Meeting of the Corporate and Strategic Committee

Date: Wednesday 2 September 2020

Time: 9.00am

Venue: Council Chamber
Hawke's Bay Regional Council
159 Dalton Street
NAPIER

Agenda

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: FOLLOW-UPS FROM PREVIOUS CORPORATE & STRATEGIC COMMITTEE MEETINGS

Reason for Report

1. On the list attached are items raised at previous Corporate & Strategic Committee meetings that staff have followed up on. All items indicate who is responsible for follow up, and a brief status comment. Once the items have been reported to the Committee they will be removed from the list.

Decision Making Process

2. Staff have assess the requirements of the Local Government Act 2002 in relation to this item and have concluded that, as this report is for information only, the decision making provisions do not apply.

Recommendation

That the Corporate and Strategic Committee receives and notes the "*Follow-up Items from Previous Meetings*".

Authored by:

Leeanne Hooper
TEAM LEADER GOVERNANCE

Approved by:

James Palmer
CHIEF EXECUTIVE

Attachment/s

⇩**1** Followups for September 2020 CorpStrat meeting

Follow-ups from Previous Corporate and Strategic Committee Meetings

10 June 2020

	Agenda Item	Follow-up / Request	Responsible	Status Comment
1	Remit to Local Government New Zealand Annual General Meeting	Support for Hauraki District Council's Coastal Hazards remit was emailed within timeframes.	J Palmer /R Graham	Support emailed on 12 June and remit passed by LGNZ AGM
2	Risk Maturity Roadmap	Formal launch the proposed Risk Management Maturity Roadmap with the goal of embedding consistency in risk-intelligent decision making across all levels and functions of the organisation	H Marsden/ J Ellerm	Council resolved agreement to the implementation of the Risk Management Maturity Roadmap on 24 June. FARS meeting on 12 August received.
3	Health and Safety Governance Charter	Report on the status of 2018 Health & Safety internal audit recommendations	K McInnes /J Palmer	Report provided to 12 August FARS meeting.

11 March 2020

	Agenda Item	Follow-up / Request	Responsible	Status Comment
4	Strategic Bi-lateral Arrangements	Chairman and Chief Executive to put forward a proposal to the HB Local Government Leaders Forum to establish regular bilateral meetings with each of the four territorial authorities in the region	J Palmer/	Scheduling has been delayed due to the Covid19 response but will be developed for the 2020-21 financial year.
5	HBRC Agrichemical Collection Service Funding	Staff to investigate options to continue Agrichemical collection on a user pays basis for commercial users, and contributing to HazMobile collection events held annually by the district and city councils which target residential users.	J Blunden / L Lambert	Staff are engaging with District and City Councils around possible contributions or joint operation of hazmobile collection events. It is anticipated that a new process will be put forward for implementation in 2021-22.

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: CALL FOR MINOR ITEMS NOT ON THE AGENDA

Reason for Report

1. This item provides the means for committee members to raise minor matters they wish to bring to the attention of the meeting.
2. Hawke's Bay Regional Council standing order 9.13 states:
   2.1. "A meeting may discuss an item that is not on the agenda only if it is a minor matter relating to the general business of the meeting and the Chairperson explains at the beginning of the public part of the meeting that the item will be discussed. However, the meeting may not make a resolution, decision or recommendation about the item, except to refer it to a subsequent meeting for further discussion."

Recommendations

3. That the Corporate and Strategic Committee accepts the following "Minor Items Not on the Agenda" for discussion as Item 15:

Topic	Raised by

Leeanne Hooper
GOVERNANCE LEAD

James Palmer
CHIEF EXECUTIVE

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: REPORT AND RECOMMENDATIONS FROM THE 12 AUGUST 2020 FINANCE AUDIT AND RISK SUB-COMMITTEE

Reason for Report

1. The following matters were considered by the Finance Audit and Risk Sub-committee (FARS) meeting on 12 August 2020 and are now presented for the Committee's consideration alongside any additional commentary the Sub-committee Chair wishes to offer.

2. The purpose of the Finance, Audit and Risk Sub-committee, in accordance with its Terms of Reference, is to report to the Corporate and Strategic Committee to fulfil its responsibilities for:

   2.1. The provision of appropriate controls to safeguard the Council's financial and non-financial assets, the integrity of internal and external reporting and accountability arrangements

   2.2. The review of Council's revenue and expenditure policies and the effectiveness of those policies.

   2.3. The independence and adequacy of internal and external audit functions

   2.4. The robustness of risk management systems, processes and practices

   2.5. Compliance with applicable laws, regulations, standards and best practice guidelines.

Procurement Policy Amendments to Support the HB Economic Recovery

3. This item provided an update on progress implementing the management actions in response to recommendations from the 2018 Internal Audit, the amended HBRC Procurement Policy and Manual, and provided a 2019-20 year-end report of procurement metrics requested by the sub-committee.

4. In relation to amendments made to the Procurement Policy and Manual to strengthen HBRC's ability to support the region's economic recovery, these included adding evaluation weighting to local purchasing, amending the Principles to add and emphasise Climate Smart Recovery and best practice procurement advised by OAG for achieving Broader Outcomes. In addition, the Policy was amended to raise the CE's delegation from $50k to $100k for capital expenditure if funded from the asset replacement reserve.

5. Following discussions, the meeting resolved to recommend the Policy and Manual for adoption by the Corporate and Strategic Committee as proposed to FARS.

Risk Assessment and Management

6. In the area of Risk Assessment and Management, the Finance, Audit and Risk Sub-committee, as per its Terms of Reference, has responsibility and authority to:

   6.1. review whether Council management has a current and comprehensive risk management framework and associated procedures for effective identification and management of the council's significant risks in place, and

   6.2. undertake periodic monitoring of corporate risk assessment, and the internal controls instituted in response to such risks.

7. The Risk Maturity item introduced the draft Risk Management policy and framework in accordance with the Risk Maturity Roadmap approved by the 10 June C&S and confirmed by Council resolution on 24 June, as well as outputs of risk maturity activities completed as outlined in the roadmap. In addition, the agenda item also provided

Crowe's finalised report on its assessment of HBRC's enterprise risk management maturity and reconciled the approved phases in the risk maturity roadmap recommendations identified in Crowe's internal audit report.

7.1. Through discussions at the meeting it was agreed that the approved risk maturity roadmap addresses the recommendations from the Crowe Audit report with one exception being that an internal audit on the assurance framework will now have to be added to phase three of the roadmap.

7.2. The Sub-commmittee resolved "confirms it is comfortable that management actions undertaken or planned for the future adequately respond to the findings and recommendations of the Crowe *Internal Audit – Risk Management Maturity Assessment* report".

8. The Six-Monthly Enterprise Risk Management Report provided the six-monthly update of Council's enterprise risk profile in a new format. Elements of the new format risk report included a residual risk rating for each enterprise risk, control corrective actions and supporting risk information such as known emerging issues or uncertainties that may impact Council's risk profile.

8.1. Through the meeting discussions it was agreed that the new format risk report reflects risk maturity activities undertaken as outlined in the approved risk maturity roadmap. It was also noted that the new format risk report will continue to improve and evolve as the phases in the risk maturity roadmap are delivered, and as the recently drafted risk management framework is embedded into the business.

8.2. The sub-committee resolved to receive the report and "confirm its confidence that Council management has undertaken an effective risk identification and risk management process for Council's significant risks, and that actions taken to date to mature HBRC's risk management system are in line with Council's expectations as provided to the 10 June 2020 Corporate and Strategic Committee meeting in the Risk Maturity Roadmap."

Internal Audit

9. The Sub-committee was provided with four items relating to Internal Audit. The Finance, Audit and Risk Sub-committee has responsibility and authority, in accordance with its Terms of Reference, to:

9.1. confirm the terms of appointment and engagement of external auditors, including the nature and scope of the audit, timetable, and fees

9.2. receive the internal and external audit report(s) and review actions to be taken by management on significant issues and recommendations raised within the report(s), and

9.3. ensure that recommendations in audit management reports are considered and, if appropriate, actioned by management.

10. The Annual 2020-21 Internal Audit Work Plan presented the proposed work plan for the financial year along with an overview of similar review/audit activities underway across the organisation, highlighting:

10.1. Internal audits to be undertaken in the 2020-21 financial year are a People, Recruitment, Retention and Wellbeing review, and Data Analytics, and 40 hours will be retained in order to address any specific new risk area that may arise during the financial year

10.2. two Section 17a reviews are in progress, Works Group and Biosecurity, and will be finalised and reported during 2020-21

10.3. through discussions, the sub-committee agreed to the Internal Audit programme for the 2020-21 financial year as proposed.

11. The Cyber Security Internal Audit Follow-up item provided the sub-committee with an update on the status of recommendations arising from the Crowe Cyber Security internal audit report and management actions were taken to address the risks identified

which have been side-tracked by the Covid-19 response. Also comfortable that IT is addressing the telephone and finance system risks through implementation of the new systems.

11.1. IT will work with Risk and Assurance Lead to address IT risks and prioritise IT projects using a risk based approach

11.2. A resource was requested through the Annual plan to develop and implement an ICT disaster recovery plan

11.3. Will be presenting an IT strategy through the long term plan.

12. Following discussions, the sub-committee resolved "confirms it is comfortable that management actions undertaken or planned for the future adequately respond to the findings and recommendations of the Crowe *Internal Audit – IT Security* report."

13. The Data Analytics Internal Audit Report did not note any significant issues or concerns.

14. The Internal Audits Review and Action Plan item updated the sub-committee on the status of the Crowe recommendations arising from previous Water Management, Health & Safety, Procurement and Contracts Management internal audits, highlighting:

14.1. Of the 18 Health & Safety management actions identified in the September 2018 Health and Safety internal audit, seven were partially implemented, and two were yet to be action. The Health, Safety and Well being work programme for 2019-21 was updated to address the open actions.

14.2. Management actions in response to recommendations made in the Water Management internal audit and subsequent follow-up audit had been closed.

14.3. Two management actions from the Crowe Procurement and Contract Management internal audits were still in progress. The contract evaluation performance template is on track to be implemented n October 2020. While the internal audit monitoring process to ensure procurement and contract compliance now aligns to the rollout of an internal assurance framework as part of risk maturity.

2019-20 Annual Report Audit Plan

15. This item provided an update on the 2019-20 Annual Report process that Audit NZ is undertaking, highlighting:

15.1. Despite Central Government extending the timeframes within which councils must adopt their 2019-20 annual reports, this Council is working toward adoption within the normal requirement, being on 28 October 2020

15.2. This year the following key risks and issues will be a main focus of the audit:

15.2.1. Valuation of investments in HBRIC

15.2.2. COVID-19 impact on public sector accounting standards

15.2.3. Revaluation of Infrastructure Assets

15.2.4. Fair Value of other revalued assets

15.2.5. Changes in the Group capital structure

15.2.6. Managed Funds Investments

15.2.7. Consolidation process

15.2.8. Adjustments to ensure HBRIC and NPHL results are correctly incorporated into HBRC's group results

15.2.9. Valuation of investment properties.

Treasury Report to 30 June 2020

16. This item provided an update of compliance monitoring of treasury activity and the performance of Council's diversified investment portfolios, which highlighted:

16.1. As at June 30, HBRC had one $2.5m Term Deposit and held $3.6m in its Cheque Accounts. There is a currently a $5m facility available if required

16.2. In July 2020, HBRC raised $6.3m in loans with the LGFA as part of normal procedure under the Revenue & Financing Policy.

16.3. The total capital invested in Managed Funds at 30 June 2020 was $156.6m, this represents a true return of $2.6m (1.68%) return on the original investment after adjusting for inflation & fees, which is available to be returned to the Council

16.4. The Annual Treasury Reporting requirements will be delivered as part of Annual Report, due to timing of the year end process and the revaluations of the other investment assets. This is schedule to be presented in October 2020.

16.5. Further enhancements will continue to be developed as part of the FARS work programme.

Decision Making Process

17. These items were specifically considered by the Finance, Audit and Risk Sub-committee on 12 August 2020 and are now the subject of the following recommendations to the Corporate and Strategic Committee.

Recommendations

The Finance, Audit and Risk Sub-committee recommends that the Corporate and Strategic Committee:

1. Receives and considers the *"Report and Recommendations from the 12 August 2020 Finance, Audit and Risk Sub-committee Meeting"*

2. Agrees that the decisions to be made are not significant under the criteria contained in Council's adopted Significance and Engagement Policy, and that the Committee can exercise its discretion and make decisions on these items without conferring directly with the community or persons likely to have an interest in them.

Procurement Policy Amendments to Support the HB Economic Recovery

3. Adopts the Procurement Policy and Manual with amendments as proposed.

Risk Maturity

4. Approves both the Risk Management Policy and the Risk Management Framework as proposed, and as being appropriate and sufficiently robust to manage Council's significant risks.

Reports Received

5. Notes that the following reports were provided to the Finance Audit and Risk Sub-committee.

5.1. Six Monthly Enterprise Risk Management Report *(resolved: confirms its confidence that Council management has undertaken an effective risk identification and risk management process for Council's significant risks, and that actions taken to date to mature HBRC's risk management system are in line with Council's expectations as provided to the 10 June 2020 Corporate and Strategic Committee meeting in the Risk Maturity Roadmap)*

5.2. Annual 2020-21 Internal Audit Work Plan (*resolved: adopts the 2020-21 Internal Audit Work Plan as proposed)*

5.3. Cyber Security Internal Audit Follow-up (*resolved: confirms it is comfortable that management actions undertaken or planned for the future adequately respond to the findings and recommendations of the Crowe Internal Audit – IT Security report)*

5.4. Data Analytics Internal Audit Report (*resolved: receives and notes the Data Analytics Internal Audit Report)*

5.5. Internal Audits Review and Action Plan (*resolved: confirms it is comfortable that management actions undertaken or planned for the future adequately respond to the findings and recommendations of the Crowe Internal Audit Follow-up Audit report).*

5.6. 2019-20 Annual Report Audit Plan *(resolved: receives and notes the "2019-20 Annual Report Audit Plan" staff report and agrees the Audit Plan as proposed)*

5.7. Treasury Report to 30 June 2020 (*resolved: receives and notes the "Treasury Report to 30 June 2020).*

5.8. Sub-committee work programme August 2020 update (*resolved: To receive and notes the "Sub-committee Work Programme August 2020 Update" staff report).*

Authored by:

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Approved by:

Jessica Ellerm
GROUP MANAGER CORPORATE SERVICES

Attachment/s

⇨**1**	Procurement Policy - Revised Aug 2020	Under Separate Cover
⇨**2**	Procurement Manual - Revised August 2020	Under Separate Cover
⇩**3**	August 2020 Risk Management Policy	
⇩**4**	August 2020 HBRC Risk Management Framework	

HAWKES BAY REGIONAL COUNCIL
TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

Staff Policy

TITLE:	**Risk Management Policy**		
STAFF POLICY NO:	**?**		
POLICY FIRST INTRODUCED:	*August 2020*	***POLICY LAST REVIEWED:***	*New as at August 2020*
PERSON RESPONSIBLE FOR REVIEWING POLICY:	*Risk & Assurance Lead*	***NEXT REVIEW DUE:***	*August 2021*

Purpose

This policy outlines the scope of Hawke's Bay Regional Council's (HBRC's); risk management system (RMS), risk management governance arrangements, and risk management roles and responsibilities. The aim of HBRC's risk management system is to:

- support the achievement of HBRC's operational and strategic objectives
- cultivate a culture that risk management is everyone's responsibility ensuring consistent and transparent risk intelligent decision making
- provide oversight and assurance to Council and to the Executive Leadership Team (ELT) that HBRC's risks are well managed
- effectively prioritise resource allocation for the management of risks that most significantly impact objectives, and
- ultimately protect; Council owned assets, regional resources, and key stakeholder interests in an efficient and sustainable way.

This policy mandates the use of a single risk management framework throughout HBRC and therefore this policy should be read in conjunction with HBRC's risk management framework.

Policy

1. **Background**

1.1. HBRC's vision is a healthy environment, a vibrant community and a prosperous economy. This vision is supported by a strong set of values that includes partnership and collaboration, accountability, transparency, and excellence. Council sets HBRC's risk appetite. Setting of the risk appetite is informed by the vision, values and long-term strategy.

1.2. To help ensure that HBRC effectively and efficiently delivers on its vision, and it's strategic and operational objectives sound risk management practices have been developed. Therefore, HBRC's ELT are steadfast on embedding these risk management practices throughout Council. The ELT support a culture of risk ownership by all staff and re-enforce the need for risk intelligent decisions that are guided by Council's risk appetite.

1.3. HBRC's commitment to ensuring risks are well managed is through a robust RMS that mandates a single risk management policy and a single risk management framework.

1.4. This risk management policy outlines the parameters and structure of HBRC's RMS, including risk specific roles and responsibilities. While the risk management framework that supports this policy provides more detail on HBRC's risk practices and risk processes.

2. **Key Definitions**

2.1. **All of Government (AoG) risk maturity model** – benchmark risk maturity model that is promoted by Local Government New Zealand (LGNZ).

2.2. **Cause** – underlying reason why the risk event occurs

2.3. **Consequence** – impact of an event on objectives

2.4. **Control** – a process that either reduces; the likelihood, or the consequence of a risk event

2.5. **Enterprise Risk Management (ERM)** – the process of planning, organising, leading, and controlling the activities of an organisation in order to either minimise the effects, or seize opportunities, from uncertainty that impacts an organisation's objectives.

2.6. **Event** – when there is a change to circumstances that triggers a risk response

2.7. **Likelihood** – chance or probability of a risk event happening

2.8. **Mitigation** – specific measures taken to minimise or eliminate unacceptable risks

2.9. **Risk** – the effect of uncertainty on objectives that maybe either positive or negative

2.10. **Risk Champions** – a person designated to coordinate and oversee the risk management activities of a business unit

3. **Principles**

3.1. To implement a single RMS where risk management principles and practices can be consistently applied at every level of HBRC. So that, all risks are managed within Council's risk appetite and that the ELT has good oversight of risks and can in turn provide positive assurance to Council that risks are being proactively managed.

3.2. This risk management policy has been designed to align to best practices and is benchmarked on the principles outlined in ISO 3100:2018 Risk Management – Guidelines, and the structure of the LGNZ endorsed AoG risk maturity model.

3.3. HBRC's risk management policy and framework has been tailored to right-size the risk system so that it is proportionate to HBRC's size and mandate. 'Tailoring' refers to risk system components such as frequency of reporting and number of risk resources it does not change fundamental risk principles and practices.

4. **Objective**

4.1. HBRC's objectives for this policy are to

4.1.1. Ensure all staff are aware of their risk management obligations to identify, escalate and manage risks.

4.1.2. Ensure staff with risk specific tasks are aware of those specific requirements.

4.1.3. Frame the high-level mandatory risk practices including; minimum levels of risk reporting (frequency), mandatory risk data, and storage of risk information.

4.1.4. Ensure risk management principles and practices are embedded into the everyday decisions and activities undertaken by staff.

5. **Risk Vision**

5.1. All HBRC staff take responsibility for owning HBRC's risks with consistent and transparent risk intelligent decision making.

6. Risk Management Roles and Responsibilities

6.1. Council

6.1.1. Sets HBRC's risk appetite.

6.1.2. Defines the parameters of HBRC's risk management system and risk maturity through approving both the risk management policy and framework.

6.1.3. Promotes a culture of proactive risk management.

6.1.4. Delegates to the Finance Audit and Risk Sub-Committee oversight, monitoring and challenge of HBRC's RMS and risk reporting.

6.2. Finance Audit and Risk Sub-Committee (FARS)

6.2.1. From staff receive and review HBRC's aggregated enterprise risk report at least every six months.

6.2.2. Considers any resource requests from staff that are for prioritising and allocating resources to mitigate material risks identified in the risk reporting.

6.2.3. Oversees the effectiveness of HBRC's RMS and ensure there is an emphasis on continuous improvement and risk maturity.

6.2.4. From staff receive, review and recommend to Council that it adopts any changes or customisation of either the risk management policy or framework.

6.2.5. Ensures a culture exists that encourages transparency and open discussions on potential risks and emerging issues.

6.3. Executive Leadership Team (ELT)

6.3.1. From the Risk and Assurance Lead at least every 6-months receive, review and ratify the enterprise risk report prior to presenting to FARS.

6.3.2. From the Risk and Assurance Lead receive an action tracking update on all risk control corrective actions in progress.

6.3.3. Monitor the effectiveness of HBRC's RMS to validate the focus on continuous improvement. Including, ensuring the system remains relevant by undertaking a formal annual review of both the risk management policy and framework against HBRC's strategy, objectives and culture and benchmarked to the latest best practice risk maturity model.

6.3.4. Lead risk management across HBRC by endorsing both the risk management policy and framework and ensure that adequate resourcing is allocated to risk management.

6.3.5. Assign clear risk management roles, responsibilities and accountabilities to the appropriate level across HBRC.

6.3.6. Lead a culture that encourages transparency and open discussions on potential risks and emerging issues across all HBRC functions.

6.3.7. Ensure there is a comprehensive understanding of risk management by all staff and stakeholders through promoting and communicating HBRC's RMS purpose, vision and values.

6.3.8. Ensure key business decisions formally consider risks to HBRC.

6.3.9. As individual Executives ensure that at least quarterly each business unit reviews its risks and reports these to the Risk and Assurance Lead to enable enterprise risk aggregation.

6.3.10. As individual Executives ensure that at least quarterly risk corrective action tracking updates are provided to the Risk and Assurance Lead for updating FARS, when appropriate.

6.3.11. As individual Executives ensure any risks identified between reporting cycles that are of material significance are escalated as per the risk management framework. Any resulting risk corrective actions must be tracked and monitored until closed.

6.4. **Risk and Assurance Lead**

6.4.1. Provide support to the ELT so that they meet their risk management obligations as detailed in this policy.

6.4.2. Support the ELT to drive a culture of risk ownership and risk intelligent decision making.

6.4.3. Maintain the RMS including updating both the risk management policy and framework to ensure continuous improvement and benchmarking of these documents to the latest risk maturity best practice.

6.4.4. Coordinate and chair the risk aggregation sessions with the Risk Champions and ensure risk updates from those meetings are captured in the enterprise risk report for the ELT risk meeting.

6.4.5. Ensure at least quarterly the enterprise risk report is a key agenda item on the ELT meeting schedule and that enough time is allocated for the ELT to discuss the enterprise risks. Circulate the updated enterprise risk register and enterprise risk report ahead of the meeting.

6.4.6. Using the output from risk discussions at the ELT meeting update the six-monthly enterprise risk report for the FARS. And, as appropriate, for the: CE, Corporate and Strategic Committee, or Council.

6.4.7. Develop education material and train staff on risk management concepts and practices, including training on both the risk management policy and framework.

6.4.8. Oversee the embedding of risk management processes and practices across the business to ensure consistency of application.

6.4.9. Oversee compliance with both the risk management policy and framework.

6.4.10. Coordinate the delivery of the annual internal audit plan and track the progress of all agreed risk corrective actions resulting from the individual audits.

6.4.11. Track all other outstanding control corrective actions reported to FARS that have been identified through risk assessments, continuous improvement, or risk incidents.

6.4.12. Collaborate with other risk based functional management system owners, such as; Health and Safety, Quality Management, Asset Management, Environmental and Information Security to ensure that the underpinning risk management system is structured in a way that supports functional management system integration.

6.5. **Risk Champions**

6.5.1. Assist their Executive Leader to execute on their BU risk assessment and risk reporting obligations.

6.5.2. Maintain their business unit risk register in accordance with the risk management framework.

6.5.3. Coordinate and chair their business unit risk workshops that identify and assess their business unit critical risks.

6.5.4. Update and provide their business unit risk register to the Risk and Assurance Lead at quarterly, as guided by the risk reporting timetable.

6.5.5. Actively participate in risk forums and risk aggregation sessions as their business unit risk representative.

6.5.6. Advocate risk management within their business unit and provide risk management support to staff within their business unit, as required.

6.5.7. Undertake formal risk training, as required.

6.6. **All Staff**

6.6.1. Must take ownership of risks by considering and identifying risks in their day to day activities and decision making.

6.6.2. Must ensure risk corrective actions or risk mitigations are completed within agreed timeframes.

6.6.3. Must ensure risk controls are repeatable and operate as designed.

6.6.4. Must escalate any risk event or near miss in accordance with any specified regulations. Or, in the absence of specified regulations using the default risk escalation criteria as outlined in the risk management framework.

6.6.5. As required, must participate in any risk identification or risk assessment workshops.

7. **Fixed High-Level Risk Practices**

7.1. The design of HBRC's RMS; risk management policy and framework has been based in principle off the risk management standard produced by the internal organisation for standardisation (ISO 31000:2018), see figure 1. ISO 31000:2018 provides the ability to tailor risk processes, so they are right sized for Council. In addition, the ISO model allows for better alignment to Council's other structured functional management systems such as Quality Management Systems (ISO 90001). It should be noted that some risk processes outlined in the risk management framework are structure from the AoG risk maturity model. However, these processes are complimentary to ISO 31000:2018.

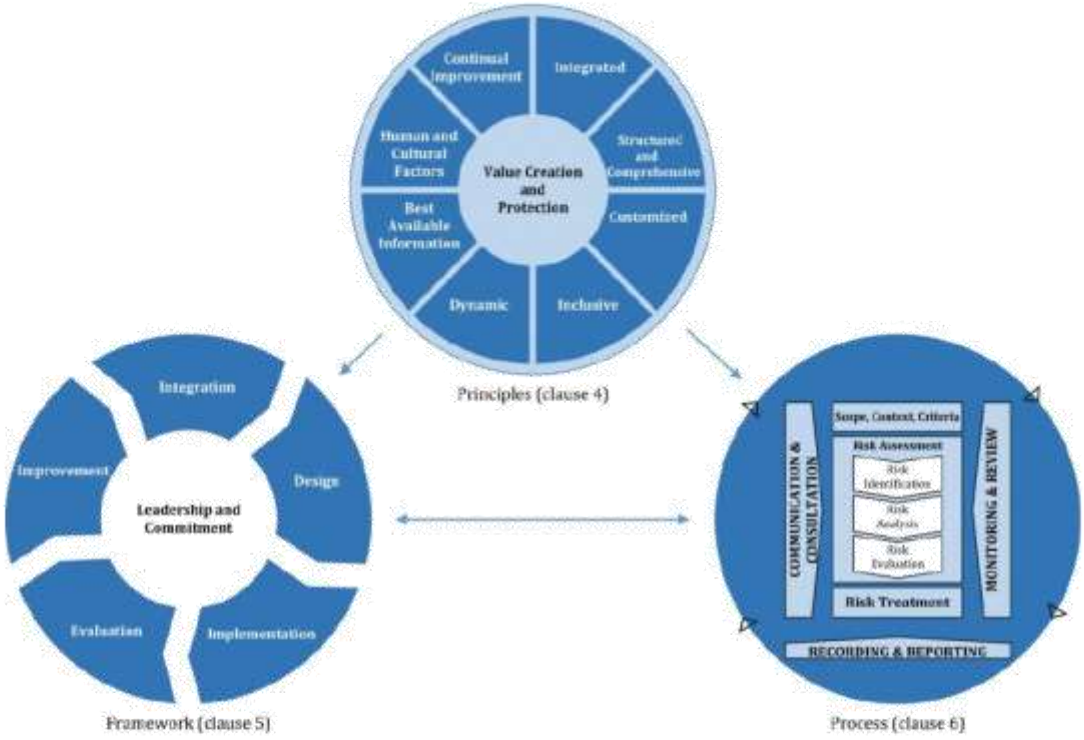


Figure 1

8. **Internal Audit and Review**

8.1. From time to time the RMS may be subject to an internal audit review. The aim of any review will to; benchmark the design of the RMS against best practice risk maturity models, check operational compliance with both the risk management policy and framework, and identify broader opportunities for improvement.

9. **Policy Non-compliance**

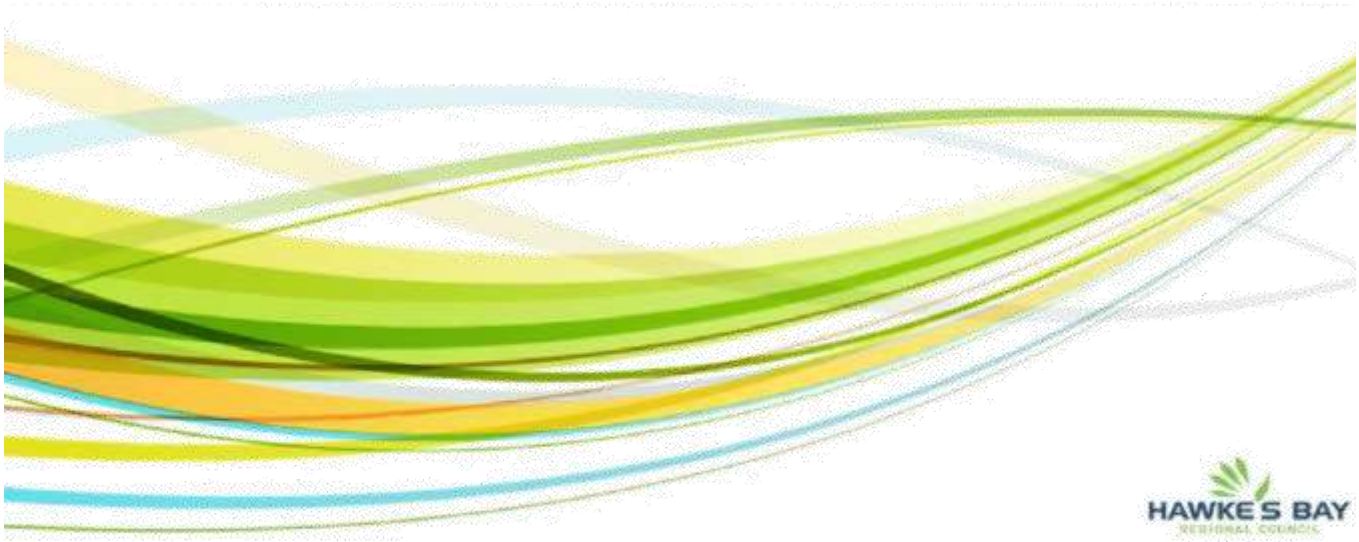
9.1. All stakeholders that this policy applies to are expected to comply.

9.2. Serious or repeated breaches of non-compliance by staff may result in disciplinary action as guided by the code of conduct. Or, in the case of a contractor action taken as determined by the underlying contract terms and conditions.

Hawke's Bay Regional Council

Risk Management Framework (RMS)

August 2020



Contents

1 Purpose of the Framework

The purpose of this framework is to provide more detail on the structure and processes of HBRC's risk management system (RMS) that is outlined in HBRC risk management policy. The intention of this framework is to provide clarity to all staff on their risk management obligations and to drive consistency with regards to the application of risk management processes across HBRC's. This framework supports the achievement of HBRC's aim of the RMS as outlined in the risk management policy, these aims include:

- to support the achievement of HBRC's operational and strategic objectives
- cultivate a culture that risk management is everyone's responsibility ensuring consistent and transparent risk intelligent decision making
- provides oversight and assurance to Council and Executive Leadership Team (ELT) that risks are well managed
- effectively prioritise resource allocation for the management of risks that most significantly impact objectives, and
- ultimately protect; Council owned assets, regional resources, and key stakeholder interests in an efficient and sustainable way.

This risk management framework should be read in conjunction with the risk management policy.

2 Definitions

- **All of Government (AoG) risk maturity model** – benchmark risk maturity model that is promoted by Local Government New Zealand (LGNZ)
- **Cause** – underlying reason why the risk event occurs
- **Consequence** – impact of an event on objectives
- **Control** – a process that either reduces; the likelihood or consequence of a risk event
- **Critical Risk** – sometimes refer to as 'key risks' or 'enterprise risks', these are the risk event most material to an organisation
- **Critical Control** – sometimes referred to as 'key controls', these are main controls that reduce the likelihood or impact of the risk event. They are important as they may be the only control or because the degree to which they mitigate the risk event.
- **Enterprise Risk Management** – the process of planning, organising, leading, and controlling the activities of an organisation in order to either minimise the effects, or seize opportunities, from uncertainty that impacts an organisation's objectives.
- **Event** – when there is a change to circumstances that triggers a risk response
- **Financial Risk** – the potential for financial loss and uncertainty from creditors, financial markets or liquidity.
- **Inherent Risk** – an assessed level of an untreated risk prior to the application of controls
- **Likelihood** – chance or probability of a risk event happening
- **Mitigation** – specific measures taken to minimise or eliminate unacceptable risks
- **Operational Risk** – the potential for losses from inadequate or failed internal processes, people and systems, or from external events
- **Residual Risk** – an assessed level of risk after the application of controls and mitigations
- **Risk** – the effect of uncertainty on objectives that maybe either positive or negative
- **Risk Appetite** – the degree of risk the governing body is prepared to accept in pursuit of objectives articulate in qualitative terms
- **Risk Capacity** – the total amount and type of risk able to be sustained in pursuit of objectives, articulated in quantitative terms
- **Risk Champions** – a person designated to coordinate and oversee the risk management activities of a business unit
- **Risk Management** – is a series of activities undertaken to systematically identify and address risk
- **Risk Tolerance** – the total amount and type of risk the governing body (Council) is prepared to accept given the organisations mandate articulated in quantitative (a subset of risk capacity)
- **Strategic Risk** – the chance that a strategy will result in losses from failed business decisions, or lack thereof (pursuit of an unsuccessful business plan)

3 Applied Standard of HBRC's Risk Management Framework

As outlined in HBRC's risk management policy, HBRC's RMS has been designed to align to best practice and is benchmarked on the leading international standard for risk management ISO 31000:2018 Risk Management – Guidelines. In addition, HBRC's RMS also considers the LGNZ endorsed All of Government (AoG) risk maturity model.

The risk management processes described in this framework therefore aligns to the risk management processes described in ISO 31000:2018. The tailoring of the HBRC risk management system relates to the right sizing of reporting frequency, risk hierarchy structure, and mandatory risk tiers for aggregation and not the fundamentals for ensuring a robust risk assessment.

4 Risk Management Framework Objectives

The objective of this risk management framework is to provide a one framework approach to risk management across all of HBRC. Enabling the integration of risk management practices into all activities, management functions and key decisions.

5 Risk Management Standards

HBRC's risk management framework is benchmarked to ISO 31000:2018 (see figure 1 below) and is extended to consider LGNZ endorsed All of Government (AoG) risk maturity model (see figure 2 below).

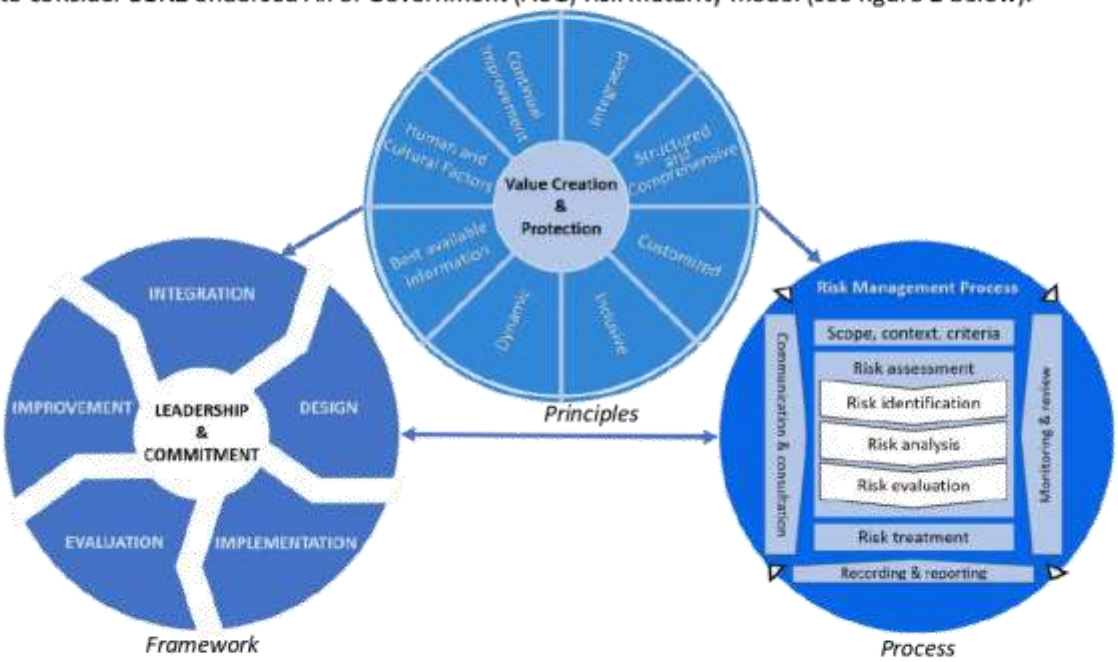


Figure1 – ISO 31000:2018 Guidelines for Managing Risk

Figure 2 – AoG Enterprise Risk Maturity

6 Principles of HBRC's Risk Management System

6.1 Overview

ISO 31000:2018 contains several principles (see figure 3 below). Application of these principles at HBRC are fundamental to ensure an effective risk management system that protects an organisation and creates value. Essentially, if processes are not adding value, they are simply adding costs. A summary of each principle as they have been applied at HBRC is outlined below.

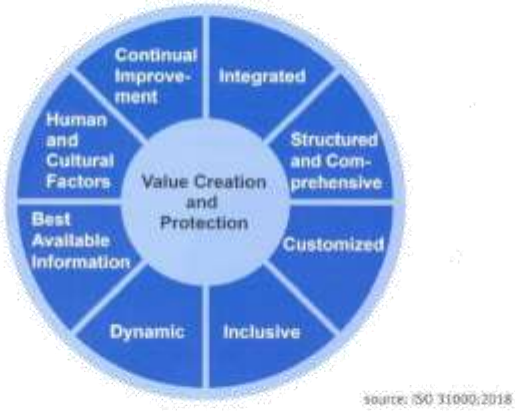


Figure 3 – ISO3100:2018 Principles

6.1.1 Integrated

For a risk management system to create value it cannot operate as a standalone function. Therefore, at HBRC the intention is for risk thinking to be embedded into the culture and to occur in all activities. Formal risk processes occur for tier one and tier two business objectives and within key functional management systems e.g. asset (AMS), health and safety (HSMS), quality (QMS), information security (ISMS) etc.

6.1.2 Structured and Comprehensive

HBRC's risk management system is formalised with a 'one' framework approach that contains structured and comprehensive key risk artefacts e.g. risk management policy, risk management framework, and risk appetite etc.

6.1.3 Customised

The risk management system has been purposely linked to HBRC's mandate and the framework is tailored with consideration to HBRC's mandate, size and scale. Tailoring of the risk system is considered to not weaken any foundational risk system provisions.

6.1.4 Inclusive

Risk management is inclusive of all key HBRC stakeholders needs this inclusiveness is reflected in the risk matrix, key stakeholders include e.g. Ratepayers, Tangata Whenua, Staff, Regulators etc.

6.1.5 Dynamic

Under HBRC's risk system formal risk assessments processes are undertaken at least four times per year for tier one and tier two business objectives. These assessments include a scan of the internal and external environment to contemplate how changes and emerging issues may impact HBRC's risk profile.

6.1.6 Best Information Available

Within HBRC's risk system any formal risk assessment requires relevant and available data to be sourced for the risk workshop. Relevant data may include; historical HBRC incidents, wider industry incidents, internal audit findings, key risk indicators (e.g. staff satisfaction surveys, customer complaints) etc.

6.1.7 Human and Cultural Factors

Human behaviour and culture are key influencers on risk management. This influence maybe through failure to execute process resulting in a risk event, or, making risk decisions on the level of risk to accept. Therefore, HBRC's values are central in the risk system and are used to frame risk appetite and drive a risk aware culture.

6.1.8 Continual Improvement

HBRC has a clear and endorsed risk maturity roadmap. In addition, the risk management policy and framework are required to be reviewed against best practices at least annually.

7 Framework of HBRC's Risk Management System

7.1 Overview

There is ongoing commitment from Council and the Executive Leadership at HBRC to continue the journey of risk maturity with an aim to executing on HBRC's risk vision as described in the risk management policy; *'All HBRC staff take responsibility for owning HBRC's risks with consistent and transparent risk intelligent decision making'*.

Figure 4 – ISO3100:2018 Framework

7.1.1 Leadership and Commitment

HBRC Leadership are fully committed to the maturity of the risk management system. They are responsible for ensuring risk management aligns to with the HBRC's strategy, objectives and culture. They endorse the risk management policy, framework and processes and fully engage in all risk workshops. They ensure necessary resources are provided to effectively managing HBRC's risks within appetite.

7.1.2 Integration

At HBRC the risk management policy and framework applies to all staff. The design of the risk management system enables the ELT oversight of the effectiveness of HBRC's risk integration.

7.1.3 Design

HBRC's risk maturity roadmap was developed to acknowledge the changing external landscape and HBRC's broadening mandate. Therefore, the redesign of HBRC's risk system, policy and framework considers the changing external scale. Any risk management system redesign is done in consultation with Council.

7.1.4 Implementation

HBRC's risk management policy and framework provides a two-pronged approach to implementation. One approach establishes formalised risk reporting of aggregated tier one and tier two risks to Council via Council's Finance Audit and Risk Sub-Committee (FARS) (bottom up). And, the other approach is leadership driving a risk aware cultural to embed risk responsibility and ownership by everyone in their day to day

decision making (top down). HBRC's risk management policy outlines risk system roles and responsibilities for implementation.

7.1.5 Evaluation

As outlined in HBRC's risk management framework the Risk and Assurance Lead monitors the effectiveness of HBRC's risk system by reviewing the quality of output evidenced in the risk aggregation process. In addition, from time to time, HBRC's risk management system is audited as part of HBRC's annual internal audit plan.

7.1.6 Improvement

Continual improvement of HBRC's risk system to improve the value of risk management is always being considered. In addition, HBRC's risk management framework requires that the risk management policy and framework be reviewed at least once every three years against the latest risk maturity best practices.

8 Risk Management Processes

8.1 Overview

ISO 31000:2018 provides guidance for HBRC's risk management processes (see figure 5 below). The risk management process as outlined below is an integral part of this ensuring a consistent approach to HBRC's risk management system. Risk process can be used to assess any risk and at all level within HBRC. The following section describes each stage of HBRC's risk management process.

Figure 5 – ISO3100:2018 Process

8.1.1 Scope, Context and Criteria

The first stage of HBRC risk management process is to establish the scope, context and criteria.

Scope:

HBRC's risk process as outlined in this framework applies across the organisation. Council have endorsed the concept of a one framework approach. By exception a variation of the risk management framework can be applied. However, it is expected that variations to the framework will be discussed with HBRC's Risk and Assurance Lead prior to application.

Context:

HBRC's risk system purpose and scope is informed by the HBRC's vision, values and strategic direction. To establish HBRC's vision, values and strategy context is sought from both the external and internal environment. This includes key stakeholder values, perceptions, relationships, laws, policies and other requirements.

Criteria:
HBRC's risk criteria provides a term of reference to evaluate critical or important risks. Risk criteria is set by Council as the governing body through a risk appetite statement. The risk appetite statement contemplates Council's mandate, values, objective, and the internal and external settings, then defines the risk tolerances and risk escalation levels. In addition, risk appetite is used to validate the risk likelihood and consequence matrix that all risk assessments are context too.

8.1.2 Risk Assessment

With HBRC's risk scope, context and criteria understood the risk assessment process can be undertaken. Risk assessment is broken into three distinct activities:

- Identification of risks
- Analysis of identified risks, and
- Evaluation of identified risks

8.1.2.1 Risk Identification

ISO 31000:2018 definition of risk is "the effect of uncertainty on objectives both positive and negative'. Therefore, risk identification is finding and describing risks that could influence the achievement of objectives. Risk identification includes looking for risk; causes, risk sub events and risk consequences that would influence the achievement of objectives.

Identified risks are classified into three types of risk:

1. **Strategic Risks** - the chance that a strategy will result in losses from failed business decisions, or lack thereof (pursuit of an unsuccessful business plan). Strategic risks at an enterprise level may fail because of poor; decisions, implementation (project execution), or delivery (fails to achieve the operational gains)
2. **Financial Risks** - the potential for financial loss and uncertainty due to; creditors, financial markets or lack of liquidity.
3. **Operational Risks** - the potential for losses from inadequate or failed internal processes, people and systems, or from an external event

To effectively identify risks, it is essential that:

- the objective is clearly articulated
- the critical processes to deliver in the objective is understood, and
- a scan of the internal and external environment is available (uncertainty)

There are several different methods to identify risks and controls. HBRC require all tier one and tier two HBRC critical risks to use bowtie analysis (see figure 6 below).

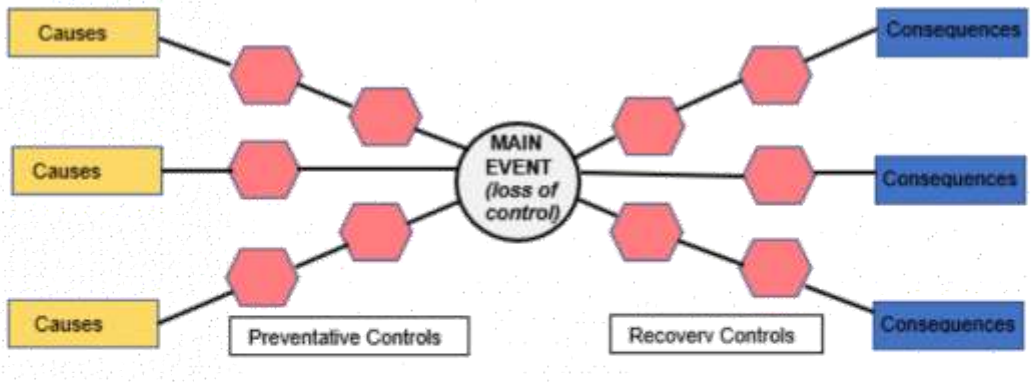


Figure 6 – Bowtie Analysis Diagram

The benefits of the bowtie analysis for risk identification includes:

- Clear identification of the main risk event (the point at which HBRC loses control)
- Clear identification of related sub risk events
- Succinct list of risk causes
- Clear list of recovery measures post event
- Clear understanding of the potential consequences or severity of the event
- Complete view of the control environment and better understand of the key preventative, detective and recovery controls

For all other risk assessment processes undertaken, the formal structure of the bowtie analysis is not required. However, the workings of the bowtie analysis must be applied. Bowtie workings include:

- Identification of the main objective
- Identification of critical processes to execute on the objective
- Brainstorming the risks with key staff
- Asking the 'but why' questions to establish the potential root causes
- Asking the 'but what next' questions to establish the potential outcomes
- Linking of possible controls to either prevent the event, or to recover quickly from the event

8.1.2.2 Risk Analysis

Once risks and controls are identified risks can be analysed. Risk analysis uses the risk causes and risk sources to estimate the level of risk exposure.

Risk analysis is the sum of two risk dimensions known as the:

1. **Likelihood** – defined as the *chance* of the risk event happening, and
2. **Consequence** – defined as the *impact* when the event happens

The overall aim of risk analysis is to form a view of the risk rating. Risk analysis can be influenced by:

- Opinions, perceptions and unconscious bias
- Complexity and degree of inter-connectivity
- Timing and availability of facts
- Unpredictability
- Confidence levels of existing controls

All assumptions and limitations that influence the risk analysis should be clearly documented in the risk register/profile and available for future re-validation of identified risks and risk assessments.

There are two states of risk analysis these are known as:

1. **Inherent Risk** – the analysed risk without applying any controls or mitigations (raw risk state), and
2. **Residual risk** – the analysed risk after additional control processes and mitigations are applied

The overall risk analysis of a residual risk is always lower than that of the inherent risk. This is because both the likelihood and/or consequence are reduced through the application of controls. The difference between the inherent risk rating and the residual risk rating indicates the importance and the operating effectiveness of current controls.

Control Assessment

At HBRC an inherent risk assessment is initially undertaken. This is to provide context of the importance of the risk controls and the worst-case impact if all controls failed. However, at HBRC generally risks are reported and discussed based on the residual state. To complete the risk analysis for the residual risk first an assessment to determine the effectiveness of the critical controls must be undertaken (see figure 7 below).

HBRC's control assessments are given one of three ratings:

I. **Effective** – the control design is fit for purpose and the control is operating as designed
II. **Requires Improvement** – the control design is fit for purpose, but the control is only operating at 75% of design, or
III. **Ineffective** – the control design is not fit for purpose, or the control is operating at less than 75 % of design, or the control is absent

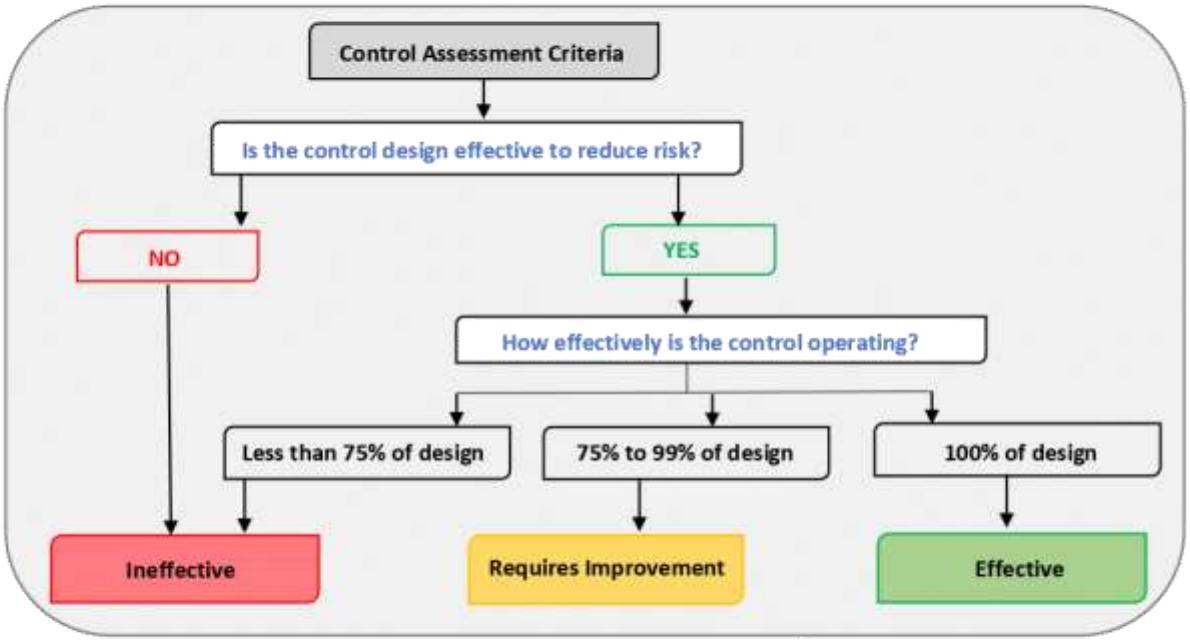


Figure 1 – Control Assessment Criteria

Risk Assessment

Along with the rating of the control assessment the residual risk analysis should also consider the:

- external setting that includes elements and emerging issues outside of HBRC's control such as environmental/climate change, demographic change, political factors, economic, emerging technology, regulatory change etc
- internal setting that includes internal changes such as; organisational restructure or redesign, significant project (e.g. technology projects) etc
- operational incidents and near misses
- related industry incidents and near misses, and
- internal audit findings

To undertake a residual risk assessment the first step is to ascertain the **likelihood** of the risk event occurring given the effectiveness of current controls and with context to changes in the internal and external setting. Once the likelihood is understood the next step is to ascertain the **consequence** of the risk event given the effectiveness of current controls and with context to changes in the internal and external setting.

The likelihood matrix applied at HBRC to analyse risk is outlined in **Appendix A** of this framework. To recognise the diverse nature of risk assessments undertaken at HBRC the likelihood matrix outlines both a quantitative and qualitative criterion. It is up to the person undertaking the risk assessment to decide which scale is most relevant for the assessment.

The consequence matrix applied at HBRC to analyse risk is outlined in **Appendix B** of this framework. At HBRC the consequence of risk can be considered by either applying a quantitative or qualitative assessment. The quantitative assessment applies a financial scale whereas qualitative assessments are considered across

five broad categories being; people (including H&S), internal core services (business interruption), reputation (service quality), legal/regulatory, and sustainability (including environmental and cultural).

The consequence categories are often inter-dependent e.g. it would be unusual for a qualitative assessment to not have some financial impact. Careful consideration should be given to ensure all interdependencies are considered. However, for the purposes of simplifying risk analysis at HBRC the overall risk rating is determined using a single dimension and based on the greatest single qualitative or quantitative impact.

The likelihood and consequence matrix have been determined at an enterprise level for HBRC. However, these scales can and should equally apply to assessments undertaken throughout the organisation. The only exception is the financial consequence scale may need a more targeted approach to better understand the spread of risks being applied to the given objectives. It is however always useful to test the risk against the enterprise consequence parameters to assist in resource prioritisations and the risk aggregation process.

Risk Heat Map

The risk analysis that includes the control assessment can be plotted on HBRC risk heat map refer **Appendix C** of this risk management framework. The risk heatmap provides a quick comparison and visual of various analysed risks. A comparison of the residual risk events is referred to as the 'spread' of risks.

Risk Escalation

In day-to-day business activities a risk may come to light that that when analysed maybe material for the business and therefore may need escalating. HBRC's risk escalation scale can be found in **Appendix D** of this risk management framework.

8.1.2.3 Risk Evaluation

Risk evaluation is a process that is used to compare risk analysis results against HBRC's risk criteria. The aim of risk evaluation is to determine whether the analysed level of risk is acceptable / tolerable and whether the risk should be further mitigated or treated.

Risk evaluation options include:

- Doing nothing
- Mitigating the risk further by considering other risk treatment options
- Undertaking further risk analysis
- Enhancing existing controls, and
- Reconsidering HBRC's strategy and objectives

The decision on the risk evaluation options should consider the following:

- HBRC risk appetite (could I? should I? test)
- Impact for HBRC's strategy
- Impact for HBRC's operational objectives, and
- Risk v reward i.e. cost of treatment relative to the benefit of risk reduction

For risks determined as needing treatment a broad order of priority should be established through a control corrective action plan. The corrective action plan outlining the treatment steps should be defined, agreed, recorded and tracked until closed. Updates for corrective action plans that are linked to enterprise risks should be reported to the ELT when they receive the risk reporting, and to the Finance Audit and Risk Sub-Committee (FARS) every meeting.

If it is agreed to not treat a risk that is outside HBRC's risk appetite, perhaps the treatment options are unavailable or cost/resource prohibitive then the risk is deemed an **accepted** risk. An accepted risk must continually be reviewed by management to scan for new cost-effective risk mitigations. The risk must also be reported to the ELT when they receive the risk reporting, and to FARS every meeting for the duration that it remains an 'accepted' risk. The decision to continue to accept the risk by FARS must be formally minuted.

If the underlying uncertainty presents a risk opportunity to do something different. Then rather than determining a risk corrective action plan, a plan outlining the how to purse the opportunity should be defined, agreed and tracked/recorded.

8.1.3 Risk Treatment

If it is agreed in the risk evaluation process to treat the risk, then one of the following seven treatment options will need to be decided:

- Avoid the risk by either stopping the activity or not starting the activity
- Take on more risk to take advantage of an opportunity or pursue a new opportunity
- Remove or reduce the source of the risk
- Reduce the likelihood of the risk occurring
- Reduce the consequences of the risk occurring
- Share the risk with another party or transfer the risk completely to another party e.g. insurance

Risk treatments that deal with the downside of risk maybe referred to as risk mitigation, risk reduction, risk prevention or risk elimination. However, not all plans treat the downside of risk.

There are three types of controls that reduce risk these are:

- **Preventative Controls** – stop risk events happening e.g. duties segregation, pre-employment checks
- **Detective Controls** – operate to alert that the risk event is happening or there is an increased chance of the risk event happening e.g. day two transaction checks
- **Corrective (or Recovery)** – operates after the risk event to reduce the risk event impact e.g. BCP

The decision on which treatment option to implement will depend on the criticality and strategic importance of the activity to HBRC.

8.1.4 Risk Recording and Reporting

Until a technical solution that supports the HBRC's risk management framework/system is available risk registers will be maintained using excel spreadsheets. Information that must be captured in the spreadsheets includes;

- risk title and risk description (specify risk related exclusions)
- risk causes
- risk controls and control descriptions
- inherent risk rating
- residual risk rating
- control assessment
- control corrective actions with action tracking updates

The Risk and Assurance Lead is responsible for maintaining HBRC's enterprise risk profile and the Business Unit Risk Champion are responsible for maintaining HBRC's Business Unit risk profile.

Formal risk reporting is required from the Business Units on a quarterly basis. The Risk and Assurance Lead in consultation with the Team Leader Governance is responsible for issuing a risk reporting timeline to the BU Risk Champions.

The Risk and Assurance Lead is responsible for collating and aggregating BU risks into HBRC's enterprise risk profile. The Risk and Assurance Lead is also responsible for coordinating and chairing the risk forum that each Business Unit Risk Champion attends to validate the aggregation of the Business Unit risks into HBRC's enterprise risk register/profile.

The output of the risk forum is reflected in the enterprise risk register that is reported to the ELT on a quarterly basis. The Risk and Assurance Lead presents the quarterly risk report at the ELT at ELT meeting designated for receiving the risk report. The ELT at that meeting will discuss, refine and approve the

enterprise risk assessments. Every six months in February and August HBRC's enterprise risk register/profile is presented to FARS for noting.

There are two types of risk reporting periods. **Full** risk reporting that occurs prior to the FARS meeting in February and August. And, **light** risk reporting that occurs in May and November when reports are for discussion and information of the ELT but not required to be presented to FARS.

Light risk reporting (May and November): No full BU risk workshop is required. The BU Risk Champion updates the BU risk register in conjunction with the BU senior management team and submits the updated BU risk register to the Risk and Assurance Lead. The Risk and Assurance Lead uses this data to update the enterprise risk register which forms the basis for the risk aggregation session. The BU Risk Champions are expected to attend a one-hour risk aggregation session that the Risk and Assurance Lead coordinates and chairs.

At the ELT meeting designated for receiving the enterprise risk report the ELT agenda will include a one-hour session to discuss the enterprise risk register that was agreed by the BU Risk Champions at the risk aggregation session. If through this process a material shift in enterprise risk profile is identified, then the reporting cycle will become full reporting (*see below*).

Full risk reporting (March and August): In a full risk reporting cycle the BU Risk Champion coordinates and chairs their respective BU risk workshop. Supporting risk material required to review the identified BU critical risks and undertake risk analysis must be provided at the meeting. The workshop will follow the risk assessment process outlined under 8.1.2 of this framework. It is expected that these BU risk workshop will take approximately 1.5 hours. Using the output from the meeting the BU Risk Champion then updates the BU risk register and submits the updated register to the Risk and Assurance Lead. The Risk and Assurance Lead then updates HBRC's enterprise risk register/profile and coordinates and chairs the following risk aggregation with the BU Risk Champions. The risk aggregation session is to agree the enterprise risk register for reporting to the ELT. This risk aggregation session for a full reporting period is expected to take 1.5 hours.

At the ELT meeting designated for receiving the full enterprise risk report a 1.5-hour timeslot is allocated on the agenda. This time is to discuss HBRC's enterprise risk register and agree the six-monthly risk report for presenting to the FARS. The final risk report to FARS must contain all relevant supporting material and an update on control corrective actions and an update on progress to close out the outstanding internal audit findings.

8.1.5 Risk Communication and Consultation

Communication and consultation is not a distinct stage in the management of risk. It continues through the whole risk management process. Essentially, dialogue between HBRC and key stakeholders is ongoing, and information is shared and received about the management of risk. However, this is not joint decision making. Once communication and consultation is finished, decisions are made and directions are set by Council, not by stakeholders.

8.1.6 Risk Monitoring and Review

The Risk and Assurance Lead will monitor the risk management system by continually checking documented output from risk analysis and more generally critically observing risk culture from across the business. The aim is to assess whether expected performance levels are being achieved.

Once HBRC's risk management system (policy, framework and appetite) is implemented it will be reviewed periodically through HBRC's internal audit programme to ensure is remains 'fit for purpose' and benchmark against the latest risk maturity best practice.

Regular risk training and updates will also be coordinated by the Risk and Assurance Lead across the business providing an opportunity to receive staff feedback on continual improvements to the risk system.

9 Record Keeping

HBRC should be able to demonstrate evidence of the application of the risk management policy and framework. Therefore, any risk meeting undertaken as prescribed in this framework should be minuted and related risk registers updated.

10 Application of Framework

This risk management framework applies to HBRC and all of its employees, consultants and advisors undertaking decisions or executing activities on behalf of HBRC.

