

# Finance and Performance Committee AGENDA

# **Notice of Meeting:**

An ordinary meeting of the Finance & Performance Committee will be held on:

Date:	Thursday 26 May 2022
Time:	9.30am
Venue:	Council Chambers, Civic Offices,
	53 Hereford Street, Christchurch

#### Membership

Chairperson Deputy Chairperson Members **Deputy Mayor Andrew Turner** Councillor Sam MacDonald Mayor Lianne Dalziel **Councillor Jimmy Chen Councillor Catherine Chu Councillor Melanie Coker Councillor Pauline Cotter Councillor Mike Davidson** Councillor Celeste Donovan **Councillor Anne Galloway Councillor James Gough** Councillor Yani Johanson **Councillor Aaron Keown Councillor Phil Mauger** Councillor Jake McLellan **Councillor Tim Scandrett Councillor Sara Templeton** 

#### 20 May 2022

#### Principal Advisor

**Principal Advisor** Leah Scales General Manager - Resources / CFO Tel: 941 8999

Dawn Baxendale Chief Executive Tel: 941 6996

David Corlett Committee and Hearings Advisor 941 5421 david.corlett@ccc.govt.nz <u>www.ccc.govt.nz</u>

Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. If you require further information relating to any reports, please contact the person named on the report.

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#### **Ōtautahi–Christchurch is a city of opportunity for all**

Open to new ideas, new people and new ways of doing things - a city where anything is possible

#### Principles

Being open, transparent and democratically accountable Promoting

equity, valuing diversity and fostering inclusion

Taking an inter-generational approach to sustainable development, prioritising the social, economic and cultural wellbeing of people and communities and the quality of the environment, now and into the future

Vibrant and thriving city centre

A well connected and accessible

Sustainable suburban and

city promoting active and

Sufficient supply of, and

21st century garden city

we are proud to live in

access to, a range of housing

Building on the relationship with Te Rūnanga o Ngāi Tahu and the Te Hononga-Council Papatipu Rūnanga partnership, reflecting mutual understanding and respect

Ensuring the diversity and interests of our communities across the city and the district are reflected in

Actively collaborating and co-operating with other local, regional and national organisations

decision-making

Liveable city

rural centres

public transport

#### **Resilient communities**

Strong sense of community Active participation in civic life

Safe and healthy communities Celebration of our identity through arts, culture, heritage,

sport and recreation Valuing the voices of all cultures and ages (including children)

# **Community Outcomes**

#### **Healthy environment**

Healthy water bodies

High quality drinking water

Unique landscapes and indigenous biodiversity are valued and stewardship exercised

Sustainable use of resources and minimising waste

#### **Prosperous economy**

Great place for people, business and investment

An inclusive, equitable economy with broad-based prosperity for all

A productive, adaptive and resilient economic base

Modern and robust city infrastructure and community facilities

Strategic Priorities						
Enabling active and connected communities to own their future	Meeting the challenge of climate change through every means available	Ensuring a high quality drinking water supply that is safe and sustainable	Accelerating the momentum the city needs	Ensuring rates are affordable and sustainable		
Ensuring we get core business done while delivering on our Strategic Priorities and achieving our Community Outcomes						
Engagement with the community and	Strategies, Plans and Partnerships	Long Term Plan and Annual Plan	Our service delivery approach	Monitoring and reporting on our		



#### FINANCE AND PERFORMANCE COMMITTEE OF THE WHOLE - TERMS OF REFERENCE NGĀ ĀRAHINA MAHINGA

Chair	Deputy Mayor Turner
Deputy Chair	Councillor MacDonald
Membership	The Mayor and all Councillors
Quorum	Half of the members if the number of members (including vacancies) is even, or a majority of members if the number of members (including vacancies) is odd
Meeting Cycle	Monthly
Reports To	Council

#### Delegations

The Council delegates to the Finance and Performance Committee authority to oversee and make decisions on:

#### Capital Programme and operational expenditure

- Monitoring the delivery of the Council's Capital Programme and associated operational expenditure, including inquiring into any material discrepancies from planned expenditure.
- As may be necessary from time to time, approving amendments to the Capital Programme outside the Long-Term Plan or Annual Plan processes.
- Approving Capital Programme business and investment cases, and any associated operational expenditure, as agreed in the Council's Long-Term Plan.
- Approving any capital or other carry forward requests and the use of operating surpluses as the case may be.
- Approving the procurement plans (where applicable), preferred supplier, and contracts for all capital expenditure where the value of the contract exceeds \$15 Million (noting that the Committee may sub delegate authority for approval of the preferred supplier and /or contract to the Chief Executive provided the procurement plan strategy is followed).
- Approving the procurement plans (where applicable), preferred supplier, and contracts, for all operational expenditure where the value of the contract exceeds \$10 Million (noting that the Committee may sub delegate authority for approval of the preferred supplier and/or contract to the Chief Executive provided the procurement plan strategy is followed).

#### Non-financial performance

- Reviewing the delivery of services under s17A.
- Amending levels of service targets, unless the decision is precluded under section 97 of the Local Government Act 2002.
- Exercising all of the Council's powers under section 17A of the Local Government Act 2002, relating to service delivery reviews and decisions not to undertake a review.

#### Council Controlled Organisations

- Monitoring the financial and non-financial performance of the Council and Council Controlled Organisations.
- Making governance decisions related to Council Controlled Organisations under sections 65 to 72 of the Local Government Act 2002.
- Exercising the Council's powers directly as the shareholder, or through CCHL, or in respect of an entity (within the meaning of section 6(1) of the Local Government Act 2002) in relation to
  - (without limitation) the modification of constitutions and/or trust deeds, and other governance arrangements, granting shareholder approval of major transactions, appointing directors or trustees, and approving policies related to Council Controlled Organisations; and

o in relation to the approval of Statements of Intent and their modification (if any).

#### **Development Contributions**

• Exercising all of the Council's powers in relation to development contributions, other than those delegated to the Chief Executive and Council officers as set out in the Council's Delegations Register.

#### Property

• Purchasing or disposing of property where required for the delivery of the Capital Programme, in accordance with the Council's Long-Term Plan, and where those acquisitions or disposals have not been delegated to another decision-making body of the Council or staff.

#### Loans and debt write-offs

- Approving debt write-offs where those debt write-offs are not delegated to staff.
- Approving amendments to loans, in accordance with the Council's Long-Term Plan.

#### Insurance

• All insurance matters, including considering legal advice from the Council's legal and other advisers, approving further actions relating to the issues, and authorising the taking of formal actions (Sub-delegated to the Insurance Subcommittee as per the Subcommittees Terms of Reference)

#### Annual Plan and Long Term Plan

- Provides oversight and monitors development of the Long Term Plan (LTP) and Annual Plan.
- Approves the appointment of the Chairperson and Deputy Chairperson of the External Advisory Group for the LTP 2021-31.

#### **Submissions**

- The Council delegates to the Committee authority:
- To consider and approve draft submissions on behalf of the Council on topics within its terms of reference. Where the timing of a consultation does not allow for consideration of a draft submission by the Council or relevant Committee, that the draft submission can be considered and approved on behalf of the Council.

#### Limitations

- The general delegations to this Committee exclude any specific decision-making powers that are delegated to a Community Board, another Committee of Council or Joint Committee. Delegations to staff are set out in the delegations register.
- The Council retains the authority to adopt policies, strategies and bylaws.

The following matters are prohibited from being subdelegated in accordance with LGA 2002 Schedule 7 Clause 32(1) :

- the power to make a rate; or
- the power to make a bylaw; or
- the power to borrow money, or purchase or dispose of assets, other than in accordance with the long-term plan; or
- the power to adopt a long-term plan, annual plan, or annual report; or
- the power to appoint a chief executive; or
- the power to adopt policies required to be adopted and consulted on under this Act in association with the long-term plan or developed for the purpose of the local governance statement; or
- the power to adopt a remuneration and employment policy.

#### Chairperson may refer urgent matters to the Council



As may be necessary from time to time, the Committee Chairperson is authorised to refer urgent matters to the Council for decision, where this Committee would ordinarily have considered the matter. In order to exercise this authority:

- The Committee Advisor must inform the Chairperson in writing the reasons why the referral is necessary
- The Chairperson must then respond to the Committee Advisor in writing with their decision.
- If the Chairperson agrees to refer the report to the Council, the Council may then assume decision making authority for that specific report.

#### Urgent matters referred from the Council

As may be necessary from time to time, the Mayor is authorised to refer urgent matters to this Committee for decision, where the Council would ordinarily have considered the matter, except for those matters listed in the limitations above.

In order to exercise this authority:

- The Council Secretary must inform the Mayor and Chief Executive in writing the reasons why the referral is necessary
- The Mayor and Chief Executive must then respond to the Council Secretary in writing with their decision.

If the Mayor and Chief Executive agrees to refer the report to the Committee, the Committee may then assume decision-making authority for that specific report.



# Part A Matters Requiring a Council Decision

- Part B Reports for Information
- Part C Decisions Under Delegation

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# Karakia Tīmatanga

## 1. Apologies Ngā Whakapāha

At the close of the agenda no apologies had been received.

# 2. Declarations of Interest Ngā Whakapuaki Aronga

Members are reminded of the need to be vigilant and to stand aside from decision making when a conflict arises between their role as an elected representative and any private or other external interest they might have.

# 3. Confirmation of Previous Minutes Te Whakaāe o te hui o mua

That the minutes of the Finance and Performance Committee meeting held on <u>Thursday, 28</u> <u>April 2022</u> be confirmed (refer page 8).

# 4. Public Forum Te Huinga Whānui

A period of up to 30 minutes will be available for people to speak for up to five minutes on any issue that is not the subject of a separate hearings process.

There were no public forum requests received at the time the agenda was prepared

# 5. Deputations by Appointment Ngā Huinga Whakaritenga

Deputations may be heard on a matter or matters covered by a report on this agenda and approved by the Chairperson.

There were no deputations by appointment at the time the agenda was prepared.

# 6. Presentation of Petitions Ngā Pākikitanga

There were no petitions received at the time the agenda was prepared.





# Finance and Performance Committee OPEN MINUTES

Date: Time: Venue:	Thursday 28 April 2022 9.30am Council Chambers, Civic Offices, 53 Hereford Street, Christchurch			
<b>Present</b> Chairperson Deputy Chairperson Members	Deputy Mayor Andrew Turner Mayor Lianne Dalziel Councillor Jimmy Chen Councillor Catherine Chu Councillor Melanie Coker Councillor Pauline Cotter Councillor Pauline Cotter Councillor Oeleste Donovan Councillor Celeste Donovan Councillor Anne Galloway Councillor James Gough - via audio/visual lir Councillor James Gough - via audio/visual lir Councillor James McLellan Councillor Jake McLellan Councillor Tim Scandrett Councillor Sara Templeton	nk		
	<b>Principal Advisor</b> Leah Scales General Manager - Resources / CFO Tel: 941 8999	<b>Principal Advisor</b> Dawn Baxendale Chief Executive Tel: 941 6996 David Corlett		

Committee and Hearings Advisor 941 5421 david.corlett@ccc.govt.nz <u>www.ccc.govt.nz</u>

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#### Part A Matters Requiring a Council Decision

#### Part B Reports for Information

Part C Decisions Under Delegation

## Karakia Tīmatanga: Given by Deputy Mayor Turner.

The agenda was dealt with in the following order.

#### 1. Apologies Ngā Whakapāha

## Part C Committee Resolved FPCO/2022/00015

That the apologies received from Councillor Keown for absence and Councillor MacDonald for partial absence be accepted. That the apology from Mayor Dalziel for a late arrival and Councillor Gough for a possible early departure be accepted.

Deputy Mayor/Councillor Davidson

**Carried** 

# 2. Declarations of Interest Ngā Whakapuaki Aronga

The Mayor, Deputy Mayor Turner and Councillors Gough and Templeton declared an interest item 13. Council-controlled organisations – Draft Statements of Intent for 2022/23 in relation to Christchurch City Holdings Limited.

Councillor Chen declared an interest item 13. Council-controlled organisations – Draft Statements of Intent for 2022/23 in relation to the Riccarton Bush Trust.

Councillors Gough, Mauger and MacDonald declared an interest item 13. Council-controlled organisations – Draft Statements of Intent for 2022/23 in relation to Civic Buildings Ltd.

Deputy Mayor Turner declared an interest in item 13. Council-controlled organisations – Draft Statements of Intent for 2022/23 in relation to Rod Donald Trust.

The Mayor, Deputy Mayor Turner, Councillors Gough and Templeton declared an interest in item 14. Christchurch City Holdings Ltd – Draft Statements of Intent 2022/23.

Councillor Scandrett decalred an interest in item 15. Venues Otautahi.

Deputy Mayor Turner and Councillor Davidson declared an interest in item 16. ChristchurchNZ Holdings Ltd – Draft Statement of Intent for 2022/23.

Councillor Mauger declared an interest in item 22. Organics Processing Plant.

A minutes silence was observed in recognition of Workers Memorial Day.



Carried

Carried

# 3. Confirmation of Previous Minutes Te Whakaāe o te hui o mua

#### Part C Committee Resolved FPCO/2022/00016

That the minutes of the Finance and Performance Committee meeting held on Thursday, 24 March 2022 be confirmed.

Deputy Mayor/Councillor Scandrett

# 26. Resolution to Include Supplementary Reports Committee Resolved FPCO/2022/00017

That the reports be received and considered at the Finance and Performance Committee meeting on Thursday, 28 April 2022.

#### **Open Items**

22. Organics Processing Options

Deputy Mayor/Councillor Scandrett

## 4. Public Forum Te Huinga Whānui

#### Part B

There were no public forum presentations.

# 5. Deputations by Appointment Ngā Huinga Whakaritenga

#### 5.1 Dr Tracey McLellan, MP for Banks Peninsula

In relation to item 7 Christchurch Wastewater Treatment Plant Recovery Update and item 22. Organics Processing Options.

#### 5.2 Michael Williams

In relation to item 7 Christchurch Wastewater Treatment Plant Recovery Update and item 22. Organics Processing Options. A written copy of Mr Williams presentation was pre-circulated (copy attached).

#### Attachments

A Michael Williams presentation

#### 5.3 Nicole Marshall

In relation to item 7 Christchurch Wastewater Treatment Plant Recovery Update and item 22. Organics Processing Options.

#### 5.4 Bruce King

In relation to item 7 Christchurch Wastewater Treatment Plant Recovery Update and item 22. Organics Processing Options.

#### 5.5 Geoffrey King



In relation to item 7 Christchurch Wastewater Treatment Plant Recovery Update and item 22. Organics Processing Options.

#### 5.6 Don Gould

In relation to item 7 Christchurch Wastewater Treatment Plant Recovery Update. Mr Gould spoke to his presentation (attached.)

#### Attachments

A Don Gould presentation

#### 5.7 Vicki Walker

In relation to item 7 Christchurch Wastewater Treatment Plant Recovery Update and item 22. Organics Processing Options.

Councillor left the meeting at10.32am and returned at 10.36am during Item 5.

The meeting adjourned at 10.52am and resumed at 11.10am.

# 6. Presentation of Petitions Ngā Pākikitanga

#### Part B

There was no presentation of petitions.

# 7. Christchurch Wastewater Treatment Plant Recovery Update Committee Comment

- 1. Staff spoke to their presentation (attached).
- 2. The Committee asked staff to make the results of the air quality monitoring available to elected members once it has been received.
- 3. The Committee noted the impact of the odour on residents and requested advice from staff and what support could be provided. The Committee also requested fortnightly progress updates on progress with Waste Water Treatment Plant recovery.

#### Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

- 1. Receives the information in this update
- 2. Notes that regular communications will be implemented to ensure residents in the local area and across the city are aware of all efforts being undertaken to expedite the removal process and reduce the effects of the odours.
- 3. Notes that an update on the details of the insurance claim will be reported to the Insurance sub-committee

#### Committee Resolved FPCO/2022/00018

#### Part C

That the Finance and Performance Committee:



- 1. Receives the information in this update
- 2. Notes that regular communications will be implemented to ensure residents in the local area and across the city are aware of all efforts being undertaken to expedite the removal process and reduce the effects of the odours.
- 3. Notes that an update on the details of the insurance claim will be reported to the Insurance sub-committee
- 4. Request staff:
  - a. Provide advice on ways that support could be provided for affected residents
  - b. Report fortnightly to the Council or the Finance and Performance Committee on progress with Waste Water Treatment Plant recovery

# Mayor/Councillor Galloway **Attachments**

A Staff Presentation Waste Water Treatment Plant Update

The Mayor joined the meeting at 11.11am, and Councillors Donovan and Johanson joined the meeting at 11.13am during item 7.

Having previously noting a conflict of interest Councillor Mauger left the meeting for all of item 22 and returned after the lunch adjournment.

# 22. Organics Processing Options

#### **Committee Comment**

1. The Committee requested staff bring back, in one month, the full net cost to Council and implications of immediately closing the plant.

#### Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee resolves to:

- 1. Agree in principle the relocation of the Organics Processing Facility to an alternative site
- 2. Request staff to:
  - (a) approach the market for options for location, partnerships, joint ventures, commercial opportunities, and
  - (b) report to Council on short listed relocation options with a comparison to redevelopment of the current site by end February 2023.
- 3. Support the continued operation at the Metro Place site with the current process controls to manage and mitigate odour until an alternative facility, or redevelopment of the current site, is operational.
- 4. Agree that, should it be necessary to meet the interim capex needs of the existing facility, staff are able to utilise part of the current capital budget for the new facility. Any capital expenditure will be confined to meeting compliance requirements and any decision to use the capex will be made by GM Infrastructure Planning & Regulatory

Carried



Services in consultation with the Chair and Deputy Chair of the Finance & Performance Committee.

5. Agree that the redacted information can be released when the Chief Executive is satisfied that there are no longer grounds under LGOMIA for withholding the information.

#### Committee Resolved FPCO/2022/00019

#### Part C

That the Finance and Performance Committee resolves to:

- 1. Agree in principle the relocation of the Organics Processing Facility to an alternative site
- 2. Request staff to:
  - (a) approach the market for options for location, partnerships, joint ventures, commercial opportunities, and
  - (b) report to Council on short listed relocation options with a comparison to redevelopment of the current site by end February 2023.
- 3. Support the continued operation at the Metro Place site with the current process controls to manage and mitigate odour until an alternative facility, or redevelopment of the current site, is operational.
- 4. Agree that, should it be necessary to meet the interim capex needs of the existing facility, staff are able to utilise part of the current capital budget for the new facility. Any capital expenditure will be confined to meeting compliance requirements and any decision to use the capex will be made by GM Infrastructure Planning & Regulatory Services in consultation with the Chair and Deputy Chair of the Finance & Performance Committee, in the event that the Committee does not exist, in consultation with the Mayor and Deputy Mayor.
- 5. Agree that the redacted information can be released when the Chief Executive is satisfied that there are no longer grounds under LGOMIA for withholding the information.
- 6. Request staff bring back in one month the full net cost to Council and implications of immediately closing the plant.
- 7. Note that Council is working with central government and Local MPs on shared outcomes regarding recycling.

Councillor Cotter/Councillor Johanson

#### **Carried**

The meeting adjourned at 1.12pm at the conclusion of Item 22 and resumed at 2.18pm.

Councillor Gough did not return to the meeting after the break. Councillor Chu returned to the meeting via audio/visual link.

Councillor McLellan returned to the meeting at 2.22pm and Mayor Dalziel return at 2.25pm during item 15.

# 15. Venues Ōtautahi draft Statement of Intent 2022/23

# Committee Resolved FPCO/2022/00020 Officer Recommendation accepted without change



#### Part C

That the Finance and Performance Committee:

1. Receives Venues Ōtautahi's draft Statement of Intent for 2022/23.

Deputy Mayor/Councillor Chen

An adjournment was held taken from 240pm to 3.00pm during item 15.

# **Election of a Chair**

#### Committee Resolved FPCO/2022/00021

It was resolved on the motion of Councillor Davidson, seconded by Councillor Cotter that Councillor Scandrett be appointed Chairperson for items 14, 16 and item 13 in relation to the Rod Donald Trust.

Councillor Davidson/Councillor Cotter

<u>Carried</u>

Carried

Councillor Coker left the meeting at 3.09pm and returned at 3.12pm during item 14.

# 14. Christchurch City Holdings Ltd - Draft Statements of Intent 2022/23

# Committee Resolved FPCO/2022/00022 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- 1. Notes the draft Statements of Intent for 2022/23 for Christchurch City Holdings Ltd and its subsidiaries;
- 2. Notes that Christchurch City Holdings Ltd's business planning process for 2022/23 and subsequent years will end in May 2022 and its forecast dividend to the Council for the Statement of Intent's three year period will be advised in time for inclusion in the Annual Plan for 2022/23; and
- 3. Agrees to provide the following feedback on Christchurch City Holdings Ltd's draft Statement of Intent for 2022/23:
  - a) Acknowledges the work that Christchurch City Holdings have done to reflect requests by Council in their Letter of Expectations for 2022/23.
  - b) That requests Christchurch City Holdings Ltd to continue to work with Council staff on the review of its dividend policy for inclusion in its final Statement of Intent for 2022/23, as requested in the Letter of Expectations for 2022/23; and
  - c) Acknowledges the recommendations of the CCHL Strategic review coming to the new Council in November.

Councillor Scandrett/Councillor Cotter

**Carried** 



# 16. ChristchurchNZ Holdings Ltd - Draft Statement of Intent for 2022/23 Committee Resolved FPCO/2022/00023 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- 1. Receives the draft Statement of Intent for ChristchurchNZ Holdings Limited for 2022/23.
- 2. Approves the following:
  - a. Capitalisation of CNZ via amalgamation of DCL as at 1 July 2022.
  - b. The CNZ Urban Development Prioritisation Framework
  - c. The CNZ/CCC Value Sharing Agreement

Councillor Scandrett/Councillor Templeton

#### Attachments

A Item 16 Christchurch NZ

Deputy Mayor Turner resumed Chair for Item 13 in relation to resolutions 2 and 3.

# 13. Council-controlled organisations - Draft Statements of Intent for 2022/23 Committee Resolved FPCO/2022/00024 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

1. Receives Rod Donald Banks Peninsula Trust's draft Statement of Intent for 2022/23;

#### Councillor Davidson/Councillor Cotter

Committee Resolved FPCO/2022/00025 Officer Recommendation accepted without change

That the Finance and Performance Committee:

2. Receives Civic Building Ltd's draft Statement of Intent for 2022/23;

#### Deputy Mayor/Councillor Scandrett <u>Carried</u> Committee Resolved FPCO/2022/00026 Officer Recommendation accepted without change

That the Finance and Performance Committee:

3. Receives Central Plains Water Trust's draft Statement of Intent for 2022/23.

# tem 3 - Minutes of Previous Meeting 28/04/2023

Carried

Carried

#### <u>Carried</u>



# 20. Te Kaha Project Delivery Ltd - Draft Statement of Intent for 2022/23 and Quarter 2 Performance Report for period ending 31 December 2021 Committee Resolved FPCO/2022/00027 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- 1. Receives Te Kaha Project Delivery Ltd's draft Statement of Intent for 2022/23; and
- 2. Receives Te Kaha Project Delivery Ltd's Quarter 2 Performance Report for the period ending 31 December 2021.

Deputy Mayor/Councillor Chen

**Carried** 

**Carried** 

# 21. Te Kaha Project - Elected Member Update

# Committee Resolved FPCO/2022/00028 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

1. Receive the information in the Te Kaha Project Elected Members Update Report.

Deputy Mayor/Councillor Mauger

# 17. Local Government Funding Agency - Draft Statement of Intent 2022/23 and Shareholder Presentation

#### **Committee Comment**

1. Mark Butcher the Chief Executive spoke to his presentation (attached).

# Committee Resolved FPCO/2022/00029 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- Notes the Local Government Funding Agency's draft Statement of Intent for 2022/23; and
- 2. Notes the investor presentation to be conducted by Mr Mark Butcher, Chief Executive of the Local Government Funding Agency at the Finance and Performance Committee's meeting.

Deputy Mayor/Councillor Cotter **Attachments** 

**Carried** 



A Local Government Funding Agency

## 8. Key Performance Results March 2022

#### **Committee Comment**

- 1. The Committee requested staff to clarify why two percentage figures were given in LTP21.9.1.
- 2. The Committee requested a briefing from staff on excess water charges.
- 3. The Committee requested the Research results from NIWA on LED lighting when available.

# Committee Resolved FPCO/2022/00030 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

1. Receives the information provided in the Key Performance Results for March 2022.

Deputy Mayor/Councillor Cotter

**Carried** 

## 9. Financial Performance Report - March 2022

#### **Committee Comment**

1. The Committee requested an update on the carry forward of the EV grants that were referenced in paragraph 15 on page 64 of the staff report.

# Committee Resolved FPCO/2022/00031 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- 1. Receives the information in the Financial Performance Report for March 2022.
- 2. Notes the likely breach of the Funding risk policy limit from April to September 2022 and the staff advice supporting it.

Deputy Mayor/Councillor Chen

# **10. Capital Programme Performance Report - March 2022**

#### **Committee Comment**

- 1. The Committee requested an update on when will start on the section of the South Express between Templeton and Eastland to Hornby.
- 2. The Committee requested an update on budget issues relating to the Halswell Junction Road Extension project.

**Carried** 



# Committee Resolved FPCO/2022/00032 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

1. Receive the information in the Capital Programme Performance Report – March 2022

Deputy Mayor/Councillor Templeton

# 11. Vertical Capital Delivery : Bi-Monthly Update

#### **Committee Comment**

1. The Committee requested that the Diamond Harbour Wharf plan be circulated.

# Committee Resolved FPCO/2022/00033 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

1. Receive the information in the Vertical Capital Delivery : Bi-Monthly Update Report.

Councillor Cotter/Councillor Davidson

**Carried** 

Carried

# 12. Delegations and Visibility of Budget Changes in the Capital Programme Committee Resolved FPCO/2022/00034 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- 1. Approve major project budget changes, over \$5m, in the programmes of Three Waters, Transport, Parks, Digital, Recreation, Sports and Events, and Vertical Capital, following ELT endorsement.
- 2. Approve budget changes over \$500,000, between standalone capital projects in the Community and Major Facility delivery programme agreed in the LTP.
- 3. Receive a regular quarterly briefing on project budget changes between \$250,000 and \$5m, approved by ELT.
- 4. Recommend these delegations be reviewed and adjusted in 12 months' time, if required.

