs of approximately \$7,000 per year.

10 May 2019

Audit and Risk Committee

## Risk Register Update Report

### 1. PURPOSE OF THE REPORT

To advise the Audit and Risk Committee on changes to the Carterton District Council risk register.

### 2. SIGNIFICANCE

The matters for decision in this report are not considered to be of significance under the Significance and Engagement Policy.

### 3. RISK REGISTER

On the 23 November 2017 the Audit and Risk Committee was presented with the council's risk register. The Carterton District Council risk register has been regularly reviewed and updated when necessary (**see Attachment 1**).

The Register contains 31 identified risk items. Mitigation measures in place identify zero residual red or orange items, 14 yellow and 17 green items.

Risk Score	Level of Risk
	<b>Extreme risk</b>
	<b>Significant risk</b>
	<b>Moderate risk</b>
	<b>Low risk</b>

The latest review identified one change listed below.

- Item No. 2 – additional mitigation measures for staff working remotely

#### **4. RECOMMENDATIONS**

That the Committee:

1. **Receives** the report.

Dave Gittings  
**Planning and Regulatory Manager**

**Attachment 1: Carterton District Council Risk Register (Doc ID 39844).**

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
1) Reputational damage	<ul style="list-style-type: none"> <li>Poor communication</li> <li>Poor performance</li> <li>Misinformed public</li> <li>Poor media relationship</li> <li>Conflicts of interest or perception of conflicts not managed</li> <li>Inappropriate behaviour of staff</li> </ul>	<ul style="list-style-type: none"> <li>Code of Conduct and/or appropriate policies</li> <li>Leadership by example</li> <li>Media training</li> <li>Appointment of media liaison advisor</li> </ul>		
2) Lapses of health and safety	<ul style="list-style-type: none"> <li>Contractors carrying out work on Council's behalf without correct health and safety plans</li> <li>Event Centre venue hirers without health and safety plans</li> <li>Staff working alone in remote working areas</li> <li>Staff interacting with troubled or difficult people who may react badly</li> <li>Equipment misuse/failure</li> </ul>	<ul style="list-style-type: none"> <li>Health and Safety requirements instigated across Council</li> <li>Create evacuation guide to be given to hirers and placed in main areas of high visibility</li> <li>Adequate training for staff in high risk areas</li> <li>Equipment is maintained and regularly serviced</li> <li>Personal camera for animal control</li> <li>Policy not to work alone where possible danger exists</li> <li>Use of Garmin In Reach devices for remote workers</li> </ul>		
3) Poor natural disaster response (Lack of preparation)	<ul style="list-style-type: none"> <li>Council overwhelmed in a major incident</li> <li>Inappropriate decisions being made</li> <li>Lack of compliance with policies and processes</li> <li>Lack of capability, knowledge and ability</li> <li>Lack of well-defined or practiced processes</li> <li>Lack of community resilience</li> </ul>	<ul style="list-style-type: none"> <li>Emergency Management planning and practices</li> <li>Regular adequate training</li> <li>Policies and procedures in place and followed</li> <li>Good relationship with WREMO and other Councils</li> <li>Ensure staff are aware of what is required and what their role is</li> <li>Asset Infrastructure resilience (e.g. purchasing of pipe work, joints and introduction of practices that have shown to be more resilient in the Christchurch earthquakes)</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
		<ul style="list-style-type: none"> <li>• On-going relationship with 'Resilient Carterton'</li> <li>• Public information and education</li> <li>• Focus on potential earthquake prone buildings within the district</li> </ul>		
4) Data management system loss	<ul style="list-style-type: none"> <li>• Sole source of information coming from data management system</li> <li>• Information not captured</li> <li>• Information and data not restored after loss</li> </ul>	<ul style="list-style-type: none"> <li>• Firewalls, passwords, and other security measures</li> <li>• Back up processes</li> <li>• Disaster recovery processes in place and working</li> <li>• Use of MagiQ Documents</li> <li>• Use of authorised systems only</li> </ul>		
5) Loss of key employees	<ul style="list-style-type: none"> <li>• Small Council with limited human resources resulting in a single staff member in key Council areas</li> <li>• Serious accident</li> <li>• Prolonged illness (non-accident)</li> <li>• Retirement</li> <li>• Disaffected staff resigning</li> </ul>	<ul style="list-style-type: none"> <li>• Cross training for some work items with the wider team.</li> <li>• Contract availability from outside agencies</li> <li>• Operations manuals/Desk Files</li> <li>• Job Descriptions</li> <li>• Document extraordinary tasks</li> <li>• Duplicate training across staff</li> <li>• Succession plans where appropriate</li> <li>• Availability of Contractors and/or Consultants</li> <li>• Investment in our people</li> <li>• Regular communication with staff</li> <li>• Engaged staff</li> <li>• Keeping jobs interesting</li> <li>• Upskilling</li> </ul>		
6) Poor building security	<ul style="list-style-type: none"> <li>• Break-ins</li> </ul>	<ul style="list-style-type: none"> <li>• Secure locking systems of all buildings and</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
		CCTV • Alarms installed in key buildings		
<b>Human Resources</b>				
7) Industrial action	<ul style="list-style-type: none"> <li>• Unhealthy organisational culture</li> <li>• Autocratic management style</li> <li>• Workplace practices</li> <li>• Poor employment practices</li> <li>• Lack of communication</li> <li>• Legal action against Council</li> </ul>	<ul style="list-style-type: none"> <li>• Education and awareness of rights</li> <li>• Managing conflict and resolving disputes in the workplace</li> <li>• Effective communication with staff</li> <li>• Bargaining parties effectively represented</li> <li>• Organisational commitment to effective/peaceful bargaining</li> <li>• Demonstrating respect</li> <li>• Good communication with staff</li> </ul>		
8) Unethical/inappropriate behaviour	<ul style="list-style-type: none"> <li>• Inappropriate computer use</li> <li>• Time misuse</li> <li>• Harassment and/or bullying of staff</li> <li>• Lack of policies or policies not enforced</li> <li>• Poor work place culture</li> <li>• Lack of effective procedures and systems</li> <li>• Theft and fraud and other illegal acts</li> </ul>	<ul style="list-style-type: none"> <li>• Create Code of Conduct and/or appropriate policies</li> <li>• Lead by example</li> <li>• Reinforce consequences</li> <li>• Show appreciate to employees</li> <li>• Create checks and balances</li> <li>• Hire for values</li> </ul>		
9) Unfair treatment of council staff	<ul style="list-style-type: none"> <li>• No framework in place to support pay, leave, overtime activities and transactions and benefits and/or bonuses</li> <li>• No formalised hiring processes in place</li> </ul>	<ul style="list-style-type: none"> <li>• Training</li> <li>• Policies and procedures in place and followed</li> <li>• Checks and balances in place</li> <li>• Documented delegated authorities/signing authority</li> <li>• Multiple signatures required</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
	<ul style="list-style-type: none"> <li>• Unequal compensation and benefits</li> </ul>	<ul style="list-style-type: none"> <li>• Collective agreements in place</li> <li>• Council Drive for a positive culture</li> </ul>		
10) Hiring of unsuitable/ unsafe personnel	<ul style="list-style-type: none"> <li>• Discriminatory practices</li> <li>• Poor interviewing practices</li> <li>• Negligent reference checks</li> <li>• Hiring staff who lack capability and or knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Staff training in interviewing or accompanied by experienced interviewer</li> <li>• Employment Agreements comply with all employment law</li> <li>• Induction process in place and used</li> <li>• Trial/probationary period in place</li> <li>• Employees required to sign off on important policies and procedures</li> <li>• Set paperwork as required by law completed</li> <li>• Dedicated HR manager position</li> <li>• Hiring procedure in place</li> <li>• Collective Employment Agreements</li> <li>• Proactive culture that allows people to speak up</li> </ul>		
11) Breach of employment legislation	<ul style="list-style-type: none"> <li>• Lack of knowledge/ awareness of employment law</li> <li>• Applicable law not complied with</li> <li>• Required records not kept</li> </ul>	<ul style="list-style-type: none"> <li>• Managers assisted by human resource understand basic employment law</li> <li>• Managers briefed by HR staff when laws changes are made</li> <li>• Employment Agreements drafted that comply with all terms and conditions of employment required by law</li> <li>• Management non-compliance not tolerated</li> <li>• Managers are aware of the records that need to be kept</li> <li>• Managers and human resources monitor all staff to ensure working conditions are appropriate and are not exploitative.</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
<b>Operations</b>				
12) Water supply contamination	<p>Multiple potential points of contamination:</p> <ul style="list-style-type: none"> <li>• Failure of chlorine dosing and pH adjustment</li> <li>• Failure of UV disinfection</li> <li>• Contamination of treated water storage</li> <li>• Contamination of ground water bores</li> <li>• Frederick Street reticulation pressure pump contamination</li> <li>• Failure of any of the distribution system connections allowing contaminant ingress</li> <li>• Untrained/unsupervised or poorly trained staff</li> <li>• Lack of monitoring</li> <li>• Response delays</li> </ul>	<ul style="list-style-type: none"> <li>• Sand filtration</li> <li>• Bag filtration</li> <li>• UV disinfection (x2)</li> <li>• pH adjustment</li> <li>• Chlorination</li> <li>• Daily monitoring</li> <li>• Weekly cleaning of filters</li> <li>• Drinking-water supply - Water Safety Plan</li> <li>• Supplementary supply</li> <li>• Ability to isolate sections of supply (contain contaminants)</li> </ul>		
13) Failure of asset/infrastructure (three waters)	<ul style="list-style-type: none"> <li>• Lack of investment in maintenance and renewal of assets</li> <li>• Lack of knowledge of asset state</li> <li>• Natural disaster (flood / earthquake) causing equipment breakage</li> <li>• Significant loss of IT or stored data not triggering warning alert</li> <li>• Loss of Power PLC / Telemetry</li> </ul>	<ul style="list-style-type: none"> <li>• Renewal programmes</li> <li>• Staff knowledge of asset condition</li> <li>• Reporting of faulty plant/equipment</li> <li>• Updated and adhered to asset management plans</li> <li>• Increased monitoring</li> <li>• Back-up water supply</li> <li>• Back-up generators</li> <li>• Use of more resilient materials and procedures in replacement and new pipework</li> <li>• Council investment in wastewater plant</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
		upgrade <ul style="list-style-type: none"> <li>• Back-up computer server</li> <li>• Back-up of telemetry data</li> <li>• Regular updating of telemetry &amp; PLCs</li> <li>• Staff capable and trained to carry out repairs</li> <li>• Supplementary supply stocked up with chemical for a prolonged event.</li> <li>• Material in stock to carry out any foreseeable repairs</li> </ul>		
14) Wastewater plant failure	<ul style="list-style-type: none"> <li>• Lack of trained staff leading to asset break or environmental damage</li> <li>• pipe failure leading to environmental contamination</li> </ul>	<ul style="list-style-type: none"> <li>• Staff knowledge of asset condition</li> <li>• Reporting of faulty plant/equipment</li> </ul>		
15) Poor building/asset security	<ul style="list-style-type: none"> <li>• Theft or damage to assets</li> <li>• Theft or damage to critical machinery</li> </ul>	<ul style="list-style-type: none"> <li>• CCTV</li> <li>• Alarms fitted to vital buildings</li> </ul>		
16) Non-compliance with GWRC consents	<ul style="list-style-type: none"> <li>• Significant loss of IT or stored data or data telemetry</li> <li>• Lack of trained personal</li> <li>• Lack of systematic monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Regular monitoring as per consent requirements</li> <li>• Back up staff trained in sampling techniques</li> <li>• Back-up computer server</li> <li>• Back-up of telemetry data</li> </ul>		
17) Poorly run roading contracts and contracting process	<ul style="list-style-type: none"> <li>• In document contractual errors</li> <li>• No oversight on contractual work</li> <li>• Poor contractual service (delays / poor work)</li> <li>• Cost overruns</li> </ul>	<ul style="list-style-type: none"> <li>• Employment of CDC roading manager for project oversight</li> <li>• Asset engineer /roading manager/ops manager closer working relationship</li> <li>• Best practice contractual arrangements</li> </ul>		



COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
	<ul style="list-style-type: none"> <li>No or poor asset condition monitoring</li> <li>Roads and footpaths not fit for purpose leading to accident/injury</li> </ul>			
8) Waste water treatment plant upgrade cost overrun or non-performance	<ul style="list-style-type: none"> <li>Lack of a detailed project plan</li> <li>Incorrect design</li> <li>Lack of Governance and project management oversight</li> <li>Project specific risks not identified and addressed</li> </ul>	<ul style="list-style-type: none"> <li>Project has Governance Group, project management, design detail, and risk register.</li> </ul>		
<b>Reserves and Buildings</b>				
9) Unsafe Council buildings or grounds in use	<ul style="list-style-type: none"> <li>Failure of specified systems (air conditioning system, fire detection, fire suppression etc.)</li> <li>Disturbance of asbestos in or on the building without appropriate safety procedures</li> <li>Failure of fire evacuation procedures</li> <li>Earthquake prone buildings in use</li> <li>Uncontrolled building access</li> </ul>	<ul style="list-style-type: none"> <li>Building warrant of Fitness closely monitored</li> <li>All suspected asbestos material identified and tested</li> <li>Regular fire evacuation procedures practised for events centre and administration building</li> <li>Any EQP buildings operated under Legislative requirements</li> <li>CCTV in place and used</li> <li>Register of all access keys and fobs in development</li> </ul>		
20) Injuries/death at the swimming pool	<ul style="list-style-type: none"> <li>Uneven /wet surfaces causing slips and falls</li> <li>Oversubscribed admission to the pool overtaking life guards</li> <li>Incorrect dosing of chlorine pool water (poor water quality)</li> <li>Untrained or undertrained lifeguards</li> </ul>	<ul style="list-style-type: none"> <li>Safety matting provided</li> <li>Manhole covers flush with surrounding paths</li> <li>Chemical handling certificates and training in pool dosing for all staff undertaking the work</li> <li>Contracted trained lifeguards</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
21) Injuries at council parks	<ul style="list-style-type: none"> <li>Children play equipment becoming or installed as unsafe</li> <li>Incompatible activities on existing equipment</li> <li>Incorrect mower or power tool use around public</li> </ul>	<ul style="list-style-type: none"> <li>Play equipment checked 6-monthly</li> <li>Clear signage of intended use</li> <li>Training and supervision of inexperienced staff</li> </ul>		
22) Incorrect or delayed cemetery internments	<ul style="list-style-type: none"> <li>Internments in the wrong site</li> <li>Internment site unprepared on time</li> <li>staff and public falling into prepared graves</li> <li>Heavy machinery use in public area</li> </ul>	<ul style="list-style-type: none"> <li>Burial warrants sent to four different staff to ensure action</li> <li>Training and supervision of inexperienced staff</li> </ul>		
23) Improper chemical use	<ul style="list-style-type: none"> <li>Incorrect storage or use of chemical sprays</li> </ul>	<ul style="list-style-type: none"> <li>GroSafe handling certificate for staff</li> </ul>		
<b>Planning and Regulatory</b>				
24) Statutory non-compliance	<ul style="list-style-type: none"> <li>IT system providing false time keeping information</li> <li>Unable to complete all required statutory tasks</li> <li>Lack of resources to follow regulations</li> <li>Procedures inadequate or not followed</li> </ul>	<ul style="list-style-type: none"> <li>Close monitoring of time frames with contractual arrangements in place for overflow</li> <li>Regular in-house audits</li> </ul>		
25) Non-compliance of CDC animal facility	<ul style="list-style-type: none"> <li>Animal facility below MPI minimum code of welfare standards</li> </ul>	<ul style="list-style-type: none"> <li>Funding for new pound in Annual plan 2019/20 for approval</li> </ul>		
26) Poor regulatory decision making	<ul style="list-style-type: none"> <li>Inexperienced staff</li> </ul>	<ul style="list-style-type: none"> <li>New staff closely supervised by competent staff</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
	<ul style="list-style-type: none"> <li>Lack of care and diligence</li> </ul>	<ul style="list-style-type: none"> <li>Annual competency assessments of BCOs</li> <li>Peer review of technical decisions for each BCO</li> </ul>		
7) Operational below standard food establishment	<ul style="list-style-type: none"> <li>Lack of regular inspections by Environmental Health Officer (EHO)</li> <li>No competent EHO available in Council</li> </ul>	<ul style="list-style-type: none"> <li>Qualified EHO employed</li> </ul>		
8) Disease spread by poor animal management practices	<ul style="list-style-type: none"> <li>Placement of wandering diseased stock into areas that were disease free</li> </ul>			
<b>Corporate services</b>				
29) Inadequate financial controls	<ul style="list-style-type: none"> <li>Not following legislative or policy financial systems and processes</li> </ul>	<ul style="list-style-type: none"> <li>Separate passwords required for each approval stage</li> <li>Segregation of duties</li> <li>Source documentation retained</li> <li>Delegations policy</li> <li>Procurement policy</li> <li>Audit trails</li> <li>Budget holder review processes</li> <li>Dunning processes</li> <li>All receipts through Debtors</li> <li>Receipts given to all customers</li> <li>Subsidiary systems reconciled</li> <li>POs pre-numbered, sequential, and signed for</li> <li>System controls</li> <li>Invoices require manager approval</li> </ul>		