11 Review

While HBRC's RMS is being embedded into the business initially the risk management policy and this risk management framework will be received annually. Changes may be made to the risk management policy and/or the risk management framework in the interim if there are significant developments in recognise risk best practice, changes to HBRC's application of risk practices, or HBRC's risk appetite.

Appendix A - Risk Likelihood Matrix

LIKELIHOOD / FREQUENCY	QUALITATIVE CRITERIA	QUANTITATIVE CRITERIA	RETURN PERIOD (FOR REFERENCE)
ALMOST CERTAIN	Expected to occur in normal circumstances; Almost inevitable; Multiple prior experiences of a similar event occurring	90-100% probability of occurrence of occurring in the next 12 months	At least once in the next 12 months
LIKELY	Expected to occur in most circumstances; Not surprised if event occurs, likely to have been observed in other Councils / Industries	50% - 90% probability of occurrence	Greater than 12 months but less than 1 in 2-yearly event
POSSIBLE	Occasional occurrence; Not completely surprised if experienced; Event may have been observed either in the past, in other industries, or other Councils	10-50% probability of occurrence within 12 months	Between 1 in 2-year and 1 in 10-year event
UNLIKELY	Event unlikely to occur; Not experienced in the past but could occur; A similar event may have been experienced in other industries	1 – 10% probability of occurrence with 12 months	1 in 10-year and 1 in 100-year event
RARE	Improbable, highly unexpected event occurring in exceptional circumstances	< 1% probability of occurrence with 12 months	Greater than a 1 in 100-year event

Appendix B - Risk Consequence Matrix

IMPACT / CONSEQUENCE	PEOPLE HEALTH, SAFETY + WELL-BEING *(HSMS & HRMS)*	ESSENTIAL INTERNAL CORE SERVICES *(HBRC's BUSINESS INTERRUPTION - BCMS and ISMS)*	REPUTATION / BRAND / SERVICE QUALITY *(QMS / AMS)*	FINANCIAL *(FMS)*	LEGAL + REGULATORY *(Comp)*	SUSTAINABILITY (CULTURAL, COMMUNITY, ENVIRONMENT) *(EMS)*
EXTREME	Mass casualties or loss of life; substantial and permanent physical + psychological harm to multiple individuals Prolonged impact on all staff.	Substantial sustained inability to deliver core services; unable to execute critical tasks Remediation results in senior management being diverted for longer than 12 months	Sustained negative national media attention (>5 days); requires urgent attention from Councillors & Executives Complete or long-term failure of infrastructure / Assets and service delivery affecting whole communities, widespread disruption. Repair/replacement longer than 12 months	$2.5M +	Multiple non-conformities or breaches of law or regulations; governance model under question	Loss of resources or objects of cultural / heritage meaning. Would cause catastrophic environmental damage materially impacting the eco-system that may result in, loss of species or fauna. Breakdown in economic activity resulting in disbanding of whole towns

IMPACT / CONSEQUENCE	PEOPLE HEALTH, SAFETY + WELL-BEING *(HSMS & HRMS)*	ESSENTIAL INTERNAL CORE SERVICES *(HBRC's BUSINESS INTERRUPTION - BCMS and ISMS)*	REPUTATION / BRAND / SERVICE QUALITY *(QMS / AMS)*	FINANCIAL *(FMS)*	LEGAL + REGULATORY *(Comp)*	SUSTAINABILITY (CULTURAL, COMMUNITY, ENVIRONMENT) *(EMS)*
MAJOR	Serious physical or psychological injury with permanent impairment. Impacts on all staff for a short to medium term.	Intermittent impact; core services partially functional (less than 90%); significant impact to key strategic objectives Remediation results in senior management being diverted for longer than 6 months but less than 12 months	Negative national media coverage >3 days; requires a coordinated media response Mid-term failure of infrastructure / Assets and service delivery affecting significant parts of whole communities, widespread inconveniences. Repair/replacement between 6 and 12 months	$1M to $2.5M	Material non-compliance or breach of duty; prosecution or sanctions feasible; legal dispute involves key stakeholders	Permanent damage to objects or resources of cultural / heritage meaning Extensive environmental damage requiring significant resources rectify that maybe ongoing. Impacts within emotional and psychological capacity of the community with ongoing reduced community services Breakdown of economic activity resulting on loss of whole communities or increase in irreversible poverty of whol towns

IMPACT / CONSEQUENCE	PEOPLE HEALTH, SAFETY + WELL-BEING *(HSMS & HRMS)*	ESSENTIAL INTERNAL CORE SERVICES *(HBRC's BUSINESS INTERRUPTION - BCMS and ISMS)*	REPUTATION / BRAND / SERVICE QUALITY *(QMS / AMS)*	FINANCIAL *(FMS)*	LEGAL + REGULATORY *(Comp)*	SUSTAINABILITY (CULTURAL, COMMUNITY, ENVIRONMENT) *(EMS)*
MODERATE	Physical injury with no hospitalisation or intermittent exposure to stressful environment Impact all staff in one line of business e.g. CEC strike action	Intermittent impact; temporary workarounds required to deliver core services at 90% capacity Remediation results in senior management being diverted for longer than 2 months but less than 6 months	Negative regional media attention (2+ days); loss of stakeholder confidence possible Short-term failure of infrastructure affecting some parts of the community. Repair/replacement between 1 to 6 months.	$500K to $1M	Material breach of regulation, or law; likely to be investigated by a regulatory body; material breach of contract by Council	Repairable damage to resources or objects of cultural / heritage meaning Localised impact on the environment that can be readil rectified but effort required to respond. One off recovery effort. Impacts within emotional and psychological capacity of a community. Medium term breakdown of economic activity resulting medium term hardship

IMPACT / CONSEQUENCE	PEOPLE HEALTH, SAFETY + WELL-BEING *(HSMS & HRMS)*	ESSENTIAL INTERNAL CORE SERVICES *(HBRC's BUSINESS INTERRUPTION - BCMS and ISMS)*	REPUTATION / BRAND / SERVICE QUALITY *(QMS / AMS)*	FINANCIAL *(FMS)*	LEGAL + REGULATORY *(Comp)*	SUSTAINABILITY (CULTURAL, COMMUNITY, ENVIRONMENT) *(EMS)*
MINOR	Minor casualties or injuries with off-site medical attention and no long-term effects Impact some staff across several lines of business	Limited, sporadic impact; core services provided at reduced service-levels Remediation results in some senior managers being diverted periodically for up to 2 months	Localised negative media coverage (1-3 days); loss of stakeholder confidence unlikely Isolated cases of infrastructure failures, Localised inconvenience to small pockets of the community. Repair/replacement between 24 hours and 1 month. No long-term impact on integrity or operation of Assets	$250K to $500K	Dispute may require mediation or mandatory reporting of non-compliance	Slight impact on resources or objects of cultural / heritage meaning that can be instantly remediated Limited impact on the environment that can be readil rectified but effort required to respond and minimize. One of recovery effort. Short term breakdown of economic activity short term hardship Limited impacts on community emotional and psychological capacity.

IMPACT / CONSEQUENCE	PEOPLE HEALTH, SAFETY + WELL-BEING *(HSMS & HRMS)*	ESSENTIAL INTERNAL CORE SERVICES *(HBRC's BUSINESS INTERRUPTION - BCMS and ISMS)*	REPUTATION / BRAND / SERVICE QUALITY *(QMS / AMS)*	FINANCIAL *(FMS)*	LEGAL + REGULATORY *(Comp)*	SUSTAINABILITY (CULTURAL, COMMUNITY, ENVIRONMENT) *(EMS)*
INSIGNIFICANT	Minor injuries; treatable on-site with 1st aid, no long-term impairment Impacts some staff on one line of business	Minor impact on essential / critical services provided Senior management respond to disruption within BAU	Local or assorted complaints; little recognition, minimal change in stakeholder confidence Inconsequential short-term failure of Assets. Repair/replacement less than 24 hours. No disruption to public services or utilities	$100k to $250K	Minor contractual or regulatory breach or non-compliance; possibly remedied w/out notification or fines	No disturbance on resources o objects of cultural / heritage meaning. Minimal impact on the environment or pollution – little direct damage to the ecosystem that is easily rectified within budget Little adverse emotional and psychological impacts on communities Discreet and short-term impacts of economic activity Response by emergency services and agencies no CDEM coordination required

Appendix C – Risk Heat Map and Risk Tolerance Zones

ALMOST CERTAIN	LOW	MEDIUM	HIGH	HIGH	HIGH
LIKELY	LOW	MEDIUM	MEDIUM	HIGH	HIGH
POSSIBLE	LOW	LOW	MEDIUM	MEDIUM	HIGH
UNLIKELY	NEGLIGIBLE	LOW	LOW	MEDIUM	HIGH
RARE	NEGLIGIBLE	NEGLIGIBLE	LOW	MEDIUM	MEDIUM
	INSIGNIFICANT	MINOR	MODERATE	MAJOR	EXTREME

Appendix D – Risk Escalation Scale

This diagram sets out the scale for risk escalation. The scale should be applied at the residual risk level i.e. after controls and mitigations have been considered. This scale provides a minimum criterion for risk escalation however all staff are encouraged to raise any risk concerns they have regardless of the residual risk rating.

Escalated to the CEO and Council

Escalation to the CEO and FARS Chair as soon as possible. Action required to reduce the risk and / or subject to formal risk acceptance. Direct monitoring by FARS.

Escalate to the General Manager and CEO

Escalation to the General Manager and CEO to review possible risk mitigation strategies. Escalation to FARS as part of regular risk reporting. Ongoing monitoring by the General Manager.

Managed at Operational Level

Within appetite no escalation or specific response required. Reported to operational levels as required. Monitored within existing controls and mitigation plans.

Raised Attention – Over Controlled

Within appetite no escalation or specific response required. However, discussion with team leader considered appropriate to determine if the risk is being over controlled at excess costs. Consider streamlining controls.

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: REGIONAL WATER SECURITY PROGRAMME – CHB PROJECT

Reason for Report

1. This item reports on the outcome of a targeted engagement with the Tukituki Leaders' Forum (TTLF) on water storage options in Central Hawke's Bay, and presents 'next-steps' recommendations for the CHB Water Storage project, as a subset of the HBRC Regional Water Security Programme, based on technical analysis while taking into account the outputs of the TTLF and the views of staff.

Officers' Recommendation(s)

2. Council officers recommend that the Committee agrees to:

   2.1. temporarily suspend any further investigations or assessment of above-ground water storage sites (as shortlisted by T&T) pending the earlier of either further analysis of the costs and benefits of smaller scale storage or the outcome of the Managed Aquifer Recharge Pilot Study

   2.2. urgently progress the Managed Aquifer Recharge Pilot, and

   2.3. requests that staff undertake further engagement with the CHB community to develop broader non-storage policy solutions and interventions for achieving water security in that District.

Executive Summary

3. At the request and recommendation of the Central Hawke's Bay District Council (CHBDC) project staff initiated an independently-facilitated process with the Tukituki Leaders' Forum. The purpose of this engagement was to help inform investigations into potential above-ground water storage options for the Ruataniwha plains area. CHBDC felt this approach was the most appropriate way to re-visit water storage solutions in a post-Ruataniwha Water Storage Scheme (RWSS) operative Plan Change Six environment.

4. On 31 July, after five workshops (including two conducted online through the national lockdown period), an independent facilitator conducted an options evaluation conference. Valuable insights were gained through the process and the final outputs provide staff with confidence to recommend that this project does not progress any of the shortlisted small to medium scale storage sites to prefeasibility at this time.

5. The technical assessment has highlighted just how challenging above-ground water storage is in CHB. With a clear preference from the TTLF in creating a higher volume of water through storage, the smaller sites as a multi-storage option, even if technically viable, are unlikely to be economic.

6. The original RWSS site, either at the 90M m3 or as a low dam option at 19M m3 (which is below the level that inundates the DoC land), is subject to challenges and constraints beyond the influence of staff. Without both a change of policy and political will at national level further investigations of this site are outside the scope of the project by virtue of funding arrangements with the Provincial Growth Fund.

7. Accordingly, staff believe, in the absence of a specific change of policy or direction from central government, that the Managed Aquifer Recharge Pilot which has continued to be advanced since being presented to Council proceed with urgency so that its technical viability and social license can be tested.

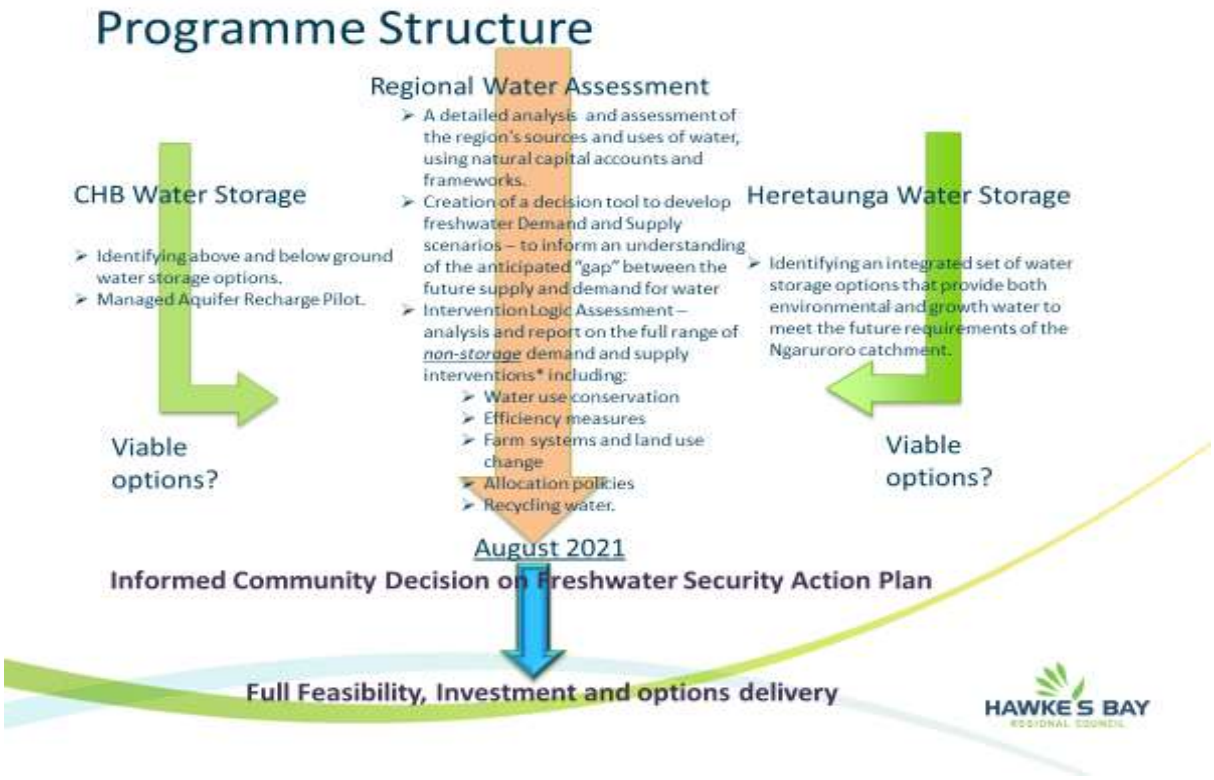
Water Security Programme - Recap

8. At a strategic level, the ambition of the Regional Water Security Programme is to deliver freshwater supply and demand solutions/interventions to ensure the sustainable management of this most critical resource. The objective of the programme has been defined as ***"Hawke's Bay has long-term, climate resilient and secure supplies of freshwater, for all."***

9. The core of the programme is the HBRC's Regional Water Assessment. This project combines detailed data analysis from across the region and analyses a range of water security options to create a decision-making tool and report that in turn will inform a community engagement process. The broader Hawke's Bay community will be engaged on this report and its recommendations. We intend to hold an informed community conversation to understand community preferences for interventions on both the demand and supply side of the water balance equation.

10. In parallel with the development of the Regional Water Assessment, the project team is investigating and validating a range of viable water storage options that could, if and when appropriate, be advanced through to feasibility and construction alongside the community's preferred non-storage solutions. Based on hydrological studies and the absence of a range of potential above ground storage sites, in the case of CHB we are also exploring the viability of *below-ground* water storage through a Managed Aquifer Recharge Pilot.

11. The structure and approach of the Regional Water Security Programme can best be illustrated as follows.



12. Staff have engaged Wallbridge Gilbert Aztec, who specialise in groundwater replenishment hydrology and engineering projects, to support an ambitious work programme to establish a full MAR site as a field pilot within the next 12 months.

13. Establishment of a MAR site is technically, politically, and culturally complex and involves much of the same activity to establish any other storage site including technical identification and verification of site, environmental assessment and consent processes. A key focus of the field trial is to not only test the technical viability and effectiveness of MAR to replenish the aquifer and "add more water to the system" but also to confirm social license to operate.

14. The project has been progressing technical investigations to identify promising areas to establish a potential MAR site. Staff are commencing engagement with selected groups and iwi to gauge their support and concerns. This represents the critical path, as whilst it has been used more extensively overseas, it is relatively new to New Zealand and requires community support and acceptance if it is to be a potentially viable option.

Discussion

Tukituki Leaders' Forum

15. The Tukituki Leaders' Forum (TTLF) was established as a joint initiative between CHBDC and HBRC. The forum operates under Terms of Reference which describes its purpose as follows.

    15.1. *"The Forum has been convened to provide community views, perspectives and insights on the options and impacts of Hawke's Bay Regional and Central Hawke's Bay District councils' (The Councils) policies, plans and practices with regard to water, land and infrastructure management in the Tukituki catchment.*

    15.2. *The Forum was formed by invitation from the Chair of the Hawke's Bay Regional Council and Mayor of the Central Hawke's Bay District Council.*

    15.3. *The Forum is an invited group of community leaders who are being asked to think to the future and to provide feedback that influences the Councils' activities relevant to the group's mission statement:*

        15.3.1. *To create a unified approach to enhancing the mauri of the river by improving water quality and security through proactive land and water management in the Tukituki catchment.*

    15.4. *The Forum is not a decision making group and are not able to direct Council resources nor write or change Council policy. Instead, the group will meet regularly and form an important reference and feedback panel for Council activities with respect to water, land and infrastructure management in the Tukituki catchment.*

    15.5. *The Forum will consider and discuss issues to ensure that local iwi/hapu, community and primary sector groups are involved and have the opportunity for input and to provide comment on the work of the group."*

16. The group comprises 17 'voting' members with considerable resourcing, attendance and support being provided by both Councils. The ToR records the following position statement in relation to membership:

    16.1. *"As a community leaders' Forum, members are expected to convey ideas and perspectives from their wider community networks. However, the views expressed by members will be assumed to be their own and not attributed to any group. As the Forum is not a decision making body no attribution of views is required."*

17. In anticipation of the formal execution of the CHB Water Security Project funding agreements with the PGF, on 13 February HBRC presented an outline of the project to a CHBDC councillor workshop. It was CHBDC's firm view that the CHB project be initially worked up with the TTLF and that a preferred independent facilitator be engaged to direct this work. As a result of that workshop, members of the water security project attended a meeting of the TTLF on 18 February where an overview of the Water Security Programme was provided and the forum's consent to incorporate water security into its own work was sought and granted.

18. An independent facilitator, Catalyze APAC Ltd, was engaged on the basis of its expertise in an approach to structured decision making known as 'Multi Criteria Decision Analysis' and guided the TTLF through the following steps.

    18.1. agree a problem statement

    18.2. develop evaluation criteria for water storage options

    18.3. review a recommended set of desktop water storage options provided by Tonkin and Taylor.

18.4. evaluate the options using Multi Criteria Decision Analysis (MCDA) and Decision Conferencing.

19. The first independently-facilitated session took place online on 28 April with four attended sessions on 12, 19, 26 May and 16 June. A final Options Evaluation Conference took place on 31 July, the results of which will be summarised shortly and are attached.

Tonkin and Taylor CHB Water Storage Assessment

20. Immediately prior to the March Covid-19 lockdown, Tonkin and Taylor (T&T) were engaged to complete an engineering assessment of potential community storage sites for the Ruataniwha Plains. The storage sizes considered were to reflect the required storage volume(s) to maintain current water availability and reliability, and the opportunity to supply additional water ('new' water) where a site appeared to support that.

21. This study considered and built on previous water storage work in the area by HBRC and, specifically, the Ruataniwha Plains prefeasibility studies undertaken by T+T in 2008, 2009 and 2011. While those prefeasibility studies were focused on larger scale community storage schemes to service increased water demand and development on the Ruataniwha Plains, a number of previously considered sites were deemed potentially suitable for smaller community scale storage. These smaller schemes were reassessed against the 2020 Regional Water Security Programme project's objectives and criteria.

22. Specifically, T&T's brief was to identify and provide a high level assessment of potential water storage sites to release water into the Tukituki River and its main tributaries across the Ruataniwha Plains (i.e. Mangaonuku Stream, and the Waipawa, Tukipo and Makaretu rivers) to meet the following objectives.

    22.1. Provide current consent holders with a more secure and reliable water supply that reduces the likelihood and severity of minimum flow restrictions (as set by the operative Plan Change 6).

    22.2. Support stream flows sufficient to protect water dependent ecosystems and improve the overall health of the Tukituki catchment's waterways.

    22.3. Identify and deliver a means of providing 'new' water to the catchment sufficient to:

        22.3.1. Promote community and iwi well-being through improved access to a new allocation of water available at times of high and medium flow.

        22.3.2. Support the region's economic growth and resilience to changing climatic/economic environments.

23. It is important to note that T&T's approach was to assess and rank potential sites on typical technical engineering considerations for water storage projects. Non-engineering criteria were to be developed and assessed by the TTLF. In addition to a TTLF workshop presentation in June, the final report was provided to forum members prior to the 31 July Evaluation conference. The report was provided in-confidence on the basis that potentially affected landowners had not been advised of the report's initial findings.

24. However, based on staff's recommendation that no site is investigated further at this stage the full report is attached for reference.

Options Evaluation Conference 31 July 2020

25. Guided by T&T's engineering-focussed desktop analysis, the evaluation conference 'bench-tested' decision criteria for CHB water storage developed and agreed by the TTLF and reproduced here (see section 4.4. of Appendix A in the T&T report).

Criterion	Description
Environmental impact	The extent to which the option creates negative impacts on the environment within the catchment area, because of the facilities created and areas downstream from the storage facility(ies). This criteria excludes any consideration of land use impacts from the use of the stored water.
Environmental benefits	The extent to which the option creates positive impacts to the environment within the catchment area. Considerations include (amongst others) benefits to surface and groundwater, the creation of habitat, the extent to which the option fosters biodiversity, and the extent to which the options benefits the mauri of the river(s).
Social Benefits	The extent to which the option provides social benefits such as access to healthy drinking water and other community benefits, including those specifically applicable to Maori (Tikanga and mahinga kai)[1]
Supply Certainty Benefits	The certainty that the storage will be filled. This includes consideration of the probability of recharge both now and in the face of climate change.
Economic Benefits	The extent to which the option provides economic benefits. This includes both consideration of the amount of economic benefit created and the diversity of the economic benefits.
Future Proofing	The extent to which the option is adaptable, will be sustainable and resilient to environmental catastrophes such as earthquakes and other natural events that could impact its continued operation.
Establishment Risks	The extent to which the option is exposed to risks in its establishment
Ongoing Risks	The extent to which the option is exposed to risks in its on-going operation. This excludes risks associated with natural events which are considered under future proofing.

26. Considerable thought was given as to the inclusion or exclusion of the original RWSS Makaroro site (A7) for the purpose of the exercise. This site presented a theoretically viable option denoted A7 (19) – namely a 19m m3 “low dam” option that did not impinge on the DoC land that the Supreme Court effectively excised from the RWSS project.

27. In addition, the TTLF facilitator was of the view that the time and effort invested in conducting an Evaluation Conference is relatively significant compared to the incremental time in evaluating an additional option. It was felt the advantage of comparing A7(90Mm3) as a hypothetical option against other options is it enabled Forum members and other stakeholders to understand how A7(90Mm3) would compare if it were possible to construct and fill it. Noting that several of the shortlisted sites were only theoretically viable but needed to survive technical, environmental, economic and social thresholds before becoming “real” options, the decision was taken by the Forum to include the original 90m m3 site – A7 (90) – in the interests of thoroughly testing the evaluation criteria.

28. The appended report provides a full account of the process and outcomes. Importantly, the facilitator concluded that the criteria held up well to the exercise and that the results indicated that the criteria were consistently applied and provided stable results. The report has this to say (pg 27).

[1] Tikanga relates to spiritual, cultural and social values while mahinga kai is customary food harvesting traditions and practices.

1.1.1 Overall Preferences

The overall preferences, all criteria being considered, show us the following results.

The criteria in the list below drive the overall results because of the differences in how options perform against these criteria and the Forum's preferences for those differences (the order is from highest weight to lowest weight):

Environmental Benefits

(reducing) Environmental Impacts

Future Proofing

Economic Benefits.

The Forum weighed the benefits and risk (minimisation) significantly greater than the costs.

Overall, the Forum preferred options with more stored water than those with less – the one exception being the Ongaonga site (where sites with lower volumes were still preferred over Ongaonga). There is also a definite preference for certain sites based on location. We see this through a significant difference in preferences between sites which both have the same volume of water.

29. Ultimately, the conference identified the A7 (90) RWSS Makaroro site or a combination of two other sites, M5 and C2 (with a combined storage total of 21m m3) as the sites that performed best against the group's evaluation criteria.

30. As a part of T&T's brief, a separate assessment of the indicative costs of building the shortlisted sites was prepared before the conference but was not shared with the group members for the purposes of the conference. The reason this information was not tabled was to avoid the overwhelming tendency of cost considerations to anchor or crowd out the consideration and assessment of the qualitative criteria developed by the group and thereby distract from the main purpose of the exercise. The Evaluation Conference was designed to elicit the preferences of the TTLF for many different dimensions of value (benefits) that the different options might offer as expressed through the criteria.

Options Assessment

31. Through HBRC's Managed Aquifer Recharge Pilot study and the Regional Water Assessment staff are continuing to progress initiatives that, collectively with this project, aims to provide the community and decision makers with a broad range of interventions and solutions that can underwrite water security for the CHB community.

32. Any assessment of above ground water storage options in CHB was likely to cover ground already traversed extensively through the RWSS project. While this project sought to identify other smaller scale sites that could operate to provide either environmental objectives by enhancing or maintaining summer flows and/or modest growth and resilience opportunities for extractive use, T&T's analysis ultimately confirmed earlier conclusions around the technical and financial constraints of attempting to build medium-scale storage sites on the Ruataniwha plains area.

33. This process has highlighted the unique and significant challenges for establishing water storage in a catchment with combined elements of a low ratepayer and a narrow extractive water user base. These pre-conditions make it challenging to spread or recover the lifetime cost of an expensive, small to medium scale storage facility that provides predominantly environmental flows (with perhaps modest growth water). By contrast, the RWSS adopted the following logic: the most favourable water storage site from an engineering perspective was also the most efficient site from a volume perspective, which in turn provided the opportunity to create additional growth water via a visible commercial model that ultimately funded the site. With this as context, while HBRC is not revisiting the original RWSS, both because of previous Court rulings and PGF funding conditions, HBRC also understands that the many in CHB community see value in exploring what options may exist to progress the Makaroro site (as opposed to

original scheme in its entirety), within a framework that provides sufficient benefit to all stakeholders.

34. Staff are tasked with providing Committee members with recommendations as to sites suitable for further assessment by way of a business case for a pre-feasibility study. Ultimately, based on current information, we are unable to make any such recommendation. The table below identifies the major constraints associated with each option that sat outside of the TTLF assessment criteria.

Site	Conference Ranking	Constraint(s)
M4 Addis Rd (2Mm3)	**6**	Build and distribution cost
M4 Addis Rd (8Mm3)	**7**	Build and distribution cost
M5 Mangamate Stream (8Mm3)	**5**	Build and distribution cost
B2 Ongaonga (13Mm3)	**8**	Build and distribution cost
C2 Sherwood (13Mm3)	**4**	Build and distribution cost
A7(19Mm3) Makaroro	**3**	Build and distribution cost PGF funding prohibition on material reinstatement of RWSS
A7(90Mm3) Makaroro	**1**	Legal prohibition on access to DoC Land PGF funding prohibition on storage above 20m m3 in one site. PGF funding prohibition on material reinstatement of RWSS
Mixed site:M5+C2 (21Mm3)	**2**	Build cost

35. Based on the information we have at this time staff cannot therefore make a recommendation to commit any site(s) to a business case for prefeasibility. Based on T&T's high level costs assessments, even if they were technically viable, the smaller sites on their own are extremely unlikely to meet current cost-benefit criteria based on factors such as the cost to build, the cost to distribute water to the place of need, or both. Staff do believe that further work needs to be done on the cost-benefit analysis of sub-medium scale storage in the Ruataniwha catchment. There are other examples nationally (the proposed Waimea Dam in the Tasman district, for example) that might offer insights and information that could be relevant to the fresh water sources and use profile of the Ruataniwha catchment.

36. The A7 site is subject to challenges and constraints that are beyond the influence of staff and that can only be overcome by a change of policy and political will at a national level. In the meantime, staff continue to operate in the framework set down by the PGF under its funding agreements, i.e. that the project *"must not involve the reinstatement of any material aspect of the Ruataniwha water storage and reticulation project."*

37. Nonetheless, in the face of climate change and demand pressures, CHB water security remains of critical importance to the district and the region and it is premature to rule out water storage as forming a part of a suite of future-proofing solutions. Accordingly, staff do recommend the following actions.

    37.1. Temporarily suspend any further investigations or assessment of above-ground water storage sites (as shortlisted by T&T) pending the earlier of:

        37.1.1. further analysis of the costs and benefits of smaller scale storage, and

        37.1.2. the outcome of the Managed Aquifer Recharge Pilot Study.

    37.2. Urgently progress the Managed Aquifer Recharge Pilot, including comprehensive engagement with iwi, landowners and the wider community on all aspects of the proposed pilot.

37.3. Further engage with the CHB community through the Regional Water Assessment project to develop broader non-storage policy solutions and interventions for achieving water security in that District.

Strategic Fit

38. Climate change will impact our freshwater systems in many ways and a transition to more extreme drought-flooding hydrological patterns could have profound consequences for freshwater ecosystems, and severe social and economic impacts. The effects of higher temperatures, declining precipitation and more frequent extremes will have implications not only for land and water management, but also community resilience and well-being

39. That HBRC carries the highest level of responsibility for meeting this challenge in this region is reflected in the significance of its resourcing dedicated to improving freshwater quality and quantity, which is in turn driven by its statutory obligations under legislation, national direction and regulation. A qualitative analysis of the Strategic Plan demonstrates that over 50% of the organisations 23 Strategic Goals are directly linked to freshwater objectives. A similar exercise for the Long Term Plan identifies approximately 35% of HBRC's 48 core function Level of Service Measures as contributing to and resourcing improved freshwater outcomes.

Climate Change Considerations

40. MfE's National Climate Change Risk Assessment for New Zealand (NCCRA), (https://www.mfe.govt.nz/publications/climate-change/national-climate-change-risk-assessment-new-zealand-main-report) published in August of this year, identifies the risk to freshwater water supplies as being central to the most extreme risk – *"Risk to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise".* Specific reference is made that "[r]ural water supplies are also sensitive to climate change hazards, particularly where reticulated systems are limited or absent."

41. The NCCRA categorised the following as priority risks for the Natural Environment domain.

41.1. N3 - Risks to riverine ecosystems and species from alterations in the volume and variability of water flow, increased water temperatures, and more dynamic morphology (erosion and deposition), due to changes in rainfall and temperature;

41.2. N4 - Risks to wetland ecosystems and species, particularly in eastern and northern parts of New Zealand from reduced moisture status, due to reduced rainfall;

41.3. N7 - Risks to terrestrial, freshwater and marine ecosystems, due to increased extreme weather events, drought and fire weather.

42. The NCCRA records, among others, the following Human Domain risks.

42.1. H2 - Risks of exacerbating existing inequities and creating new and additional inequities, due to differential distribution of climate change impacts;

42.2. H3 - Risks to physical health from exposure to storm events, heatwaves, vector-borne and zoonotic diseases, water availability and resource quality and accessibility, due to changes in temperature, rainfall and extreme weather events;

42.3. H4 - Risks of conflict, disruption and loss of trust in government from changing patterns in the value of assets and competition for access to scarce resources, primarily due to extreme weather events and ongoing sea-level r

42.4. H6 - Risks to Māori social, cultural, spiritual and economic wellbeing from loss of species and biodiversity, due to greater climate variability and ongoing sea-level rise;

43. The NCCRA records, among others, the following Economy Domain risks.

    43.1. E3 - Risks to land-based primary sector productivity and output due to changing precipitation and water availability, temperature, seasonality, climate extremes and the distribution of invasive species.

44. Climate change will impact our freshwater systems in many ways and a transition to more extreme drought-flooding hydrological patters could have profound consequences for freshwater ecosystems, and severe social and economic impacts. The effects of higher temperatures, declining precipitation and more frequent extremes will have implications not only for land and water management, but also community resilience and well-being.

45. It is safe to say that we expect more extremes, which includes becoming more drought prone and more severe rainfall events leading to flooding, and this impacts the reliability and quality of the region's water resources. We expect temperatures to increase in our lakes, rivers and streams which will affect the freshwater ecology.

Considerations of Tangata Whenua

46. The Provincial Development Unit's position paper "Water Storage and the Provincial Growth Fund" includes the following statement under the heading "PGF Investment Principles"

    46.1. ***Māori land development****: Projects will be prioritised that support Māori to achieve higher returns from their land by addressing access to water. There are catchments where Māori have undeveloped land but low levels of access to water, which creates a barrier to Māori land development. A comparison of Kerikeri and Kaikohe illustrates the issues, where differences in levels of water storage and Māori ownership of land drive very different land prices and economic returns between the two towns. In parts of Northland and East Coast, Māori communities lack water as a key enabler of development.*

47. HBRC's applications to the PGF specifically references the opportunities for these projects to contribute to Māori.

48. It is well understood that higher temperatures and declining rainfall may reduce water availability, while demand for water is likely to increase. Freshwater resources also have significant cultural significance for Māori. Shading along riverbanks, stream flow and water quality have effects on aquatic habitats which support mahinga kai – food gathering – which is highly valued.

Financial and Resource Implications

49. The recommendations are aligned with existing LTP and PGF funded commitments and do not require a departure or variation to programmed workstreams.

Decision Making Process

50. Council and its committees are required to make every decision in accordance with the requirements of the Local Government Act 2002 (the Act). Staff have assessed the requirements in relation to this item and have concluded:

    50.1. The decision does not significantly alter the service provision or affect a strategic asset, nor is it inconsistent with an existing policy or plan.

    50.2. The use of the special consultative procedure is not prescribed by legislation.

    50.3. The decision is not significant under the criteria contained in Council's adopted Significance and Engagement Policy.

    50.4. The persons affected by this decision are all persons with an interest in the region's management of natural and physical resources under the RMA.

    50.5. Given the nature and significance of the issue to be considered and decided, and also the persons likely to be affected by, or have an interest in the decisions made, Council can exercise its discretion and make a decision without consulting directly with the community or others having an interest in the decision.

Recommendations

1. That the Corporate and Strategic Committee receives and considers the "*Regional Water Security Programme – CHB Project*" staff report.
2. The Corporate and Strategic Committee recommends that Hawke's Bay Regional Council:
   - 2.1. Agrees that the decisions to be made are not significant under the criteria contained in Council's adopted Significance and Engagement Policy, and that Council can exercise its discretion and make decisions on this issue without conferring directly with the community or persons likely to have an interest in the decision.
   - 2.2. temporarily suspends any further investigations or assessment of above-ground water storage sites (as shortlisted by T&T) pending the earlier of:
     - 2.2.1.1. further analysis of the costs and benefits of smaller scale storage, and
     - 2.2.1.2. the outcome of the Managed Aquifer Recharge Pilot Study.
   - 2.3. urgently progresses the Managed Aquifer Recharge Pilot, including comprehensive engagement with iwi, landowners and the wider community on all aspects of the proposed pilot.
   - 2.4. further engages with the CHB community through the Regional Water Assessment project to develop broader non-storage policy solutions and interventions for achieving water security in that District.

Authored by:

Tom Skerman
ACTING MANAGER REGIONAL WATER SECURITY

Approved by:

Tom Skerman
ACTING MANAGER REGIONAL WATER SECURITY

Attachment/s

⇩**1** Catalyze August 2020 CHB Water Storage Options Evaluation Report

⇩**2** August 2020 Tonkin + Taylor CHB Water Security Project - Stage 1 Water Storage Options Assessment

CATALYZE
Clarity. Confidence. Decisions.

CENTRAL HAWKE'S BAY WATER STORAGE

Report on Evaluation of Dam Storage Options

Document Reference: HBRC 200801 | Version 3 | August 2020

Completed by: **Edward Poot**

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Purpose

This report records the work undertaken by Catalyze in support of the Hawke's Bay Regional Council and their Central Hawke's Bay Water Storage Project. It outlines the process and the evaluation of dam storage options considered by the Tukituki Leader's Forum.

Review

Prepared by:	Edward Poot	August 2020
Reviewed by:	Paul Gordon and Shona Bernard Chandler	August 2020

Distribution

Name	Copies
Catalyze E-files for HBRC	1 Electronic Copy
HBRC	E-copy to Tom Skerman and Project Manager

Revision table

Version	Date	Notes
1	19/8/2020	Draft of results
2	19/8/2020	Complete draft
3	24/8/2020	Final Report

Contents

Tables and Figures

1. Executive Summary

1.1. Context

The Hawke's Bay Regional Council (HBRC) is concerned that climate change and freshwater demand pressures will progressively result in less water, or more volatile water supplies. These pressures will create a need to prioritise environmental and ecosystem requirements and will result in the absence of an agreed set of interventions/solutions and severely compromised water security for extractive use and other community needs.

As a part of its broader Provincial Growth Fund-funded Regional Water Security Programme, HBRC has therefore established the Central Hawke's Bay Water Security Project to identify and assess viable option(s) to mitigate the impacts on groundwater levels resulting from groundwater abstraction and to deliver "new" water to build resilience in the face of a changing climate and for smart growth. This project is one of a range of interventions by HBRC to deliver a more certain freshwater future.

1.2. Process

Catalyze was engaged by HBRC at the recommendation of Central Hawke's Bay District Council (CHBDC). Catalyze supported HBRC with the development of a co-created process to evaluate a range of water storage options using dams. The process was intended to inform what, if any, water storage options using dams, should be taken to through a pre-feasibility stage. Options for Managed Aquifer Recharge could not be evaluated at this time due to the need for trial work to assess the viability of MAR in the Central Hawke's Bay.

The process involved a series of workshops over a four-month period with the Tukituki Leaders' Forum to:

- agree a problem statement
- develop evaluation criteria for water storage options
- review a recommended set of options provided by Tonkin and Taylor
- evaluate the options using Multi Criteria Decision Analysis (MCDA) and Decision Conferencing

1.3. Options

Tonkin and Taylor created a long list of options which underwent a desktop technical evalaution to generate a short-list of recommend options. This list was modified by HBRC following advice from Catalyze and the following list of eight options, with thier associated volumes in brackets, was considered by an MCDA Evaluation Conference held on 31 July 2020.

- M4 Addis Rd (2Mm^3)
- M4 Addis Rd (8Mm^3)
- M5 Mangamate Stream (8Mm^3)
- B2 Ongaonga (13Mm^3)
- C2 Sherwood (13Mm^3)
- A7(19Mm^3) Makaroro

- A7(90Mm^3) Makaroro
- Mixed site: M5+C2 (21Mm^3)

1.4. Overall Results

Figure 1 shows the overall preferences of the Forum for each site and volume combination. If A7 (90Mm^3) is taken out of the results, the remainder of the graphic is unchanged. The most-preferred option is indicated by the tallest bar.

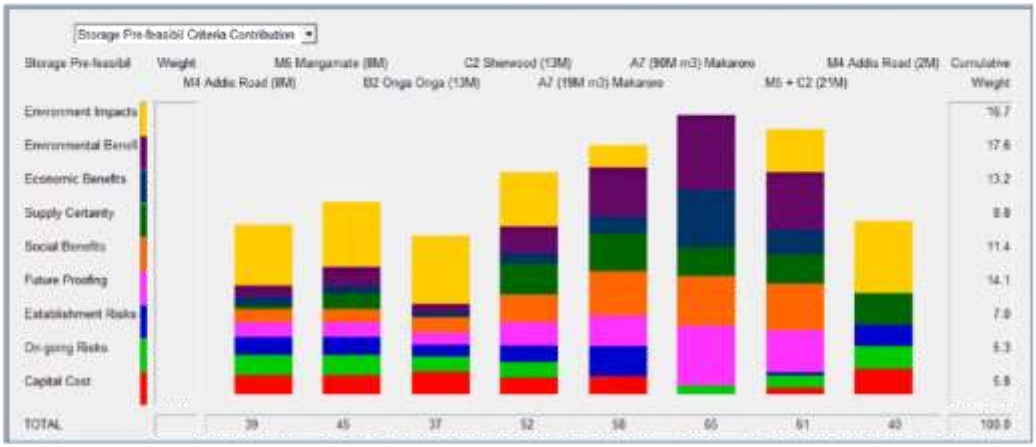


Figure 1: Overall Results - Criteria Contribution for each option

What we learned from the detailed results and analysis follows.

The overall preferences for the options are the result of the differences in how options perform against the criteria listed below and the Forum's preferences for those differences (the order is from highest weight to lowest weight):

- Environmental Benefits
- (reducing) Environmental Impacts
- Future Proofing
- Economic Benefits.

The Forum weighted the benefits and risk (minimisation) significantly greater than the costs.

Overall, the Forum preferred options with more stored water than those with less. There is also a definite preference for certain sites based on location, in part because of what the site offers in terms of its capacity for storage and in part because of the benefits that certain sites provide in making water accessible to different areas in the catchment both in terms of supply certainty and in terms of the resulting environmental benefits.

Overall, the most promising sites from this evaluation appear to be:

- A7(90Mm^3) Makaroro
- Mixed site: M5+C2 (21Mm^3)

The reason the 'mixed site' performed so well, relative to other options, was the fact that it provided water at each 'end' of the catchment.

Sites at M4 Addis Rd (both the 2Mm^3 and 8Mm^3 options) and B2 Ongaonga (13Mm^3) were the least preferred from a wide range of perspectives. The analysis suggests that these options are not worth further consideration in pre-feasibility.

The results are generally stable as indicated by the fact that alternative scores and weights would not change the outcomes outlined above.

The results from the analysis in this report suggest they are requisite for the purpose for which they were originally intended - informing what options, if any, might be considered for further investigation in pre-feasibility.

Our view is that the results align with the discussion in the room at the Evaluation Conference, and therefore reflect the preferences of the Tukituki Leaders' Forum at the time of the Evaluation Conference.

2. Background

2.1. Context

From 2013 to 2016, the Hawke's Bay Regional Council (HBRC) sought to consent the Ruataniwha Water Storage Scheme (RWSS) as part of the overall Tukituki Catchment Proposal, which would have built a dam with 90Mm^3 of storage. A decision by the Supreme Court decision overturned the Department of Conservation's land-swap agreements and thereby ruled out the development of a 90Mm³ storage dam on the consented Makaroro site.

Since then planned changes in Plan Change 6 (PC6) have come into force. PC6 requires more water to be retained in the environment. The situation has been bought into stark relief in 2020 by an extremely dry period and at the same time, that the overwhelming body of expert opinion is projecting a more volatile and drier climate into the future.

HBRC has recognised that progressively less water will be available for extractive use, particularly for irrigation and industrial use.

HBRC decided that in a post-RWSS world, with stronger environmental limits and bottom lines, the status quo (or a "do nothing" approach) is not viable. HBRC has therefore established the Central Hawke's Bay Water Security Project to identify and assess viable option(s) to:

1. To mitigate the impacts of declining groundwater levels resulting from groundwater abstraction and as a result to:

- provide existing consent holders confidence of a secure and reliable water supply to sustain their current level of investment
- stabilise and recover the aquifer system to protect ground water dependent ecosystems and improve the overall health of our waterways
- maintain higher surface water 'base flows' and wetland/lake levels across the Ruataniwha Basin.

2. Additionally, the solution aims to deliver "new" water to":

- allow issuing of new consents to support smart growth to continue to contribute to diversifying the region and reducing economic risk; and
- provide reliable access to a level of water necessary to build resilience in a changing climate a sustainable supply to the community both now and anticipated for the future.

This project is one of a range of interventions by HBRC to deliver a more certain freshwater future as part of its broader Provincial Growth Fund-funded Regional Water Security Programme.

Catalyze was approached by HBRC in January 2020, at the recommendation of Central Hawke's Bay District Council (CHBDC). Following further engagement with CHBDC, Catalyze was subsequently engaged to assist HBRC in the development and delivery of a process to evaluate water storage options as part of pre-feasibility work for the project. This report covers our work in support of the project. The aim of our work was to assist HBRC to determine which, if any, of the water storage options using dams should be taken to the pre-feasibility stage of the project.

2.2. Tukituki Leaders' Forum

The Tukituki Leaders' Forum was convened by HBRC and CHBDC to provide community views, perspectives and insights on the options and impacts of Hawke's Bay Regional and Central Hawke's Bay District councils policies, plans and practices with regard to water, land and infrastructure management in the Tukituki catchment.[1]

The Tukituki Leaders therefore provided a suitable group of Iwi and other community leaders which could be actively involved in the process which follows.

2.3. Why this approach?

Comparing the value proposition of the range of water storage options could be complex. There are many variables, risks, and benefits that cannot be expressed in dollar terms, particularly at the early stages of the project.

HBRC therefore decided to engage Catalyze to design and facilitate a robust assessment of the Capability Mix Options, employing a decision-making methodology known as Multi Criteria Decision Analysis (MCDA) using Decision Conferencing.

MCDA using Decision Conferencing has been used with Catalyze's assistance on a number of major acquisition projects across Defence, the New Zealand Intelligence Community and the wider public sector. Catalyze's work is known to the Treasury and has contributed to the success of many business cases when considered by Cabinet.

MCDA is an approach and a set of techniques, with the goal of providing an overall ordering of options from the most preferred to the least preferred. The advantages of MCDA are that it:

- helps evaluators focus on the value provided and to maximise value for money through use of a theoretically sound approach for assessing preferences and understanding the relative importance of those preferences
- provides a way of looking at complex problems with mixed monetary and non-monetary objectives (hard/soft)
- allows the problem to be broken into manageable pieces, and then be reassembled into a whole again
- enables 'apples and oranges' to be compared using a common metric of value
- helps maximise value from limited resources
- provides an audit trail
- serves as an aid to decision-making (but people make the decision)

Decision Conferencing is both a technical and a social process with the following functions:

- The technical process (MCDA and its supporting software tools):
  - supports the social process
  - provides real-time modelling
  - conforms to the axioms of decision theory
  - allows us to perform sensitivity and robustness analysis

[1] Tukituki Leaders Forum Terms of Reference 2020.

    - acts as a knowledge repository or 'corporate memory'
- The social (group) process enables the group to:
    - establish a shared understanding of project issues
    - develop a sense of common purpose
    - understand different perspectives and objectives
    - gain agreement and commitment to the way forward from those implementing the decisions

More information about MCDA and Decision Conferencing for Options Analysis is included at Annex A.

3. Process

3.1. Process design

Catalyze works with clients to develop a decision support process that will meet the needs of the client and the challenges that they face. We typically tailor what we know works well so that we can leverage our experience while making sure it is well suited to the client's specific context.

Our processes are designed based on the following underlying principles:

- process before content
- active Iwi and stakeholder[2] participation
- tangible and intangible value
- academic rigour.

In addition, we seek to make all our work highly transparent and auditable, to provide both participants and decision-makers with confidence and clarity in the decisions.

In this engagement the process design started with a discussion with HBRC. A virtual workshop, using Zoom, was then held to explore what process might work well for members of the Tukituki Leader's Forum. The workshop first looked at the 'Problem Statement' before moving onto looking at process design. Input was captured on a whiteboard and a draft design was recirculated to Forum members for feedback.

In designing the process, we were cognisant that Forum members are volunteers and that their time is precious. We therefore sought to minimize the amount of work and preparation that was required out of session and maximise what we could gain from the time the Forum was together in its meetings.

3.2. The process

The process developed is shown in Figure 3 below. The process was based on a series for workshops with the Forum members. Each workshop was followed by offline work by Catalyze prior to playing back the outputs for further feedback. Each step in the process built on the previous.

Key steps in the process followed a typical MCDA using Decision Conferencing approach. A generic approach for MCDA is often presented as in Figure 2.

[2] In our work with decisions, we refer to stakeholders very broadly. In the context of this report, the term stakeholders primarily refers to Tukituki Leader's Forum Members, unless explicitly stated otherwise.

Figure 2: Generic MCDA Process

The key steps below in the Tukituki Leaders' Forum process are numbered in Figure 3 (numbers in brackets in the list below Figure 3).

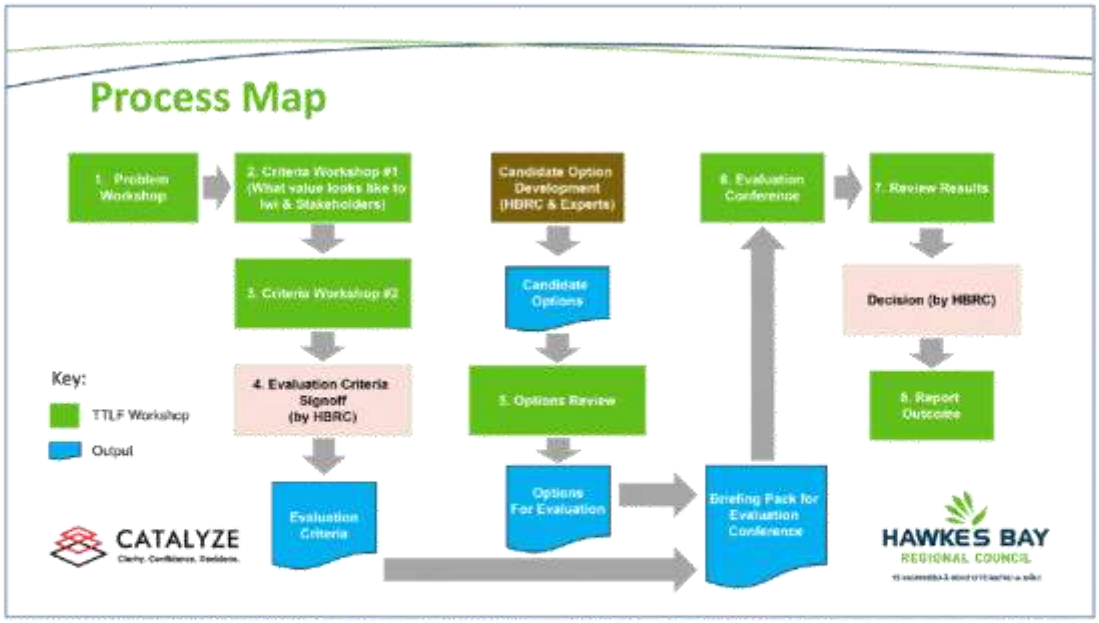


Figure 3: Process Map for Evaluation of Water Storage

- Two criteria development workshops (2. and 3.)

- An options workshop (5.)
- An Evaluation Conference (a form of Decision Conference) (6.)
- A review of the result s with Evaluation Conference participants (7.)

Each of these steps is covered in more detail in the subsequent sections of this report.

3.3. Process Timeline

Meetings were held with Tukituki Leaders on the dates Table 1.

Date	Workshop[3]	Purpose and Scope
28 April	Initial Introduction (by Zoom)	Project Context Brief on Managed Aquifer Recharge (MAR) from Wallbridge Gilbert Aztec (WGA) Introduce Catalyze and initial discussion on process
12 May	Problem Definition Workshop (by Zoom)	Present problem definition, set expectations and explore possible process designs
19 May	Criteria Workshop 1 (by Zoom)	Development of criteria headlines and ideas to support development of descriptions Update Problem Statement
26 May	Criteria Workshop 2	Further development of criteria Final update to Problem Statement
16 June	Options Review Workshop	Briefing to participants on options Reflection/feedback on draft criteria
31 July	Evaluation Conference	Evaluate the options against the criteria
7 August	Brief back (by Zoom)	Brief Evaluation Conference preliminary results to Evaluators

Table 1: Meeting Dates, Purpose and Scope

3.4. Problem Statement

Tukituki Leaders wanted a clear problem statement. The HBRC Project Team therefore created a first draft for consideration by the Forum members. This initial draft is in Figure 4 below.

[3] COVID 19 meant that the anticipated process had to be switched from in person to virtual, using Zoom, to accommodate the restrictions during lockdown. Meetings held virtually are annotated. The final 1 hour brief-back was also held by Zoom for efficiency reasons for all participants.

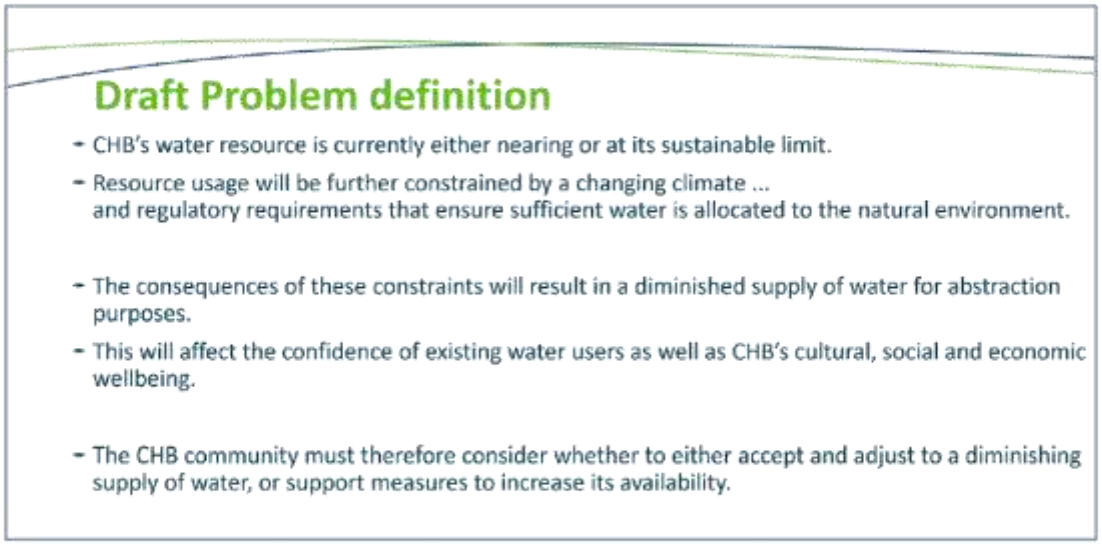


Figure 4: Draft Problem Statement for Water Storage

After presentation at to the Forum, the draft problem statement went through a series of iterations, based on feedback from Forum members and guidance from HBRC on technical subject matter. The final version of the problem statement is in Figure 5. This is the version of the statement used included with the reference material for the Evaluation Conference.

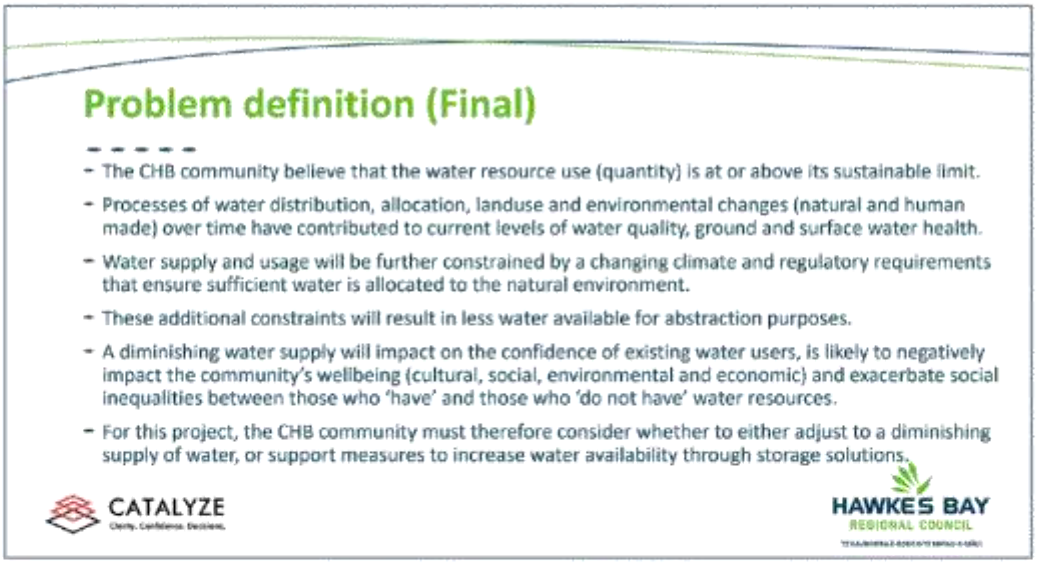


Figure 5: Final Problem Definition

4. Decision Criteria

4.1. Criteria Development Process

Catalyze facilitated two Decision Criteria Workshop to develop a set of Decision Criteria requisite for discriminating different Water Storage Options. The first workshop was conducted via Zoom, due to COVID; the second was conducted with the Forum Leaders in person following conclusion of COVID lockdown. In each case, questions and pre-work were provided to Forum members in advance to assist the value obtained from each workshop and to encourage active participation by all Forum members.

The purpose of the workshops was to understand the different Forum member perspectives first-hand, rather than making (potentially flawed) assumptions about what matters to Forum members.

The workshops developed the key headlines for the benefit and risk criteria that would be used to discriminate the Water Storage Options and the factors to consider in each criterion. These criteria were then worked up in more detail by Catalyze, with feedback and assistance as needed from HBRC.

Once the Options were provided by Tonkin and Taylor, it became apparent that the level of detail needed to effectively evaluate these options would in many cases not be available at this stage of the Water Storage project. It was therefore decided by HBRC, following advice from Catalyze, that we would 'lift' the level of the criteria to be more strategic.

This approach would still enable considerable learning to be achieved by all involved but make it easier to relate the criteria to the options and briefing information provided.

4.2. Value Criteria

In this process we use value-based criteria. 'Value' lies in the domain of outcomes – the 'ends' which result from doing or having something. Value criteria cover both tangible and intangible outcomes. These include not just financial outcomes; they are much wider than that and can cover anything that matters to Forum members.

To put it another way, value relates to 'why'. The assumption is that Forum members generally want something because of the value it provides.

4.3. Criteria Characteristics

In an options analysis, the criteria fall into three categories.

- **Benefits:** the benefit that the option will deliver to stakeholders.
- **Risks**: the risks associated with implementing the option.
- **Costs:** the total cost of establishing the option (Cost data was provided, so the costs criterion was not scored at the Decision Conference, but it was weighted).

In general, it is important that MCDA evaluation criteria are:

- strategic – they are aligned to the stakeholders' strategic objectives
- complete – they cover all the key things which matter to stakeholders which can be influenced by the options

- non-redundant and independent – there is no overlap between the criteria, so benefits are not double-counted
- preference independent – the preference for one criterion is independent of preference for another
- concise – there is a requisite number of criteria for the decision
- specific – they are within the scope of the decision and differentiate the options
- understandable – they can be understood by the stakeholders in the decision process in an unambiguous way.

4.4. Decision Criteria

The final set of criteria evaluated at the Conference were as detailed in Table 2 (below). These were a roll-up of the more detailed criteria detailed in Annex B. This approach was taken because of the level of detail available for each of the options.

The two environmental criteria were however kept distinct. This was because one criterion talks to benefits (something Forum members on the face of it want) while the other talks to impacts (something Forum members generally want to minimize). This approach enabled us to keep benefits and impacts clearly separated in two separate conversations and assisted distinguishing the preferences for the options, and the underlying reasons.

During the Decision Conference, additional consideration was provided in the Environmental Benefit Criteria for the mauri of the river. Similarly, the social benefits were scored with the additional consideration of the social benefits for Māori.

Criterion	Description
Environmental impact	The extent to which the option creates negative impacts on the environment within the catchment area, because of the facilities created and areas downstream from the storage facility(ies). This criterion excludes any consideration of land use impacts from the use of the stored water.
Environmental benefits	The extent to which the option creates positive impacts to the environment within the catchment area. Considerations include (amongst others) benefits to surface and groundwater, the creation of habitat, the extent to which the option fosters biodiversity, and the extent to which the options benefits the mauri of the river(s).
Social Benefits	The extent to which the option provides social benefits such as access to healthy drinking water and other community benefits, including those specifically applicable to Maori (Tikanga and mahinga kai)[4]

[4] Tikanga relates to spiritual, cultural and social values while mahinga kai is customary food harvesting traditions and practices.