Deputy Mayor/Councillor Cotter

<u>Carried</u>



# 18. Annual Plan 2022/23 - proposed timeline and process for adopting the final Annual Plan

Committee Resolved FPCO/2022/00035 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- 1. Receive the information in the Annual Plan 2022/23 proposed timeline and process for adopting the final Annual Plan Report
- 2. Confirm the content and designated status (Elected Member Information Only, or public briefing) for briefings of 17-25 May 2022
- 3. Advise any other changes to the proposed timeline to conclude the Annual Plan 2022/23.

Councillor Scandrett/Councillor Cotter

# 19. Overdue General and Rates Debtors at 31 March 2022 (Greater than \$20,000 and 90 days)

# Committee Resolved FPCO/2022/00036 Officer Recommendation accepted without change

#### Part C

That the Finance and Performance Committee:

- 1. Receives the Overdue General and Rates Debtors (Greater than \$20,000 and 90 days) report.
- 2. Notes the action being taken to recover the overdue amounts.
- 3. Resolves that a redacted copy of the report can be released after the Committee has received the report but the names of the individuals and organisations will remain confidential.

Councillor Cotter/Councillor Scandrett

**Carried** 

Carried

# 23. Resolution to Exclude the Public

#### Committee Resolved FPCO/2022/00037

#### Part C

That at 5.10pm the resolution to exclude the public set out on pages 518 to 519 of the agenda be

Deputy Mayor/Councillor Scandrett

#### The public were re-admitted to the meeting at 5.16pm.

Carried



Karakia Whakamutunga: Given by Deputy Mayor Turner.

Meeting concluded at 5.16pm.

CONFIRMED THIS 26<sup>th</sup> DAY OF MAY 2022.

## DEPUTY MAYOR ANDREW TURNER CHAIRPERSON



# 7. Christchurch Wastewater Treatment Plant Recovery Update

<b>Reference / Te Tohutoro:</b>	22/623427
Report of / Te Pou Matua:	Michael Croucher, Senior Programme Manager, michael.croucher@ccc.govt.nz
General Manager / Pouwhakarae:	Jane Davis, GM Infrastructure, Planning & Regulatory Services, jane.davis@ccc.govt.nz

# 1. Summary

- 1.1 This report provides an update on the recovery activities following the Christchurch Wastewater Treatment Plant fire in November 2021.
- 1.2 At the Finance & Performance Committee on 28 April 2022 it was resolved that fortnightly updates would be provided to either the Finance and Performance Committee or Council.
- 1.3 This report includes a summary of the activities presented by staff to the Council meeting on 12 May 2022. It also outlines the proposed measures to support the people most affected by the odours being generated by the plant.
- 1.4 Staff will provide a presentation to Council in support of this report with the activities that have been undertaken since that meeting, those currently underway and next steps.

# 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

- 1. Receives the information in this update.
- 2. Agrees the community support package as outlined in the report, up to the value of \$1M.
- 3. Notes the support package will be funded from operational surpluses.

# Key activities presented to Council on 12 May 2022

#### Filter Media Removal Contract

- 2.1 Southern Demolition & Salvage Limited were awarded the contract to remove the media from the Trickling Filter structures on 11 May 2022.
- 2.2 Machinery began arriving on site 12 May 2022 with media removal scheduled to start 6 June 2022.
- 2.3 The media material is scheduled to be completely removed by early Spring 2022.

#### The Recovery Actions (25 March till now)

- 2.4 Approval to remove the filter media from the trickling Filters was received from our insurers on 25 March 2022.
- 2.5 25 March 5 April; procurement options investigated to ensure that we are still meeting requirements under Council's procurement process and Office of the Auditor General best practice guidance.
- 2.6 Executive Team briefed on 6 April and decision on procurement options made 11 April.
- 2.7 13 April meeting with preferred contractor held to discuss requirements.



- 2.8 14 28 April; contractor securing sub-contractors and suppliers. At same time Council staff were preparing contract documentation.
- 2.9 Finance and Performance Committee meeting with project briefing and deputations held 28 April.
- 2.10 Proposal received from contractor on 28 April, with staff review completed 2 May.
- 2.11 General terms and conditions of contract finalised 3 May.
- 2.12 Informal briefing to the Insurance Subcommittee on insurance matters given on 6 May
- 2.13 10 May; Insurance Subcommittee meeting (with morning site visit to CWTP).
- 2.14 Letter of award issued to contractor 11 May.

#### **CWTP Interim Operations Update**

- 2.15 The temporary aeration basins now have aerators installed and are operationally online aerating settled sewage. The system still requires pumps to be delivered from Sweden (estimated departure date 19th May, installation end of June). Once these pumps have been installed, the clarifiers can be brought back online and the system is then fully available. Once this is established and stable, the biomass will begin to grow and treat the sewage, thereby replacing the treatment process which was previously undertaken by the trickling filters.
- 2.16 Electrical conduits, cabling and transformers and controls are being installed as they arrive from overseas.
- 2.17 Two additional surface aerators with supporting infrastructure have been installed on Oxidation Pond 1.
- 2.18 The Trickling Filter bypass pipe is nearing completion.
- 2.19 Underground critical services have been clearly identified to ensure that ongoing operations are not compromised with the pending removal process.
- 2.20 Operational documentation being tested and updated as adaptations are implemented.
- 2.21 Operational laboratory established, onsite mini laboratory to be used by site operations staff to provide rapid test results.
- 2.22 We have fast tracked the scheduled replacement of the site's Telehandler with a more reliable unit so we can rapidly change out any aerator breakdown with a critical spare.

#### **Environmental Monitoring**

- 2.23 Staff have been fully trained to take air samples, which will be analysed and results published regularly in collaboration with Environment Canterbury and Community and Public Health.
- 2.24 Regular scheduled meetings with specialists from Environment Canterbury and Community and Public Health have been set up to ensure cross agency collaboration on public health and environmental issues.
- 2.25 We are also engaging with external specialists to provide assessments and advice on monitoring results.

#### **Insurance Cover**

2.26 The Waste water treatment plant is insured under the Council's above ground asset policy which covers material damage and business interruption insurance.



- 2.27 The Trickling Filters have an insured value of \$90 million.
- 2.28 Business Interruption cover of \$10 million is available for increased costs of operations and \$5m for assessing and preparing claims. \$10m initial payment received late November 2021.

#### **Future Process Options Assessment**

- 2.29 A consultant was appointed late April to undertake an options assessment for replacement of the Trickling Filters. The work will be delivered in four packages; establishment of treatment plant capacity baseline (pre-fire), new technology options from around the world to replace the Trickling Filters, assessment of options for best reduction in greenhouse gas emission and options assessment for increased treatment capacity to accommodate future population and business growth.
- 2.30 The consultant will also be asked to investigate treatment options that would not require discharge to a water body.

#### **Community Support**

- 2.31 Council was invited to attend a community led meeting on 13 May at Bromley community centre.
- 2.32 Wellbeing workshops have been promoted to be run by an independent health provider on 25 May and 1 June.

#### **Our Communication Approach**

- 2.33 A flyer was distributed to over 3,000 immediate households in the neighbourhood surrounding the treatment plant.
- 2.34 Half page advertisements were running in local suburban papers containing the same information as the flyer.
- 2.35 Three Newsline and three e-newsletters have been published.
- 2.36 Air quality findings and report was published on the Council's website.

#### Reporting

- 2.37 We are reporting fortnightly to Council and Finance & Performance Committee meetings covering the operational status of the plant, actions taken since the last report, actions underway and next steps.
- 2.38 Monthly reporting to the Insurance Subcommittee covering contractor performance and detailed reporting on insurance matters.
- 2.39 We will also be reporting to Health & Safety and Audit & Risk Committee meetings on matters relating to health and safety and risk.

#### 3. Proposed Community Support Package

- 3.1 At its 28 April 2022 meeting, the Finance and Performance Committee noted the impact of the odour from the treatment plant on residents and requested advice from staff on ways that support could be provided (FPCO/2022/00018).
- 3.2 Councillors asked that this advice include the establishment of a fund to support the provision of financial support to residents most affected by the odour. At a community meeting on 13 May 2022, residents also asked for support to alleviate what they described as financial and psychosocial impacts of the odour. Councillors present at the



community meeting reiterated their desire to provide assistance to alleviate some of the burden on the residents.

- 3.3 Council has worked with community and government partners to identify a process to:
  - a) Provide financial support for households most affected by the odour.
  - b) Provide information and connections to other support available in the community
  - c) Facilitate access to information.
- 3.4 It is proposed that Council provides a small financial contribution to households in the most affected area (3018 households). This area is bounded by Buckleys Road, Pages Road, State Highway 74, and Linwood Avenue. In exceptional circumstances other people just outside the defined area affected by the odour may receive some support, but this will be determined on a case by case basis.
- 3.5 The contribution is to assist covering costs for residents related to the odour, including laundry services, doctor appointments, vet appointments, heat pump cleaning, the purchase of appliances and firewood, and increased power use. There will be controls put in place to ensure only those eligible will receive the support. There will be an audit trail created.
- 3.6 Community partners will allocate the funding, on request from households.
- 3.7 Council considered providing this support via a rates rebate but this is not proposed as it would target property owners rather than all residents (i.e. renters).
- 3.8 The community support package also includes working with local schools, early childhood education providers and community agencies to provide other support and activities to mitigate the stress on the community and ensure access to information.
- 3.9 It is proposed that up to \$1 million be allocated from the forecast surplus in the F22 budget to the community support package. Staff will provide more details of the support package at the Finance and Performance meeting.
- 3.10 Partners are lined up to provide this service directly to claimants on confirmation of the recommended funding amount and source of funds, anticipating this would be available from 30 May 2022.

#### 4. Current activities and Next Steps

4.1 A presentation from staff will be provided at the meeting on the activities that have been undertaken since the Council meeting on the 12<sup>th</sup> of May and the next steps.

#### 5. Attachments / Ngā Tāpirihanga

There are no attachments for this report.

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
Not applicable	



# Confirmation of Statutory Compliance / Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002). (a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

# Signatories / Ngā Kaiwaitohu

Author	Michael Croucher - Senior Programme Manager
Approved By	Jane Davis - General Manager Infrastructure, Planning & Regulatory Services



# 8. Key Performance Results April 2022

Reference Te Tohutoro:	22/578534
Depart of To Dou Matura	Peter Ryan, Head of Performance Management,
Report of Te Pou Matua.	peter.ryan@ccc.govt.nz
General Manager	Lynn McClelland, Assistant Chief Executive
Pouwhakarae:	lynn.mcclelland@ccc.govt.nz

#### 1. Brief Summary

- 1.1 The purpose of this report is to track delivery of organisational performance priorities set out in the 2021-31 Long Term Plan, to target and within budget. The key organisational performance measures include:
  - 1.1.1 Service delivery
  - 1.1.2 Capital projects (planning and delivery)
  - 1.1.3 Finance
- 1.2 Organisational performance forecasts as at 30 April 2022 show decline for Level of Service and both capital project delivery targets. The capital planning FY2024/25 target remains stable, while FY2023 target has been met. The operating budget remains positive and stable while capital programme financial performance continues to decline.
- 1.3 This remains a relatively positive series of forecasts, given the impacts of COVID-19 on level of service delivery. There are also supply chain delays impacting Council's capital programme delivery. These effects are being felt nationwide.
- 1.4 The minor forecast variations from previous years for these results shows that Council's mitigation strategies to deal with Covid-impacts have been largely successful to date.

Organisational Performance Summary	Target	Forecast Actual / change	Forecast Result against Target
Service Delivery			
Deliver Community Levels of Service to target	≥85%	79.3% 🔻	×
Capital projects (planning and delivery)			
Delivery complete' milestones (whole of life)			
Deliver Watchlist projects	≥90%	85.3% 🔻	×
Deliver Non-Watchlist projects	≥85%	77.4% 🔻	×
Capital programme planning			
FY2023 funding budgets allocated by 1 <sup>st</sup> March 2022	≥90%	95.3% ↔	$\checkmark$
FY2024/2025 funding budgets drawn down by 1 <sup>st</sup> May 2022	≥90%	64.8% ↔	×
Finance			
Operational budgets are actively managed within approved opex budget	100%	100.0% $\Leftrightarrow$	$\checkmark$
Deliver overall capital programme to approved budget	=/-10%	-24.4% 🔻	×

# 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

1. Receives the information provided in the Key Performance Results for March 2022.



# 3. Service delivery

#### ELT Goal: Deliver 85% Community Levels of Service to target

**Community Level of Service Delivery** 



- 3.1 Community levels of service (LOS) year-end forecast as at April is **79.3%** against the performance target of 85%. This is a decline of 3.3% from March 2022.
- 3.2 This April forecast is 3.4% below the result from this time last year and lower than last year's final result (81.6%).
- 3.3 The restrictions of COVID-19 response levels (New Zealand remains at 'Orange') continue to impact the number of people using the Council's facilities, services and programmes, such as Art Gallery, Akaroa Museum, Libraries, Recreation and Community Centres.
- 3.4 Impacts are also noticeable in some regulatory services, such as increases in consent volumes leading to delays in consent processing. Extensive effort around recruitment and contracting has been underway for some time to provide the additional capacity needed.
- 3.5 This year's resident satisfaction surveys were released during the month with 25 of 38 survey questions achieving target.
- 3.6 For further details regarding LOS exceptions, refer to managers' comments in **Attachment A**.
- 3.7 The scatter diagram below is an overview of the performance of the top-ten activities as at April 2022.
  - 3.7.1 The vertical y-axis shows service delivery (LOS) performance.
  - 3.7.2 The horizontal x-axis shows budget over/underspend.





- 3.8 Since the beginning of this financial year, the majority of activities continue to cluster around the 'sweet spot' delivering their LOS to target and on budget.
- 3.9 Similar to March reporting, the activities requiring focus are Transport, Water Supply, Solid Waste and Resource Recovery, Recreation, Sports, Community Arts and Events and Parks Heritage and Coastal Environment

#### Performance by Activity Table - Forecast April 2022

					<b>Community Levels</b>		
	Net Cost * (Opex)			of Service			
Activities	Full Year	Full Year Plan	Carry Fwd	**Variance	% Variance after	%	
	Forecast \$000	\$000	\$000	after C/Fwd	C/Fwd	Delivery	Total #
Water Supply	27,900	27,899	0	-1	-0%	56%	16
Wastewater Collection, Treatment and Disposal	32,492	30,992	0	-1,500	-5%	91%	11
Stormwater Drainage	13,524	15,024	0	1,500	10%	100%	10
Flood Protection and Control Works	2,712	2,712	0	0	0%	100%	5
Strategic Planning and Policy	17,909	18,680	400	371	2%	100%	17
Economic Development	16,408	16,353	0	-55	-0%	93%	15
Transport	29,993	28,031	400	-2,362	-8%	61%	18
Solid Waste and Resource Recovery	41,413	44,220	0	2,807	6%	75%	8
Regulatory and Compliance	-345	3,450	0	3,795	110%	71%	28
Parks, Heritage and Coastal Environment	36,357	37,194	366	471	1%	78%	23
Housing	-7,089	-6,785	0	304	4%	100%	5
Governance	9,402	9,802	0	400	4%	80%	5
Citizens and Customer Services	9,110	8,993	0	-117	-1%	88%	8
Civil Defence Emergency Management	1,414	1,403	0	-11	-1%	75%	4
Community Development and Facilities	14,493	15,041	772	-224	-1%	100%	5
Christchurch Art Gallery	7,126	6,935	0	-191	-3%	33%	6
Canterbury and Akaroa Museums	8,663	8,726	0	63	1%	80%	5
Libraries	35,016	34,850	5	-171	-0%	100%	10
Recreation, Sports, Community Arts and Events	17,363	15,766	554	-2,151	-14%	67%	9
Performance Management and Reporting	0	0	0	0	0%	100%	5
Net Cost	313,861	319,286	2,497	2,928	1%	0.0%	213

\*Net Cost - excludes depreciation, corporate overheads and interest.

\*\* Negative variance means overspend or under-recovery

# 4. Capital projects, planning and delivery

#### ELT Goal: Deliver 90% Watchlist capital projects to 'delivery complete' milestones

#### ELT Goal: Deliver 85% non-Watchlist capital projects to 'delivery complete' milestones

- 4.1 Watchlist project performance is forecast at **85.3%** (target **90%**), this is a decline of 2.9% from the March report but well ahead of the previous year's forecast at the same period. A total of 5 projects are forecast to not meet milestone baseline target date.
- 4.2 Forecast Non-Watchlist project delivery has declined to **77.4%** (target **85%**).
- 4.3 Supply chain delays and construction price escalation remain a concern nationwide and are risks to the delivery of the Council's capital programme.
- 4.4 For further information and underlying detail, refer to the detailed Capital Project Performance Report April 2022.



Forecast Capital Project Delivery

Christchurch City Council

#### Forward view of capital delivery performance for the LTP (financial)

4.5 This is an overview of capital delivery in the last three years against plan, plus capital delivery planned for the first three years of the LTP 2021-31.



- 4.6 Figures are updated for 2022/23 and 2023/24, per the adopted Draft Annual Plan (24 February 2022).
- 4.7 There has been stability of delivery year-on-year for projects CCC is responsible for delivering (green line total spend), ranging consistently between **\$390m to \$409m** spend per annum over the previous 3 years.
- 4.8 For this year (year 1 of the LTP 2021) the total programme amount set for CCC to spend (core plus externally funded) was \$487m. This excludes spend for projects CCC is not responsible for Parakiore and Te Kaha/CMUA.
- 4.9 The April 2022 forecast for capital delivery (core plus externally funded) in the Finance Report is \$350m which equates to **71.9%** of the capital budget. This excludes Parakiore and Te Kaha/CMUA). (Note this refers to % capital spend, as distinct from capital milestone delivery % in 4.1 and 4.2)
- 4.10 Under the Draft Annual Plan 2022/23, future year's CCC delivery programmes for 2022/23 and 2023/24 are currently set at **\$498m and \$565m** (blue line again excluding Te Kaha and Parakiore).
- 4.11 This means there are clear risks around deliverability for these future years, given the consistency of spend these last 4 years (approx. \$400m pa), plus the challenges of supply of materials, skills, and cost escalation that will impact both 2021/22 and 2022/23, and potentially the years beyond.
- 4.12 For more detail refer to the Financial Performance and PMO Reports April 2022.



# ELT Goal: Ensure capital planning for FY23 funding programme budgets allocated, 90% by 1 March 2022.

# ELT Goal: Ensure capital planning for F24 & FY25 funding programme budgets drawn down, 90% by 1 May 2022.

- 4.13 Capital planning targets are intended to monitor the draw-down of capital funding programme budgets in years 2, and 3 and 4 of 2021-31 LTP. This helps the business plan and prepare for future capital project delivery, in order to effectively implement the LTP.
- 4.14 **95.3%** of FY 2022/23 funding programme budgets have been allocated, meeting the target for **90%** projects initiated to be allocated by **1st March 2022**.

**64.8%** of FY2024/FY2025 funding programme budgets has been drawn down in CPMS. The target is for **90%** funding programme budgets drawn down by **1st May 2022**. There remains some time for the business to achieve target.

# 5. Finance

#### ELT Goal: Demonstrate value for money and actively manage our operational budgets.

#### ELT Goal: Deliver overall capital programme to approved budget, =/ -10%.

- 5.1 There is currently a \$23.1 million surplus forecast for the year.
- 5.2 The operational surplus is currently \$32.2m better than budget, forecast to reduce to 30.3m (\$23.1m after signalled carry forwards). The forecast (after signalled carry forwards) has improved slightly by \$0.7m from last month.
- 5.3 Capital programme is forecast variance at -24.4% (based on project manager forecasts), outside the organisations performance target of between 0% to -10%. More detail is available in the Capital Programme Performance Report.

# Attachments Ngā Tāpirihanga

No.	Title	Page
A 🕂 🛣	LOS Exceptions Commentary April 2022	34

Additional background information may be noted in the below table:

Document Name	Location / File Link
Nil	Nil

# Confirmation of Statutory Compliance Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002). (a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.



(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

# Signatories Ngā Kaiwaitohu

Author	Johan Jacobs - Senior Business Analyst
Approved By	Peter Ryan - Head of Performance Management
	Lynn McClelland - Assistant Chief Executive Strategic Policy and Performance



Level of Service Exceptions Forecast Period Ending: 30 Apr 2022

#### Deliver 'Community' Levels of Service to target

S Levels of service which will fail to meet target.

• Levels of service for which intervention is required to meet target.

#### **GOA Communities and Citizens**

LTP21: 3.0.1 The Art Gallery attracts residents and visitors into the city, contributing to the	
identity, wellbeing and activation of the city.	
Maintain visitation at 95% of the average of the last 5 years, or higher	
169.692 actual. Target is 254.642. Sitting at 67% of year to date target.	
Due to Covid closure Aug-Sep 21, the ongoing lack of international visitors and no visitors from	
the North Island during current Covid levels the Gallery is tracking at less visitor numbers than	
required to meet this annual target. The effect of Omicron now in the community is also having a	
large impact on visitor numbers. While we have seen a marked improvement in visitor numbers in	
April due to restrictions easing this is not enough to make a difference.	
LTP21: 3.0.6 Residents and visitors have access to a nationally significant art gallery	
Maintain: Hours of opening: No fewer than 2,749 hours pa	
Due to Covid closures 18/8-8/9 incl the Gallery will be open 2710 hours in the 21_22FY. Target is	
2749	
Will not meet target due to Covid closures	
LTP21: 3.0.9.2 Deliver a diverse range of Public and school-specific programmes to promote and	
educate the importance of the visual arts	
Average of at least 22,000 people attend advertised public programmes per annum	
893 attended public programmes. YTD = 8,687	
Small attendances despite considerable interest on Facebook. The school holiday programme	
numbers were kept to a maximum of 12 per session because of Covid over 7 days. 530 took up the	
shared trail around	
LTP21: 3.0.9.1 Deliver a diverse range of Public and school-specific programmes to promote and	
educate the importance of the visual arts	
Average of at least 11,000 attend school specific programmes per annum	
266 attended school programmes.	
This was a short month owing to school and public holidays. Please note error in YTD March.	
-	

#### **Canterbury and Akaroa Museums**

Measure:	LTP21: 3.3.2 Visitors per annum to Akaroa Museum
🛇 Target:	Maintain visitation of at least 95% of the average of previous 3 years.
Actual:	Total visitors year to date - 13,335
Comments:	April visitor total was 1,788, lower than last April and well below target.



<b>Citizens and Custo</b>	omer Services	
Measure:	LTP21: 2.6.4.1 Citizen and Customer expectations for service response are delivered in a timely	
	manner	
😣 Target:	Telephone enquiries have an average speed to answer of no more than 120 seconds	
Actual:	YTD: 131 seconds	
	Full year forecast: to 30 June - 128 seconds	
Comments:	The end of year projection is showing a forecasted ASA of 128 seconds. Given we only have two months left in the financial year it is unlikely we will have the call volume and staff resource to pull the LOS back to 120 seconds.	
	A total of 26,425 calls were received this month. Absence due to sickness has presented challenges this month, with our daily sick leave exceeding more than 10 staff absent on multiple occasions. COVID related sick leave has been a common theme.	
	Ongoing attrition and shortfall in staffing levels. Staffing levels are being addressed with another recruitment centre held on the 14th of April, offers of employment given to 5 successful candidates. This induction group is scheduled to start on the 30th of May. Further recruitment centres are planned for in June. In addition a comprehensive detailed analysis has confirmed the requirement for an additional 2FTE to support the phone channel. An appropriate request has been included in the annual plan financials for approval. "Courtesy call-back" was utilised by 1672 customers.	
	ASA Breakdown April 2022: The majority of calls (69%) were answered in under 2 minutes. Some higher wait times were observed intermittently throughout the month with higher call volumes and sick leave being the primary factors.	
	% calls answered in less than 2 minutes = 69.9% (15.980 calls)	
	% calls answered between $2 - 5$ minutes = 15.97% (3651 calls)	
	% calls answered above 5 minutes = 14.1% (3232 calls)	
Measure:	LTP21: 2.5.4.1 Build resilience through public education and community engagement	
😣 Target:	programmes At least 60 CDEM public education activities occur annually, including tsunami public education and Stan's Got a Plan school programmes	
Actual:	30 completed YTD.	
	We now have a full complement of Community Resilience Coordinators in the team. We are reviewing the methodology for delivery and expect to have significantly increased rigour around identifying 'at risk' communities and connecting with them. We have been at 33% capacity for one year and do not have enough time to complete the 50% of the target that remains this FY	
	Staff training is required, members of the public are reluctant to meet in the COVID environment, and the CDEM message is being diluted among all the other COVID and mental health resilience campaigns. Fatigue is a factor.	
	impact is measured.	



#### GOA Parks, Heritage and Coastal Environment

Parks Heritage Manag	gement
Measure:	LTP21: 6.9.1.6 To manage and maintain Parks scheduled heritage buildings
😣 Target:	Resident satisfaction with presentation of Parks scheduled heritage buildings:>= 55%
Actual:	2021/2022 survey results 50%
Comments:	Satisfaction with the management and maintenance of Parks Heritage buildings has increased slightly since last year to 50% but is slightly below target (55%). There are no specific breakdown of results or comments available to review about these measures so it is difficult to understand these results. We need to ensure that the results are not tainted by privately owned heritage buildings, such as the Christchurch Cathedral for example. The repair programme for earthquake damaged heritage buildings continues to track well. Some high profile buildings such as the Provincial Chambers and Robert McDougall Art Gallery are subject to further decisions.
Parks and Foreshore	
Measure:	LTP21: 6.4.4 Overall customer satisfaction with the presentation of the City's Cemeteries.
😣 Target:	Cemeteries presentation: resident satisfaction >=85 %.
Actual:	Actual at 72%
Comments:	Survey results just in, goal not met , off 8% from previous year.
Remedial Action:	Will look at detail from survey to review allocation of resources so that any poor performance can be addressed.
Measure:	LTP21: 6.8.1.6 Overall Regional Sports Organisation satisfaction with the standard of the city's
0 -	Council provided sports surfaces
Straget: Actual:	Satisfaction >=75% Resident Satisfaction survey result in Actual 60 % a reduction by 10 %(significant).
	The target score was met for playing surface fit for purpose,(70%) but not condition ( 50%). We may have a questionable result here as the survey size is 10 .
	Also the results are predominately from summer code and they would have been influenced by the extremely high growth conditions, 2.5 times average rainfall.
Comments: Remedial Action:	I think we will need to look into a different methodology or pulse surveys for results. Discuss with RSO's the best way to get meaningful info.
Measure:	LTP21: 6.8.4.2 Overall customer satisfaction with the presentation of the City's Parks
S Target:	Inner City presentation: resident satisfaction >=80%
Actual:	76% survey result, no specific comments other than a general comment of reduction in
Comments:	Whilst the result is below expectations given the challenges with COVID, resources and staffing and a well above average wet summer and the resultant growth, the team has done the best they could. Replacement parts for playground equipment currently has up to 26 week waiting period, the same is true for some other equipment suppliers. We are just backfilling one of the staff members who has been on long term absence.
Measure:	LTP21: 6.0.3 Overall customer satisfaction with the presentation of the City's Community Parks
<ul> <li>Target: Actual: Comments: Remedial Action:</li> </ul>	Community Parks presentation: resident satisfaction >=60 % Actual at 56%, below goal Survey results just in, shows below goal by 4%, similar to last year Will review survey results and focus resources and our approach to deliver of areas that
	underperformed.