COUNCIL RISK	POSSIBLE CAUSE	MITIGATION	Raw RS	Mitigated RS
		<ul style="list-style-type: none"> <li>• Mileage claims through payroll</li> <li>• Only 3 credit cards (Mayor, CE, CSM)</li> <li>• Approval required before use</li> <li>• Clear policy and guidelines</li> <li>• Small number on payroll – everyone known to staff</li> <li>• All changes reviewed and checked</li> <li>• Manager approves timesheets</li> <li>• Electronic timesheet approves annual leave in advance</li> <li>• Overtime authorised in advance</li> </ul>		
30) Unable to obtain loan funding	<ul style="list-style-type: none"> <li>• Loss of bank confidence</li> </ul>	<ul style="list-style-type: none"> <li>• strong financial management</li> <li>• relationship with account manager</li> </ul>		
31) Local Body elections	<ul style="list-style-type: none"> <li>• Electoral fraud</li> <li>• Errors in election process</li> </ul>	<ul style="list-style-type: none"> <li>• Employ appropriate elected service supplier</li> <li>• Security measures around voting booths</li> <li>• Elected officer declaration</li> </ul>		

**Wastewater treatment plant upgrade**

To date, the pre-clearing and the sediment and erosion controls have been fully completed. Trial compaction testing has been completed and the methodology has been accepted by the Tonkin and Taylor Engineer. CHB, the contractor undertaking the works, had planned to commence the main embankment fill in early April however, with the issues of groundwater management it is anticipated that the existing timeframes will be compromised. It is highly likely that work will move into the following construction season.

Cut to waste earthworks between the old drains has been 50% completed, and a layer of hard fill placed over the remaining material to improve machine access to allow commencement of subfloor drainage. The contractor has cut a temporary open channel (accepted by GWRC) to allow accumulated sediment laden water to flow to the (sealed) new ephemeral channel (potential storage of 8 million litres) where it will be stored, allowed to settle and discharged through the Gallons Road culvert leading to the Mangatāre Stream.

All minor variations affecting the building consent thus far have been submitted to Waikato Regional Council and been approved.

**Mud Fish Habitat**

The Council is in discussion with further development of the ponds 1 and 2 for the creation of a permanent mudfish habitat. Aftercare management procedures associated with the new wetlands habitat have yet to be finalised which may involve monitoring surveys at intervals to check the well-being of the new habitat. In addition, a wetland management protocol is being developed for staff use.

Infrastructure and Services Committee Meeting 5 June 2019 Page 21 – 23

**24 May 2019 Infrastructure and Service Committee**

**Wastewater and Solid Waste Report Pages 21 - 22**

**1. PURPOSE OF THE REPORT**

The purpose of this to update and inform the Committee on wastewater and solid waste operations from February to May 2019.

**2. SIGNIFICANCE**

The matters for decision in this report are not considered to be of significance under the Significance and Engagement Policy.

### 3. WASTEWATER

Signs have been erected along State High Two advising the public that construction of the new storage ponds has commenced.



A new screen and nogwash, to filter all the solids out of the raw wastewater channel at the entrance to the Wastewater Treatment Plant, has been commissioned. This new asset has replaced the old contra sheer screen, saving time and labour for plant staff who were constantly washing and unblocking the old set up



The pine shelter belt on Daleton Farm, that run alongside of State Highway Two, has been trimmed. There have been discussions as to the permanency of the shelter belt however it was agreed that it will remain in place to provide shelter to allow the native seedlings to get established and will be reassessed in five years' time. Council will maintain the shelter belt over this period.



River levels have risen with the recent rain, forcing us to stop irrigating to land; redirecting the waste water discharge into the Mangatarere Stream.

During March an odour problem caused by low dissolved oxygen in Pond 1. It was quickly resolved by staff applying additional aeration into the pond as well as applying calcium nitrate to lift dissolved oxygen levels and neutralise the odour. We are in the process of analysing the

1. PURPOSE

The purpose of this paper is to advise the committee of further progress with the Wastewater Treatment Plant Upgrade project. The Project Governance sub-committee has met regularly since June of this year.

2. SIGNIFICANCE

The matters for decision in this report are not considered to be of significance under the Significance and Engagement Policy.

3. TIMELINE AND RISKS

The projected and updated timelines, risk and costs associated with the project are indicated on **Attachment 1**.

4. STORAGE RESERVOIRS CONSTRUCTION STAGE 2

The contract completion date of 31 May 2019 has been updated by Central Hawkes Bay Construction (CHB) and is now 8 July 2019. This prediction appears overly optimistic and a more realistic assessment including the completion of pond lining, top soiling, and ephemeral channel relocation works will be delayed until next summer.

Should the pond liner and geo fabric not be installed by July, council will purchase and store any liner already delivered and stockpiled on site.

Delays with the finalisation of mudfish translocation, combined with late possession of the contract, contractors' own delays, and issues with effective management of de-watering excavations will result in minor winter shutdown and full restart next summer, although this will be dependent on weather conditions over the coming months.

5. CONSTRUCTION PROGRESS

A wet April resulted in minimal progress while the contractor worked through dewatering issues over the site, but other less time-critical tasks in their program were completed, including collector manholes, trenching for the collector pipework and filling of the old ephemeral channel.