Criterion	Description
Supply Certainty Benefits	The certainty that the storage will be filled. This includes consideration of the probability of recharge both now and in the face of climate change.
Economic Benefits	The extent to which the option provides economic benefits. This includes both consideration of the amount of economic benefit created and the diversity of the economic benefits.
Future Proofing	The extent to which the option is adaptable, will be sustainable and resilient to environmental catastrophes such as earthquakes and other natural events that could impact its continued operation.
Establishment Risks	The extent to which the option is exposed to risks in its establishment
Ongoing Risks	The extent to which the option is exposed to risks in its on-going operation. This excludes risks associated with natural events which are considered under future proofing.

Table 2: Evaluation Conference Decision Criteria

The Criteria are represented in the Criteria 'Value Tree' shown in Figure 6, which follows. The 'Value Tree' acts as a roadmap in conducting the Evaluation Conference and helps make the trade-offs between different criteria explicit.

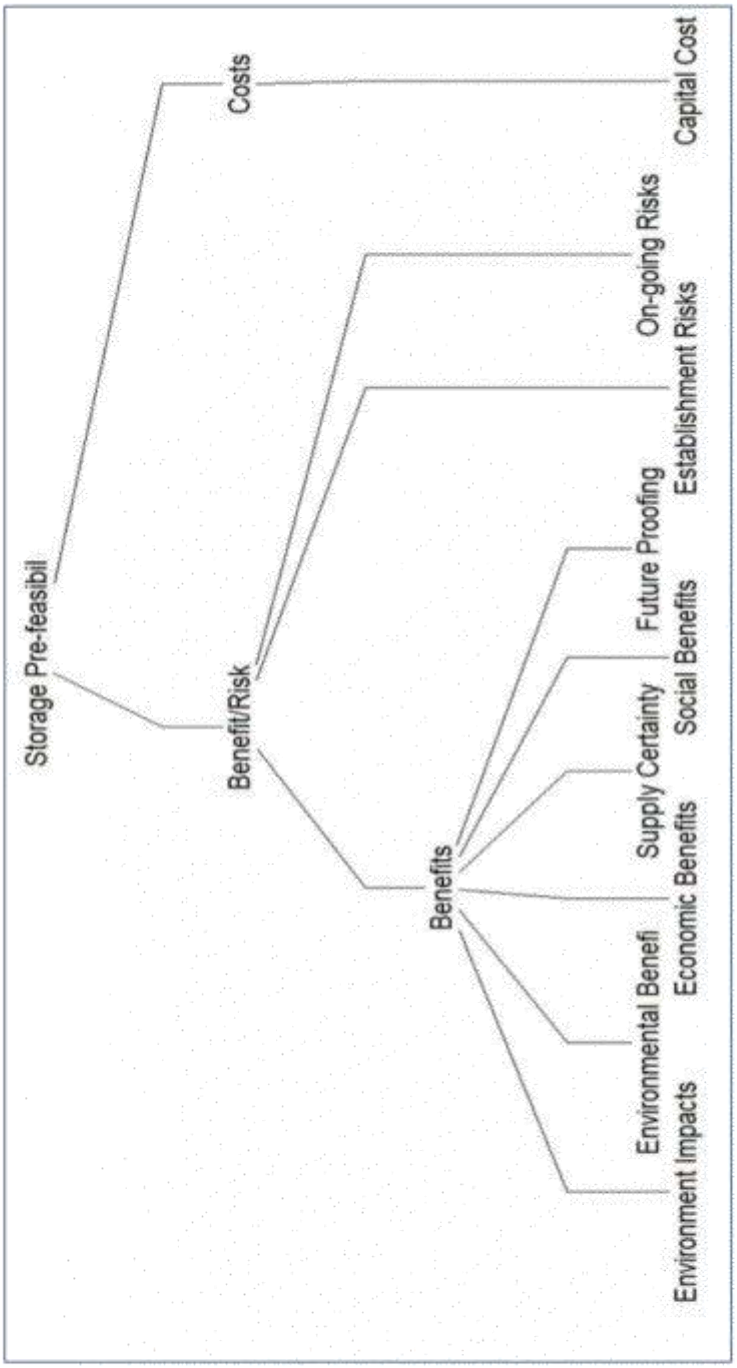


Figure 6: Criteria 'Value Tree'

5. Options Evaluated

5.1. The Options

The HBRC Project Team provided a set of options based on advice from Tonkin and Taylor in thier report *Central Hawke's Bay Water Security Project, Study 1 Preliminary Water Storage Assessment* dated July 2020.

The options that were evaluated are detailed below. Because some sites could be developed with different amounts of storage, it was decided at the Evaluation Conference to evalute both the smaller and largest volume for site M4 Addis Road was evaluated. That is M4 (2Mm^3) and M4 (8Mm^3) were scored as seperate options.

A 'mixed site' consisting of storage dams at both M5 and C2 was also evaluated. The purpose of the 'mixed site' option was to assess whether there are additional benefits when two sites are provided over and above the total benefits of the individual sites (synergy).

The eight options considered at the Evaluation Conference were:

- M4 Addis Rd (2Mm^3)
- M4 Addis Rd (8Mm^3)
- M5 Mangamate Stream (8Mm^3)
- B2 Ongaonga (13Mm^3)
- C2 Sherwood (13Mm^3)
- A7(19Mm^3) Makaroro
- A7(90Mm^3) Makaroro
- Mixed site: M5+C2 (21Mm^3)

A number of Forum members questioned the value of including A7(90Mm^3), given the Supreme Court's ruling in relation to the previous dam option at the site.

Our advice to HBRC and Forum members was that the time and effort invested in conducting an Evaluation Conference is relatively significant compared to the incremental time in evaluating an additional option. The advantage of comparing A7(90Mm^3) as a hypothetical option against other options is it enables Forum members and other stakeholders to understand how A7(90Mm^3) would compare if it were possible to construct and fill it. It also ensures HBRC is well placed to answer questions in the decision-making process about the site and it performance, without needing to reconvene the Evaluation Conference process.

MAR still requires further field trials to determine whether it is viable in the Central Hawke's Bay. MAR options were therefore not included in the evaluation at this stage of the project.

The key parameters for each site are detailed in the following table (Table 3) from the Evaluation Conference briefing material (from the aforementioned Tonkin and Taylor report).

5.2. Option Costs

High-level capital cost estimates were provided by Tonkin and Taylor for each option. These were intentionally not disclosed in detail to the Forum to enable the evaluation conversations to focus on the criteria; most criteria relate to value/benefits and risks. The cost trade-off conversation is covered in Section 6.5.

Storage site		Catchment area (km^2)	Estimated net catchment yield volume (Mm^3/yr)	Storage for current use (to offset flow depletion)			Opportunity/maximum reasonable storage			Distance to harvest source (km)	Distance to release (km)
				Dam height (m)	Dam crest length (m)	Volume (Mm^3)	Dam height (m)	Dam crest length (m)	Volume (Mm^3)		
Waipawa River (including Mangaonuku Stream) (2 to 5 million m^3 storage size for current offset use)											
A7 (high)	Makaroro (RWSS)	111.5	96	Not suited to smaller volumes			81	450	90	N/A	0
A7 (low)							51	275	19	N/A	0
M4	Addis Rd	9.5	3.1	28	380	2	43	615	8	2.5	0
M5	Mangamate Stream	14.2	5.2	34	515	5	38	760	8	1	0
Tukituki River (including Ongaonga and Kahahakuri streams) (3 to 5 million m^3 storage size for current offset use)											
B2	Ongaonga Stream	11.5	2.7	16	640	3	24	750	5.8	1.5	0
Tukituki River (including Tukipo River) (3 to 5 million m^3 storage size for current offset use)											
C2	Sherwood	10.5	3.5	28	620	3	35	870	13	1 to 7	0

Table 3: Key Parameters of Water Storage Sites

6. Prioritising the Options

6.1. Decision Conference Participants

A standard Multi-Criteria Decision Analysis (MCDA) options analysis process was used to analyse the Water Storage Options and determine the Forum's associated preferences for water storage. Catalyze's proprietary tool Hiview3 was used to capture the MCDA model and provide visualisation of the outcomes.

An Evaluation Conference was held on Friday 31 July 2020 at the Waipawa Municipal Theatre, Central Hawkes Bay, with the following participants acting as Evaluators.

Attendees	
Alastair Haliburton	
Mayor Alex Walker	Central Hawkes Bay District Council
Alistair Setter	
Angus Mabin	
Bob Cottrell	
Clint Deckard	
Duncan Holden	
Councillor Jerf Van Beek	Hawkes Bay Regional Council
Hugh Ritchie	
Jesse Friedlander	
Kelly Annand	Central Hawkes Bay District Council
Louise Phillips	
Mike Paku	
Michael Harrison	
Roger Maaka	
Councillor Will Foley	Hawkes Bay Regional Council
Willie White	

Table 4: Evaluators at the Evaluation Conference

The Decision Conference was facilitated by Edward Poot from Catalyze, with Tapio Sorsa, also from Catalyze, providing support.

A number of SMEs from HBRC attended the Evaluation Conference. These and other observers are listed in Annex C.

6.2. Evaluation Conference Process

In the Evaluation Conference, a structured MCDA process was carried out whereby only the 'evaluators' participated in the scoring and weighting discussions, with the subject matter experts providing clarification when sought by the decision makers.

Each option was scored relative to all other storage options, against each criterion in turn. This captured the level of benefit or risk the group determined each option would deliver for each criterion, relative to the other options. This is known as 'relative preference scoring'.

When scoring the options, the group assessed the total benefit or risk that storage option would provide against the criterion, considering the scale and scope of the benefit or risk. The scores agreed by the Forum members represent the combined judgement of all these elements for each criterion.

The criteria were weighted using a process of 'swing weighting'. This captured both the relative significance of the criteria and the relative size of the difference between the best and worst storage option with respect to that criterion.

On completion of scoring and weighting, the group examined outputs from the MCDA Model – shown in the following sections – to see which storage option was preferred for each of the criteria, and what we could learn from the overall preferences of the group.

It is important to note, that at this stage of the process the idea was not to determine the final option for water storage, but to determine from the group's preferences, which options, if any to take forward for further investigation in the pre-feasibility stage.

6.3. Assumptions Made

At the Evaluation Conference a number of assumptions were made to assist the conversation. These were:

1. The each of the options was technically feasible and can be built.[5]
2. The options will be funded by public money.[6]

[5] Forum members was not equipped to decide otherwise, and the options will or will not be determined to be feasible by technical experts in due course. At that point the option will either continue to be an option or not.
[6] For this stage of the process and this level of evaluation the breakdown of the public funding by source is not critical.

6.4. Criteria Weights

Criterion Short Name	Scale Bottom	Scale Top	Relative Weight
Environmental Impacts[7]	A7 (90Mm^3) Makaroro	M4 Addis Road (2Mm^3)	95
Environmental Benefits[8]	M4 Addis Road (2Mm^3)	A7 (90Mm^3) Makaroro	100
Economic Benefits	M4 Addis Road (2Mm^3)	A7 (90Mm^3) Makaroro	75
Supply Certainty	B2 Ongaonga	A7 (90Mm^3) Makaroro	50
Social Benefits	M4 Addis Road (2Mm^3)	A7 (90Mm^3) Makaroro	65
Future Proofing	M4 Addis Road (2Mm^3)	A7 (90Mm^3) Makaroro	80
Establishment Risks	A7 (90Mm^3) Makaroro	A7 (19Mm^3) Makaroro	40
Ongoing Risks	A7 (19Mm^3) Makaroro	M4 Addis Road (2Mm^3)	30
Costs	A7 (90Mm^3) Makaroro	M4 Addis Road (2Mm^3)	33

Table 5: Criteria Weights

Notes:

1. In the Evaluation Conference, the weights were evaluated bottom-up. First, all the benefits were weighted against each other, then the highest weight benefit was weighted against the risk criteria. The weights shown have been automatically scaled as this process proceeded.
2. These weights are swing weights, and therefore must only be considered in the context of the swing ('scale bottom' to 'scale top') of benefit/risk/cost between the options.

6.5. Weighting Rationale for Benefit/Cost Trade-off

Stakeholders often find it hard to grapple with the 'cost vs benefit' trade-off, as represented by the relative weight on Costs compared to Benefits. In this case the trade-off for Forum members was between the difference in Environmental Benefit and the difference in cost between the cheapest and most expensive options from a CAPEX cost perspective.

For the purposes of the trade-off conversation the Facilitator chose to use the figure of $100m as an easy figure for evaluators to grapple with. Once the preference of the Forum was agreed, this was converted to the actual weight by considering the actual difference (swing) in cost between the cheapest and most expensive options.

[7] Environmental impact is 'the preference for the environmental impacts'. The Forum had the strongest preference (scoring highly) for options they assessed to have the lowest environmental impacts. For the detail of the criteria see Section 4.4.

[8] Environmental benefits is the preference for the environmental benefits. The Forum had the strongest preference (scoring highly) for options the Forum assessed as having the greatest benefit to the environment.

The difference in Environmental Benefit was the difference between the environmental benefit that would be obtained by building water storage option A7 (90Mm^3) rather than option M4 (2Mm^3)

Forum members were first asked for their relative preference, which was to have the Environmental Benefit rather than the money (the cost 'saving' from the most expensive to the least expensive option). Forum members were then asked how much money would there need to be before they could not distinguish between the money and the environmental Benefit. The answer to this question was $500M.

If the cost saved scale length was actually $100m, then the figure of $500m tells us the weight should be 20. But since the scale length is actually $166m and the Forum felt the Environmental Benefit was equivalent to $500m, then 166 is 1/3rd of 500 hence the weight of 33. Therefore the benefit and cost weights are:

- **100** on the increase in environmental benefit between building water storage option A7 (90Mm^3) rather than option M4 (2Mm^3)
- **33** on the cost difference between the most least and most expensive water storage options using dams considered by the Forum at the Evaluation Conference.

7. Model Output/Overall Results

7.1. Introduction

The Evaluation Conference is still early in the decision-making process on water storage.

The purpose of the Evaluation Conference was to determine the preferences of Forum members for various opportunities, benefits, risks and costs in water storage options. The aim was to learn as much as possible about what Forum members preferred and what they had a preference against. The set of options was constructed in a way to help elaborate those preferences, rather than being designed to determine 'the option' to progress.

That said, the nature of the evaluation means that we are also able to draw some conclusions about certain sites, in particular those that HBRC might be able to discount from further investigation at this stage of the process.

This section of our report covers the overall results from the 'big picture' to the more detailed. A separate following section goes into the detail of the sensitivity of the results.

7.2. Criterion Contribution

7.2.1. How to read the Criteria Contributions Graphic

The Criteria Contribution graph below (Figure 7) is the most comprehensive view of the overall results. Figure 7 shows the combined, weighted scores of each of the site/dam options including preference for capital costs (i.e. the total 'weighted preference value'). The total weighted preference value for each option is shown underneath the bar (e.g. 61 for the M5+C2 option). The taller the bar the more preferred the option.

For risk criteria, a tall bar means a higher preference for that level of risk (= low risk), while for cost criteria a tall bar means high preference for that cost (= low cost).

The graphic shows relative preference. For any given option, the absence of a coloured segment just means that particular option scored 'least preferred' by the Forum for that criteria i.e. there was zero preference for that option against that criteria.

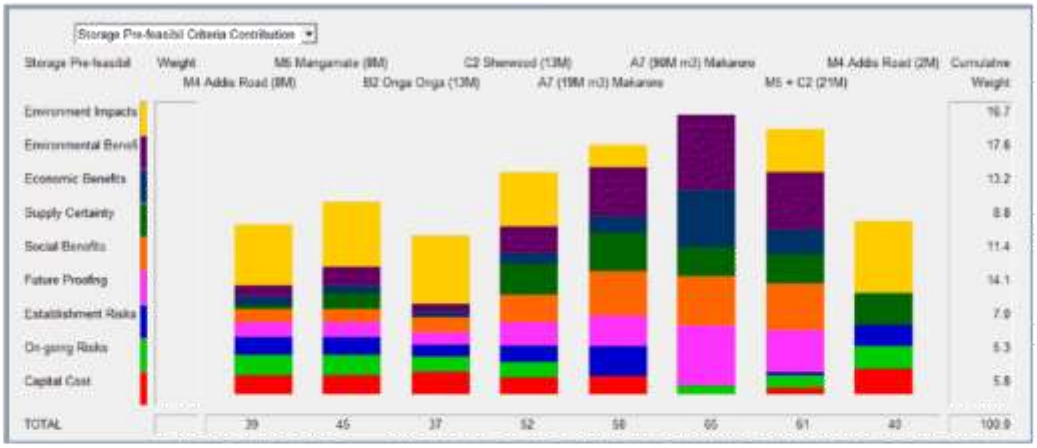


Figure 7: Overall Results for all options

On the right-hand side of the graphic are the total cumulative weights for each criterion as a percentage.

7.2.2. Overall Preferences

The overall preferences, all criteria being considered, show us the following results.

The criteria in the list below drive the overall results because of the differences in how options perform against these criteria and the Forum's preferences for those differences (the order is from highest weight to lowest weight):

- Environmental Benefits
- (reducing) Environmental Impacts
- Future Proofing
- Economic Benefits.

The Forum weighed the benefits and risk (minimisation) significantly greater than the costs.

Overall, the Forum preferred options with more stored water than those with less – the one exception being the Ongaonga site (where sites with lower volumes were still preferred over Ongaonga). There is also a definite preference for certain sites based on location. We see this through a significant difference in preferences between sites which both have the same volume of water.

For example, M4 and M5 both offer an option with 8Mm^3; however, there is a significant difference in preferences for the two sites. A similar result can be noted between B2 and C2. Both B2 and C2 have 13Mm^3 of storage, but significantly different preferences from the Forum. In both examples, the higher performer in the pair, C2 and M5, is preferred in significant part because of the difference between options in their supply certainty and environmental benefits.

Overall, the most promising sites from this evaluation appear to be:

- A7(90Mm^3) Makaroro
- Mixed site: M5+C2 (21Mm^3)

The reason the 'mixed site' performed so well, relative to other options, was the fact that it provided water at each 'end' of the catchment.

7.3. Overall Results excluding A7(90Mm^3)

Because of the issues associated with site A7(90Mm^3) (discussed earlier in this report), we have also included a view of the results when the A7(90Mm^3) option is excluded (Figure 8).

In the context of options evaluation using MCDA that the '3 points' difference in the total preference between M5+C2 and A7(19Mm^3) is significant and should be interpreted as an overall clear preference for M5+C2. However, both M5+C2 and A7(19Mm^3) are significantly preferred over the remainder.

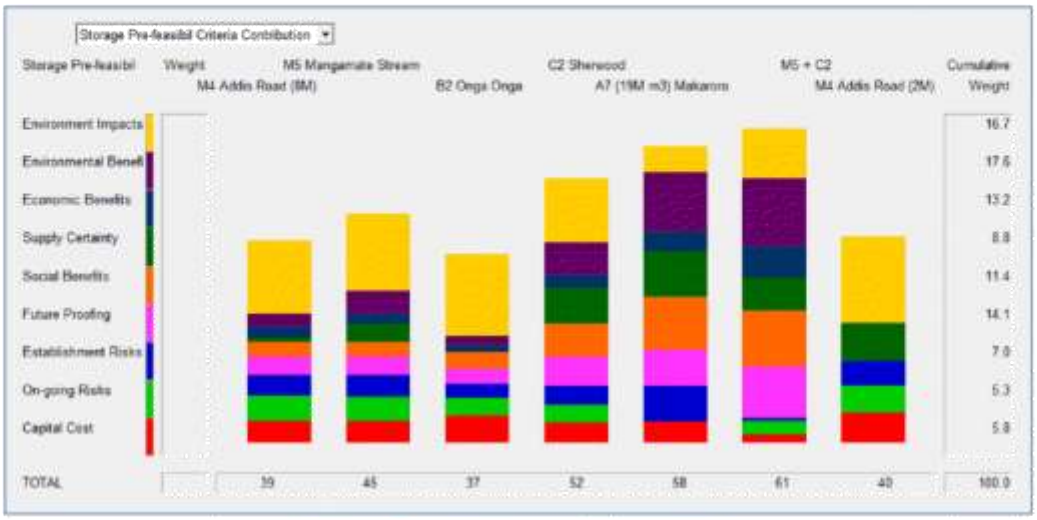


Figure 8: Results Excluding A7 (90Mm^3)

7.4. Benefits only

Putting aside the risks for the moment we can review a picture of the benefits only. Figure 9 shows the benefits only of each option, relative to each other (excludes Risks and Costs).

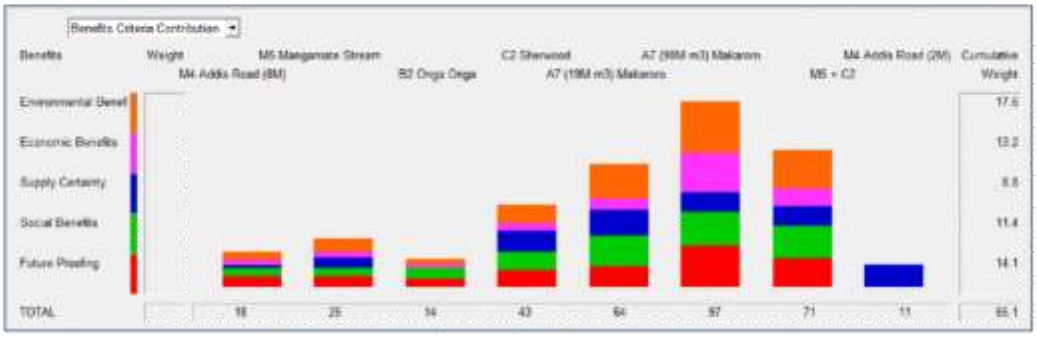


Figure 9: Overall Results - Benefit Only View

Figure 9 shows us that the cumulative benefit from having both M5 and C2, 71 points is signifcantly greater than thier cumulative individual benefits (25+43 points=68 points) (synergy). As noted earlier, this is because the Forum saw additional benefit in having a storage site at each end of the catchment.

7.5. Risks/Impact Only

Figure 10 shows only the preferences for the dimensions that the group wanted to minimize or avoid – risks or environmental impacts. In Figure 10: Risk/Impact Picture taller bars are preferred; these are the options with lower impact or risk.

Scores for establishment risks may be able to be improved by early risk reduction activities.

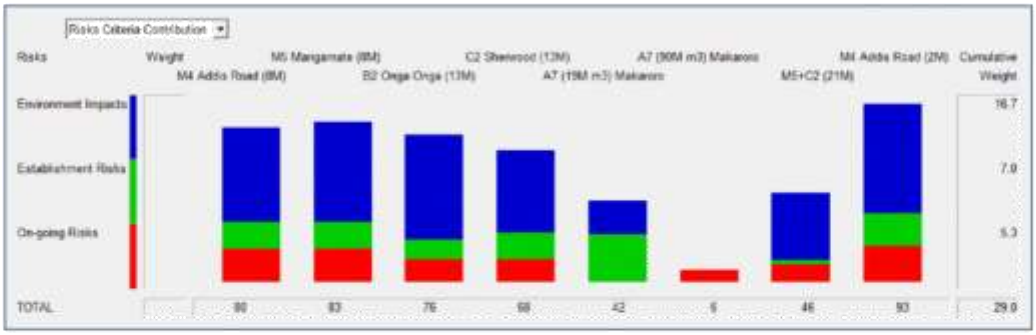


Figure 10: Risk/Impact Picture

7.6. Benefit/Risk Trade-off

Figure 11, next page, shows how options compare for Benefit and Risk (excluding cost). In this graphic the 'Risks' scale is 'preference for risk' i.e. less risky or less environmental impact options are to the right on the risk scale.

Figure 11, shows that the Forum would never opt for options M4 (8Mm^3), B2 or A7(19Mm^3) as there is always an option with better benefits and less risk.

Figure 11, also shows that Option 6 - A7 (90Mm^3) maximises the benefit but has higher risks/impacts than other alternatives. If a lower risk/impact option is required, the Forum would progressively move to Option 7 - M5+C2 (21Mm^3) or Option 4 - C2 (13Mm^3) on its own. The graph shows that you quickly give up benefits as you move to take options with a more preferred overall risk/impact.

Option 2 - M5 and Option 8 M4 (2Mm^3) are low risk options but with relatively small benefits.

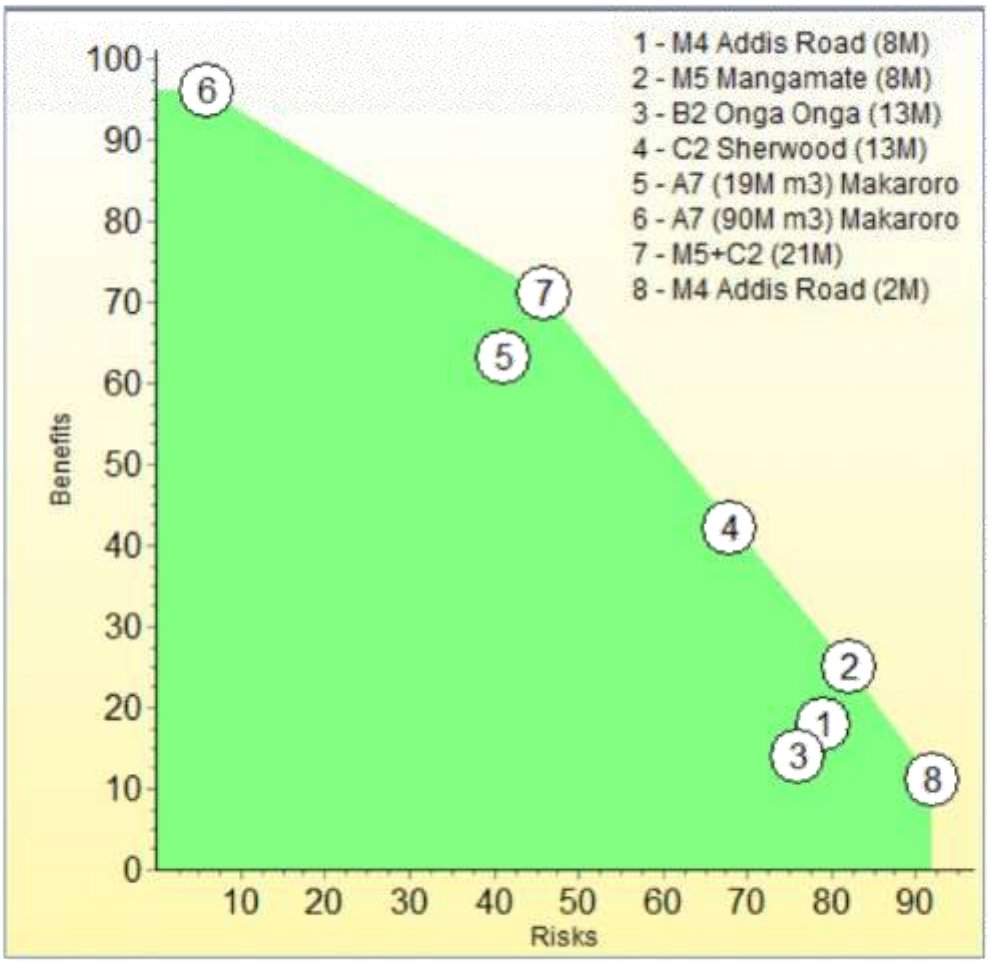


Figure 11: Benefit/Risk Map

7.7. 'Value-for-Money' trade-off

Figure 12 shows benefit/risk on the 'Y' axis and unweighted cost on the 'X' axis. This is the 'value-for-money' view. Cost scale is preference for cost i.e. cheaper options are to the right of the cost scale.

Figure 12 shows the Forum would never opt for M4(8Mm$^{3)}$, M5, B2 or C2 - Options 1-4 - as there is always an option with better benefits/less risk and lower cost.

Option 6 A7(90M m^3) maximises the benefit but if it is unaffordable the Forum would move to Option 7 - M5+C2 or Option 5 – A7(19Mm^3) which would reduce the benefits but at a reasonable trade-off in costs.

Option 8 - M4 (2Mm^3) has good costs but sacrifices considerable benefits.

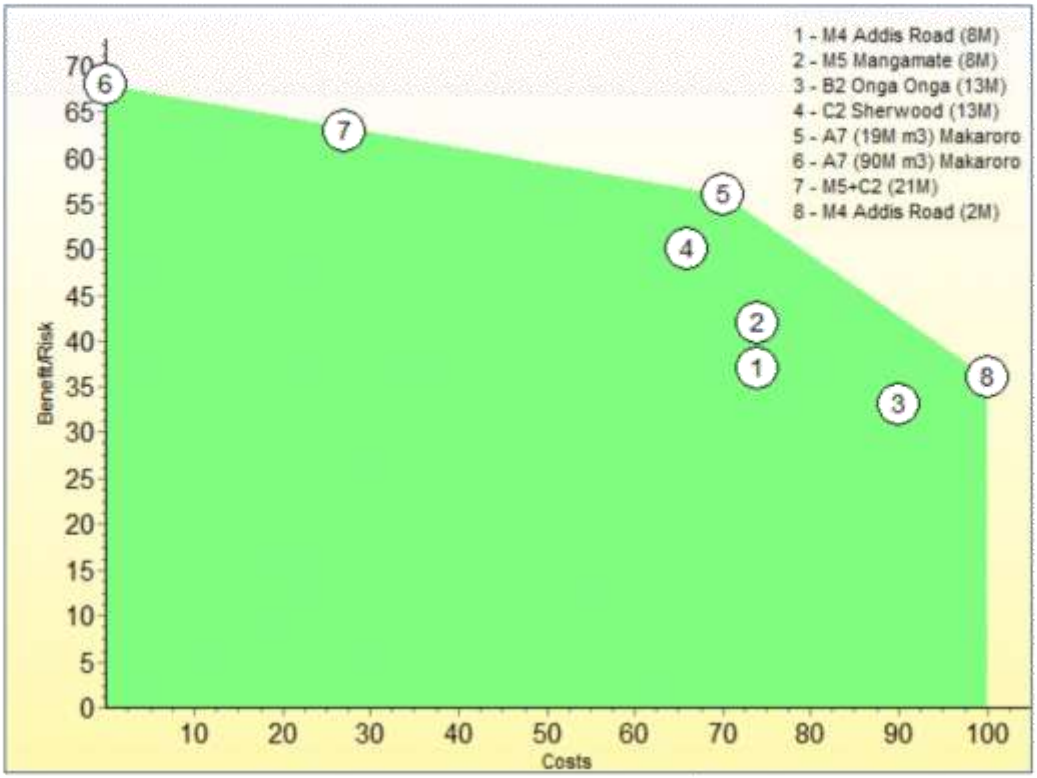


Figure 12: Value for Money trade-off

7.8. Comparing Options: A7(90Mm^3) and M5+C2 (21Mm^3)

Compare A7 (90M m3) Makaroro minus M5+C2 (21M)

	Model Order	Cum Wt	Diff	Wtd Diff	Sum
Benefits	Economic Benefits	13.2	55	7.3	7.3
Benefits	Environmental Benefi	17.6	25	4.4	11.7
Benefits	Future Proofing	14.1	30	4.2	15.9
Benefits	Social Benefits	11.4	5	0.6	16.5
Benefits	Supply Certainty	8.8	2	0.2	16.6
Risks	Establishment Risks	7.0	-10	-0.7	15.9
Risks	On-going Risks	5.3	-15	-0.8	15.1
Costs	Capital Cost	5.8	-28	-1.6	13.5
Risks	Environment Impacts	16.7	-60	-10.0	3.5
		100.0		3.5	

Figure 13: Direct Comparison of A7(90Mm^3) and M5+C2 (21Mm^3)

Figure 13 provides a direct comparison between A7(90Mm^3) and M5+C2 (21Mm^3). Green bars show where A7(90Mm^3) is preferred over M5+C2 (21Mm^3) and by how much. Red bars show where M5+C2 (21Mm^3) is preferred over A7(90Mm^3).

A7(90Mm^3) is preferred over M5+C2(21Mm^3) because of greater economic benefits, environmental benefits, better future proofing, better social benefits and greater certainty of supply.

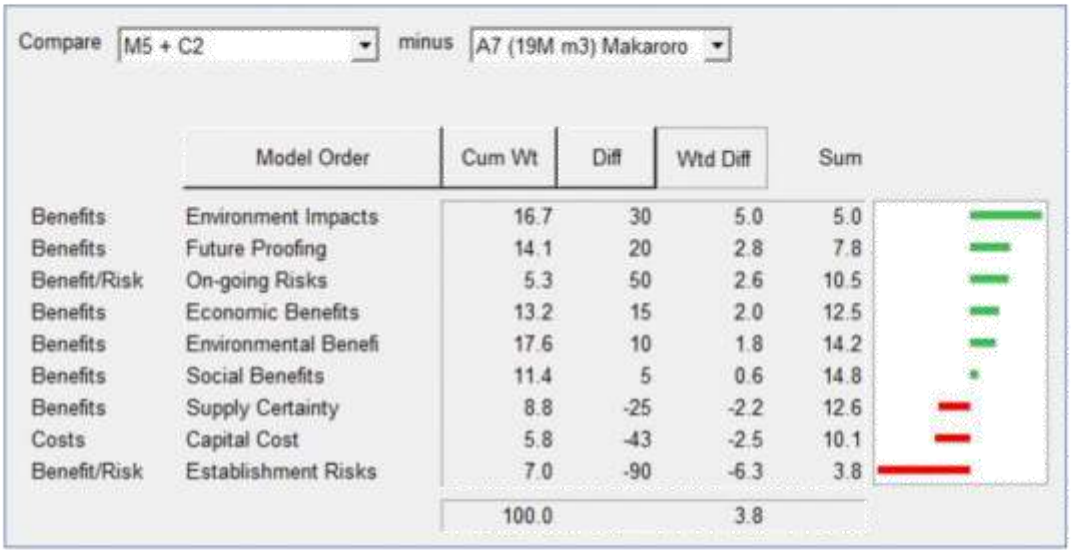
M5+C2 (21Mm^3) is preferred over A7(90Mm^3) due to lower establishment and on-going risks, lower capital costs and lower environmental impacts.

7.9. Comparing Options: M5+C2 (21Mm^3) and A7(19Mm^3)

Figure 14 enables a direct comparison to be made between options M5+C2 (21Mm^3) and A7(19Mm^3). In the graphic the green bars show where M5+C2 (21Mm^3) is preferred over A7(19Mm^3). Red bars show where A7(19Mm^3) is preferred over M5+C2 (21Mm^3).

M5+C2 (21Mm^3) is preferred over A7(19Mm^3) because of smaller environmental impacts, better future proofing, lower on-going risks, better economic, environmental and social benefits.

A7(19Mm^3) is preferred over M5+C2 (21Mm^3) due to significantly lower establishment risks, lower capital costs and greater certainty of supply.



	Model Order	Cum Wt	Diff	Wtd Diff	Sum
Benefits	Environment Impacts	16.7	30	5.0	5.0
Benefits	Future Proofing	14.1	20	2.8	7.8
Benefit/Risk	On-going Risks	5.3	50	2.6	10.5
Benefits	Economic Benefits	13.2	15	2.0	12.5
Benefits	Environmental Benefi	17.6	10	1.8	14.2
Benefits	Social Benefits	11.4	5	0.6	14.8
Benefits	Supply Certainty	8.8	-25	-2.2	12.6
Costs	Capital Cost	5.8	-43	-2.5	10.1
Benefit/Risk	Establishment Risks	7.0	-90	-6.3	3.8
		100.0		3.8	

Figure 14: Comparison of Options M5+C2(21Mm^3) and A7(19Mm^3)

7.10. Other insights

We also looked at whether there were additional insights to be gained by removing A7(90Mm^3) from the mix. There were no significant other insights to be gained that haven't already been covered in the previous graphics and discussion. None of the previous insights discussed are overturned by analysis of these additional views. All this analysis adds weight to the conclusion in the next section on the sensitivity and stability of the overall results.

8. Sensitivity Analysis/How stable are the results?

8.1. Sensitivity Analysis

Figure 15 shows how the criteria weights would need to change before there would be any change in the Forum's overall preference for the options. Figure 15 is interpreted as follows.

- Criteria are listed down the middle of the diagram; bars drawn to the right represent which option would become preferred given an increase in cumulative weight.
- Bars drawn on the left represent which option would become preferred given a decrease in cumulative weight.
- Green bars indicate low sensitivity.
- Orange bars indicate that only a large change in the criteria weight would change the preferred option.
- Red bars indicate the model is sensitive to the weight on that criterion and only a modest change in cumulative weight would change the preferred option.
- No bar indicates no amount of weight change would change the preferred option.

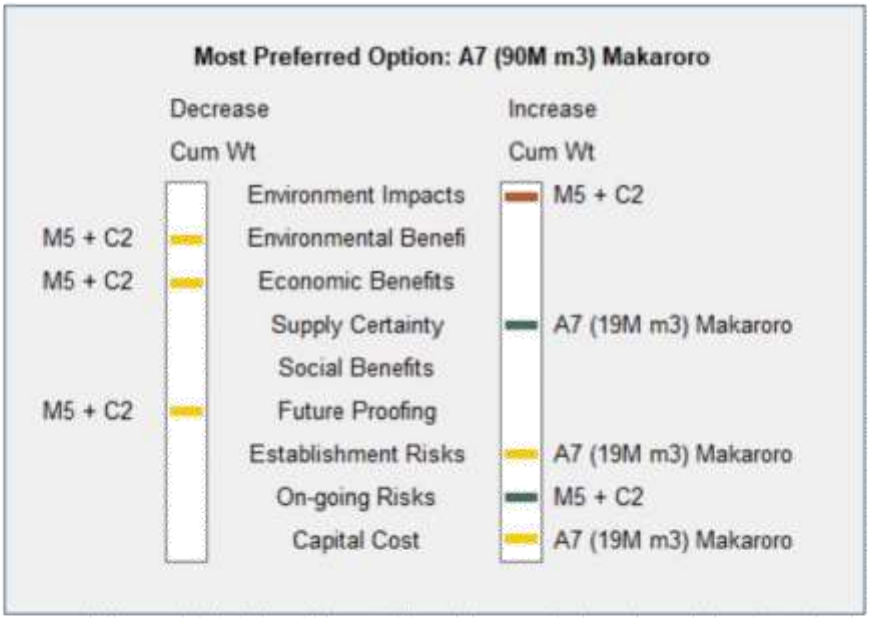


Figure 15: Stability of Results to changes in Criteria Weights

When all options are considered, the Figure 15 indicates the model is very stable and only sensitive to an increase in weight on 'Environmental Impacts'.

Figure 16 shows an equivalent picture if A7(90Mm^3) is removed as an option. In this case:

- the model is again very stable
- the overall preference is for option M5+C2 (21Mm^3)
- but this time the single sensitivity is that a relatively small change in weight on establishment risks would cause A7(19Mm^3) to be the overall preferred option. Once A7(90Mm^3) is removed as an option, the model is stable in relation to Environmental Impacts.

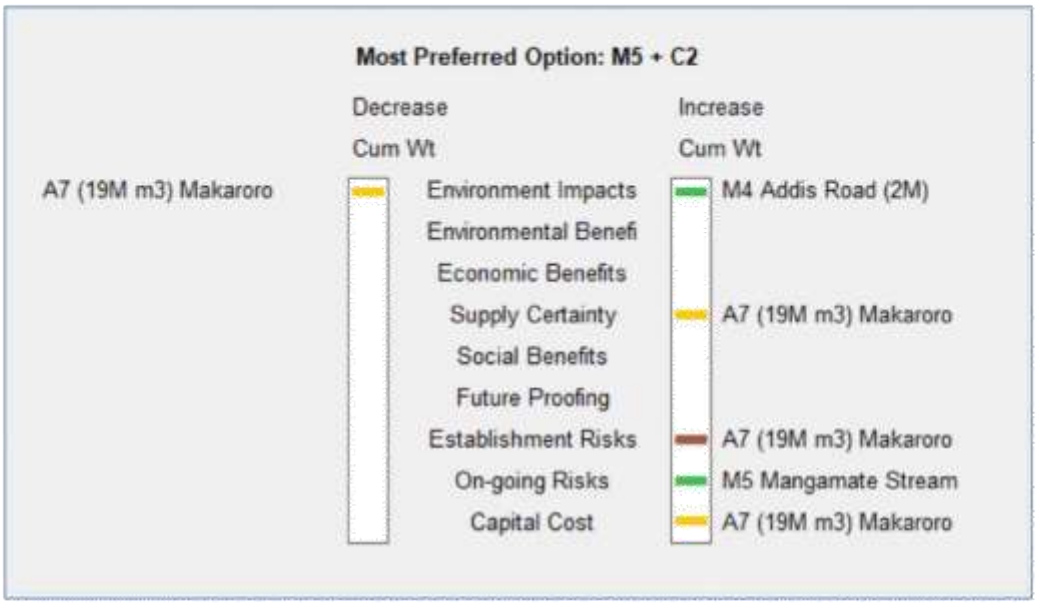


Figure 16: Sensitivity of the result - when A7(90Mm^3) is excluded

8.2. Sensitivity Analysis on Scores

Several scores and weights were identified at the Evaluation Conference for more detailed sensitivity analysis. These are detailed in Table 6 below.

None of this sensitivity analysis make a material difference to the results.

Option	Criterion	Score/ Weight	Alternate Score	Outcome
A7 (90)	Future Proofing	100	140	No change in order
A7 (90)	Ongoing Risks	65	80	No change in overall scores
All Options	Costs (Weight)	33	66	No change in order
All Options	Costs (Weight)	33	17	Two least preferred options now equal.

Table 6: Sensitivity Analysis and Alternative Scores

The graphics supporting each of the conclusions in the table above are included in Annex D: Sensitivity Analysis Detail. The graphics in the Annex include A7(90Mm^3) for completeness.

9. Observations about the results

9.1. Overall Results

The results from the analysis in this report suggest they are requisite for the purpose for which they were originally intended - informing what options, if any, might be considered for further investigation in pre-feasibility.

Our view is that the results align with the discussion in the room at the Evaluation Conference, and therefore reflect the preferences of the Tukituki Leaders' Forum at the time of the Evaluation Conference.

The results are overall very stable. Different weights from the Forum for Establishment Risks and Environmental might impact the most preferred option but at the end of this analysis the sites that are most likely candidates for further investigation appear to be A7, C2 and M5. In each case, the Forum would always prefer to maximise the storage available at any chosen site.

The Value for Money assessment is a trade-off and a different perspective from whether it makes sense to construct the option given the cost of the water it would produce. To assess the affordability of options it is recommended that HBRC starts with the most preferred option and works its way down the preferences looking at the options through the affordability lens.

The Forum's cost/benefit trade-off conversation was that the environmental benefits over the longer-term would be worth an equivalent of $500M in one-off capital investment. Even if the Forum's preferences for cost halved or doubled their preference for the options would remain unchanged.

The analysis shows that options M4 Addis Road and B2 Onga can be discounted from the process.

9.2. Criteria

The results from this Conference, and the weights applied to criteria, strongly indicate the considerations of most value to Forum members. For clarity these are:

- Environmental Benefits
- (reducing) Environmental Impacts
- Future Proofing
- Economic Benefits

At a future date, we recommend revisiting these criteria in their detailed form and incorporating them into a single decision support model along with technical criteria. Such an approach would provide a robust basis for making any final decisions around water storage options in Central Hawkes Bay.

10. Annex A: Decision Conferencing for assessing Options

Client Challenge

You are faced with evaluating several options to provide advice and a recommended option to decision makers, for a business case or some other investment decision. It may be for infrastructure, investing in a large capital item, determining where to locate something or advising on what option to respond to a tender with.

You want to be confident and clear on the options, how they perform relative to each other and the decision to be taken. You also want the outcome to be transparent and to align stakeholders through the process.

What is an Evaluation Conference?

An Evaluation Conference is a tried and tested event in a process known as Decision Conferencing that uses best practice analytical techniques and social processes to align a group of stakeholders on the decision to be taken. It is designed in a way that draws out the varied perspectives and experience of stakeholders, increasing the level of shared understanding of the options.

In practice an Evaluation Conference is a group of stakeholders meeting in a highly structured workshop, facilitated by an independent expert in decision making. Subject matter experts brief the stakeholders and provide an opportunity for questions. Stakeholders then apply their judgement to determine the value options will deliver relative to each other from their stakeholders' perspective.

Evaluation Conferences are usually conducted in person. However, through the COVID lockdown in New Zealand they continued to be used successfully as virtual workshops using widely available video-conferencing tools.

History

As a process, Decision Conferencing has evolved since its early practice by one of the founders of Catalyze, Professor Larry Phillips of the London School of Economics and Political Sciences. Larry first started Decision Conferencing in 1981. Larry alone has facilitated over 300 Decision Conferences.

Evaluation Conferences have been used widely in the New Zealand public sector in the last 15 years. The term Evaluation Conference was coined to make clear the difference between evaluating options and the process of making the decision itself. Evaluation and Decision Conferences have assisted decision making relating to the future of the Defence Force, future investment in Education Payroll (after Novopay), investments for the Police, where to locate the new Mental Health Unit at Counties Manukau DHB, selection of the Future Air Mobility Capability for the NZDF (C-130J Hercules) and investment choices in the Transport Sector in New Zealand to name a few.

The Decision Conferencing approach is recognised by the Treasury and this work has underpinned business cases that have received very favourable reviews through the Gateway process.

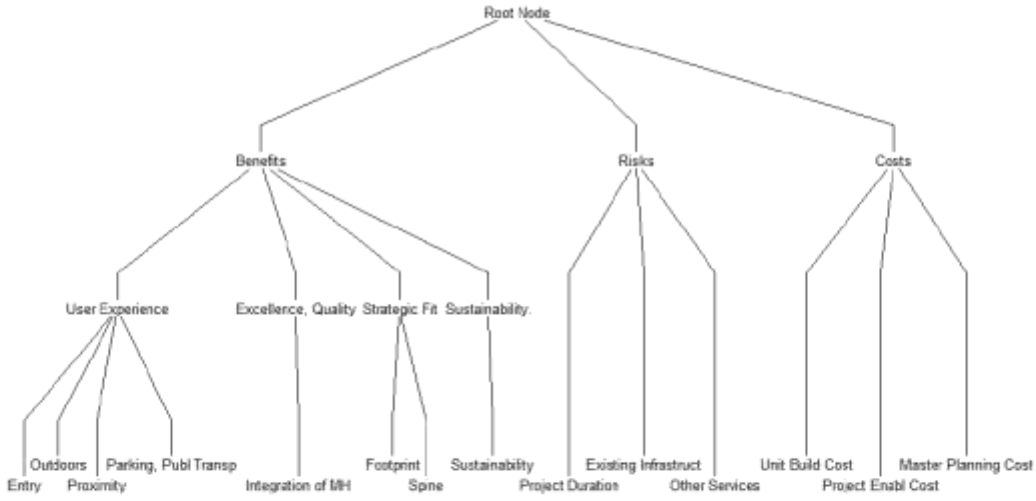
How does an Evaluation Conference work?

For participants, the conference can be a part-, full-, or sometimes a multi-day workshop. The idea is to break the evaluation of the options into small conversations considering the different evaluation criteria in turn. By looking at the options one criterion at a time it is easier for the group of stakeholders to reach agreement on how each option performs.

The process requires no previous experience of Decision Conferencing; in fact, frequently it is a new experience for most people in the conference. Briefing packs in advance advise not just the options being considered and the Evaluation Criteria but also how participants can best prepare themselves for the workshop.

The criteria will have been developed with active participation from stakeholders. and cover a range of benefits, risks and costs.

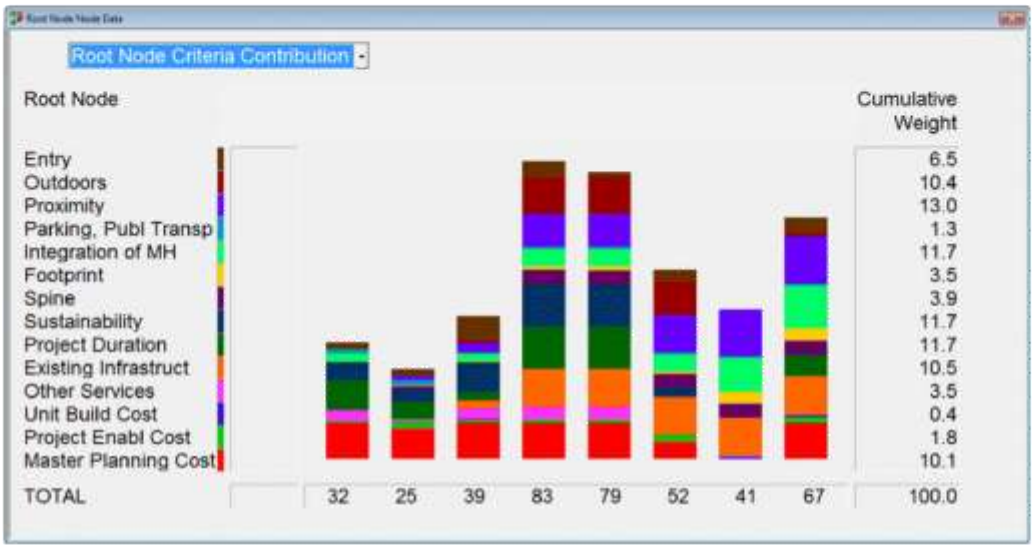
A 'Decision Model' representing the options and the evaluation criteria is produced by a combined team from Decision Conferencing experts and the client. An example of a model is shown below; the root node is the overall result.



Evaluating one criterion at a time, the picture of how options perform builds until we have an overall view of how options perform relative to each other. 'Scoring' conversations are a simple process that is explained in detail in the Conference. The work starts slowly to allow participants to gain familiarity with the process and then speeds up as understanding of the options and process grows.

The results can be shown in many different ways, usually live in the conference. A key view is the graphic below which not only shows how options perform relative to each other (the total height of the bar in the graph) but how that overall performance is made up. Each coloured segment provides a visual indication of how the option performed against a particular criterion. This way the group sees not only how options perform relative to each other, but why it is they perform that way.

What the results look like



This analysis not only lets those involved understand the best options, but points to where options may be improved, based on where the group judged value is delivered.

The Evaluation Conference scores options relative to each other, so the conversations build on one another during the conference. These rich conversations take up most of the time in the conferences. Continuous presence by the stakeholders conducting the evaluation throughout the conference is therefore essential to getting the best outcome.

Decision Conferencing is underpinned by the analytical technique of Multi-Criteria Decision Analysis (MCDA) and conferences are independently facilitated by Decision Conferencing experts.

More information

For further information on Decision Conferencing please contact your nearest Catalyze consultant or contact info@catalyzeapac.com.

11. Annex B: Evaluation Criteria – Detail

The following are the detailed criteria developed with the Tukituki Leaders' Forum before a decision was made to roll them up a level. They are included here as they would likely form a starting point for a more detailed evaluation of options after pre-feasibility work is complete.

Long Name	Short Name	Detail
Environment[9]		
Negative environmental impacts	Environmental impact	The extent to which the option creates negative impacts on the environment within the catchment area, because of the facilities created and areas downstream from the storage facility(ies).
Positive environmental benefits	Environmental benefits	The extent to which the option creates positive impacts to the environment within the catchment area. Considerations include (amongst others) benefits to surface and groundwater, the creation of habitat and the extent to which the option fosters biodiversity.
Social Benefits		
Educational and Recreational Outcomes	Education & Recreation	The extent to which the option provides for or supports education and recreational outcomes for the community. This includes benefits at storage sites and elsewhere.
Public Health Outcomes	Public Health	The extent to which the option provides public health outcomes, such as access to healthy drinking water.
Supply Certainty Benefits		
Storage recharge	Recharge	The certainty that the storage will be filled. This includes consideration of the probability of recharge both now and in the face of climate change.
Timing	Timing	The extent to which the storage option will be able to provide water at times when it is needed.
Economic Benefits		
Economic Diversity	Diversification	The extent to which the option enables diversification in economic activity in the region reducing risk to the community.
Economic Advantage	Advantage	The extent to which the option can provide economic advantages to the region. This includes consideration of employment opportunities generated, the option's

[9] These criteria would also factor in the degree to which options were 'natural' or not.

Long Name	Short Name	Detail
		impact on standard of living in the local community and the enablement of higher value land use.
Future Proofing		
Adaptability	Adaptability	The extent to which the option is adaptable to meet changing circumstances and/or future needs. This includes the degree to which the option can be scaled (up or down) or expanded to meet changing demographics and/or land use.
Sustainability	Sustainability	The extent to which the option is sustainable.
Resilience	Resilience	The extent to which the option is resilient to environmental catastrophes such as earthquakes and other natural events that could impact its continued operation.
Establishment Risks		
Regulatory Risk	Regulation	The risk that a change in laws or regulations could negatively impact the delivery of the candidate option. This includes risks to obtaining the necessary consents for the storage facilities and any other works required.
Cost Risk	Cost Risk	The risk that the costs of establishing and/or operating the storage network will be greater than anticipated.
On-going Risks		
Loss of community control	Control	The risk that the community lose control over the storage asset.
Environmental Risk	Environmental Risk	The risk that the environmental outcomes expected from the option are not achieved.

Table 7: Detailed Criteria Descriptions

12. Annex C: Evaluation Conference Attendees

A number of supporting staff attended the Evaluation Conference in addition to the members of the Tukituki Leaders' Forum acting as Evaluators. These attendees are detailed below.

Name	Detail
Tom Skerman	HBRC (SME)
Amanda Langley	Project Manager: Water Storage Project (SME)
Iain Maxwell	HBRC (SME)
Liz Lambert	HBRC (SME)
David Todd	Tukituki Leaders' Forum Facilitator
Richard Wakelin	HBRC Project Manager (Support)
Monique Davidson	CEO Hawkes Bay District Council (Observer)

Table 8: Evaluation Conference supporting staff

13. Annex D: Sensitivity Analysis Detail

The following slides show the resulting criteria contribution view for each of the Sensitivity Analysis (SA) captured in the Evaluation Conference. As noted in the body of the report, none of the sensitivity analysis make a material difference to the results.

A7(90M m^3) is included here for completeness and Table 6 is repeated below for ease of reference.

Option	Criterion	Score/ Weight	Alternate Score	Outcome
A7 (90Mm^3)	Future Proofing	100	140	No change in order
A7 (90Mm^3)	Ongoing Risks	65	80	No change in overall scores
All Options	Costs (Weight)	33	66	No change in order
All Options	Costs (Weight)	33	17	Two least preferred options now equal.

Note that in the titles below, the primary scores/weights from the Conference are included for reference in brackets.

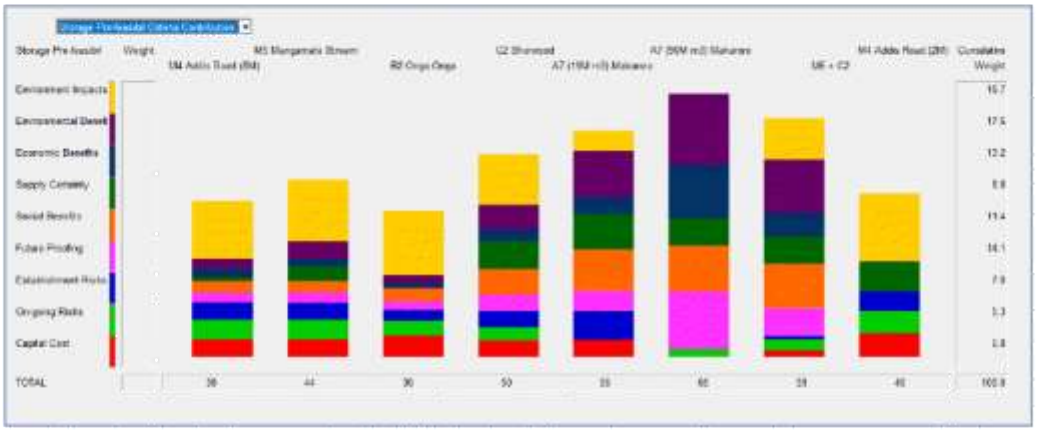


Figure 17: Alternative Score: A7(90Mm^3) Future Proofing at 140 (vs 100)

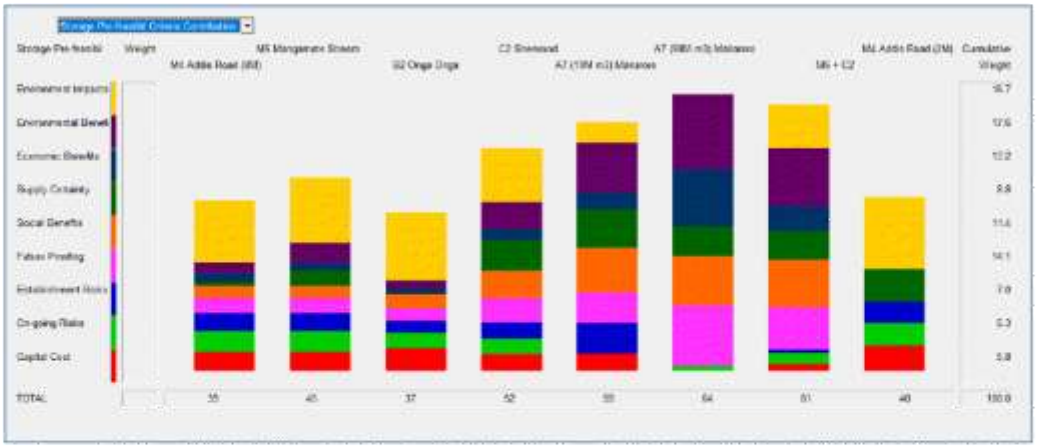


Figure 18: Alternative Score: A7(90Mm^3) Ongoing Risks at 8 (vs 65)

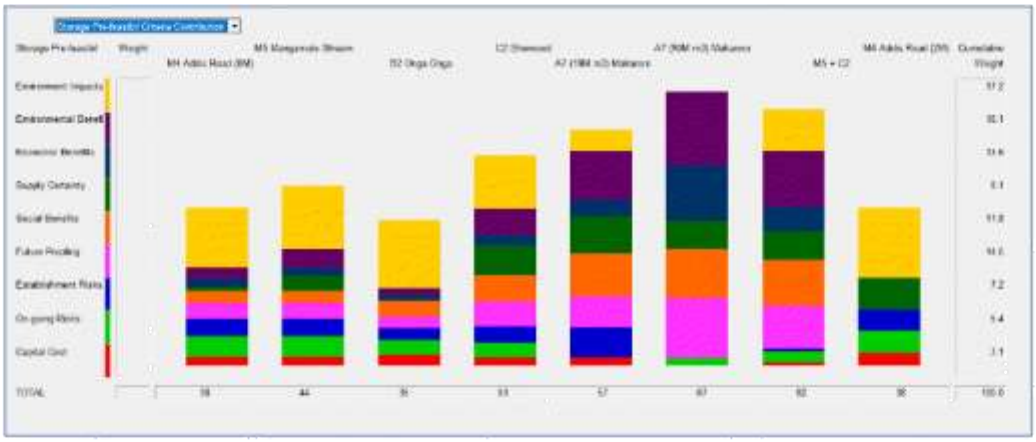


Figure 19: Sensitivity Analysis: Costs Weight at 17 (vs 33)

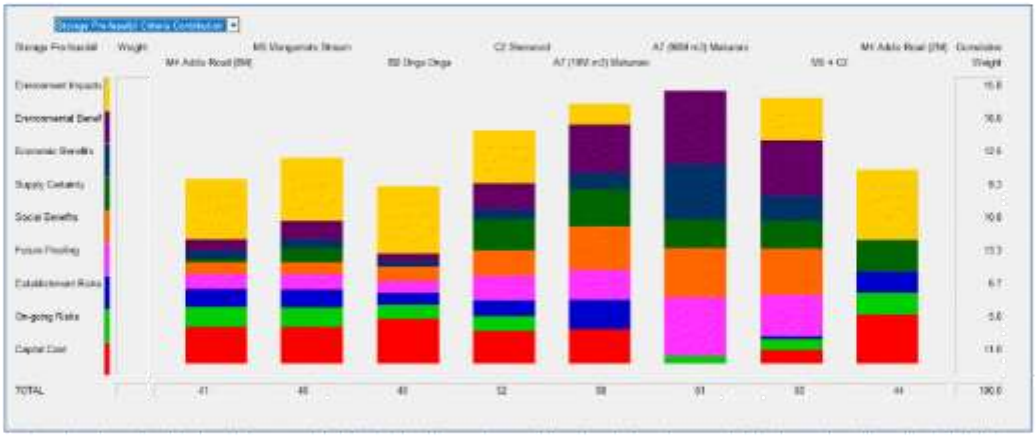


Figure 20: Sensitivity Analysis: Costs Weight at 66 (vs 33)

REPORT

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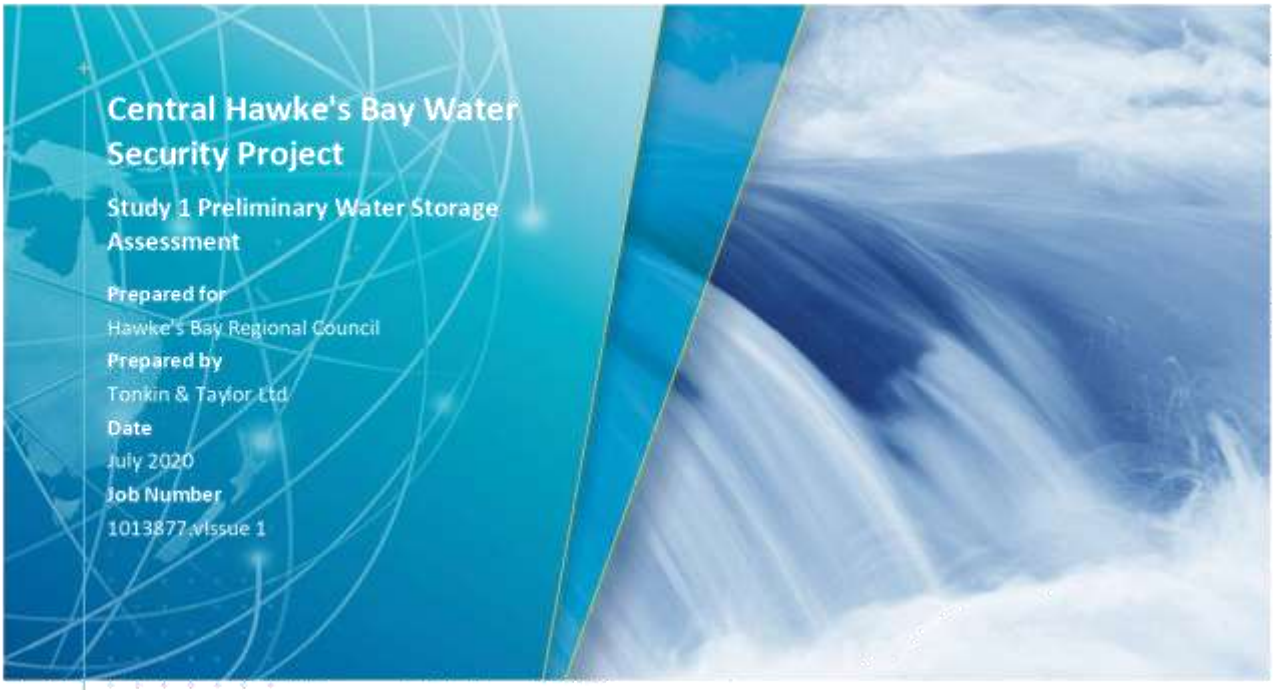

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Executive Summary

Hawke's Bay Regional Council (HBRC) are looking to respond to pressures on the water resources in the Ruataniwha Plains in Central Hawke's Bay, from current and increased water use, future climate change, and to meet community expectations on water use and land management per operative Plan Change 6[1] to the Hawke's Bay Regional Resource Management Plan.