Measure:	LTP21: 7.0.1.1 Provide citizens access to fit-for-purpose network of recreation and sporting
	facilities
😣 Target:	38 x Recreation & Sport facilities are available for use (Te Pou Toetoe open)
Actual:	There continue to be temporary closures within Recreation and Sport Centres as staff test
	positive for COVID19 or have had to isolate as household contacts.
Remedial Action:	Continue to support staff as they test positive for Covid19 or isolate as household contacts.
	Mitigation measures remain in place to minimise the spread of Covid19
Measure:	LTP21: 7.0.2.2 Provide well utilised facility based recreational and sporting programmes and
😣 Target:	The number of participants using multipurpose recreation and sport centres, outdoor pools and stadia at least 4.4 million
Actual:	The impact of the COVID19 requirements means we will not meet the participation target and are currently 1,099,352 participations behind plan (Actual YTD 3,080,981 vs Plan YTD 4,180,333)
	Fitness participations are down 19%, Aquatics down 24.7%, Outdoor Activities down 37.7%, Indoor activities down 37.4%,
Comments:	The impact of COVID19 means we will continue to slip further behind the participation target with the transmission of Omicron in the community.
Measure:	LTP21: 2.8.5.1 Produce and deliver engaging programme of community events.
😣 Target:	A minimum of 11 events delivered annually of which three are marquee events. (Outdoor events subject to weather)
Actual:	The following events have been cancelled due to COVID19 H&S requirements: New Years Eve, Summer Theatre, Summer Sundays, Kite Day, Summer Nights, and Family Festival.
Public Information ar	nd Participation
Measure	TP21: 4.1.10.1 We provide effective and relevant external communications marketing and
	engagement activities to ensure residents have information about Council services, events, activities decisions and opportunities to participate
😣 Target:	67% of residents are satisfied that our communications, marketing and engagement activities are effective, helpful, and relevant.
Actual:	2021/2022 survey result 65%.
Comments:	External communications saw a very disappointing 17% decrease in satisfaction to 65%, and failed to meet its level of service target of 67%. While this is a significant drop on the 2020-21 result, it is more in line with previous years' results. The 2020-2021 result of 82% was, in reality, ar anomaly, given that previous years' results have been in the low 60s and high 50s.
Remedial Action:	Underway with benchmarking effectiveness of our communications channels - this work is expected to be completed by the end of 2022. More deliberate and regular monitoring and reporting will help us track trends, and highlight areas that are doing well, and areas that require improvement.
	We remain committed to delivering timely, accurate, relevant communications that are resident- focused and easily understood. We also remain committed to a culture of continuous improvement, with a willingness to trying new channels and tactics to reach our audiences. Most recently, we have been trailing online webinars as a way of connecting with more people from different parts of the city and peninsula.



Measure:	LTP21: 4.1.9 We provide advice and support in community engagement, and consultation planning and delivery, to teams across the organisation and to Elected Members
😣 Target:	Percentage of residents who feel they can participate in and contribute to Council decision- making. 41%
Actual:	2021/2022 survey results 26%
Comments:	26% satisfaction is disappointing, but in line with previous years. Since 2016 we have only achieved our level of service once (2017).
Remedial Action:	Staff are working with the Engagement Working Group. The purpose of the Group is to make recommendations to the Council on opportunities to improve awareness of and community participation in decision-making processes, including the 2024 Long Term Plan.
	Outputs of the Group include an engagement action plan and a pre-engagement strategy for the draft Long Term Plan.

# **GOA Regulatory and Compliance**

<b>Building Regulation</b>	
Measure:	LTP21: 9.1.9 Audit Building Warrant of Fitness to ensure public safety and confidence
😣 Target:	Audit 20% of building stock
Actual:	18 Audits were carried out in April
	143 Audits have been carried out YTD
Measure:	LTP21: 9.1.1 Grant Building Consents within 20 days working days
Target:	The minimum is to issue 95% of building consents within 19 working days from the date of acceptance
Actual:	43.9% of consents have been issued within 19 working days for the month of April
	37.7% of consents have been issued within 19 working days Financial YTD
Comments:	The volume and complexity of building consent applications remains high during April.
Measure:	LTP21: 9.1.4 Ensure % satisfaction with building consents process
Target:	75% satisfaction
Actual:	The customer satisfaction for the month of April was 78.42%
Measure:	LTP21: 9.1.7 Grant Code Compliance Certificates within 20 working days
Target:	Issue minimum 95% of Code Compliance Certificates within 19 working days from the date of
	acceptance.
Actual:	92.5% of Code Compliance Certificates were granted within 19 working days for the month of
	April. 87.8% of Code Compliance Certificates were granted within 19 days for the financial YTD
Comments:	Applications for Code Compliance Certificates remain steady
<b>Resource Consenting</b>	
Measure:	LTP21: 9.2.1 % of non-notified resource management applications processed within statutory
	timeframes.
😣 Target:	99% within statutory timeframes.
Actual:	62% of applications were processed with the statutory timeframe and 78% of applications YTD
Comments:	Applications received continue to be at very high levels resulting in a backlog of applications to
	process. It is unlikely the backlog will reduce in the short term.
<b>Remedial Action:</b>	Outsourcing of applications to consultancies is being maximised.
	Recruitment is continuing.
	Process efficiencies continue to be explored but are now largely maximised.
Measure:	LTP21: 9.2.18 % of notified resource management applications processed within statutory
	timeframes.
😠 Target:	99% within statutory timeframes.
Actual:	75% of applications were processed within the statutory timeframe for April.84% of applications
	have been processed within the statutory timeframe YTD
Remedial Action:	Same remedial actions are being implemented as for non-notified applications



### **Regulatory Compliance and Licensing**

	Measure:	LTP21: 9.0.8 The community is not subjected to inappropriate noise levels
X	Target:	90% of complaints in relation to excessive noise are responded to within one hour.
	Actual:	Of the 1156 calls that have been made about excessive noise, 1217 were responded to within one
		hour for the month. KPI for the month was 94.9%
	Comments:	Contractor is continuing with changes that were initiated to rostering to ensure there are officers
		dedicated solely to noise control work over weekends. These changes have resulted in a 6%
		improvement for April.
		The YTD result is currently 86.7% which is 3.3% below target.
	Remedial Action:	Continue to work with contractor to meet the KPI.
	Measure:	LTP21: 9.0.5 Food premises are safe and healthy for the public
0	Target:	98% of scheduled Food Control Plan verification visits are conducted.
	Actual:	1167 verifications completed YTD
	Comments:	Currently team is on target to achieve verification inspection level of service. Achievement of this
		goal is contingent on operators being available at scheduled inspection times.
	Remedial Action:	Team to ensure if there are gaps in their schedule these are backfilled by other verifications due
		to be completed this year.

### GOA Wastewater Collection, Treatment and Disposal

### Wastewater Collection, Treatment and Disposal

Measure:	LTP21: 11.0.1.16 Proportion of residents satisfied with the reliability and responsiveness of
	wastewater services
🛇 Target:	>= 67%
Actual:	Final result for year end is 59%

### **GOA Water Supply**

Water Supply	
Measure:	LTP21: 12.0.7 Average consumption of drinking water in litres per resident per day
😣 Target:	<= 220
Actual:	YTD =283
	April = 263
	March = 293
	February Actual = 285
	January Actual= 349
	December Actual = 298
	November Actual = 319
	October Actual = 274
	September Actual = 261
	August Actual = 241 July Actual = 247
Comments:	Demand is in line with previous years
Remedial Action:	Continue capital renewals as per approved Asset Management Plans, to manage network leakage rates.
	Newsline article: Christchurch households that regularly use large amounts of water will begin
	paving an extra charge from July next year to cover the cost of supplying
Measure:	LTP21: 12.0.1.13 Proportion of residents satisfied with reliability of water supplies.
Starget:	>= 75%
Actual:	Actual year end result 77%
Measure:	LTP21: 12.0.2.19 Proportion of residents satisfied with quality of Council water supplies
😣 Target:	>= 50%
Actual:	Actual for year end 46%



	Measure:	LTP21: 12.0.2.20 Proportion of Medium Hazard commercial connections >38mm diameter with
		compliant backflow prevention device tested within the last year
0	Target:	>=95%
	Comments:	Comments per December 2021; 95%* of High Hazard commercial connections with
		compliant backflow prevention device tested within the last year*
	<b>Remedial Action:</b>	Comments per December 2021; This level of service relates to all high hazard backflow
		prevention devices throughout the water supply network, Council owned and private.
		Private devices are required to be tested under the New Zealand Building Code through
		a building warrant of fitness process and provide a high level of confidence that these
		are tested (we are not currently able to identify if the device is high or medium hazard in
		Pathways at the moment) as its a legislative requirement. Council devices that have
		been installed and managed by Council are programmed to be tested on a yearly basis.
		* is to advise this is not an actual but a plan, actual figures will be available once the
		hackflow project is completed in early 2022.

Measure:	LTP21: 12.0.6 Percentage of real water loss from Council's water supply reticulated network
<ul> <li>Target: Actual: Comments:</li> </ul>	<= 24% 25.8% As at EO April 2022, there are 13,557,853 m3 water lost to leakage, based on a 5-yr rolling data. Total annual pump station flow ending April 2022 is 52,586,539 m3 extracted from WaterOutlook report. This comes to a percent leakage of 25.8%
Remedial Action:	The leakage rate is based on a 5-year rolling data. There is a reactive repair programme via third party provider that fixes identified leaks.
	To significantly reduce the leakage rate, a proactive leak repair programme must be done. This can be accomplished by installing meters in each of the 200 zones so that there is accurate measurement of water supply and consumption, and zones with the highest leakage rate can be prioritised for repairs. There is currently a test zone for this set up.
Measure:	LTP21: 12.0.2.2 Proportion of High Hazard commercial connections with compliant backflow prevention device tested within the last year
Target:	>=100%
Actual:	Comments per December 2021; 95%* of High Hazard commercial connections with
Comments:	compliant backflow prevention device tested within the last year* Comments per December 2021; This level of service relates to all high hazard backflow prevention devices throughout the water supply network, Council owned and private.
Remedial Action:	a building warrant of fitness Comments per December 2021; Continue with backflow project that includes reporting, integration and a register to improve reporting figures and confidence.
Measure:	LTP21: 12.0.2.9 Proportion of residents (with supplies of > 100 customers) supplied water
<ul> <li>Target: Comments:</li> </ul>	compliant with the DWSNZ bacterial compliance criteria 100% Comments per March 2022: Drinking Water Assessor stated on its Quarterly Compliance report: "Section 4 – Criteria 6A (DWSNZ S4.3.1(2)) – non-compliances relating to "maximum intervals exceeded" for the following zone – Northwest (CHR001NO). This relates to missed samples occurring on the 19th September 2021. A decision has been made to issue a "non-compliance" however given the DWSNZ compliance period is "One year" (DWSNZ 4.3 page 31) this effect on the whole year is unable to be officially qualified at this point in time."
Remedial Action:	Comments per March 2022: Final compliance statement will need to be assessed once the financial year is finished.



# GOA Solid Waste and Resource Recovery

Solid Waste and Res	ource Recovery
Measure:	LTP21: 8.0.3 Customer satisfaction with kerbside collection service
🛇 Target:	At least 80% customers satisfied with Council's kerbside collection service for each year
Actual:	Ongoing discussions with contractors to improve customer satisfaction with kerbside collections
	Survey results for 2021/2022 78%.
Comments:	Early discussions with contractor to introduce KPIs to improve customer service has commenced
Measure:	LTP21: 8.0.1 Recyclable materials collected by Council services and received for processing at the
	Materials Recovery Facility (MRF)
Target:	80kg (+40%/-10%) recyclable materials / person / year collected and received by Council services
Actual:	77.66 kg per person
Comments:	Post COVID lockdown in April 2020 40% of all truckloads of recycling were being sent to landfill
	due to containing contamination over 10%. By April 2022 this has been reduced to 12% being
	sent to landfill.
Remedial Action:	Council is continuing to address the excessive contamination issue with ongoing education, bin
	auditing and bin removals
A Transport	
Transport	
Measure:	LTP21: 10.3.3 Maintain customer perception of the ease of use of Council on- street parking
	facilities
😣 Target:	>=50% resident satisfaction
Actual:	This goal is determined by the Council's annual residents survey.
Comments:	The results of the annual residents survey was 49% so target not met.
<b>Remedial Action:</b>	Council parking staff undertook a small survey of 100 parking meter uses earlier in the calendar
	and 85% found that the meters were easy to use.
	To consider the outcomes provided in the residents survey.
Measure:	LTP21: 16.0.10 Maintain the perception that Christchurch is a walking friendly city
😣 Target:	>=85% resident satisfaction
Actual:	Annual Residents Survey Result 70% for FY 22
Comments:	FY21 Annual Residents Survey 74%, FY20 was 83%. The target of 85% looked achievable when
	target set pre-Covid.
<b>Remedial Action:</b>	There is a programme of work in the LTP #60377 to improve walking at key priority locations
	identified in the Network Operating Framework. This work will identify the interventions to
	improve the experience for pedestrians. Initial delivery package planning underway with
	prioritisation of programme planned for early 2022. The footnath renewal programme LTP #164
	has \$12 million for years EV22 to EV25 recognising the fact that we are still catching up from the
	earthquakes' legacy
	cartiquance legacy.



	Measure:	LTP21: 10.0.2 Increase the share of non-car modes in daily trips
$\bigotimes$	Target:	>=17% of trips undertaken by non-car modes
	Actual:	Last available data as per FY2018: 17%
		Unknown if the target will be met by end of year.
	Comments:	1. We do not have updated data and no indication for the timeframe for the survey by Waka
		Kotahi.
		2. A method and target change for this goal is included in the proposals from staff for the Draft
		Annual Plan 2022-2023.
		3. If the method and corresponding target change is adopted as part of the Annual Plan 2022-2023
		process, then the performance for the financial year does NOT meet the target as it is 32.5%
		against a target of 35%.
		2022-2023 Annual Plan staff proposal is to change the method of measurement and target FROM
		Ministry of Transport Household Travel Survey & >17% TO Annual Life in Christchurch Residents
		Survey & >35% . New target is proposed based on the trend alignment with the previously agreed
		LTP target (see Transport unit meeting agenda paper 20.9.2021)
		2021 Christchurch Residents Survey results are published. These show a decline in non-car
		modes. According to the survey, the non-car mode share is 32.5% against the proposed new
		target of 35%.
		The main decline is in Public Transport by 23% (1.3% decline in overall mode share) and in cycling
		by 10% (1.8% decline in overall mode share) since last year 2020 results.
		The decline is attributed to lower trips overall in the pandemic environment, particularly with the
		increased number of office workers having worked from home and a large decrease in public
		transport use due to concern regarding close proximity travel with strangers.
		Public Transport share is down across the board for all trip purposes.
		Cycling is the roughly the same for education and work purposes but considerably lower for other
		trip purposes. Walking is slightly higher for other trip purposes (excl. work and education) leading
		to slightly higher overall mode share.
	Remedial Action:	New method and target are proposed as part of the Annual Plan process which, if approved, will
		ensure continuity of surveys and provide higher reliability on accessing the data.
		If the new method and target is adopted remedial actions are required. The proposed target is
		not met according to the finalised Annual life in Christchurch survey results
		not met according to the imalised Annual the in christendren survey results.
		Remedial actions to increase non-car mode share are
		- focus on public transport which has recently benefited from central government's CRAF funding
		to bring forward some of the broader PT Futures business case projects.
		- continued construction and completion of bus lane projects (such as Lincoln Road peak hour
		bus lanes project currently at hearing panel stage)
		- continued construction and completion of major cycle ways as well as local cycle way
		connections projects.
		- continued work on increasing the walkability level of service.



	Measure:	LTP21: 10.5.41 Increase access within 15 minutes to key destination types by walking
$\bigotimes$	Target:	>=53% of residential land holdings with a 15-minute walking access
	Actual:	43%
	Comments:	No change since September 2021 due to reporting cycle (once a year).
		Actual shows a 9% decline from last financial year result and is 10% less than the 53% target of
		this FY .
		9% decline from last year is distributed as below:
		5.5 %: Process refinement, where walking speed input is changed from 5km/hr to 4km/hr,
		resulting in a reduction in walkable catchment size. This refinement makes the speed
		assumptions more demographically inclusive and aligned to those used for the Spatial Plan.
		Note: A request for a 5.5% target reduction will be included in proposals from staff for the Draft
		Annual Plan 2022-2023. This is to allow the target to be refined and adjusted to account for the
		change in walking speed in calculation method which has changed from 5km/hr to 4km/hr in
		order to reflect a broader demographic which the goal intends to benefit.
		3 %: Actual changes to the network with residential growth in inaccessible settings (i.e. new
		subdivisions)
		0.5 % : Closure of a key destination (Redcliffs supermarket closure).
		When 5.5% decline attributed to method change is taken out of consideration, the remaining
		3.5% decline (i.e. 48.5% against 53% target) suggests that we are unlikely to meet the target as we
		are unlikely to influence key services (food, health, employment, education) to open in the
		unconnected residential areas within the financial year.
	Remedial Action:	- Staff continue to contribute to the Christchurch Spatial Plan (The Otautahi Plan). Strategic
		policy, planning and delivery staff support and work towards greater integration between land
		use and transport which is required to increase walkability access to key destinations.
		Chaff and the second data was defined a second standard data between the transmission of the transmission of the
		- Stan continue to provide regulatory advice to private developments to ensure effective walking
		connectivity is provided for proposed commercial and residential developments.
		Within its indirect areas of influence. Transport Unit can:
		Initiate focused communications and education. Whilst unlikely to change the results for the EV it
		can improve public awareness in the medium and long term. For example the mapping used in
		calculating the walkable catchments can be made public to assist the public in their decision
		making for where they choose to live. This would need to be prioritised amongst other education
		and advocacy programmes
		In early November 2021, Transport staff presented at Christchurch Conversations, on the topic of
		15 minute neighbourhoods and shared the concepts and maps with the public. The maps have
		since been referred to by local politicians and urban design professionals.



Measure: Sarget: Comments:	LTP21: 16.0.1 Maintain roadway condition to an appropriate national standard, >=5% of the sealed local road network is resurfaced per year 1.6% of the entire network has been resurfaced YTD. This is projected to increase to 2% by the end of the financial year. The main reasons for not being able to deliver the required length of resurfacing are as below: - Covid-19 lockdowns - Supply chain issues due to Covid-19 - Abundance of pre-seal repairs due to the under-maintained status of road and backlog of the earthquake repairs. This delays the delivery of the road surfacing projects. - Final year of the 5-year maintenance contract causing delays in delivery - Staff changes through the Council Transport Unit and disruptions as a result
Remedial Action:	We are identifying new work streams for more efficient delivery of the resurfacing programme. It will include identifying those resurfacing opportunities where the works can be undertaken outside of the usual resurfacing season and extending the delivery season. This will also include opportunities to use new resurfacing materials and technologies. We are also improving our software and processes to be able to better manage our roading assets.
Measure: Target: Actual: Remedial Action:	LTP21: 16.0.9 Improve resident satisfaction with footpath condition >=40% resident satisfaction 35% We are continuing with the footpath resurfacing programme and addressing customer service requests in a timely manner. The programme for footpath renewals is being developed and staff are investigating cost effective options for collecting footpath condition data.
Measure: Target: Actual: Comments: Remedial Action:	LTP21: 16.0.8 Maintain the condition of footpaths >=80% footpaths rated 1,2 or 3 Due to the lack of operational funds, condition assessment for footpaths has not been undertaken for FY22. The condition of the assets is currently unknown. Due to the lack of operational funds, condition assessment for footpaths has not been undertaken for FY22. The condition of the assets is currently unknown. Funding for condition rating of footpaths is being sought through the annual plan process. Although condition rating results are not available, the footpath renewal programme is being implemented. This will have a positive effect on the condition survey has been undertaken.



# GOA Economic Development

Measure:	LTP21: 5.0.6 Citizenship Ceremonies for Christchurch based new New Zealand citizens' delivered
😣 Target:	Deliver a regular schedule of high quality Citizenship Ceremonies to confer citizenship for new
Actual:	New Zealand Citizens in Christchurch, within budget A Citizenship ceremony was held in July 2021.
Comments:	Given the Alert Level change in August last year, CIR had to cancel the ceremonies scheduled for August 2021.
	In September 2021, due to the COVID Delta outbreak, DIA instructed local governments nationally that ceremonies could be held only at the Alert Level 1, or Level 2 if the number of guests meets public gathering restrictions. Usually the Christchurch ceremonies have 350-400 people attending so couldn't be held at Level 1 or 2.
	In March 2022 DIA advised that ceremonies should remain on hold. CIR are requesting a DIA update post the April 2022 move to Orange status and lifting of restrictions on public gathering. The planned schedule of Citizenship Ceremonies will not be achieved by the end of the financial year, but the activity will remain within budget.

<b>Governance and decis</b>	sion-making
Measure:	LTP21: 4.1.29.2 Respond to requests for information held by Council in a manner that complies
	with the legislative processes and timelines set out in the LGOIMA
😣 Target:	Provision of information is in accordance with LGOIMA principles and requirements - 100%
Actual:	The Council received 58 LGOIMA requests.
	Current YTD - 756 requests.
	YTD the Council has met its obligations - 98.7% of the time (746 out of 756 requests)
Comments:	1 request was not responded to on time. Staff did not provide the information within the
	timeframe. A decision was made but owing to complexity of request and Covid-19 disruption this
	was delayed
Remedial Action:	Staff apologised and explained to the requestor. Demand on staff time has been particularly high
	during this period.



# 9. Financial Performance Report - April 2022

Reference Te Tohutoro:22/491571Report of Te Pou Matua:Bruce Moher, Acting Head of Finance, bruce.moher@ccc.govt.nzGeneral ManagerLeah Scales, General Manager Resources/CFO,<br/>leah.scales@ccc.govt.nz

# **1.** Brief Summary

- 1.1 The purpose of this report is for the Finance and Performance Committee to be updated on financial performance to 30 April 2022, including the current full year forecast, and to receive information relating to the Council's treasury and debtors risks, and insurance notifications.
- 1.2 Financial results to date and forecast remain positive.
- 1.3 The Treasury funding policy is in temporary breach, as signalled in the March 2022 Report and described in section 7. All other treasury risk positions are within policy limits.
- 1.4 There was a decrease in rates and general debt during the month.
- 1.5 There were no material insurance issues for the month.

# 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

- 1. Receives the information in the Financial Performance Report for April 2022.
- 2. Notes the breach of the Funding risk policy limit, likely until September/October 2022 and the staff advice supporting it.



# 3. Key Financial Statistics

	2020/21	Current Year	Draft 2022/23
Rating Units	175,617	177,350 (+1.0%)	178,830 (+0.8%)
Rating Base (CV)	\$114.0b	\$116.7b (+2.4%)	\$117.6b (+0.8%)
Total Rates	\$557.2m	\$594.7m (+6.7%)	\$634.1m (+6.6%)
Increase to existing payers	3.80%	4.97%	4.96%
Residential CV \$400k	\$2,312	\$2,417 (+4.54%)	\$2,531 (+4.74%)
CV \$509k (avg)	\$2,842	\$2,975 (+4.68%)	\$3,119 (+4.86%)
CV \$1m	\$5,239	\$5,500 (+4.98%)	\$5,780 (+5.10%)





Funding and Spending	for 2021/22 (\$m)

Expenditure		Revenue	
Сарех	634	Rates	595
Opex	501	Capital revenues	152
- interest	85	Fees and charges	145
Debt repayment	54	Dividends	20
Reserves	2	Interest	18
	1,276		929
The balancir	ng factor i	sborrowing	347

# Historic and projected gross debt level

Scale of Business		\$m		
Fixed assets and Infrastruc	cture	12,673		
Investments		3,211		
Cash and other	309			
Totalassets	16,193			
Less Debt	15%	2,366		
Less other liabilities	3%	517		
=Equity	82%	13,310		

Item No.: 9



# 4. Financial Overview

- 4.1 Financial information reported covers two key areas.
  - 4.1.1 Operational (expenditure and revenue) covers the day to day spend on staffing, operations and maintenance, and revenues.
  - 4.1.2 Capital covers the capital programme spend and funding relating to it.
- 4.2 The forecast operating surplus has increased slightly (\$0.7 million) from that reported last month to \$23.1 million. It is driven by Recreation and Sport COVID revenue exposure reducing \$0.3 million, with smaller various savings forecast throughout the organisation contributing to the remainder.
- 4.3 \$1.55 million of the above forecast surplus needs to be applied to the COVID-19 Business Recovery Plan approved by Council.
- 4.4 The intention is to recommend use of \$7.25 million of the forecast surplus to avoid the current year's planned COVID borrowing.
- 4.5 After applying sections 4.3 and 4.4 above the surplus reduces to \$14.3 million. It is recommended that \$4.1 million of this is applied against repayment of remaining COVID debt.
- 4.6 COVID-19 Restrictions Impact the following are the material expected forecast impacts, an improvement of \$0.3 million from the March report reflecting the reduced revenue exposure in Recreation and Sport. The overall Council COVID impact is now forecast at \$6.1 million.