Trial compaction testing was completed and the compaction methodology has been accepted by the engineer in March. CHB had planned to commence dam embankment in early April, but this has only been underway over the last three weeks, (four weeks behind). Difficulties during dewatering resulted in the construction of the collection drain taking twice as long to complete and will have negative consequences to the completion of the earthworks by the scheduled July date.

'Cut-to-waste' earthworks between the old drains has been completed and a layer of hard fill placed over the remaining material to allow machine access to commence subfloor drainage. Dewatering of the part of the site has been difficult due to the high ground flows and higher permeability of the gravels than initially anticipated. The agreement with CHB was that the council would take over the discharge pumping upon completion of the subfloor collector manholes. In recognition of groundwater pumping difficulties council accelerated the planned installation its own pumping system to assist with the contractors own dewatering of the site.

Evaluations are being undertaken of a subsoil drain curtain and groundwater level monitoring wells. The monitoring of ground water levels will provide enhanced operational management of the ponds during maintenance.

All minor variations to the building consent have been approved by Waikato Regional Council.

On-site visits held with the neighbours, Gary Smith, David and Nicole Herd, Warren and Pauline Tucker, and Ken Edwards. Nicole wished for additional planting to bridge the gap where the old cottage was removed and the existing planting by state highway ends. Gary and David had observed that they could feel the vibrations of the construction activities specifically when the vibrating roller was operating.

## 6. MUD FISH HABITAT AND REHOMING

The current cost to Council for the mudfish re-homing is estimated as an additional \$155K. This cost was not anticipated and hence not allowed for in the initial project budgets.

Some restoration work is required in the wetland to minimise leakage, raise and strengthen separation bunds, channelling, and additional tree planting.

Aftercare management procedures associated with the new wetland's habitat have yet to be finalised with Greater Wellington Regional Council. This may involve monitoring survey at intervals to check the well-being of the new habitat (if necessary for mudfish). In addition, a wetland management protocol is being developed for staff use, the first draft has been completed by Bill Sloan.

## 7. STAGE 3 WORKS

Preliminary design work for the conveyance and pumping infrastructure has been completed, and the concept design has been approved with all comments addressed. Mott MacDonald's offer of detailed design, service has been reviewed and approved. The design will take 10 weeks from council approval and if the implementation plan is not delayed, procurement can still commence on the 1 July.

## 8. CONSENT MANAGEMENT

Bill Sloan has had some contact with Iwi Representatives in regard to any likely changes that need to be made to the Tangata Whenua Value Monitoring Plan, there appear to be no pressing issues.

## 9. RECOMMENDATIONS

That the Infrastructure and Services Committee:

1. **Receives** the report.

Matt Chapman  
PROJECT MANAGER

### **Attachment 1: Risk and costs**

Click [here](#) to view (Pages 31-34)

### **Extraordinary Council Meeting 5 June 2019 Page 6**

#### **Extracted from Draft Annual Plan 2019/20 consideration of feedback**

##### **Other issues**

Rates affordability – the affordability of rates received a lot of feedback. While many people acknowledged the costs of the wastewater treatment plant upgrade project as a major contributor to the recent rates increase, many indicated the high rates are becoming unaffordable. Some people questioned the rates policy and the allocation of rates across ratepayers. Others made reference to the number of ratepayers in Carterton on low fixed incomes, especially elderly.

### **Ordinary Council Meeting 26 June 2019 Pages 153-155**

#### **Wastewater treatment plant upgrade**

While the works on the construction site are going very well, the contract completion date of 31st of May 2019 requires amendment. Tonkin and Taylor, the Council's engineers, are waiting for an official request for a time extension by CHB (the contractor) who are currently indicating a September completion date. It would be extremely optimistic to believe that the pond lining would be fully completed by then, even if suitable weather conditions prevail through winter. A more realistic completion date of pond lining, top soiling, and ephemeral channel relocation works may not be until the end of February 2020.

#### **Wetlands**

Aftercare management procedures associated with the new wetland habitat are being finalised with Greater Wellington Regional Council. Officers are working through the GWRC request for the construction of 600m of 'like-for-like' drains to replace the ones removed. This is a requirement of the resource consent.

### **Stage 3 Works**

Detailed design is underway for the pipe work for stage 3 with the planned procurement tender aiming for an early July release.

### **Planting options for the irrigated areas under the pivots**

An on-site meeting was held with Dave Horne from Massey University with a view to get the ball rolling on an under graduate study into efficient planting options and the development of a trial.

### **Ephemeral channel relocation**

85% of old channel is now filled and a further 13,000m<sup>3</sup> of excavation is required to complete the replacement channel.

## **Infrastructure and Services Committee Meeting 3 July 2019**

3 July 2019

Infrastructure and Services Committee

### **Wastewater Treatment Plant Upgrade Update**

#### **1. PURPOSE**

The purpose of this paper is to advise the committee of further progress with this project. The Project Governance sub-committee has met regularly since June 2018.

#### **2. SIGNIFICANCE**

The matters for decision in this report are not considered to be of significance under the Significance and Engagement Policy.

#### **3. TIMELINE AND RISKS**

The projected and updated timelines, risk and costs associated with the project are indicated on **Attachment 1**.

#### **4. STORAGE RESERVOIRS CONSTRUCTION STAGE 2 PROGRAM UPDATE**

The original contract completion date was 31 May 2019 and we have obviously gone beyond that date. Central Hawkes Bay Construction have provided a somewhat optimistic renewed construction finish date of September 2019. Although possible this date is seen from the Council's perspective as unlikely and have programmed a completion date of February 2020.

#### **5. CONSTRUCTION PROGRESS**

A dryer start to winter is enabling good progress on the earthmoving. Central Hawkes Bay

Construction (CHB) has employed Blackley's who are a specialised pipelaying subcontractor from Palmerston North to complete the remaining pipework. Blackley's have been onsite for a week at the time of writing and it is difficult to gauge to what extent the timeframe may need adjusting at this point. The addition of a specialist pipe laying contractor may see Council's projected finish date being moved.

*Figure 1: Arial view of the construction site looking south*



## **6. EPHEREMAL CHANNEL RELOCATION WORKS**

The filling of the existing ephemeral channel is underway utilising unsuitable soil taken from the reservoir site. Approximately 40% (8,000m<sup>3</sup>) of the existing ephemeral channel was filled last year. An additional 13,000m<sup>3</sup> of soil is needed to be moved for the new replacement ephemeral channel to match the old channel volume.

*Figure 2: Aerial view of the western side of the construction works*





## **7. STAGE 3 - PIPE AND PUMPS**

A detailed design from Tonkin and Taylor is progressing with planned procurement planned for early July 2019.

## **8. STAGE 4 - PIVOTS**

Massey University's Professor Dave Horne has expressed an interest to supervise a student led post graduate study into a potential crop below the pivots. Professor Horne has visited the site and discussions are progressing.

## **9. AERATION**

The design team from Mott MacDonald's are proceeding with study on the pond aeration system. A low level of aeration had been allowed in the original budget but no formal engineering work had been completed and Mott's will provide a specific recommendation for the ponds in to be incorporated into stage 2 of the construction. To assist with reviewing all possible systems Council undertook a site visit to Manawatu DC to investigate what systems they are using and the system's performance.

*Figure 3:Waste Water Treatment Plant Fielding detention ponds.*



*Figure 4: Himatangi, using Reliant equipment*



## **10. NEW WETLAND**

Council are working alongside Greater Wellington Regional Council to develop the construction of 600m of drains to replace the ones removed from the dam footprint. Consent conditions require Council to create 'like-for-like' mudfish habitat. At this point of design the habitat (i.e drains) will be created at the northern end of the existing ponds and link up with them.