Part of HBRC's response is to consider community scale storage solutions to provide additional flows in the Tukituki River and its tributaries. The previously proposed Ruataniwha Water Storage Scheme (RWSS) was intended to provide water storage to significantly increase water availability and reliability to the Ruataniwha Plains. While the RWSS is not proceeding, the pressures on water resources remain, and HBRC are looking to at least maintain the current water availability and reliability, for both present and predicted future climate conditions.

The study presented in this report covers an engineering assessment of potential community storages for the Ruataniwha Plains. The storage sizes considered reflect the required storage volume(s) to maintain current water availability and reliability, and the opportunity to supply additional water ('new' water) where a site appears to support this. The output of this engineering assessment is an initial shortlist of potential storage sites and schemes (refer Section 6) for further consideration by HBRC decision-makers.

This study considers and builds on previous water storage work in the area by HBRC and specifically the Ruataniwha Plains prefeasibility studies undertaken by T+T in 2008, 2009 and 2011. While these prefeasibility studies were focused on larger scale community storages to enable increased water demand and development in the Ruataniwha Plains, a number of the previously considered sites may also be suitable for smaller community scale storage and have been reassessed against this project's objectives and criteria.

Identification and assessment of potential storage options were undertaken using semi qualitative assessment criteria developed by Tonkin & Taylor Ltd (T+T) (refer Section 2). The assessed features/criteria for each site (such as catchment area, dam height, dam volume to storage volume ratio, geology, proximity to water sources for flow harvesting where required, and potential impact to downstream areas) were scored relative to the other sites, and the total scores used to inform the ranking of sites in order of preference for the shortlist (refer Section 5).

The required storage volumes were assessed based on water demand scenarios developed using flow data supplied by HBRC. The estimated target annual storage volumes to enable offsetting flow depletion from current water use only are in the order of 3 Mm^3 for the Tukituki River and 2 Mm^3 in the Waipawa River (total of 5 Mm^3) (refer Section 2). The opportunity to provide further storage for a range of uses has also been considered based on the storage volume that each potential site appears to best support.

Simplified assessment of catchment hydrology was undertaken to enable consideration of local catchment yield and whether supplementary flow harvested from a nearby waterway was necessary to meet the target annual storage volumes (refer Section 4). Further refinement of catchment hydrology, along with consideration of daily supply-demand patterns, may result in lower storage volumes and/or flow harvesting requirements than presented in this initial study.

The shortlist sites are presented in Table A below by river. Further details are provided in Section 6.

[1] HBRC "*Plan Change 6 to Hawke's Bay Regional Resource Management Plan Tukituki River catchment*". Operative 1 October 2015. HBRC Report No. SD 15-08 – 4767.

Table A Summary of initial shortlist sites

River	Storage volume (Mm^3)	Shortlist site(s)
Initial short list for offsetting depletion from current water use		
Waipawa	2 to 5	• M4 Addis Rd • M5 Mangamate Stream
Tukituki	3 to 5	• B2 Ongaonga • C2 Sherwood • C1 Avoca • P1 Upper Maharakeke Stream
Initial short list for additional supply		
Waipawa	8	• M4 Addis Rd • M5 Mangamate Stream
	10 to 15	• A4 Glenalvon
	20 to 90	• A7 Makaroro
Tukituki	10 to 15	• C2 Sherwood • B1 Ongaonga

Of this initial shortlist, we recommend that HBRC specifically consider the following more apparently promising sites first:

- M4 Addis Rd
- M5 Mangamate Stream
- B2 Ongaonga
- C2 Sherwood

The engineering assessment presented in this report highlights that the majority of the potential community scale valley storage sites identified in the Ruataniwha Plains and surrounding foothills appear more suited to smaller storage volumes in the range of 5 – 10 Mm^3. There are a limited number of sites that could potentially accommodate larger storage up to 20 Mm^3, noting these rely on external refill/water harvesting from adjacent rivers/streams.

Opportunities for storage volumes larger than 20 Mm^3 appear limited to the main stems of the larger rivers and sites located close to the Ruahine Range (e.g. such as the RWSS). These sites appear more suited to very large-scale storage (e.g. 90 Mm^3 at the A7h Makaroro site) and do not appear to economically scale down to sizes around 20 Mm^3. This is predominantly due to the relatively incised rivers which mean relatively economic dam height to water storage ratios only occur for very large volumes. The higher sediment load also makes smaller storages less attractive and reliant on regular sediment management to maintain the storage volume. Furthermore, a large spillway capacity is required for safe flood passage at such dams during both construction (diversion) and long-term operation, which, for a given site, does not reduce for a smaller dam.

The lower foothill and Ruataniwha Plains sites are predominantly in alluvial materials (refer Section 2.3 for further details) and present a range of technical challenges and risks that are different to storages founded in rock. Some examples include the need for specific consideration of reservoir leakage, foundation seepage and cutoff measures, susceptibility to internal erosion and liquefaction potential. While these technical risks can be addressed, they add complexity and cost to the lower foothill sites and require careful consideration.

Non-engineering matters related to potential shortlisting are being covered in parallel by HBRC. Sites selected by HBRC will require further consideration and assessment in subsequent stages (refer Section 7).

1 Introduction

1.1 Context

Hawke's Bay Regional Council (HBRC) are looking to respond to pressures on the water resources in the Ruataniwha Plains in Central Hawke's Bay, from current and increased water use, future climate change, and to meet community expectations on water use and land management per operative Plan Change 6[2] to the Hawke's Bay Regional Resource Management Plan.

Part of HBRC's response is to consider community scale storage solutions to provide additional flows in the Tukituki River and its tributaries. The previously proposed Ruataniwha Water Storage Scheme (RWSS) was intended to provide water storage to significantly increase water availability and reliability to the Ruataniwha Plains. While the RWSS is not proceeding, the pressures on water resources remain, and HBRC are looking to at least maintain the current water availability and reliability (for both current and predicted future climate conditions).

The study presented in this report covers an engineering assessment of potential community storages for the Ruataniwha Plains. The storage sizes considered reflect the required storage volume(s) to maintain current water availability and reliability, and the opportunity to supply additional water ('new' water) where a site appears to support this. This work considers and draws upon the previous assessments from the 2008 to 2011 prefeasibility and advanced prefeasibility studies that preceded the feasibility study for the RWSS (refer Section 3 for further details and references).

1.2 Intended project outcomes

As stated in our Project Brief[3], the primary objectives of the Central Hawke's Bay Water Security Project (CHB WSP) are to:

1 Provide current consent holders with a more secure and reliable water supply that reduces the likelihood and severity of minimum flow restrictions (as set by the operative Plan Change 6).

2 Support stream flows sufficient to protect water dependent ecosystems and improve the overall health of the Tukituki catchment's waterways.

3 Identify and deliver a means of providing 'new' water to the catchment sufficient to:

- a Promote community and iwi well-being through improved access to a new allocation of water available at times of high and medium flow.
- b Support the region's economic growth and resilience to changing climatic/economic environments.

1.3 Scope of this study

The scope of this study (Study 1) is to identify and assess at a high level potential water storage sites to release water into Tukituki River and its main tributaries across the Ruataniwha Plains (i.e. Mangaonuku Stream, and the Waipawa, Tukituki, Tukipo and Makaretu rivers).

The scope of work covered by this report is defined in the project brief, and is restated below:

a *Produce a report based on reviewing the previously considered storage options in the "Pre-feasibility Study of Water Augmentation Opportunities – Ruataniwha Plains (dated June*

[2] HBRC *"Plan Change 6 to Hawke's Bay Regional Resource Management Plan Tukituki River catchment"*. Operative 1 October 2015. HBRC Report No. SD 15-08 – 4767.
[3] HBRC project brief *"Tukituki Water Security Project: Study 1 – Storage Options – Preliminary Assessment (Scoping Phase)"* approved 9 April 2020.

2009)" in terms of their ability to provide water during dry periods to support flow above minimum levels thereby mitigating the risk of water take bans to consent holders (see objectives 1 and 2 above).

b *Revalidate the proposed sites with updated LiDAR and with the objectives of multi-purpose water use (and users) against a backdrop of changing climate.*

c *Identify any further sites (including small scale sites that might operate as a network collectively or integrate with potential groundwater replenishment sites) that may not have been considered earlier as part of finding solutions to deliver on both objectives 1 and 2 (that is, storage for security of supply of existing irrigated areas and the environment as well as "new" water to future proof anticipated demand).*

d *Analysis into how a flow maintenance scheme might be optimised for low flow enhancement. Identify what areas and the extent of the streams that will most benefit from different storage options.*

The following activities are excluded from this study:

- *Wholesale update of the T+T 2009 report.*
- *Review of demand assumptions (revision of the demand will be undertaken separately by HBRC to inform options analysed during the pre-feasibility phase).*
- *This study will not be required to consider climate change scenarios at a fundamental level as this will be considered in later investigations.*
- *Large scale irrigation schemes are not supported. The Government (providing partial support for this project via its Provincial Growth Fund scheme) is not categorical about the maximum acceptable size of a project as this will depend on the benefits. As a guideline, a single storage site should be below "mega" schemes able to service 20,000ha+.*

2 Storage Selection Criteria

2.1 Water demand

The current groundwater and surface water abstractions in the Ruataniwha Plains are resulting in flow depletion in the Tukituki River and main tributaries (i.e. Mangaonuku Stream, and the Waipawa, Tukituki, Tukipo and Makaretu Rivers). HBRC have undertaken modelling of the groundwater-surface water interaction using Modflow and SOURCE software to estimate the extent of flow depletion.

The extent of flow depletion varies seasonally and year to year which can add complexity to determining storage requirements. For this first stage study, the water demand has been simplified into an annual volume requirement to enable approximate storage requirements to be calculated. This study relies and builds upon the work undertaken by HBRC to determine the water demand scenarios for the storage site and scheme selection. Further details and references are provided in the following subsections.

2.2 Potential storage size range

Initial selection of potential storage sites for further consideration is determined by the required storage size. Water demands in the Ruataniwha Plains being targeted by this study include the current demand for offsetting flow depletion (i.e. from groundwater and surface water abstraction), and also the potential future demand, such as driven by a reduction in summer river flows by future climate change, and growth/land use change.

The storage volumes required to offset the estimated flow depletion has been calculated using the supplied outputs from the HBRC SOURCE model. The following demand scenarios were considered for flow release to offset the river flow depletion from surface and groundwater takes:

1. Release only when river flows in the Tukituki River at Red Bridge drop below the minimum flow of 5,200 l/sec (new minimum flow from 1 July 2023 per PC6).
2. Release only when river flows in the Tukituki River at Red Bridge drop below the minimum flow of 5,200 l/sec, and assuming that historic takes were reduced and curtailed at the previous minimum flow of 3,500 l/sec (before PC6).
3. Offset all depletion over the full range of river flows (i.e. flow is released even when the flow in the Tukituki River at Red Bridge is above the minimum flow of 5,200 l/sec). This scenario is included for comparison purposes only.
4. Release to maintain minimum river flow (i.e. the flow in Tukituki River at Red Bridge is maintained to at least 5,200 l/sec). This scenario is included for comparison purposes only.

The resulting live storage volumes for the four demand scenarios are presented in Table 2.2 below. These volumes have been calculated for the 2013 dry year, which this report refers to as the design drought year. The design drought year was adopted for the design demand scenario as this indicates the storage required to provide a level of reliability benchmarked to a recent drought. In contrast, the average year demand is typically 20 to 25% (TBC) of the 2013 demand. The adopted flow demand scenario for this study is Scenario 2 (i.e. offset depletion when flow in the Tukituki River at Red Bridge is below the minimum flow of 5,200 l/sec, accounting for historic demand reduction and curtailment at 3,500 l/sec). This represents offsetting the effect of water takes at relatively low river flows.

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Table 2.1: Indicative storage volumes

River and flow recorder site	Indicative annual live storage volume required (million m^3)			
	Scenario 1 Offset when at/below minimum flow	Scenario 2 Offset when at/below minimum flow, accounting for historic demand reduction	Scenario 3 Offset all flow depletion	Scenario 4 Maintain minimum river flow at 5,200 l/s
Tukituki River at Tapairu Rd	2.4	**2.6**	7.1	-
Waipawa River at RDS/SH2	1.3	**1.4**	4.0	-
Tukituki River at Red Bridge	4.1	**4.4**	12.1	11.3

For initial site selection, this 2020 study has adopted a minimum storage volume of 2 million m^3 for sites supplying the Waipawa River and 3 million m^3 for sites upstream of the Tukituki River at Tapairu Rd site. A combined minimum storage volume of ~5 million m^3 is required, either from a single site or two sites.

These volumes are based on the calculated requirements for flow depletion offsetting above, with an allowance for 10% additional flow demand on the Tukituki River downstream of the Tapairu Road and Waipawa at RDS/SH2 flow monitoring sites (which record approximately 90% of the total river flow in the Tukituki River at Red Bridge site as per HBRC advice[4]), as well as for dead storage, water losses, and uncertainty in volume estimates.

Development of community scale storage(s) should reflect the volume of storage required to meet the wider Ruataniwha Plains community's objectives and aspirations, noting that this may change overtime. An estimated maximum reasonable storage volume at each site was also considered to provide an indication of what additional storage may be available for other community requirements. Estimated maximum reasonable storage volumes are presented by site in Section 5.2.

The previous Ruataniwha Plains scoping and prefeasibility studies undertaken in 2008 and 2009 looked at storage sizes 4 Mm^3 and higher, which is slightly larger than the calculated minimum individual site requirements for this 2020 study. The previously identified potential sites have been reconsidered in this study per Section 3.

2.3 Potential storage locations and geological context

We have considered and selected potential storage sites in the study area based on a range of published information sources including the previous sites from the 2009, 2010 and 2011 T+T studies for the Ruataniwha Water Storage Scheme, HBRC LiDAR and LINZ Digital Elevation Models (DEMs), aerial imagery, geology maps (1:50,000 and 1:250,000 scales) and the GNS Active Faults Database. Appendix A includes high level figures showing some of the base information used to support this study.

The Ruataniwha Plains and surrounding foothills feature relatively complex geology and seismic hazards that limit and complicate the potential for community scale valley storages close to the plains. In general terms, most of the potential storage sites are in complex alluvial/lacustrine deposits (formed by ancient rivers and lakes), with a smaller number of potential sites in rock. Figure 2.1 below provides a high-level overview of the regional geology based on published geological maps for context.

[4] Email from Thomas Wilding (HBRC) to David Leong (T+T) dated 6 April 2020.

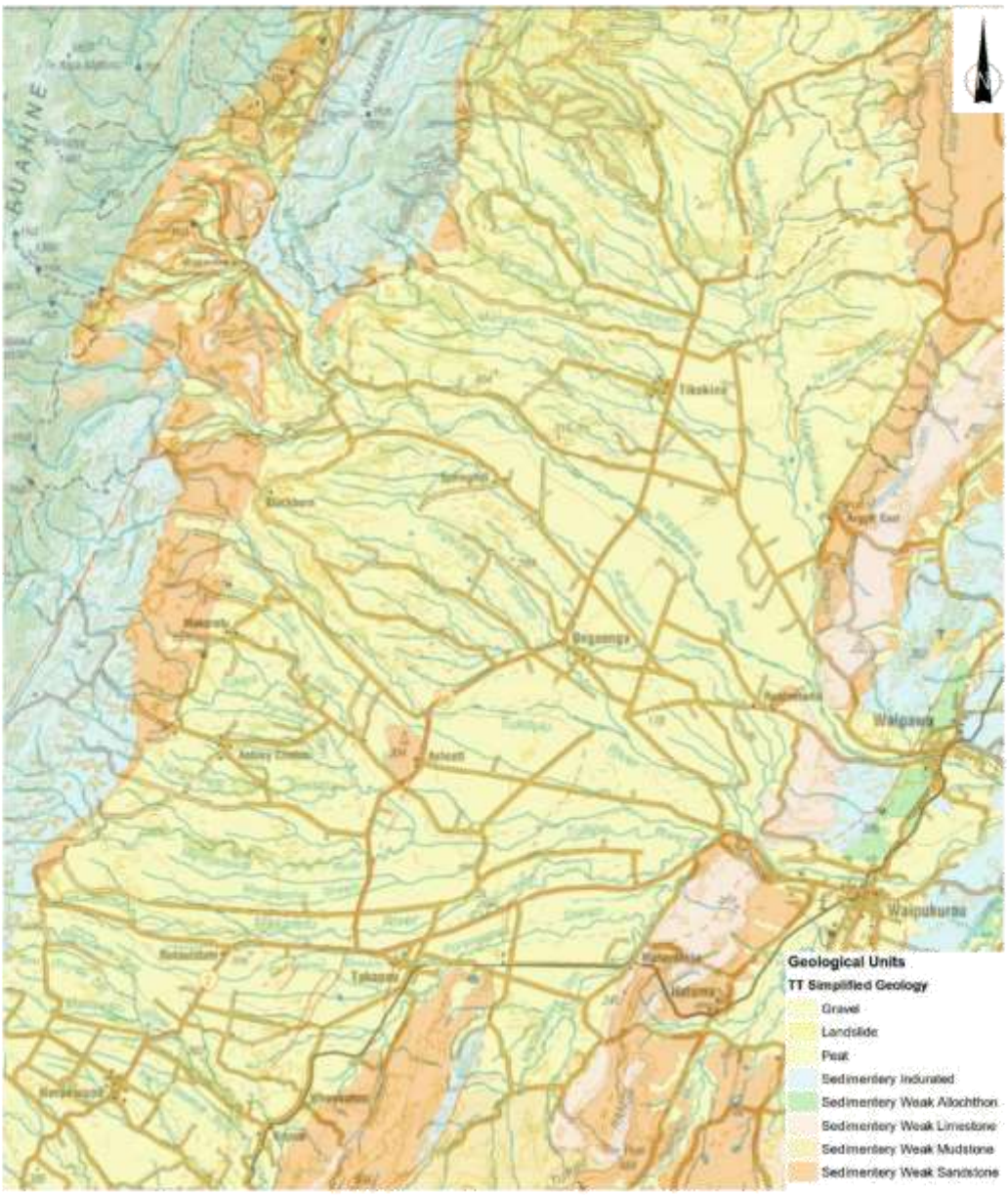

Figure 2.1 *Regional geology of the Ruataniwha Plains (Geology from GNS 250k scale geology maps) (Yellow shows extent of alluvial deposits, orange colour is sedimentary rock. Ruahine Range is greywacke rock – unshaded areas).*

Metamorphic rock (greywacke) is present at depth and further into the Ruahine Range at the headwaters of the Waipawa and Tukituki rivers (close to number of significant active fault traces such as the Mohaka Fault). Potential sites in the Ruahine Range are typically in incised valleys and on river branches that have relatively steep gradients and high sediment loads which, in general terms, are more suited to larger scale storages. The proximity to Department of Conservation land also limits the potential for storages in this area.

There are also some potential storage sites in the Turiri Range (in the south, and to the south of Takapau) and the Raukawa Range (to the north east, north of Waipawa) that are in sedimentary rock (i.e. sandstones and mudstones). These potential sites have limited catchment sizes and would rely on harvesting for the larger storage volumes, which is likely to be relatively expensive when compared to non-harvesting options. These sites are also located closer to the downstream river reaches and therefore while they may contribute to the flow as measured in the lower Tukituki River at Red Bridge, they offer more limited potential for enhancing flows in the Ruataniwha Plains and providing additional water for consumptive uses without significant pumping and conveyance infrastructure (e.g. pipe networks).

Community scale water storages in alluvial materials present a range of technical challenges and risks that are different to storages founded in rock. Some examples include the need for specific consideration of reservoir leakage, foundation seepage and cutoff measures, susceptibility to internal erosion and liquefaction potential.

Most of the potential sites initially identified from topography are in alluvial and lacustrine deposits of variable age and material type (e.g. interbedded gravels that are unweathered to moderately weathered with layers of silt and sands). The properties of these materials will be specific to each site and investigation is necessary to determine if the at-site geology is suitable for community scale storage. The layering/stratigraphy of the gravels may also provide a limit on storage sizes (especially where thick layers of young relatively permeable gravels are present in higher areas of some valleys).

2.4 Shortlist selection criteria and ranking

The adopted engineering criteria for shortlisting the potential storage sites are summarised in this section. These criteria were used on a qualitative basis (e.g. sites with a larger number of beneficial attributes were shortlisted over those with less beneficial attributes) rather than on a semi-quantitative basis using a multi-criteria analysis approach. This is considered appropriate for this scoping level desktop-based assessment given the level of information available for each site and the project stage.

Twelve criteria have been adopted based on typical technical engineering considerations for water storage projects. These technical/engineering shortlisting criteria have been grouped into four overall categories based on the criteria type. The categories are Hydrology (criteria 2 and 9), Engineering Design (criteria 1, 3, 4, 7 & 8), Geotechnical (criteria 5 & 6), and Environmental (criteria 10, 11 & 12).

The adopted storage site shortlisting criteria are as follows:

1 Site storage sufficient for the required reservoir volume (conducive topography).
2 Catchment area sufficient to fill reservoir.
3 Required dam height.
4 Storage volume to dam volume ratio.
5 Proximity to known active faults.
6 Known geological hazards/site geology.
7 Proximity to river with available allocation for harvesting (comprising distance and elevation difference).
8 Proximity to target stream/river for flow release.
9 Relative spillway size/capacity (assumed based on catchment area, not calculated for this study).
10 Land use in the dam footprint and reservoir area (e.g. dwellings, high value horticultural land, dry hill country farmland).

11 Potential environmental impacts including existing wetlands present in potential reservoir area. An ecological assessment has not been done at this stage.

12 Presence and proximity of downstream developments, including communities, dwellings and significant infrastructure (e.g. major roads).

These criteria are also a proxy for potential construction costs (for example, a higher and longer dam on challenging geology, near an active fault, and with population immediately downstream, would cost more than a smaller dam at a remote site on favourable geology). High level construction cost estimates have not been undertaken as part of this study, on the basis that this would be undertaken for shortlisted sites in subsequent stages.

The following non-engineering aspects and associated shortlisting criteria are not specifically considered in this report. This is on the basis that they will be covered at a high level by HBRC separately to the engineering evaluation of sites presented in this report:

- Cultural requirements and drivers.
- Socio-economic drivers.
- Community desirability and/or outcomes of initial stakeholder engagement.
- Regulatory requirements/implications (e.g. regional and district planning, resource consentability).
- Financial aspects (e.g. potential scheme pricing and revenue models, funding models – financial/capital structuring to fund scheme(s)).
- Scheme(s) construction and commercial arrangements.
- Land ownership and access.

The relative ranking for each of these categories has been developed based on considering the variability across all the sites for each criteria, and scoring each site as relatively more advantageous (score of 3), average (score of 2) and less advantageous (score of 1). The scores were added together to obtain the final relative score (which can range from 12 to a maximum of 36), which was considered in the relative ranking of sites for each target river. Sites that were identified as having significant risks/flaws (for example where a dam site has large apparent landsliding or is on an active fault) are also ranked (score of 0) but ruled out from further consideration (i.e. not shortlisted).

The relative rankings for each site considered in this study are presented in Section 5 and Appendix C. A ranking classification matrix with qualitative descriptions is included in Appendix C. Comments are provided to support each selected score and inform the shortlist selection process.

This approach is fundamentally about comparing sites against each other to identify the more advantageous sites for further assessment (i.e. selecting the best looking of the group). As this is a high-level desktop study, there is uncertainty in the suitability of each site, and initially shortlisted sites may prove to be unsuitable or more challenging upon closer scrutiny and investigation. This approach is intended to provide a staged framework for arriving at preferred site(s) for more detailed analysis and investigation (rather than investing in this analysis too early in the selection process).

3 Potential Storage Sites

3.1 Previously considered storage options

Potential storage sites for the supply of water to the Ruataniwha Plains were extensively considered as part of the scoping[5], prefeasibility[6] and advanced feasibility studies[7] undertaken by Tonkin & Taylor (T+T) for HBRC between 2008 and 2011 for the Ruataniwha Water Augmentation Scheme (which lead to the now discontinued Ruataniwha Water Storage Scheme, RWSS). The purpose of these previous studies was to identify and develop an irrigation water storage scheme(s) that would enable full development of the Ruataniwha Plains in areas that were restricted by water availability and reliability.

This study considers the storage volumes required to maintain current use and offset river flow depletion effects (refer Section 2.2) (which are less than the previously reported volumes required to meet the then adopted irrigation demands for the 2008 to 2011 RWSS studies), as well as the opportunity for additional storage at the assessed potential sites (i.e. if a site appears suited to a larger storage volume, this has been considered as an opportunity to provide additional water for other uses). This results in two shortlists of potentially advantageous sites (refer Section 6); one for sites better suited to the maintaining current use requirements only (for offsetting flow depletion), and another that better provides the opportunity for larger scale storage in addition to maintaining current use.

The previously identified potential storage sites were reconsidered for the purposes of this study, specifically noting that some sites were not shortlisted on the basis that they provided too small a storage volume to meet the RWSS requirements. A brief summary of these previously identified sites is provided below as relates to this 2020 study. The previous reports should be referred to for further details of the prior RWSS studies.

The shortlisted potential sites from the T+T 2008 and 2009 prefeasibility studies are presented in Table 3.1 below, along with commentary on subsequent assessments as part of the 2011 advanced prefeasibility study.

Table 3.1: Summary of previously considered storage options from 2008 to 2011 T+T studies (1)

Storage site	Catchment area (km^2)	Approx. dam height (m)	Approx. storage volume (million m^3)	Comments regarding potential suitability for this 2020 study
A1 –Dutch Creek (2)	17.8	63	20.5	Significant geological hazards identified at site during investigations and site considered not suitable.
A2 – Gwavas Forest	8.4	45	8.1	Potentially suitable for 2020 study.
A4 – Glenalvon Rd	4.4	32.5	10	Potentially suitable for 2020 study noting smaller scale storage with/without flow harvesting.

[5] T+T report titled "*Ruataniwha Irrigation Study Stage 1 Report Potential Storages*" dated November 2008. T+T Ref: 25916.
[6] T+T report titled "*Prefeasibility Study of Water Augmentation Opportunities - Ruataniwha Plains*" dated June 2009. T+T Ref: 25916.
[7] T+T report titled "*Ruataniwha Water Augmentation Scheme: Advanced Prefeasibility Summary Report*" dated February 2011. T+T Ref. 27195.

Storage site	Catchment area (km^2)	Approx. dam height (m)	Approx. storage volume (million m^3)	Comments regarding potential suitability for this 2020 study
A5 – Te Heka [2]	7.9	31	16	Site located on Te Heka active fault. Not selected for this study.
A7h – Makaroro [3]	111	69	50	RWSS looked at 90 Mm^3 dam (83 m high dam). A smaller scale dam was also considered at same site for 2020 study.
B1 – Upper Ngaruru	7.2	46	21.3	Potentially suitable for 2020 study.
B2 - Lower Ngaruru	10.5	25	8.3	Potentially suitable for 2020 study.
B3 – Blackburn Rd [2]	9.4	29	22	Reconsidered for 2020 study.
C1 - Avoca	5.8	52	26	Not shortlisted for 2011 advanced prefeasibility study due to apparent landslide in reservoir margin. Reconsidered for 2020 study.
C2 – Sherwood [2]	12	39	14	Potentially suitable for 2020 study.
C3 – Ashley Clinton Rd	6	25.5	7.6	Potentially suitable for 2020 study.
D1 - Whenuahou [2]	10.9	25	6	Site located on Ruataniwha active fault and not selected for 2011 advanced prefeasibility. Not selected for 2020 study.
D2 – Rangitoto Rd [2]		28	14	Site located on Takapau active fault and not selected for 2011 advanced prefeasibility. Not selected for 2020 study.
D2a – Rangitoto Rd A [3]	1.3	21.5	2.4	Not selected for 2020 study.
D2b – Rangitoto Rd B [3]	0.8	29.5	4.1	Not selected for 2020 study.
D3 – Hinerangi Rd	44	19	11.1	Not selected for 2020 study.
D5 – Makaretu [3]	44.5	41	25	Shortlisted in 2011 advanced prefeasibility study and subsequent investigation found artesian pressures and the site was deemed unsuitable. Not selected for 2020 study.

(1) Fourteen sites were previously assessed and shortlisted for the next stage, as reported in Ruataniwha Irrigation Study, Stage 1 Report Potential Storages (T+T report November 2008, Ref: 25916).

(2) These were the sites that were previously assessed and shortlisted for the next stage, as reported in Prefeasibility Study of Water Augmentation Opportunities - Ruataniwha Plains (T+T report June 2009, Ref: 25916).

(3) These were the additional sites assessed and reported in Ruataniwha Plains Water Augmentation Scheme: Advanced Prefeasibility Study - Summary report (T+T report February 2011, Ref: 27195)

Sites B1 and B2 on the Ongaonga Stream were initially removed from shortlist during the June 2009 prefeasibility study due to potential landslide issues in the reservoir margin. B1 and B2 were returned to the site list in the advanced prefeasibility report. C1 on the Avoca River features a large apparent landslide feature and was not considered further as more suitable looking sites were progressed.

Of note in the feasibility report is the allowance for sediment load in the Makaroro River at site A7, which was estimated at the time to result in approximately 0.18 million m^3 of sediment infill per year on average (noting also the reported range of 0.12 to 0.25 million m^3/year). This sediment infill allowance would relatively quickly infill smaller storage volumes on the Makaroro River (and the similar sites near the Ruahine Range such as the head of the Tukituki and Waipawa Rivers) which

supports not locating smaller storages on the main branches of the Waipawa, Tukituki and Makaretu Rivers.

Four potential sites were added as part of the 2010 advanced prefeasibility study. These sites were A7 (which was ultimately selected as the RWSS site), D5 (in the Makaretu River catchment), and a revised arrangement for site D2 formed by two smaller dams (D2a and D2b) either side of the active Takapau fault. Several of the 2009 prefeasibility sites (D1, D2, B3, and A5) were removed from further consideration/discontinued on the basis that they crossed active fault traces (D1, D2) and/or had relatively challenging site geology.

Sites A7 and D5 where shortlisted for further investigation in the feasibility study. Geotechnical investigations at Site D5 (which was sited entirely in alluvial deposits and located on the main stem of the Makaretu River) identified significant artesian pressures and this site was abandoned and the remaining site A7 progressed to become the RWSS (noting a slightly different location was selected upstream of the original site A7 following site investigations). The artesian pressures identified at site D5 may be site specific or could be indicative of sites in the Ruataniwha Plains on alluvial materials in general.

3.2 Additional storage options

3.2.1 Waipawa River

For this study, six additional potential in- valley storage sites were identified on the Mangaonuku Stream and tributaries. These options are presented in Section 5 and in the figures in Appendix A. No additional sites were considered on the main stem of the Waipawa River and its upstream tributaries in the Ruahine Range on the basis outlined in Section 2.3.

3.2.2 Tukituki River

For the present study eight additional potential in valley storage sites were identified on the tributaries to the Tukituki River within the catchments of the Kahahakuri and Ongaonga streams (four sites), and the Porangahau and Maharakeke streams (which flow into the Makaretu River) (four sites). Only one relatively small additional potential site was identified in the foothills near the headwaters of the Tukipo River and its tributaries (on the Avoca River), noting that the incised, relatively steep channels into alluvial deposits in this area result in challenging geological conditions and limited sites with suitable storage volumes for reasonable dam sizes. These options are presented in Section 5 and in the figures in Appendix A.

No additional sites were considered in headwaters of the Tukituki River in the Ruahine Range. As outlined in Section 2.3, potential sites in this area are typically in incised valleys and on river branches that have relatively steep gradients and high sediment load which, in general terms, are more suited to larger scale storages.

The steeper river gradients and incised valleys mean that comparatively advantageous dam fill to storage volume ratios (and therefore generally construction cost per m^3 stored) only occur for larger storage volumes (typically once the dam height is sufficient to impound water above the incised/gorge areas). The valley foothill sites are typically wider and more advantageous in terms of dam height to storage ratio for the smaller storage sizes (e.g. less than 15 Mm^3).

Based on the sedimentation estimates developed as part of the RWSS studies (refer Section 3.1), a large sedimentation storage allowance, or regular sediment management (e.g. via sluicing) would likely be necessary for these sites. The percentage of the total storage volume that is for reservoir sediment infill, or the long-term operation costs associated with sediment management therefore becomes less onerous for larger total storage volumes.

Consideration of these aspects as part of the RWSS project influenced the decision to select the 90 Mm^3 A7 Makaroro site (in the Waipawa River catchment). Other large scale storage sites on main rivers and branches near the Ruahine Range (including on the Tukituki River) were considered as part of the RWSS prefeasibility studies before site A7 was ultimately selected for further assessment as the preferred site for larger scale storage.

4 Hydrology

4.1 Catchment yields

The local runoff available for storage at each potential site is influenced by the catchment size and location/rainfall. Sites located further inland towards the Ruahine Range receive significantly higher average annual rainfall than sites in the foothills and on the Ruataniwha Plains, and a major part of the Tukituki and Waipawa River flows come from the Ruahine Range[8].

NIWA's future climate change predictions for the Central Hawke's Bay[9], while uncertain, are for a reduction in average annual rainfall in the Ruataniwha Plains (noting a seasonal variation in the change). However, the main rivers in the area are still expected to have more reliable flow than the streams in the smaller foothill valleys. This means sites/schemes that are on major tributaries, or have external harvesting from the Waipawa or Tukituki River to fill the valley storage, are expected to be more resilient to the potential effects of future climate change.

The available flow for storage is a function of the catchment yield (the total volume of streamflow that a catchment provides) less the residual flow requirements at the storage site (which, for a simplified initial assessment, can be expressed as a percentage of the catchment streamflow) (refer Section 4.2).

For this initial scoping level study, we have considered the available flow for storage on an annual basis. Further refinement to the storage requirements should be made at the next project stage by considering the daily/monthly variation in water availability and demand (which may result in a lower active storage requirement).

We have estimated the potential annual catchment net yield for storage refill for each potential storage site by:

1 Estimating the mean annual rainfall loss (through infiltration and evapotranspiration) for selected gauged catchments and extrapolating these estimates to the ungauged storage sites. The gauged catchment loss was calculated by subtracting the annual mean flow (from the HBRC and NIWA supplied flow records), expressed in mm per year, from the catchment's mean annual rainfall (using the areal average value).

   This approach was previously used for the Ruataniwha scoping and prefeasibility studies in 2008 and 2009, and a regional relationship between mean annual rainfall and rainfall loss developed. This regional relationship was reassessed using the recent data and adopted as suitable for this study.

2 Subtracting the estimated mean rainfall loss from the mean annual rainfall (catchment areal-averaged mean annual rainfall approximated by the value at the catchment centroid for the smaller catchments) at each ungauged catchment to get the catchment yield (in mm per year), and then calculating the gross mean annual catchment yield (in m^3/year) based on the catchment area to the storage site.

3 Assigning a representative gauged site for each ungauged storage site to estimate the potential yield in a dry year (expressed as a proportion of the mean catchment yield) and also the residual flow allowance (expressed as a proportion of the mean flow) for the ungauged storage sites.

[8] Hawke's Bay Regional Council report "*Hydrology of the Tukituki Catchment*". September 2012. HBRC Plan No. 4405.
[9] NIWA report "*Hawke's Bay Climate Change Projections*". May 2017. NIWA client report No: 2017126AK

4 Subtracting the residual flow allowance, taken to be the assessed 7-day mean annual low flow (7-day MALF), from the potential catchment yield in a dry year (see Section 4.2 following) to obtain the available net catchment runoff for storage refill in a dry year.

The adopted representative gauged sites and their paired potential storage sites are presented in Table 4.1 below. There are a limited number of suitable flow gauge records that are representative of the storage site catchment and the Tukipo River at SH50 and Waipawa River at RDS are the primary gauged sites, with the Makaroro River at Burnt Bridge used for sites that have steep catchments closer to the Ruahine Range.

Supporting flow statistics for the gauged catchments are included in Appendix C.

Table 4.1: Adopted gauged site pairing with potential storage sites

Gauged site	Paired potential storage sites [2]
Otane Stream at Glendon	M6
Makaroro River at Burnt Bridge	A7, A2, M4, M5
Waipawa River at RDS	A4, M1, M2, M3
Tukipo River at SH50	B1, B2, B3, O1, O2, O3, C1, C2, C3, T1, T2, D2a/b, D3, P1, P2, P3, P4
Mahaharakeke Stream at Limeworks Stn Rd	Initially considered but not used due to short duration of record

(1) Refer Section 4.1 for further details on how the annual mean rainfall losses were calculated.

(2) Refer Section 5 and Appendix A for further details on specific potential storage sites.

4.2 Residual flow requirement and net yield

A key consideration when determining the allowable flow that can be retained for storage is the residual flow requirements downstream of the storage site. The following potential residual flow regimes/criteria were initially considered and discussed with HBRC:

1 Release up to the 7-day Mean Annual Low Flow (MALF) (low flow take case). This means if inflows are lower than the 7-day MALF, then outflows can be reduced to match inflows. In practice however, unless inflows are measured in real-time, the release will be maintained at the 7-day MALF. Furthermore, under low flow conditions, additional releases over and above the 7-day MALF will likely be required to meet downstream demands.

2 Release up to the median flow (high flow take case). This means all inflows up to the median flow are released, and water storage only occurs using flows that are above the median flow. This approach is generally more applicable to the operation of intakes that harvest water from the main rivers/tributaries, and likely too onerous (and unprecedented) for smaller valley storages.

3 Ignore own catchment harvest and assume what comes in must go out (no take case). In this situation, refill relies entirely on harvesting from another source, which is highly unusual for water storage, apart from the practicality of implementing such a release regime for any site that has a reasonable catchment size (which will necessitate oversized low level outlets that can discharge large floods even when the storage is drawn down).

For this study, the low flow take case has been adopted, coupled with a conservative limit on the available catchment yield in a dry year. For comparison, this results in slightly lower yields than estimated in the 2008, 2009 and 2011 studies. For the design case, we have assumed a net annual catchment yield that is the lesser of the:

i The estimated available catchment flow volume in a dry year (calculated as the 10th percentile value of the synthetic mean annual flow series (as derived from paired gauged site data)) minus the residual flow volume (calculated as the 7-day MALF times 365 days), or

ii 50% of the available catchment mean annual flow volume.

We understand that HBRC sets residual flow requirements for storage dams on a case-by-case basis and with consideration of the potential effects (as per the Resource Management Act). The Regional Resource Management Plan[10] and Plan Change 6 (PC6) do not include specific residual flow release requirements for water storages/in stream dams in the Tukituki River catchment.

Plan Change 6 Policy POL TT13A In-stream dams provides some effects-based rules for flow management such that minimum flows are not to be adversely affected by damming (i.e. minimum flows are not reduced or longer duration than the pre-damming condition), and that flow variability above minimum flows is provided for and the potential effects of high flow takes are considered. Minimum flow requirements are specified in Plan Change 6 for the main rivers and streams in the Ruataniwha Basin (refer Table B1 in Appendix B).

The calculated annual net catchment yields adopted for this study are presented in Table 5.1 in Section 5 below.

4.3 Water transfer schemes

Based on the estimated annual catchment yields and the residual flow requirements, many of the potential storage sites would rely on flow harvesting from adjacent streams/rivers to provide the target annual storage volumes. Selection of potential harvesting sites and transfer arrangements require assessment of the available/allowable flow for harvesting.

In general terms, large volumes of water for storage can only be harvested from the major rivers/tributaries which have more flow available for longer durations, as opposed to the smaller streams that only have sufficient flow volumes available during floods. Harvesting being restricted to high flows/flood flows means that harvesting can only occur for a limited period of the year, which results in larger more expensive harvesting infrastructure (e.g. intakes, pumps and pipework) that is infrequently used (i.e. low utilisation factor).

The proximity of a site to a suitable stream/river for harvesting is a key criterion for the shortlisting of sites. Where significant flow harvesting is required, this tends to favour sites that are closer to the main branches of the Tukituki River (e.g. the Waipawa, Tukituki, Makaretu, Kahahakuri rivers and the Mangaonuku Stream).

PC6 specifies high flow allocation limits for the Waipawa and Tukituki Rivers only as measured at the Waipawa at RDS/SH2 and Tukituki at Tapairu Road and Red Bridge sites. The percentage of high flow allocation for tributaries to these rivers (e.g. the Mangaonuku Stream, Tukipo River, Porangahau and Maharakeke Streams etc.) is calculated by HBRC based on catchment area. We understand from HBRC that there is limited high flow left unallocated and this may further restrict the volumes able to be harvested.

Specific harvesting requirements and options should be considered and developed further in the next stages of this project. In particular, options for increasing take during the winter months when there is much lower water demand should be explored with HBRC.

Indicative water transfer schemes have been considered at a high level for each site where this appears needed to meet the target annual storage volume. Consideration of transfer schemes for this scoping level study consists of potential intake sites, pipeline/channel routes, and elevation

[10] Hawkes Bay Regional Council *"Regional Resource Management Plan (RRMP)"*. Operative 28 August 2006.

differences to enable comparison between sites. Indicative water transfer schemes are presented in the figures in Appendix D for the shortlisted sites that appear to require harvesting.

5 Scheme Selection

5.1 Summary of schemes considered

Table 5.1 overleaf provides a summary of the storage schemes specifically considered as part of this study. As described in Section 2, sites were reviewed for the target storage volume(s) to maintain current use and then considered for the opportunity to provide additional storage volume, including consideration of the maximum reasonable storage based on topography, geology, what volume can be filled by the local catchment and external harvesting opportunities. The summarised relative rankings for each site against the assessment criteria (refer Section 2.4) are included in Appendix C.

Potential water storage sites typically have a reasonable maximum upper bound in terms of storage capacity arising from constraints in the site topography, geology and/or hydrology. Storages above this reasonable maximum (where physically achievable) may result in significant additional works for limited additional benefit (e.g. long saddle dams, large scale water harvesting infrastructure).

In some instances, multiple sites of smaller storage volume may be more suitable for providing a moderate storage volume than a single site, for example where there is significant distance between the storage site(s) and the demand locations. There is often a trade-off between economies of scale (which drive larger storages for a lower cost per m^3 of water stored) and project development timeframes and funding, with smaller scale storage projects more readily developed albeit at a higher cost per m^3 of water stored. The desired storage volume and whether a single or multiple storages are preferred should be considered in the next project phase.

Table 5.1: Summary of storage schemes

Storage site		Catchment area (km^2)	Estimated net catchment yield volume (Mm^3/yr)	Storage for current use (to offset flow depletion)			Opportunity/maximum reasonable storage			Distance to harvest source (km) [6]	Distance to release (km)
				Dam height (m) [5]	Dam crest length (m)	Volume (Mm^3)	Dam height (m) [5]	Dam crest length (m)	Volume (Mm^3)		
Waipawa River (including Mangaonuku Stream) (2 to 5 million m^3 storage size for current offset use)											
A1[2]	Dutch Creek	Excluded on basis of geological risks identified during initial site investigations									
A2[1]	Gwavas Forest	8.0	3.4	28	440	2	46	580	13	1	0
A3[1]	Upper Mangamate	Replaced by site M4 Addis Rd in this study which is slightly downstream									
A4[1]	Glenalvon Rd	3.5	0.7	17	500	2	32	600	10	5	0
A5[2]	Te Heka	Excluded on basis that site crosses active fault (Te Heka Fault)									
A7[4]	Makaroro (RWSS)	111.5	96	Not suited to smaller volumes			83	510	90	N/A	0
M1	Glenalvon Rd alternative	2.7	0.5	19	450	2	35	600	12	5	0
M2	Holden Rd	2.9	0.7	18	520	2	22	560	3.5	1.5	0
M3	Springvale	2.7	0.8	24	430	2	38	570	8	1.5	0
M4	Addis Rd	9.5	3.1	28	380	2	43	615	8	2.5	0
M5	Mangamate Stream	14.2	5.2	34	515	5	38	760	8	1	0
M6	Mangatahi Stream	32.0	5.4	14	420	5	33	320	25	2.5	0
Tukituki River (including Ongaonga and Kahahakuri streams) (3 to 5 million m^3 storage size for current offset use)											
K1	*Upper Kahahakuri*	*5.5*	*1.4*	*18*	*600*	*1.8 (Too small)*	*Not suited to larger scale storage*			*2*	*0*
B1[1]	Upper Ongaonga	7.8	2.0	22	560	3	37	630	13	1	0

Storage site		Catchment area (km^2)	Estimated net catchment yield volume (Mm^3/yr)	Storage for current use (to offset flow depletion)			Opportunity/maximum reasonable storage			Distance to harvest source (km) [6]	Distance to release (km)
				Dam height (m) [5]	Dam crest length (m)	Volume (Mm^3)	Dam height (m) [5]	Dam crest length (m)	Volume (Mm^3)		
B2[1]	Ongaonga Stream	11.5	2.7	16	640	3	24	750	5.8	1.5	0
B3[2]	Blackburn Rd	9.5	1.8	20	1080	5	32	1360	22	3 to 16	0
O1	Upper Blackburn Rd	5.5	1.2	20	510	3	25	610	6.8	4.5	0
O2	Pettit Valley Rd	15.8	3.8	17	630	3	25	750	8	3 to 16	0
O3	Nochi Trust	0.9	0.2	32	520	2.8	Not suited to larger scale storage			0.5 to 8.5	0
Tukituki River (including Tukipo River) (3 to 5 million m^3 storage size for current offset use)											
C1[1]	Avoca River	5.8	2.2	25	360	3	50	560	19	3	0
C2[2]	Sherwood	10.5	3.5	28	620	3	35	870	13	1 to 7	0
C3[1]	Ashley Clinton Rd	6.1	2.4	Not suited to smaller storage volumes			25	1130	5.7	<1 to 2.5	0
T1	*Mangatewai Trib.*	*1.2*	*0.5*	*14*	*300*	*0.5 (Too small)*	*Not suited to larger scale storage*			*N/A*	*0*
T2	Avoca Trib.	1.8	0.6	31	325	3	38	380	6.3	1	0
Tukituki River (including Makaretu River, Porangahau and Maharakeke streams) (3 to 5 million m^3 storage size for current offset use)											
D1[2]	Whenuahou	Excluded on basis that site crosses active fault (Ruataniwha Fault)									
D2[2]	Rangitoto Rd	Excluded on basis that site crosses active fault (Takapau Fault)									
D2a[3]	Rangitoto Rd	0.2	0.1	22	915	2.4	Not suited to larger scale storage			5.5	0
D2b[3]		3.2	0.9	30	1400	4.1	Not suited to larger scale storage			5.5	0
D3[1]	Hinerangi Rd	44	8.5	Not suited to smaller storage volumes			19	2200	11.1	4 to 6	0
D5[3]	Makaretu	Excluded on basis of artesian pressures identified during initial site geotechnical investigations (including drilling)									

Storage site		Catchment area (km^2)	Estimated net catchment yield volume (Mm^3/yr)	Storage for current use (to offset flow depletion)			Opportunity/maximum reasonable storage			Distance to harvest source (km) [6]	Distance to release (km)
				Dam height (m) [5]	Dam crest length (m)	Volume (Mm^3)	Dam height (m) [5]	Dam crest length (m)	Volume (Mm^3)		
P1	Upper Maharakeke Stream	14.1	3.9	20	620	3	40	770	12	7 to 9	0
P2	Aorangi Rd	1.5	0.2	20	380	2.4	Not suited to larger scale storage			4 to 6	0
P3	Upper Hinerangi Rd	3.6	0.8	23	290	3	37	380	10.6	7 to 9	0
P4	Waikopiro	7.0	1.8	17	425	3	43	600	26	5.5	0

(1) Among the fourteen sites previously assessed and shortlisted for the next stage, as reported in Ruataniwha Irrigation Study Stage 1 Report Potential Storages (T+T report November 2008, Ref: 25916).

(2) These sites were previously assessed and shortlisted for the next stage, as reported in Prefeasibility Study of Water Augmentation Opportunities - Ruataniwha Plains (T+T report June 2009, Ref: 25916).

(3) These were the additional sites assessed and reported in Ruataniwha Plains Water Augmentation Scheme: Advanced Prefeasibility Study - Summary report (T+T report February 2011, Ref: 27195)

(4) Site A7h dam geometry as per the Ruataniwha Plains Water Storage Project Technical Feasibility Study Report (T+T report dated August 2012, Ref: 27690.100/3).

(5) Dam heights include a nominal allowance for 2 m for freeboard above normal reservoir levels (except for Site A7h, which was specifically assessed as part of the RWSS). Freeboard requirements are site specific and should be considered further for the preferred sites at the next stage.

(6) Distance to harvest source is the same for the current use storage and opportunity/maximum reasonable storage options.

5.2 Site relative ranking

The potential storage sites considered for this study have been shortlisted using the qualitative criteria in Section 2.4. A relative ranking score was assigned to each criterion and the total summed scores ranked for comparison to assist with selection of the shortlisted sites. Details of the scoring against applied criteria are provided for each site in Appendix C. Table 5.2 below presents a summary of the relative ranking between the schemes.

Table 5.2: Relative rank of storage schemes

Storage site		Relative rank	Comments
Waipawa River (including Mangaonuku Stream)			
A2	Gwavas Forest	2	Moderate storage potential with some external harvesting for larger storage sizes. QEII covenant land immediately downstream.
A4	Glenalvon Rd	3	Moderate storage potential near SH50 and relies on external harvesting.
A7	Makaroro (RWSS)	1 (large storage only)	Ruataniwha Water Storage Scheme site that is more suited to large scale storage up to 90 Mm^3.
M1	Glenalvon Rd alternative	4	Moderate storage potential near SH50 and relies on external harvesting. Reservoir covers QEII covenant land.
M2	Holden Rd	6	Poor storage to dam volume ratio and relies on external harvesting. Tikokino township immediately downstream.
M3	Springvale	5	Poor storage to dam volume ratio and relies on external harvesting.
M4	Addis Rd	1	Suitable storage volume with no harvesting required and option for increasing storage with harvesting from adjacent stream.
M5	Mangamate Stream	1	Suitable storage volume with no harvesting required and option for increasing storage with harvesting from adjacent stream.
M6	Mangatahi Stream	6	Upstream of East Argyll township. Has potential to store a larger volume of water with harvesting from the Mangaonuku Stream but noting site is at the downstream end of the Ruataniwha Plains.
Tukituki River (including Ongaonga and Kahahakuri streams)			
K1	*Upper Kahahakuri*	-	*Site is too small for volume needed to offset flow depletion.*
B1	Upper Ongaonga	2	Site appears more suited for smaller storage size without external refill. Presence of SH50 and Ongaonga township downstream could be a potential concern.
B2	Ongaonga Stream	1	Appears to provide range of storage sizes with and without external refill. Presence of SH50 and Ongaonga township downstream could be a potential concern.
B3	Blackburn Rd	3	Relatively long dam crossing Blackburn Road and relies on external refill. Has potential for larger storage reliant on external harvesting.
O1	Upper Blackburn Rd	4	Similar to Site B3 but with lower relative potential for increased storage. QEII covenant land in reservoir area.
O2	Pettit Valley Rd	3	Appears well suited for 3 M m^3 scale storage with some potential for larger storage with external refill. Crosses Pettit Valley Rd.
O3	Nochi Trust	4	Site is relatively small and relies heavily on external harvesting.
Tukipo River			

Storage site		Relative rank	Comments
C1[1]	Avoca River	2	Site appears promising for range of storage sizes noting large scale apparent landslide in reservoir area may limit storage potential.
C2[2]	Sherwood	1	Appears to provide range of storage sizes with and without external refill. Downstream QEII covenant and DoC land a consideration.
C3	Ashley Clinton Rd	4	Large dam for storage size and relies on external harvesting
T1	*Mangatewai Trib.*	-	*Site too small for volume needed to offset flow depletion*
T2	Avoca Trib.	3	Site appears better suited to smaller scale storage (around 3 Mm^3) and relies on external harvesting/refill.
Makaretu River (including Porangahau and Maharakeke streams)			
D2a	Rangitoto Rd	6	Large dam for small storage volume and relies heavily on external refill, close to active faults.
D2b		6	Large dam for small storage volume and relies on external refill, close to active faults.
D3	Hinerangi Rd	5	Large dam and reservoir area takes up a significant area of valuable farmland.
P1	Upper Maharakeke Stream	1	Can refill from own catchment for smaller storage volumes.
P2	Aorangi Rd	4	Small storage volume and relies heavily on external harvesting.
P3	Upper Hinerangi Rd	2	Relies on external harvesting from a long distance away.
P4	Waikopiro	3	Close to active faults and requires road realignment.

5.3 Additional considerations for shortlisting

Further assessment of these sites was undertaken when selecting and refining the shortlist for each river (i.e. the shortlist considers the relative rankings in Table 5.2 but is not based solely on this). A degree of engineering judgment has been necessary for shortlisting given the early stage of the project and inherent uncertainties in the high-level desktop-based study undertaken.

Many of the sites rely on external water harvesting to refill the larger scale storages, and the extent of flow harvesting has been into account to adjust the relative ranking of sites and their apparent suitability for shortlisting. The relative ranking in Table 5.2 considers the scale at which substantial external refill would be required, and ranks sites based on the assessed more suitable storage volume for each site (e.g. some sites are more suited to 2 to 3 million m^3 of storage whereas others suit larger storage volumes of 5 to 10 million m^3 and above).

6 Shortlist of Storage Sites and Schemes

6.1 Initial shortlisted sites

The shortlisted sites recommended for further consideration are summarised below in Table 6.1 below. At least two storage sites are desirable/necessary if flow is to be released into the upper catchments of both the Tukituki and Waipawa rivers. Alternatively, a water conveyance structure (canal and/or pipeline) could be constructed for cross-river transfer if storage is concentrated in one location. Also, a single site that augments either river may be sufficient if only offsetting flow depletion at the Tukituki at Red Bridge site is considered.

Table 6.1 Recommended initial shortlist for offsetting effect of current water use only

River/Stream	Minimum storage required (M m^3)	Shortlist site(s) (and relative rank for river catchment as per Table 5.2)
Waipawa River - Mangaonuku Stream	2 to 5	• M4 Addis Rd (1) • M5 Mangamate Stream (1)
Tukituki River - Ongaonga and Kahahakuri Streams	3	• B2 Ongaonga (1)
Tukituki River - Tukipo River		• C1 Avoca (2) • C2 Sherwood (1)
Tukituki River - Makaretu River (including Porangahau and Maharakeke Streams)		• P1 Upper Maharakeke Stream (1)

The opportunity to supply additional water for other uses (such as municipal, industrial and irrigation supply) in addition to offsetting river flow depletion from current takes was also a factor in the selection of the shortlisted sites. Some sites are more suited to larger scale storages than others on account of physical constraints such as topography (e.g. at sites where most of the storage is provided at higher levels), and river characteristics (such as size of flood and associated spillway provisions relative to dam size and storage, and river sediment load which may infill a smaller reservoir too quickly). The initial shortlist for larger scale storages therefore differs to the flow-offset only shortlist and is presented in Table 6.2.

Table 6.2 Recommended initial shortlist for larger scale storage opportunity

Storage volume (Mm^3)	Shortlist site(s)	River catchment (subcatchment)
8	• M4 Addis Rd • M5 Mangamate Stream	Waipawa River (Mangaonuku Stream)
10 to 15	• C2 Sherwood	Tukituki River (Tukipo River)
	• B1 Ongaonga	Tukituki River (Ongaonga Stream)
	• A4 Glenalvon	Waipawa River (Mangaonuku Stream)
20 to 90	• A7 Makaroro	Waipawa River (Makaroro River)

These shortlisted sites and the indicative schemes (some of which include conceptual water harvesting and distribution pipework) are presented in the figures in Appendix D. Recommendations for the next stages of study to further refine the shortlist towards selection of the preferred site(s) are provided in Section 7.

6.2 Recommended priority sites

For storage volumes in the 3 to 8 million m^3 range, we recommend that HBRC specifically consider the following shortlisted sites first, on the basis these appear the most promising at this stage:

- M4 Addis Rd
- M5 Mangamate Stream
- B2 Ongaonga
- C2 Sherwood

Should further assessment or investigation identify additional constraints/risks at a site that make it less suitable, and alternative site from the initial shortlist could be selected for consideration.

If the Ruantaniwha Plains community and HBRC are looking for larger scale storage opportunities, this could include multiple storage sites to provide scale and spatial distribution. There are a limited number of apparently suitable sites for individual storage volumes greater than 10 Mm^3, and ultimately if substantially larger scale storage is sought then, from a purely engineering/geological/ hydrology perspective, this would favour the previously assessed Ruantaniwha Water Storage Scheme sites (Site A7 and variants) and/or consideration of large scale storage on the main stem of other rivers.

7 Recommendations for Next Stages

7.1 Overview

This study has identified a number of potential sites and schemes that appear suitable for further assessment in the next project stage. It is expected that further assessment will result in improved understanding of the preferred sites and may identify further significant risks/aspects that rule a site out, in which case another site from the shortlist could be considered further.

The staged development approach being undertaken is endorsed and this approach enables sites to be considered in a structured manner with progressive review at each stage of further investigation and design development. A typical high-level dam development/assessment staging, excluding associated social, environmental and financial aspects, is presented below:

a Initial site investigations involving walkover inspection by an engineering geologist and dam engineer.

b Concept design and specimen costings.

c Initial site investigations (e.g. test pits, material testing, drilling) and targeted hydrological monitoring.

d Feasibility level design and costings.

e Resource consents.

f Detailed design, associated investigations, and costings.

g Building consent.

h Construction.

It is recommended that the preferred/priority shortlist sites are considered further using this staged approach.