Activity	Reduced Revenue	(\$m)	Expenditure Impacts	(\$m)
Recreation & Sport	Entry/Usage fees	1.8	Additional security	0.3
	Casual rentals/hire revenues	0.3	Event cancellations	(0.2)
			Casual Labour decrease	(0.1)
			(lockdown period)	
Libraries	Lower fees & charges/facility	0.5	Additional security	0.4
	hire/rent relief			
Parks	Lower shop sales & rental relief	0.4	Lower stock purchases	(0.1)
Art Gallery	Lower shop sales/donations/facility	0.2		
	hire			
Citizen & Customer Service	NZ post revenues decrease	0.1		
Community Development	Community Facilities hire revenues	0.1		
Transport	Decrease in fines	1.0		
	Parking	0.9		
	Rental relief	0.2		
Corporate/Internal services	Petrol Tax	0.1	Temporary staff costs/Masks/	0.2
			Rapid tests/Legal	
	Total Revenue Impact	5.6	Total Expenditure Impact	0.5

4.6.1 Favourable forecasts across other areas of the organisation cover the above impact.

# 5. Operational Position

5.1 Operational revenue exceeds expenditure as it includes rates revenue for capital renewals and debt repayment. This revenue is referred to below as 'Funds not available for Opex' and removed from the Operational result below.

	Year to Date Results			Forec	ast Year En	After Carry Forwards			
\$m	Actual	Budget	Var	Forecast	Budget	Var	Carry Fwd	Var	
Revenues	(767.5)	(741.7)	25.8	(822.4)	(793.3)	29.1	-	29.1	
Expenditure	507.5	513.7	6.2	616.4	621.8	5.4	10.6	(5.2)	
Funds not available for Opex	176.2	176.4	0.2	175.7	171.5	(4.2)	(3.4)	(0.8)	
Surplus	(83.8)	(51.6)	32.2	(30.3)	-	30.3 🔵	7.2	23.1	



# 5.1 Brief summaries of the surplus, revenues, and expenditure are highlighted below.

### Surplus

The operational surplus is currently \$32.2 million better than budget, forecast to be \$30.3 million by yearend (\$23.1 million after signalled carry forwards). Major carry forwards signalled in the forecast include the claims preparation and management of legal proceedings (\$3.4 million – borrowed for rather than rates funded), holiday pay remediation payments (\$3.3 million), operational costs associated with the earthquake repair programme (\$1.1 million), and Rockfall grants to cover future claims (\$0.9 million). Smaller carry forwards contribute to the remainder of the \$10.6 million forecast.

# Key forecast result drivers after carry forwards:

Higher subvention receipts (\$9.2 million), Recycling processing fee savings and prior year rebate (\$6.4 million), favourable net interest/dividend revenues (\$4.6 million), higher Regulatory and Compliance volumes (\$4.5 million – net of resourcing costs), higher rates revenue (\$2.8 million), personnel savings (\$2.6 million), Burwood Landfill continued operations (\$1.7 million), and insurance savings (\$1.1 million).

Partially offset by COVID-19 restrictions impacts (\$6.1 million), additional remediation costs for Le Bons Bay Landfill (\$1.7 million), and higher refuse disposal fees (\$1.6 million).

### Revenues

Revenues are \$25.8 million higher than budget year to date - forecast to be \$29.1 million higher at year end. Below are the key drivers of these variances:

	YTD	Forecast
Regulatory & Compliance revenues (driven by higher building/resource consent volumes)	\$9.9m	\$10.8m
Higher subvention receipts than planned	\$9.2m	\$9.2m
Increased Burwood Landfill revenues (due to continuing operations)	\$3.4m	\$3.2m
Rates Revenues (2020/21 rating growth higher than planned)	\$3.2m	\$2.8m
Interest Revenues (higher interest rates and cash on hand)	\$3.0m	\$3.7m
Higher Transwaste dividends received	\$2.1m	\$2.1m
EcoCentral Recycling Processing fee rebate received (relating to prior years)	\$1.4m	\$1.4m
Timing of Excess Water/Trade Waste revenues	(\$1.5m)	-
COVID-19 revenue impacts	(\$4.7m)	(\$5.6m)

# Expenditure

Expenditure is \$6.2 million lower that budget year to date and forecast to be \$5.4 million lower at year end before carry forwards (\$5.2 million higher after budget carry forwards).

Key variance drivers:	YTD	Forecast (after c/f)
Recycling processing fee savings (net of increased disposal of contaminated loads)	\$3.7m	\$3.4m
Timing of grant payments	\$2.4m	-
Lower Personnel costs (excl. Regulatory & Compliance shown below)	\$2.3m	\$2.6m
Parks expenditure (Red zone delay in transfers/managing costs to cover COVID related revenue loss)	\$1.9m	\$0.6m
Three Water activities behind budget spend (timing of Water Reform programme spend)	\$1.1m	-
Lower insurance premiums	\$1.0m	\$1.1m
Earthquake repair programme opex related costs to be carried forward	\$1.0m	-
Recreation & Sport expenditure timing (forecast offset by grant/subsidies revenues received)	\$0.7m	(\$0.5m)
Higher debt servicing costs (due to higher interest rates - offset by revenues)	(\$0.5m)	(\$1.2m)
Le Bons Bay Remediation (increased costs due to additional material found)	(\$0.9m)	(\$1.7m)



Burwood Landfill operation costs (continued operation – offset by revenues)	(\$1.2m)	(\$1.7m)
Transport expenditure (YTD due to earlier maintenance – forecast post rain event repairs)	(\$1.5m)	(\$0.5m)
Higher Regulatory & Compliance resourcing costs (offset by revenue volumes)	(\$5.2m)	(\$6.3m)
Procurement savings (unlikely to be found due to inflation impacts & living wage decision)	-	(\$0.7m)

# Funds not available for Opex

Forecast reduction from surplus of \$0.8 million after carry forwards is due to a better Housing (\$0.3 million) and Dogs (\$0.1 million) forecast result (both non-rates funded) and \$0.4 million relating to the Bexley Landfill Remediation project (rate funded capital project).

# 6. Capital Position

	Year to Date Results			Forecast Year End Results				After Carry Forwards			
\$m	Actual	Budget	Var		Forecast	Budget	Var		Carry Fwd	Var	
Core Programme	228.3	288.5	60.2		318.6	413.9	95.3		95.3	-	
External Funded Programme	36.9	55.7	18.8		50.2	72.8	22.6		22.6	-	
Less unidentified Carry Forwards	-	-	-		(18.8)	-	18.8		18.8	-	
Core/External Funded Programme	265.2	344.2	79.0		350.0	486.7	136.7		136.7		
Te Kaha/Parakiore	53.8	75.2	21.4		73.6	119.4	45.8		45.8	-	
Total Capital Programme	319.0	419.4	100.4		423.6	606.1	182.5		182.5	-	
Revenues and Funding	(265.2)	(286.9)	(21.7)		(299.2)	(301.2)	(2.0)		(17.5)	15.5	
Borrowing required	53.8	132.5	78.7		124.4	304.9	180.5		165.0	15.5	

# Capital Expenditure

- 6.1 Gross capital expenditure of \$319 million has been incurred year to date. A further \$104.6 million is forecast to be spent by year end.
- 6.2 The \$423.6 million forecast spend is based on a Core/External Funded spend of \$350 million, plus forecast spend of \$73.6 million on Te Kaha and Parakiore projects.
- 6.3 Project managers have identified \$163.7 million relating to specific projects forecast to be carried forward. The forecast includes an additional \$18.8 million of expected carry forwards yet to be specifically identified (forecast based on actuals to date and historical trend analysis).
- 6.4 The Draft 2022/23 Annual Plan includes an assumed total \$50 million carry forward. This forecast has been revised to approx \$175 million for the Final as presented in recent briefings.
- 6.5 For further information on capital, please refer to the Capital Programme Performance Report.

# **Capital Revenues and Funding**

- 6.6 Year to date capital revenues and funding are \$21.7 million behind budget, due to timing of Crown revenues reflecting slower spends in Shovel Ready, Te Kaha and Water Reform projects. A carry forward of \$16.8 million is forecast for Crown revenues.
- 6.7 Forecast after carry forwards are \$15.5 million higher largely driven by additional drawdowns forecast for development contributions (\$7.5 million) due to higher contributions received, budgets not required for development contribution rebates (\$4.5 million) due to closed schemes with balances remaining, and higher water connection fees (\$2.2 million).
- 6.8 The lower current year borrowing requirement forecast of \$180.5 million comprises \$182.5 million for capital programme carryforwards (timing), and permanent lower borrowing of \$15.5 million due to the higher capital revenues outlined in 6.7 above.

ltem 9



# 7. Treasury

# **Borrowing & Advances to Related Parties**

7.1 Council's borrowing and treasury-related Advances are shown below:

	Current	YTD Change
Gross Borrowing	2,158,915,000	118,550,000
Advances to Related Parties	688,388,162	14,394,350
Rates-Funded Borrowing	1,470,526,838	104,155,650

- 7.2 There have been minor changes since last month, relating to the refinance of debt maturities in April.
- 7.3 Rates-funded debt is expected to remain materially unchanged this financial year net outflows from operations and capital investment will be funded by existing cash holdings.

### **Policy Compliance**

7.4 All Treasury risks are within Policy limits:

Risk Area	Compliance
Liquidity Risk	Yes
Funding Risk	Breach
Interest Rate Risk	Yes
Counterparty Credit Risk	Yes

7.5 **Funding Policy Breach:** This breach was signalled in the March 2022 Report and discussed at the April 2022 F&P Committee meeting. It is caused by an inadequate amount of debt maturing beyond 7 years (\$181m actual, vs. \$232m policy minimum), and will be corrected when the capital programme requires new borrowing to be incurred (expected around September / October 2022). There is no impact on Council's interest costs or risks.

# **Funding & Interest Rates**

7.6 Council's projected **funding** needs per financial year are shown in the chart below, split between the maturity of existing gross borrowing (green) and expected new borrowing requirements (grey). There is a significant concentration risk in the 2024 year, which is subject to on-going management.





7.7 Council's **interest rate risk** is managed, to reduce the volatility of interest costs from year to year. Most existing debt has been fixed for at least the next three years, which will limit the impact of recent market interest rate increases on Council's future borrowing costs.

Estimated average cost of funding, by financial year								
	FY22	FY23	FY24					
Rates-Funded Debt	4.4%	4.5%	4.2%					

# 8. Rates and General Debt

8.1 Rates debt decreased \$3.5 million this month and General debt decreased \$26.2 million as shown in the table below. General debt at March month end included a Crown invoice for \$28.8m relating to Te Kaha (CMUA), which was paid on 1 April.

\$m	March	Current	Change	Comment
Rates Debt	21.0	17.5	(3.5)	
Overdue rates for current year	19.0	15.7	(3.3)	Instalment 4 not due until May & June
Arrears from previous years	2.0	1.8	(0.2)	
General Debt	34.7	8.5	(26.2)	A \$28.8m Crown contribution for Te Kaha was outstanding in March and was paid on 1 April 2022
(less than 30 days)	33.9	7.3	(26.6)	As above
(between 30 – 90 days)	0.4	0.9	0.5	-
(greater than 90 days)	0.4	0.3	(0.1)	_

- 8.2 General debts of \$0.12 million have been written-off year to date, and \$6k in the April month of which \$5k related to libraries debt.
- 8.3 A summary report of debtors written-off in 2021/2022 by month is provided as Attachment A.
- 8.4 The graph below shows 90+ days rates debt as a percentage of the annual rates strike that year, with a three month moving average to smooth the quarterly cycle, and indicates that rate arrears are well in hand.





# 9. Insurance Claims

The table below outlines the number of events that have been notified by Council against its insurance policies as well as claims against Council from third parties during April 2022.

	Policy	Claims / No	Estimated	
	Policy	Above excess	Below excess	Cost
Claims by Council	Motor Vehicle	0	0	\$0
	Material damage	0	0	\$0
Claims against Council	PI / PL	0	0	\$0

9.1 CWTP fire claim - updates on this claim will be reported to the Insurance Subcommittee. CWTP plant recovery updates are being provided fortnightly to Finance and Performance Committee and Council.

# Attachments Ngā Tāpirihanga

No.	Title	Page
A 🕹 🔛	Debtors Written Off Summary 30 April 2022	56

Additional background information may be noted in the below table:

Document Name	Location / File Link
Nil	Nil



# Confirmation of Statutory Compliance Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002). (a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

# Signatories Ngā Kaiwaitohu

Authors	Ryan McLachlan - Reporting Accountant						
	Andrew Jefferies - Manager Rates Revenue						
	Steve Ballard - Group Treasurer						
	Brett Hales - Manager Transactions						
	Adrian Seagar - Insurance & Asset Manager						
	Martin Zelas - Team Leader Rates						
Approved By	Bruce Moher - Acting Head of Finance						
	Leah Scales - General Manager Resources/Chief Financial Officer						



### Debtors Written Off Summary 30 April 2022

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Dahturittan eff			_		_				_		_		_		_		-		_		_				-		
Debt written off - summa	aryrepo	ort	_		_				_								_								_		
		July		August		September		October	1	November		December		January		February		March		April		May		June		YTD Total	%
Breakdown:																											
Parking	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$		\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	0%
Regulatory	\$	781	\$	-	\$	-	\$	-	\$	580	\$	-	\$	653	\$	-	\$	-	\$	300	\$	-	\$	-	\$	2,315	2%
Sundry	\$	-	\$	-	\$	133	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	130	\$	-	\$	-	\$	263	0%
Street Poles	\$	8,599	\$	-	\$	-	\$	16,972	\$	-	\$	39,278	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	64,849	56%
Commercial Rents	\$	-	\$	-	\$	6,844	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	6,844	6%
Hall/Facilities Hire	\$	-	\$	78	\$	26	\$	469	\$	27	\$	165	\$	47	\$	153	\$	-	\$	-	\$	-	\$	-	\$	964	1%
Others	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	0%
Library	\$	3,251	\$	3,842	\$	-	\$	4,065	\$	3,613	\$	5,378	\$	3,874	\$	4,012	\$	3,254	\$	5,425	\$	-	\$	-	\$	36,713	32%
Intelli -RSU	\$	411	\$	536	\$	331	\$	317	\$	592	\$	293	\$	-	\$	574	\$	479	\$	349	\$	-	\$	-	\$	3,882	3%
Total 2021-2022	\$	13,042	\$	4,456	\$	7,333	\$	21,822	\$	4,812	\$	45,114	\$	4,574	\$	4,739	\$	3,733	\$	6,203	\$	-	\$	-	\$	115,828	
Total 2020-2021	\$	16,089	\$	5,663	\$	44,169	\$	35,699	\$	12,525	\$	97,526	\$	4,950	\$	9,948	\$	10,751	\$	3,585	\$	8,509	\$	8,512	\$	257,925	
Variance to Last Vear	¢	(2047)	¢	(1 200)	¢	(26.926)	¢	(12 976)	¢	(7 712)	¢	(52 412)	¢	(276)	¢	(5 200)	) ¢	(7.019)	¢	2.610	¢	(9 500)	¢	(9 512)	¢	(142.006)	

Not included in the Library write-offs above is the historical list of overdue fees removed and list of debt collection fees removed totalling \$270,659.

Attachment A

6

Item



# **10. Capital Programme Performance Report - April 2022**

<b>Reference / Te Tohutoro:</b>	22/643335
Report of / Te Pou Matua:	Andrew Robinson, Head of Programme Management Office
General Manager / Pouwhakarae:	Lynn McClelland, Assistant Chief Executive

# 1. Brief Summary

- 1.1 The purpose of this report is for the Finance and Performance Committee to be informed of Capital Performance for period ending 30 April 2022 and the outlook for coming months.
- 1.2 It has been an extremely difficult year for capital delivery with the cascading effects of Covid, international supply chain issues, and cost escalation having an effect across all areas of capital delivery.
- 1.3 While it is challenging to make accurate predictions as to the time period within which these broader issues outside of Council control will resolve, internal planning and risk mitigation is based on the assumption that a return to normal is not expected in the short term, and a two year adjustment is expected at a minimum.
- 1.4 The capital programme in the major facilities area accounts for the bulk of the non-delivery of total capital budget. The large scale projects of Te Kaha, Parakiore, Performing Arts Precinct and Hornby Community Centre all require major adjustments to the expected budget phasing over the coming years.
- 1.5 Change in the scope (potential location) of the Organics Processing Plant has delayed any possible capital expenditure for this project.
- 1.6 The capital programme for the Transport area will underperform by a significant margin this financial year. Two major areas were the carriageway reseal programme not being able to fully deliver its programme of work due to adverse weather, works planning and Covid impacts at the back end of the sealing season. Delays with the cycleway programme caused by KiwiRail integration requirements also had an impact but collaboration is now improved.
- 1.7 The capital programme for the Three Waters programme held up extremely well given the risks and issues of the year, and keeping the increasing momentum of delivery in this area will be a key focus.
- 1.8 Planning, initiation and internal visibility of the capital programmes are continuing to make excellent progress, and this is strengthening our ability to deliver projects in the coming years to meet the large step up required to meet LTP expectations. Focus on maintaining a strong future pipeline of defined and confirmed capital projects will be key to success.

# 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

1. Receive the information in the Capital Programme Performance Report



# Attachments / Ngā Tāpirihanga

No.	Title	Page
A 🕂 🔛	2022-05-12 Capital Delivery Report - April 2022	59
В <u>↓</u>	2022-04 Capital Watchlist Report - April 2022	90
Afohe		
С 🚺 🌃	2022-04 External Funded - DIA - April 2022	95
D <u>J</u>	2022-04 External Funded Report - Shovel Ready - April 2022	100
Afoin		
E 🕂 🔛	2022-04 Major Cycleways Report - April 2022	107

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
nil	nil

# Confirmation of Statutory Compliance / Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002). (a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

# Signatories / Ngā Kaiwaitohu

Author	Richard Wesley - Principal Advisor PMO	
Approved By	Lynn McClelland - Assistant Chief Executive Strategic Policy and Performance	



# **Capital Delivery Programme Report**

# **Overall Summary Table**

	Budget	Forecast	Actual	Forecast Result
CCC Core	\$413.3m	\$330.1m	\$226.7m	80%
External Funded	\$73.5m	\$49.4m	\$37m	67%
Sub Total	\$486.8m	\$379.5m	\$263.6m	78%
Te Kaha / Parakiore	\$119.4m	\$73.7m	\$53.8m	62%
Total	\$606.2m	\$453.2m	\$317.4m	75%

\*As reported by Project Managers and Heads of Service as at 20<sup>th</sup> April 2022

# **Financial Year Summary**









# **Overall Capital Delivery Performance**

The overall capital programme has been revised downwards due the impacts of the various risks and issues facing the delivery programme. First among these is the risks from Covid now coming to the fore in terms of slowdown with capital project delivery.

With the instability of this year, and the ongoing risks and issues (summarised below), including supply chain constraints (Labour & Materials) and industry capacity, the final expected capital delivery for the entire programme is trending towards an outcome of around **\$350m (72%)** for the council delivered capital programme of works in FY22, compared to Programme Reports as at 20 April 2022 of \$379.5M.

### **Capital Delivery Programme Risks and Issues**

Current programme level risks and issues that exist across the Capital Programme are as follows. **Covid-19** 

The medium term effects from the global Covid slow down, combined with the current short term effects of the Covid outbreak in Canterbury, are now having a large impact on the performance of the capital programme.

### Supply Chain

Contractors continue to review supply chain risks and issues, including identification of alternative (lower risk) sourcing locally. Projects are identifying alternative supply wherever possible, or rephasing work to reduce impact of supply delays. Further information in relation to supply chain risks and issues are in a separate attachment to this report.

### **Port Delays**

Risk relating to supply of imported materials being constrained by delays at both international and local ports. Projects are identifying alternative supply wherever possible, pre-ordering or rephasing work to reduce impact of supply delays.

### **Cost Escalation**

Heads of Service are assessing the commercial viability and inflationary pressures of continuing projects that are experiencing the above issues.

Where deferring is the preferred option, Units will look to substitute projects, i.e. deliver future approved projects in the programme earlier ensuring minimal impact on the overall budget commitment. Further information of any projects at risk or currently impacted is in a separate attachment to this report.

### **Exchange Rate**

Any hike in the US dollar may impact project costs – at present, this is not impacting projects however has potential to do so. Any change in project costs are subject to contractual conditions with the contractor.

### **Human Resources**

The current buoyant job market, and the retention / attraction of staff in technical roles is an issue both within Council and external Services providers and other client organisations.

### **Breakdown by Delivery Group**

This following graph shows the delivery areas by current financial year total budget amount. It gives an instant comparison of the size of capital programme as set by the Long Term Plan (LTP),



the current actual spend in the different areas (dark green), and where capital will not be spent this year (shown in the amber colour, also known as the "carryforward"). The forecast delivery as a percentage of the budget is also shown. This is a percentage of the current year budget amount, and not the overall budget of the project. Therefore a project

current year budget amount, and not the overall budget of the project. Therefore a project showing a percentage delivery of over 100% for the year is delivering faster than budgeted and using a 'bring back' of funds from FY23 to accelerate the programme. These 'brings backs' offset some of the delayed projects unable to make full use of their current year budgeted figure.

The following pages of this report expand on the overall performance, spend and forecast of each major area of capital delivery, and provide a brief overview of the top twenty projects in that Service Area.



# **Overall Summary Table**

	Budget	Forecast	Actual	Forecast Result
Te Kaha	\$59.3m	\$34.2m	\$24.0m	58%
Parakiore	\$60.0m	\$39.5m	\$29.8m	66%

The budget schedule as recorded in the Long Term Plan (LTP) has not proved accurate for these two very large capital projects.

As already reported substantial completion for Parakiore has been delayed to October 2023.

Enabling works at the Te Kaha is underway. Developed Design is due to be completed in May 2022 with BESIX Watpac (Kōtui) price submission expected shortly thereafter for Council consideration.



# **Financial Year Summary**



Monthly Cashflow Actuals vs Forecast



# ltem 10

### **Project Breakdown**



# **Project Commentary on Projects with Current Year Budget Deferred**

Project	Progress
Parakiore Recreation and Sports Centre (Metro Sport Facility)	The construction programme has been impacted by COVID-19, including the availability of specialist overseas and Auckland subcontractors due to the border and Covid restrictions. The programme and completion date are being reviewed monthly by Contractor and Ōtākaro. Refer to the April Watchlist for additional details.
Te Kaha Canterbury Multi Use Arena (CMUA)	Kōtui (BESIX Watpac and their consultant team) have worked with Client representatives including Council and Venues Ōtautahi staff and have now completed the Preliminary Design for the arena. Final price submission is expected end May 2022.
Te Kaha Canterbury Multi Use Arena Site Decontamination (CMUA)	Discrete areas of contamination have been carried out as part of the Enabling Works. Any major areas of contamination discovered will be removed as part of the main construction contract. Tenders for the Ground Improvement and bulk earthworks have closed and are currently being evaluated.
Parakiore Recreation and Sports Centre Equipment (Metro)	For the purchase of specific equipment to operate the facility. Planning is underway on finalising the equipment requirements.



# **Three Waters**

# **Overall Summary Table**

	Budget	Forecast	Actual	Forecast Result
CCC Core	\$156.1	\$132.5	\$92.0	85%
External Funded	\$25m	\$23.5m	\$19.8m	94%
Total	\$181.1m	\$156m	\$111.8m	86%

# **Financial Year Summary**



# Monthly Cashflow Actuals vs Forecast





# ltem 10

### **Programme Commentary**

Last financial year Three Waters spent \$153m. In spite of the continuing difficulties with Covid and the international situation we are still forecasting overall to deliver \$156m (86%) this financial year.

The programme consists of three areas with varying performance this year:

- Waste Water now on track to deliver 100% of the budgeted \$57m which will be an outstanding result if achieved.
- Water Supply are currently forecasting to deliver 85% of the programme this year.
- Storm Water forecasting around 65% delivery. The Key reasons behind underperformance this year are mainly delays obtaining consenting and land purchases; but also supply chain issues (mainly timber) and resource constraints, including Covid absences among design staff and contractors.

Resourcing

- Three Waters have reviewed resource to meet the demands of an increased programme in FY22 and future LTP years. Filling existing vacancies in critical planning teams is challenging due to the current competitive labour market.
- Existing resources are spread thinly supporting improvement works, while also completing Asset Management Unit tasks and reactive requests from across the council/unit.
- There are increasing risks to the three waters maintenance contract, accuracy of valuations and delivery of the Asset management improvement plan / maturity targets as a result of under resourcing in the Three Waters Asset Management and the Asset Management Unit. The constrained labour market is also complicating the staff replacement required.

**Project Pipeline** 

- Currently initiating remaining projects now for delivery in FY22 and turning attention to ensuring the initiation of new projects in FY23.
- Packaging up renewals to; provide economic benefits, reduce delays tendering for individual projects, and provide certainty of work to consultants/contractors and in turn Christchurch City Council.
- Review of current delivery mechanisms to enable speed to market, and increased programme.
- Planning to generate more opportunities with project briefs completed so that when other projects are delayed or we receive good tender rates we have projects ready to commence immediately.

Current Risks to Delivery (apart from global Covid risk)

- There is a risk in relation to the delivery of the full FY22 programme if there are significant delays in the recruitment and on-boarding of internal resources.
- Bottlenecks in the Planning and Design phase (resource availability) while we backfill planning roles we are employing external consultants to provide some cover.
- Staff in a Competitive Market: shoulder taps occurring. There is a risk of losing some of our Project Managers to other employers (Clients, Consultants, and Contractors).



There are other risks which are unlikely to affect the forecast at this stage but which can affect things from a value perspective in FY23:

- Inflation: Likelihood of rising prices going forward into FY23.
- Material prices: We are struggling to lock in some material prices due to volatility in prices. Likelihood of more tendered prices being higher than the budget.
- Covid absences: particularly with contractor's staff, and supply chain impacts.
- Adverse weather: significant wet weather could close down sites for the winter earlier than anticipated.