Figure 5: Site of the proposed drains for the mudfish



## 11. RECOMMENDATIONS

That the Infrastructure and Services Committee:

1. **Receives** the report.

Matt Chapman  
**PROJECT MANAGER**

**Attachment 1: Risks and Costs**

**Attachment 2: Implementation and Project Plan**

**Attachment 3: Financial Report**

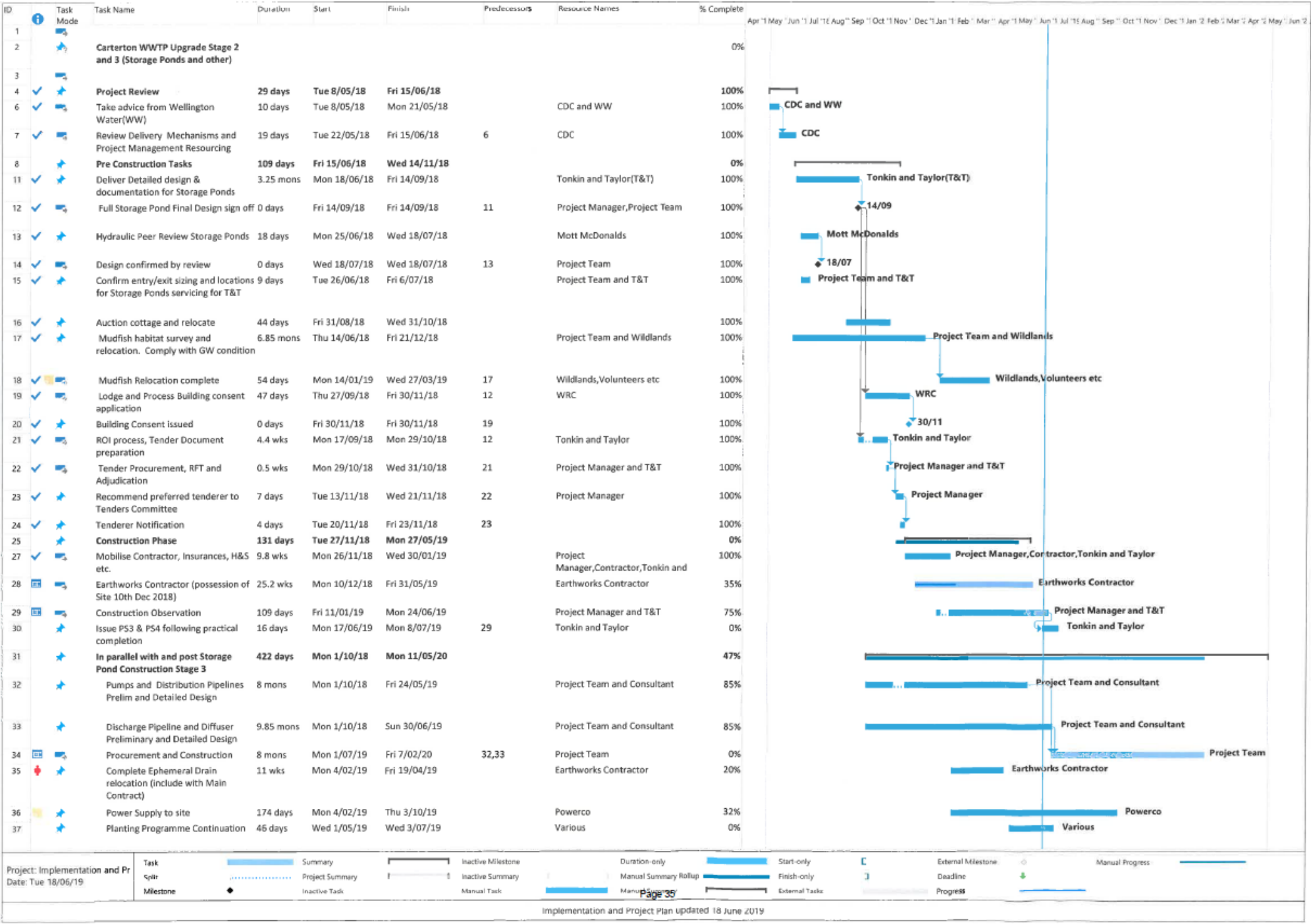




Risk Identification and Raw risk score								Mitigated risk score		Actions/Monitoring		
	Item	Assessment Likely, Moderate, Rare, Very rare, Unanticipated	Rating 1-5	Description	Assessment Minor, Moderate, Significant, High,	Rating 1-5	Rating 1-25	Actions	Residual Risk 1-25	Risk Ownership	By When	Action Completed/comments
1	Budget Overrun	likely	5	overspend carried forward, negative impact on rates	moderate	2	10	use expenditure management, share risk	4	Project Manager	Project Duration	ngoing monitoring
2	Programme Time Overrun	likely	5	delay in tender processes , construction window compromised 18/19	significant	3	15	provide tight control but adapt as necessary	8	Project Manager	Project Duration	Stage 3 - Detailed design underway by MOTT's on program. Stage 2 - physical works delayed no cost implications.
3	Work Place Safety Incidents	rare	3	Council Legislative Liability	moderate	2	6	All protocols signed off evidential reporting from Contractor to Principal	4	Governance	Project Duration	Daily inspections by Engineers Rep. Near miss's reported to Julie. Regular monthly safety audits by Contractor. CDC Audited site in April
5	Governance, lack of oversight, insufficient PM resources	Rare	3	Lack of project understanding	significant	3	9	Information of and regular reporting to Governance committee and Infrastructure Services	3	R & R Manager	Project Duration	ngoing reporting to Project Governance Group
6	Negative Reputation and public perception	moderate	4	Little understanding of Councils environmental objectives, no ratepayer buying	moderate	2	8	Implement a Project Comms Plan	4	Council and Comms Management	Project Duration	Project Update Newsletter issued September another due in the New Year once physical works underway
7	Legal and Non compliance with consents	moderate	4	Non compliance resulting court action against Council	significant	3	12	Tight project and construction controls	3	Council and Staff	ngoing	Construction compliance and Annual Report submitted on time. Dougal bought on board to lease with GW
	Mud fish Relocation Delay	moderate	4	fish salvage and consequent construction delays	significant	4	1	Tightly manage the specialist reporting and Regulatory response	1	Project Manager	during construction	Completed 27th March. Resulting construction Delay 2-3 weeks, actual time to be assessed.
8	Environmental	rare	3	Poor Environmental Management Council/Contractor	moderate	2	6	Site education, compliance and reporting	3	Contractor/Council	ngoing	Regular liaison with Dougal.
9	Specification not met	rare	3	Poor quality not fit for purpose, reduced useful life	High	4	12	Robust QA Plan in place, PS4 sign off required	9	Donkin and Taylor	Conclusion of earthworks contract	Daily observation required for the scale and complexity of the work. All Variations minor submitted and approved by Waikato
10	Project Scope Change	rare	2	Budget and design objectives threat	high	4	8	Formal Contract in place	4	Council	ngoing	Unlikely scope changes to design intentions. Inlet pipes now external not internal.
11	Natural Disaster Works Damage	rare	3	Significant Damage to Works	extreme	5	15	Adequate Works Insurance Cover	6	Council	Project Duration	Contract Insurances will be put in place
13	Contractor Failure	rare	3	Project under priced, Contractor poor performer	Moderate	2	6	Financial reporting both ways during the physical works contract	6	Project Manager/Council	during the Contract	ngoing. Poor dewatering methodology, CDC provided early supply of outfall pumping.
14	Lack of right turn bay to Gallons Road	moderate	4	Possible likelihood with significant consequences if accident occurs during or post construction Risk assessment completed - no right turns at Gallons road. Where and when safe to do so.	significant	3	12	Agreement from NZTA to improve the safety of right turn traffic to Gallons road	6	Project Manager/Council	during the Contract	Waiting for NZTA Reply to latest letter from council
15	Bedding	rare	2	Delay in Pipe installation due to supply chain delays	moderate	3	6	Make contact with GWRC to request assistance to source aggregate supply	1	Contractor	Day	Made contact with GWRC (Des Peterson) who agreed on 2 river extraction options, Waiohine and Ruamahanga (Greytown) 2. Talk to local transport operators for back loading options. - Bill Hammond can backload, Peter Warren X Martinborough.
16	Mudfish delays	likely	5	<ul style="list-style-type: none"> <li>Mudfish recovery delay costs including any time-related costs yet to be submitted by CHB.</li> </ul>	significant	3	15	fortnightly contract meetings - ongoing discussions and contractual records kept.	10	R&T / Project Manager	during construction	Contractual request made to CHB to submit variation. They have employed a consultant to collate information.