7.2 Key technical uncertainties and risks

There is uncertainty regarding the technical and engineering requirements for the shortlisted sites. Further assessment and investigation are necessary to improve the understanding of these sites. Some key technical and engineering risks which relate to these uncertainties include:

- Site geology and seismicity.
- Water demand patterns and seasonal variability.
- Water harvesting availability and consentability. The assessed net yield volumes estimated in this study are highly sensitive to input parameters and hydrological investigations (including flow gauging and monitoring) are recommended as a priority.
- Losing reaches in streams/rivers used for conveyance such as the Waipawa and Tukipo Rivers.
- Availability of dam construction materials.
- Potential dam break hazard.
- Flood hazard to harvesting infrastructure.

The risks summarised above are not a comprehensive list (e.g. it excludes environmental aspects and land tenure, for example), and further risks are likely to be identified during the subsequent stages of study/assessment. A risks and opportunities register should be developed for each site at the next stage of investigation, and this register would be progressively refined and updated through the project stages.

7.3 Considerations for specific sites

Based on this high-level desktop-based exercise, there are some apparent key considerations for the shortlisted sites. These considerations are:

- Site specific assessment and investigation of geology.
- Proximity of the Ongaonga Stream sites (e.g. Sites B1 and B2) to Ongaonga township. Does this add significant complexity to obtaining resource consents and therefore make these sites less suitable, and/or does the community support storage in these locations?
- The potential deep-seated landslide feature on true left reservoir margin for Site C1 Avoca (e.g. where the Tukituki Makaretu Rd traverses down the hill). Does this rule this site out for all storage volumes due to risk of landslide into the reservoir or just larger scale storage?
- Does the presence of QEII covenant land downstream of Site C2 Sherwood add significant complexity to obtaining resource consents and make this site less suitable?
- Relocation of Hinerangi Road to enable storage at Site P1 Upper Maharakeke. Does this limit the storage size at this site?

8 Applicability

This report has been prepared for the exclusive use of our client Hawke's Bay Regional Council, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

Tonkin & Taylor Ltd

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Appendix A: Potential Storage Site Overview Plans

- Figure A1 Study area overview
- Figure A2 Topography and faults
- Figure A3 Waipawa River site overview
- Figure A4 Tukituki River site overview
- Figure A5 Tukipo River site overview
- Figure A6 Makaretu River site overview

Appendix B: Catchment Hydrology and Water Balance

- PC6 minimum flow requirements
- Gauged catchment flow statistics

Table B1: Minimum river flow requirements in operative Tukituki Plan Change 6 (PC6)

Stream/River	Site	Minimum flows (l/sec)[1]	Comments
Mangaonuku Stream	U/S Waipawa	1170	Currently operative as from 1 July 2018
Tukipo River	SH50	150	
	Ashcott Rd	1043	
Tukituki River	Tapairu Rd	2300	
Waipawa River	RDS/SH2	2500	
Lower Tukituki River	Red Bridge	4,300	Applies 1 July 2018 to 30 June 2023.
		5,200	Applies 1 July 2023 onward.

(1) From Table 5.9.3 Tukituki River catchment minimum flows in Operative PC6.

Table B2: Gauged sites river flow statistics (period 2000 to 2019 only)

Stream/River	Site	Catchment area (km^2)[2]	Mean flow (l/s)[1]	Median flow (l/s)[1]	7-day MALF (l/s)[1]	10th percentile of annual mean flows (l/s)[1]
Mangaoho Stream	SH50[3]	32.6	664	64	28	589
Makaroro	Burnt Bridge	122	7,028	3,712	1,319	5,339
Waipawa River	RDS/SH2	680	16,266	8,836	2,707	11,818
Kahahakuri Stream	Ongaonga Bridge[4]	49	629	466	286	512
Otane	Glendon	23.6	148	51	7	84
Tukipo River	SH50	88	1,680	802	159	1,219
Makaretu River	Watson's Reach	57	2,286	1,265	241	1,936
Maharakeke Stream	Limeworks Station Rd[4]	68.5	774	291	130	668
Tukituki River	Tapairu Rd	777	15,642	9,161	2,325	11,980
	Red Bridge	2380	43,286	20,364	5,446	29,748

(1) Based on a selected period in the supplied flow records from January 2000 to December 2019, taken as representative of the current stream hydrology, where data is available. These flow statistics may differ from HBRC published values that use a longer data period or naturalised flows.

(2) As per HBRC report "Hydrology of the Tukituki Catchment Flow metrics for 17 sub-catchments" dated September 2012. EMT 12/18 or otherwise calculated from DEM.

(3) Flow record is from 1976 to 1979 for this site.

(4) Catchment upstream from site is understood to influenced by groundwater losses/depletion.

(5) Flow record is from 1978 to 1981 for this site.

Appendix C: Potential Site Shortlist Matrix

- Classification matrix for ranking sites
- Site ranking table

C1

Classification matrix

Criteria type	Hydrology	Engineering design		Hydrology [4]				Geotechnical [5]		Environmental		
Criteria	**Site storage sufficient [1]**	**Dam height [2]**	**Storage volume to dam volume ratio (%)[3]**	**Catchment can fill reservoir?**	**Proximity to reliable water harvesting location (distance and elevation) (if needed)**	**Proximity to target stream/river for flow release (as measured along potential pipeline route)**	**Relative spillway size/capacity (based on catchment area noting rainfall variability)**	**Proximity to known active faults**	**Known geological hazards/ site geology**	**Land value in dam footprint and reservoir area[6]**	**Potential environmental impacts**	**Downstream environment including dwellings, significant infrastructure [6]**
Criteria number	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
Relative advantage	**Relative rank descriptor examples**											
Advantageous (3)	Meets current use storage requirements for both rivers, and has opportunity for larger storage	<15 m	≤ 10%	Yes, no harvesting required	No harvesting required	< 1 km and gravity	Catchment area < 10 km^2	>10 km from known active fault	No significant landslides present, site geology advantageous for a dam (e.g. sandstone/ siltstone, older weathered gravels).	Remote high/ hill country dry land, no dwellings or local roads in reservoir area	No designated wetlands, Doc land or QEII covenant land at or immediately downstream of dam.	No dwellings or significant infrastructure immediately downstream.
Average (2)	Meets current use storage requirements for both rivers	15 m < h <25 m	10% < Vs/Vd ≤ 20%	Some catchment yield but flow harvesting required	< 5km and elevation difference < 40 m, or gravity fed option	1 km < distance < 5 km (gravity and pumping)	10 km^2 < Catchment area < 30 km^2 and/or higher relative rainfall area near Ruahine Range	10 km> dam site >2 km from known active fault trace	Minor landslides, dam site geology relatively simple.	Arable land, flat enough to be cultivated, and/or one or two dwellings, and/or local road	Some riparian vegetation, but no DoC or QEII covenant land at dam/reservoir	One or two dwellings and/or one type of major infrastructure (e.g. local road) downstream
Less advantageous (1)	Meets current use storage requirements for one river only	>25 m	>20%	Limited to no catchment yield and flow harvesting required	>5 km and/or elevation difference > 40 m	> 5 km (gravity and pumping)	Catchment area > 30 km^2	<2 km from known active fault trace	Apparent significant landslides present, site geology that may add significant complexity to dam design (e.g. relatively young alluvial gravels, lake deposits, interbedded loess/ sand/ low plasticity silt layers).	High value horticulture, and/or more than two dwellings, and/or local road.	DoC or QEII covenant land at or immediately downstream of dam.	More than two dwellings immediately downstream, main road and/or state highway.
Significantly less advantageous (0)	Does not meet storage requirement	N/A						Active fault runs through dam site	Major landside present at dam site/abutment.	Large number of dwellings or state highway present	Designated wetlands impacted.	N/A

(1) Storage volume calculated from DEM surface.

(2) Dam height calculated from DEM surface and includes 2 m freeboard above NTWL. Smaller scale dams with limited catchment typically have freeboard values around 2 m. Larger dams typically have more freeboard. Freeboard requirements should be considered in subsequent stages. The presented dam height relates to the current use maintenance storage volume unless otherwise stated.

(3) Dam volume calculated assuming earthfill/rockfill embankment with 4 m wide crest and 1V:2.5H shoulders and taking dam centreline cross-section from DEM to get lengths if full dam height and partial dam height lengths for simplified volumes. The presented dam ratio relates to the current use maintenance storage volume unless otherwise stated.

(4) Hydrology assessed based on delineated catchments using DEM and flow records as per Section 4. Harvesting infrastructure assessed using Google Earth and DEM surfaces.

(5) Geology and geohazard assessed using GNS Active Faults database, Geological Maps, DEM surface and aerial imagery.

(6) Assessed using aerial imagery.

Site ranking summary

Storage site		Total score	Ranking and supporting comments for each criterion											
			(1) Storage	(2) Dam Height	(3) Dam storage ratio	(4) Catchment	(5) Proximity to harvesting	(6) Proximity to release	(7) Spillway size	(8) Proximity to active faults	(9) Geology	(10) Land value	(11) Environment	(12) Downstream area
Waipawa River (Mangaonuku Stream)														
A1	Dutch Creek	Excluded on basis of geological risks identified during initial prefeasibility site investigations												
A2	Gwavas Forest	24	(3) Can store up to ~13 Mm^3	(1) 28 m high dam (2 Mm^3 volume)	(1) 25%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) ~1 km and ~20 m elevation difference from Upokororo Stream.	(3) 0 km (release into Middle Upokororo Stream).	(2) Catchment area of 8 km^2 noting higher rainfall in higher elevation catchment.	(2) 8.2 km from nearest active fault.	(2) Moderately weathered alluvial gravels and Kidnappers Group gravels. Moderately incised stream, instability not obvious, may need a saddle dam behind left abutment.	(3) Remote hill country dry land, driveway to one dwelling in reservoir area	(1) QEII covenant land within reservoir area and immediately downstream of dam.	(2) Potentially one dwelling and local road (Matheson Rd) downstream. SH50 8 km downstream.
A3	Upper Mangamate	Replaced by site M4 Addis Rd in this study which is slightly downstream												
A4	Glenalvon Rd	25	(3) Can store up to ~10 Mm^3	(2) 17 m high dam (2 Mm^3 volume)	(2) 14%	(1) Limited to no catchment yield and flow harvesting required	(2) ~5 km and ~20 m elevation difference from Waipawa River.	(3) 0 km release into the stream to Mangaonuku Stream.	(3) Catchment area of 3.5 km^2	(2) 6.8 km from nearest active fault.	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits. Reservoir contained within lower most alluvial terrace.	(3) Hill country dry land, no dwellings	(2) Some riparian vegetation, no DoC or QEII covenant land at dam/ reservoir	(1) Multiple dwellings, Glenalvon Rd and SH50 downstream.
A5	Te Heka	Excluded on basis that site crosses active fault (Te Heka Fault)												
A7	Makaroro (RWSS)	27	(3) Can store up to ~90 Mm^3	(1) 83 m high dam (90 Mm^3 volume)	(3) 5% (noting CFRD design)	(3) Yes, no harvesting required	(3) No harvesting required	(3) 0 km release into the stream to Makaroro River.	(1) Catchment area of 112 km^2 in the Ruahine Range.	(1) (2) Refer Ruataniwha Water Storage Feasibility Study for specific details.		(3) Hill country dry land, no dwellings	(1) Some riparian vegetation, DoC land in reservoir (Ruahine Forest Park).	(3) Long reach of river to nearest dwellings at Makaroro Rd (confluence with Waipawa River)
M1	Glenalvon Rd alternative	24	(3) Can store up to ~12 Mm^3	(2) 19 m high dam (2 Mm^3 volume)	(2) 14%	(1) Limited to no catchment yield and flow harvesting required	(2) ~5 km and ~30 m elevation difference from Waipawa River.	(3) 0 km release into the stream to Mangaonuku Stream.	(3) Catchment area of 2.7 km^2	(2) 7.8 km to nearest active fault.	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits. Fairly broad stream valley, possible minor instability on upstream left bank of reservoir.	(3) Hill country dry land	(1) QEII covenant land within reservoir area.	(1) Multiple dwellings, Glenalvon Rd and SH50 downstream.
M2	Holden Rd	25	(2) Can store up to ~3.5 Mm^3	(2) 18 m high dam (2 Mm^3 volume)	(2) 15%	(1) Limited to no catchment yield and flow harvesting required	(2) ~1.5 km and ~10 to 15 m elevation difference from adjacent branch of Mangaoho Stream.	(3) 0 km release into the stream to Mangaoho Stream.	(3) Catchment area of 2.9 km^2	(2) 5.5 km from nearest active fault.	(2) Kidnappers Group alluvial gravel. Possible old instability above left bank of reservoir	(3) Hill country dry land	(2) Some riparian vegetation, no DoC or QEII covenant land at dam/ reservoir	(1) Multiple dwellings and Tikokino township, and SH50 downstream.
M3	Springvale	23	(3) Can store up to ~8 Mm^3	(2) 24 m high dam (2 Mm^3 volume)	(1) 22%	(1) Limited to no catchment yield and flow harvesting required	(1) ~1.5 km and ~70 m elevation difference from adjacent branch of Mangaoho Stream.	(3) 0 km release into the stream to Mangaoho Stream.	(2) Catchment area of 2.7 km^2 noting higher rainfall in higher	(2) 8.9 km from nearest active fault.	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits.	(3) Hill country dry land	(2) Some riparian vegetation, no DoC or QEII covenant land at dam/ reservoir	(2) Two dwellings, and Holden Rd downstream.

C3

Storage site		Total score	Ranking and supporting comments for each criterion											
			(1) Storage	(2) Dam Height	(3) Dam storage ratio	(4) Catchment	(5) Proximity to harvesting	(6) Proximity to release	(7) Spillway size	(8) Proximity to active faults	(9) Geology	(10) Land value	(11) Environment	(12) Downstream area
									elevation catchment.					
M4	Addis Rd	25	(3) Can store up to ~8 Mm^3	(1) 28 m high dam (2 Mm^3 volume)	(2) 17%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) 2.5 km and 30 m elevation difference from adjacent stream (Site M5).	(3) 0 km (release into Mangamate Stream).	(2) Catchment area of 9.5 km^2 noting higher rainfall in higher elevation catchment.	(2) 5 km from nearest active fault.	(2) Alluvial gravel of various ages. Reservoir contained within the lowermost alluvial terrace.	(3) Hill country farm land, and commercial forestry	(2) Some riparian vegetation and commercial forestry, no DoC or QEII covenant land at dam/ reservoir	(1) Gwavas Rd, SH50 and two dwellings downstream
M5	Mangamate Stream	23	(3) Can store up to ~8 Mm^3	(1) 34 m high dam (5 Mm^3 volume)	(2) 16%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) ~1 km and 30 m elevation difference from adjacent stream (Site M4).	(3) 0 km (release into Mangamate Stream)	(2) Catchment area of 14.2 km^2 and higher rainfall in higher elevation catchment.	(2) 4.9 km from nearest active fault	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits in valley floor, Kidnappers Group alluvial gravel beneath shoulders. Reservoir contained within lowermost alluvial terrace.	(2) Hill country farm land. potentially one dwelling, and Gwavas Rd in reservoir area at upper levels	(2) Some riparian vegetation, but no DoC or QEII covenant land at dam/ reservoir. QEII covenant land noted above reservoir level on true right.	(1) Gwavas Rd, SH50 and two dwellings downstream
M6	Mangatahi Stream	24	(3) Can store up to ~25 Mm^3	(1) 14 m high dam (5 Mm^3 volume)	(3) 3%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) ~2.5 km and 30 m elevation difference from Mangaonuku Stream.	(3) 0 km (release into Mangatahi Stream to Mangaonuku Stream)	(1) Catchment area of 32 km^2	(2) 3.5 km from nearest active fault	(2) Mangaheia Group Sandstone. Shallow instability features on slopes above reservoir.	(3) Hill country, no dwellings or roads/	(1) Some riparian vegetation, no DoC or QEII covenant land at dam/ reservoir, DoC land (Marginal Strip) immediately downstream.	(1) Multiple dwellings at Argyll East township, Argyll East Primary School, Argyll and The Brow Rd downstream.
Tukituki River (Ongaonga and Kahahakuri Streams)														
K1	*Upper Kahahakuri*	*(0) Site too small*	*(0) Can store up to ~1.8 Mm^3*	*(2) 18 m high dam*	*N/A*	*(1) Some catchment yield but flow harvesting required for larger volumes > ~1 Mm^3.*	*(2) ~2 km and 40 m elevation difference from Waipawa River.*	*(3) 0 km (release into Kahahakuri Stream to Tukituki River, and/or release back though harvesting infrastructure to Waipawa River)*	*(3) Catchment area of 5.5 km^2*	*(2) 5.6 km from nearest active fault*	*(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits. Late Quaternary gravel on flanks. Broad shallow flat between terraces.*	*(3) Hill country, no dwellings or roads. Existing small farm dam in reservoir area.*	*(2) Some riparian vegetation, no DoC or QEII land. Nearby Springhill Scenic Reserve upstream of reservoir area.*	*(2) Two dwellings and Wakarara Rd downstream*
B1	Upper Ongaonga	26	(3) Can store up to ~13 Mm^3	(2) 22 m high dam (3 Mm^3 volume)	(2) 15%	(2) Some catchment yield but flow harvesting required for larger volumes	(1) ~ 2.5 km and 80 m elevation difference from Kahahakuri Stream, 9 km and 50 m elevation difference from Waipawa River.	(3) 0 km (release into Ongaonga Stream to Tukituki River, and/or release back though harvesting infrastructure to Waipawa River)	(3) Catchment area of 7.8 km^2	(2) 3.4 km from nearest active fault	(2) Kidnappers Group alluvial gravel. Possible shallow instability on left bank of reservoir.	(3) Hill country, exotic forestry block, no dwellings, Ngaruru Rd (unsealed or paper road).	(2) Some riparian vegetation around Ongaonga Stream, no DoC or QEII land.	(1) Three dwellings immediately downstream, Ngaruru Rd downstream, SH50 and Ongaonga township downstream

Storage site		Total score	Ranking and supporting comments for each criterion											
			(1) Storage	(2) Dam Height	(3) Dam storage ratio	(4) Catchment	(5) Proximity to harvesting	(6) Proximity to release	(7) Spillway size	(8) Proximity to active faults	(9) Geology	(10) Land value	(11) Environment	(12) Downstream area
B2	Ongaonga Stream	24	(3) Can store up to ~6 Mm^3	(2) 16 m high dam (3 Mm^3 volume)	(2) 12%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) 1.5 km and 35 m elevation difference from adjacent Ongaonga Stream branch, ~ 7.5 km and 5 m elevation difference from Kahahakuri Stream, 13.5 km and gravity fed from Waipawa River.	(3) 0 km (release into Kahahakuri Stream to Tukituki River.	(2) Catchment area of 11.6 km^2	(2) 3.4 km from nearest active fault	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits in valley floor, Middle Quaternary alluvial gravels beneath shoulders. Broad valley.	(2) Hill country and arable farming in valley floor, no dwellings, Ngaruru Rd.	(2) Some riparian vegetation around Ongaonga Stream, no DoC or QEII land.	(1) Two dwellings nearby and Ngaruru Rd downstream, SH50 and Ongaonga township
B3	Blackburn Rd	24	(3) Can store up to ~22 Mm^3	(2) 18 m high dam (5 Mm^3 volume)	(2) 17%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) 3 km and 55 m elevation difference from adjacent Ongaonga Stream branches, ~ 8.5 km and 40 m elevation difference from Kahahakuri Stream, 15.5 km and gravity fed/10 m head pumping from Waipawa River.	(3) 0 km (release into Ongaonga Stream to Tukituki River.	(3) Catchment area of 9.5 km^2	(1) 570 m from nearest active fault. Fault runs through reservoir (Ruataniwha Fault)	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits in valley floor, Kidnappers Group alluvial gravel beneath shoulders. Possible shallow landslides on left flank of reservoir (surficial soils).	(1) Hill country and arable farming in valley floor, two dwellings and farm buildings, Blackburn Rd.	(3) Open farm land, no DoC or QEII land.	(1) Two dwellings, Blackburn Rd, cemetery, SH50 farm buildings and Pettit Valley Rd and bridge downstream. Ongaonga township ~4.5 km downstream.
O1	Upper Blackburn Rd	21	(3) Can store up to ~7 Mm^3	(2) 20 m high dam (3 Mm^3 volume)	(2) 12%	(1) Some catchment yield but flow harvesting required for larger volumes > 1 Mm^3.	(1) 4.5 km and 75 m elevation difference from downstream Ongaonga Stream branches.	(3) 0 km (release into Ongaonga Stream to Tukituki River.	(3) Catchment area of 5.5 km^2	(1) 700 m from nearest active fault	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits in valley floor, Kidnappers Group alluvial gravel beneath shoulders. Undifferentiated late Quaternary gravel in upper reservoir reaches. Possible landsliding around left abutment of dam.	(2) Hill country and arable farming in valley floor, no dwellings, Blackburn Rd.	(1) Open farm land, QEII Covenant land in reservoir area, DoC land potentially in reservoir area (Paterson's Bush Scenic Reserve).	(1) Multiple dwellings, Blackburn Rd, cemetery, SH50 farm buildings and Pettit Valley Rd and bridge downstream. Ongaonga township ~6 km downstream.
O2	Pettit Valley Rd	23	(3) Can store up to ~8 Mm^3	(2) 17 m high dam (3 Mm^3 volume)	(2) 19%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) 3 km and 55 m elevation difference from downstream Ongaonga Stream branches, ~ 9.5 km and 20 m elevation difference from Kahahakuri Stream, 15.5 km and gravity fed from Waipawa River.	(3) 0 km (release into Ongaonga Stream to Tukituki River.	(2) Catchment area of 15.8 km^2	(1) 1 km from nearest active fault	(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits in valley floor, Kidnappers Group alluvial gravel beneath shoulders. Possible shallow instability on left flank of reservoir.	(2) Hill country, potentially one dwelling, Pettit Valley Rd.	(2) Some riparian vegetation around Ongaonga Stream, no DoC or QEII land.	(1) Multiple dwellings nearby and Pettit Valley Rd downstream, SH50 and Ongaonga township

C5

Storage site		Total score	Ranking and supporting comments for each criterion											
			(1) Storage	(2) Dam Height	(3) Dam storage ratio	(4) Catchment	(5) Proximity to harvesting	(6) Proximity to release	(7) Spillway size	(8) Proximity to active faults	(9) Geology	(10) Land value	(11) Environment	(12) Downstream area
O3	Noichi	23	(1) Can store up to ~2.8 Mm^3	(1) 32 m high dam (2.8 Mm^3 volume)	(1) 25%	(1) Limited to no catchment yield and flow harvesting required	(1) 0.5 km and 40 m elevation difference from Ongaonga Stream, ~ 1 km and 50 m elevation difference from Kahahakuri Stream, 8.5 km and 30 m elevation difference from Waipawa River.	(3) 0 km (release into Kahahakuri Stream to Tukituki River, and/or release back though harvesting infrastructure to Waipawa River)	(3) Catchment area of 0.9 km^2	(2) 3.6 km from nearest active fault	(2) Kidnappers Group alluvial gravel in valley floor, mid- Quaternary gravel on flanks. Possible shallow instability on left bank of reservoir.	(3) Hill country, no dwellings or roads.	(3) Open farm land, exotic forest block, no DoC or QEII land.	(2) Potentially two dwellings downstream, and SH50 ~4 km downstream.
Tukipo River														
C1	Avoca River	24	(2) Can store up to ~19 Mm^3 though smaller storage lower risk (~3 Mm^3)	(2) 25 m high dam (3 Mm^3 size)	(2) 12%	(2) Some catchment yield but flow harvesting required for larger volumes	(1) 3 km and 90 m from Tukituki River	(3) 0 km (release into Avoca River to Tukipo River.	(3) Catchment area of 5.8 km^2	(2) 3 km from nearest active fault	(2) Kidnappers Group alluvial gravel. Possible instability on left bank of reservoir.	(2) Hill country, potentially one dwelling, reservoir floods Tukituki Makaretu and Pleasant Valley Rds.	(1) Farm land with some riparian vegetation around Avoca River, DoC land (A'Deanes Bush Scenic Reserve) downstream.	(2) Farm land, Makaretu Rd, nearest dwellings 2.5 km downstream
C2	Sherwood	22	(3) Can store up to ~13 Mm^3 though smaller storage may be more suitable (~6 Mm^3)	(1) 28 m high dam (3 Mm^3 size)	(2) 19%	(2) Some catchment yield but flow harvesting required for volumes larger than 3 Mm^3	(2) <1 km and 40 m from Avoca River, or 5 – 7 km and 50 m from Tukituki River.	(3) 0 km (release into Tukipo River.	(2) Catchment area of 10.5 km^2	(1) 1.1 km from nearest active fault	(2) Rata alluvial gravel with undifferentiated mid-Quaternary alluvial gravel high on right shoulder. Broad valley, reservoir primarily fills incision of lowermost terrace.	(2) Hill country farm land, reservoir floods Mill Rd.	(1) Farm land with some riparian vegetation, QEII covenant land immediately downstream	(1) Two dwellings and SH50 ~2.5 km downstream.
C3	Ashley Clinton Rd	27	(2) Can store up to ~6 Mm^3	(2) 25 m high dam (~6 Mm^3)	(1) 25%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) <1 km and 25 m from Tukipo River, or 2.5 km and 60 m from Mangatewai River.	(3) 0 km (release into Mangatewai Stream to Tukipo River.	(3) Catchment area of 6.1 km^2	(2) 2 km from nearest active fault	(1) Ohakea alluvial terrace deposits.	(2) Hill country farm land, dam site over Ashley Clinton Rd.	(2) Farm land with some riparian vegetation, no DoC or QEII land.	(1) Three dwellings downstream, Ashley Clinton Rd, and SH50 ~2.5 km downstream.
T1	*Mangatewai tributary*	*(0) Site too small*	*(0) Can only store up to ~0.5 Mm^3*	(3) 14 m high dam at 0.5 Mm^3	*N/A*	*(3) No harvesting required*	*(3) No harvesting required*	*(3) 0 km (release into Mangatewai Stream to Tukipo River.*	*(3) Catchment area of 1.2 km^2*	*(2) 3 km from nearest active fault*	*(1) Ohakea alluvial terrace deposits. Primarily gravel with minor loess deposits in valley floor, Kidnappers Group alluvial gravel beneath right shoulder. Undifferentiated gravel on left shoulder. Possible instability on left bank of reservoir.*	*(3) Hill country farm land.*	*(2) Farm land with some riparian vegetation downstream, no DoC or QEII land.*	*(2) One dwelling and farm buildings downstream, potentially Ashley Clinton Rd, and SH50 ~3 km downstream.*

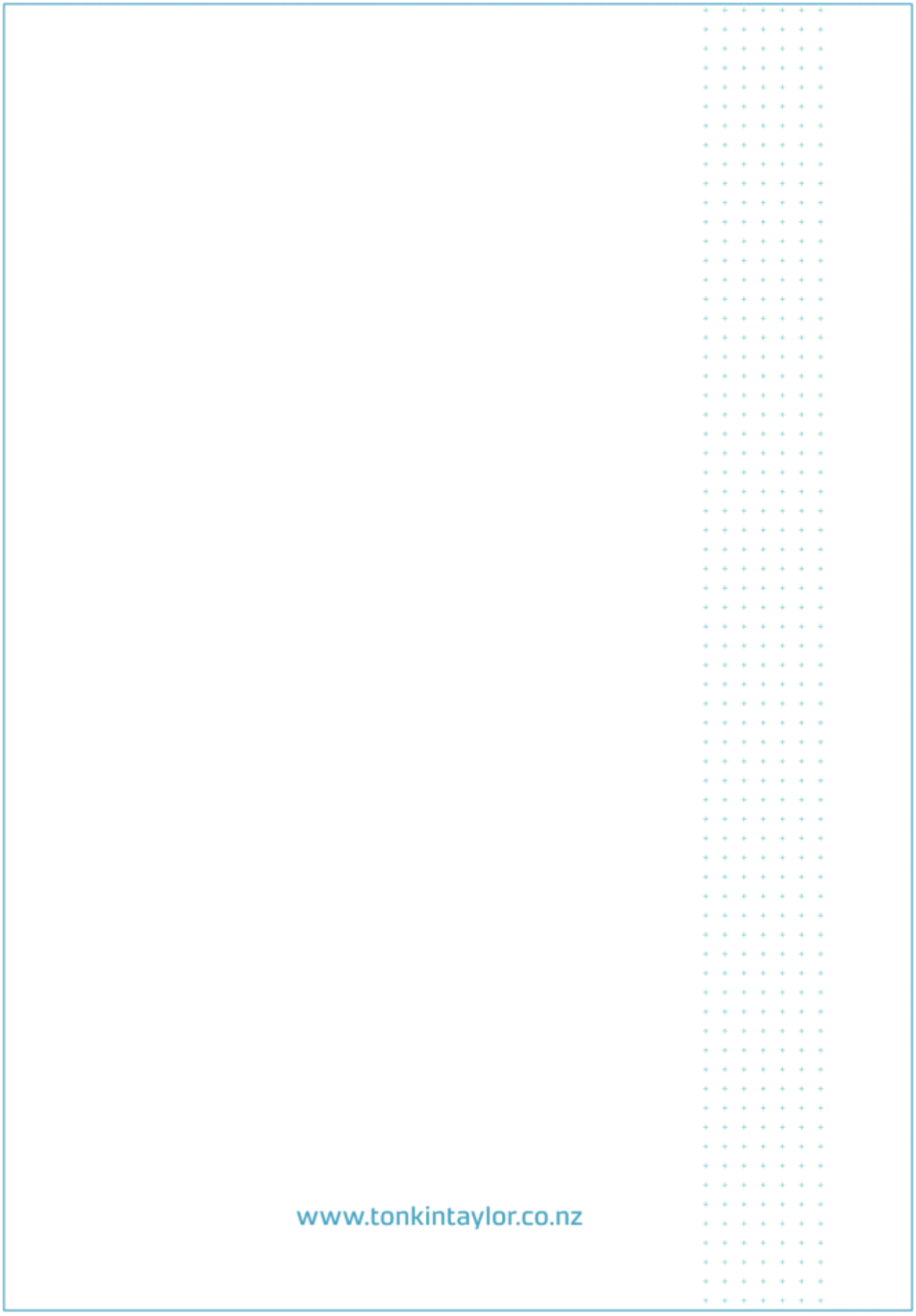
Storage site		Total score	Ranking and supporting comments for each criterion											
			(1) Storage	(2) Dam Height	(3) Dam storage ratio	(4) Catchment	(5) Proximity to harvesting	(6) Proximity to release	(7) Spillway size	(8) Proximity to active faults	(9) Geology	(10) Land value	(11) Environment	(12) Downstream area
T2	Avoca tributary	23	(3) Can store up to ~6 Mm^3	(1) 31 m high dam (3 Mm^3 volume)	(1) 21%	(1) Limited to no catchment yield and flow harvesting required	(2) < 1 km and 20 m elevation difference from Avoca River	(3) 0 km (release into Avoca River to Tukipo River.	(3) Catchment area of 1.8 km^2	(2) 3.8 km from nearest active fault	(2) Kidnappers Group alluvial gravel.	(2) Hill country, one dwelling, reservoir floods Makaretu Rd and Anderson Rd (unsealed road).	(1) Farm land with some riparian vegetation around Avoca River, DoC land (A'Deanes Bush Scenic Reserve) downstream.	(2) Farm land, Makaretu Rd, Two dwellings ~1 km downstream
Makaretu River (Porangahau and Maharakeke Streams)														
D1	Whenuahou	Excluded on basis that site crosses active fault (Ruataniwha Fault)												
D2	Rangitoto Rd	Excluded on basis that site crosses active fault (Takapau Fault)												
D2a	Rangitoto Rd	22	(2) Can store up to ~3 Mm^3	(2) 22 m high dam (2.4 Mm^3 volume)	(1) >20%	(1) Limited to no catchment yield and flow harvesting required	(2) ~5.5 km and elevation difference ~30 m to Makaretu River.	(3) 0 km (release into Porangahau Stream to Makaretu and then Tukituki River.	(3) Catchment area of 3.2 km^2	(1) 1.2 - 1.9 km to nearest active faults (Takapau and Ruataniwha)	(1) Late Quaternary gravel in valley floor, alternating sandstone and limestone on right shoulder, Kidnappers Group alluvium on left shoulder. Very broad shallow valley.	(3) Hill country pasture	(1) DoC land immediately downstream (Porangahau Marginal Strip).	(2) Farmland, one dwelling and Paulsen Rd
D2b		21	(2) Can store up to ~4 Mm^3	(1) 30 m high dam (4 Mm^3 volume)	(1) >20%				(3) Catchment area of 0.2 km^2			(3) Hill country pasture		
D3	Hinerangi Rd	22	(3) Can store up to ~11 Mm^3	(2) 19 m high dam (11 Mm^3 volume)	(1) >20%	(2) Some catchment yield but flow harvesting required for larger volumes	(2) ~5 km and elevation difference ~15 m to Makaretu River (or 4 km and ~15 m to Porangahau Stream)	(3) 0 km (release into Maharakeke Stream to Makaretu and then Tukituki River.	(1) Catchment area of 44 km^2	(1) 1.9 km to nearest active fault (Glendevon), and 2.2 km to Oruawharo Fault	(1) Ohakea and Holocene alluvium gravels in valley floor. Very broad shallow valley.	(2) Hill country pasture, potentially one dwelling and Hinerangi and Aorangi Rds within reservoir area.	(3) No designated wetlands, Doc land or QEII covenant land at or immediately downstream of dam.	(1) Multiple dwellings downstream, Oruawharo and Woburn Rds, railway line
D5	Makaretu	Excluded on basis of artesian pressures identified during initial site geotechnical investigations (including drilling)												
P1	Upper Maharakeke Stream	24	(3) Can store up to ~12 Mm^3	(2) 20 m high dam (3 Mm^3 volume)	(2) 15%	(2) Some catchment yield but flow harvesting required for larger volumes	(1) ~9 km and elevation difference ~50 m to Makaretu River (or 7 km and ~50 m to Porangahau Stream).	(3) 0 km (release into Maharakeke Stream to Makaretu and then Tukituki River.	(2) Catchment area of 14.1 km^2	(1) 800 m from nearest active fault (Oruawharo Fault). Fault crosses upper reach of reservoir.	(2) Tourere Formation Mudstone. Instability above left shore of reservoir	(2) Hill country pasture, a few dwellings and Hinerangi Rd in reservoir area	(3) No designated wetlands, Doc land or QEII covenant land at or immediately downstream of dam.	(1) Multiple dwellings immediately downstream, and Hinerangi and Aorangi Rds
P2	Aorangi Rd	23	(1) Can store up to ~2.4 Mm^3	(2) 20 m high dam (2.4 Mm^3 volume)	(2) 15%	(1) Limited to no catchment yield and flow harvesting required	(1) 6 km and elevation difference ~65 m to Makaretu River (or 4 km and ~65 m to Porangahau Stream)	(3) 0 km (release into Awanui Stream to Makaretu and then Tukituki River.	(3) Catchment area of 1.5 km^2	(1) 700 m from nearest active fault (Oruawharo Fault)	(1) Undifferentiated Quaternary gravel in valley floor. Mangaheia Group sandstone on beneath shoulders. Likely instability above both sides of reservoir.	(3) Hill country pasture	(3) No designated wetlands, Doc land or QEII covenant land at or immediately downstream of dam.	(2) One dwelling downstream, and Aorangi Rd
P3	Upper Hinerangi Rd	28	(3) Can store up to ~11 Mm^3	(2) 23 m high dam	(3) 9%	(1) Limited to no catchment yield and flow	(1) ~9 km and elevation difference ~50 m to Makaretu River (or	(3) 0 km (release into Porangahau Stream to	(3) Catchment area of 3.6 km^2	(2) 2 km from nearest active fault	(2) Tourere Formation Mudstone. Shallow instability upstream of right dam shoulder.	(3) Hill country pasture	(3) No designated wetlands, Doc land or QEII covenant land at or	(2) Two dwellings immediately downstream, and

C7

Storage site		Total score	Ranking and supporting comments for each criterion											
			(1) Storage	(2) Dam Height	(3) Dam storage ratio	(4) Catchment	(5) Proximity to harvesting	(6) Proximity to release	(7) Spillway size	(8) Proximity to active faults	(9) Geology	(10) Land value	(11) Environment	(12) Downstream area
				(3 Mm^3 volume)		harvesting required	7 km and ~50 m to Porangahau Stream).	Makaretu and then Tukituki River.		(Oruawharo Fault)	Deeper landslip further upstream on left bank.		immediately downstream of dam.	Hinerangi and Aorangi Rds.
P4	Waikopiro	27	(3) Can store up to ~26 Mm^3	(2) 17 m high dam (3 Mm^3 volume)	(3) 9%	(1) Limited to no catchment yield and flow harvesting required	(2) ~5.5 km and elevation difference ~30 m to Makaretu River.	(3) 0 km (release into Porangahau Stream to Makaretu and then Tukituki River.	(3) Catchment area of 7.0 km^2	(1) 1.2 km from active fault (Takapau Fault). Near inactive Waikopiro Fault.	(3) Mangaheia Group sandstone. Relatively broad valley.	(2) Hill country pasture, dam and reservoir sits over Paulsen Rd.	(2) DoC land immediately downstream (Porangahau Marginal Strip).	(2) Two dwellings immediately downstream, and Paulsen and Te Roto Rds.

Appendix D: Shortlisted Scheme Plans

- Figure D1 M4 Addis Rd & M5 Mangamate Stream
- Figure D2 B1 Ongaonga
- Figure D3 B2 Ongaonga
- Figure D4 C1 Avoca
- Figure D5 C2 Sherwood
- Figure D6 P1 Upper Maharakeke Stream
- Figure D7 A7 Makaroro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HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: CYCLEWAY CO-FUNDING

Reason for Report

1. This report seeks support from the Council regarding the portion of funding required for three priority Hawke's Bay trail projects where this ensures that the balance of funding already approved by MBIE can be accessed from Central Government. These three projects were not considered in the LTP 2018-2028 but were subsequently outlined due to new government funding opportunities that led to the *Hawke's Bay Trials Great Ride Business Case 2018-2023* approved by Council and the National Cycle Trail Network 'Great Rides' body.

Officers' Recommendations

2. Officers recommend that the Council support the loan funding of $418,500 for the three capital priority projects. This investment leads to the rest of the required funding to be received.

Executive Summary

3. The Hawke's Bay Trails are the sum of three concept rides: The Water Ride, The Wineries Ride and The Landscape Ride. Open all year round, nearly 200kms of mostly off-road trail crisscross the plains and main rivers, linking many of the sights in Napier, Ahuriri, Bay View, Taradale, Clive, Haumoana, Te Awanga, Clifton, Havelock North, and Hastings. The trails also form part of a public cycleway network that links the cities of the region, connecting with the urban 'I Way' shared pathways of Hastings and Napier and joining with the coastal and country settlements.

4. The trail network, operates over multiple parcels of land owned by various entities, including the Napier and Hastings Councils, DOC, Kiwirail, LandCorp and NZTA with the HBRC owner of almost 84km of the network.

5. The Hawke's Bay Trails Great Ride Business Case 2018-2023 to Ministry Business, Innovation and Employment outlined five new projects for the region to improve safety, enhance and extend the trails over the next five years. This was accompanied by Cost Benefit Analysis carried out by the independent business management consultancy firm, Martin Jenkins. These projects were approved by MBIE and 50% funding approved.

    5.1. Safety Priority Project Waimarama Road Improvements

    5.2. Safety Priority Project Ahuriri Underpass Improvements

    5.3. Bay View to Whirinaki Extension

    5.4. Ngaruroro Explorer

    5.5. Karamū Stream Extension.

Background/Discussion

6. The success of the Hawke's Bay Cycle Trails has been integrated with the ongoing partnership between the key parties including HBRC, NCC and HDC and their ability to work together and partner with Central Government to fund the development of these trails as part of the NZ Great Rides network of trails.

7. After securing central government funding for key extensions to the network, the objective of this proposal is to ensure HBRC deliver on their responsibilities to fund the supporting infrastructure required to bring the trails up to the level of the other trails and ensure a consistent experience.

8. The extensions will create greater connectivity between the trails and make it easier and safer for riders to explore the Hawke's Bay Region and continue to cement Hawke's Bay's reputation as a cycling friendly region.

9. The Hawke's Bay Trails officially opened in 2012 and consists of nearly 200km of off-road cycle trails. There were more than 600,000 trips recorded across the network last year, with research indicating 60 per cent of trail use is by locals and 40 per cent by visitors to the region.

10. The maintenance of the trails is shared between other local authority partners. This will also require contributions from district councils to trail surface renewal in the future and their allowance for this in their respective LTPs.

11. Priority Project: Waimarama Road Safety Improvements: Status – ready to build in conjunction with Hastings District Council.

Sub-total Estimated Budget: $717,000 2019/2020 HBRC contribution required $93,500

Total cost:		**$717,000.00**	**HDC to project manage/construct**
Funding:	MBIE	$358,500.00	
	HDC	$230,000.00 (approved)	
	HBRC	**$93,500.00**	
	ECCT	$35,000.00	
	TOTAL	**$717,000.00**	

12. Priority Project: Ahuriri Underpass Improvements: Status – NZTA getting final consent and ready to build seawall southern end, on existing trail.

Sub-total Estimated Budget: $350,000 2019/2020 HBRC contribution required $125,000

Total cost:		**$350,000.00**	**OPUS to project manage/construct**
Funding:	MBIE	$125,000.00	
	HBRC	**$125,000.00**	
	NZTA	$100,000.00 (NZTA consumed the design cost on top of the contribution)	
	TOTAL	**$350,000.00**	

13. Priority Project: Bayview Whirinaki trail: Status – Work underway this financial year.

Sub-total Estimated Budget: $1,054,000 2020/2021 HBRC contribution required $200,000

Total cost:		**$1,054,000.00**	**NCC to project manage/construct**
Funding:	MBIE	$504,000.00	
	NCC	$250,000.00 (annual plan -approved)	
	HDC	$100,000.00 (annual plan- approved)	
	HBRC	**$200,000.00**	
	TOTAL	**$1,054,000.00**	

14. **Total Estimated HBRC Budget 2020-21 and sum sought in this recommendation: $418,500**

Options Assessment

15. The alternative option is to not proceed with the providing partner funding to the projects and thus put in jeopardy both the $848,500 of specific project funding for these three trail projects for the Hawke's Bay Region and potentially the overall $1.3M of Central Government Funding:

15.1. **Option 1 –** HBRC does not fund the share which may lead to the project not proceeding.

15.2. **Option 2 –** Raise a loan for the required $418,500 during the 2020-21 financial year and repay this over 10 years. The long-term benefits of improving the various cycleways triggers an intergenerational component, therefore a 10-year loan

would be appropriate. Repayments assume a 3% Interest Rate over the life of the loan.

Increase in General Rate requirement	$48,596
Total Repayment over 10 years	$485,964

Strategic Fit

16. These projects align with councils' priorities of: Smart, sustainable land use, healthy and functioning biodiversity and sustainable services and infrastructure.

17. Specifically, the Cycle Trails network contributes to the Community Outcome of:

    17.1. Sustainable Services and Infrastructure

    17.2. As per the Hawke's Bay Regional Cycle Plan 2015, the vision for cycling in the region is:

    "*To recognise cycling in Hawke's Bay to such an extent that the region is nationally and internationally recognized as providing the most bike-friendly experience in New Zealand"*

    18.3 HBRC, along with other key partners, developed this strategy with the aim to maximise the financial and social returns from cycling in the areas of:

    18.3.1 Liveability

    18.3.2 Health

    18.3.3 Tourism.

18. The benefits are extensive and deliver on HBRC's Long Term Plan Community Outcomes:

    18.1. **Vibrant Community:** An opportunity for safer cycle network connectivity allowing community recreation, events and cycle commuting, thus reducing vehicle congestion, and more liveable cities

    18.2. **Healthy Environment:** Providing an enduring infrastructure for cycling/walking/running; providing safe off-road routes for recreation, sport and providing transport alternative of cycle commuting, to reduce carbon emissions

    18.3. **Prosperous Economy:** These enhancements are highly integral to our tourism industry, these improvements providing new routes, safer year-round, for local cycle tourism operators, ensuring their survival, while connecting locals/visitors to local business's like hospitality, retail and accommodation.

Financial and Resource Implications

19. This proposal is for new budget currently not allowed for in the Annual Plan (but have been raised as an issue). The budget is specifically supporting infrastructure including trail building with wayfinding signage, fencing and maintenance overall, covered by other budgets to be included in the LTP draft where these would follow trail construction. There will be no impact on FTEs. Maintenance cost will be minimal and only on HBRC land and HBRC owned asset. Majority of the assets are vested in Hastings District Council and NZTA respectively.

	Description	2020-21	Year 1	Year 2	Year 3
FTEs					
OPEX	*Internal time*				
	Consultancy				
	Maintenance & Enhancement		$8,500	$8,500	$8,500
CAPEX		$418,500			

Consultation

20. The key stakeholders include Hastings District Council, Tāngata Whenua, Ministry of Business, Innovation & Employment, private landowners and NZ Transport Agency. Waimarama Road Safety Project team has completed an archaeological assessment and hui-ā-hapū with mana whenua of Heretaunga.

Other Considerations

Benefits

21. The benefits of the Great Rides have been documented in an evaluation report in 2016 which show that:

    21.1. around 1.3 million people used the 22 Great Rides of Ngā Haerenga, the New Zealand Cycle Trail

    21.2. around 86.5% of users of the Great Rides were New Zealanders, and just over 114,000 or 13.5% were international visitors

    21.3. for every dollar attributed to construction and maintenance of the Great Rides during 2015, approximately $3.55 of annual benefits were generated

    21.4. the economic contribution of the cycle trails in 2015 was estimated at $37.4 million

    21.5. the social contribution of the Great Rides was estimated to be $12 million. This includes reduced mortality and cost savings from diseases associated with physical inactivity

    21.6. key factors of successful governance included having a clear strategy, marketing expertise and dedicated resource for trail maintenance.

22. An extension of these highly valued assets will continue to make them appealing to Hawke's Bay residents and form part of a strong domestic tourism offering which will continue to attract visitors to the region and provide valuable economic stimulus.

Strategic Context

23. The strategies and plans used to inform this report are as follows;

    23.1. Hawke's Bay Trails Great Ride Business Case 2018-2023

    23.2. Hawke's Bay Trail CBA Summary – Martin Jenkins report

    23.3. Hawke's Bay Regional Cycle Plan 2015

    23.4. Government Policy Statement on land transport (GPS)2018

24. The trails' purpose is primarily recreation and supports both the Recreation and Economic outcomes and values of the Regional Park Network Plan.

Linkage with Overall Investment and Priority Projects

25. The other two trail projects in (5) above have already attracted investment. In April 2019 Tourism Minister Kelvin Davis, announced the investment to create an extra 27km of new cycle ways around Napier and Hastings and extend the existing network of Cycle Trails. The two projects to gain funding in Hawke's Bay were:

    25.1. A 16km Ngaruroro Explorer which will provide an attractive, easy and off-road loop route around the Ngaruroro River. ($764, 500 initial estimation - Hawke's Bay Trails Great Ride – Business Case 2018 to 2023)

    25.2. A 11km Karamū Stream extension which will create a safe, off-road link to the Wineries Ride.($913,000 initial estimation Hawke's Bay Trails Great Ride – Business Case 2018 to 2023)

    25.3. Funding decision for these projects will be advanced through the 2021-2031 LTP.

Decision Making Process

26. Council and its committees are required to make every decision in accordance with the requirements of the Local Government Act 2002 (the Act). Staff have assessed the requirements in relation to this item and have concluded:

26.1. The decision does not significantly alter the service provision or affect a strategic asset, nor is it inconsistent with an existing policy or plan.

26.2. The use of the special consultative procedure is not prescribed by legislation nor required under HBRC's policies with respect to this legislation.

26.3. The decision is not significant under the criteria contained in Council's adopted Significance and Engagement Policy.

26.4. The persons affected by this decision are all persons with an interest in the region's cycle trail use and network opportunities.

26.5. Given the nature and significance of the issue to be considered and decided, and also the persons likely to be affected by, or have an interest in the decisions made, Council can exercise its discretion and make a decision without consulting directly with the community or others having an interest in the decision. "One way' communication may be used to inform project partners and the community on council's contribution to these existing projects being led and undertaken by other agencies where HBRC is primarily a funding partner.

Recommendations

1. That the Corporate and Strategic Committee receives and approved the "Cycleway co-funding" staff report.
2. The Corporate and Strategic Committee recommends that Hawke's Bay Regional Council:

   2.1. Agrees that the decisions to be made are not significant under the criteria contained in Council's adopted Significance and Engagement Policy, and that Council can exercise its discretion and make decisions on this issue without conferring directly with the community or persons likely to have an interest in the decision.

   2.2. Support and approves the loan funding of $418,500 for the Waimarama Road Safety Improvements, Ahuriri Underpass Improvements, and Bayview Whirinaki Trail capital priority projects to leverage Central Government funding approved by the Ministry for Business Innovation and Employment.

Authored by:

Martina Groves
ACTING REGIONAL ASSET MANAGER

Approved by:

Chris Dolley
GROUP MANAGER ASSET MANAGEMENT

Attachment/s

There are no attachments for this report.

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: ORGANISATIONAL PERFORMANCE REPORT FOR PERIOD 1 APRIL TO 30 JUNE 2020

Reason for Report

1. The Organisational Performance Report provides the information councillors need as governors to track performance against the level of service measures set in the 2018 Long Term Plan. It provides essential business intelligence and situation-specific factors affecting the organisation's ability to deliver on what it said it would. It also holds staff to account for non-financial and financial performance and signals through traffic light status reporting issues that may require management intervention.
2. The report is also useful in the preparation for the next long term plan as it familiarises councillors with the current levels of service and how we deliver them. Any significant changes to levels of service require consultation with the community and are typically done during a long term plan.

Content of the Report

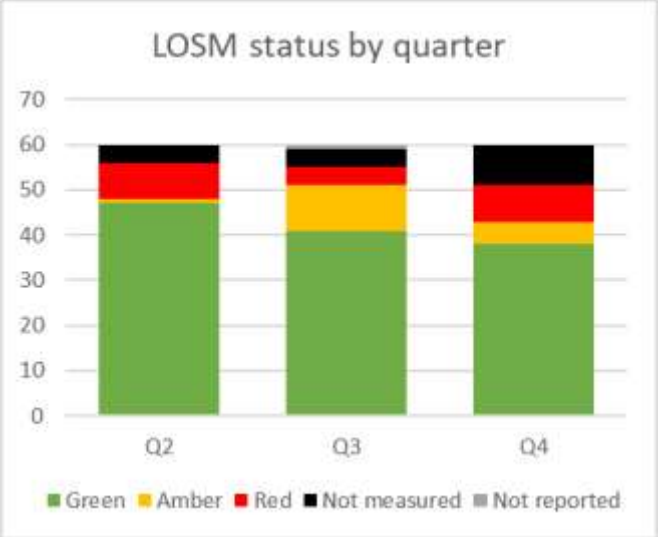
3. Attached is the Organisational Performance Report for Quarter 4 of 2019-20. The quarter is the three months from 1 April to 30 June 2020, and contains three parts plus an Executive Summary with highlights and lowlights for the quarter.
    - 3.1. **Part 1**: **Significant Events or Programmes** impacting this quarter. These tend to be cross-council so sit outside the groups of activities section
    - 3.2. **Part 2**: **Business Improvement measures** which focus on how well we are performing across a number of corporate-wide measures such as health and safety incidents, and response to customer feedback
    - 3.3. **Part 3**: **Groups of Activities** –Traffic light status and commentary on level of service measures and related 3-digit code workstreams.
4. This quarterly report includes commentary on the impacts of COVID-19 and the drought on Council's activities and related budgets.

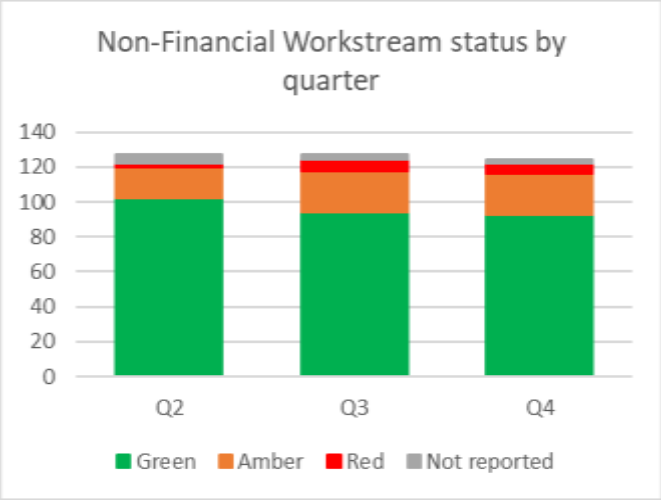
Background

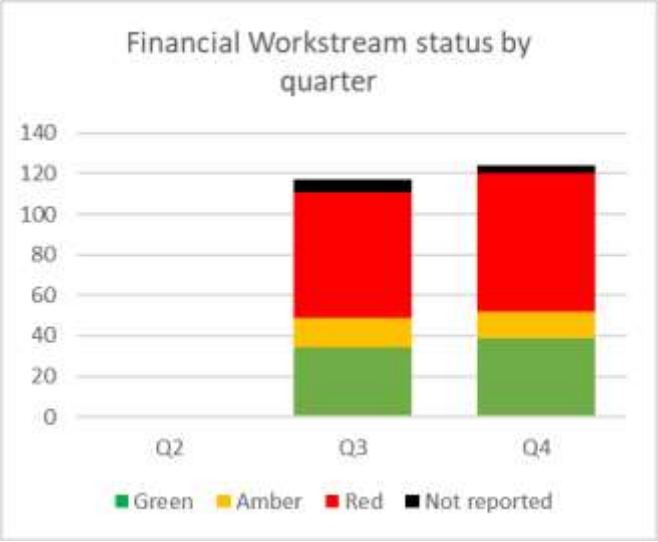
5. This is the sixth Organisational Performance Report to be presented. Improvements continue to be made to the content to ensure the information is meaningful for governors and to the process for collating the information to reduce reporting burden for staff.
6. Staff complete their reporting in a software tool called Opal3 once actual financial results for the quarter are loaded on the 20th of the month following the end of the quarter. Staff choose the status (red, amber, green) of non-financial results, but it is fixed against agreed criteria for financial results. For example, red is set at >$30,000 or >10% over or under budget. Staff are then required to provide commentary on what they did in the quarter in terms of actual non-financial performance and to explain any variations to operating budgets.
7. A separate report going to the same council meeting presents aggregated financial performance at the group of activities level for the year end as well as carry forwards.

Change between quarters

8. When the Quarter 2 Organisational Performance Report was presented to council, it was noted by a Councillor that it was difficult to see how we are tracking. The following graphs attempt to show the change between quarters.







Next Steps

9. Further planned improvements to the Organisational Performance Report, include setting targets for the business improvements measures, comparisons with industry benchmarks where possible and the inclusion of capital expenditure reporting next quarter.

10. Training with staff is ongoing to improve the quality of reporting.

Decision Making Process

11. Staff have assessed the requirements of the Local Government Act 2002 in relation to this item and have concluded that, as this report is for information only, the decision making provisions do not apply.

Recommendation

That Hawke's Bay Regional Council receives and notes the "*Organisational Performance Report for period 1 April to 30 June 2020*".

Authored by:

Kelly Burkett
BUSINESS ANALYST

Approved by:

Desiree Cull
STRATEGY AND GOVERNANCE MANAGER

Attachment/s

⇩**1** HBRC Organisational Performance Report 1 April - 30 June 2020

HAWKE'S BAY REGIONAL COUNCIL
Organisational Performance Report

Quarter 4: 1 April to 30 June 2020

Prepared on 21 August 2020

Contents

Executive Summary

This Organisation Performance Report provides Council with the information it needs to understand the situation-specific factors affecting performance. It reports on how well we are performing across a number of corporate-wide measures and uses the Groups of Activities from the current 2018-28 Long Term Plan to present actual financial and non-financial performance against planned at the worksteam level. A separate financial report covers aggregated financial performance by Group of Activity as well as council wide results, revenue breakdown and assessment of carry forward requests.

This information is used by the Chief Executive, Executive team and staff to ensure alignment of council's work programmes across different groups and teams to achieve the Council's strategic plan outcomes and to ensure a steadfast focus on performance and accountability.

This report covers the period of 1 April to 30 June 2020. The report covers:

- Significant events and programmes this quarter
- Business improvement metrics
- Groups of Activities:
    - Governance and Partnerships
    - Strategic Planning
    - Integrated Catchment Management (ICM)
    - Asset Management
    - Consents and Compliance
    - Emergency Management
    - Transport

Highlights for quarter 4 and year-end

- Hawkes' Bay CDEM Group distributed more than $1M of welfare aid during the COVID-19 response.
- A drought relief fund was set up and three lifestyle feed runs were held in June to support farmers and small block owners impacted by the region's worst ever drought.
- 600 businesses were supported in the region during this period by the Regional Business Partner team.
- Productivity and staff well-being maintained during Level 4 lockdown and between levels, staff scored the organisations response to COVID-19 as 8.5 out of 10. In particular staff noted in ranked order ICT and helpdesk support, great communication and working from home experience.
- Climate. Smart. Recovery plan developed to guide Council's response to COVID-19 and the extended drought.
- Refreshed 5-yearly Strategic Plan adopted on 24 June 2020.
- Preparation and consultation of the 2020-21 Annual Plan resulting in a 0% rates revenue increase for 2020-21 and the establishment of a $1 million Recovery Fund.
- TANK plan was publicly notified on 2 May 2020.
- Unprecedented volume of central government resource management-related proposals driving statutory advocacy activity.
- 11 Ecosystem Prioritisation sites had works completed over the year.
- Approx. $120,000 Envirolink funding was secured from HBRC contribution of $10,000.

Lowlights for quarter 4 and year-end

- 5% rate of return on investments became unachievable for the FY20 year.
- Revenue income for consents and compliance is substantially under recovered for the reporting year.

- Substantially reduced use of public transport during lockdown impacted annual targets for bus patronage, passenger kilometres travelled and proportion of total costs covered by bus fare.
- The 5-year rolling average of deaths and serious injuries in road crashes has increased this year.
- The performance measures for erodible land planted in trees and stream length protected were below target for the year, however both were up from last year (666ha and 27km respectively).

PART 1: SIGNIFICANT EVENTS AND PROGRAMMES THIS QUARTER

1.1 COVID-19

As the lead agency in the Hawke's Bay for the response to COVID-19 the Hawkes' Bay CDEM Group achieved the following:

What we did:

Coordination and Planning

- Activated the Group Emergency Coordination Centre with a hybridised 'virtual' staff pool
- Produced multi-agency response plans for COVID-19 and Drought
- Established a new contractual arrangement to run in/outbound calling for response with The Development Hub
- Piloted the 'Joint Intelligence Group' initiative in Hawke's Bay (adapted)
- Operated/responded under the first ever 'All of New Zealand' declaration of emergency
- Over 350 external coordination meetings

Network of Networks

- Established network of networks around key populations (12)
- Worked in partnership with Māori, Pasifika, and other ethnic groups

Public Information

- Inclusive of the drought response the public information team published 31 media releases
- Established regular newsletters (8) which were circulated internally and externally
- Coordinated 6 media interviews with the Group Controller
- Published 213 posts to social media since 12 March including 10 video interviews with Mayors/staff, resulting in 1516 more followers since the first response post (27,702 total)
- Initially focusing on mainly COVID-19 content then pivoting mid-response to support the drought response efforts

What was delivered?

- 170 Staff from HB councils working for the GECC
- 50 Welfare assessors (additional)
- 12 Network groups stood up
- 70 Key network contacts established
- 48 Group Situation Reports released
- 12 Action or Contingency Plans produced
- 82 Days in response *(20th March – 1st July)*
- 33 Days - longest consecutive stretch
- 6 new tools/software systems rolled out during response 'on-the-fly'
- 34 households in TAS accommodation
- 54 homeless persons accommodated
- 168 clothing or blanket requests processed
- 7,000+ inbound & outbound phone calls
- 419 calls processed on the peak day (17th April)
- ~1,600 welfare parcels delivered by HBCDEM
- ~8,400 welfare parcels delivered by the community
- $940,000 Claimable spend on Household Goods and Services

1.2 Drought

The drought persisted and deepened over April and May, and then drought-breaking rain came in late June.

Until then, the Hawkes' Bay CDEM Rural Advisory Group (RAG), supported by HBRC Catchment Management and communications staff were heavily involved in the response.

Satellite teams were set up covering feed, logistics, water, Māori relations, mental health, and animal welfare, and they engaged landowners, particularly important over the COVID-19 lockdown given the isolation of the farmers.