### **Top Twenty Projects Current Financial Year Spend Summary**



# Project Commentary on Projects with Current Year Budget Deferred

Project	Progress
SW Eastman Sutherland and Hoon Hay Wetlands	We are working to reduce the impacts of COVID lockdown. Plant supply is going to be one of our key challenges over the next three years.
WW Lyttelton Harbour Wastewater Scheme	This large (\$60m) complex project is coming into the final completion and commissioning stages.
WW Upper Totara, Puriri, Balgay, Milnebank, Karamu, Field, Wharenui, Weka, Tui, Leinster & Bristol Mains Renewal	Refer to the Apr External Funded Report for DIA
SW Flood Management LDRP 521 Stage 1 Waitaki	Wetland construction to be delayed by six months due to delays from ECan consenting and service utilities which has not allowed the design to be finalised, and increased overall project costs.
WS Scruttons Road Pump Station to Lyttelton Road	Delays due to the supply chain of pipe material currently sitting at 20 weeks due to disruption to shipment & manufacturing from international supplier.
WS Jeffreys Road Pump Station Upgrade (PS1076)	Contract now awarded. Possession of the site is now expected in early May 2022.
Hoon Hay Basin Outlet & Cashmere Stream	Construction is in progress with contractor and is largely complete. Stream structure to follow after gate installed in February.
SW Highsted Land Purchase & Construction of Waterways, Basins & Wetlands	Main construction has been completed, but a variation added to the works. Therefore a time delay with delivery.
SW Knights Drain Ponds (LDRP 509)	Design changes ongoing and tender documents being prepared for main construction. Construction to be completed in FY23.
WW Riccarton Mains Renewal (Hansons Lane to Euston Street)	The physical works are now complete and the project is in the defects liability stage.
WW W Edmonds, Randolph, Marcroft, Manning, Wildberry, Hopkins, Ferry & Okeover Mains Renewal	The project is in construction phase and will continue into the next Financial Year.



# **Transport and Waste Management**

# **Overall Summary Table**

	Budget	Forecast	Actual	Forecast Result
CCC Core	\$106.8m	\$85.8m	\$63m	80%
External Funded	\$40.5m	\$18.2m	\$10.1m	45%
Total	\$147.3m	\$104m	\$73.1m	71%

### **Financial Year Summary**





### Monthly Cashflow Actuals vs Forecast



Attachment A

# **Programme Commentary**

A focus on accurate end-of-year forecasts has resulted in a significant drop in the end of year forecast, which is down by \$24m in the month. The biggest movers are:

- Maintenance projects particularly Chipseal (32% of the drop) where a multitude of issues around work and cost allocations have been uncovered. We are working on the systems to avoid future similar cost allocation problems again, and a forward plan for FY23 maintenance works has been developed so the contractors can start works as soon as the new contracts are let.
- Rapanui-Shag Rock MCR (14% of the drop) where the contractor has delayed work start to manage COVID-related resourcing issues.
- Halswell Junction Road (5% of the drop) where our improved relationship with Kiwirail means we are getting more realistic information from them. Unfortunately, this has resulted in a significant forecast cost increase and delay to works.
- Northern Arterial Extension (10% of the drop) which is a genuine cost reduction on the NZTA-led Northern Motorway project. This cost reduction comes from CCC's share of the savings now the insurance claim is settled, plus some release of contingency now the final asphalt layer has been laid.

May and June FY22 forecasts are expected to be much higher than Jan-Mar, as historic Chipseal costs are costed to the correct projects, and a number of larger projects have recently started on site: Rapanui-Shag Rock MCR; Coastal Pathway; and Lincoln Road.

Improved communication with Kiwirail is giving us a more realistic view of the likely project timeframes, although in many cases this has resulted in a significant increase in costs and timeframes. Kiwirail and CCC managers are meeting monthly to understand each other's requirements and mitigate the project slippage and cost increases.

Supply Chain risks are also being managed at a programme level, for example, by trying to involve contractors early in planning renewals works so they can guarantee bitumen supply.

There is a growing focus on FY23 forecasts, and trying to better forecast the likely works for next year. The biggest risks to delivery of this are:

- Kiwirail interface: A number of our larger spend projects most notably parts of Halswell Junction Road & parts of the MCR programme are at risk due to issues resulting from Kiwirail resource problems. Regular meetings are ongoing to understand and mitigate this risk, but this is likely to impact FY23 & FY24 spend.
- COVID shutdown impact: Changes to levels and/or outbreaks may affect access to resources. Isolation requirements have caused delays to some projects, although we would expect this to ease into FY23.
- Supply Chain issues: exposure to imported goods such as bitumen and LED lights could impact overall spend and/or scope
- Cost inflation: We are seeing new tenders consistently coming in around 10% higher than expected. Unless this eases, this will prevent projects from progressing to tender or construction in line with the programme.



ltem 10



# **Top Twenty Projects Current Financial Year Spend Summary**

# **Project Commentary on Projects with Current Year Budget Deferred**

Project	Progress
Carriageway Reseals - Chipseal	The accelerated \$3.5m of capital work brought forward from FY23 has not been able to be delivered early as planned. A further update on this issue will be available at the meeting.
Major Cycleway South Express Route (Section 2) Craven to Buchanans	Refer to the April External Funded Report - Shovel Ready.



Project	Progress
Coastal Pathway & Moncks Bay	Refer to the April External Funded Report – Shovel Ready.
Major Cycleway - South Express Route (Section 3) Curletts to Old Blenheim	Refer to the April External Funded Report – Shovel Ready.
Dyers Pass Corridor Guardrails Installation	Dyers Pass Road projects for the installation of guardrails, sealed shoulder widening, and drainage channels. First phase complete, second phase to run from May 22 to Dec 22.
Carriageway Smoothing Surfacing of Streets	Additional work to complete two blocks of Salisbury St, and the extension of Cranford St.
Major Cycleway - Nor'West Arc Route (Section 2) Annex & Wigram Road to University	Refer to the April External Funded Report – Shovel Ready.
Delivery Package – Road Lighting Renewals	LED designs are progressing. Light controllers are being installed. Pole renewals are underway, and the first round of luminaires has been approved for procurement.
Marshland Road Bridge Renewal	Practical completion issued 21 <sup>st</sup> December 2021, 6 months ahead of schedule.
Evans Pass Road & Reserve Terrace Remedial Works	Project planning, scoping, and estimating for cash flow forecasting are progressing in parallel with investigations, detailed design, and tender preparation for Evans Pass Rd and Reserve Terrace.
Major Cycleway – Heathcote Express Route	Drawdown requests have been processed and the funds allocated to the actual projects being used to deliver the programme.
Road Safety Priorities Delivery Package (CRAF)	The carry forward is required to finish off the programme of works that had started in 2021 and will finish in 2023. The remaining projects which have been designed and a going to community board's approval are scheduled to continue in July 2022. Some projects were delayed by COVID-19. This is fully funded by NZTA.
Minor Road Safety Improvements	Between now and the end of June 2022, there are a number of project investigations taking place in order to allow us to confirm/start a new delivery package from July 2022.



Project	Progress
Major Cycleway - Northern Line Route (Section 1) Blenheim to Kilmarnock and Harewood Crossing & Restell	Ongoing civils design review by Kiwirail. No programme and cost certainty until designs are approved.
New Brighton Public Realm Improvements	Primary goal this FY 22 is secure the second last property for a new road extension. High- level scheme options as to the various road layout are complete, however further refinements on the design is paused until the various property can be secure.
New Brighton Roading & Transport Improvements (CRAF)	As per New Brighton Public Realm Improvements.
Riccarton Roading & Transport Improvements (CRAF)	The project team have met with the two Boards (Halswell-Hornby-Riccarton and Fendalton-Waimairi-Harewood) and are being supplied with additional information to inform their decision on the CRAF work in their area. The tender has been awarded.
Richmond Roading & Transport Improvements (CRAF)	The Papanui-Innes Community Board have decided on the CRAF programme of work for Richmond at the 18 March 2022 meeting.
Spreydon, Sommerfield, Waltham & Beckenham Roading & Transport Improvements (CRAF)	This is a programme of work identified in the CRAF programme, contributing towards the area regeneration of Spreydon, Somerfield, Waltham, and Beckenham in March 2022.


### **Vertical Capital Delivery**

### **Overall Summary Table**

	Budget	Forecast	Actual	Forecast Result
CCC Core	\$63.8m	\$28.6m	\$22.9m	45%
External Funded	\$8m	\$7.7m	\$7m	96%
Total	\$71.7m	\$36.3m	\$29.9m	51%

### **Financial Year Summary**





### Monthly Cashflow Actuals vs Forecast



# ltem 10

### **Programme Commentary**

Overall the Vertical Capital Delivery programme is looking to deliver half of its budgeted programme.

This is primarily due to delays with the top three projects in this portfolio of work as shown on the graph below with Hornby Library, Organics Processing Plant and Performing Arts Precinct.

#### **Top Twenty Projects Current Financial Year Spend Summary**



### Project Commentary on Projects with Current Year Budget Deferred

Project	Progress
Hornby Library, Customer Services & South West Leisure Centre	The piling delay has reduced the forecast spend for this financial year, and together with the hydrotherapy pool addition will push completion later in 2023.
Organics Processing Plant Development	Options are being prepared for alternative locations for this project. A full briefing is underway for Elected Members.
Performing Arts Precinct	The early civil work is complete. Completing the design has been challenging, although we are aiming for high quality documentation to reduce future risks. Contract start and finish dates will be available once the tender process is complete. Tenders issued mid-May after prequalification process.
Te Pou Toetoe Linwood Pool	Defects rectification and minor improvements are ongoing.
Town Hall Rebuild	With the completion of this project, the remainder of the budget funds are now surplus.
Performing Arts Precinct Site Decontamination	Work on site is complete. Practical completion will be awarded once we have received the documentation required from the contractor.
Diamond Harbour Wharf Renewal	Main contract has now been awarded with construction due to begin June 2022.
The Square & Surrounds	Positive stakeholder meetings have been ongoing and concept plans are due to be brought back to elected embers in the near future.
Tsunami Warning System	The project is now in the planning phase.
Pages Road Depot Building Repair	Detailed design is underway and tendering is expected to be in June 2022. The budget



Project	Progress
	requirement cannot be confirmed until the detailed design is finished and an updated cost estimate is completed. Covid is delaying completion of detailed design.
Park Maintenance Facility Planned Renewals	The preparation and establishment of facilities for the new Parks Maintenance teams are now underway for the Nga Puna Wai Complex.
Te Kete Wānanga o Wai Mōkihi - South Library & Service Centre Earthquake Repairs	An updated scope and costs of repair has been completed. We anticipate a briefing for Elected Members prior to a Council decision about the advancement of this project.
SW South New Brighton & Southshore Estuary Edge Flood Mitigation	We are currently working through the Preliminary Design Phase of this project which is planned to be completed in August 2022. This is likely to result in a carry forward of the FY22 budget.
Red Zone Regeneration-Southshore and South New Brighton Estuary Edge Erosion Management	Early planning underway now including statements of work, programming and survey in order to create a sound layer of data for design development.
Akaroa Wharf Renewal	Refer to the April Watchlist Report
Programme - Community Facilities Tranche 2	This project is the "bucket" of programme funds to support the delivery of multiple projects that were approved as TRANCHE 2 by Council - see TRIM 14/533434 for full list of projects approved.



### **Parks**

### **Overall Summary Table**

Budget	Forecast	Actual	Forecast Result
\$24.2m	\$20.8m	\$14.8m	86%

### **Financial Year Summary**





#### Monthly Cashflow Actuals vs Forecast

### **Programme Commentary**

The Parks unit now includes the Parks Project Management team (historically part of Community Capital Delivery Team). Deliverability commentary now reflects the combined Parks unit. Activities to improve delivery are as follows:

• A revised approach to the Parks programme is continuing to be implemented to enable delivery to a larger capital budget in FY22 and beyond including reviewing the capacity and capability of the current teams.

- Dedicated resources have been assigned to scope projects, assess deliverability and define the delivery mechanism (through Community, Rangers, Parks project managers etc.). Priority is on completing this activity for FY22, with a wider focus on the next three years to enable a rolling programme of work in construction for future years.
- Fortnightly meetings with sponsors to review progress on current year's programme including accuracy of forecast and commitments (purchase orders raised).

### Top Twenty Projects Current Financial Year Spend Summary



Christchurch City Council

### Project Commentary on Projects with Current Year Budget Deferred

Project	Progress
Lancaster Park War Memorial Entrance Gates (Capex)	Construction is underway with the contractor now on site. Anticipated to end September 2022.
SW Prestons & Clare Park	The overall projects is 85% complete with Stage 1, 2, and 3 handed over. Stages 4 and 5 are delayed due to difficulties with consenting.
Chokebore Lodge	Works are now forecast for delivery in the FY23 financial year (Jul-Dec 2023).
Citizens' War Memorial Earthquake Repair	Work underway on site. Sound progress to date. The deadline for completion of the memorial has been revised to 30 September 2022. This provides a month's contingency in the programme for completion ahead of Armistice Day on 11/11.
Residential Red Zone – Asset Renewal/Repair	Material has arrived in Christchurch and completion is expected by Mid-May 2022. The installation will take about 3 weeks at Kerr and Owles Terrace.
Bays Skate & Scooter Park Development	The project is progressing well. The Community Board approved the landscape plan on 14 April 2021.
Ōtākaro-Avon River Corridor Ecological Restoration (OARC)	We have 26,250 plants ordered and held with local nurseries for planting at six Ōtākaro Avon River Corridor locations. These sites will be planted by community groups and our staff in June, with site preparation carried out prior to that.
Te Papa Kura Redcliffs Park Development	Funding was split between two financial years so the completion date has been pushed out to align with the funding.
Community Parks Planned Green Assets Renewals	Parks Unit have planting work underway with volunteer groups. Staff scoping ornamental garden renewals works for FY 23.
Bishopdale Park Skate Park Renewal	Construction underway with completion in July 2022.



Project	Progress
Regional Parks - Building - sewer and component renewals	\$183k committed, \$51k completed, inspections completed awaiting recommendations.
Planned Sports Field Renewals	Currently on track with the current planning although it will be a very tight timeline to complete the Elmwood cricket block re- alignment in the autumn of 2022.
Community Parks Play Item Renewal	Cashmere Valley Playground - replace tube slide - March/April 2022 (replacement slide ordered). Softfall replacement - sites to be confirmed and softfall ordered.



### Digital

### **Overall Summary Table**

Budget	Forecast	Actual	Forecast Result
\$22.7m	\$20.5m	\$15.7m	90%

### **Financial Year Summary**



93% 91% 83% 82% 79% 76% \$2M 64% 57% 55% \$1M 13% 0% \$0M Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Forecast Actual Percentage

### Monthly Cashflow Actuals vs Forecast

### **Programme Commentary**

Current status as follows:

- Quarterly review of progress was completed in February for FY22 at the Executive Governance meeting. An update on the Modern Workplace and SAP Improvement Programmes were provided as well as an update on the progress of standing up the Digital Citizen Experience Programme.
- Current portfolio level risks and issues are in relation to resource availability and scheduling conflicts recruitment is underway and contractor resourcing sought to



mitigate impacts to the programme. Recruitment continues and at last assessment vacancies had decreased. Contractors continue to be used to mitigate impacts to the Digital Portfolio.

- A Portfolio Delivery Risk Management Working Group has been established to address
  management of dependencies, risks and issues across the Portfolio, this group meets
  monthly or as required to respond to the current risk/issue level. Areas of concern were
  identified around interdependencies between various projects and programmes relating
  to Identity Platform Service, it has been decided to set-up a special Risk Management
  Working Group to look closely at this developing situation to ensure any portfolio level
  risks and issues are managed and if there are conflicting priorities across the portfolio that
  decisions are escalated to the right level of governance.
- Pipeline will need to be slowed while resource constraints are addressed. Additional initiatives will only proceed if delivery resource is not constrained or where necessary it is an organisational priority in which case portfolio priorities will be re-set and teams informed of a change in priorities, we are in the process of addressing items identified in this report.
- Risks to delivering against current forecast due to continued constraints around resourcing and IT system environments to support current projects in-flight.

Remaining spend relies on the following key initiatives

• 23 projects in early phases – Plan and Initiate (\$8.6m) - 13 of these projects are currently flagging resource related risks.



### **Top Twenty Projects Current Financial Year Spend Summary**

### Project Commentary on Projects with Current Year Budget Deferred

Project	Progress
Data Network upgrade New Design Future Phases	High certainty in delivering against current forecast. Detailed planning (Elaboration) has just been completed.
Get off GEMS	High certainty to spend due to onboarding contractors to increase output.
Digital Citizen Experience - Service Request & Related Enhancements	Unforeseen expense and significant risks and issues are currently being managed.
Time Management	The project is in plan phase and overall status is amber due to requiring Architect resource to help progress architectural decisions.
Information Management Enhancement Bundle	Work for all teams has been planned and has started up. Whilst recruitment is underway - present understaffing is proving a "slow down" in work.
Digital Library Equipment Renewals & Replacements	The project is in Execute phase and overall status is green - on track.
TRIM Upgrade FY22	Project initiation has started. Timeline & Scope will be reset in Elaboration.
General Application upgrades & security patching	The project is in planning/execute phase and overall status is currently on track.
Windows Server OS Upgrades	Apogee work started. Valuation Data Hub, BDH Space and VDH Exchange Testing started. Three remaining .NET servers to be migrated by the end of March.
Spatial Strategy Project 4 Migrate to ESRI	These tranches of work are not likely to be completed by the end of the FY22, due to insufficient resources and competing project priorities.
Programme - Technology Systems Replacements & Renewals	Programme funding pool.
Modern Workplace Programme - Council Meeting Rooms Audio Visual Upgrade	The project is at risk due to the IM Data Ingestion Tool not be able to be supported once it goes live. The approach taken now is to



Project	Progress
	gather information in relation to what is in use now for business and then decide the best way forward for the solution.
Information Management Data Ingestion	Budget will depend on RFP responses. Expect to require additional funds in FY23 - to be confirmed during Planning.
IAAS Transition to Cloud	Working with senior leads to ascertain priority and timeline against other urgent work and BAU.
Customer Experience Platform Enhancement Bundle	Finalising the design and tender documentation has been delayed to May 2022 tender due to resource constraints. Aug 2022 construction start date is in the pipeline Separate minor packages as preparatory works are being considered to advance construction.
Modern Workplace Programme - Council Meeting Rooms Audio Visual Upgrade	<ul> <li>The Modern Workplace Programme - Council Meeting Rooms Audio Visual Upgrade Project (66132) is planning to deliver the following activities before the end of the financial year: <ul> <li>Audit of the current meeting rooms</li> <li>Baseline of current technology faults</li> <li>Use case generation and analysis</li> <li>Stakeholder feedback survey</li> <li>Requirements gathering activities RFP generation and release</li> </ul> </li> </ul>



### **Other Capital**

### **Overall Summary Table**

Budget	Forecast	Actual	Forecast Result
\$39.3m	\$29.7m	\$19.5m	75.5%

### **Financial Year Summary**



#### Monthly Cashflow Actuals vs Forecast



### **Programme Commentary**

This final section of capital project is dominated by four high value items such as the library book purchase capital project, housing renewal, general property purchase and other finance movements.

The remaining projects are on a smaller scale and involve the recreation and sport portfolio of work around the city.



### **Top Twenty Projects Current Financial Year Spend Summary**

### Project Commentary on Projects with Current Year Budget Deferred

Project	Progress
Delivery Package – Library Resources (Books, Serials, AV, Electronic)	On track
Corporate Investments	The forecast underspend reflects the current predicted spend profile of the Housing Initiative.
Property Purchase – 213 Lichfield Street	Expected to be completed before end of the financial year.
Pioneer Renewals & Replacements	There have been significant delays working through the alternative heat sources for the pool heating including resource consent, ECan, procurement and contractor delays.
Cowles Stadium Renewals & Replacements	The exterior cladding is to be replaced at the same time as the roof replacement project. The Australian contractor has advised that roof bending and contractor availability will most likely occur after current restrictions ease.
Delivery Package - Community Centres Renewals & Replacements	Current work in progress for the following: Waimairi Community Centre Refurbishment Harvard Community Lounge Refurbishment Lyttleton Recreation Centre – Heaters Coronation Library Floor Gaiety Hall Parklands Community Centre Roof Fendalton Community Centre Refurbishment including security installation
Delivery Package – Fleet & Plant Asset Purchases	There are significant supply chain issues causing major delays getting vehicles into the country.
Graham Condon Renewals & Replacements	There have been delays in confirming the lease with the High School/Ministry of Education, limited contractors who can do the work and supply chain delays on equipment (22-30 weeks).
Jellie Park & Pioneer Recreation & Sports Centres	The Stage 4 strengthening & earthquake repair works at Jellie Park/Pioneer will be delayed until Metro Sports has opened to ensure



Project	Progress
	capacity is maintained across the recreation and sports centre network.
Delivery Package - Corporate Property Renewals & Replacements	Current work in progress for the following: Civic Building LED Lighting renewals, Smith Street building and lighting renewals and the Dog Pound renewals.
Specialised Recreation and Sport Facilities Equipment Planned Renewals & Replacements	Currently completing Cowles Stadium renewals – bleachers, scoreboard and sound system.
Delivery Package - Christchurch Art Gallery Renewals & Replacements	Current renewal/replacement work in progress for the following: Security room, Roof protection, Cable network Chilled water pipes, Gallery refurbishments, Projector
Smart Cities Innovation	Recent Covid level changes and supply chain issues have delayed the progress of some initiatives.
Te Hapua Pool Renewals & Replacements	A comprehensive review of the electrical/power supply found that substantial upgrades were required and this has delayed getting the contract to market until March 2022.
Christchurch Art Gallery Collections Acquisitions	Art acquisitions are made as and when suitable works become available. If there are any unspent funds at year end they are carried forward to enable more ambitious acquisitions to be made.
Fitness Equipment Renewals & Replacements	Orders placed and awaiting delivery of the spin bikes and other fitness equipment.
Christchurch Justice & Emergency Services Precinct	There is further work required on the SCADA project and EOC related equipment. This work has been delayed due to resource constraints and changes in staff.
Delivery Package - Library Built Asset Renewals & Replacements	Current work in progress: Aranui - minor refurbishment, Lyttleton - boiler and basement work Turanga - lights or smoke curtain

### **CHRISTCHURCH CITY COUNCIL - CAPITAL PROGRAMME WATCHLIST** April 2022

•			Time (Devia Green Amber Red	ation from Ba <30 days del 31-60 days d >61 days del	<b>aseline)</b> lay lelay lay		Βι	udget (Dev Green Amber Red	viation from I On Track Forecast Ove Forecast Ove	Baseline) rspend <5% rspend >5%			
	Project Title	Current Phase	TIME Time Status	Original Delivery Date	Current Approved Delivery Date	Current Forecast Delivery Date	BL	UDGET Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	STATUS Overall Status	СОММ
sj	<b>Lancaster Park Enabling</b> <b>Works</b> (pre-requisite to redevelopment)	(Execute) Construction	•	Jun-19	Mar-22	Jun-22		•	\$3.0 M	\$3.0 M	\$3.0 M	Amber	Operational funded pro simply a reflection of the after the park is opened enabling works) is curre has been possible to des sportsfield developmen elements to be costed a bollard and chain, conc
Park	Lancaster Park Redevelopment	(Execute) Construction	•	Jun-26	Jun-26	Jun-26			\$8.7 M	\$8.4 M	\$1.6 M	Green	Capital funded project. gates restoration, paved
	Citizens War Memorial Earthquake Repair	(Execute) Construction	•	Jun-19	Oct-22	Oct-22		•	\$0.8 M	\$0.9 M	\$0.5 M	Green	The deadline for comple September 2022. This pi for completion ahead of need to be sourced to ei
	Hornby Library, Customer Services and South West Leisure Centre	(Execute) Construction	•	Apr-20	Dec-22	Sep-23		•	\$35.9 M	\$39.9 M	\$9.0 M	Red	The project is delayed fro addition, integration of t delay. The current milest into account. The main p overseas supplied items, addition, the effect of Co for the hydrotherapy po
	Naval Point Development Plan	(Execute) Investigate	•	Jun-15	Aug-31	Aug-31		•	\$29.7 M	\$29.2 M	\$8.4 M	Green	Stage one works are aln Subsequent stages of th the Leasing and Operati LTP includes \$26.825M f years. Project is current risks within the project i requirements, stakehold work.

### City Council

### ENTARY - BUDGET / TIME / RISKS

bject. Although the overall status is amber, this is the fact that the retaining wall will be completed d in early May 2022. This part of the project (the ently running very close to the budget because it escope a proportion of the enabling works to nt. However there are still some enabling work and completed (perimeter tie-in, retaining wall, crete mowing strip).

The park will will be opened without the memorial d area and retaining wall being completed.

letion of the memorial has been revised to 30 provides a months contingency in the programme of Armistice Day on 11/11. Additional budget will ensure the project continues efficiently.

rom the late arrival of pile steel and piling issues. In the hydrotherapy pool extension will cause further stones are a current best estimate, taking the delays project risks are the remaining piling, shipping of s, resource competition, and scope variations. In covid-19 on the workforce and community funding bool are also risks.

most complete and stage two is about to start. he plan will be developed in more detail and once tional Plan has been confirmed. The 2021 - 2031 for the delivery of the project over the next 10 tly forecast to deliver within budget. The major include the ongoing coordination of event lder groups and future development stages of ltem 10

			TIME				BUDGET				STATUS	СОММ
	Project Title	Current Phase	Time Status	Original Delivery Date	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Overall Status	
Vertical Capital Delivery	Akaroa Wharf Renewal	(Execute) Investigate	•	Feb-23	Aug-25	Aug-25	•	\$20.2 M	\$20.2 M	\$1.2 M	Amber	As the project is still in s be confirmed until a pro includes \$19.1M for the number of risks includin currently escalating ma materials, the needs of associated costs, the m structure and the future
	Red Zone Regeneration- Southshore and South New Brighton Estuary Edge Erosion Management	(Execute) Investigate	•	Jun-25	Jun-25	Jun-25	•	\$5.7 M	\$5.7 M	\$0.2 M	Green	Early planning underwa programming and surve design development.
	Performing Arts Precinct	(Execute) Design		Jun-18	Jul-24	Jul-24		\$36.0 M	\$36.0 M	\$3.8 M	Amber	The project has conside completing the design a The programme throug lease ends will remain v escalations over the pre two years. Given the pr construction contingen the project. This indica considerable risks are s affecting resourcing, re
	High Street Tram Extension	(Execute) Construction	•	Jun-21	May-22	May-22	•	\$3.7 M	\$3.6 M	\$3.3 M	Green	The main risk is that ele solution is required whi study results still to be
	Barrington, Lincoln & Whiteleigh Intersection Improvement	(Execute) Procure	•	Jun-17	Oct-23	Oct-23	•	\$1.5 M	\$1.5 M	\$0.2 M	Green	This project will be deli 1 Public Transport proje from similar projects in may be required to the wheelchair users.
	Core Public Transport Route & Facilities - South-West Lincoln Road (Phase 1)	(Execute) Procure	•	Jun-20	Oct-23	Oct-23	•	\$5.1 M	\$6.1 M	\$1.3 M	Amber	The time and scope are Moderate risk that the c

scheme investigation, the final timeframe cannot referred option has been agreed. The current LTP e delivery of this project. The project includes a ing project budget (particularly at this early stage), aterial and shipping costs, availability of specialist the community, heritage requirements and nanagement of the existing use of the wharf e of privately-owned buildings.

ay now including statements of work, yey in order to create a sound layer of data for

erable challenges, particularly the programme for and procurement, and possible cost escalations. gh to when The Court Theatre's current building very tight. The cost estimates show significant cost evious three months and projected over the next roject stage and the present risks, the projected ncy available is possibly insufficient to complete ates significant risk to the project. Other shipping of overseas supplied items, Covid-19 esource competition, and scope variations.

ectrical power study results show high cost ich is over available budget. Full electrical power received.

ivered in conjunction with the Lincoln Road Phase ject. Site works are now underway, but feedback nother parts of New Zealand suggest that changes design of the raised platform to reduce any risk to

on track however the finances require attention. construction costs will exceed the current budget.