1	nsuitable material	moderate	4	<ul style="list-style-type: none"><li>Amount of unsuitable material higher than anticipated and will reduce the \$312k contingency (risk) available within the contract with CHB.</li></ul>	significant	3	12	regular earthwork monitoring surveys	6	T and Contractor	uring construction	n going reporting to Project Governance Group
1	dditional cut to fill site	moderate	4	<ul style="list-style-type: none"><li>Additional suitable fill source made available.</li></ul>	moderate	2	8	CHB requested to consider providing a lower rate for this material as there's savings in cartage for cut to fill	3	roject Manager	uring construction	onitor situation and be pro-active should conditions change.
1	phemeral channel replacement	likely	5	<ul style="list-style-type: none"><li>Contingency money earmarked for the cost of excavating the new ephemeral channel replacement now at risk, an additional \$130k above the contract value of \$3.4m will need to be considered.</li></ul>	High	4	20	roject manager to provide early warning should this be required	15	roject Manager/Council	uring construction	n going reporting to Project Governance Group
2	levelling works under pivot	moderate	4	<ul style="list-style-type: none"><li>During this stage, it's becoming less likely un-utilized money being available for any additional levelling works under the proposed 3<sup>rd</sup> pivot.</li></ul>	Moderate	2	8	onthly meetings	4	ouncil	uring construction	onsidering commercial options to off set costs - cut and carry for levelling and seeding.
2	dditional supervision costs	likely	5	<ul style="list-style-type: none"><li>Winter close down unlikely, therefore I expect additional costs from T&amp;T who I've requested a forecast to completion. I expect unspent provisional items to cover this.</li></ul>	significant	3	15	onthly meetings	6	T / Project Manager	uring construction	T costs to be monitored closely
2	eration system	moderate	4	<ul style="list-style-type: none"><li>The investigation's on aeration systems are resulting in the realisation that \$70k may be insufficient budget.</li></ul>	Moderate	2	8	onthly meetings	4	roject Manager	uring construction	ontinued to investigate systems currently in use, in readiness for when MOTT's supply design solution so there's no delays in choosing the right product
2	ower Supply	moderate	4	<ul style="list-style-type: none"><li>Power supply – the 200Kva transformer ordered by the council may not have enough capacity to run the two river outfall pumps as they require 340A ~ 245kVA. Once the electrical designers have worked through the design, we will know for sure. This will be increased costs for supplying a 300kVA and I anticipate running costs will be proportionally higher.</li></ul>	Moderate	2	8	OTT's carrying out pump / electrical design	7	roject Manager / MOTT's	uring construction	OTT's to provide early warning Project manager to inform Power co immediately if change required.
2	round water seepage	moderate	4	<ul style="list-style-type: none"><li>Installation of additional groundwater trench and drainage blanket due to additional ground water seepage</li></ul>	Moderate	2	8	variation priced requested	7	T / Project Manager	uring construction	minor variation - Submitted to Waikato for building consent approval.

1	07-Mar-19	dated			
2	28-Mar-19	dated action	3	24-May-19	dated action
3	28-Mar-19	dated action	15	24-May-19	dated
7	28-Mar-19	dated action	15	18-Jun-19	dated Rating
8	28-Mar-19	dated action	16-24	21-Jun-19	dated early warnings
1	29-Mar-19	dated action			
11	12-Apr-19	dated action			
2	24-May-19	dated action			



## Costs Tracking



## **Ordinary Council Meeting 7 August 2019**

Wastewater treatment plant upgrade Storage Reservoirs Construction The contract completion date of 31 May 2019 will now be amended as Tonkin and Taylor have received an official request for a time extension by CHB which indicates a September completion. Council consider that even this date is extremely optimistic of the pond lining being fully completed by then, even if suitable weather continues to prevail through winter. At this point having full completion of pond lining, top soiling, and ephemeral channel relocation works is estimated by Council to be late February 2020, still well within consent requirement timeframes.

### Stage 3 Works

While pond construction is under way, the detailed design of the stage three pipe works is being finalised. Some additional design queries have resulted in procurement planning commencing one month later than planned. Preliminary design delivery is now estimated for 5 August. Council is planning on the tender documents being available in the first week of October allowing 3 weeks of advertising and 2 weeks for evaluation. Awarding the contract is targeted for mid to late November enabling contract paperwork to be in place before Christmas.

### Ephemeral channel relocation

There is approximately 85% of the old channel to be filled and a further 13,000m<sup>3</sup> of excavation still required to complete the replacement channel.

### Consent Management

Council are liaising with Greater Wellington on the design and placement of drains for the like-for-like habitat reconstruction. Council will use in-house resources to complete this with construction of the drains imminent

## **Infrastructure and Services Committee Meeting 14 August 2019**

14 August 2019

Infrastructure and Services Committee

### **Carterton Wastewater Treatment Plant Upgrade Project**

#### **1. PURPOSE**

The purpose of this paper is to advise the committee of further progress with this project. The Project Governance sub-committee has met regularly since June of this year.

#### **2. SIGNIFICANCE**

The matters for decision in this report are not considered to be of significance under the Significance and Engagement Policy.

### **3. STORAGE RESERVOIRS CONSTRUCTION STAGE 2**

The contract completion date of 31 May 2019 has past and requires amendment. Central Hawkes Bay Contractors (CHB) are currently eight weeks delayed following their construction program. Tonkin & Taylor (T&T) have now received an official request for a time extension by the CHB which indicates a September completion, the Engineer is currently reviewing this request. Council assess this new completion date as being extremely unlikely and there being a very low possibility of pond lining being completed by then, even if suitable weather continues to prevail. Full completion of pond lining, top soiling, and ephemeral channel relocation works would not be until the end of February next year.

### **4. CONSTRUCTION PROGRESS**

Mild winter weather is enabling continued progress on the earthmoving at the storage reservoirs. CHB employment of Blackley's, a specialised pipe laying subcontractor from Palmerston North, to complete the pipework has resulted in solid program achievement and a positive step forward.

CHB tender methodology involving the completion of all earthworks over the entire site prior to fully lining has resulted in unplanned logistical issues. Managing the greater surface areas has been challenging.

CHB revised plan shows completing the earthworks for one pond and the placement of liner by the end of August, however, this is not looking promising. Imbalance of cut to fill (shortage of suitable fill) due to increase in unsuitable soil materials will drive further



program delays. Additional soil borrow area for suitable fill and stockpile areas have been provided to the contractor adjacent to the reservoir.