The Council created a dashboard to visually capture the essence of the drought situation and to inform decision makers. The RAG conducted regular phone surveys of landowners which gave a picture of how people were coping and the hardest hit areas, and this was inputted into the dashboard.

A drought crisis hub was established on the Hawke's Bay Regional Council website, a fortnightly Rural Advisory Group newsletter, regular spreads in local newspapers, and media coverage of the event with commentary from the RAG.

Given the protracted nature of the drought, there was a critical feed deficit, and in response, a drought relief fund was set up by local government leaders, and administered by the RAG, to help with the cost of transporting feed to the farm.

The RAG, with the support of Catchment Management, organised three lifestyle feed runs in June to support small block owners.

1.3 Climate Change

Climate change is a significant programme of work for Council that draws resources from across the business. In the previous quarter (January – March 2020), an interim climate change working group had been formed to assist staff in shaping a regionally coordinated programme for responding to climate change. The priority areas identified by the working group slowed considerably since the working group's initial meeting. This was due to staffing commitments to the COVID-19 pandemic and drought response efforts.

In response to COVID-19 and the drought, the Executive developed a Climate. Smart. Recovery plan to guide council decision-making during the crisis. Its purpose was to ensure that each decision made in response to COVID-19 is carefully considered and aligns to a climate-smart future.

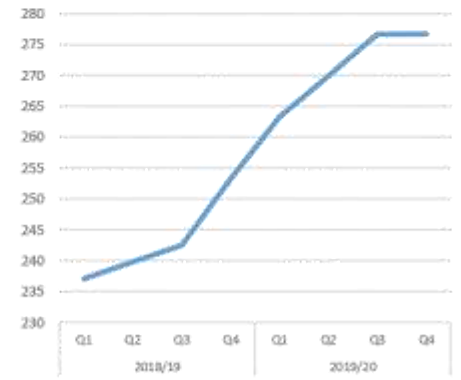
In June 2020, the Council adopted a refreshed 2020-25 Strategic Plan. The most significant change to the Strategic Plan resulting from the refresh is a greater focus on climate change. Councillors agreed that climate change is a pervasive driver across of the Regional Council's activities and is now more explicitly reflected in the Vision and Focus Areas. Notably, one of the Strategic Goals was revised to reduce the deadline for the Regional Council to confirm it is carbon zero. That goal now reads: *"By 2025, HBRC is carbon zero and plays a leadership role in the region's goal of net zero greenhouse gases by 2050."*

PART 2: BUSINESS IMPROVEMENT MEASURES

2.1 People & Capability

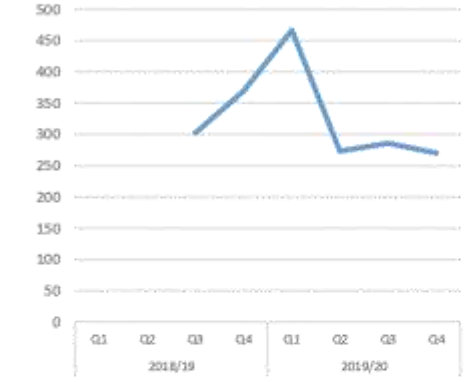
Purpose: To monitor key People and Capability measures.

Headcount (FTEs) (incl Works Group WG)	End Q4 (Jun 2020) 276.71	Vacancies* (incl WG)	End Q4 (Jun 2020) 9



*Data reporting commenced Q3 of 2019.

Resignations (excl WG)	Q4 (Apr - Jun 2020) 9	Sick Leave Used (excl WG)	Q4 (Apr – Jun 20) 270.06 days



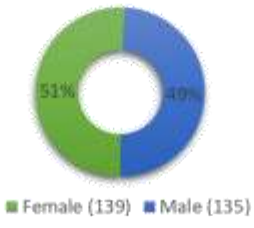
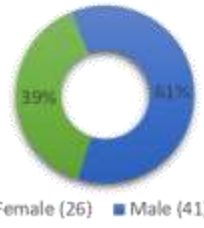
Key finding: Workforce was more stable than usual, likely due to COVID-19. Likewise, sick leave taken this quarter is down 26.9% compared to Q4 2018-19.

Commentary: Vacancies dropped sharply reflecting a decision by the Exec to adopt a soft freeze on replacing vacancies due to cost saving.

Attraction and retention of candidates has improved in this quarter and the number of applications received for vacancies has significantly increased. Hiring Managers are focusing on having a robust short-listing process to narrow down the candidate pool.

Staff Ratios

The following graphs show the current ratio of male and female staff as known at 30 June 2020.

Total Staff	Staff in Management	Management Ratio
		

2.2 Health & Safety (H&S)

Purpose: To measure the amount of incidents and accidents occurring at HBRC.

Key Finding: Accidents and incidents were down this quarter compared to the previous quarter, incidents and accidents have trended down slightly over the last 24 months.

H&S Incidents	Q4 (Apr - Jun 2020) 20

Commentary: We had 20 incidents over this period; 5 were accidents with no time off work, 3 accidents requiring time off work, 5 public complaint and 7 were related to property damage.

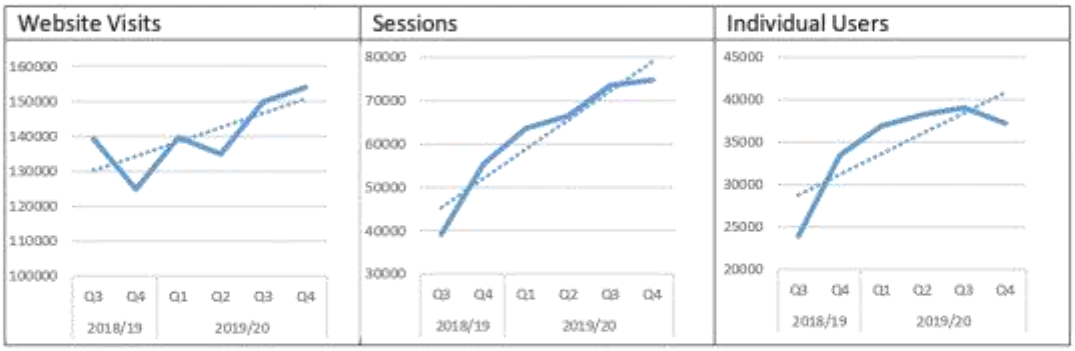
The primary focus was the response to COVID-19 and the move between Level 4 and level 3 and then subsequently the return of all staff back to the business in Level 2. An organisational pandemic plan was developed with an update for all staff at Level 2. Considerable effort and time was spent co-ordinating and delivering orientation to the business. Flu injections were provided to 153 staff across the organisation

Results: An appendix of incidents is attached at Appendix 1

2.3 Marketing and Communications (MarComms)

Website

Purpose: To measure the customer utilisation of our website.



Key finding: Growth in web use slowed. This was due to reduced public activity and enquiry, related to COVID-19 level 4-3 constraints.

Result: Top Pages in Apr – June

- River Levels
- Rainfall
- Drought Crisis Hub

Facebook

Purpose: To measure the volume of posts, likes and reach as an indicator of MarComms effectiveness.

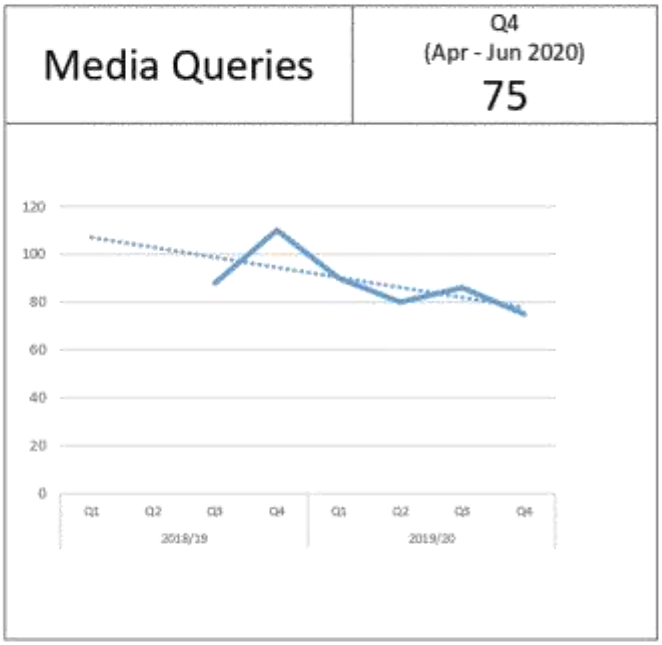
Key finding: Facebook reach increased markedly, directly related to COVID-19 physical restrictions and an active programme of posting over the period.

Results:

Top Facebook Posts	Reach
Motorcyclist hooning down Awatoto	22,467
Give a little page 'Digging deep for our farmers in drought' launched	19,209
Lifestyle Feed Run	19,186

2.4 Media

Purpose: To track the number and nature of all media queries.



Key Finding: Media queries for Q4 were down on Q3 by 12%. We received 331 media queries for the 2019- 2020 year, 90 in Q1, 80 in Q2, 86 in Q3 and 75 this quarter.

Commentary: Most media queries in April-June 2020 were from local journalists, with interest in the drought, COVID-19, winter burning and water security. There were 20 calls from Stuff and 15 from HB Today.

Media calls logged in April were 50% down as the Comms team was working in the CDEM COVID-19 and drought response.

We received follow up calls on media releases including drought, water security and winter burning.

The drought received national media interest. Also of note was HBRC response to COVID-19, climate change mitigation unit, Mahanga wetland, CHB nitrogen levels, air quality and water bottling consents.

Metric: All media enquiries and are logged when they are received.

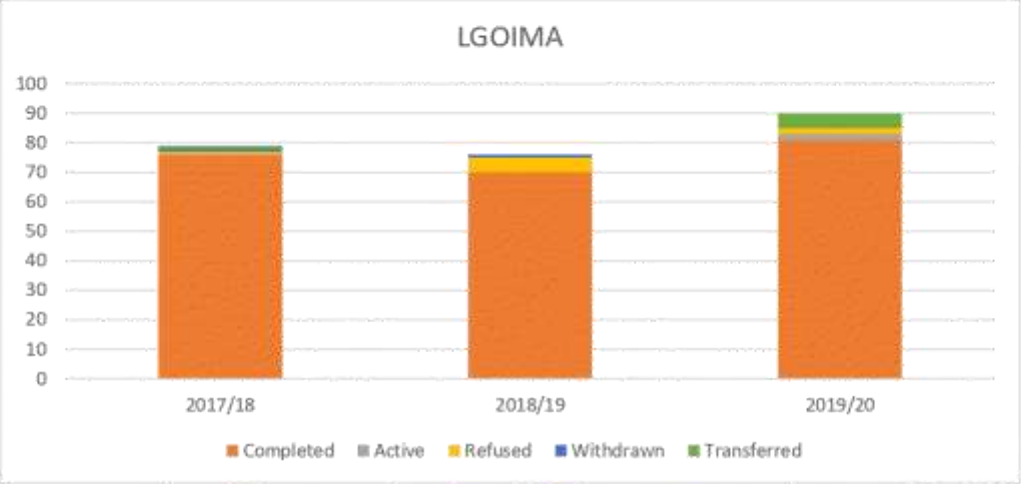
2.5 Local Government Official Information Management Act (LGOIMA) Summary

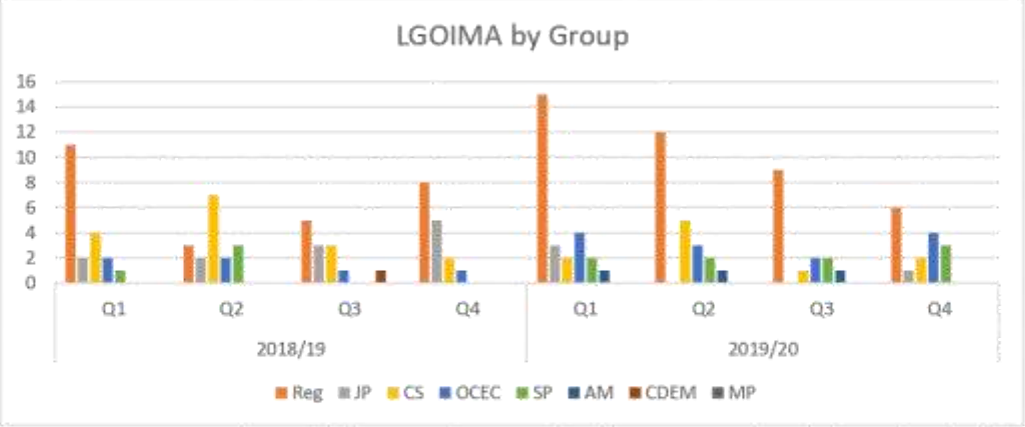
Purpose: To track the number and nature of requests to monitor impact on staff time as well as to ensure HBRC meets its statutory responsibilities.

Key Finding: There was a 17% increase in the number of LGOIMA requests this year compared to 2018/19. With the exception of Q2 last year the Regulation group has received the most LGOIMA requests each quarter.

Metric: All LGOIMA requests are entered into the councils LGOIMA log and updated

Commentary: In Q4 we had 18 LGOIMA requests to respond to, of which three were transferred. All LGOIMA requests received during Q4 were completed within required timeframes and there were no complaints made to the Office of the Ombudsman against HBRC responses to requests.





*JP stands for James Palmer.

Results: The LGOIMA log is as Appendix 2.

2.6 Customer Feedback

Purpose: To track the number and nature of feedback to monitor impact on staff time as well as to improve staff responsiveness.

Key finding: 93% of items (79 of 85) in Q4 were responded to within the required timeframe of <4 business days, compared to 42% last quarter. 4 complaints were received, these complaints were related to work undertaken without consent (2), public walking on the stopbank and council vehicle parking.

Commentary: The key categories of feedback were Pest Control/Biosecurity (18), Heatsmart (16), Water (8) and Parks/Trails/Open Spaces (8).

Metric: The customer feedback reported on here is feedback received via the Regional Council's website only. Customers select whether their feedback is a comment, compliment or a complaint. All feedback received via this system is required to be responded to within four business days

Results: Feedback received in the period of this report were:

Year	Quarter	Feedback Received
2018/19	Q1	
	Q2	
	Q3	76
	Q4	103
2019/20	Q1	72
	Q2	56
	Q3	74
	Q4	85

Results: The Customer Feedback Register is available on request.

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2.7 Risk

HBRC like all organisations is faced with operating in a challenging and rapidly changing world. The changing external business environment brings increased uncertainties and therefore amplified risks to an organisation's strategy. Changes to the business landscape include; stakeholder expectations (social, cultural), regulations and legislation, technology, environmental, third party reliance, and political. Recognising the increasing rate of change and therefore increasing organisational risks the Corporate and Strategic Committee at the 10 June 2020 meeting endorsed a roadmap to mature HBRC's risk management system. The longer-term vision for maturity of HBRC's risk system is to establish risk intelligent decision making that is embedded consistently throughout Council.

To achieve this the risk maturity roadmap has a four phased approach with the first three phases being implemented over 12 months to July 2021.

Phases one to three include:

- Developing a standardised risk management policy and framework for use throughout HBRC
- Implementing risk processes as outlined in the risk management framework
- Improved risk reporting that over the long term will contain key risk indicators
- Formalising HBRC risk appetite
- Structuring HBRC's control environment, and
- Improved risk assurance

During this reporting period New Zealand's COVID-19 global pandemic response resulted in the activation of alert level four or full lockdown. As a result, HBRC activated and successfully operated under its business continuity arrangements. Most of HBRC's staff worked remotely from home, while staff that support HBRC's 'essential services' were mobilised using 'safe' pandemic practices.

During the quarter HBRC's internal auditors 'Crowe' initiated the following internal audit reviews:

- Risk Management Maturity Assessment
- Internal Audit - Follow-up Audit
    - Procurement and Purchasing – May 2018
    - Contracts Management – May 2018
    - Health and Safety – September 2018, and
    - Water Management Follow-up – May 2018
- Data Analytics

These audit reports will be provided to the Finance, Audit and Risk Sub-Committee on 12 August 2020.

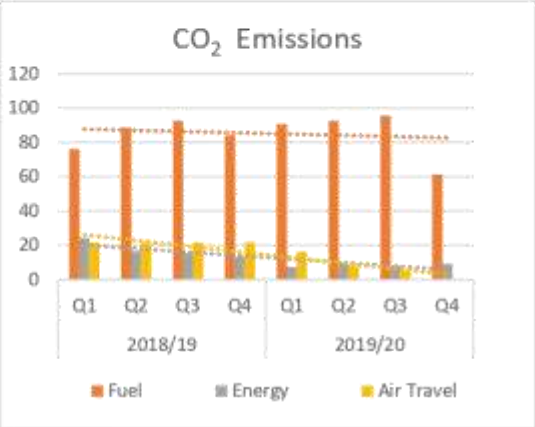
2.8 ICT Operations

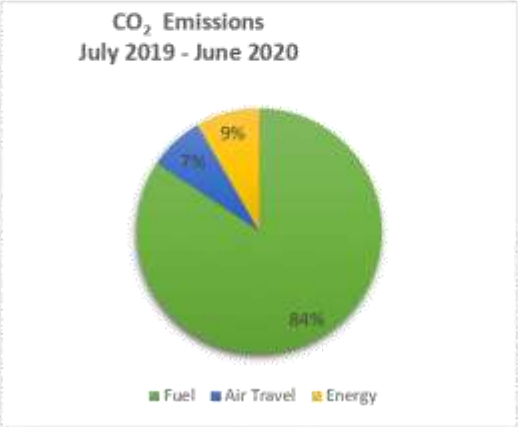
No data provided

2.9 Facilities and Fleet

Corporate Sustainability

Purpose: To monitor progress towards reducing Council's carbon footprint.





*Please note that energy use is for Dalton Street offices only

Key finding: CO_2 emissions from all three sources are trending in the right direction. Emissions from Air Travel and Fuel Use have both reduced this quarter while Electricity Use has increased. The increase in Electricity Use could reflect the return of staff to the office following COVID-19 lockdown.

Results:

Air travel

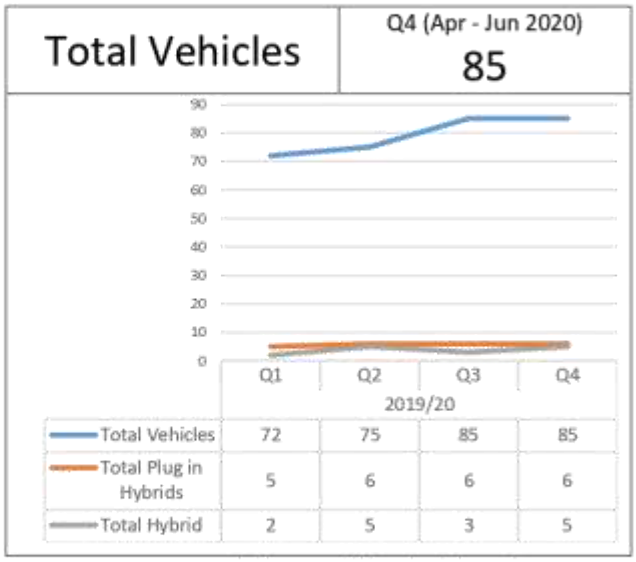
Year	Quarter	Total travel distance (Km's)	CO_2 emissions (tonnes)	Approx. Cost to offset
2018/19	Q1	79250*	21.5*	
	Q2	79250*	21.5*	
	Q3	79250*	21.5*	
	Q4	79250*	21.5*	
2019/20	Q1	118,268	16.14	$347.33
	Q2	59,417	8.1	$188.00
	Q3	37,470	5.1	$127.39
	Q4	981	0.1	$3.86

*Annual figure averaged over the four quarters of 2018/19

Energy Use

Year	Quarter	Electricity Use (Kw/h)	Gas Use (Kw/h)	CO_2 Emissions (Electricity + Gas)	% Change CO_2
2018/19	Q1	74478	72605	24.3	
	Q2	80089	27971	16.4	-32.5%
	Q3			15.1	-7.9%
	Q4			13.3	-7.5%
2019/20	Q1	69201	47040	7.2	-45.9%
	Q2	69813	14993	9.8	36%
	Q3	76278	3398	7.9	-19%
	Q4	42855	24359	8.9	12.7%

Vehicles



Commentary: Vehicles have been replaced but the number of vehicles remain at 85 until vehicles sold (retained for some new roles)

Fuel use

Year	Quarter	Petrol(litres)	Diesel (litres)	Quarterly Spend	CO_2 Emissions (Tonnes)	% Change CO_2
2018-19	Q1	4391	23828	$36,691	76	
	Q2	5836	27618	$43,215	88.5	16.4%
	Q3	6386	28327	$41,390	92.5	4.5%
	Q4	7355	24356	$41,299	84.12	-9%
2019-20	Q1	7322	26685	$43,968	90.64	7.8%
	Q2	7611	27238	$46,578	92.58	2%
	Q3	7459	28445	$43,196	95.50	3%
	Q4	3715	19175	$19,859	61.19	-36%

3.0 Procurement

The procurement hub was launched in July 2019 and training is cascaded by group. Procurement information is now available 'live' at organisation and group level utilising the Power BI Dashboard. Further levels of drill down detail are available at group, service and contract manager levels. On average, one contract is being generated across the organisation every day, with the contract being one part of a three stage (planning, sourcing and managing including evaluation) process.

Procurement activity reporting 2019-20

Procurement reporting to FARS for the period 1 July 2019 to 30 June 2020

- 212 contracts were created
- 15 contracts were awarded with a value of $100k+, 6 contracts were valued at $75k-$100k, and 9 contracts valued at $50-$75k were awarded.
- 150 contracts (70%) were assessed by the contract owners as being low risk, 54 contracts (25%) were assessed as being medium risk, and 8 contracts (3.7%) assessed as high risk
- Of the 32 contracts with a value greater than $50,000 9 completed an RFP/RFQ process, 19 considered local suppliers, and 14 confirmed living wage payments.
- There are 27 contracts expiring in the next three months that will be subject to post contract evaluation.

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PART 3: GROUPS OF ACTIVITIES

Under the Local Government Act 2002 the Regional Council is required to present its financial and non-financial information in groups of activities for ease of understanding. In the 2018-28 Long Term Plan the Regional Council aggregated its activities into seven Groups of Activities (GOAs), being:

1. Governance and Partnerships
2. Strategic Planning
3. Integrated Catchment Management
4. Asset Management
5. Consents and Compliance
6. Emergency Management
7. Transport

The seven GOAs are made up of 25 activities, 33 levels of service and 124 budget codes (as per Opal3). This report covers layers 3 and 4 of the pyramid below.

The following tables' links level of service[1] performance results to the resources required (3-digit budget codes). It uses a traffic light reporting approach. Financial information covers labour hours and external costs such as contractors and legal costs. Capital expenditure will be provided for the first time next quarterly report.

Non-financial status	NF	Achieved or On Track
	NF	Off Track
	NF	Not Achieved or Off Track
	NF	Not measured this year
Financial status	F	Actual results are > 10% or $30,000 over or under budget
	F	Actual results are between 5-10% and $15,000-$30,000 over or under budget
	F	Actual results are within 5% and $15,000 over or under budget

[1] Levels of service statements on what we aim to achieve, for who and why. These are effectively our commitment to our community.

3.1 Governance and Partnerships

There are two activities within Governance and Partnerships Group of Activities (GOA):

- Community Representation and Leadership
- Tāngata Whenua Partnerships and Community Engagement

Activity: Community Representation and Leadership

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will make transparent decisions, deliver cost-effective infrastructure and services and engage the community in activities and decision-making processes, with clear expectations for participation.	Council meetings are conducted in compliance with statutory requirements and Standing Orders. Target: Achieved	NF	**Achieved.** All Council and Committee meetings were advertised, conducted and minuted in accordance with relevant Local Government Act and Local Government Official Information & Meetings Act requirements. All meetings in Q4 met statutory requirements as amended by the COVID-19 Response (Further Management Measures) Legislation Act 2020. This enabled meetings of Governance bodies to be held while restrictions on public meetings were in force and the Pandemic Notice in effect. Committee meetings were suspended during April and May 2020 and weekly online Regional Council meetings held instead. Public meetings in the HBRC Council Chamber recommenced 10 June 2020.	840 - Community Representation & Regional Leadership	NF F	In response to COVID-19, councillors and staff worked from home and in the virtual environment for a 10 week period from 1 April 2020. Central Government amended the LGA and LGOIMA to enable virtual meetings to proceed, with provisions to override the requirement for members to be physically present to count toward a quorum and to allow 'live streaming' or broadcasting of meetings to provide the means for the public to attend. During this time 8 Regional Council, 1 Regional Planning Committee and 7 workshops were held virtually, using Zoom software. Meetings in the Council Chamber resumed 10 June 2020. Significant overspend on staff internal time, mainly attributed to additional Executive, Governance and Project Management resources required to

	LTPs and annual reports receive "unmodified" audit opinions Target: Achieved	NF	**Partially Achieved** This measure relates to current documents. The amended 2018-28 Long Term Plan received a clear audit opinion. An unmodified audit opinion was received on the Council and group's other audited information for the 2018/19 Annual Report. A qualified audit opinion was received on the Council's group financial statements for the 2018/19 Annual Report. The basis of the qualified audit opinion was due to the group financial statements including the statements of the Council's subsidiary, Port of Napier Limited for the year ended 31/3/2019 rather than for the year ended 30/6/19.			support meetings and Long Term/ Annual plan development processes. Initial work has started on the LTP for 21-31 but work on this was delayed due to the impact of COVID-19 on staff time for work on the LTP.
	Percentage of surveyed residents who perceive "acceptable to very good" value of services from HBRC rates (source: 2-yearly SIL perception survey). Target: No survey this year	NF	**Not Measured this year** The most recent SIL perception survey was undertaken between May – June 2019 and reported in the 2018-19 financial year.			

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will make sound investment decisions to grow its assets and generate investment incomes to fund council projects, programmes and activities.	Rate of returns on investment as set out in council's Investment Policy are met. Target: Achieved	NF	**Not Achieved.** As the COVID-19 crisis unfolded, the 5% required rate of return became unachievable for the FY20 year. In Quarter 4 there was a vigorous bounce back to near Quarter 2 levels, however the return for the FY20 year is 1.6%.	880 - HBRIC Costs	NF F	Napier Port IPO was achieved with a successful launch on the NZ Stock Exchange. Expenditure was higher than budgeted due to the Napier Port IPO mail-outs taking place in 19/20. No further costs have been incurred since the IPO.
				881 - Holding Company Support	NF F	Project is on track. The finance team employed a management accountant at the start of quarter 4 whose primary focus is the provision of financial support to HBRIC. The management accountant has been performing daily accounting functions and producing the required reporting to the HBRIC board and management. Expenses were down for quarter 2 and 3 as HBRIC were paying for accounting support directly with an external company. Quarter 4 and ongoing, HBRIC pay a fixed monthly amount for accounting support from the HBRC finance team resulting in the surplus.
				971 - Restricted Leasehold Property	NF F	Delays to freeholding and transfers due to COVID-19 lockdowns. On budget.
				975 - Property Investment	NF F	The project records the income from the Wellington Leasehold property portfolio with no non-financial performance measures. The project is on track except income is down slightly due to rent relief given to one leaseholder as a result of COVID-19 impacts to their business.

Activity: Tāngata Whenua Partnerships & Community Engagement

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC engages in strategic relationships to better achieve its vision and purposes.	Annual reporting to council on performance of strategic relationships Target: Achieved	NF	**Not measured** Performance of strategic relationships was not measured and therefore not reported prior to the Annual Report. A methodology for measuring performance is under development. Strategic Relationships relates to the operation of Māori Committee, Regional Planning Committee (RPC) and bi-laterals with Post Settlement Governance Entities. Q4 was impacted by COVID-19. During this time the Māori Committee met once on 6 May and the RPC met once on 3 June, both via Zoom. No bi-laterals were scheduled or held.	876 - Contingency Funding Support	NF F	Financial result is showing as red as it is a contingency fund and non-use indicates sound budgeting.
				895 - Community Engagement & Communications	NF F	MarComms team supported COVID-19 response, drought recovery and Annual Plan consultation during Q4. Maintained constant delivery using full resource allocation, somewhat diverted to COVID-19 response. On track with spending to year end. COVID-19 led to sustained communications delivery, but redirected activities to a response focus.
				896 - EnviroSchools	NF F	Planting at Harakeke Walkway with Marewa School, Napier Central School became an Enviroschool, Te Māhia School joined in the Dung Beetle release - received national coverage. All 16 Heretaunga Kindergarten Association kindergartens are now part of the Enviroschools Hawke's Bay community. Concluded year end on budget. Financial spend not affected by non-physical delivery of environmental education programme for a period of 4-weeks, due to work-arounds using enhanced digital delivery, i.e. Zoom.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC has the internal capability and capacity to engage effectively with Tāngata Whenua.	An annual programme to improve cultural competency for staff and councillors is resourced, developed and implemented. Target: Achieved	NF	**Achieved** This year the Māori Partnerships Team worked with EIT to provide Te Reo Māori classes to staff. The team initiated a region-wide five council collaboration over Q4 with plans to cost-share on cultural competency tools, frameworks and support. COVID-19 had little effect on progress with remote operating.	874 - Tangata Whenua Engagement	NF F	Māori Partnerships team consists of 3 FTEs. Strategic alliances primarily are through two committees (RPC and Māori) and bi-laterals with PSGEs on matters outside of RPC/RMA. Staff vacancies impacted on productivity, internally and externally through Q3 and Q4. The most significant impact however on Q4 productivity was COVID-19 Alert level 4 lockdown. Adjustments to remote operating (Zoom and MS Teams) enabled small recovery April/May. No bi-laterals were held Q4. RPC met 6 June and Māori Committee 6 May 2020. Internal Time variance was due to 2 staff vacancies not being filled until Feb and April 2020. Variance (-36%) in External Time was due to, (1) No Māori Committee meetings following triennium between Aug 2019 and Feb 2020, (2) COVID-19 impacting all tangata whenua meetings in Q4, (3) technical adviser resignation.
				913 - Systems Integration Project	NF F	No data provided
				843 - Corporate Sustainability	NF F	No data provided
				889 - Interest Group Liaison	NF F	Costs to be journalled to PRJ 874, and code closed

***Investment Performance Objectives** [excerpt from Statement of Investment Policy and Objectives (SIPO)] Council's Fund is targeted to earn a return at least equal to a real return (after inflation and fees) of 4.5% in Year 1 and 5.0% per annum in Year 2 and beyond. All returns are assessed in NZD.

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3.2 Strategic Planning

There are three activities within Strategic Planning Group of Activities (GOA):

- Strategy
- Planning
- Sustainable Regional Development

Activity: Strategy

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will keep informed about organisational, local, regional, national and international issues and trends, periodically develop a high quality and relevant Strategic Plan and align the organisation to deliver on strategic outcomes.	Annual reporting to council on the development and/or implementation of the Strategic Plan to maintain its currency and relevance. Target: Achieved	NF	**Achieved** A refreshed Strategic Plan was adopted by Council on 24 June 2020. The five-year strategy is a non-statutory document that sets the scene and prioritises funding for the 2021-31 Long Term Plan. Leading up to its adoption the focus areas, outcomes and timebound goals were workshopped by the Council and Māori Committee between February - June 2020. A small number of amendments were made to reflect current circumstances and new priorities, in particular climate change is more explicitly referenced and targets realigned to national timeframes.	190 - Strategic Development and Execution	NF F	COVID-19 forced a major change to the Strategy and Projects team's Q4 work programme. Two of the four Strategy and Projects team were seconded to CDEM during level 4 lockdown. This combined with the decision to consult on the Annual Plan impacted on LTP preparations and planned improvements to the PMO hub, project sponsor and project management essentials training. COVID-19 also resulted in re-work and the delayed adoption of the Strategic Plan from April to June. The Organisational Performance Report Q3 was produced as planned. The Snr Reporting Analyst role remains vacant. The budget is yellow as it was underspent in external costs due to project training put on hold as a result of COVID-19. Project Sponsor and Essentials Training is co-facilitated by Tregaskis-Brown and the Strategy and Projects Team.
				376 - Future Farming	NF F	The Future Farming Trust made its annual presentation to Council on 29 July 2020. There was a carry forward from the 2019/20 year to ensure the full funding allocation for this project was made available to the Trust. The carry forward was necessary as a result of the time it took to formally establish and constitute the Trust as an entity separate from HBRC.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				994 - Napier-Gisborne Rail	NF	This Target is now incorporated into KiwiRail's performance under a loan agreement that recorded the repayment terms of HBRC's advance to KiwiRail to support the reinstatement of log freight service between Napier and Wairoa
				995 - Regional Water Security Scheme	NF	The Regional Water Security project, anchored around the Regional Water Assessment, has the objective of ensuring that the region has long term, climate resilient and secure supplies of freshwater, for all. The programme ambition is to build a detailed understanding about our sources and uses of water across the region using natural capital and resource accounting frameworks. This will inform future supply and demand scenarios and help identify intervention and investment priorities on both sides of that equation. Parallel community scale water storage investigations will identify viable sites that could support an integrated package of solutions.

Activity: Planning

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC develops and maintains clear and appropriate policies that promote the sustainable management of the region's natural and physical resources and protects the community from resource management related risks.	Compliance with statutory timeframes for RMA planning documents Target: Achieved	NF	**Achieved** No known failures to comply with statutory timeframes relating to preparation and review of RMA planning documents. Under Code 192 both PC7 (Outstanding Waterbodies) and TANK Plan (PC9) were publicly notified with extended submission periods which will compress timeframes for completion of the hearing and decision-making milestones (legal maximum is decisions to be issued within two years after plan change public notification date).	191 - Regional Coastal Plan	NF F	Draft RCEP Effectiveness report received 23 October 2019. Staff peer review completed, albeit delayed due to other resource management project commitments and staff redeployment to CDEM duties as a result of the COVIID-19 pandemic. Meanwhile, work continued on the Clifton to Tangoio Coastal Hazard Management Strategy. A planning consultant has been appointed to undertake the review and reporting of policy and consenting implications of the Strategy's preferred options as the Policy and Planning team have been significantly under-staffed. A watching brief is being maintained on that work. This project is red as it was underspent at the end of the financial year. The outsourced planning consultancy work has been supported via Clifton to Tangoio budget not the 191 budget.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				192 - Strategy & Planning	NF F	PC7 (OWB) & TANK (PC9) continue to be the principal focus of the policy work programme. 42 submissions were received on proposed Outstanding Waterbodies plan change (with 901 submission points) were being summarised in parallel to arrangements being made for short-listing and appointment of hearing commissioners. Proposed TANK Plan was publicly notified in May 2020, and submission period was extended to 14 August. Staff have commenced a 'gap analysis' of the RRMP. The COVID-19 pandemic event did delay work on the projects within this workstream. All members of the Planning Team were deployed to assist for some time in the CDEM Group COVID-19/drought response event. Delays to proposed TANK Plan notification and the extended submission period resulted in the budget being off-track, associated costs (communications, IT, staff input etc) will be pushed into 2020/21. Hearings have also been delayed in TANK Plan (RPC decision making and COVID-19) and Outstanding Waterbodies proposed plan change (6 month consultation) resulting in significant costs rollover to 2020/21 (est. $800,000). A new submissions database was purchased to support accurate management of public submissions on plans. The senior planner vacancy was filled in April.

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Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				194 - Response to Climate Change	NF F	An independent research company was commissioned to undertake a survey on climate change community and business perceptions in the region. Staff made some progress on three key actions that had been prioritised by the Climate Change Working Group formed in March. However, progress on those priorities had been delayed by the COVID-19 pandemic because key planning staff were deployed to assist with the CDEM event response. Overspend primarily due to commissioning of a climate change community and business perceptions survey. Staff had also contributed to a public event launching Climate Action HB in association with the 3R Group, plus increased community engagement on climate change matters.
HBRC will proactively work with territorial authorities to achieve alignment on policies, plans and strategies.	Planning managers from HBRC and territorial authorities meet at least twice each year to discuss and identify integration issues; and improvements to content and/or processes for regional and district plans. Target: Achieved	NF	**Partially Achieved** Regular communications with the TLAs' planning managers is maintained. During 2019/20, that also involved development of joint submissions on various central government proposals, including freshwater reform, air quality regulations, and national policy statements for urban development, highly productive land, and indigenous biodiversity. It was intended to hold a meeting of HB Council Policy Managers' in April however the COVID-19 pandemic and CDEM response deferred that.	196 - Statutory Advocacy	NF F	2019/20 was an unprecedented year for central government proposals relating to resource management matters. Liaison with MFE in particular during Q4 involved some planning staff providing sector feedback on draft freshwater NPS and regulations. A joint submission with other HB Councils was drafted on proposed amendments to air quality regulations. Planning staff coordinated preparation of evidence from HBRC's experts on Environment Court proceedings for the Ngaruroro/Clive Rivers WCO. Environment Court WCO proceedings have encountered delays due to COVID-19. Evidence was prepared for first tranche of High Court proceedings on Marine & Coastal Area (Takutai Moana) Act applications. Staff time was within budgets, but external expenditure was significantly over budget. The

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will regularly submit on national direction, plan and consenting matters.	Number of submissions made to local and central government per annum. Target: Maintain three year rolling average. Baseline: 5.67 (3 years to 2017)	NF	**Achieved.** 12 (3-year rolling average) Nineteen submissions lodged during the year - with four submissions made in Q4. All submissions are recorded on HBRC website (#hbrcsubmissions). 2019/20 was unprecedented year of activity from central government on resource management-related proposals. Submissions on several local consent proposals, district plans, but most notably, a high number of submissions on Bills and a variety of other central government proposals (e.g. climate change proposals, freshwater reform, national policy statements on indigenous biodiversity, urban development and highly productive land, national regulations for air quality and outdoor tyre storage). 2019/20 was an unprecedented year of activity from central government on resource management-related proposals.			additional external expenses are primarily due to the commissioning of evidence from HBRC's experts on Environment Court proceedings for the Ngaruroro/Clive Rivers WCO, plus associated legal services in same proceedings. Legal expenses were also incurred for the unbudgeted work to prepare evidence for first tranche of High Court proceedings on Marine & Coastal Area (Takutai Moana) Act applications.

Activity: Sustainable Regional Development

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will co-invest in regional economic development organisations for the benefit of the Hawke's Bay economy.	Funding contracts with approved performance targets and reporting requirements are in place for HB Tourism, Matariki REDs and the Regional Business Partners Programme. Target: Achieved	NF	**Achieved** Contracts were in place for all 3 entities. KPIs were exceeded by the Regional Business Partner team resulting from COVID-19.	179 - Economic Development	NF F	During this quarter the RBP team were active supporting local businesses impacted by COVID-19. Additional funding was provided by NZTE which enabled increased staff resourcing and capability voucher spend. Over 600 businesses were supported in the region during this period. Further funding was requested. HB Tourism also played a key role supporting the sector during this period as well as stranded visitors (in collaboration with the CDEM team). Both RBP and HBT presented to Council to keep elected members up to date on COVID-19 business impacts. There was increased spend by the RBP team for staff resourcing, IT equipment as well as considerable financial expenditure on capability vouchers for businesses impacted by COVID-19. Due to the immediate need caused by COVID-19, HBRC approved the voucher payments which were sent on to NZTE to reimburse (causing a small delay in reconciliation). Business HB sought additional funding from Councils but this is pending an independent ED review and the LTP process.

3.3 Integrated Catchment Management (ICM)

There are three activities within Integrated Catchment Management Group of Activities (GOA):

- Science and Information
- Catchment Management
- Biodiversity and Biosecurity

Activity: Science and Information

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will monitor and provide accurate and timely information to decision makers and the community on the State of the Environment (SOE) for Hawke's Bay.	A 5-yearly State of the Environment Monitoring Report is produced along with annual scorecards and monthly updates. Results are made available primarily through digital media. Target: Achieved	NF	**Partially Achieved** Monthly updates have been completed as scheduled. Fourteen 5-yearly SOE technical reports are published. A summary Key Issues report has been drafted and going to Council in August 2020 prior to publication. This will complete the SOE reporting.	153 - State of the Environment Reporting	NF F	The entire Science section produced fourteen 5-yearly SoE technical reports and a Summary report in August 2019. A 5-yearly Synthesis report is ready for publication following presentation to the Regional Planning Committee in August 2020. Overspent internal time due to focussed effort from the entire Science section.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	SOE monitoring programmes are in place and results are published on HBRC and LAWA websites for Climate and Air Quality, Surface Water, Groundwater, Land Science, The Coast Target: Achieved	NF	**Achieved** SoE monitoring programmes ran to schedule and relevant data was captured and uploaded to relevant websites. Some backlog created by COVID-19 was able to be addressed.	315 - Surface Water Quality	NF F	Routine monthly monitoring of 92 river sites and 5 lakes by the water quality and ecology team was completed by the water quality and ecology field team. Freshwater quality and ecology scientists completed annual reporting for Tutira, and provided support for the Whakaki and Tutira FIF workstreams. Work undertaken in this programme contributed to 6 river water quality technical reports (project 153). The ecosystem health programme was successfully completed for its first complete year, and results were utilized for a paper in a scientific journal. Workstreams were satisfactorily completed despite some disruption and missed sampling due to COVID-19. Minor underspend reflects missed sampling runs during the lockdown. It was not appropriate to carry some costs forward, if the work could not be undertaken the following year (i.e. can't go back in time to sample March 2020). Most sites only lost 1 month of data, a small number of sites lost 2 months' worth.
				320 - Surface Water Quantity	NF F	Monitoring completed and data collected on time and to relevant standards for the SoE water quantity programmes. Team is now fully staffed and relevant training is taking place. Any gaps caused by COVID-19 lock down have been largely filled. Controllable costs largely on track, i.e. Internal time close to budget and external cost slightly under spent as not able to use contractors or get equipment serviced during COVID-19 lock down. Financial result is showing as red as Income from Section 36 charges are well below budget.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				325 - Ground Water Quality	NF F	Hydrology and Hydrological Science Team. The Team Leader resigned and left Council end of April during lockdown. A new staff member joined the Team and started in April during lockdown. BAU was disrupted during this period with the loss of a senior surface water hydrology scientist from the Team and the induction of a new staff member in the role of Senior Surface Water Hydrologist to the Team. BAU was also disrupted with the transition from the outgoing Team Lead to the induction and secondment of an Acting Team Lead for Hydrology and Hydrological Science Team. Underspend. The groundwater quality budget included funds for groundwater quality sample analysis for all groundwater monitor wells. However not all monitor wells are being sampled, due to site set-up, lack of appropriate pumping equipment and staffing resources. Therefore, sampling expected was not undertaken.
				330 - Ground Water Quantity	NF F	The groundwater quantity project is responsible for monitoring groundwater level status within regionally significant groundwater resources. This project mainly involves time from Resource technicians to measure and process data, and time from Scientists to analyse and report on data. Groundwater levels have continued to be measured over the Q4 quarter with no disruptions caused by the COVID-19 situation. There have been some delays in processing of automatic recorders. These delays are not anticipated to greatly affect the project. Groundwater level reporting has continued on track as per normal. The over expenditure in this project is primarily driven by costs associated with staff time. This comes from both Scientist time and Enviro info time. Enviro Info time has been under budgeted for many years.

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Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				331 - Coastal Quality	NF F	Project outcomes were met and expenditure was on budget.
				339 - Land Science Research & Investigations	NF F	All programs within the 339 work streams have tracked as expected and are ongoing into the next financial year as expected. An additional program (339-204 - LiDAR) was added to the 339 workstream midway through the FY. This did get underway but has now stopped and contractors returned to Australia due to COVID-19. The under-spend was due mainly to a combined under-spend of 'Overhead charges' and 'Internal time'. The internal time was lower for this project but higher for its sister project 340 that meant between the two projects the overall spend was balanced.
				340 - Land Monitoring	NF F	In the last quarter Land science has completed a new regional land use map for the region, completed a new point analyses survey for the Whakaki catchment, completed the wetland inventory survey and produced technical report, updated and reviewed a new version of SedNetNZ, began exploring ways to monitor slow moving land slips, provided a new model locking at risk identification of event based land sliding and reviewed report, project managing roll out of new ISCO sediment monitoring programme. Other work is detailed in 339 work-stream. Only partial completion of objectives was due to soil quality monitoring being restricted (COVID-19). The 340 work stream wetland programme required more staff time than was originally thought, but this will be balanced by the reduction in expected staff time utilised in the other Land Science work stream (339). This has resulted in higher staff costs than expected for this work stream. However, the soil quality monitoring job within this work-stream had to be postponed due to COVID-19 which in turn caused an under spend in external costs.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	Council maintains its International Organisation for Standardisation (ISO) 9001-2015 accreditation for data collection, analysis and storage. Target: Achieved	NF	**Achieved.** Annual external audit completed on 20-21 January 2020. Accreditation maintained.			All ISO accredited staff maintained their efforts towards the Quality Management System (QMS) during the Level 4 lockdown. No changes to the QMS have been made in Q4.
HBRC will undertake targeted science research and investigations on matters relevant to policy development to inform the Council and stakeholders.	The Science team develops and implements an annual work programme in line with plan change requirements Target: Achieved	NF	**Achieved** The Council's Science Strategy was refreshed in January 2020 and sets out the Science team's contribution to plan changes. This year's focus has been supporting plan change processes for TANK and Mohaka catchments. With Policy staff, preparation is underway for a region-wide plan change to meet timeframes of NPS-FM 2020.	182 - Unspecified Research & Grants	NF F	Approximately $120,000 Envirolink funding was secured from HBRC contribution $10,000 to the initiative. The funding provided technical advice from research organisations on matters relating to resource management in Hawke's Bay. This workstream supports the University of Waikato Professorial Chair position. Overspent internal time due to significant effort from Environmental Information section providing data and services to LAWA. The largest budget issue was a correction to s36 charging that appeared as a $40,000 expense.
				310 - Regional Groundwater Research	NF F	New models for Ruataniwha surface water and groundwater systems are almost complete. These will be used to inform decisions for implementation of the Tukituki sub-regional plan and regional water security initiatives. Modelling and technical support was delivered to support the TANK plan change. SkyTEM survey was completed, as the basis for the regional 3D aquifer mapping initiative. Workstream was on budget

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Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				311 - Regional Surface Water Research & Investigations	NF F	The staffing changes (as noted above in 325) impacted on BAU. The MBIE Braided River Hawke's Bay Case Study for the Ngaruroro River undertaken by Lincoln Agritech (that the Regional Council had agreed to support in-kind and financially) required payment. This took our finance over budget for this quarter.
				312 - Freshwater Ecology Investigations (Projects)	NF F	Data collection for the planned investigations were largely completed by the water quality and ecology field team, with the exception of some workstreams (e.g. feacal source tracking, Tukipo characterisation and Whakaki investigations) which were delayed due to COVID-19 and have been carried forward into 2020/2021. Freshwater quality and ecology provided science support for the TANK plan change, Mohaka plan change and Tukituki implementation workstreams. This project was underspent because some routine monitoring workstreams were budgeted under 312, but were moved to 315 to tidy up project structures. The budget did not reflect this, but the discrepancies largely balance out when looking between 312 and 315 (the two freshwater quality and ecology codes combined). With the remaining discrepancy reflecting COVID-19 disruption, some of which has been requested as carry forward to complete investigative work.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				313 - Coastal Water Quality Research & Investigations	NF F	Internal time is largely underspent. This reflects an FTE that was assigned to 313 in year 2 of the LTP to support coastal data needs that has not been undertaking work aligned to this project at the expected level. End of year level for Environmental Information was at 20% of budgeted amount, however some of this time was spent within the coastal SOE project (331) which was 43% over budget for Environmental Information time. External expenditure was on track for this project, as was the Science time. Large underspend reflects the internal time difference in the Environmental Information area.
HBRC will reduce harmful air pollution and comply with the National Environmental Standard (NES) for Air Quality.	Number of exceedances of PM10 in the Napier and Hastings Airsheds Target: Napier 1; Hastings 3	NF	**Achieved.** Hastings and Awatoto had one exceedance during the FY while Napier had no exceedances.	341 - Air Quality	NF F	The Winter 2020 air emissions inventory is complete, although a section on orchard burning has been deferred and will be produced separately because the sector couldn't provide the information required until later in the year. PM10 monitoring in the Napier, Hastings and Awatoto airsheds has met the performance objectives of 95% data capture and 75% valid data. Monthly PM10 reporting and data processing are complete for the FY. External costs were on budget and the COVID-19 lockdown had no impact on the financial result. Internal science staff time is over budget because 40 weeks of science time should have been allocated to 341 at the start of the FY rather than spread over 341 and 153.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	Number of clean heat systems installed annually under financial assistance programme Target: 1000	NF	**Achieved** 11,881 total between 2009 - 30 June 2020 2019-20: 678 The target of 10,000 clean heat installations over 10 years (1000/year) has been achieved.	342 - Healthy Homes Initiatives	NF F	The Heatsmart programme provided 200 insulation loans, 119 clean heat loans and 359 grants - giving a total of 678 assistance packages valued at $1,013,997; The sustainable homes programme has provided assistance with an additional 725 assistance packages to the value of $3,129,662. The programme shows an increase in demand and borrowing beyond budgeted expectation for sustainable homes. All borrowing is recovered via a voluntary targeted rate. The operational costs for the scheme will be reviewed as part of the LTP budget round.
HBRC will encourage efficient and effective water use to maximise the benefits of the water allocated and comply with regulations under the RMA for measuring and reporting water takes	Percentage of consent holders with water meters operating using telemetry or web/text systems Target: 90%	NF	**Achieved** 94.6%. As at 30 June 2020 84.3% of consents were reporting using web or telemetry. Adding in consents where the take is tamper tagged of 10.3% giving a total of 94.6%. Note: 10.3% of consent holders have wells with a security seal (tamper tag) fitted. These wells are not in use. The security seal allows us to confirm that they have not been used.	395 - Water Information Services	NF F	The WIS team have met targets for telemetry and web reporting. The Technical Advisor position has been filled but the six months without that position has meant notifications for re verifications of meters was slower. Work transferring from Daisy to Iris and training the new Technical Advisor was impacted by COVID-19. WIS income is billed at end of the financial year. Estimate of income at end of financial year is $355900 once all accounts are paid. Planned software development not yet expended.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	Total water consented as a percentage of the allocation limit for each significant water resource (Tukituki).* Note: Additional rivers will be added as allocation regimes are set through catchment based plan changes to give effect to NPS FM>	NF	**Achieved** 99% for Surface water in Tukituki 53% for Groundwater stream depleting takes in Tukituki. Surface water is allocated to the limit. (Note allocation set by PC6 and measured as L/s rather than m3/week). Consents are expiring and allocation rates and volumes are being reviewed. This may free up water. Applications have been made in anticipation of this. Tukituki is the only catchment with a rule-based limit set since the NPS-FM came into effect and is less than or equal to 100% for the total catchment for surface water and groundwater stream depleting takes (see table below). The TANK Plan Change, now notified, will address how the allocation, particularly from stream depleting groundwater, is to be counted in the next catchment to come under the NPS-FM. In the meantime, no more water will be allocated from the surface low flow allocation block or groundwater from over allocated catchments.	314 - Water Efficiency	NF F	One 0.4 FTE involved in this work. Last quarter held 3rd of 3 hort sector group meetings for the financial year. Alongside policy team worked with Aqualinc to complete contracted calibration works to the Irricalc model and extended this work to better assess properties with a high water table. Assisted with water user consultation in preparation for the TANK Plan Change notification and organised Ngaruroro Irrigation Society meeting to discuss TANK. Assisted Tukipo catchment irrigators during drought.

Activity 3.2 Catchment Management

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will partner with Tāngata Whenua and community groups in identified priority areas to achieve land and water outcomes.	Annual reporting to council on engagement, actions and impacts within priority areas. Target: Achieved	NF	**Partially Achieved** Reporting to council on engagement delayed due to COVID-19. This will be reported at the next Māori Committee. Staff have been engaging individual land owners in priority areas as part of the wider Erosion Control Scheme but momentum and focus in priority areas has slowed as a more regional approach to scheme delivery has been taken. Work is still happening in priority areas with wetland creation for nitrogen management meetings being held in the Tukipo, and through both Freshwater Improvement Fund projects multiple engagement with the community in the Tutira and Whakaki priority areas. Work is underway to look at a coordinator for the Ahuriri project. Q4 was impacted on by the COVID-19 lockdown and restrictions to engagement.			
HBRC will work with farmers, growers and	Percentage of land area (by catchment) that	NF	**Partially Achieved** 99% (by land area)	378 - FEMPs	NF F	Focus areas are FEMP auditing in the Tukituki and the re-submission of all Tukituki FEMPs prior to the 31 May 2021 deadline.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
industry to transfer knowledge on environmental risks and impacts, and support the adoption of good management practice on-farm to achieve smart, sustainable land use.	operates under a Farm Environment Management Plan or an independently audited industry good management practice framework as required under the RRMP. Target: Tukituki – 100%		The Tukituki latest GIS analysis identified that there are < 20 small land parcels left to lodge a low intensity form with the council and 12 property > 10 ha identified as requiring the FEMP to be verified. The compliance team are currently investigating these properties.	351 - Te Waiu o Tutira	NF F	The Project is experiencing significant delays as we proceed with stakeholder engagement relating to certain high cost project deliverables. The viability of the project is at significant risk due to this. An increased expenditure of this budget was achieved in the last quarter in delivering on-ground project works (planting, fencing etc.). Under spent. We are considering the viability of carrying forward a large portion of this budget. Please note that Council is in Deed with MfE for this project, we have committed this money as part of the Freshwater Improvement Fund project. If we agree to continue the project we will need to carry forward any unspent funds to ensure we can still deliver this project.
				352 - Ahuriri Estuary Protection & Enhancement	NF F	All identified deliverables for the Ahuriri Protection and Enhancement Project were completed on time and within budget including but not limited to - fencing and planting for biodiversity enhancement and erosion control, hydrology mapping and an engineering assessment of Whareranga Stream.
				353 - Lake Whatuma Protection & Enhancement	NF F	We have not progressed the sale and purchase of a large portion of the lake which has stalled protection and enhancement actions and budget spend. Under spent. No actions, hence no budget spend. Carry forward will be requested to leverage funding from other funders for this project.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				354 - Whakaki Lake Protection & Enhancement	NF F	The Project is experiencing delays as we proceed with stakeholder engagement relating to certain high cost project deliverables which we hope to resolve in the near future. An increased expenditure of this budget was achieved in the last quarter in delivering on-ground project works (planting, fencing etc.). Under spent. We will need to carry forward a large portion of this budget. Please note that Council is in Deed with MfE for this project, we have committed this money as part of the Freshwater Improvement Fund project. We need to carry forward any unspent funds to ensure we can still deliver this project.
				355 - Marine Protection & Enhancement	NF F	No internal time is allocated to this project. Internal time is under 313. Project objectives were meet within the expenditure allocated to this project.
HBRC will encourage through subsidy, education, working with industry and recording and reporting riparian	Additional area of highly erodible land planted in trees (ha).	NF	**Not Achieved** 666 ha of erodible land in trees this financial year, the second year of Erosion Control Scheme (ECS). 225 ha of erodible land in trees in Q4 which included COVID-19 period (source: CRM).	379 - Erosion Control Scheme	NF F	Land purchase for Aramoana of $204k has been capitalised and not visible in this financial result. Overall between 379 and 379c and the land purchase the net of the ECS is under spend of circa $300k. Which relates to work on the ground that is planned but has yet to be completed.

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Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
planting and fencing, wetland protection and afforestation to improve soil conservation and water quality.	Target: 2000Ha of land under cover		This compared to 94 ha of erodible land in trees last financial year (1st year of ECS).	306 - Erosion Control Scheme Booster	NF F	This project provides 'booster' funding to the Erosion Control Scheme. COVID-19 impacted on the ability to make farm visits and hold scheduled workshops and slowed down work on the installation of Sediment Monitors. Office based work related to Erosion Control Plans and general planning and workshop development did continue. There was a data cleanup exercise instigated under this project that related to the Collector Tool used for all ECS work (and this project) however this has yet to be extended to the CRM data which may impact on reporting accuracy related to works on the ground. The surplus in this project relates to external funding received for capital expenditure. This funding will be requested to be carried forward, for the continuation of the sediment monitor purchase and installation that will be completed in 20/21. This is a self-funded project (with in-kind contribution contributed by HBRC). The potential total funding available was not claimed due to unmet milestones as a result of COVID-19. MPI is yet to confirm whether Treasury will approve 'roll-over' of the unspent funds to 20/21 but indication is positive.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				380 - Wairoa/ Mohaka Catchments	NF F	During Q4 staff have initiated 23 ECP's and carried out 42 farm visits. Wider engagement has been held with the McRae Trust, Ohuka Discussion Group, meeting with Mahia landholders, a Farm Planning workshop has been held and a number of wider community events attended. This is a good effort given all the interruptions through the COVID-19 lockdown and delays to the work program while the full contingent of staff has been employed for the Wairoa Office. The team is still being challenged by on-farm transportation and shortage of planting materials - which is being rectified The project is significantly over budget. This was primarily the result of the employment of contractors to fill the gaps and keep the work program progressing in key areas while we were recruiting new staff to undertake the role internally.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				381 - Soil Conservation Nursery	NF F	Pole harvest has begun. We attempted to create a Request for Quote to undertake the harvest to achieve procurement and health and safety goals which was unsuccessful. Instead hired the harvest crew on student contracts this delayed the start of harvest (exacerbated by COVID-19). We have had unbudgeted capex approved to replace the nursery tractor and the harvest chainsaws which were at the end of their lives. The current nursery manager has tendered his resignation and Works Group are going to manage this position going forward. Over budget. Internal time is up as additional help was needed to assist the nursery manager with harvest. Historically this assistance has been coded elsewhere. External cost is lower because we carried stock forward. Income is down due to poor pole numbers in Q1. Despite the income from the 2020 harvest sales being recorded in Q4 of 2019/2020 when it occurred

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				382 - Central Catchments	NF F	The central catchment team has been impacted by several events in the last quarter. This has led to some planned work being partially achieved and other unplanned work being undertaken. 45 Erosion control plans were completed out of a target of 70. Erosion control scheme work outputs are reported elsewhere alongside job 379. Events that impacted on and changed work achieved were: One team member at reduced capacity due to non-work related injury, COVID-19 lockdown preventing farm visits and reducing ECP progress for some time, more team input required at the nursery and significant drought response and lifestyle feed run work done by the team. Under spend. External budget is on budget and Internal staff time is underspent. This is due in part to vacated admin role not being replaced within the team. Also some staff time has been coded to nursery and hotspot codes
				383 - Tukituki/Southern Catchments	NF F	Working to budget for external costs, internal time needs sorting by Finance to find out why actuals are greater than they should be.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				303 - Tagasaste SFF Project	NF F	Monitoring has continued throughout the COVID-19 lockdown period. This has been possible even without the science team due to the availability of local labour and by making small compromises. However the data collected has been of high quality and value. The data from the May monitoring round has not been analysed yet. Initial results are similar to last years, therefore making the measurements of autumn patterns more robust. Analysis of significant data has been presented in the M-06 report. A small over spend has occurred (approx 2%).
	Additional kilometres of riparian margin protected annually to reduce sediment, nutrient and/or bacterial contamination of water Target: 100km	NF	**Not Achieved** 27 km this financial year (2nd year of ECS). 15.8 km of stream protected in Q4. This compared to 8 km last financial year (1st year of ECS). Catchment team is reinforcing where these actions can be funded to get greater uptake.	384 - Riparian Planting Programme	NF F	This code is to monitor riparian plant cost and has no budget.