			ТІМЕ				BUDGET				STATUS	СОММ
	Project Title	Current Phase	Time Status	Original Delivery Date	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Overall Status	
t	Wigram & Hayton Intersection Improvement	(Execute) Design	•	Jun-21	Jul-22	May-23	٠	\$1.0 M	\$1.0 M	\$0.2 M	Red	The Netsal developeme of the underpass at Wig the past this option was transport planners and accommodate the traff Red status reflects this been delayed, and a cu possibility of cost sharin original design.
ort and Waste Managemen	Downstream Intersection Improvements: Cranford Street (Includes Downstream of Christchurch Northern Corridor (Project 1 and 2) in Handover	Close	•	Jun-20	Oct-20	Oct-20	•	\$12.3 M	\$12.1 M	\$12.1 M	Green	Overall on Track
Transp	Dyers Pass Corridor Safety Improvements (Guardrails, Cycle Safety and Pedestrian)	(Execute) Construction	•	Jun-19	Dec-22	Dec-22	•	\$13.4 M	\$13.4 M	\$9.8 M	Green	Implementation of gua be delivered, based on
	Evans Pass Road and Reserve Terrace Remedial Works	(Execute) Design	•	Jun-19	Jun-28	Jun-28	•	\$24.5 M	\$24.5 M	\$1.7 M	Green	
	Halswell Junction Road Extension	(Execute) Construction	•	Jun-16	Jul-24	Jun-23	•	\$12.5 M	\$17.3 M	\$7.0 M	Red	Project timeline is still a with Kiwirail to ensure p \$1.3mil (including conti has been identified. On and costs causes uncer additional costs have b quantities of land conta
	Road Lighting LED Installation	(Execute) Design	•	Jun-18	Jun-23	Jun-23	•	\$1.3 M	\$1.6 M	\$0.0 M	Amber	Overall programme on approved, lead time in work is expected to star to seek the budget that programmes which will showing. The main risk unpredicatble as a resu forcasting to take accou

ent at Nga Puna Wai has now decided to make use gram Road as an entrance to the development, in is ruled out. This project needs to be reviewed by I it is highly lightly the design need to change to fic using the entrance to the Netsal development. change, as the integration means the project has irrent high risk of cost escalation. There is a ing with the Netsal development for changes to

rdrails at the sites within the package of works will safety priority within available budget.

at risk and CCC are working very closely programme is on track. A shortfall of around tingency) as per reviewed road works cost estimate a going changes in the Kiwirail programme of works rtainty but this has been monitored very closely, been included in the estimate to allow for potential amination being higher than anticipated.

track. The first round of procurement has been 3-5 months. Design work is ongoing and the Install art in July 2022. A change request will be submitted t was approved in the LTP from related lighting I then resolve the current forecast overspend at to the project remains the supply chain which is all of Covid. Longer lead times are being used when unt of this.

			ТІМЕ				BUDGET				STATUS	СОММ
	Project Title	Current Phase	Time Status	Original Delivery Date	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Overall Status	
	SW Cashmere Worsleys Flood Storage (LDRP 500)	(Execute) Construction	•	Apr-17	Jun-23	Jun-23	•	\$27.2 M	\$30.9 M	\$23.8 M	Red	Construction for upper Resource Consent for d progress with dam cons Budget estimate has be complete project. Chan now on track as baselin
Three Waters	SW South New Brighton & Southshore Estuary Edge Flood Mitigation	Plan	•	Jun-26	Jun-26	Jun-26		\$6.5 M	\$6.5 M	\$0.2 M	Green	Ecology mapping in Sou encroaches existing are are protected under Na Statement and Nationa regulations which apply specialist counsel from impact on the project d slight delay whilst this i not be known until a wa
	<b>SW Eastman Sutherland and Hoon Hay Wetlands</b> (including Eastman Wetlands (LDRP 528)	(Execute) Construction	•	Jun-24	Jun-24	Jun-24		\$39.6 M	\$41.1 M	\$25.5 M	Green	This project and budge Sutherland Eastman Pr
	WW Akaroa Reclaimed Water Treatment & Reuse Scheme	(Execute) Investigate	•	Jun-16	Jul-29	Jul-29	•	\$74.5 M	\$74.5 M	\$12.1 M	Green	
	WW Lyttelton Harbour Wastewater Scheme	(Execute) Construction	•	Feb-19	Jun-22	Jun-22	•	\$60.8 M	\$58.8 M	\$53.6 M	Green	Fully connected system place by 1 June 2022, th works still scheduled fo commissioning of the w the treatment plants.

valley earthworks and landscaping is complete. dam has been granted which would allow work to struction planned to commence October 2022. een updated and the budget is not sufficient to nge request being prepared. Project completion ne completion date has been revised.

authshore has identified that the proposed design eas of saltmarsh, salt meadow and seagrass which ational Environment Standards, NZ Coastal Policy al Policy Statement. The exact policies and by are being investigated with Council's external a Buddle Findlay, as this may have a significant design. The immediate impact on the project is a issue is investigated, however the extent of this will ray forward is identified.

et has now been combined to the Combined roject.

n from Lyttelton Harbour through to Bromley in hough some delays due to COVID. Completion of or the end of July 2022. Main risks are waste water system as a whole and demolition of

			TIME				BUDGET				STATUS	СОММ
_	Project Title	Current Phase	Time Status	Original Delivery Date	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Overall Status	
	Third Party Delivery / Funding								#N/A			
	Parakiore Recreation and Sports Centre (Metro Sport Facility)	(Execute) Construction	•	Jan-20	Jun-23	Oct-23		\$151.3 M	\$151.3 M	\$122.3 M	Red	Delays due to slower pr COVID-19 flow on effect work is forecast as Q4 2 cashflow is subject to ir on the project.
Third Party Delivery / Funding	Te Kaha Canterbury Multi Use Arena (CMUA)	(Execute) Investigate		Jun-25	Jun-25	Jul-25		\$521.8 M	\$521.8 M	\$35.3 M	Amber	As per Council resolution sports mode), project co- (previously forecast for meets the programme at As per Council resolution sports mode), Council at Watpac and their consu- representatives includin now completed the Pre Design has updated the escalation and total est Tender for the Early Wo been awarded, and the currently being evaluat construction budget for in relation to the Design phase.
	Multicultural Recreation and Community Centre	(Execute) Construction	•	Jun-21	Jan-23	Jan-23	•	\$3.0 M	\$3.0 M	\$2.9 M	Green	Purchase completed.

rogress than current construction programme and ts. The completion date for the main construction 2023. Timing of the Council's Contribution and nvoicing from Ōtākaro based on their expenditure

on 12 August 2021 to retain a 30,000 seat arena (in completion has been revised to mid-2025 r December 2024) due to this decision. This still agreed in the Funding Agreement with the Crown. on 12 August 2021 to retain 30,000 seat arena (in approved an additional \$50m budget. Kōtui (BESIX ultant team) have worked with Client

ing Council and Venues Ōtautahi staff and have eliminary Design for the arena. The Preliminary e impacts on programme, risk contingency, timated cost for the arena.

orks subcontract for Ground Improvement has bulk earthworks subcontract has closed and is ted. Commitment to spend against the or other work is subject to a further Council decision n & Construct contract, after the Developed Design

### DEPARTMENT OF INTERNAL AFFAIRS (DIA) - WATER (\$40.5M)

External Funding is for both Capital and Operational Expenditure. Progress updates for all initiatives being delivered (both capital and operational) are provided below.

				TIME				BUD	DGET				RIS
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Council Funded	Govt Funded	TOTAL Approved Budget	Current Forecast	Actuals to Date	Status	Risk Commentary (
	WS Riccarton Rd Mains Renewal (Hansons to Matipo)	Close		Jun-22	Apr-22	•	\$2.3 M	\$2.0 M	\$4.3 M	\$4.2 M	\$4.2 M	Green	The physical works a liability stage.
	WS Libeau and Chemin Du Nache Mains Renewal	(Execute) Construction	•	May-22	Aug-22	•	\$0.1 M	\$1.2 M	\$1.3 M	\$1.3 M	\$0.9 M	Red	Construction in prog completion date wh by Aug 2022. Risks o watermain during c
	WW Upper Totara, Puriri, Balgay, Milnebank, Karamu, Field, Wharenui, Weka, Tui, Leinster & Bristol Mains Renewal	(Execute) Construction	•	Nov-22	Nov-22	•	\$3.6 M	\$2.2 M	\$5.8 M	\$5.3 M	\$3.1 M	Green	Works is going well t
	WW Trafalgar, Dover, Cornwall, Lindsay, Caledonian and Ranfurly Mains Renewal	Close	•	May-23	Aug-22	•	\$1.8 M	\$1.7 M	\$3.4 M	\$3.3 M	\$3.2 M	Green	Construction compl findings, delays, cou based on HNZ requi
	WW Philomel, Inverell, Pegasus, Endeavour, Royalist, Effingham, Monowai, Nile Mains Renewal	(Execute) Construction	•	May-23	May-22	•	\$1.3 M	\$2.5 M	\$3.8 M	\$3.8 M	\$3.2 M	Green	Construction compl project. Part 2, busy to project - Pacific D
enditure	WW Nalder, Ruru, McLean, Wyon, Rudds, Griffiths, Digby, Rasen and Tilford Mains Renewal	Close	•	May-23	Aug-22	•	\$0.8 M	\$1.3 M	\$2.0 M	\$2.0 M	\$1.9 M	Green	Consturction compl currently. No Archae
Capital Expo	WW Sails, Langdons, Hoani, Wilmot, Cone, Perry, Gambia, Frank, Sturrocks, Grassmere Mains Renewal	Close	•	May-23	Aug-22	•	\$1.5 M	\$2.6 M	\$4.1 M	\$4.0 M	\$3.9 M	Green	Project Completed a monitored going for work in the market o projects.

# City Council

#### KS (BUDGET AND TIME)

#### (By Exception)

are now complete and the project is in the defects

ogress, with June 2022 forecast as the construction hich aligns with the DIA timeframe. QA to be handed in of rock in Rue Pompallier, risk of damage to existing construction, contractor notified.

for a planned completion date.

pleted. QA in submission. In defects. Archaeology build impact the duration of the project and productivity irrements.

pleted part 1. In defects. To reduce PO value for the y with design investigation, an additional street added Drive.

leted. Project now in defects liability stage. No risks eology findings in this area.

and now in defects liability stage. COVID-19 to be rward impact on contractors and resources. Volume of coupled with resources on government funded ltem 10

### DEPARTMENT OF INTERNAL AFFAIRS (DIA) - WATER (\$40.5M)

External Funding is for both Capital and Operational Expenditure. Progress updates for all initiatives being delivered (both capital and operational) are provided below.

			TIME				BUD	OGET				RIS
Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Council Funded	Govt Funded	TOTAL Approved Budget	Current Forecast	Actuals to Date	Status	Risk Commentary (
WW Akaroa Inflow and Infiltration Renewals	(Execute) Construction	•	Mar-22	Mar-22	•	\$1.1 M	\$2.7 M	\$3.8 M	\$3.0 M	\$2.0 M	Green	Construction is prog COVID delays and ar
WW Duvauchelle Inflow and Infiltration Renewals	(Execute) Investigate	•	Jun-22	May-22	•	464,999.96	\$1.5 M	\$1.9 M	\$1.9 M	\$0.4 M	Red	The construction is s Also, contaminantio other project to use.
WW Lift Station SCADA Renewals	(Execute) Construction	•	Mar-22	Mar-22	•	-	\$0.5 M	\$0.5 M	\$0.5 M	\$0.4 M	Red	Advised by the Supp May. The contract ha team are working th and completed prior
WS Rawhiti Smart Water Network	(Execute) Construction	•	May-22	Mar-22	•	-0.5 M	\$2.6 M	\$2.1 M	\$2.1 M	\$2.0 M	Green	From April 2022, the water LTP funded pr
WS L'Aube Hill Reservoir Bypass	(Execute) Construction	•	Apr-24	Apr-22	•	-	\$1.14 M	\$1.1 M	\$1.1 M	\$0.9 M	Amber 	Bypass works on ma storage in the form of Currently we are tria stream water storag supply risks for Akar reservoir for ongoing

# City Council

### KS (BUDGET AND TIME)

#### (By Exception)

gressing. Due to a number of approved variations, rchaeological delays.

signifcantly delayed due to the Archaeology authority. on was found. DIA money will need to be returned for

plier that the delivery of units is now likely to be in mid has now been awarded at this stage but the evaluation hrough the tags. Critical risk of getting works ordered or to end of financial year.

e rest of this project scope will delivered under Smart roject.

ain set of 14 tanks of 30m<sup>3</sup> each complete. Secondary of a single 500m<sup>3</sup> tank also complete in service. aling the use of the old reservoir in summer as a run of ge tank. This will help reduce some of the summer roa. We will continue with the repair of the old graw water service in March 2022. ltem 10

### DEPARTMENT OF INTERNAL AFFAIRS (DIA) - WATER (\$40.5M)

External Funding is for both Capital and Operational Expenditure. Progress updates for all initiatives being delivered (both capital and operational) are provided below.

				TIME					RIS				
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Council Funded	Govt Funded	TOTAL Approved Budget	Current Forecast	Actuals to Date	Status	Risk Commentary (
	WS Sydenham Suction Tank Replacment	(Execute) Procure	•	Mar-23	May-23	•	\$5.9 M	\$0.42 M	\$6.3 M	\$5.9 M	\$0.8 M	Red	The construction co manager is working been highlighted by The late start is beca steel tank.
diture	WW Mains Renewal - Tomes, Rutland, Scotston, Norfolk, Bennet, Mays, Tevendale, Chapter, Lingard, Mathias, Paparoa and Claremont	(Execute) Construction	•	Jun-23	May-23	•	\$4.1 M	\$2.0 M	\$6.1 M	\$6.1 M	\$3.2 M	Amber	Construction progra contractor. Further of Contractors, Resour between Tome and being managed to ta mains renewals. Pip Rd and Paparoa Sta customers affected.
Capital Expen	WW - Heathcote Valley Pipeline	(Execute) Construction	•	Apr-22	Apr-22	•	\$0.0 M	\$1.3 M	\$1.3 M	\$1.3 M	\$1.0 M	Green	Work is progressing constructed. Work i Contractors spend p representative is inv
J	WW Sewer Lateral Renwals	Initiate					\$0.0 M	\$1.4 M	\$1.4 M	\$0.0 M	\$0.0 M	Green	
	WS Sample Points	Initiate			Jun-22	•	\$0.00 M	\$0.47 M	\$0.47 M	\$0.3 M	\$0.0 M	Red	Established the sam delivered to Citycare costs for the supply price for the installa
	WW Odour Bed Renewals	Concept					\$0.00 M	\$0.28 M	\$0.28 M	\$0.0 M	\$0.0 M	Green	
	Sub-Total Capital	1		1			\$22.4 M	########	\$49.9 M	\$46.2 M	\$31.3 M		

# City Council

#### KS (BUDGET AND TIME)

#### (By Exception)

ontract is on the brink of award. The CCC project to resolve a risk around the piling design which has the preferred bidder before awarding the contract. ause there is a significant lead time on the stainless

amme will go into FY23. Delayed construction start by delay due to evaluation process, COVID 19, rces and conditions.Design for additional works Mays Road properties in progress. Risks are currently ake into account standard risks associated with WW bes to be renewed along Tomes Rd, Rutland St, Mays are critical so special consideration required regarding

with the pipe in manufacture, pipe footings almost is still scheduled to be complete by the end of May. profile is falling behind programme, engineers vestigating.

npling points (80). Bollard casings and components e. Discussion ongoing with Citycare to firm up the (now the actual costs are known) and awaiting the ation.

### DEPARTMENT OF INTERNAL AFFAIRS (DIA) - WATER (\$40.5M)

External Funding is for both Capital and Operational Expenditure. Progress updates for all initiatives being delivered (both capital and operational) are provided below.

			TIME				BUD	GET				RIS
Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Council Funded	Govt Funded	TOTAL Approved Budget	Current Forecast	Actuals to Date	Status	Risk Commentary (
WS Reservoirs & Suction Tanks (Condition assessments of high priority tanks)	Plan			Ongoing	•	\$0.00 M	\$0.70 M	\$0.70 M	\$0.7 M	\$0.6 M	Green	Planned to spend th programme comme Inspections were ca this year.
Small Community Private Water & Wastewater Scheme Needs Assessment	(Execute) Construction			Mar-22	•	_	\$0.30 M	\$0.30 M	\$0.3 M	\$0.3 M	Green	Final report tweakir
WS Water Pump Station Deferred Maintenance	(Execute) Construction		Jun-22	Jun-22		\$0.38 M	\$3.5 M	\$3.9 M	\$4.0 M	\$3.5 M	Green	Work is progressing allocated budget wi
WW Pump Station Deferred Maintenance	(Execute) Construction	•	Jun-22	Jun-22	•	\$0.10 M	\$2.27 M	\$2.4 M	\$2.5 M	\$2.1 M	Green	All work progressing stations by March20 WW stations comple there are no risks to remainder of the pro
WW CCTV Inspections	(Execute) Construction	•		May-22	•	\$0.00 M	\$1.8 M	\$1.8 M	\$2.2 M	\$1.4 M	Green	All nine packages av June. CCTV data is b to be formalised.
Business Case for Regional Water Services Entity (CCC contribution)	Closed	•	Jun-21	Jun-21	•	\$0.00 M	\$0.22 M	\$0.22 M	\$0.2 M	\$0.2 M	Green	Project is closed
WS Pressure Management and Water Supply Rezoning	(Execute) Investigate	•	Feb-22	Dec-22	•	\$0.00 M	\$0.25 M	\$0.25 M	\$0.3 M	\$0.3 M	Green	The DIA milestones funded by OPEX and
WW Duvauchelle Wastewater Treatment Plant Deferred Maintenance	Closed			Feb'21	•	\$0.00 M	\$0.09 M	\$0.09 M	\$0.1 M	\$0.1 M	Green	Project is closed.

# City Council

#### SKS (BUDGET AND TIME)

#### (By Exception)

he budget by end of June 2022. Internal cleaning enced. Impacts of COVID on resources and availability. arried out last year and another tranche is underway

ng underway, to be completed by 30 April

g with no issues. All stations have been scoped. Full *v*ill be spent by end of June 2022

ng very well. We will complete the Stage II waste 022 and then move onto Stage IV stations to have all leted by June 2022. All stations have been scoped and o delivery. Funding has been confirmed for the roject.

warded with works to be completed before the end of being audited by an external party. Awaiting DIA funds

s for this project complete - the fuller project is cond that part is continuing. ltem 10

### DEPARTMENT OF INTERNAL AFFAIRS (DIA) - WATER (\$40.5M)

External Funding is for both Capital and Operational Expenditure. Progress updates for all initiatives being delivered (both capital and operational) are provided below.

				TIME				BUD	GET				RISI
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Council Funded	Govt Funded	TOTAL Approved Budget	Current Forecast	Actuals to Date	Status	Risk Commentary (I
Ą	Asset Lifecycle Maintenance Optimisation	(Execute) Investigate	•	Dec-21	Jul-22	•	\$0.00 M	\$2.87 M	\$2.9 M	\$2.5 M	\$2.2 M	Green	The proposed contra reduces the risk there in the contract docur has been flagged frou request to increase fu timeline to go-live an The timeline will be r two weeks, after whi requested.
C V	Chlorination System Remedial Vork	Initiate			Jun-22	•	\$0.00 M	\$1.0 M	\$1.0 M	\$2.0 M	\$1.8 M	Green	
S	Sub-Total Operational						\$0.5 M	\$13.0 M	\$13.5 M	\$14.8 M	\$12.4 M		
Т	TOTAL DIA						\$22.9 M	\$40.5 M	\$63.4 M	\$61.0 M	\$43.6 M		



Budget (Deviation from Baseline)GreenOn TrackAmberForecast Overspend <5%</th>RedForecast Overspend >5%

# City Council

#### KS (BUDGET AND TIME)

#### By Exception)

act start date has moved to late June 2022. Whilst this re is still not any slack on the timeline given the delay uments being ready for release onto GETS. The budget om Red to green following the completion of a change funds. Close collaboration with Citycare Water on the nd the work required in mobilisation and transition. reviewed and confirmed by Citycare Water in the next hich if a further timeline extension is required it will be

April 2022

### INDUSTRY REFERENCE GROUP: SHOVEL READY (\$133.2M)

			TIME				BUDGET				<b>RISKS (</b>	BUDGET AND TIME)
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date		Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Risk Statı	s Risk Commentary (By Exception)
icote Expressway	Section 2 - Tannery to Martindales	Procurement	•	Jun-25	Oct-23		•	\$13.6 M	\$12.2 M	\$1.0 M	Red	Additional funding approved by Finance and been transferred into the project, driving the with Kiwirail mean that we now have a cleare significant change to completion date. Kiwira design, costs, and supply of materials are con
Heat	Programme Contingency - Major C Expressway	ycleway - Heathcote						\$0.0 M	\$0.0 M	\$0.0 M		
								\$13.6 M	\$12.2 M	\$1.0 M		
	<b>Section 1</b> - Major Cycleway - Northern Line Route (Section 1) Blenheim to Kilmarnock, and Harewood Crossing and Restell	Detailed Design		Jun-23	Apr-24		•	\$8.1 M	\$8.1 M	\$4.6 M		Ongoing discussions with Kiwirail have given completion dates reflects the delivery depen
	<b>Section 2a</b> - Major Cycleway - Northern Line Route Tuckers to Sturrocks including crossings	Detailed Design	•	Jun-21	May-23		٠	\$3.2 M	\$3.2 M	\$0.3 M	Red	implementation of the crossings. Construction which will further inform the completion mile has being procured through KiwiRail to speed commence procurement of long lead items.
Line Cycleway	<b>Section 2b</b> - Major Cycleway Northern Line Route (Section 2b) Sturrocks to Barnes & Main North Road	Detailed Design		Oct-22	May-23		•	\$2.2 M	\$2.2 M	\$0.6 M		finalised. Potential for lizards to be at some estimates are based on high level estimates f process.
Northern	Section 3a - Major Cycleway Northern Line (Section 3a) Styx Mill Overbridge to Northwood Boulevard	Construction		Dec-22	Jun-22			\$1.5 M	\$1.0 M	\$0.5 M	Green	
	Major Cycleway - Northern Line Route (Section 1) Railway Crossings	Detailed Design	•	Dec-23	Aug-23		•	\$5.4 M	\$5.3 M	\$0.1 M	Red	Construction programmes still to be confirm completion milestone. External resource for efficiency of delivery, rail crossings may be p confirmed with Kiwirail. Cost estimates are b updated through the design process.
	Programme Contingency - Major C Line Cycleway	ycleway Northern		•		• <b>-</b>		\$1.5 M	\$0.0 M	\$0.0 M		
								\$21.8 M	\$19.8 M	\$6.1 M		

# City Council



Performance Committee on 24 March 2022 has now e change to green budget status. Ongoing. discussions er idea of the timing of crossing works, driving the ail works are still in design phase and risks exist until nfirmed

n us a clearer idea of their timeframes, and the delay to ndencies with KiwiRail on the design and ion programmes are still to be confirmed by KiwiRail lestone. External resource for KiwiRail signal design ed up delivery, KiwiRail internal civil design and Deed of Grant and lease agreement are being e locations which will require relocation. Cost from 2017 and are being updated through the design

ed by Kiwirail which will further inform the Kiwirail signal design has being procured. For rocured with other Northern Line sections. To be based on high level estimates from 2017 and are being

			TIME			BUDGET				<b>RISKS (B</b>	UDGET AND TIME)
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Risk Status	Risk Commentary (By Exception)
	<b>Section 1a</b> - Major Cycleway Nor'West Arc Route (Section 1a) Cashmere To Sparks	Defects Liability	•	Dec-20	Dec-20	•	\$4.8 M	\$4.7 M	\$4.7 M		
	<b>Section 1b</b> - Major Cycleway Nor'West Arc Route (Section 1b) Sparks to Lincoln & Halswell intersection	Defects Liability	•	Oct-20	Mar-21	•	\$4.0 M	\$4.0 M	\$4.0 M	Green	Construction is now complete.
LC .	<b>Section 1c</b> - Major Cycleway Nor'West Arc Route (Section 1c) Lincoln & Halswell Intersection to Annex & Southern Motorway Underpass	Defects Liability	•	Mar-22	Dec-20	•	\$2.2 M	\$2.2 M	\$2.2 M		
Nor'West A	Annex, Birmingham & Wrights Corridor Improvement	Construction	•	Mar-24	Jul-25	•	\$7.1 M	\$7.1 M	\$1.7 M	Red	Works will be primarily complete by July 20 is required at the Annex Road Rail Crossing under investigation. Cost estimates will be however there is a high risk of a budget sho
	Ilam, Middleton & Riccarton Intersection Improvement	Defects Liability		Dec-21	Jan-22	•	\$1.3 M	\$1.2 M	\$1.2 M	Green	Construction is now complete.
	<b>Section 2</b> - Major Cycleway - Nor' West Arc Route (Section 2) Annex & Wigram Road to University	Construction	•	Jul-22	Jul-22	•	\$13.2 M	\$8.1 M	\$7.2 M	Green	This section is primarily complete and the delivery of the remaining works in Suva Str to NWA Section 3.
			TIME			BUDGET				<b>RISKS (B</b>	UDGET AND TIME)
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Risk Status	Risk Commentary (By Exception)
Nor West Arc	<b>Section 3</b> - Major Cycleway - Nor' West Arc Route (Section 3) University to Harewood	Investigation and Scheme Design	•	May-25	Jun-23	•	\$10.8 M	\$10.8 M	\$1.2 M	Amber	Scheme design approved. Revised project
	Programme Contingency - Nor' We	est Arc		1	<u> </u>	L	\$2.0 M	\$0.0 M	\$0.0 M		• •
			. <u> </u>			Total	\$45 A M	\$38.1 M	¢22.2 Μ	I	

# City Council

22. The forecast milestone date reflects the work that , options for treatment at this crossing are currently updated once a proposed treatment is agreed, ortfall.