25<sup>th</sup> July

## 5. EPHEMERAL CHANNEL RELOCATION WORKS

The filling of the existing channel is underway utilising 'cut to unsuitable material' from the dam footprint. 40% (8,000m<sup>3</sup>) of new replacement ephemeral channel was completed last year, therefore, an additional 13,000m<sup>3</sup> is required to match the old channel volume. Further filling delayed through wet ground conditions during July has now recommenced.





## 6. STAGE 3 - PIPE AND PUMPS

Detailed design of pipe and pump work for stage 3 is underway. Additional design queries have resulted in procurement planning commencing one month later than previously planned and preliminary design delivery is now scheduled for the 5 August. Council are planning to have the tender documents by the first week of October allowing three weeks of advertising and two weeks for evaluation. This would place the pipe contract award to mid-late November and contract paperwork in place before Christmas.

**Table - Milestones scheduled for achievement over the next reporting period and changes to those milestones with respect to the previous plan (HAZOP - A hazard and operability study)**

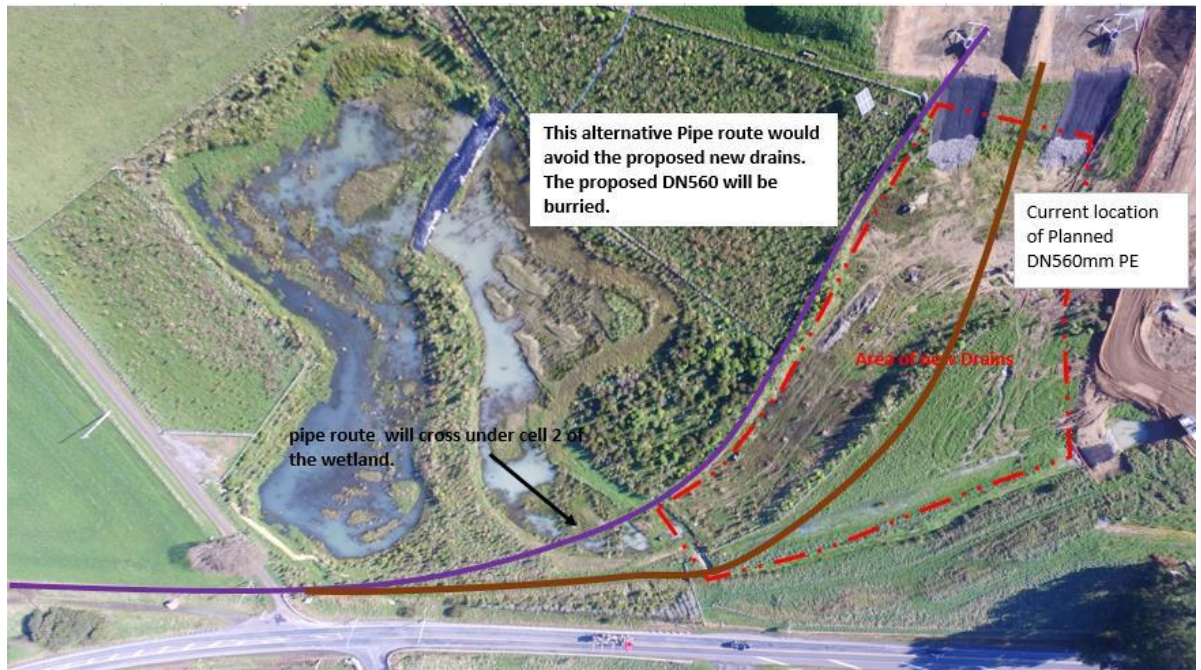
Milestone	Baseline Date	Target Date	Achievement
HAZOP Preliminary design package		05/08/2019	
HAZOP workshop		13/08/2019	
HAZOP and CDC prelim design approval		16/08/2019	
Final design		27/09/2019	
Tender Documents and Engineers Estimate		04/10/2019	

## 7. AERATION

Mott MacDonald's are proceeding with the design of the pond aeration system in conjunction with existing Waste Water Treatment Plant requirements.

## 8. NEW WETLANDS

We continue to work through Greater Wellington Regional Council's request for the construction of 'like-for-like' drains alongside the existing wetlands. Alton at Greater Wellington is currently reviewing any environmental effects of an alternative engineering solution that re-routes the pipeline avoiding the proposed drains.



9.

## FINANCIAL

- Mudfish recovery delay costs submitted by CHB are currently being assessed by T&T.
- The additional 32,000m<sup>3</sup> of unsuitable material has depleted the contingency available within the contract.
- Additional ground seepage was not anticipated during the design phase has resulted in groundwater drainage variation and an increased cost of \$76k.
- Opportunity to utilise unused contingency money for the cost of excavating and levelling the replacement ephemeral channel replacement is now not a possibility.
- There will be additional contract supervision costs from T&T with the work continuing through the winter period. Council's contract manager will continue to visit site three days a week as the Engineers Representative keeping these costs to a minimum.
- The on-going investigations on aeration systems are resulting in the growing awareness that the initially budgeted \$70k may be insufficient as an allowance, research on potential aeration solutions are continuing.
- Power supply – the 200Kva transformer capacity is being double-checked by designers at Mott MacDonald's. Last week Power Co installed the connection cabling on the high voltage pole in front of the site entrance.

## 10. RECOMMENDATIONS

That the Infrastructure and Committee:

1. **Receives** the report.

Matt Chapman  
PROJECT MANAGER

### 3.10 Wastewater

Flows into the wastewater plant have increased with recent rain fall. Once the pipe renewal in Lincoln Road is completed it will help to eliminate a lot of this extra flow.

#### Wastewater treatment plant upgrade

##### *Storage Reservoirs Construction*

The contract completion date for the reservoir construction is formerly October. This allows for time extensions for mudfish delays, additional earthworks and inclement weather. Bulk filling of dam embankments had started at the time of writing and should dry weather prevail through Spring the pond lining should be started by November. Full completion of pond lining and top soiling is likely to be the end of February 2020.