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Activity 3.2 Biodiversity and Biosecurity

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will work with partners and stakeholders to implement the HB Biodiversity Strategy and Action Plan so biodiversity is enhanced, healthy and functioning.	Additional number of targeted priority sites where biodiversity is actively managed. Target: 1-2	NF	**Achieved** The Biosecurity/Biodiversity team delivered works at 11 Ecosystem Prioritisation sites. This included deer fencing, planting, pest plant and pest animal control. This has been made possible through partnering both internally and externally with other groups/organisations. COVID19 and drought has resulted in the deer fencing of one site being delayed.	662 - Biodiversity	NF F	The Biosecurity/Biodiversity team delivered works at 11 Ecosystem Prioritisation sites this year. This included deer fencing, planting, pest plant and pest animal control. This has been made possible through partnering both internally and externally with other groups/organisations. COVID-19 and drought has resulted in the deer fencing of one site being delayed. Budget 662 (Biodiversity) is broken into two budgets, being 662-001 (OPEX) and 662-080 (Community Capital). The Community Capital budget is underspent. The overall combined budget for 662 is 101%.
				338 - Biodiversity Strategy	NF F	Endangered species database development (stage 2) is in progress. Tier 2 biodiversity monitoring framework development underway, funded by Envirolink and Biodiversity Working Group with Landcare Research being service provider. High resolution aerial image capturing over frost flats led by BOPRC is completed, but image processing has been delayed due to COVID-19 affecting service provider (South Africa base). Wilding pine mapping in HB frost flats is in progress. Budget on track.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will undertake research, and implement and review regional pest management plans that improve biodiversity, human health and economic prosperity.	Maintain and implement current Regional Pest Management Plan. Target: Achieved	NF	**Achieved** Regional Pest Management Plan review has been completed. Plan became operative Feb 2019. The Biosecurity team have implemented this plan, which contains 23 pest animals, 2 marine pests, 5 horticulture pests and 33 pest plants. A legal review has been undertaken on Notices of Direction, amendments to documents incorporated by reference and staff Biosecurity Act warrants.	650 - Plant Pest Control	NF F	The pest plant team completed almost all field operations this FY. In the last quarter this involved the management of 11 different pest plants. These pest programmes are outlined in the Regional Pest Management Plan. Two programmes could not be completed due to the COVID-19 lockdown (old man's beard aerial control and Australian sedge spraying). The urban woolly nightshade programme was completed but some properties could only be inspected from the footpath due to COVID-19 Level 2 and 3 restrictions. Woolly nightshade articles were published in local newspapers. Over/under recoveries have resulted in the budget being overspent by 19%
HBRC will provide effective pest management programmes that improve regional biodiversity, human health and economic prosperity.	Percentage of monitored Possum Control Areas (PCAs) with a 5% or less trap catch. Target: 90%	NF	**Partially Achieved** Due to COVID-19 the PCA Education Monitoring Programme is behind schedule. 91% of the results have been processed. We are waiting on results from the remaining 183 monitoring lines (due 14 August). We are on track to achieve the LOSM of 5% or less trap catch of monitored possum control areas. The average RTCI of the results to date is currently 2.9%.	660 - Regional Animal Pest Control	NF F	The pest animal and Predator Free Hawke's Bay teams have completed almost all pest animal programmes, including rabbits, rooks, feral goats and predators. Good progress has been made in the Whakatipu Mahia possum eradication programme with milestones on track. COVID-19 has delayed the completion of the PCA monitoring programme. This is due to be completed by the 14th Aug 2020. The Pest Animal budget came in slightly under-spent this FY. The 8% overspend is due to over/under recoveries
	Decreasing trend (based on previous 5-year average) in the number of active rook nests. Target: Achieved	NF	**Achieved** 247 5-year average The annual rook programme has been completed with 141 nests treated. This is tracking downwards, the 5 year average being 247 active nests treated	689 - Pest Management Strategies	NF F	The Regional Pest Management Plan has completed its review and is operational. An online Pest Hub has been launched in partnership with the Comms team where the public can gain information and report the sighting of pests in the Hawke's Bay region. A LGA

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	Percentage of animal pest enquiries responded to within target timeframe. (5 days for rabbits). Target: 100%	NF	**Achieved.** 100% A total of 66 rabbit inquiries have been responded to over this financial year all within the required 5 day time frame			section 17a efficiency and effectiveness review has been undertaken of a range of Biosecurity operations within the RPMP to make sure they are effective and fit for purpose. Legal advice has been sought on Notices of Direction and amending Incorporation by Reference documents within the RPMP. Budget was on track.
	Percentage of plant pest inspections and actions completed within target timeframes (see schedule for specific plant pests). Target: 100%	NF	**Achieved** 100% 130 rural properties and 380 urban properties were visited during this period. The following pest plants have been managed: African feather grass, Goats rue, Phragmites, Cathedral bells, Spiny emex, Old man's beard, Climbing spindleberry, Chilean needle grass, Wilding conifers, Woolly nightshade, Privet. The Calamint biocontrol SFF project funding has been completed			

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3.4 Asset Management

There are three activities within Asset Management Group of Activities (GOA):

- Flood Protection and Control Works (Rivers, Drainage & Small Schemes)
- Flood Risk Assessment and Warning
- Open Spaces

Activity: Flood Protection and Control works; (a) Rivers, (b) Drainage and (c) Small Schemes

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will maintain an effective flood control network that provides protection from frequent river flooding to communities and productive land within designated flood protection schemes in the Heretaunga Plains and Ruataniwha Plains				250 - Investigations and Enquires	NF F	Many ratepayer enquiries dealt with by all team members of Regional Assets. $40k over budget. Additional costs incurred: Computer services - assistance from control of report filing etc. +$6000, legal and property advice +$15,000 - eg. Mangarau Dam easement, Rissington flood issue, Te Awanga Downs subdivision, time from regional assets + $19,000
				251 - Subsidised Investigations & Minor Projects	NF F	Schemes Team (Regional Assets) managing project, tree work carried out by Works Group and various local contractors. Tree work delayed due to COVID-19. Additional work carried out beyond that budgeted, predominantly tree removal in CHB and Wairoa areas. Expenditure $58k over budget.
				255 - Consultancy Services	NF F	Minor work for Bridge hydraulic analysis for GDC. Decision made by Executive to discontinue offering hydraulic modelling consultancy for external parties.
				261 - River and Lagoon Opening	NF F	Schemes Team (Regional Assets) managing project, works carried out by local contractors as required. Increased surveillance and precautions taken during COVID-19 isolation. Opening cost and frequency trending upwards over 2010 to 2020 potentially due to increased investment, awareness and responsiveness combined with environmental factors (river flow, swell, and sea level). $50k over budget. River mouths opening carried out as required.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	The major flood protection and control works that are maintained, repaired and renewed to the standards defined in the relevant scheme Asset Management Plan and annual works program. Target: Achieved	NF	**Partially Achieved** The renewal programme have had some delays due to COVID-19 as resources and outside contractors been committed to COVID-19 response.	265 - Upper Tukituki Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors. Delay to some works due to COVID-19. Underspent because various work was not required, due to work carried out as subsidised work (251) and gravel (369).
				286 - HPFCS - Rivers Maintenance	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as per Asset Management Plan. Reduced Operations Group and Contractor expenditure than budgeted due to work not required. Capital underspend due to Heretaunga Plains Flood Control Level of Service being in design phase
	Changes to flood levels of protection are consulted on with the affected communities and delivered within agreed timeframe. *Current levels of protection are	NF	**Not Achieved** From a capital delivery perspective the upgrade to the level of service to Heretaunga Plains Flood Control Scheme is behind the schedule indicated in the 2018 LTP. Resources have now been engaged to undertake the planning and	287 - HPFCS - Flood & River Control	NF F	Level of services review is underway with great progress. All other capital works planned for this FY is progressing well, we are working on prioritisation work and failure risk and consequence for each river. We are spending only on internal and professional services. No physical work have started this FY.
				288 - HPFCS - Special Projects	NF F	The overspend is due to more time spent on condition assessments, level of services hydrology modelling and ecological management plans reviews.
				369 - Gravel Management	NF F	Actual exceeds forecast due to the ongoing external costs in processing the new consent.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	1%AEP (1:100 year return period) for both Heretaunga Plains and Upper Tukituki Schemes. Target: Heretaunga Plains: Phased design and construction. Upper Tukituki: Subject to consultation outcome		concept design phases of this project. The communication plan is now being submit to steering group for discussion. All other aspects of the project are on track. The project is already being consulted with iwi groups and other affected parties. Ongoing updates to council and third parties including Fish and Game and DOC.	370 - River Cross Sections	NF F	Waipawa, Kopuawhara completed. Wairoa on hold until after lockdown. Survey of Wairoa River deferred due to movement restrictions during COVID-19. Missed survey is planned for coming year 20/21. $125k underspend. Some staff time was incorrectly booked against gravel study Job code 369. ($17k)
HBRC will protect and enhance the scheme's riparian land and associated waterways administered by the Regional Council for public enjoyment and increased biodiversity.	The ecological function of urban streams is maintained or enhanced (source: 6-yearly rolling review and Ecological Valuations of River Ecological Management and Enhancement Plans (EMEP). Target: Achieved	NF	**Not Measured** Ecological management plans for rivers are currently being reviewed	364 - Regional Pathways	NF F	Some budgeted expenditure was not carried out due to work scheduling and reduced levels of maintenance due to COVID-19. COVID-19 response costs under 287-014
				363 - Public Access to Rivers	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. Services of First Security and other contractors have been reduced with new HBRC Ranger. Increased surveillance and precautions taken during COVID-19 lockdown. $182k over budget. Extra rubbish collection ($100K), upgrade to public access areas, fencing, and repairs undertaken. Public Access and Security Review in progress. Demand from public for increased level of service.
HBRC will maintain an effective drainage network that provides drainage outlet for rainfall	Number of reported incidences of out-of- channel flooding lasting more than 24	NF	**Achieved.** Water level remained within mainstem channel sections.	290 - HPFCS - Drain and Pump Assets	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as per Asset Management Plan. Minor delay to works due to COVID-19. Under spent due to less Contractor and Flood provision expenditure than budgeted due to work not required.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
runoff for communities and productive land within the drainage scheme.	hours for the design rainfall runoff and lesser events. Target: Zero			291 - HPFCS - Npr/Meeanee /Puke	NF F	Majority of the operational maintenance activities were completed as per contract with some of provision sums not spent due to work not required Significant renewals programme undertaken including: Plantation Pump Station renewal in progress. Kenny Rd Pump Station new pump.
				292 - HPFCS - Brookfields/A watoto	NF F	The majority of the regular operational activities were completed as per annual maintenance contract. The provisional sum in the contract was underspent due to work not required this FY.
				293 - HPFCS - Pakowhai	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. $37k under budget. Less Operations Group and Contractor maintenance expenditure than budgeted due to work not required.
				294 - HPFCS - Muddy Creek	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. Minor delay to works due to COVID-19. Under spent. Less Operations Group and Contractor maintenance expenditure than budgeted due to work not required. Capital budget for new flood outlet pipe not spent due to installation delay.
				295 - HPFCS - Haumoana	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. New pump installed. Under spent. Additional renewals budget spent due to urgent work required to pump station repairs and enhancement to Haumoana lagoons. The capital budget of $66,000 hasn't been executed this FY due to other renewals taking priority.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				296 - HPFCS - Karamu	NF F	Schemes and Open Space Teams (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. Minor delay to works due to COVID-19. Maintenance work carried out as required Under spent. The Budget for this FY was set for both Karamu scheme operational work and Karamu enhancement and capital work. Some of the work was coded incorrectly into 282 Karamu Enhancement.
				297 - HPFCS - Raupare/Twyford	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. Work carried out as required. Less Operations Group and Contractor maintenance expenditure than budgeted due to work not required.
				298 - HPFCS - Tutaekuri/Moteo	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required.
				299 - HPFCS - Puninga	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. Under spent. No renewal work was completed this year as the assets are still in good condition so this was deferred. Less Contractor maintenance expenditure than budgeted due to work not required
HBRC will maintain an effective flood control and drainage network that provides protection from frequent flooding to communities	Flood protection and drainage networks are maintained, repaired and renewed to the key standards defined in the Scheme Asset management plan	NF	**Achieved.** Planned maintenance and works have been executed for all schemes except Opoho. The Opoho pump station is currently out of service. We are working with the scheme participants (three) to determine the most efficient and effective	240 - Makara Flood Control Scheme	NF F	Schemes Team managing project, maintenance contracted carried out by Works Group. Under spent. Additional future finance may be required following engineering inspections.
				241 - Paeroa Drainage Scheme	NF F	Schemes Team managing project, maintenance contracted carried out by Works Group and local contractors. Minor delay to works completed due to COVID-19. Staff vacancy in Wairoa role has reduced work completed in quarter. $24k under budget. Less Operations Group maintenance expenditure than budgeted due to work not required.

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Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
and productive land within designated Scheme areas, including: - Makara Flood Control - Paeroa Drainage - Porangahau Flood Control - Ohuia – Whakaki Drainage - Esk River - Whirinaki Drainage - Maraetotara - Te Ngarue - Kopuawhara Flood Control - Poukawa Drainage - Kairakau	and annual works program. Target: Achieved		way forward. The scheme participants have expressed a desire not to invest in overhauling the existing pump station and are fully informed. Given the relative size of Opoho therefore status is green.	242 - Porangahau Flood Control Scheme	NF F	Schemes Team managing project, maintenance contract carried out by Works Group as per schedule. The maintenance programme completed. Silt extraction occurring at Tauretaikai Stream-Wanstead Swamp, Porangahau Road and working with CHBDC. Scheme operating to forecast expenditure/income.
				243 - Poukawa Drainage Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and local contractors. Minor delay to works completed due to COVID-19. Channel excavation carried out in May 2020 in coordination with marae and landowners. Scheme operating to approx. forecast expenditure/income.
				244 - Ohuia - Whakaki Drainage Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and local contractors. Minor delay to works completed due to COVID-19. The maintenance programme complete but some of the provision sum in the contract not spent due to work not required. Energy expenditure less than budgeted. Budget carried forward for pump station repairs.
				245 - Esk River Control Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group. Working on enhancement planting with Esk River Care Group. Under Spent. Minor delay to works completed due to COVID-19.
				246 - Whirinaki Drainage Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group. Working on enhancement planting with Esk River Care Group. Scheme operating to forecast expenditure/income.
				247 - Maraetotaroa River Control Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and local contractors. Lower burn piles carried out to support Maraetotara enhancement planting group. Scheme operating to forecast expenditure/income.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				248 - Te Ngarue River Control Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group. Scheme operating to forecast expenditure/income.
				249 - Kopuawhara River Control Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group. Tree work delayed due to COVID-19. Scheme operating to forecast expenditure/income.
				266 - Opoho River Control Scheme	NF F	The maintenance programme is in progress as per schedule for pump station which is currently decommissioned due to safety concerns. Spraying completed. Review of scheme currently being undertaken to confirm best solution.
				276 - Kairakau Community Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out as required. Agreement of work programme with community to be reviewed. Mangakuri River mouth opening undertaken during COVID-19 Alert Level 4 (9 Apr). Review of scheme objectives and work programme is required. No issues to report.
				277 - Wairoa Rivers and Streams Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. Significant additional work currently undertaken at marae projects. Work postponed due to COVID-19 and started in May. Yacht Club retaining wall completed. Wairoa Marae Te Ruahina (LB Wairoa river) battering and planting completed

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				278 - Central & Southern Area Rivers & Streams Scheme	NF F	Schemes Team (Regional Assets) managing project, maintenance contract carried out by Works Group and various local contractors as required. Significantly less Internal Staff time expenditure than budgeted (This code is 30% planned and 70% reactive). The underspend is due to work not being required or identified through the year. Additional tree work for Te Waiohinganga (Esk) River Care Group completed ($4k). Burn piles Maraetotara.
				264 - Westshore Coastal Works	NF F	Renourishment completed. The contract was delivered under budget. Cost varies each year depending on market conditions and actual erosion rate.
				322 - Coastal Processes Invgs	NF F	Joint Coastal Strategy on track. Additional modelling was required due to increased scope and peer review feedback. Coastal technical resources are subsidised by HBRC so impact to HBRC greater than impact to Joint Coastal Strategy Project approximately $30k over budget.

Activity: Flood Risk Assessment and Warning

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC provides reliable warning of flooding from the region's major rivers to at risk communities in the Wairoa, Tutaekuri and Ngaruroro and Tukituki areas	Percentage of time that priority telemetered rainfall and river level sites are operational throughout the year. Target: 98%	NF	**Achieved** 98% target has been met.	715 - Flood Risk Assessment	NF F	Staff time on this project was used to perform analysis, liaise with TLA's, answer queries to do with flood issues (note 250 General Enquiries) or the risks associated with flooding. Includes responses to severe weather events, flood forecasting, responding to queries from communications section (from media). $60k under budget. Our section was understaffed for portion (50%) of the year, so a portion of the budget was not spent (all internal time).
				718 - Flood Warning System	NF F	The flood warning and river level monitoring system has worked well. COVID-19 didn't really impact on this project Budget was on target.
Council provides accurate and timely flood forecasting information online to advise the community on likely rainfall and flooding	Percentage of the region at risk of flooding from large rivers, covered by a flood forecasting model. Target: 70%	NF	**Achieved** Flood forecasting models cover 70% of the region by area. The target is to cover 70%, and this has been 100% achieved. The area of these catchments cover about 70% of the entire region (see map below). Flooding from the rivers in these catchments could cause large economic loss. Modelling is focused on the lower reaches of these major river systems.	719 - Flood Forecasting & Hydrological Flow Management	NF F	Catchment reviews, hydrodynamic modelling for flood hazard planning, mapping. Staff worked on Esk flood model as part of that scheme review.

Activity: Open Spaces

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will maintain, develop, and provide public access to existing Council owned regional parks and investigate affordable new opportunities for public enjoyment of open space for multi-purpose benefits	Regional parks are managed to the key standards defined in Individual Park Plans (IPPs) where present and / or the HBRC Regional Park Network Plan. Target: Achieved	NF	**Achieved** Service levels for all Regional Parks met. New Asset Management Plan being developed for better management and operation of all Regional Parks assets (including forests and trails).	362 - Regional Park Network	NF F	All Regional Parks are managed as per plan and operations contract with Works Group. (Te Mata Park, Hawea Park, increased LoS for Pekapeka). Open Spaces increased their contribution to the Te Mata Park Trust for its operation. All this has increased the demand on resourcing. The overspend on maintenance work (WG) is due to additional work required (outside of contract) replacing and fixing vandalised assets within the park. Internal time is overspent due to higher demand and increased enquires on regional parks networks from public. Increase in contribution for the Te Mata Park trust for the operation from 0.6 FTE to 0.8FTE
				281 - Raupare Enhancement Scheme	NF F	The work has been completed as per winter planting schedule.
				282 - Karamu Enhancement Scheme	NF F	Maintenance work on existing plants completed per contract for the year. Staff time was higher than anticipated to complete work offsetting external vendor requirements. Internal time is overspent due to some additional work required (extra maintenance work and coordinating work) The capital expenditure is overspent as no budget was allocated, but this was part of the Karamu Strategy Plan development work. Budget for this was not coded correctly and allocated to 296 but has been rectified through clear expectations on clarity on job coding. Specific focus will be placed on Karamu Operations and Enhancement to ensure actuals are accurately captured.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				988 - HBRC Forestry Estate	NF F	Managed by team Open Spaces Ongoing forest maintenance (ie plant and animal pests control, silviculture, fence repairs, track clearing), harvest preparation, native planting (Tutira manuka plantation, Waipukurau Forest), draft forest estate management plan for consultation completed. Highlights: Silviculture being done in house by Works Group staff in their winter off-season providing security of scarce labour and with obvious benefit to them also Lowlights: Delay in start of harvest. Significant income variation as harvest was delayed another year due to Kahikanui bridge and sediment trap not being ready.
				893 - Regional Infrastructure	NF F	This is a debt repayment tracking project for debt funded works performed in prior years. The project is on track.
				373 - Tangoio Soil Conservation Reserve	NF F	Managed by the Open Spaces team. Forestry felling delayed due to COVID-19 impact on log price. Management Plan (draft for consultation) and budget for next LTP period, track cutting for pest control access, silviculture of commercial trees, forest harvest preparation, ongoing plant and animal pest control, Maungaharuru Tangitu (MTT) youth employment and training, 3x new MTT youth employed on casual contracts Lowlights: High possum numbers in northern end of Reserve Highlights: Tracks cut and intensive possum control carried out to ensure low numbers from now on Contracted forestry crew who had been financially affected by COVID-19 layoffs through MSD for silvicultural work. Variance in internal time as summer student requirements were less than originally anticipated.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				374 - Maungaruru Tangitu	NF F	The funds for this project must be spent on a work programme we have agreed with MTT and we have been unable to complete this process. Underspent. Funds accumulating in reserve fund for use once work programme confirmed

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3.5 Regulation

There are three activities within Regulation Group of Activities (GOA):

- Consents
- Compliance and Pollution Response
- Maritime Safety

Activity: Consents

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will process resource consent applications in a timely manner	Percentage of resource consents processed within statutory timeframe in Resource Management Act. Target: 100%	NF	**Not Achieved** 99.8% All but one application has been processed within statutory time frames.	402 - Resource Consents	NF F	At year end within 5% of expenses but under recovered in terms of income by $300,524. Recovered 66% of costs compared to target of 80%. Running at around 77% prior to under recovery figure of $288,978 added in. This cost doesn't become evident until the end of year and may be partly attributable to costs associated with COVID-19. Overall still a good achievement by the Consents Team. **Performance Measure** / **Jul 19- Jun 20** **Consents in process** 533 **Applications Received** 597 **Consents Issued** 539 **Consents processed within Timeframe** 99.8% **Cost recovery to date** 66%
				446 - Appeals and Objections	NF F	Underspent. This is a contingency for legal costs. Costs have been incurred for Te Mata Mushrooms and for Tukituki Plan Change implementation. But not to the extent anticipated.

Attachment 1

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
				470 - Building Act Implementation	NF F	Central Government has not enacted the dam legislation and there is still no published timetable for doing so. Waikato invoiced 4th quarter for administering the scheme on behalf of North Island Councils. Invoice was for $8870 + GST. This included an IANZ audit (Maintain BCA accreditation) which occurs every 2 years. Audit bill split between the 8 Councils.
Policy Implementation				465 - Policy Implementation - Regulation	NF F	The Policy Implementation team has been focussing mainly on Tukituki implementation. The 31/05/20 deadline was delayed due to the COVID-19 lockdown. Industry providers were unable to meet with landowners to update FEMPs and Nutrient budgets or assist with the completion of application forms. An interim process had to be established which allowed landowners to submit a pre-application as a placeholder for a full application. The prolonged drought also played a significant part in the decision making. A streamlined plan change to update Table 5.9.1D was approved by the RPC on 18/03/20. Internal time has exceeded budget. Significant time has been spent on plan change 6A including by the consents team, who have used the 465 code. This was not budgeted for at the start of the year. External costs were below budget.

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Activity: Compliance and Pollution Response

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will monitor consent holders to ensure compliance with the resource consent conditions imposed to protect the environment and human health	Percentage of programmed inspections/reports completed each year as per the adopted risk-based Compliance Monitoring Strategy. Target: 100%	NF	**Not Achieved** Percentage Monitored: **93.07%** Consents to be monitored =3,554 Consents Monitored=3,308 8656 consents are current within the HBRC database for active consents. Of these consents many are bore permits or structures that are no longer monitored so approximately 3554 consents were programmed to be monitored in the 2019/2020 period. Of these 3554 consents, HBRC monitored 3308 or 93.07%. This is an improvement on the previous year due to slightly increased resources however we have been unable to achieve the 100% target in our LOSM. Potential reasons for not achieving our target include increased monitoring of permitted activities, increased enforcement and COVID-19 restrictions limiting audits of low risk sites.	450 - Compliance Programmes	NF F	During COVID-19 Level 4 Compliance staff were fully utilised and able to catch up on compliance monitoring reports, desktop returns, administration and support the pollution response team. With a return to Level 3 staff undertook compliance visits for the higher-risk activity sites who had operated during Level 4 as essential services and other industries including forestry, wineries (vintage) and low flow monitoring, including proactive engagement with farmers who were suffering as a result of the drought. With a return to Level 2 normal BAU monitoring was resumed. Revenue income for the compliance programme is substantially under recovered for the reporting year. We recovered better than expected ($135,000 against the forecast $115,000) for the 4th quarter. However, we were substantially under recovered approximately $860,000. This was mainly due to a significant increase in overheads for the year (approximately $450,000 from $250,000 last financial year). A large portion of administration we currently do not charge for and the unachievable s36 revenue target. A

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	Percentage of monitored consents which receive and overall grade of full compliance. Target: 95%	NF	**Not Achieved** Full Compliance = **90.9%** Low Risk Noncompliance = 4.2% Moderate Noncompliance =4.2% Significant Noncompliance= 0.8% Incomplete (work in process)=0.11% These are approximate values and will be confirmed in the annual CME report to Council. A change in how Council grades compliance with consents is largely responsible for this increase in low risk non-compliance. Council escalates its regulatory response on a case-by-case basis according to the risk to the environment and human health, the seriousness of the non-compliance, the apparent attitude to compliance, and the compliance history and frequency of issues arising.			review of s36 compliance monitoring charges, and percentage recovery targets set in the R&F policy is been undertaken for the LTP. **Performance Measure** / **YTD (Jul 19 – Jun 20)** **Total Number of Consents Monitored** — **3308** Consents monitored — 3275 Forestry Consents monitored — 33 Bore security reports received and assessed — 124 Forestry Permitted Activities monitored — 38 Contaminated Land Queries — 237 Hazardous waste queries — 43

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Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will provide a pollution response service for public complaints, reports of environmental incidents and unauthorised activities	Maintain a 24-hour/7 day a week duty management/pollution management response system. Target: Achieved	NF	**Achieved** Appropriately qualified staff operate the 24/7 duty management and pollution response system.	445 - Environmental Incident Response	NF F	Pollution Response: Total number of pollution calls = 983 Calls by type: Air = 628 Coastal = 27 Groundwater = 9 Land = 185 Surface water = 133 Nav Safety = 1 Enforcement: Abatement Notices issued = 21 Formal Warnings = 11 Infringement Notices = 88 Enforcement Order = 1 Prosecutions = 12 Over spent. Additional afterhours charging against 445 by compliance staff contributed to the financial result showing as red.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will investigate and manage contaminated sites to ensure public health and safety and environmental protection.	A Hazardous Activities & Industries List (HAIL) database of potentially and confirmed contaminated sites is maintained. Target: Achieved	NF	**Achieved.** HAIL database is approx. 20% transferred into the new IRIS system. Anticipated end of year for full transferal. Efficient systems now in place to reduce expected staff hours required responding to HAIL requests. Undertaking more specific review of landfill vulnerability.	151 - Hazardous Waste/ Substance Management	NF F	The hazardous waste and contaminated land team is a function that sits within the compliance and enforcement team but is 100% rates funded. We experienced a decrease in collections of hazardous chemical over COVID-19 restrictions but an annual increase overall. A paper was put to Council to determine the future of the program which will now focus on only higher risk chemicals from residential sources to enable our funding to go further during the year. Internal staff time was reduced this year due to other demands on FTE from the enforcement and compliance programme functions. Expenditure was within anticipated levels for the financial year. Slight over spend of 10% was forecast at end Q2 and 15K was requested from the risk and audit committee to cover the additional costs of increased collections. Staff internal time cost was reduced as FTE were required to undertake 445 and 450 cost centre functions as a priority.
HBRC will respond to oil spills within the Hawke's Bay Coastal Marine boundary and maintain a Tier 2 Oil Spill Response Plan, which identifies priority areas in HB for protection in the event of a major spill.	An operative Tier 2 Oil Spill Plan and a trained and qualified oil spill response team is in place at all times. Target: Achieved	NF	**Achieved** The T2 plan is currently being fully reviewed (as required on a 3-year basis). The second oil spill exercise scheduled for March 2020 did not happen due to COVID-19 restrictions. The first of two exercises for this year is scheduled for mid September. A response team is in place at all times. The number of responders is currently under review with the potential for two new team members.	720 - Marine Oil Spill	NF F	The Tier 2 oil spill plan is being maintained. A full review and update of the plan is currently being undertaken with completion anticipated next financial year (2020-2021). Training and exercising has been interrupted due to COVID-19. Future scheduled training has been prepared, the next training scheduled for September 2020. The budget for exercising is from Maritime NZ. Due to COVID-19 there are less vessels entering NZ ports hence the budget for training (and other oil spill response costs) have been reduced. Spending to date is in line with current budget allocations.

Activity: Maritime Safety

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will provide local navigation safety control of shipping and small craft movements and provide navigation aids to ensure the region's navigable waters are safe for people to use	Maintain a Maritime New Zealand accredited Hazard Identification/Risk Assessment and Safety Management System for the Napier Pilotage Area. Target: Achieved	NF	**Achieved** This is regularly updated and reviewed by the Harbour Master and senior port of Napier staff.	460 - Navigational Aids & Regulations	NF F	The lockdowns during level 3 and level 4 meant there was no recreational boating or school visits. Hence the Harbour Master budget was 4% underutilised.
	Number of maritime incidents occurring per year reported to Maritime New Zealand in accordance with regulations. Target: Maintain or decreasing trend. Baseline = 43 (3 years to June 2018)	NF	**Not Achieved** 79 (3-year rolling average) There were 50 incidents reported compared to 105 in 2018-19, 82 in 2017-18 and 33 in 2016-17. This year's result is an improvement but likely to be due to maritime inactivity due to COVID-19.			

3.6 CDEM

There are two activities within CDEM Group of Activities (GOA):

- Hawke's Bay CDEM Group
- HBRC Emergency Management

Activity: Hawke's Bay CDEM Group

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
The HBCDEM Group will educate people about hazards, increase natural hazards knowledge through research and provide this information for risk reduction measures including land use planning, asset management, and infrastructure.	A 5-yearly Hazard Research Plan is approved by and reported on annually to the CDEM Group Coordinating Executives Group. Target: Achieved	NF	**Achieved** Current Hazard Research Plan was adopted in 2015 and last reported to the GCEC in late 2019. Focus this year on identification of landslide risk from earthquakes, commissioned in accordance with the 10 Year Hazard Research Plan. GNS Bluff Hill earthquake induced landslide forecast and hazard assessment received April 2020, and Region-wide earthquake induced landslides risk assessment report published August 2020.	709 - East Coast Lab	NF F	East Coast Life At the Boundary (ECLAB) has supported several science projects including MBIE Hikurangi/ Seismogenesis Hikurangi Integrated Research Experiment (SHIRE) research. Promoted Tsunami Hikoi 9-15 March 2020 and Shakeout drills. The inter-regional Hikurangi Response Planning project was concluded 30 June 2020, with a Toolbox published on the website for five partner CDEM Groups and NEMA. All costs fully recovered.
	Percentage of surveyed residents that identify earthquake, flooding and tsunami as major hazards in Hawke's Bay (source: 2-yearly SIL perception survey). Target: Same or better result than last survey (86%; 58%; 45%)	NF	**Not measured this year.** The most recent SIL perception survey was conducted between May – June 2019 and was reported in the 2018-19 Annual Report. Next survey due 2021.	711 - Hazard Ident. & Mitigation	NF F	In line with 10-year Hazard Research Plan, focus this year was on identification of landslide risk from earthquakes, GNS Bluff Hill earthquake induced landslide forecast and hazard assessment received April 2020, and Region-wide earthquake induced landslides risk assessment report published August 2020. This project met project deliverables for the year with external costs on budget, but internal time under spent due to COVID-19.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
The HB CDEM Group will increase readiness, and ensure a coordinated and appropriate response and recovery from a civil defence emergency to reduce the impact on people and property.	An operative Group Plan under the CDEM Act 2002 is in place, reported on annually and reviewed within statutory timeframes by the Joint Committee. Target: Achieved	NF	**Achieved** A project plan to review existing Group Plan was developed and agreed to by the CEG and Joint Committee late last year. Work had commenced on hazard risk review. Due to the response to COVID-19 commencing in February and current work on planning for COVID-19 resurgence the CEG has determined that the review is not priority at this time. This will be discussed at the next Joint Committee meeting in August. Whatever the priority, this project will need to be re-evaluated and project plan adjusted. The current Plan remains operative until replaced.	712 - Readiness & Response	NF F	This work program was significantly impacted by the COVID-19 response. However on a positive note a number of response infrastructure and processes were tested. Due to the urgency of the COVID-19 response a number of lesser priority response infrastructure and processes were developed and implemented. The overspend in this project is largely a result of the purchase and distribution of emergency welfare aid during the COVID-19 response. The operational costs of this response also contributed to the overspend. Just under $1mil of welfare costs have been claimed from central government and will be accrued into 2019/20 once the exact amounts accepted are known. This overspend needs to be balanced against the other projects funded by the regional CDEM rate which are generally underspent (as a result of reduced activity in these areas during the COVID-19 response) and the existing $371k CDEM reserves.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	A Group Work Programme implementing the Group Plan objectives is approved and reviewed 6 monthly by the Coordinating Executives Group. Target: Achieved	NF	**Achieved.** A Group work programme is in place and has been agreed to by the Coordinating Executives Group and reviewed quarterly at their meetings. However due to the response to COVID-19 commencing in February with activation occurring on 20 March this plan was re-evaluated by CEG and objectives adjusted accordingly. Priority has been placed on post COVID-19 response reviews, implementing lessons learnt and planning for re-emergence. It is likely that the ongoing response and future recovery to COVID-19 will impact on existing work programmes for the next 12-18 months.	713 - Civil Def & Emerg Mgmt Coord	NF F	Most of the projects and work in this project were suspended during the COVID-19 response. Some have been resumed however the work programme has been delayed and will be reviewed over the next few months. There is likely to be continued disruption in work related to this project as staff are involved in planning for the re-emergence of COVID-19. Prior to the COVID-19 response there was significant expenditure in this project on central government funded resilience projects. Most of this expenditure has been claimed. However there is under expenditure in this project with regards to staff time and the suspension of some projects due to the COVID-19 response. The under expenditure of $77k helps to balance the over expenditure in project 712.
	Overall percentage score from the Ministry of CDEM assessment of the Hawke's Bay CDEM Group's capability (source: 5-yearly assessment). Target: 80%	NF	**Not measured this year.** The national monitoring and evaluation programme run by the National Emergency Management Agency (NEMA) is currently suspended. The last evaluation for Hawke's Bay was conducted in 2015 with a score of 60%. The Group self-initiated an evaluation in support of the Group Plan review in early 2019. This was carried out using the same evaluation tool as used in 2015 and an independent review panel. The review was conducted by a consultant and two NEMA staff and a score of 72.2% was assessed.			

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	Percentage of surveyed residents prepared to cope for at least three days or more on their own (source: 2-yearly perception survey). Target: Increasing trend	NF	**Not measured this year** The most recent SIL perception survey was conducted between May – June 2019 and was reported in the 2018-19 Annual Report. Next survey due 2021.			

Activity: HBRC Emergency Management

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
As the HB CDEM Group's Administering Authority, HBRC will provide an agreed budget and support to enable the Group to achieve the CDEM outcomes agreed to in the Group Plan	HBRC provides support to the HB CDEM Group in accordance with a service level agreement. Target: Achieved	NF	**Achieved** HBRC as the administrative authority for the Hawke's Bay CDEM Group has provided support to the Group in accordance with the agreed roles and responsibilities matrix. This matrix and levels of service were due to be reviewed in May 2020. However due to the response to COVID-19 commencing in February with activation occurring on 20 March this plan will need to be re-evaluated and objectives adjusted accordingly. HBRC have fully supported the Group response to COVID-19 both with staff physically in the Group Emergency Coordination Centre and working virtually in teams from home.	710 - Response Management	NF F	This project shows a significant overspend, as the Council does not budget for emergency response, and the HBRC's response to COVID-19 was managed under this project, costing the Council $464,096. The budgeted expenditure was within budget and delivered on project deliverables as outlined.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will ensure it has capability and capacity to respond and manage its assets during a civil defence emergency	Maintain established team, training, procedures including Emergency Operations Centre Manual and Business Continuance Plan. Target: Achieved	NF	**Achieved** HBRC's emergency response capability has been maintained for the year. 55 new staff received CDEM induction training, and procedures are being updated following the 2019 regional exercise. The HBRC Incident Room was maintained for the provision of a Council response to emergencies when the need arises, including maintenance of pre-established Standard Operating Procedures. HBRC Business Continuance Plan approved by Finance, Audit and Risk Committee on 11 February 2020.	714 - Local Emergency Management	NF F	Most of the projects and work in this project were suspended during the COVID-19 response. Some have been resumed however the work programme has been delayed and will be reviewed over the next few months. There is likely to be continued disruption in work related to this project as staff are involved in planning for the resurgence of COVID-19. As a result of the COVID-19 response there was significant under expenditure in this project with regards to staff time and the suspension of some projects. There were also three vacancies in this area since the start of the financial year and there was some under expenditure due to vacancies not being filled immediately. One of these vacancies was not filled prior to the COVID-19 response. All of the staff resources in this area were redeployed to project 712 as part of the response. The under expenditure of $204k helps to balance the over expenditure in project 712.
	24-hour duty management system in place. Target: Achieved	NF	**Achieved** An effective 24-hour duty management system, supported by PNCC afterhours, has been operated with 468 calls managed & logged by the duty managers for the year. 162 warnings or watches or severe weather, tsunami warnings, or other events have been effectively managed.			

3.7 Transport

There are three activities within the Transport Group of Activities (GOA):

- Transport Planning and Road Safety
- Passenger Transport
- Regional Cycling

Activity: Transport Planning and Road Safety

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will develop and implement the region's transport planning documents to promote improved integration of all transport modes, land use and efficient movement of freight.	Adopted Regional Land Transport Plan (RLTP), Regional Public Transport Plan (RPTP) and Regional Cycling Plan in place. Target: Achieved	NF	**Achieved** The Regional Land Transport Plan was adopted in June 2018 in accordance with statutory timeframes. The next review commenced in late 2019 and is due for completion in 2021. The Regional Public Transport Plan 2015 was reviewed during the 2018-19 year and was adopted by Council in June 2019. The Regional Cycle Plan 2015 is in place but under review during 2020.	797 - Regional Land Transport Strategy	NF F	The main activity for the year has been the procurement and development of the Hawke's Bay Transport Study, which is a joint project with the territorial authorities and NZTA. The outcomes of this will feed into the review of the Regional Land Transport Plan, due to be completed in April 2021. This activity is over budget largely due to the allocation of $22k overhead at year end. NZTA subsidy for this overhead could not be attributed to the 19-20 financial year.
				798 - Regional Cycling Activity	NF F	We have clarified the regional activities and budget commitments from HBRC council to the regional projects and all activities are now confirmed as per ownership of the assets. Internal time is overbudget due to increased resourcing for the Bay View Whirinaki project planning and initiation.

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will coordinate and implement sustainable regional road safety initiatives so that Hawke's Bay roads and pathways are safe and accessible, and the emotional and financial costs of road traffic crashes are reduced.	Incidence of fatal and injury crashes in our region (5 year rolling average). Target: Decreasing trend	NF	**Not Achieved** 2019: 113 (5-year rolling average of fatal and injury crashes for the Hawke's Bay region). Statistics for the five year rolling average of fatal and injury crashes are no longer being updated by Ministry of Transport and NZTA. Therefor reporting is on the five year average of deaths and serious injuries in road crashes (combined).	786 - Regional Road Safety	NF F	All planned activities were undertaken until March 2020 when the effects of the COVID-19 emergency and lock-down had a significant effect on community road safety activities. One major event which could not take place was the Road Safety Expo, which is usually attended by almost all Year 11 students in Hawke's Bay. Instead of the usual community activities, the road safety team carried on with planning and development work for activities for the post-lockdown period. The overspend in this workstream is due to the allocation of under recovery of $77,216 as at 30 June. This has resulted from higher than budgeted overhead costs added to the Transport Cost Centre D81.

Activity: Passenger Transport

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
HBRC will provide an accessible, integrated bus service and work with the relevant territorial authority to ensure appropriate service infrastructure within and between the Napier, Hastings and Havelock North urban areas to meet the transport needs of the people of Hawke's Bay.	Annual patronage on the Hawke's Bay bus services. Target: Maintain or increasing trend	NF	**Not Achieved** 2019-20: 512,397 trips taken. 5-year rolling average to Jun 2020: 641,372. From July to February, patronage declined by 3% overall, however numbers were showing a positive trend in Jan-Feb. Some of the longer services (between Napier and Hastings) maintained or increased patronage, but most suburban services were showing significant declines. From March, patronage was severely affected by COVID-19, with 5% of usual patronage during Level 4, when only essential trips were permitted. By June, patronage was 80% of normal levels.	790 - Subsidised Passenger Transport	NF F	All activities were undertaken as planned until late March. COVID-19 substantially reduced use of public transport, including Total Mobility. Patronage of bus services recovered to about 80% of usual by end June, while Total Mobility numbers were higher than usual in June as services were free. The Subsidised Passenger Transport activity was over budget due to significantly higher cost and lower revenues than budgeted, as well as the allocation of $81,000 overhead at year end. The cost of the bus contract rose substantially due to 1. increased indexation rates 2. The legal requirement to pay bus drivers for ten minute breaks every two hours (the Employment Relations Amendment Act) 3. lower fare revenues from declining patronage.
	Annual passenger kilometres travelled on the Hawke's Bay bus services. Target: Maintain or increasing trend	NF	**Not Achieved** 2019-20: 5,563,303 passenger kilometres travelled. 5-year rolling average to June 2019: 6,820,792 km. Passenger kilometres were down by 2% for the year from July to Feb overall, however showing an upswing in January and February. However March figures sat at only 5% of usual levels due Level 4 COVID-19 restrictions and numbers were severely affected through the remainder of the COVID-19 emergency to June.			

Level of Service Statement	Level of Service Measure	Status	Commentary	Budget Code + Name	Status	Commentary
	Proportion of total service costs that is covered by fares. Target: Maintain or increasing trend	NF	**Not Measured this year** 2019-20: Cannot provide a meaningful number The proportion of total costs that is covered by fares continued to decline due to significantly higher costs and lower patronage. From July - to February the recovery was approximately 32%. From March 24 through to 30 June, bus services were free due to the COVID-19 emergency and therefore a meaningful calculation cannot be made for the full year.			
	Percentage of residences and businesses in Napier within 500m (under normal conditions) and 600m (in low density/outer areas) walking distance of a bus stop within existing bus routes. Target: 90% Hastings; 75% Napier	NF	**Achieved** 90% Hastings 90% Napier A re-calculation exercise conducted using Napier and Hastings district plan maps has shown that 90% of residential and commercial business are now within 500m of a bus stop. Low density/outer urban areas were not able to be calculated using this method. Based on current urban growth rates, this performance indicator is unlikely to change significantly			

Appendix 1

Accidents/Incidents Log – April - June 2020

Incident Type	Hazard Type
Accident - No Time Off Work	Load/Unloading. (WG)
Accident - No Time Off Work	Operating a chainsaw.
Accident - No Time Off Work	4WD vehicle driving
Accident - No Time Off Work	Office Activities
Accident - No Time Off Work	4WD vehicle driving
Accident - Time off Work	Manual Handling i.e. (WG Yard) lifting/bending/stretching/pushing/pulling.
Accident - Time off Work	Office Activities
Accident - Time off Work	Office Activities
Property Damage	Driving a motor vehicle
Property Damage	Small boats.
Property Damage	Mechanical-Mowing/Drain work
Property Damage	Cleaning repairing and/or maintenance of machinery (WG Wshop)
Property Damage	Fire - grass or vegetation
Property Damage	Nil. Theft of equipment
Property Damage	Driving a motor vehicle
Speeding/traffic violation/public complaint	Visitors and members of the public (WG)
Speeding/traffic violation/public complaint	Visitors and members of the public (WG)
Speeding/traffic violation/public complaint	Driving a motor vehicle
Speeding/traffic violation/public complaint	Driving a motor vehicle
Speeding/traffic violation/public complaint	Hazardous chemicals.

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Appendix 2

LGOIMA Log – April - June 2020

Request Subject	Response Due	Action Date	Request Status
Grants assistance for farmers	25/06/2020	10/07/2020	Completed
Voluntary pay cuts	18/05/2020	26/08/2020	Completed
Inaugural Council Minutes	9/06/2020	15/05/2020	Completed
Hawkes Bay Proteins enforcement documents	4/06/2020	11/05/2020	Completed
Unconsented dwellings and buildings	3/06/2020	6/05/2020	Transferred
Records management policy	29/05/2020	5/05/2020	Completed
Puketitiri Road Subdivision	28/05/2020	5/05/2020	Transferred
Te Pou Whakarae position	29/05/2020	4/05/2020	Completed
Apollo consent application	29/05/2020	4/05/2020	Completed
3 waters bid to central government	21/05/2020	26/05/2020	Completed
Communications relating to Ruby Princess	7/05/2020	17/04/2020	Transferred
Arthur D Riley and Co Ltd and Associated Companies	17/04/2020	5/04/2020	Completed
Nitrates in drinking water	15/04/2020	5/04/2020	Completed
Wastewater treatment plant compliance reports	1/05/2020	1/04/2020	Completed
Lowe's Pit	22/04/2020	5/05/2020	Completed
Runanga 2D Flooding and Damage	10/04/2020	16/03/2020	Completed
CEO Twitter account	6/04/2020	17/04/2020	Completed
Wateruse for Plantation Rd Dairies	3/04/2020	13/03/2020	Completed

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HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: UPDATE ON COVID-19: CDEM FINANCIAL REPORT AND RESURGENCE PLANNING

Reason for Report

1. The purpose of this report is to update the Committee/Council on the financial impacts on the Hawke's Bay CDEM Group of the recent COVID-19 response and ongoing work in responding and preparing for the resurgence of COVID-19.

Executive Summary

2. Financial – The response to COVID-19 has had a significant impact on the Group finances and work programme. The provision of emergency welfare support and direct operational response costs resulted in $1,692,324 additional expenditure in 2019-20. Reimbursement of $530,053 has been approved for the first welfare cost claim from the National Emergency Management Agency (NEMA). A further three claims amounting to a total of $409,351 are currently being assessed.

3. This has resulted in a net overspend of $374,077 (after Lifelines expenditure has been removed). The Group currently has $371,515 held in reserves leaving a deficit of $2,562 in the reserve account.

4. In summary, while there has been significant unbudgeted expenditure in the CDEM Group budgets, the decision to hold under-expenditures in recent years as a reserve has meant this has been managed, without the need to increase the regional targeted rate. There is however some residual risk for deficits resulting from any future events.

5. COVID-19 Resurgence Planning and Work Programme – There is an ongoing high risk of a recurrence of COVID-19 and some form of community transmission beyond what has already occurred in the future.

6. The Group work program is being to be re-orientated to help manage the impacts of this risk.

7. The learnings from the COVID-19 response to 30 June 2020 has helped inform the priorities and direction of the Group's work/projects for at least the next 6-12 months.

Background and Discussion

8. At the last meeting of the Hawke's Bay CDEM Group Joint Committee on 31 August, two papers requesting the adoption of the Group's financial report for 2019/20 and the endorsement of decisions regarding resurgence planning and the Group work programme, were presented.

9. These two papers are attached for the information of the Committee. The Group Manager/Controller for the Group will be available at the meeting to inform the committee on the Joint Committee decisions arising from the attached papers and answer any questions.

Decision Making Process

10. Staff have assessed the requirements of the Local Government Act 2002 in relation to this item and have c oncluded that, as this report is for information only, the decision-making provisions do not apply.

Recommendation

That the Corporate and Strategic Committee receives and notes the *"Update on Covid-19: CDEM Financial Report and Resurgence Planning"* staff report.

Authored and Approved by:

Ian Macdonald
GROUP MANAGER/CONTROLLER

Attachment/s

⇩**1** 2019-20 HB CDEM Group Financial Report

⇩**2** CDEM Group Covid-19 Resurgence Planning and Future work programme

HAWKE'S BAY REGIONAL COUNCIL

HB CDEM GROUP JOINT COMMITTEE

Monday 31 August 2020

Subject: 2019-20 HAWKE'S BAY CDEM GROUP FINANCIAL REPORT

Reason for Report

1. The purpose of this report is to provide the final Group financial report for the 2019-20 year for the approval of the Committee.

Officers' Recommendations

2. That the Committee adopts the 2019-20 Hawke's Bay CDEM Group Financial Report.
3. That the Committee agrees that the 2019-20 overspend from the COVID-19 response be held as a deficit in the Hawke's Bay CDEM Group targeted rate reserve account.
4. That this deficit be recovered through the management of expenditure in future financial years.

Executive Summary

5. The response to COVID-19 has had a significant impact on the Group finances and work programme. The provision of emergency welfare support and direct operational response costs resulted in $1,692,324 additional expenditure in 2019-20. Reimbursement of $530,053 has been approved for the first welfare cost claim from the National Emergency Management Agency (NEMA). A further three claims amounting to a total of $409,351 are currently being assessed.
6. This has resulted in a net overspend of $374,077 (after Lifelines expenditure has been removed). The Group currently has $371,515 held in reserves leaving a deficit of $2,562 in the reserve account.
7. It is recommended that this small deficit in the reserve be recovered by way of managing expenditure over the 2020-21 financial year. The risk with this approach is that further emergency expenditure maybe required as the result of a resurgence of COVID-19 or another emergency event.
8. In summary, while there has been significant unbudgeted expenditure in the CDEM Group budgets, the decision to hold under-expenditures in recent years as a reserve has meant this has been managed, with some residual risk from future events, without the need to increase the regional targeted rate.

Background/Discussion

9. Attachment 1 contains the final financial reports for 2019-20 summarising the costs attributed to the COVID-19 response and more detailed reports for the four Group project areas that are currently funded by the regional CDEM targeted rate (711, 712, 713 and 714).
10. Prior to the COVID-19 response, the Group budgets were on track for under expenditure for the 2019-20 financial year. This has also helped in reducing the financial impact of the COVID-19 response.
11. As part of the COVID-19 response the Group incurred two additional types of expenses. These include operational response and emergency welfare support expenditure. A summary of these costs are attached.
12. The operational response costs included matters such as:
    - 12.1. Short term contracts for additional welfare staff
    - 12.2. Development and operation of the welfare 0800 number and the team of needs assessors

12.3. Personnel costs for extra staff hours

12.4. Miscellaneous response costs such as food for shifts, extra IT equipment and software licences.

13. Emergency welfare costs included such items as:

13.1. Grocery items

13.2. Household goods such as clothing and blankets

13.3. Delivery costs

13.4. Emergency accommodation

13.5. Reimbursement of food bank costs

14. The extra expenditure due to COVID-19 has been significantly offset by reduced activity in other areas such as risk reduction, hazard research, coordination and community engagement.

15. Another factor to be considered as part of the Group finances is the addition operational expenditure of $60,000 in supporting the drought response.

16. In summary the additional COVID-19 and drought operational response costs have been absorbed through reduced activity in non-response areas and the utilisation of the existing reserve.

17. 2020-21 Financial Year Risks – As the CDEM reserve account is now depleted there is a risk that if another significant event was to occur a large deficit may arise.

18. By far the biggest risk now, is any response required as part of a resurgence of COVID-19. Based on our previous experience and the fact that across all levels of government and the community we are better prepared. It is probable that any resurgence will not have as large impact and will be better managed. Given recent work and conversations across the all of government response there is confidence that the demand on CDEM welfare services in particular will not be as high as it was in the first response.

19. As the 2020-21 rates have now been struck there are no real short-term options available to provide for a reserve. Therefore any emergency expenditure over the next 12 months may require the reserve account to move further into deficit.

Options Assessment

20. As expected the COVID-19 response has had a significant impact on the finances of the Group. The gross result of this would have been an approximately $700,000 overspend. However, after taking out reduced expenditure across the CDEM activity and using the $371,000 held in reserve a minor deficit remains.

21. There are limited options available to address this, and the risk of further deficit into 2020-21.

Strategic Fit

22. Under the Group Plan the Group is required to efficiently and effectively respond to an emergency event. There is nothing in this paper or recommendations that adversely impact on this.

Financial and Resource Implications

23. Any financial or resource implications have been addressed as part of this paper.

Decision Making Process

24. Committee is required to make every decision in accordance with the requirements of the Local Government Act 2002 (the Act). Staff have assessed the requirements in relation to this item and have concluded:

24.1. The decision does not significantly alter the service provision or affect a strategic asset.

24.2. The use of the special consultative procedure is not prescribed by legislation.

24.3. The decision does not fall within the definition of the Administrating Authority's (HBRC) policy on significance and engagement

24.4. No persons can be identified who may be affected by this decision.

24.5. The decision is not inconsistent with an existing policy or plan.

24.6. Given the nature and significance of the issue to be considered and decided, and also the persons likely to be affected by, or have an interest in the decisions made, the Committee can exercise its discretion and make a decision without consulting directly with the community or others having an interest in the decision.

Recommendations

That Hawke's Bay CDEM Joint Committee:

1. Receives and considers the "2019-20 Hawke's Bay CDEM Group Financial Report" staff report.
2. Agrees that the decisions to be made are not significant under the criteria contained in Council's adopted Significance and Engagement Policy, and that Council can exercise its discretion and make decisions on this issue without conferring directly with the community or persons likely to have an interest in the decision.
3. That the Committee adopts the 2019-20 Hawke's Bay CDEM Group Financial Report.
4. That the Committee agrees that the 2019-20 overspend from the COVID-19 response be held as a deficit in the Hawke's Bay CDEM Group targeted rate reserve account.
5. That this deficit be recovered through the management of expenditure in future financial years.

Authored by:

Ian Macdonald
GROUP MANAGER/CONTROLLER

Approved by:

Ian Macdonald
GROUP MANAGER/CONTROLLER

Attachment/s

1 CDEM Income and Expenditure 2019-20 Financial Year

2 Project Progress Report - Reduction - Hazard Identification and Mitigation

3 Project Progress Report - Readiness and Response

4 Project Progress Report - Recovery and Coordination

5 Project Progress Report - Local Emergency Management

6 Project Progress Report - Emergency Management Total

7 CDEM Reserve Account

Attachment 1

Item 10

Summary: CDEM Income and Expenditure 2019/20 Financial Year

Project Code	ACTIVITY GROUPS Activity Sub-Groups	Expenditure Actual	Expenditure Budget	(%) Of	Income Actual	Income Budget	(%) Of	Net Result
5.0 Emergency Management								
711	711 - Reduction - Hazard Identification & Mitigation	130,725	296,420	44%	- 201,638	- 297,174	68%	-70,913
712	712 - Readiness & Response	2,634,991	679,965	388%	- 1,900,753	- 671,428	283%	734,238
713	713 - Recovery & Coordination	559,633	579,905	97%	- 637,903	- 585,316	109%	-78,270
714	714 - Local Emergency Management	512,524	700,149	73%	- 718,907	- 696,782	103%	-206,383
	HB Civil Defence Emergency Management Group	**3,837,873**	**2,256,438**	**170%**	**- 3,459,201**	**- 2,250,700**	**154%**	378,672

PROJECT PROGRESS REPORT

Hawkes Bay Regional Council

Year: 2019 (From 01-Jul-2019 To 30-Jun-2020)
GROUP: 749 Emergency management total PROJECT: 711 Reduction - Hazard Ident. & Mitigation

+	Activity Detail	Actual	Budget
	Personel and Overhead Costs	**56,626**	**228,111**
2835	Rate collection costs	6,067	6,067
	Overhead Charges	**6,067**	**6,067**
2310	Advertising	1,255	6,000
2380	Consultancy costs	35,322	45,942
2385	Contractors	6,865	
2395	Contributions	19,075	
2720	Meeting expenses	505	
2725	Miscellaneous expense	125	1,000
2750	Other direct costs	1,156	4,000
2780	Printing & publishing		3,500
2875	Remission on Maori land	2,138	
3050	Travel & accommodation	1,592	1,800
	External Costs	**68,032**	**62,242**
	TOTAL COSTS	**130,725**	**296,420**
1040	Targeted rates	(198,106)	(196,243)
1144	Miscellaneous revenue	(2,500)	(100,000)
1305	Interest - projects	(1,032)	(931)
	Income	**(201,638)**	**(297,174)**
	TOTAL EXTERNAL INCOME	**(201,638)**	**(297,174)**
	NET FUNDING REQUIREMENT	**(70,913)**	**(754)**

Attachment 1

Item 10

PROJECT PROGRESS REPORT

Hawkes Bay Regional Council

Year: 2019 (From 01-Jul-2019 To 30-Jun-2020)
GROUP: 749 Emergency management total PROJECT: 712 Readiness & Response

+	Activity Detail	Actual	Budget
	Personel and Overhead Costs	**868,230**	**567,306**
2835	Rate collection costs	14,697	14,697
5416	Computer services charges	45	
	Overhead Charges	**14,742**	**14,697**
2155	Protective clothing	8,286	
2170	Staff recognition fund	230	
2180	Training	7,561	
2310	Advertising	25,542	
2338	Building maintenance	1,152	
2354	Catering	871,929	
2365	Cleaning	80	
2370	Computer software license cost	6,267	
2380	Consultancy costs	8,560	
2385	Contractors	330,583	1,462
2395	Contributions		10,000
2436	Digital Media / Webcasting	749	
2450	Donations	250,000	
2470	Equipment - small	41,535	
2545	General expenses	27,578	
2560	Graphic design expenses	935	
2600	Hygiene supplies	2,259	
2610	Information Services reviews	490	
2614	Infrastructure Services	199	
2635	Internet usage charges	7,438	
2640	IT consumables	1,499	
2710	Marketing	500	
2715	Materials & consumables	(40,812)	
2720	Meeting expenses	2,518	
2725	Miscellaneous expense	55,970	1,000
2728	Mobile & cellphone charges	12	
2750	Other direct costs	2,543	40,000
2780	Printing & publishing	1,723	1,000
2790	Property administration		

+	Activity Detail	Actual	Budget
2885	Rental expense	56,450	23,000
2900	Room hire	174	
2940	Software maintenance	8,316	
2975	Stationery	968	
3015	Technical materials	3,784	3,500
3020	Telecommunications	47,520	14,000
3045	Training - project related	2,213	4,000
3050	Travel & accommodation	15,500	
3085	Vehicle lease expense	1,770	
	External Costs	**1,752,019**	**97,962**
	TOTAL COSTS	**2,634,991**	**679,965**
1040	Targeted rates	(682,902)	(676,478)
1144	Miscellaneous revenue	(929,354)	
1159	User charges & cost recoveries	(288,483)	
1305	Interest - projects	(15)	5,050
	Income	**(1,900,753)**	**(671,428)**
	TOTAL EXTERNAL INCOME	**(1,900,753)**	**(671,428)**
	NET FUNDING REQUIREMENT	**734,238**	**8,537**

Attachment 1

Item 10

PROJECT PROGRESS REPORT

Hawkes Bay Regional Council

Year: 2019 (From 01-Jul-2019 To 30-Jun-2020)
GROUP: 749 Emergency management total PROJECT: 713
Recovery & Coordination

+	Activity Detail	Actual	Budget
	Personel and Overhead Costs	**423,979**	**502,202**
2835	Rate collection costs	8,782	8,782
	Overhead Charges	**8,782**	**8,782**
2180	Training	2,982	
2310	Advertising	5,632	22,821
2380	Consultancy costs	2,471	20,000
2385	Contractors	45,534	
2395	Contributions		12,000
2396	Contributions - Lifelines	4,240	
2470	Equipment - small	548	
2490	Equipment servicing	40	
2560	Graphic design expenses	21,732	
2660	Legal fees & charges	1,450	2,000
2710	Marketing	18,454	
2715	Materials & consumables	458	
2720	Meeting expenses	5,747	
2725	Miscellaneous expense	1,452	2,000
2780	Printing & publishing	3,241	5,000
2810	Publication subscriptions	173	
2975	Stationery	53	
3020	Telecommunications	5,018	1,500
3050	Travel & accommodation	7,647	3,600
	External Costs	**126,872**	**68,921**
	TOTAL COSTS	**559,633**	**579,905**
1040	Targeted rates	(566,626)	(561,296)
1144	Miscellaneous revenue	(95,205)	(18,500)
1210	Local authority grants	25,000	
1305	Interest - projects	(1,197)	(5,520)
1465	Other rentals	124	
	Income	**(637,903)**	**(585,316)**
	TOTAL EXTERNAL INCOME	**(637,903)**	**(585,316)**
	NET FUNDING REQUIREMENT	**(78,270)**	**(5,411)**

PROJECT PROGRESS REPORT

Hawkes Bay Regional Council

Year: 2019 (From 01-Jul-2019 To 30-Jun-2020)

GROUP: 749 Emergency management total PROJECT: 714 Local Emergency Management

+	Activity Detail	Actual	Budget
	Personel and Overhead Costs	**488,828**	**531,244**
2180	Training	(31,841)	
2240	Parts	16	
2310	Advertising	1,713	51,754
2385	Contractors	10,080	4,700
2456	Education costs		8,600
2470	Equipment - small	589	12,500
2490	Equipment servicing	3,150	16,100
2665	Licence fees		1,000
2710	Marketing		11,200
2715	Materials & consumables	3,155	613
2720	Meeting expenses	282	
2725	Miscellaneous expense	13,807	2,050
2750	Other direct costs	45	
2780	Printing & publishing	890	10,000
2890	Repairs & maintenance	6,283	
3015	Technical materials	10,926	
3020	Telecommunications	2,220	
3030	Thinning & prunning	104	
3045	Training - project related	2,140	47,825
3050	Travel & accommodation	135	2,563
	External Costs	**23,695**	**168,905**
	TOTAL COSTS	**512,524**	**700,149**
1040	Targeted rates	(701,115)	(694,520)
1144	Miscellaneous revenue	(596)	
1210	Local authority grants	(15,000)	
1305	Interest - projects	(2,196)	(2,262)
	Income	**(718,907)**	**(696,782)**
	TOTAL EXTERNAL INCOME	**(718,907)**	**(696,782)**
	NET FUNDING REQUIREMENT	**(206,383)**	**3,367**

Attachment 1

Item 10

PROJECT PROGRESS REPORT

Hawkes Bay Regional Council

Year: 2019 (From 01-Jul-2019 To 30-Jun-2020)

GROUP: 749 Emergency management total PROJECT: 712 Readiness & Response

JOB: 712016 HBCDEM COVID-19 Response (2020)

+	Activity Detail	Actual	Remarks
	Personel and Overhead Costs	**439,241**	
2155	Protective clothing	8,286	
2170	Staff recognition fund	230	
2310	Advertising	9,057	
2354	Catering and Food	871,929	Food purchased for foodbanks and food parcels
2365	Cleaning	80	
2370	Computer software license cost	1,267	
2380	Consultancy costs	6,380	
2385	Contractors	238,295	Includes establishment and operation of 0800 number
2436	Digital Media / Webcasting	69	
2545	General expenses	27,578	
2560	Graphic design expenses	213	
2600	Hygiene supplies	2,259	
2610	Information Services reviews	490	
2710	Marketing	500	
2715	Materials & consumables	182	
2720	Meeting expenses	132	
2725	Miscellaneous expense	51,563	
2750	Other direct costs	1,509	
2975	Stationery	373	
3015	Technical materials	3,576	
3020	Telecommunications	16,749	
3050	Travel & accommodation	10,598	
3085	Vehicle lease expense	1,770	
	External Costs	**1,253,083**	
	TOTAL COSTS	**1,692,324**	
1144	Miscellaneous revenue	(929,354)	Claimed from central government
	Income	**(929,354)**	
	TOTAL EXTERNAL INCOME	**(929,354)**	
	NET FUNDING REQUIREMENT	**762,970**	

CDEM Reserve Account			
	CDEM	Lifelines	**TOTAL**
2018/19 Balance	371,515	42,000	**413,515**
2019/20 Net Expediture	374,077	4,595	**378,672**
2019/20 Balance	**-2,562**	**37,405**	**34,843**

HAWKE'S BAY REGIONAL COUNCIL

HB CDEM GROUP JOINT COMMITTEE

Monday 31 August 2020

Subject: CDEM GROUP COVID-19 RESURGENCE PLANNING AND FUTURE WORK PROGRAMME

Reason for Report

1. The purpose of this report is to attain endorsement from the Committee on a decision by the Coordinating Executives Group (CEG) as to the direction of the Group work program over the next 6-12 months.