ICR operational. The completion date reflects the eet. \$2M allowance under contingency to be transferred

oudget to be determined based on approved design.

			TIME			BUDGET				RISKS (BUDGET AND TIME)		
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Risk Status	Risk Commentary (By Exception)	
ui - Shag Rock	<b>Section 3</b> - Major Cycleway - Rapanui Shag Rock Route (Section 3) Dyers to Ferry Road Bridge	Construction	•	Jun-23	Oct-22	•	\$9.0 M	\$9.0 M	\$4.4 M	Amber	A contract has been awarded for construc to a COVID 19 outbreak within the contrac Start on Site is expected to start in early M	
Rapar	Programme Contingency - Major C Shag Rock					\$0.4 M	\$0.0 M	\$0.0 M				
-						Total	\$9.4 M	\$9.0 M	\$4.4 M			

		TIME			BUDGET				RISKS (BUDGET AND TIME)			
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Risk Status	Risk Commentary (By Exception)	
	<b>Section 1</b> - Major Cycleway - South Express Route (Section 1) Hei Hei to Jones	Major Cycleway - ess Route (Section 1) Construction ones		Dec-22	Dec-24	•	\$9.2 M	\$9.2 M	\$3.2 M	Red	The majority of the works are forecast for co Gilberthorpes Road has KiwiRail dependenc our latest understanding of their programm continues to reflect the dependency on Kiw is forecast. Work can continue on delivery c start in FY23.	
ith Express	<b>Section 2</b> - Major Cycleway - South Express Route (Section 2) Craven to Buchanans	Construction		Dec-22	Dec-22		\$15.5 M	\$14.8 M	\$0.9 M	Green	Junction road which started in August). Sec Construction is planned for 2022. Traffic ligh started in June 2021.	
Sou	<b>Section 3</b> - Major Cycleway - South Express Route (Section 3) Curletts to Old Blenheim	Construction	•	Dec-21	Dec-21	•	\$17.1 M	\$16.9 M	\$15.5 M	Green	Risk Status has now changed to green to ref complete, and claims from the Contractor a	
	Programme Contingency - Major C Express	ycleway - South	. <u>F</u>			<u> </u>	-0.0 M	\$0.0 M	\$0.0 M			
						Total	\$41.8 M	\$41.0 M	\$19.7 M			

# City Council



tion however contruction start on site was delayed due ctor, which has caused the delay to Completion Dates. Nay.

ompletion in May 2023, however the work at cy and so the programme for this section is based on ne. This remains unconfirmed, so the Risk status viRail and the risk to both time and budget beyond what of some of the route and construction is anticipated to

cond Awarded in February 2022. The bulk of hts at Waterloo/Hei Hei were awarded and construction

flect the additional funding approved. Work is are being assessed.



Total Budget of \$149.1M is Shovel Ready funding plus historic costs

A contract has been awarded and work has commenced on site. Significant constraints to be consenting, and complex engineering), stormwater/ flooding issues, archaeology. The program

April 2022

### CROWN REGENERATION ACCELERATION FUND - CRAF (\$40M)

Across all CRAF Transport Improvement projects listed below, further projects will be drawn down once scope has been defined to provide visibility of the confirmed initiatives.

		ТІМЕ				BUDGET					RISKS (BUDGET AND TIME)		
Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date		Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Ris	sk Status	Risk Commentary (By Exception)	
Linwood & Woolston Roading & Transport Improvements	Investigation and Scheme Design		Jun-26	Jun-26			\$6.6 M	\$6.6 M	\$0.2 M	Gre	een		
New Brighton Roading & Transport Improvements	Investigation and Scheme Design	•	Jun-26	Jun-26		•	\$6.6 M	\$6.6 M	\$0.2 M	Gre	een		
Riccarton Roading & Transport Improvements	Investigation and Scheme Design	•	Jun-26	Jun-26		•	\$6.6 M	\$6.6 M	\$0.1 M	Gre	een		
Richmond Roading & Transport Improvements	Investigation and Scheme Design		Jun-26	Jun-26		•	\$4.1 M	\$4.1 M	\$0.2 M	Gre	een		
Spreydon, Somerfield, Waltham & Beckenham Roading & Transport Improvements	Investigation and Scheme Design		Jun-26	Jun-26		•	\$6.6 M	\$6.6 M	\$0.2 M	Gre	een		
Road Safety Priorities Delivery Package (CRAF)	Construction	•	Jun-24	Jun-24		•	\$5.0 M	\$4.2 M	\$1.8 M	Gre	een		
Public Transport - Bus Priority, Riccarton Rd, Matipo to Waimairi (CRAF)	Investigation and Scheme Design	•				•	\$1.3 M	\$1.3 M	\$0.0 M	Gre	een	Project in early planning phase. Consultatio	
Public Transport - Advance Bus Detection (CRAF)	Plan	•				•	\$0.6 M	\$0.5 M	\$0.0 M	Gre	een	Project in early planning phase	
Public Transport - Intersection Improvements, Bus Transfers (CRAF)	Plan					•	\$0.1 M	\$0.1 M	\$0.0 M	Gre	een	Project in early planning phase	
Public Transport - Bus Priority, Gloucester St (CRAF)	Plan					•	\$0.4 M	\$0.3 M	\$0.0 M	Gre	een	Project in early planning phase	
Public Transport - Bus Priority, Shirley Rd (CRAF)	Plan					•	\$0.2 M	\$0.2 M	\$0.0 M	Gre	een	Project in early planning phase	
Public Transport - Bus Priority, Lincoln Rd from Whiteleigh to Wrights (CRAF)	Investigation and Scheme Design	•		Sep-24		•	\$2.1 M	\$2.1 M	\$0.0 M	Gre	een	Schedule in line with PT priority Curletts to required.	
Public Transport - Bus Priority, Cashmere Rd (CRAF)	Plan					•	\$0.1 M	\$0.1 M	\$0.0 M	Gre	een	Project in early planning phase	

# City Council

Expected Early 2022 Construction anticipated EV 24
respected Early 2023. Construction anticipated Fr 24.
Irights. This section of work can be brought earlier if

April 2022

Public Transport - Bus Priority, Ferry Rd (CRAF)	Initiate				\$0.2 M	\$0.2 M	\$0.0 M	Green	Project in early planning phase
TOTAL CRAF (\$19.6m still to be all	)	\$40.3 M	\$39.3 M	\$2.7 M					



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April 2022

### CHRISTCHURCH EARTHQUAKE APPEAL TRUST (\$13.8M) and CROWN REGENERATION ACCELERATION FUND (\$40M)

		TIME			BUD	BUDGET					RISKS (BUDGET AND TIME)		
Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Bu St	udget tatus	Current Approved Budget	Current Forecast	Actuals to Date	Risk Status	Risk Commentary (By Exception)		
<b>Ōtākaro Avon River Corridor</b> - 3x Footbridges & Landing (CEAT)	Construction (Bridges) Construction (Landing)	•	Jun-30	Jun-30	(	•	\$13.8 M	\$13.8 M		Green	Public openings scheduled for Avondale Brid		
<b>Ōtākaro Avon River Corridor</b> - City to Sea Pathway, Ecological Restoration, Landings (CRAF)	Plan	•	Jun-30	Jun-30		•	\$40.0 M	\$40.0 M	\$7.2 M	Green	Key programme risks relate to expectations assets (escalated to CE level to be addressed interpretations, particularly ECan positions Specific representative of ECan has been ap group to provide advice and support. Other actively managed and reviewed by PM, PCG		
TOTAL CEAT AND CRAF							\$53.8 M	\$53.8 M	\$7.2 M				

### Time (Deviation from Baseline)

Green	
Amber	
Red	

### Budget (Deviation from Baseline)

Green
Amber
Red

# City Council

Attachment D Item 10

dge (4 March) and Dallington Landing (12 March).

a around Third Party infrastructure, particularly Orion d initially with Orion counterpart, and consenting on contamination and passive groundwater take. opointed and is now a member of the Project Steering r key risks captured in a programme wide register, and PSG meetings.

### CHRISTCHURCH CITY COUNCIL - MAJOR CYCLEWAYS PROGRAMME April 2022

All Major Cycleway Shovel Ready projects are reported through the "Externally Funded" report

			TIME			BUDGET				<b>RISK (BU</b>	DGET AND TIME
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Status	All risks are n
S.	Section 1 - Major Cycleway - Wheels to Wings Route (Section 1) Harewood Road to Greers Road	(Execute) Investigate	•	Jun-27	Jun-27	•	\$8.9 M	\$8.9 M	\$2.4 M	Green	
Mind to Mind	Section 2 - Major Cycleway - Wheels to Wings Route (Section 2) Greers Road to Wooldridge Road	Concept			Jun-27	•	\$8.8 M	\$8.8 M	\$0.0 M	Green	The Hearings I for a decision r
M	Section 3 - Major Cycleway - Wheels to Wings Route (Section 3) Wooldridge Road to Johns Rd Underpass	Concept			Jun-28	•	\$5.0 M	\$5.0 M	\$0.0 M	Green	
				•	• • •		\$22.7 M	\$22.7 M	\$2.4 M		
Little River	Major Cycleway – Little River Link Route Rail Crossing	(Execute) Design	•	Jun-25	Dec-23	•	\$0.4 M	\$0.3 M	\$0.0 M	Red	Expected budg automated gate originally allow
				•			\$0.4 M	\$0.3 M	\$0.0 M		
Southern	Section 1 - Major Cycleway - Southern Lights Route (Section 1) Strickland Street to Tennyson St	Concept	•	Jun-27	Jun-27	•	\$4.4 M	\$4.4 M	\$0.4 M	Green	
. –							\$4.4 M	\$4.4 M	\$0.4 M		





lget shortfall due to a scope increase as Kiwi Rail are requiring ates either side of the Grove Road crossing which was not wed for. ltem 10

	Section 1 - Major Cycleway Ōtākaro-Avon Route (Section 1) Fitzgerald Avenue to Swanns Road Bridge	(Execute) Investigate	•	Jun-28	Jun-28	•	\$8.1 M	\$8.0 M	\$0.2 M	Green	
Avon-Õtākarc	Section 2 - Major Cycleway Ötākaro-Avon Route (Section 2) Swanns Road Bridge to ANZAC Drive Bridge	Concept			Jun-28	•	\$11.1 M	\$11.1 M	\$0.0 M	Green	
	Section 3 - Major Cycleway Ōtākaro-Avon Route (Section 3) ANZAC Drive Bridge to New Brighton	Concept			Jun-28	•	\$11.1 M	\$11.1 M	\$0.0 M	Green	
							\$30.4 M	\$30.3 M	\$0.2 M		
oute	Section 1 - Major Cycleway - Ôpāwaho River Route (Section 1) Princess Margaret Hospital to Corson Avenue	Initiate	•	Jun-29	Jun-29	•	\$11.6 M	\$11.6 M	\$0.1 M	Green	
āwaho River F	Section 2 - Major Cycleway - Ōpāwaho River Route (Section 2) Corson Avenue to Waltham Road	Concept			Jun-28	•	\$6.1 M	\$6.1 M	\$0.0 M	Green	
Ōpā	Section 3 - Major Cycleway - Ōpāwaho River Route (Section 3) Waltham Road To Ferrymead Bridge	Concept			Jun-29	•	\$37.9 M	\$37.9 M	\$0.0 M	Green	
							\$55.5 M	\$55.5 M	\$0.1 M		




MAJOR CYCLEWAYS - SECTIONS COMPLET												
				TIME		BUDGET				RISK (BUD	GET AND TIME	
	Project Title	Current Phase	Time Status	Current Approved Delivery Date	Current Forecast Delivery Date	Budget Status	Current Approved Budget	Current Forecast	Actuals to Date	Status	Risk Comment	
e	Section 1 - Grassmere to Tomes	Closed	٠	Oct-15	Oct-15		\$1.7 M	\$1.7 M	\$1.7 M	Green		
Paral	Section 2 - Bealey Ave to Trafalgar	Closed	٠	Aug-17	Aug-17		\$11.1 M	\$11.1 M	\$11.1 M	Green		
anui	Section 3 - Trafalgar to Tomes	Closed	٠	May-17	May-17		\$0.0 M	\$0.0 M	\$0.0 M	Green		
Pap	Section 4 - Grassmere to Sawyers Arms Road	Closed	٠	Aug-17	Aug-17		\$3.4 M	\$3.4 M	\$3.4 M	Green		
					•		\$16.2 M	\$16.2 M	\$16.2 M			
ıs Trail	Section 1a - Hoon Hay Road to Roker/Strickland Street	Closed	٠	Jun-18	Jun-18	•	\$17.5 M	\$17.5 M	\$17.5 M	Green		
rymai	Section 1b - Victors Rd to Hoon Hay Road	Closed	۲				\$0.0 M	\$0.0 M	\$0.0 M	Green		
Quar	Section 2 - Halswell to Victors Road	Closed	٠	Jun-19	Oct-19		\$6.1 M	\$6.2 M	\$6.2 M	Green		
					<u>.                                    </u>		\$23.6 M	\$23.7 M	\$23.7 M			
	Section 1 - Matai St East	Closed		Jan-16	Jan-16		\$3.3 M	\$3.1 M	\$3.1 M	Green		
cle	Section 2 - Hagley Park to Riccarton Bush	Closed	٠	Nov-17	Nov-17		\$3.3 M	\$3.3 M	\$3.3 M	Green		
Jni-C	Section 3 - Ngahere St to Dovedale Ave	Closed	•	Sep-17	Sep-17		\$4.2 M	\$4.2 M	\$4.2 M	Green		
	Section 4 - Railway Line Crossing	Closed	٠	Sep-17	Sep-17		\$0.3 M	\$0.3 M	\$0.3 M	Green		
	· ·				• • • •		\$11.0 M	\$10.8 M	\$10.8 M			



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tarv		
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ncote ress	Section 1 A- Ferry Rd	Closed	•	Oct-19	Oct-19		\$6.2 M	\$6.2 M	\$6.2 M	Green
Heath Exp	Section 1 B- Charles St to Tannery	Closed	•	Oct-19	Oct-19		\$11.2 M	\$11.2 M	\$11.2 M	Green
					<u> </u>		\$17.4 M	\$17.4 M	\$17.4 M	
er Link	Section 1 - Moorhouse Avenue to Edinburgh Street	Closed	•	Sep-18	Sep-18		\$6.6 M	\$6.6 M	\$6.6 M	Green
e Riv	Section 2 - Wigram Magdela Link	Closed		Jan-17	Jan-17		\$0.2 M	\$0.2 M	\$0.2 M	Green
Litt	Section 3 - Little River Township	Closed	•	Oct-16	Nov-16		\$0.8 M	\$0.8 M	\$0.8 M	Green
							\$7.5 M	\$7.5 M	\$7.5 M	
						· · · · · · · · · · · · · · · · · · ·				
Northern Line	MCR Northern Line Cycleway - Section 1b- South Hagley Park Connection	Closed	•		Sep-14	•	\$0.0 M	\$0.0 M	\$0.0 M	Green
							\$0.0 M	\$0.0 M	\$0.0 M	
						<b></b>				
shag Rock	MCR Rapanui - Shag Rock Cycleway - Section 1 - Worcester Street to Linwood Ave	Closed	•	Oct-18	Jan-18	•	\$9.2 M	\$9.2 M	\$9.2 M	Green
Rapanui S	MCR Rapanui - Shag Rock Cycleway - Section 2 - Aldwins Road to Dyers Road	Closed	•	Jul-18	Jul-18	•	\$7.1 M	\$7.1 M	\$7.1 M	Green
					<u> </u>		\$16.3 M	\$16.3 M	\$16.3 M	
TOT							¢470.0 M	¢1 <del>77 7</del> M	¢02.2 M	
TOTA	L MCK PROGRAMIME (EXCL		ERNAL FUNDED SHOVEL READY)				\$178.0 M	\$177.7 M	\$92.2 W	

Time (Deviation from Baseline)									
Green	<30 days delay								
Amber	31-60 days delay								
Red	>61 days delay								

Budget (Deviation from Baseline)	
Green	On Track
	_

Red

Forecast Overspend <5% Forecast Overspend >5%







# **11.** Te Kaha Project - Elected Member Update

Reference Te Tohutoro:	22/205418
Report of Te Pou Matua:	David Kennedy, Chief Executive Te Kaha Project Delivery Limited, David.Kennedy@ccc.govt.nz
General Manager Pouwhakarae:	Barry Bragg, Chair Te Kaha Project Delivery Limited, barry.bragg@ngaitahu.iwi.nz

## 1. Brief Summary

1.1 The purpose of this report is to update Elected Members on the progress of the Te Kaha Project Delivery Limited.

## 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

1. Receive the information in the Te Kaha Project Elected Members Update Report.

## Confirmation of Statutory Compliance / Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002). (a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

## Signatories Ngā Kaiwaitohu

Author	David Kennedy - Chief Executive Te Kaha Project Delivery Limited
Approved By	Barry Bragg - Chair Te Kaha Project Delivery Limited

## Attachments Ngā Tāpirihanga

No.	Title	Page
A 🕹 🔛	Te Kaha Elected Member Update 30 April 2022	112

Te Kaha CMUA Elected Member Update 7 May 2022 https://www.ccc.govt.nz/the-council/future-projects/major-facilities/canterbury-arena/



RELIMINARY DESIGN – VIEW FROM NORTHWEST CORNER

#### 30 APRIL 2022

# Te Kaha Project Delivery

Report for Finance & Performance Committee meeting 26 May 2022

#### **CURRENT UPDATES**

Kōtui, a consortium led by BESIX Watpac NZ (CMUA) Limited, with Christchurch-based construction companies Southbase Construction and Fulton Hogan, are at the end of the Developed Design phase of the Pre Contract Services Agreement (PCSA).

Work is also underway on progressing the Early Works Strategy approved by Council on 09 December 2021. The Ground Improvement and Temporary Works Engineering subcontractors have been appointed, and detailed design work is underway on these works with Ground Improvement work likely to start on site in May 2022. The tender for bulk earthworks is currently being evaluated.

BESIX Watpac are currently obtaining pricing based on the Developed Design documentation, and will submit a Fixed Design & Construct (D&C) Price on 27 May 2022. Following receipt of this information there will be a comprehensive qualitative risk assessment completed and negotiation of the design and construction contract. They have advised that, like all construction projects in NZ at the moment, they are facing increased escalation and supply issues, including the effects of the Ukraine war.

The Te Kaha Project Delivery Limited Board and Venues Õtautahi are finalizing the agenda and timing for two/three project briefings to Council over May and June, covering the developed design, updated investment case and D&C contract, total project cost and programme delivery assessment. The Te Kaha Project Delivery Ltd Board remains on track to make the D&C contract recommendation to Council at the end of June 2022.

The current delivery programme, is as follows:

	BRIEF		PROCU	RE		DESIG																		
	ENAB	LING WO	RKS						•							CONST	TRUCTIO	DN NC						
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	1	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2	2020				2021				202	2			2	023			2	024			2	2025	

#### SCOPE

Te Kaha CMUA will position Central Christchurch and the Canterbury region as a world class option for attracting and hosting events. Its main purpose will be to host major sporting and entertainment attractions up to an international level.

Te Kaha CMUA is to be located over three city blocks between Hereford and Tuam Streets, bounded by Madras and Barbadoes Streets. This location is well connected with main transport routes and within easy walking distance of the central city accommodation, hospitality and transport facilities. Te Kaha CMUA is a replacement for the previous stadium at Lancaster Park, destroyed in the 2010-2011 earthquakes, and the current temporary Orangetheory Stadium.

Delivery timetable as of 30 April 2022. Disclaimer – All timeframes are accurate at the time of publication and are dependent on public sector delivery mechanisms.



# 12. South Library Te Kete Wānanga o Wai Mōkihi - Earthquake Repair Options

**Reference / Te Tohutoro:** 22/529026

Report of / Te Pou	Carolyn Robertson – Head of Libraries & Information
Matua:	Brent Smith – Head of vertical Capital Delivery
General Manager / Pouwhakarae:	Mary Richardson – General Manager Citizens & Community

# 1. Purpose of the Report Te Pūtake Pūrongo

- 1.1 The purpose of this report is to update Council on the findings of the pre-project investigation into the cost and scope of repair works required to address structural damage to the South Library from the 2010-2011 Canterbury earthquake sequence and bring this facility up to 100% NBS Importance Level 3; and endorse the staff recommendations.
- 1.2 This report provides Council with a comparison of repair with a rebuild of this facility including supporting technical advice in relation to: geotechnical, structural, architectural, building services, legal, insurance, whole of life carbon, programme, cost, and funding implications.
- 1.3 In summary the investigation has revealed:
  - a. The scope of repair required to address the structural damage at the South Library is more extensive than previously thought.
  - b. The extent of fabric replacement required for a repair is almost equivalent to a rebuild.
  - c. The complex repair has a high level of risk and unknowns in terms of time, cost and quality.
  - d. There are significant benefits to a rebuild including; energy efficiency, comfort, reduced operational and maintenance costs, lower whole of life carbon assessment, lower capital cost, more surety of construction programme, better contractual terms and associated warranties & guarantees.
  - e. Because of the anticipated length of closure we recommend setting up a temporary facility in the area if feasible.
  - f. The cost estimate for repair exceeds the \$13.6 million of CAPEX funds on plan. The project will require a (future) bid for construction capital and operating funds for temporary facility in Annual Plan 2023-2024.
  - g. Staff recommend a rebuild of this facility.
- 1.4 The decision in this report is of low significance in relation to the Christchurch City Council's Significance and Engagement Policy. The level of significance was determined by:
  - 1.4.1 Noting that the decision to repair the earthquake damaged South Library has already been made on 04 August 2016. This is included in the current Long Term Plan 2021-2031.
  - 1.4.2 The recommended resolution is that staff advance the design of the repair or rebuild to 'concept' and validate the cost estimate before returning to Council in Q1 2023 for a decision to progress the project.



- 1.4.3 There is sufficient Operating & Capital budget already on plan to develop the concept design and associated cost estimate.
- 1.5 In terms of gauging the views and preferences of interested and affected persons, consultation will be undertaken with the current stakeholders, community groups, and also members of the local community to take all suggestions put forward into consideration during the planning and design phases of the project.

# 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

- 1. Direct staff to progress the design for a rebuild of the South Library Facility on its existing site.
- 2. Endorse the development of a concept design and costing for consideration by Council in Q1 2023.
- 3. Note that the advancement of the project to construction will require additional funding in Annual Plan 2023-2024 and or a Long Term Plan adjustment.

# 3. Reason for Report Recommendations Ngā Take mō te Whakatau

- 3.1 **Rebuild on the existing site:** The preferred option, recommended by staff is the rebuild of the facility on the existing site for the following reasons.
- 3.2 There is now an opportunity for Council to review the rationale of a repair vs. new build option and make sure that the right long-term choice is made. In scoping the repair consideration has been given to the following key factors:
  - a. Long term performance of the building
  - b. Possible future change to the building use including the opportunity to improve function or the complete scope of issues with the original (pre-quake) design
  - c. Building Code Compliance
  - d. Recommendation of 'Heathcote river flooding report" and the impact of any possible underfloor or road flooding
  - e. The cost of temporary accommodation & relocation while works are carried out
  - f. The insurability of the repaired building
  - g. The complexity of contracts for the repair works including warranties for works
  - h. The (current day) difference in cost between a repair and a full replacement
- 3.3 **Functionality**: A preliminary workshop was held with Council staff who manage and occupy the building on both the functionality and future operational requirements. The results of this indicated that the facility provides sufficient floor area but the use of the space is inefficient. With wholesale changes to interior fabric required for repair or rebuild, there is an opportunity to optimise building function and efficiency, providing best value for future library and community use.
- 3.4 **Geotechnical:** Modelling and a preliminary site investigation, Attached A & B, to inform the structural solution for repair. Modelling has revealed that the site is low risk for lateral spread but prone to liquefaction in the deep soil layers below the water table. This means that



(shallow) ground improvement is not beneficial and in future seismic events the building will be prone to further differential settlement.

3.5 **Structural Engineering:** A high level structural repair design to inform the cost estimate for repair, Attached C. The scope of repair will include the foundations and floor slabs. A raft slab is recommended as this gives good seismic resilience and is simple to design and construct. The new slab can be placed on top of the existing foundation and floor slabs avoiding the need to excavate & dump the existing fabric. This saves money & time, minimises excavation of contaminated ground, provides the opportunity to raise the floor level to mitigate flood risk and comply with current flood level requirements.

The internal pre-cast concrete walls are quake prone and the engineer recommends removing these to reduce the seismic load on the building. Given the existing floor will be covered by a new slab, all of the internal walls and finished will need to be replaced.

3.6 **Architectural** : Advice has been provided in relation to the reuse of fabric, the interface of the new structural elements with existing building elements and code compliance, Attached D. South Christchurch Library is approaching a 20-year life span, which brings several building elements to their considered "end of life" and will require replacement in the near future.

The necessary structural repairs require building consent, and due to Building Code changes since the building was consented and constructed, elements of the building design and fabric will require upgrade.

A patch work repair to the system is unattainable with a high level of risk and unknowns outweighed by the benefits of a new system. A new façade system to the outside line of the new steel will provide continuity and simplification of the construction and sequencing with the roof replacement. This solution will remove the risk of any residual earthquake damage and any potential weather tightness issues caused by the condition of existing system. A new continuous façade system will also have a positive impact on the thermal performance of the building and internal comfort level.

- 3.7 **Building services**: The heating ventilation and cooling (HVAC) system is approaching the end of its useful working life and would become redundant in the repair and rebuild scheme. The current & ongoing issues with sewer and HVAC can be addressed in the repair or rebuild scope.
- 3.8 **Whole of life carbon:** An assessment has been prepared in accordance with EN 15978 (2011), Attached E. The carbon assessment makes comparisons against Council's Ōtautahi Climate Resilience Strategy (issued 2021).

The assessment shows repair offers a greater level of re-lifting to existing building fabric while a new build offers the greatest potential to improve the environmental impact of the structure, thermal performance, servicing strategy, comfort and daily performance of the building.