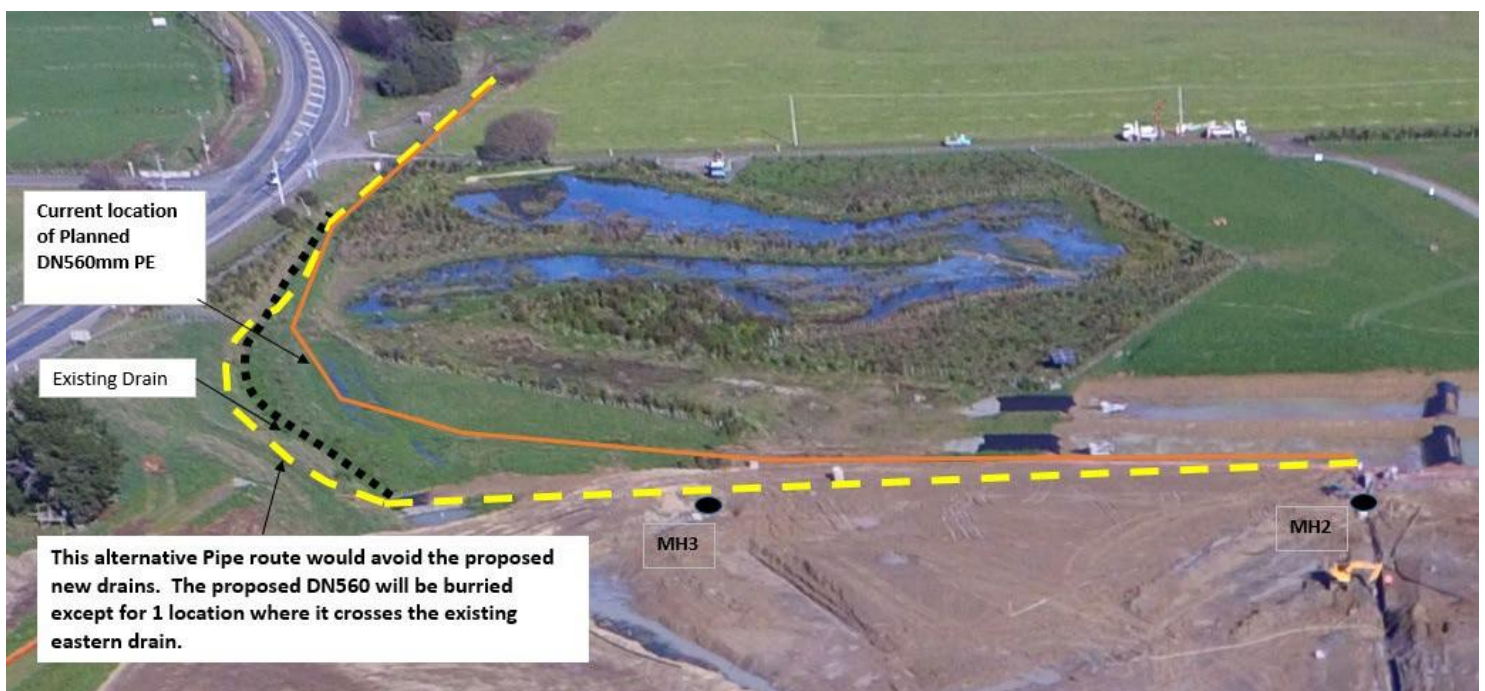
### *Stage 3 Works*

Detailed design is well underway with a Hazard and Operability (HAZOP) workshop run in early August being a success and extremely useful. The process design was fully explored, and concerns discussed, and action points assigned. Subject matter experts and specialists including Mott MacDonald's process and electrical designers, Council operational staff, project team leaders, local drainage contractor and a systems architect. One of the action items was for Mott MacDonald's designers to consider the pros and cons of relocating the existing UV south to the new ponds. Mott MacDonald's will complete a detailed assessment to assist council in making the UV move decision. This will result in delayed procurement earlier reported for pre-Christmas. Tender documents and engineering estimates are now scheduled for late March 2020. However, the delay is low risk as pipe laying is not highly weather dependent and final delivery of the WWTP upgrade will not be compromised (January 2023).

Contractors have uncovered an additional 32,000m<sup>3</sup> of unsuitable material from the pond area that will need excavating and a corresponding amount of suitable fill replaced. The initial design for a 200Kva transformer was underestimated and significantly greater capacity is required. A 500Kva transformer is needed and this process is being worked through with Power Co.

### *Consent management*

Council Staff are liaising with Greater Wellington on regular basis. Still in discussions are the construction of the 'like-for-like' drains to cater for the mudfish currently with GWRC. There is a possibility of an alternative pipe route avoiding a new 600m drain system currently being considered by Council design



### *WWTP Upgrade Budget tracking*

Total ten-year budgets for the WWTP upgrade have been reviewed by the project Governance Group and is still within the total planned budget. The 2018-2028 Ten Year Plan forecast was \$7,912,589 for the total WWTP upgrade. Planning refinements and the potential to save on a new UV treatment facility has kept the total anticipated budget to \$7,363,547, a favourable difference of \$549,043.

## **Ordinary Council Meeting 20 November 2019**

### **Council Committees, Advisory Groups and Portfolio Responsibilities for the 2019-22 Triennium**

#### **5.2. Wastewater Treatment Plant Upgrade Project Governance Group**

The Wastewater Treatment Plant Upgrade Project is a very significant project for the Council. Last triennium, as the project moved into its construction phase, a governance group was established to oversee the project. The role of the Governance Group was to provide oversight of the capital works programme, procurement processes and manage the various project risks, including budget and timeline risks. The membership of the group was:

- Chief Executive (project sponsor)
- Operations Manager (project owner)
- Deputy Mayor Keys (political oversight)
- Councillor Deller (political oversight)

The Mayor also sat in on the Governance Group meetings. The Project Manager reported to the Governance Group. The construction phase is about 50% through. It is recommended that the Governance Group continue, with the current membership, to ensure continuity.

### **Wastewater Treatment Plant Upgrade Project**

#### *Storage Reservoirs Construction*

All unsuitable material has now been removed and pebble drains installed. These drains will control the groundwater flows encountered and allow fill to be placed. The contractor has decided on a staged approach and will work towards completing one reservoir ready for liner installation by Christmas. The installation of approximately 700m/reservoir subsoil drains will commence once the floor level is within 1m of finished level.

It is anticipated that the completion of all reservoir floors will be near the end of February next year.



### *Stage 3 Works*

The pros and cons of relocating the current UV treatment plant have been considered and the design team has advised there are no benefits, so will remain at its current location.

However, the existing transformer in Dalefield Road must be doubled in size to power the new reservoir pumps.

The design team have re-visited the concept of gravity outfall rather than the proposed design of pumping. Initial investigations are promising and a high likelihood of success, however prior to making the final decision the hydraulics are currently being thoroughly checked. The change from pumped to gravity has a direct positive effect on operations cost.

Detailed design is well underway, procurement target dates to be re-assessed but expected in the new-year.

### *Ephemeral channel relocation*

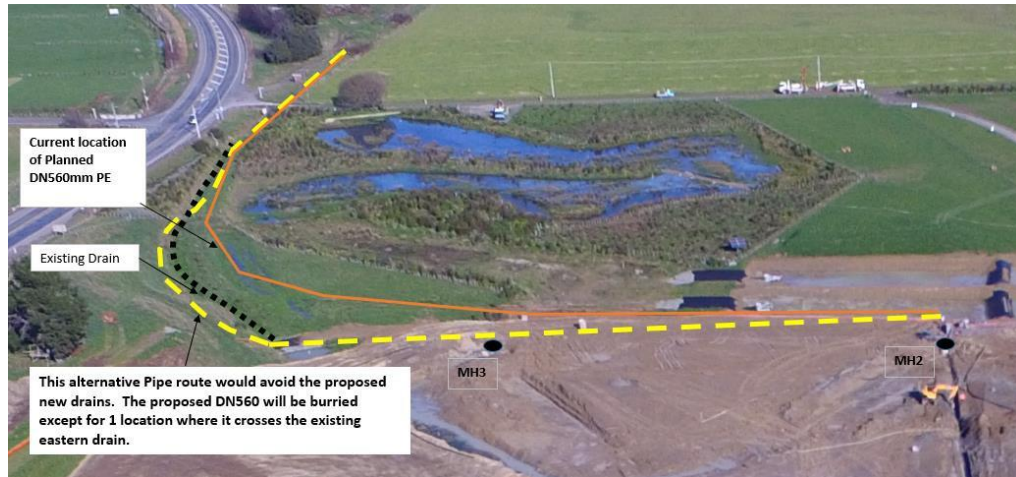
95% of the old channel is now filled and a further 13,000m<sup>3</sup> of excavation is still needed to form the new replacement channel.





### *Consent Management - Wetlands*

The design of the “like for like” drains, to replicate the previous existing drains/wetland, are currently being worked on. The alternative pipe route avoiding a new 600m drain system can be considered once GW are satisfied with the drain design.



### *Open Day*

An open day for the public to come and view the construction progress has been arranged for December 1st between 11.00 and 2.00pm