Executive Summary

2. There is an ongoing high risk of a future recurrence of COVID-19 in Hawke's Bay and some form of community transmission beyond what has already occurred.
3. The Group work program needs to be re-orientated to help manage the impacts of this risk.
4. The learnings from the COVID-19 response to 30 June 2020 has helped inform the priorities and direction of the Group's work/projects for at least the next 6-12 months.

Background

5. Post the initial COVID-19 response it was deemed prudent to review the work being undertaken by Group office, with the support of Council and partner agency staff. This work had commenced and CEG provided guidance and decisions at its 20 July meeting.
6. Subsequently on 12 August community transmission was confirmed in Auckland and Hawke's Bay was placed back into Level 2 restrictions.
7. National advice is that there continues to be a high risk of a recurrence of COVID-19 and some form of community transmission into the future.
8. In mid-June some initial decisions were made by the Group Manager/Controller to set the high-level intent for the Group office for the rest of 2020. These are:
    8.1. To ensure Group office staff can support a Group response to a COVID-19 recurrence.
    8.2. To ensure any work/projects will add value to a Group response to a COVID-19 recurrence.
9. The aim is to have Group office staff rested and capable of supporting a sustained response, while also reviewing or developing supporting systems, processes and relationships to respond to a COVID-19 recurrence.
10. This work commenced with staff wellbeing initiatives and monitoring, and the commencement of the COVID-19 response to 30 June after-action review (AAR). Some initial COVID-19 recurrence response planning was also completed and this was further prioritised and advanced upon returning to Level 2 on 12 August.

Discussion

11. Decisions on the Group work priorities over the next 6-12 months also have implications for council staff and partner agencies. While the Group office staff will play a significant role, much of what needs to occur also requires commitment and input from key council staff and partner agencies. As such this work needs to be given a high priority within organisations.

12. Work has commenced on reviewing the current Group COVID-19 recurrence plan (dated 14 Aug) in light of the National Action Plan being released on 19 August. In priority order, the CEG confirmed the following key work areas for improvement:

    12.1. The identification, selection, onboarding, and staff management policies (e.g. rostering, contracts, EAP) of staff in the GECC.

        12.1.1. Significant work has been completed in this area.

        12.1.2. The Group office has completed engagement with Councils, controllers and staff have been clearly identified to play roles within specific functions in the GECC and as needs assessment analysts. Short training sessions with these staff have commenced.

    12.2. Review of health and safety for the GECC facility and staff within, safe working methods for those deployed. Including bubble management and use of PPE.

        12.2.1. Work on this review has commenced. Health and safety staff from HBRC, HDC and NCC have commenced a review of existing documentation, induction and procedures including ongoing wellbeing.

    12.3. System accessibility, stability, shared understanding of response systems and data management within response information systems.

        12.3.1. The work in this area are a number of smaller process/hardware initiatives and training. As mentioned training is underway and ICT systems are part of this.

        12.3.2. A security review of ICT systems which hold personal information through emergency welfare needs assessment has just been completed and any implications are being identified.

    12.4. Supply chain and logistical processes, integration of Fast-Moving Consumer Goods systems into procurement and food package system.

        12.4.1. The Hawke's Bay councils Director, Regional Strategic Procurement has commenced reconnecting with local supermarkets and gaining an understanding of their capability to support food distributing if needed.

        12.4.2. Further work is required in this area however to an extent this is driven at a national level.

    12.5. Welfare needs assessment and referrals process. Options analysis of the Āwhina needs assessment tool vs The Development Hub. Integration and implementation into Group response systems.

        12.5.1. Good progress has been made in this area. Work has been ongoing with HBRC, HDC and NCC as to how we might internalise the call centre (the so called 0800 number) by better using existing staff who will be under utilised should Hawke's Bay move back into Level 3 restrictions or above.

        12.5.2. At this stage it has been decided not to use the national needs assessment tool (Āwhina) primarily to maintain continuity for the on-going COVID-19 response. However, we will be reviewing this decision as Āwhina is developed further by the National Emergency Management Agency (NEMA).

        12.5.3. As mentioned we intend to use council staff to carry out the detailed welfare needs assessment as people are referred from the 0800 number. Council staff and two facilities from HDC and NCC have already been identified. Training packages have been developed and training of the needs analysis staff will occur over the next few weeks.

    12.6. Embedding community engagement in response into our wider response framework. Ensuring networks of networks approach in response is enduring, informs a re-escalation, and increases long term resilience of Hawke’s Bay.

12.6.1. The Group Welfare Manager has been working with the wider Welfare Coordination Group (WCG) to review the roles and responsibilities to help guide and lead the individual networks. Attachment 1 outlines how this is now structured.

12.6.2. Each of the networks have met at least once since July and this relationship management will be ongoing.

12.6.3. Feedback from staff has been that while the NGOs and volunteers involved in the networks are feeling drained, and are still dealing with the ongoing impacts of COVID-19 on their communities, there is self-confidence that they will be able to effectively support their communities should Hawke's Bay move into Level 3 or above again.

12.6.4. This work area has also been enhanced by the establishment of the Regional Leadership Group (RLG) which is part of the central government Caring for Communities initiative. The role of the RLG is to provide support, advice and governance to the overall regional response to COVID-19. The members of this Committee are also part of this Group.

13. The recommendations above are consistent with a number of learnings from the national COVID-19 response review which was undertaken in late July. Three Group office staff attended this review.

14. An outline timeframe for this work is as follows. Due to the August resurgence of COVID-19 much of this work has been accelerated and where necessary operational decisions made on actions and priorities in keeping with the intent from CEG:

14.1. 20 July CEG - project initiation, work program areas of focus for recurrence was approved.

14.2. August - Engaging with project teams and stakeholders, understanding the problem. Scoping the work for re-escalation. Due to the current COVID-19 resurgence this work has been accelerated.

14.3. September – where developed project plans socialised and consulted with stakeholders.

14.4. 19 October CEG – Present outstanding project plans and approval for implementation. Review existing or completed work.

14.5. Ongoing already - Embed formal COVID-19 to Jun 2020 response lessons, implement and monitor project plans.

15. At the July CEG meeting, the point was made that the above should not be viewed as a purely linear process and where appropriate and within the guidance of this paper, projects or work may be brought forward or occur concurrently. This is what has occurred.

16. The implications of changing the direction of the Group work program for the next 6-12 months are:

16.1. The review of the Group Plan will need to be delayed until 2021. Given the review of the National Plan has been further delayed, the current Plan is seen as generally fit for purpose and has been updated as appropriate, the residual risk of this decision is low.

16.2. In general current risk reduction and community engagement work will be delayed by about 6 months – although some work which was significantly advanced is being completed.

16.3. Significant exercises will be placed on hold until 2021 and some training will be delayed.

17. The Committee should also note that the Group Welfare Manager Alison Prins has resigned her position and will leave on 9 September. Due to the pivotal role of this

position in readiness and response particularly in the COVID-19 response, the Group office has employed Joanne Lawrence on a short-term contract until the end of the year. This is to provide continuity in the current response while the position is reviewed and the market recruitment process completed.

18. Ms Lawrence was an alternate Group Welfare Manager during the first COVID-19 response and covered for a couple of weeks while the incumbent was rested. She also held a leadership position at MSD and was a member of the WCG for a number of years.

Next Steps

19. It is requested that the Committee endorse the CEG decisions outlined in this report. This will ensure that the Group is well positioned to continue to respond to the intermediate risks of an ongoing recurrence of COVID-19.

20. CEG and the Regional Leadership Group will be kept up to date on the Group COVID-19 Recurrence Work Plan as it is further developed and implemented.

21. This will also be reported on at the next Committee meeting.

Strategic Fit

22. Under the Group Plan the Group is required to respond to emergencies efficiently and effectively within Hawke's Bay. This paper helps to facilitate this for COVID-19.

Considerations of Tangata Whenua

23. Tangata whenua are included as part of the Regional Leadership Group and at a more operational level the networks of networks.

24. There is further work started in developing a more deliberate approach to working with tangata whenua across the 4Rs in emergency management.

Financial and Resource Implications

25. There are no significant resourcing issues as existing budgets should cover any costs in the work mentioned in this paper.

26. The only risk with funding is in the response to moving to Level 3 or 4 as the Groups current reserves were exhausted in the initial response. This has been noted in a previous paper.

Decision Making Process

27. Committee is required to make every decision in accordance with the requirements of the Local Government Act 2002 (the Act). Staff have assessed the requirements in relation to this item and have concluded:

    27.1. The decision does not significantly alter the service provision or affect a strategic asset.

    27.2. The use of the special consultative procedure is not prescribed by legislation.

    27.3. The decision does not fall within the definition of the Administrating Authority's (HBRC) policy on significance and engagement

    27.4. No persons can be identified who may be affected by this decision.

    27.5. The decision is not inconsistent with an existing policy or plan.

    27.6. Given the nature and significance of the issue to be considered and decided, and also the persons likely to be affected by, or have an interest in the decisions made, the Committee can exercise its discretion and make a decision without consulting directly with the community or others having an interest in the decision.

Recommendations

That Hawke's Bay CDEM Joint Committee:

1. Receives and considers the "CDEM Group COVID-19 Resurgence Planning and Future Work Programme" staff report.
2. Agrees that the decisions to be made are not significant under the criteria contained in Administrating Authority's adopted Significance and Engagement Policy, and that Committee can exercise its discretion and make decisions on this issue without conferring directly with the community or persons likely to have an interest in the decision.
3. Endorses the CEG decisions on the direction of the Group work program, including COVID-19 Resurgence Planning, over the next 6-12 months.

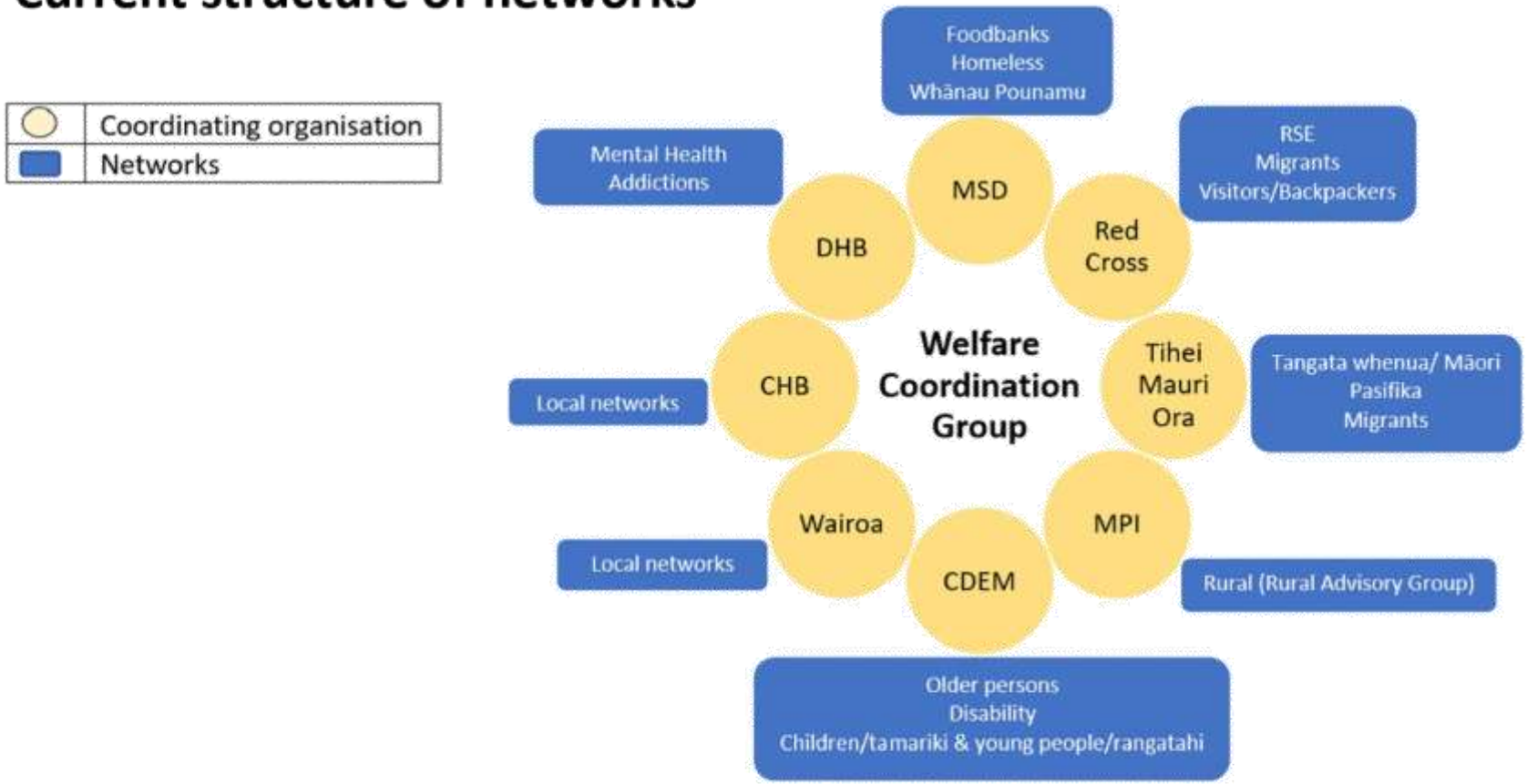
Authored and Approved by:

Ian Macdonald
GROUP MANAGER/CONTROLLER

Attachment/s

1 Network of Networks

Current structure of networks



Item 10

Attachment 2

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: HBRC COVID-19 RESPONSE REVIEW UPDATE

Reason for Report

1. This item provides an update on the review being carried out on HBRC's organisational response to the Covid-19 pandemic.

Background

2. In December 2019 an outbreak of Coronavirus disease (Covid-19) was detected in Wuhan, China. The virus rapidly spread across the globe. On 30 January 2020 the World Health Organisation (WHO) declared the Covid-19 outbreak a 'public health emergency of international concern'. On 11 March 2020 WHO declared Covid-19 a 'global pandemic'.

3. Within New Zealand the first case of Covid-19 was announced on 28 February. The first locally transmitted case was announced exactly one week later on 5 March 2020.

4. On 19 March 2020 New Zealand's borders were closed to all non-residents. In addition to the border closures any returning; citizen, permanent resident, or non-residents with border exemptions were required to self-isolate for 14 days.

5. To complement the border restrictions and to control the Covid-19 outbreak in New Zealand the Government in conjunction with the NZ Ministry of Health (MOH) updated the pandemic New Zealand response plan and four tier alert system. On 21 March 2020, at the time of the alert level system announcement the Government also confirmed New Zealand would enter alert level 2 in a 'go hard and go early' strategy that attempted to eliminate the disease. With the alert level system confirmed New Zealand Covid-19 response has taken the following path:

    5.1. 21 March 2020 – alert level 2 (whole country)

    5.2. 23 March 2020 – alert level 3 (whole country)

    5.3. 25 March 2020 – alert level 4 (whole country)

    5.4. 27 April 2020 – alert level 3 (whole country)

    5.5. 13 May 2020 – alert level 2 (whole country)

    5.6. 8 June 2020 – alert level 1 (whole country)

    5.7. 12 August 2020 – alert level 3 (Auckland region only)

    5.8. 12 August 2020- alert level 2 (rest of country outside the Auckland region)

6. Each alert level impacts the way in which organisations can operate. With the most significant impacts to organisations being at alert level three and four where non-essential staff are required to work from home. For a period of nearly two months (from 23 March 2020 to 13 May 2020) New Zealand operated under either alert level three or four. During this time HBRC operated by activating its Business Continuity Plan (BCP). Therefore, a review has been undertaken to capture the learnings and possible improvements to HBRC's BCP.

Discussion

7. When an organisation operates under business continuity arrangements it is deemed good practice to review the effectiveness of the response. The objective of a review is to identify improvement opportunities to ready the continuity plans to more efficiently respond to future events. At the FARS meeting on 12 August 2020 the Committee requested the review of HBRC's BCP that was activated in response to the Covid-19

lockdown be undertaken internally by staff rather than by Crowe through the 2020-21 Internal audit plan.

8. The scope and approach to obtain necessary information to undertake the BCP review included: an organisational wide staff survey, a facilitated workshop with organisational leaders using outputs from the staff survey, other key stakeholder insights, and a desktop review of relevant documentation such as HBRC's BCP, pandemic plan and response team structure.

9. The scope of the review specifically excludes Hawke's Bay CDEM response. However, did include Hawke's Bay CDEM requests for HBRC staff time required to staff the Group Emergency Coordination Centre. In addition, the scope of the review excludes additional business activities required under alert level one and alert two. The additional practices under alert level one and two were not deemed extensive and did not require HBRC to respond under BCP arrangements.

10. To date, information gathered for the final report indicates that HBRC's response to both alert level thee and four was largely effective. No material issues were immediately apparent that highlight concerns regarding the safe execution of HBRC's critical processes over this time. The final report is unlikely to identify any 'high' findings for urgent action that if remained unresolved could jeopardise HBRC's execution of critical processes if the region was to revert back into alert level three or four. These observations are supported by staff survey feedback and the facilitated session feedback. The average overall rating for HBRC's response to Covid-19 by staff was 8.49 positive on a scale of 1 being poor to 10 being excellent. In addition, staff consistently rated HBRC's response positive (greater than 80%) across all survey areas.

11. It is intended that the final report will be split across five key themes being; BCP and pandemic plans, communications (internal and external), technology, health and safety and wellbeing, and work distribution including tension between BCP and CDEM response. Details of observations within these themes based on information gathered to dated is outlined below.

Business Continuity and Pandemic Plans

11.1. There was no documented pandemic plan. Therefore, processes around staff isolation, segregation and pandemic supplies initiated as part of HBRC's Covid-19 response should be documented as reference for any future pandemic or epidemic.

11.2. HBRC's documented business continuity plan identified HBRC's critical processes that enabled an effective pandemic response by prioritising those processes. However, work arounds for critical processes within the BCP could be strengthened using a 'denial' focus; i.e. denial of staff, systems, facilities, and suppliers/services. This should ensure critical process work arounds respond to a variety of situations. For example, HBRC's Covid-19 response was focused on staff not being able to come to their usual place of work referred to as 'denial' of facilities. However, if the situation worsened and many staff became ill with Covid-19 this situation could require an additional response known as 'denial' of staff.

Communication (Internal and External)

11.3. Staff feedback through both the survey and facilitated session on the effectiveness of internal communication during alert levels three and four was favourable. Staff scored the effectiveness of internal communication as 88% positive. Internal communication channel included; formal Chief Executive Zoom meeting updates, regular HBRC online newsletter (Snappy), regular Line Manager meetings and check-ins via Microsoft Teams, and informal staff catchups through Microsoft Teams. Data is still being collated for the final report to analyse the success of HBRC external communication.

Technology

11.4. Staff feedback through both the survey and facilitated session with regards to the HBRC's technology; use, capacity, availability, and support during alert levels three and four was favourable. Staff felt that transition to working from home was smooth. The availability of IT equipment and help desk support was commendable.

Health, Safety and Wellbeing

11.5. Overall, the additional pandemic health and safety processes work well, these processes included; cleaning and cleansing, segregation, contact tracing, and pandemic PPE use. However, some improvements to the design of where work activities are undertaken to ensure 'work bubbles' remain separated is required at the Works Group.

Work Distribution Including BCP and CDEM Response Resource Tensions

11.6. Through the facilitated session with HBRC's leaders it was identified that the dependency to staff Hawke's Bay CDEM with HBRC staff created some tension. In addition, internally some staff felt the work distribution between individual staff was not always equitable. The equitable distribution of work and the tension between CDEM and HBRC resource requirements will be addressed by the review of the BCP noted in paragraph 11.2.

Next Steps

12. Finalise the full HBRC Covid-19 Response Review Report, including:

12.1. collating additional information from key external stakeholders such as external complaints and compliments data

12.2. compiling management comments into the full draft report

12.3. presenting the final draft to the Executive Leadership Team (ELT) for endorsement

12.4. assigning agreed findings and actions to a responsible staff

12.5. presenting the final report to the FARS at the 11 November 2020 meeting.

Decision Making Process

13. Staff have assessed the requirements of the Local Government Act 2002 in relation to this item and have concluded that, as this report is for information only, the decision making provisions do not apply.

Recommendation

That the Corporate and Strategic Committee receives and notes the *"HBRC Covid-19 Response Review Update"* staff report.

Authored by:

Helen Marsden
RISK AND ASSURANCE LEAD

Approved by:

Jessica Ellerm
GROUP MANAGER CORPORATE SERVICES

James Palmer
CHIEF EXECUTIVE

Attachment/s

There are no attachments for this report.

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: REGIONAL DROUGHT RELIEF FUND

Reason for Report

1. This paper sets out for Council the criteria for the Regional Drought Relief Fund (RDRF) and associated contributions and expenditure from this fund.

Executive Summary

2. The RDRF was created through contributions from the Ministry for Primary Industries ($500K), HBRC ($200K), Central Hawke's Bay District Council ($50K), Hastings District Council ($200K), Centralines ($50K) and a local "Give-a-little" fund ($15,110 as of 26 August 2020). It totals as of 26 August 2020 $1,015,110.

3. The fund was created principally to support the supply of stock feed on to farms. There is an acknowledgement that given the widespread drought conditions across the North Island and the lack of normal feed supply chains in the North Island, the costs to obtain feed, primarily from the South Island, are significantly elevated.

4. Current expenditure from the RDRF, as of 26 August 2020, is $627K. Projections indicate that a further $175K will be spent in the remaining 5 weeks that the fund remains open. It is projected that at the close of the fund (the end of September) approximately $800K will have been spent or committed.

Background

5. Drought conditions developed in Hawke's Bay and across the North Island during summer 2019-20, leading to the declaration of a "large scale adverse event" by the Agriculture Minister Damien O'Connor on 12 March 2020.

6. Hawke's Bay had below normal rainfall, above average temperatures and relatively high rates of potential evapotranspiration from November 2019 to April 2020. Rainfall accumulations from November to April were lower in 2019-20 than in the 2012-13 drought in all areas of the region, apart from Waikaremoana and the Kaweka Range.

7. Following the 2012-13 drought, NIWA developed a New Zealand Drought Index (NZDI) based on four common indices of climatological drought. Throughout summer 2019-20 the NZDI typically categorised Hawke's Bay as very dry or extremely dry, with parts of the region in drought or severe drought. Drought or severe drought levels were largely along the western ranges, particularly the Ruahine Range and adjacent hill country and surrounds. At the end of April the NZDI still categorized eastern Hawke's Bay as dry but extremely dry or in drought on the Heretaunga Plains, the Ruataniwha Plains and southern coastal areas.

8. The funding is to support reliable and appropriate supply chain logistics for stock feed to come to Hawke's Bay. A reliable supply of feed into the region is critical to support animal welfare and to allow landowners to manage their way through the winter to bridge the lack of on farm feed.

9. A complication with this current drought is that it has been a North Island wide event. Whilst many parts of the North Island may well no longer be in meteorological drought conditions, the effects of that on feed availability continue to be felt across the North Island. Put simply there is currently limited feed available in the North Island as a result of the island wide conditions. Feed is available in some South Island locations, but the transport costs for this are considerable.

Discussion

10. The RDRF is held by the Hawke's Bay Disaster Relief Trust (HBDRT) and administered by the finance team at HBRC. The HBDRT comprises Mayors of the Territorial Authorities and Chair of HBRC who is also Chair of the HBDRT.

11. Criteria for eligibility for individuals to access the fund were developed by the Rural Advisory Group (RAG) and have been used to apply the funding to date. The criteria were developed to support the principle of supplying feed to farms. The criteria were initially very financially conservative as there was no previous history to draw from to understand what the demand might be. Recently the criteria were further refined by the RAG to expand the eligibility in response to feedback from landowners affected by the drought and to make them less financially conservative as the demand was not as high as anticipated.

12. Regional Council data indicated 3,000 farms were in the drought affected area of Central Hawke's Bay and outlying areas of Hastings. The RAG made a conservative assessment that 50% of those farms will need support. This understanding then informed the scale of the funding initially made available to individuals.

13. The criteria and process to access the funding is as follows:

    13.1. Applicants have to apply for funds via an online form on the Hawke's Bay Regional Council's website: https://www.hbrc.govt.nz/environment/farmers-hub/drought-crisis-hub/drought-relief-fund-register (note this link is unpublished), or by phoning us

    13.2. Applicants need to confirm that they have a feed plan/budget and that this has informed the feed requirements being supported by their application. This information is auditable and must be supplied if asked for at a later date

    13.3. Applicants will provide their bank deposit slip and the invoice from the supplier (they must have the same name on the invoice and bank deposit slip, and the invoice must have the transport cost separated from the feed cost) and receive an email to confirm their eligibility

    13.4. The applicants will then be reimbursed as soon as possible for the transport cost – up to the maximum amount agreed according to the size of their land

    13.5. A farm trading entity can apply for the support up to the indicated maximums below.

    13.6. Farms are split into three categories:

        13.6.1. Greater than 150 ha (eligible for a maximum of originally $1,350, but now increased to $3000)

        13.6.2. Between 20 ha – 150 ha (eligible for a maximum of originally $400, but now increased to $1000)

        13.6.3. Less than 20 ha (This funding will be administered directly to support transport operators for feed supplies for this lifestyle market). No change to this category.

    13.7. Originally landowners could claim funding support from the date of 19 May 2020, which was the date the RDRF was created, this has now shifted to 12 March 2020 which is when the adverse drought event was announced by the Minister for Agriculture

    13.8. There is a reserve set aside of ($10) for the Rural Support Trust for on farm emergency situations and $37K for previously committed donated feed transport costs.

14. Further recent changes have been to:

    14.1. To not on-charge transportation costs to the recipients of donated feed ($141,000 to date). Note that this has resulted in over 2,200 large bales of feed being brought into the region

14.2. To fund the transportation of stock to properties outside the region to graze and then transport back on farm. Note that the amount paid is the same using the same size thresholds as the feed transport costs in paragraph 13. A property can claim only once for either the transport of feed or stock, not twice for both.

15. As noted in the summary for this paper, it is envisaged that the fund will be under spent. It is important to remember that HBRC has an interest in only 20% of any remaining funding. At the time the fund closes staff will bring back further advice on the remaining funding and suggested options for this. Staff would highlight now that there is the potential to tag this funding to the development of the regional drought resilience strategy work that is beginning in September. Funding could be leveraged off MPI and other sources to fund both the strategy development and strategy implementation.

Decision Making Process

16. Staff have assessed the requirements of the Local Government Act 2002 in relation to this item and have concluded that, as this report is for information only, the decision making provisions do not apply.

Recommendation

That the Corporate and Strategic Committee receives and notes the "*Regional Drought Relief Fund*" staff report.

Authored and Approved by:

Iain Maxwell
GROUP MANAGER INTEGRATED
CATCHMENT MANAGEMENT

Attachment/s

There are no attachments for this report.

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: REGIONAL ECONOMIC RECOVERY

Reason for Report

1. This item provides an update of the economic and social impact of the COVID-19 pandemic and drought for the Hawke's Bay Region, and regional recovery insights and activities.

Executive Summary

2. COVID-19 and the 2020 drought have contributed to one of the greatest economic shocks our region has seen and predictions suggest the worst is yet to come. Hawke's Bay is in a better position than some regions, but uncertainty remains high.

3. Throughout the response $330m has been paid in wage subsidies across the region, with 52% of jobs covered in the first payment and 10% in the extension. Job seeker (work ready) numbers are up 58% versus this time last year and there is a significant increase in income relief payments, accommodation supplement support and special food grants in July 2020 versus prior months and this time last year.

4. Severe drought conditions saw 177 farmers utlise the feed transport relief and 143 requesting feed budgeting assistance. The flow on impacts from water and feed shortages and low stock numbers combined with global uncertainty influencing commodity prices, is a concern.

5. Hawke's Bay GDP as a result is forecast to contract further, also impacted by reduced visitor numbers/spend and increased unemployment levels. Currently 2,200 more people have lost their jobs versus this time last year and 67% of work ready job seekers are Māori and Pacific peoples.

6. A high performing food and fibre industry and booming construction sector puts Hawke's Bay in good position for economic recovery. There is a significant pipeline of capital projects and in more cases than not the issue is filling jobs not creating them. Workforce planning and linking training and development/redeployment to labour needs, requires regional collaboration and a procurement strategy aligning with recovery priorities.

7. On the ground recovery at council level is focused on driving forward projects to stimulate economic activity and capitalising on the current Government funding pool. The social and economic development action plan already operating under the Matariki framework has been re-prioritised with a recovery focus and a refined 12-month programme of action is being finalised.

8. HBRC is focussing on expanding current programmes and what is already been done well. In addition - supporting Business Hawke's Bay, Regional Business Partners and Hawke's Bay Tourism through their on the ground recovery activities. HBRC have received $20.7m funding toward recovery projects, with another $10.6m currently pending.

Background

9. Hawke's Bay has weathered the storm well in comparison to other regions with diversity across key contributors to GDP, a significant percentage of the workforce classed as essential and able to work throughout alert levels, lower exposure to tourism spend, dominant food and fibre presence and tapped out construction sector.

10. The resurgence has caused angst across businesses and the community. Adapting between response and recovery moving forward is key, with a focus on building resilience and thriving in a 'new normal'.

11. Regional alignment on recovery priorities, procurement, upcoming project pipeline and key sector issues / barriers is front of mind for recovery planning.
12. The five Hawke's Bay councils have appointed a Regional Recovery Manager to support coordination and regional recovery efforts across councils – particularly where there is duplication or missed opportunity to engage at a regional level, and sit on the Matariki Recovery Taskforce.
13. The Director of Regional Strategic Procurement, also a regional role across all councils and a member of the Taskforce, is developing a progressive procurement strategy and 'bird's-eye' view of the regional pipeline.

Decision Making Process

14. Staff have assessed the requirements of the Local Government Act 2002 in relation to this item and have concluded that, as this report is for information only, the decision making provisions do not apply.

Recommendation

That the Corporate and Strategic Committee receives and notes the "*Regional Economic Recovery*" staff report.

Authored by:

Sarah Tully
REGIONAL RECOVERY MANAGER

Approved by:

Jessica Ellerm
GROUP MANAGER CORPORATE SERVICES

Attachment/s

⇩**1** Regional Recovery Presentation

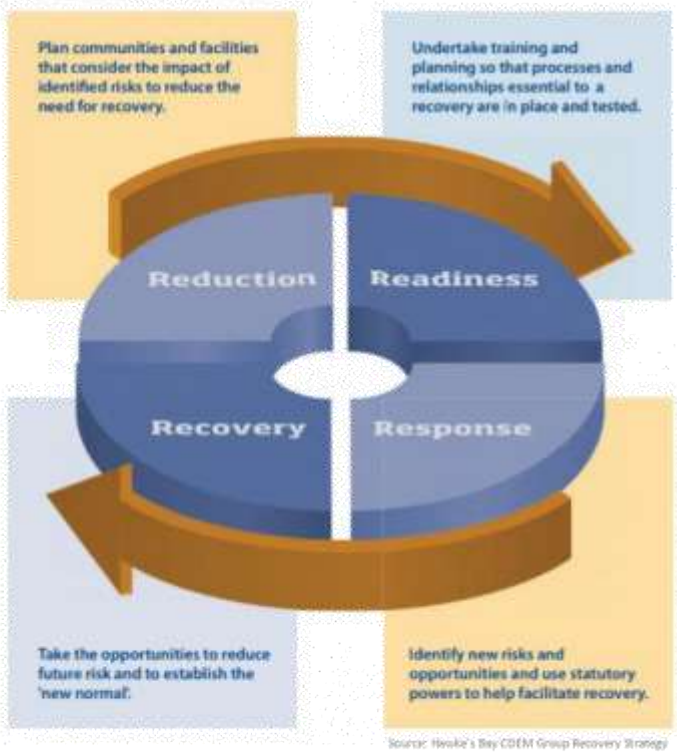
Hawke's Bay Regional Recovery

Corporate & Strategic Committee

September 2020

CENTRAL HAWKE'S BAY DISTRICT COUNCIL
HASTINGS DISTRICT COUNCIL
NAPIER CITY COUNCIL
WAIROA DISTRICT COUNCIL
HAWKE'S BAY REGIONAL COUNCIL

Respond > Recover > Thrive



Source: Hawke's Bay CDEM Group Recovery Strategy

- Final part of managing a CDEM emergency
- Should be considered during the entire '4R' cycle
- Need to be agile – move seamlessly between response and recovery
- In future resurgences or drought crisis – recovery and response go parallel
- As a region we need to take opportunities and learnings to reduce future economic and social risk
- Adapt, build resilience and thrive in a 'new normal'

September 2020

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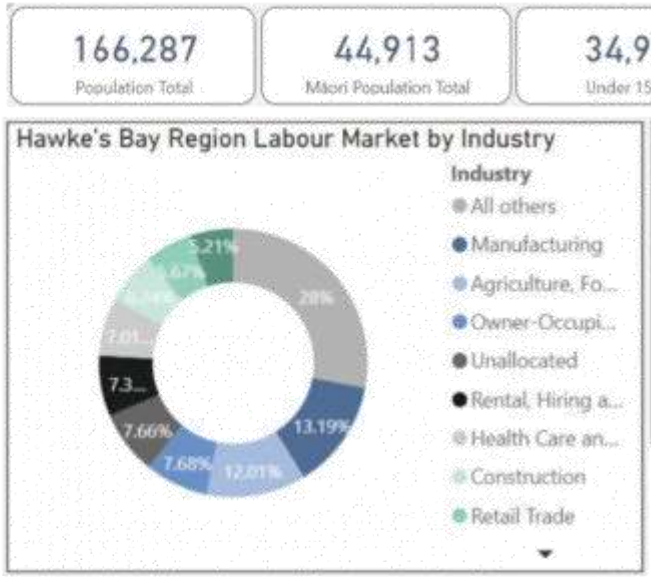
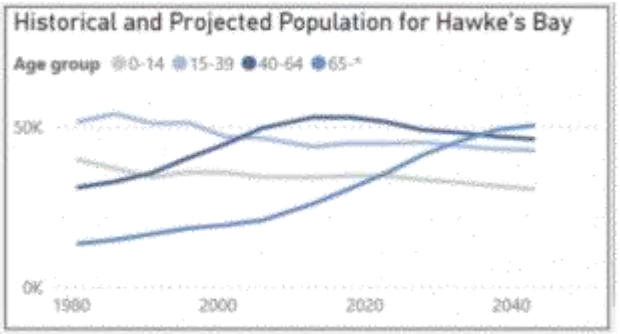
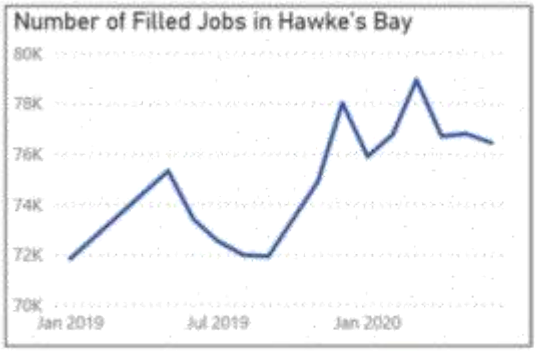
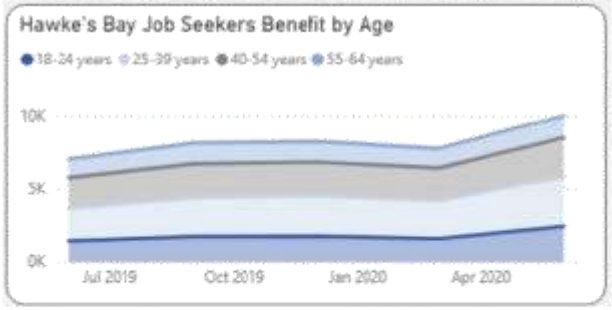
Hawke's Bay Snapshot

166,287	44,913	34,935	30,378	14,790
Population Total	Māori Population Total	Under 15 Total	Over 65 Total	Under 15 Māori









Business units by size for Construction Services, 2019

Size	Hawke's Bay Region	
	Business unit count	% of total
0	692	61.5%
1 to 5	314	27.9%
6 to 9	60	5.3%
10 to 19	50	4.4%
20 to 49	3	0.3%
50 to 99	0	0.0%
100 and over	0	0.0%

19,131	65%	25%	99%
Businesses in HB	Self-employed	Small businesses <10 employees	<50 FTE

September 2020

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Attachment 1

Item 13

The Impact

COVID-19

- Globally - 24m cases, 800,000 deaths, 200,000+ new cases per day
- Nationally - 1,683 cases, 22 deaths, currently in controlled 'second wave'

$330m
wage subsidies paid (incl. extensions)

52,788
unique jobs supported through wage subsidy

2,200
more people have lost their jobs vs last year

43%
of current job seekers are Māori

90%
increase in Covid Income Relief Payments vs last month

12% | 50%
Increase in accommodation supplement and special food grant support vs last year

Drought

- Unprecedented 2020 drought conditions
- Lowest rainfall on record for the region
- Significant water and feed shortages
- Low stock numbers

143
Beef & Lamb feed budgeting assistance cases

70%
Hawke's bay % of total assistance cases

42,565
Hawke's Bay hectares assisted

177
Number of Feed Transport Fund recipients

333
Number of Lifestyle Block Feed Run recipients

Unknown
Economic impact *MPI undertaking this work*

September 2020

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The Impact

Current Economic Indicators

-0.9%	-8.2%	↑
Provisional GDP decrease vs last year (-2.1% nationally)	Tourism spend vs last year	Job seeker support recipients
↑	-9.8%	+13.6%
Residential and non-residential building consents	House sales vs last year	House prices vs last year
+25%	+2.68%	+9.5%
Job listings vs last month	Increase in total retail spend value vs last year	Increase in no. of retail transactions in HB vs last year

HB Airport

-37%

Passenger numbers vs this time last year

-22%

Christchurch passenger numbers

-25%

Wellington passenger numbers

-35%

Auckland passenger numbers

Regional Business Partners Support

728	$1.5m	Services
Businesses supported through COVID (capability vouchers)	Recovery funding provided	• Cashflow Management (34%) • Planning (32%) • Employment / HR (16%) • Health & Wellbeing (1%)

HB Chamber of Commerce Survey (pre-resurgence)

50%	40%	50%	60%	80%
Expect economy to deteriorate	Expect their workforce to grow	Operating at 100%	Reviewing their online presence	Reviewing how they do business

September 2020

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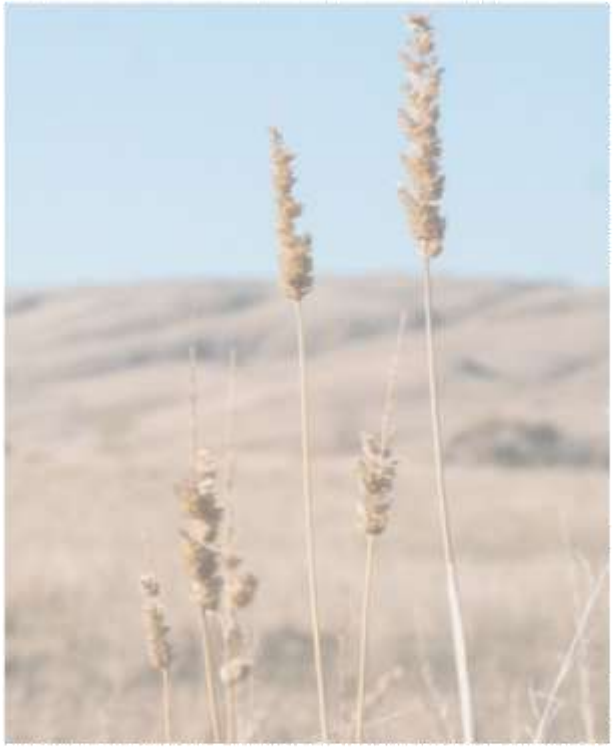
Attachment 1

The Outlook

- Economic predictions - the worst is yet to come
- Hawke's Bay economy – forecast -6.2%, but well placed to weather the storm
- Food and fibre region – protect this
- 'Hot' construction sector picking up where it left off – need to link training and employment to workforce needs
- Ageing population and significant number of rangatahi – future workforce planning crucial
- Infrastructure projects need to be fast forwarded, without compromising quality – and regional collaboration is important
- Significant PGF and Private investment into the region – pipeline, resourcing and training & development to be considered
- An attractive destination for domestic tourism – capitalise on this



September 2020

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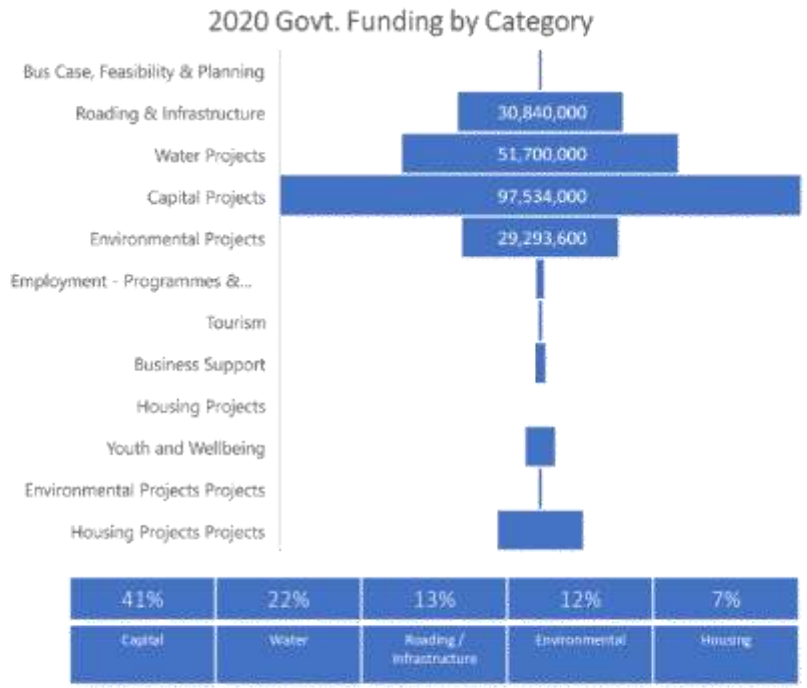
The Outlook

$338M	$236M	$102M
Total Funding to HB Region in 2019/20	Total Funding to HB Region – 2020	Total Funding to HB Region – 2019

TOP VALUE 2020 PROJECTS

$50M HB Three Waters	**$32M** HB Aquatic Centre	**$20M** Whakatu Inland Port	**$19.5M** Te Mata Mushrooms	**$19.2M** HB Flood Control	**$16M** Hastings Housing
$13M NZTA SH2 Curve Works	**$9.4M** SH51 Taihape Rd Works	**$6.4M** Pettigrew Arena Expansion	**$5M** HB Comm Fitness Centre	**$4.3M** Hineruru Cherry Land Dvlpm	**$2.9M** Apollo Foods Capability



September 2020

The Outlook

On the Ground

Primary Sector

Horticulture

- Productive season, tracking well
- RSE challenge a big concern with big impact
- Industry has a plan – need advocacy and influence
- Positive outlook if RSE issue can be addressed –prices and volumes are up and new varieties doing well.

Viticulture

- Season on track – good volumes
- Same looming RSE / labour issue
- Progressing with sector specific recovery – winter wine walks & pop up cellar doors
- Mixed impact from COVID – dependent on reliance to UK/US markets and supermarkets vs restaurants

Pastoral

- Drought has impacted feed, water and therefore stock numbers
- Concerned about flow on effect – sheep & beef prices currently okay but down on last year
- Drought resilience strategy currently in scoping phase

Tourism

- Agile industry – used to adapting
- Wellington focused campaign successful
- Domestic retail spend softening no international visitor impact for now
- HB Tourism have received $700k additional funding
- HB airport currently down 32% on passenger numbers.

Construction

- Pre COVID – very constrained capacity
- Most projects picking up where they left off – Private and Public
- There is a backlog of social housing to be built
- Sector has good outlook for next 12 months – the challenge is around the workforce and filling jobs

SME/Business

- Good support out there Recovery funding through RBP has been well utilised
- Businesses now assessing their new normal and how they operate going forward

September 2020

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The Recovery

- Working on 'birds-eye' view and regional collaboration – where this makes sense
- Data and analytics a big gap – regional dashboard in progress
- Local council recovery broadly focussed on driving activity and stimulation local economies – projects and activities that were already in the plan, now with more urgency
- Matariki have refined the programme of action, with a recovery focus. Detailed plan in progress:
  - Role: advocacy and influence
  - Enabler: data and analytics
  - Sector focus: primary, construction & health
  - Activities:
    - Integrated planning, resourcing and pipeline, training and development, regional supply chains, procurement
    - Workforce focus – current and future

Item 13
Attachment 1

HBRC Recovery

Focus

- Doing what we already do – and doing it well
- Where there is opportunity for funding – applying this to what we already know, but expand
- Supporting recovery activities through Business HB, Regional Business Partners and HB Tourism

Funding

Project	Fund	Amount	Status
HB Regional Business Partners COVID Recovery Funding	MBIE	1,495,473	Contracted, in progress
Accelerated flood control	CRRF	19,200,000	Announced, awaiting contract
Predator free funding	MFE	3,500,000	Pending
Fencing (Jobs for Nature)	MFE	2,100,000 (co-funded HBRC erosion control scheme	Pending
Additional water security funding	PGF	5,000,000	Pending

Hawke's Bay Tourism

- Have just signed the one-year funding agreement contract with MBIE - funding of $700,000 was achieved (the maximum able to be applied for within funding range).
- It is to be invested in three categories:
  1. Destination Management and Planning
  2. Industry Capability Building and Product Development
  3. Domestic Marketing
- Around 2/3 will be invested in domestic marketing, with spring and autumn campaigns to drive further visitor demand and build upon the successful "Baycation" campaign focused on the Wellington and lower-North Island markets.

On the Horizon

- Jobs for Nature - Kaimahi Regional Alliances
- Jobs for Nature - Freshwater Improvement Fund proposal

September 2020

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HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: EASTERN SCREEN ALLIANCE DEPUTATION: BUILDING A REGIONAL SCREEN INDUSTRY IN HAWKE'S BAY

Reason for Report

1. This item introduces a presentation by Patrick Sherratt, Daniel Betty and Derek Slade from Eastern Screen Alliance (ESA).

Background

2. Eastern Screen Alliance has been approached by a New Zealand company wanting to build production studios in Hawke's Bay. They were also advised that the company's connections with the big US companies also means they can potentially funnel big-budget productions into the region. Because Covid has shut down the US industry, the industry is looking to NZ to keep making productions (and keeping up with an increasing consumer demand for screen content) and it has been suggested that if there was a studio complex in Hawke's Bay, the door would be open to bringing them here.
3. Patrick Sherratt of Eastern Screen Alliance has been helping this company find land and they are close to starting the process of purchase and obtaining resource consents. ESA advises that Hastings District Council has been supportive of the proposition and has granted the company $10,000 to get a new website up and going, which should be ready in a few weeks
4. Further information is attached.

Decision Making Process

5. Staff have assessed the requirements of the Local Government Act 2002 in relation to this item and have concluded that, as this report is for information only, the decision making provisions do not apply.

Recommendation

That the Corporate and Strategic Committee receives and notes the "*Eastern Screen Alliance Deputation: Building a Regional Screen Industry in Hawke's Bay*" presentation.

Authored and Approved by:

Leeanne Hooper
TEAM LEADER GOVERNANCE

Attachment/s

⇩**1** Eastern Screen Alliance Proposal Summary Information

Pre-Reading Summary for Eastern Screen Alliance Presentation to HBRC, Wednesday 2nd September 2020

The global screen production industry is going through an unprecedented period of change. Covid-19 has limited the work of many of the production studios – particularly Hollywood in Los Angles, where a significant amount of screen content is produced.

On the flip side, Covid-19 has increased consumer demand with people watching more screen productions than ever before. This increase in demand has created an opportunity to supply content to streaming services such as Netflix, Amazon Prime and Disneyplus.

New Zealand can take advantage of this, however, the main screen production centres; Auckland, Wellington and Queenstown, are already working at capacity and their studios are booked out for at least the next three years. The smaller regions are now establishing regional film offices (RFOs) in an attempt to capture some of this international demand.

Hawke's Bay's regional film office is Eastern Screen Alliance (ESA). A film office is an economic development agency niched to the screen production industry (details on the next page). It promotes the region as a screen production destination and provides the infrastructure to support the creation of productions when they arrive. Eastern Screen Alliance also supports the development of local television and filmmakers across the region, including the Wairoa Maori Film Festival, to market and supply locally based productions to international streaming services.

Recently, ESA was approached by a private New Zealand company wanting to build screen production studios in Hawke's Bay. This company, which also has existing relationships with international studios, is exploring land options on the outskirts of Hastings. If this project goes ahead, the region will have a unique and unprecedented opportunity to attract a string of big-budget productions that can provide huge benefits for the region.

Over 60% of a screen production budget gets filtered back into the local economy. For example, if a big-budget production of $65m is brought to the region, $39m of that will be spent in intersecting industries such as food and beverage, accommodation, retail, and hardware.

A big-budget production also has the potential to employ 300–500 people (see Page 3); provide education and training opportunities for youth and filter millions of dollars back into the local community.

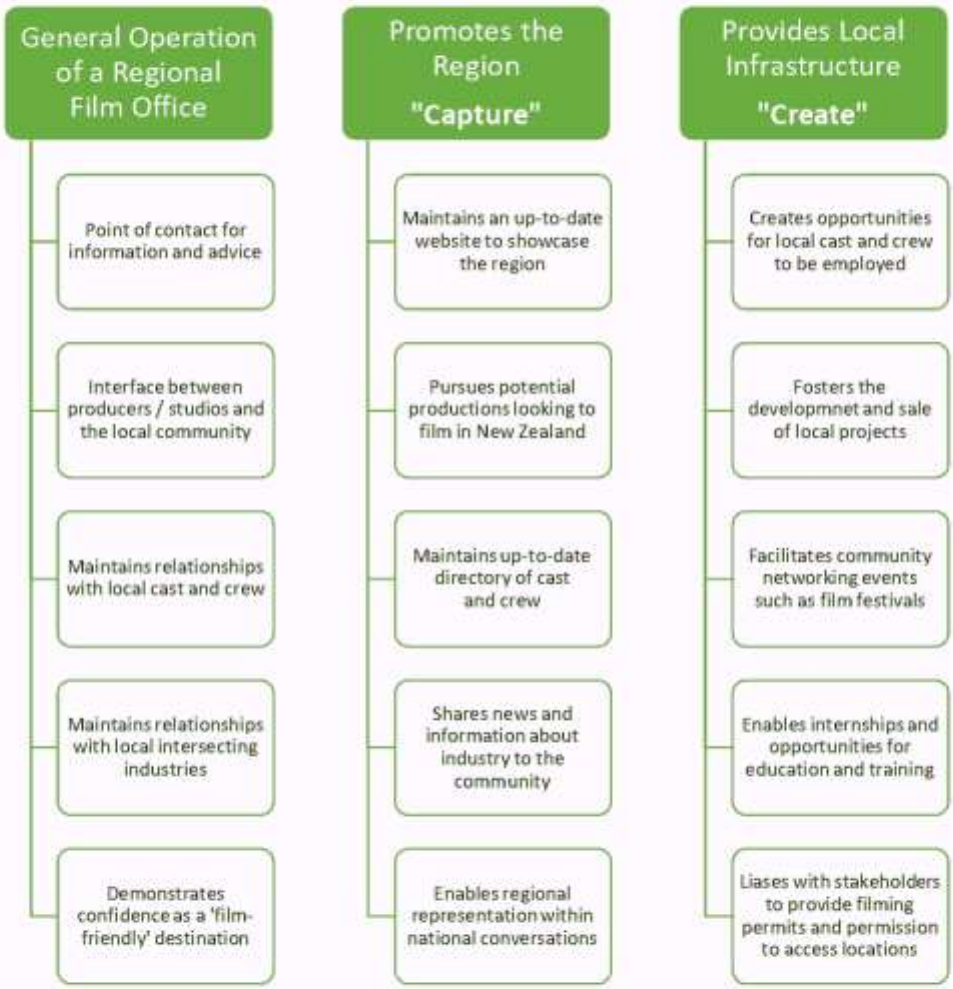
The ultimate vision is to establish a thriving screen production industry in Hawke's Bay and build the region's brand as a film friendly destination.

Eastern Screen Alliance has already presented this vision to Central Hawke's Bay Council, Napier City Council and Hastings District Council who is also assisting with resource and building consents for the proposed production studios. A presentation at Wairoa District Council is scheduled for next month.

ESA will follow up after these presentations with a proposed business case suggesting the investment required from councils to enable employed staff to carry out the work needed to take advantage of this opportunity, promote the region and build the local screen infrastructure.

The Role of a Film Office

A regional film office is an economic development agency niched within the screen production industry. A RFO's primary aim is to capture the interest of production companies to bring their work to their region. When a company agrees to make their production in Hawke's Bay, our RFO, Eastern Screen Alliance, will help them create it by providing the local infrastructure.



At present, Eastern Screen Alliance is unfunded and facilitated by volunteers working when they can.

Through regional investment, ESA will be able to activate a solid strategic growth plan which will bring into effect all the activities detailed above.

List of Jobs Created by a Production

The significant number of jobs created by a big-budget production is why many countries are looking at the screen production industry as a vehicle to create jobs and boost the economy in a post Covid-19 world.

The following is an example of the jobs needed to create a production. Hawke's Bay has many of these people already in the region. However, others will need to migrate and live in Hawke's Bay. If we can demonstrate that there will be a flow of consistent work coming into the region, our professional crew list will become stable and they will be able to enjoy a consistent secure work-stream coupled with an enviable lifestyle.

All these jobs have entry level positions enabling a large number of youth to find immediate work and training opportunities.

- Production – Directors / Producers / Cinematographer (DOP)
- Assistants to above
- Supervisors
- Cast / Extras
- Script Writers / Continuity
- Researchers
- Costume Designers
- Makeup/Hair
- Post-Production – Editors
- Publicity / Stills
- Casting
- Health / Safety / Wellbeing
- Animal Training
- Art Department– Conceptualizing / Construction /Onset / Props / Greens
- Camera operators
- Video Assistants
- Lighting / Rigging
- Grips / Gaffers / Best Boys
- Stunts
- Special Effects
- Visual Effects
- Unit/Craft Services
- Transport Operators
- Locations Managers
- Caterers
- Lawyers
- Accountants
- Builders / Carpenters
- Electricians
- Mechanics
- Runners

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: DISCUSSION OF MINOR MATTERS NOT ON THE AGENDA

Reason for Report

1. This document has been prepared to assist Committee members note the Minor Items Not on the Agenda to be discussed as determined earlier in Agenda Item 5.

Item	Topic	Raised by
1.		
2.		
3.		

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

Subject: HBRIC LTD AND NAPIER PORT QUARTERLY UPDATE

That Hawke's Bay Regional Council excludes the public from this section of the meeting, being Agenda Item 16 HBRIC Ltd and Napier Port Quarterly Update with the general subject of the item to be considered while the public is excluded; the reasons for passing the resolution and the specific grounds under Section 48 (1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution being:

GENERAL SUBJECT OF THE ITEM TO BE CONSIDERED	REASON FOR PASSING THIS RESOLUTION	GROUNDS UNDER SECTION 48(1) FOR THE PASSING OF THE RESOLUTION
HBRIC Ltd and Napier Port Quarterly Update	s7(2)(h) That the public conduct of this agenda item would be likely to result in the disclosure of information where the withholding of the information is necessary to enable the local authority holding the information to carry out, without prejudice or disadvantage, commercial activities. s7(2)(i) That the public conduct of this agenda item would be likely to result in the disclosure of information where the withholding of the information is necessary to enable the local authority holding the information to carry out, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations).	The Council is specified, in the First Schedule to this Act, as a body to which the Act applies.

Authored by:

Kishan Premadasa
MANAGEMENT ACCOUNTANT

Blair O'Keeffe
HBRIC LTD CHIEF EXECUTIVE

Approved by:

Jessica Ellerm
GROUP MANAGER CORPORATE SERVICES

HAWKE'S BAY REGIONAL COUNCIL

CORPORATE AND STRATEGIC COMMITTEE

Wednesday 02 September 2020

SUBJECT: CONFIRMATION OF PUBLIC EXCLUDED MINUTES OF THE 10 JUNE 2020 CORPORATE AND STRATEGIC COMMITTEE MEETING

That Hawke's Bay Regional Council excludes the public from this section of the meeting being Confirmation of Public Excluded Minutes Agenda Item 17 with the general subject of the item to be considered while the public is excluded; the reasons for passing the resolution and the specific grounds under Section 48 (1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution being:

GENERAL SUBJECT OF THE ITEM TO BE CONSIDERED	REASON FOR PASSING THIS RESOLUTION	GROUNDS UNDER SECTION 48(1) FOR THE PASSING OF THE RESOLUTION
Heretaunga Water Security Scoping Report	s7(2)(i) That the public conduct of this agenda item would be likely to result in the disclosure of information where the withholding of the information is necessary to enable the local authority holding the information to carry out, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations) s7(2)(j) That the public conduct of this agenda item would be likely to result in the disclosure of information where the withholding of the information is necessary to prevent the disclosure or use of official information for improper gain or improper advantage	The Council is specified, in the First Schedule to this Act, as a body to which the Act applies.
HBRIC Ltd 2019-20 Statement of Intent	s7(2)(b)(ii) That the public conduct of this agenda item would be likely to result in the disclosure of information where the withholding of that information is necessary to protect information which otherwise would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information	The Council is specified, in the First Schedule to this Act, as a body to which the Act applies.
Napier Port Verbal Update	s7(2)(b)(ii) That the public conduct of this agenda item would be likely to result in the disclosure of information where the withholding of that information is necessary to protect information which otherwise would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information	The Council is specified, in the First Schedule to this Act, as a body to which the Act applies.
Request for Remission of Leasehold Rent – Wellington Property	s7(2)(i) That the public conduct of this agenda item would be likely to result in the disclosure of information where the withholding of the information is necessary to enable the local authority holding the information to carry out, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations)	The Council is specified, in the First Schedule to this Act, as a body to which the Act applies.
Confirmation of 11 March 2020 Public Excluded Minutes		

Item 17

Authored by:

Leeanne Hooper
TEAM LEADER GOVERNANCE

Approved by:

James Palmer
CHIEF EXECUTIVE