- 3.9 **Insurance:** In order for Council to be in the best possible insurance position going forward we would need a repair strategy that rectifies all the existing earthquake damage and is able to be consented under the Building Act. There are specific clauses in Council's insurance policy that state any damage that existed at the start of the policy period (i.e. unrepaired EQ damage) is not covered in another event, regardless of cause. All repairs must comply with Building Act where applicable. A rebuild means that full insurance cover can be obtained to replacement value and the Building Act complied with as matter of course.
- 3.10 **Legal:** The legal advice is consistent with the insurance position in that a rebuild is considered to be more straightforward than a repair. A repair is inherently more difficult to scope because of unforeseen damage which results in less contractual certainty and more potential for cost & time overrun. There are also issues with risk & liability in relation to old &

new fabric and consents. A rebuild offers greater certainty for scope and cost, tighter contractual terms. There is also more programme certainty.

3.11 Cost: There is currently a CAPEX budget of \$13.6 million on plan for the period FY22-27.

The cost estimate for the proposed repair and a cost estimate for an equivalent new build on the same footprint is repair \$26.6 million vs. new build \$24.9 million, Attached F.

This is an early concept level cost estimate but gives a clear indication that the cost of repair will exceed the allocated funds. This is because the updated scope of repair is more extensive than the "do-minimum" repair option selected in 2016 and associated prices have escalated significantly since the previous estimate was prepared.

The cost of repair exceeds the cost of a new build because of the complexity and inefficiency of construction within an existing building. In addition to this base cost estimate we would expect that the project contingency needed for repair would also be a higher than that of a new build.

These cost of repair and new build are similar because the extent of fabric replacement required in the repair is almost equivalent to a full replacement. In the case of repair, all of the interior and much of the exterior building fabric requires replacement.

3.12 **Programme:** Council previously deferred this repair project through a previous Long Term Plan, so it could be sequenced to occur after the new Hornby Centre opens in 2023 and ensure that another facility was available within the libraries network.

Following a decision by Council on repair of new build the project will enter the design phase, followed by construction (Council approvals & funds permitting) in calendar year 2024. It is estimated that the repair or new build would take about 18 months. A construction timeline will be confirmed once the scope, funding and procurement plan is confirmed. No start date has been set.

# 4. Alternative Options Considered Etahi atu Kowhiringa

4.1 Repair – of the existing building (not recommended)

## Advantages

• Community perception that a much used and loved facility is not demolished and replaced

#### Disadvantages

- The working structure of the building needs to be replaced and with it all of the internal and much of the exterior fabric. The remaining roof structure and the south wall could be reused but will compromise the design and function of the repaired building
- May pose warranty, building compliance and insurance issues.
- The repair is more expensive in terms of capital outlay
- The repair will have a higher operating cost due to the inefficiency of the thermal envelope and constraints on heating and ventilation services.
- In addition although the repair brings the building strength back to 100% NBS, this is a life safety rating and the repaired building will not be as resilient as a new build.
- 4.2 Rebuild on the existing site but adjacent to current facility, (rather than on the same footprint.) (not recommended)

#### Advantages



• The existing facility could be decommissioned once the new one was operational avoiding the need to establish a temporary facility – saving \$211,000 facility costs.

#### Disadvantages

- The existing facility would be operating immediately adjacent to the construction zone which does not leave sufficient safe working space for construction and puts users at risk by placing them in close proximity to the construction site.
- The existing slab could not be reused which would add approximately \$1 million of cost to the build as well as impacting the carbon footprint.
- The available ground space on the site would force the new building footprint to be smaller than the existing one and compromised in terms of functionality due to the boundary constraints of the long narrow site and the location of wellheads and protected trees plus the setback requirements for the access way and river.
- The access way, off Colombo Street, is zoned as legal road and would need to be stopped if the building were to be placed on or near it.
- 4.3 Renovation of the Council owned distribution centre (at 54a Colombo Street), (not recommended)

#### Advantages

• The existing facility could be decommissioned once the new one was operational avoiding the need to establish a temporary facility – saving \$211,000 facility costs.

#### Disadvantages.

- The building is a single storey warehouse type structure with steel portal frames and precast concrete wall panels. The construction drawings are dated July 1986 and it is assumed that construction was soon after this. It has been assessed as > NBS 38%.
- The distribution centre is significantly smaller than the current facility, with approximately 840m<sup>2</sup> of floor area. This corresponds to only 34% of the current facility floor area.
- A comprehensive renovation including strengthening and fit out plus the installation of a lift would be required to make this building serviceable as a community facility.
- The current use would need to be transferred to another site
- It is anticipated that Community expectation would be that a similar level of service would be provided at the repaired/rebuilt facility. This includes Library, Customer Service and Community Board spaces and services, plus a café, bookable meeting rooms and the creative learning and programming spaces. Moving to a building with reduced floor space is unlikely to provide sufficient space for the current service offering.
- Obtaining consent would take longer and cost more than remaining on the current site. The subject site is zoned Residential Suburban in the Christchurch District Plan (the Plan) and is also a 'Scheduled Activity', Beckenham Water Services Yard and Pumping Station – Public Utilities (PU 1). The scheduling would not allow for the redevelopment of the site for any other purposes. Resource consent would likely be required to establish a library on the site as a Discretionary Activity and there is a risk that the application could be publicly notified.
- 4.4 A new site for the facility. (not recommended)

#### Advantage

• The existing facility could be decommissioned once the new one was operational avoiding the need to establish a temporary facility – saving \$211,000 facility costs.



#### Disadvantages

- The existing facility is a busy community hub and well used by a number of community focused teams. The site is centrally located in the ward and has good connectivity to public transport links as well as being an attractive setting in its own right.
- Moving this facility to a new site would require extensive public consultation and may not be supported by the local community.
- Establishing a new facility on a new site is expected to take considerably longer than rebuilding on the existing site and may cost more. There is also a degree of uncertainty in relation to the availability of any suitable site in the area noting the zoning restrictions, the land to the east of the site and east of Waimea Terrace is located within a Character Area.
- In the case that it is possible to find a suitable site, Council would still need to negotiate a sale, obtain resource consents and undertake extensive consultation with the users of the current facility and the wider public impacted by the new location. This would take in the order of two years and cost more than consenting on the existing (scheduled SC2– Service Centres and Community Centres) site.
- In terms of opportunities to build on a new site in this area, a site-specific planning
  assessment would be required to understand what planning implications there may be. It is
  noted that libraries are contained in the definition of 'community facility' in the District Plan.
  Community facilities are not provided for as permitted activities in the neighbouring Residential
  Zones and resource consent would likely be required to establish a library as a Discretionary
  Activity with the potential for the application to be publicly notified.
- In addition to the increased cost of consenting the cost the land purchase for a new site could be an additional land cost for Council. Although the cost of the new site could be offset by the sale of the current site, it is likely to be negatively impacted by the setback constraints, well heads on the site, contaminated land status, liquefaction potential of the site, High Flood Hazard Management Area, and adjacency to the public utility site next door which shares the access way. Future use of the existing site would be limited to what can be consented under the District Plan which zones this as residential medium density.
- Building a new facility on a new site in the area would require extensive public consultation which will increase the time and cost to achieve consent.
- The opportunity to reuse the existing slab as the base for a new raft foundation would be lost with the associated cost and carbon impacts.
- 4.5 Defer the repair or rebuild of the facility (not recommended)

#### Advantages

• Deferral would have the short term effect of saving on capital expenditure

#### Disadvantages.

- Delaying the capital cost of construction will increase risk, liability and cost escalations with the time taken to address this repair
- South is the only library in the network of 20 libraries not to have been either repaired or rebuilt in the last decade, following the earthquakes of 2010/11. Despite its high use, it is not at the same standard as other libraries of similar size and function with the building services at/or near end of life.
- The building is currently at 34%NBS (IL3) and relies on temporary strengthening (the red steel bracing on the exterior) to achieve this. The risk to the public in a 34%NBS (IL3) building is approximately 5-10x that of an equivalent new building designed to 100%NBS (IL3). This temporary strengthening was installed in 2012 so has now been in place for almost 10 years. As a PCBU, Council needs to decide if they are comfortable continuing with this level of risk in what is a high-use community facility.



- The durability of the building has been compromised due to the earthquake damage from a decade ago, with potential for increased maintenance costs and damage that may well exist currently but is unseen.
- Opex costs will continue to rise as the compromised heating, cooling, ventilation and drainage systems continue to decline and approach the end of their useful working life. There is a higher probability that asset subcomponents reactively fail and require replacement if the rebuild is further deferred.
- There are operating issues with the HVAC system which mean it is no longer fit for purpose. These issues are demonstrated by:
  - Staff work areas have become health and safety discomfort issues caused by lack of cooling, inadequate heating control and limited ventilation effectiveness.
  - Board room and learning centre rooms suffer from the same technical issues to the staff work areas
  - Members of the public and staff regularly experience discomfort due to drafts, lack of cooling and inadequate heating control
  - Café has inadequate odour and moisture exhaust ventilation, inadequate hot water supply and has restricted electrical capacity

In view of the new Covid mitigation focused ventilation assessments; all the occupants in this building are at a relatively high risk due to the lack of acceptable ventilation.

- A major failure of any of these services or the building structure itself would run the risk of facility closure for a significant period.
- The project was deferred in 2018 and again in 2020. The 2015 LTP budget figure for this project was \$16.55 million, this equates to \$22.7 million (an additional 37%) in today's dollars and \$25.7 million (an additional 55%) by project completion in late 2025. The estimated annual escalation cost for delaying the project beyond 2025 would be an average of 3-4% per annum compounding. The cost of the construction work will continue to increase if the work is deferred.
- The existing Café tenant needs some certainty over the timeline for this rebuild. By deferring the work again we run the risk of losing this tenant.
- 4.6 Private-Public Partnership. (not recommended)

#### Advantages

• A Private-Public Partnership would have the effect of saving on capital expenditure

#### Disadvantages.

- Council is not currently aware of any opportunities of this nature or precedent for this model for a library-service centre hub.
- Developing a relationship of this nature would likely add significantly to the complexity, timeframes and front end costs of the project.
- It is possible the sort of deal that could be proposed here would be developer benefiting in being 'gifted' a long lease on the land and potentially build above. It is anticipated that this arrangement could negatively impact community engagement and buy-in for the project.
- Private-Public Partnerships have been suggested on other library projects and a mixed use development is just too complex when considering fire compliance, access, security, acoustics, etc. Anything higher than single storey has a cost premium in the structure, stairs and lifts, increased circulation, etc...



- Given that the focus of a community hub like the South Library and Service Centre is the local community, we consider that Council is best placed to deliver this service.
- In addition to the time needed to form a contractual relationship it is anticipated that there would be more time required for the predesign/briefing and design phases, as well as consultation with the Community about a significantly larger building on the site and any new activity on the site (e.g. commercial or residential use)
- The constraints of the existing site including setbacks, well heads, contaminated land status, liquefaction potential, High Flood Hazard Management Area, adjacency to the public utility site next door which shares the access way. Mean that future use of the existing site would be limited to what can be consented under the District Plan which zones this as residential medium density.
- 4.7 Consider a long term lease instead of rebuilding the South Library. (not recommended)

#### Advantages

• Leasing would have the short term effect of saving the current capital budget of \$13.6 million which would have a 0.12% rates benefit spread over 4 years.

#### Disadvantages.

- The annual cost of commercial rent for an equivalent floor area (2462m<sup>2</sup>) is in the order of \$700,000 per annum. This is an operating cost that would directly impact rates, adding 0.11% to rates.
- It is doubtful that a long term lease of a suitable space in the desired location and of a suitable size to accommodate the various services and functions would be available or a cost effective option for Council. It is anticipated that the community would not find this option acceptable for anything more than a short term solution.
- A site-specific planning assessment would be required to understand what planning implications there may be. Community facilities are not provided for as permitted activities in the neighbouring Residential Zones. This means resource consent would likely be required to establish a library as a Discretionary Activity with the potential for a publicly notified application.
- The placement of a community hub within a leased commercial space must be carefully considered as Council has no control over neighbouring activity which could potentially put staff and customers at risk.

## 5. Detail Te Whakamahuki

5.1 The South Library and Service Centre is a busy popular community hub as demonstrated by the statistics below. Programme attendance at South has grown over the last few years from 5th highest in FY 2018-2019 to 2nd in FY 2020-2021 with 12,002 attendees.

#### Issues

- South Library issues (of physical books and other items) for the FY 2020-2021 were 511,443. More books were borrowed from South Library than any other library in the network.
- South Library consistently accounts for 13% to 14% of all Issues.
- The South Library collection has over 74,000 books available for loan which accounts for 6.6% of Libraries' total stock holdings.

## Visitation (Footcount)

• South had the sixth highest footcount for FY 2020-2021 with 289,015 visits, which accounts for almost 8% of all visits across the network.



• There has been a noticeable increase to the Issues per Visit metric each year at South Library, where the network average has remained fairly constant, possibly indicating its loyal customer base of avid readers

#### **New members**

- In FY 2020-2021 1,422 new members were signed up, which was almost 7% of the total.
- South consistently sits in the top 4 libraries for the number of new members signed-up.
- 5.2 Post-quake investigations were carried out in 2011 2013. Temporary Repairs to strengthen the superstructure were carried out in 2012. The original investigations carried out in the post-quake period necessarily focussed on life safety and building make safe work. The investigations were high level, minimally invasive surveys designed to pick up critical data for temporary works. This data was used to price and compare the original options for the repair scheme presented to Council in 2016. This 2016 report provided estimate of scope and cost of repair noting that some elements were not fully investigated. Key items not investigated included;
  - Insurance & legal
  - Geotech
  - Egress & Fire for code compliance
  - Flood levels
- 5.3 More than eight years have elapsed since the last of these primary investigations were carried out in 2013 and we now need to confirm the scope and cost of repair for this facility acknowledging that; what is acceptable today as a long-term solution may not be the dominimum repair option chosen previously.
- 5.4 We have sought advice from the Legal Services Unit with respect to the utilisation of funds in the current LTP for, either a repair or rebuild. In the case that additional funding is needed for the project, this can be covered off in the consultation process associated with either a future Annual Plan or LTP process.
- 5.5 Staff have investigated options for a temporary facility to house a small library and customer service offering. The current cost estimate for the temporary facility (including moving, fit out, 2 years of rental net of current facility budgets and revenue losses) is \$211,000. An option following the closure of South Library Hours could be to extend the hours at Spreydon Library including evening and Sunday opening, plus the provision of the Mobile Library Service near the current South Library site on specific days and times, based on community demand.
- 5.6 It is not envisaged that further significant central government funding will be forthcoming and certainly not Capital funding to contribute to a major repair or rebuild. Note, Council did receive operational funding from the Ministry of Education when South Library was opened for a few years to support targeted learning initiatives in partnership with the schools in the local area. This funding did not contribute to the running costs or improvements to the facility itself.
- 5.7 The decision affects the Waihoro Spreydon-Cashmere Community Board area.

# 6. Policy Framework Implications Ngā Hīraunga ā- Kaupapa here

#### Strategic Alignment Te Rautaki Tīaroaro

6.1 This report supports the <u>Council's Long Term Plan (2021 - 2031)</u>:



#### 6.1.1 Activity: Libraries

- Level of Service: 3.1.2.1 Residents have access to a physical and digital library relevant to local community need or profile Provide weekly opening hours for existing libraries:23-74 hours per week (as appropriate for metropolitan, suburban, and neighbourhood)\_.South is a large suburban library.
- 3.1.5 Library user satisfaction with library service at Metro, Suburban and Neighbourhood libraries
- 3.1.1.4 Collections and content in a variety of formats are available to meet the needs of the community.
- 3.1.3.1 residents have access to the internet...and new technologies.
- 3.1.3.3 Access to information via walk-in.....to library services.
- 3.1.4 Provide public programmes and events...learning and recreational needs.
- 3.1.8 Customer satisfaction with programmes and events.

## Policy Consistency Te Whai Kaupapa here

- 6.2 The decision to rebuild the South Library is consistent with Council's Plans and Policies. The decision aligns with Council's target of being net carbon neutral for its operations by 2030 and our commitments under the Council Ōtautahi Climate Resilience Strategy (issued 2021).
- 6.3 Once Council has resolved to provide direction on Council's preferred option for the remediation of the earthquake damaged South Library, the preferred option (repair / new build) will be procured in accordance with Council's Procurement Policy and Framework.

#### Impact on Mana Whenua Ngā Whai Take Mana Whenua

- 6.4 The current proposal is to rebuild the existing facility on its current site.
- 6.5 Should the Council decide rebuild the library and service centre on its current site (recommended option), it is not anticipated that the scale or nature of operations at the site will change significantly. The focus for rebuilding is to replace the damaged facility with associated improvements in strength, resilience, operational performance and functionality of the building.
- 6.6 There is an opportunity to engage with mana whenua early in the process to ensure that te reo name; Te Kete Wānanga o Wai Mōkihi is given prominence on the new building and that the cultural narrative of the site is incorporated into the design.

## Climate Change Impact Considerations Ngā Whai Whakaaro mā te Āhuarangi

- 6.7 The whole-of-life carbon comparison shows the amount of carbon released at each building life cycle stage. Climate change occurs as a result of accumulated greenhouse gases in the atmosphere reducing whole of life emissions is an important strategy for reducing climate impacts. Rebuild has the lowest upfront emissions and total life cycle emissions, thus having a lower climate impact than the repair option.
- 6.8 A repair offers opportunity to re-life (re-use) existing fabric. A rebuild offers greater scope to improve the environmental performance of the structure, envelope, servicing strategy, comfort and operational performance of the building.
- 6.9 In terms of net zero carbon targets:
  - Repair exceeds the 2020 benchmarks for embodied and operational targets however falls short of 2025 and 2030 targets.

# Finance and Performance Committee 26 May 2022



- Rebuild exceeds the 2025 target for embodies carbon and the 2030 target for operational carbon.
- 6.10 The total lifecycle carbon comparison is:
  - Repair 1,352 kgCO<sub>2</sub>e/m<sup>2</sup>
  - Rebuild 1,095 kgCO<sub>2</sub>e/m<sup>2.</sup>

#### Accessibility Considerations Ngā Whai Whakaaro mā te Hunga Hauā

- 6.11 We want to ensure our community facilities are accessible both to staff and visitors.
- 6.12 The current South Library and Service Centre is an accessible facility. However in the course of the design process any changes in accessibility requirements for code compliance will be addressed.
- 6.13 Should the decision be made to build a new facility, staff investigations will include consideration of how the site and the facility as a whole are fully accessible.

# 7. Resource Implications Ngā Hīraunga Rauemi

#### Capex/Opex / Ngā Utu Whakahaere

- 7.1 Cost to Implement There is currently a CAPEX budget of \$13.6 million on plan for the period FY22-26. The cost estimate for the proposed repair and a cost estimate for an equivalent new build on the same footprint is repair \$26.6 million (0.13% rates increase over three years from FY2024) vs. new build \$24.9 million (0.11% rates increase over three years from FY2024).
- 7.2 No budget is currently allocated for R&R or facility upgrades because the facility is programmed for construction. The condition of the facility is deteriorating and there are issues with HVAC and drainage. This facility will require R&R funds if the EQ repair work is not proceeding as programmed.
- 7.3 The funding currently included in the capital programme for this project is insufficient for the repair (or rebuild). The project will require additional funding through the 2023-2024 Annual Plan or 2024 Long Term Plan process to meet the shortfall.
- 7.4 We will also need to make an allowance for OPEX, phased to match construction, to cover the cost of a temporary facility. This has been estimated at \$211,000 for 24 months starting from an early 2024 start and is factored into the above noted rates impact. The costs are net of current facility operating and maintenance budgets adjusted for loss of revenues from the café lease and inability to run programmes from the smaller facility for 24 months.
- 7.5 Both options increase Council's debt ratio by approximately 0.09%.

#### Other / He mea anō

7.6 Once a decision has been made as to whether this facility should be repaired or rebuilt, the next phase of work can be advanced. This comprises the development of a functional brief & technical specification which will enable an elemental costing to be completed. This work will give Council more scope definition and enable a more accurate cost estimate to be developed. It also provides a basis for the approach to market for design and construction tenders.

# 8. Legal Implications Ngā Hīraunga ā-Ture

# Statutory power to undertake proposals in the report / Te Manatū Whakahaere Kaupapa

8.1 The Council has the statutory power to either repair or rebuild the earthquake damaged South Library.



- 8.2 The Council has the legal ability to enter into contracts for the procurement of services, however to do so it needs to act in accordance with Section 14 of the Local Government Act 2002 (LGA) 2002. The LGA 2002 (Section 14) details the principles relating to local authorities. The principles most relevant to the Council's procurement activity are:
  - 8.2.1 In performing its role, a local authority must act in accordance with the following principles:
    - a local authority should-
      - conduct its business in an open, transparent, and democratically accountable manner and;
      - give effect to its identified priorities and desired outcomes in an efficient and effective manner and;
      - undertake any commercial transactions in accordance with sound business practices and;
      - ensure prudent stewardship and the efficient and effective use of its resources in the interests of its district or region, including by planning effectively for the future management of its assets; and
      - in taking a sustainable development approach, a local authority should take into account
        - the social, economic, and cultural interests of people and communities; and
        - the need to maintain and enhance the quality of the environment; and

## Other Legal Implications / Ētahi atu Hīraunga-ā-Ture

- 8.3 The legal considerations are:
  - 8.3.1 A rebuild provides more certainty of scope of work, and therefore more certainty of cost. If a repair was selected as the preferred option, the condition of parts of the existing materials will not be able to be determined until works commence. This may result in a more extensive scope of works than initially expected, and as a result, increased cost.
  - 8.3.2 A rebuild will result in more comprehensive warranties and guarantees being available to the Council. A repair using existing materials will potentially compromise certain warranty claims if the failure could be attributed to the quality of the existing materials. An appropriate contract can mitigate a portion of this risk, however the risk is eliminated entirely if a rebuild is selected.
- 8.4 This report has been reviewed and approved by the Legal Services Unit.

## 9. Risk Management Implications Ngā Hīraunga Tūraru

- 9.1 The complex and extensive repair needed to return the South Library to 100% New Building Standard involves a significant degree of uncertainty and therefore risk. A new build is more easily defined and the associated construction work is fully warrantied so is a lower risk than repair.
- 9.2 The Council needs to consider a number of risks when considering this report. Of particular note are: financial, legal and reputational.



#### Financial risks include:

- Ongoing operational costs of maintaining facility with the current building services systems issues;
- Difficulty in fully scoping repair work results in a complex repair contract with an increased risk of scope variation, programme delay and associated cost increases
- Increases in the cost of repair / new build with inflation; and
- Vulnerability of IL3 at 34% NBS puts it at risk of closure in a future seismic or flood event
- Future insurance issues if the building is repaired rather than replaced and the risk that significant reinstatement costs may not be covered by insurance

#### Legal risks include:

- Difficulty in fully scoping repair work results in a complex repair contract with an increased risk of scope variation, programme delay, warranty and compliance issues
- Vulnerability of IL3 at 34% NBS puts it at risk of closure in a future seismic or flood event

#### Reputational risks include:

- Vulnerability of IL3 at 34% NBS puts it at risk of closure in a future seismic or flood event
- Concern from staff and community about delay in repair and length of closure; and
- Concern from the wider Christchurch community regarding costs of repairing or building a new facility.
- Consistency of choice with regard to Council's Climate Resilience strategy (repair does not meet targets)

## Attachments / Ngā Tāpirihanga

No.	Title	Page
A 🕹 🛣	South Library EQ Repair_Geotech Report_Aurecon 01 December 2021	127
B <u>J</u>	South Library EQ Repair_Geotech PSI Report_Aurecon 02 December 2021	143
C 🕂 🔛	South Library EQ Repair_Structural Engineering Report_Lewis Bradford 08 December 2021	201
D 🕂	South Library EQ Repair_Architectural Report_Jasmax 21 January 2022	215
E 🕂 🔛	Christchurch South Library Carbon Report_Jasmax_ 220317	228
F 🕂 🔛	South Christchurch Library Repair & Rescoping Cost Report R2	264

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
Nil	Nil



# Confirmation of Statutory Compliance / Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

- (a) This report contains:
  - (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
  - (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

# Signatories / Ngā Kaiwaitohu

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# Christchurch South Library

Conceptual Geotechnical Foundation Repair Feasibility Report

## **Christchurch City Council**

Reference: 520809 Revision: 1 2021-12-01



Bringing ideas to life **Attachment A** 

Item No.: 12

# **Document control record**

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# Appendices

Appendix A

Library Floor Level Survey

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Table 3	Inferred Geotechnical Ground Model
Table 4	Assessed Earthquake Events
Table 5	Liquefaction Assessment References
Table 6	Liquefaction Assessment Results

#### aurecon



# 1 Introduction

## 1.1 Overview

Christchurch City Council (CCC) is investigating options to repair earthquake damage at the South Christchurch Library, located at 66 Colombo Street, Cashmere. The Library building was damaged during the Canterbury Earthquake Sequence between 2010 and 2012. The identified damage comprises foundation settlement and cracking and damage to the library superstructure.

CCC's Structural Engineer for the project, Lewis Bradford Consulting Engineers, have proposed two repair strategies to Aurecon for the library foundation, comprising:

- Option A: Installing new isolated foundation pads under new structural columns, whilst retaining the existing non-structural floor slab. Localised removal of the existing floor slab is likely to be required to accommodate the new foundation pads. Hardfill and polystyrene would be placed over the existing slab as required to the underside of a new floor slab.
- Option B: Remove the entire existing non-structural floor slab and found the new pads and slab on a compacted hardfill system as required.

CCC has requested Aurecon to provide conceptual Geotechnical Engineering as inputs for the feasibility assessment of the proposed foundation repair strategies. Structural strengthening works will also be undertaken with either of these options which will include installing new roof bracing and struts, wall bracing, and struts and new columns.

## 1.2 Scope

Aurecon's scope of work for the conceptual geotechnical engineering inputs include the following:

- Collate the historical Geotechnical Reports completed for the site by other third-party consultants, including the OPUS Geotechnical Assessment Report, dated February 2013 [TRIM 13/434169].
- Collate and analyse any additional geotechnical investigations and information from readily available third-party sources, such as the New Zealand Geotechnical Database (NZGD) and ECAN's GIS platform.
- Provide geotechnical recommendations for the Structural Engineer's feasible repair strategies.

## 1.3 Explanatory Statement

We have prepared this report in accordance with the brief as provided. The contents of the report are for the sole use of the Client and no responsibility or liability will be accepted to any third party. Data or opinions contained within the report may not be used in other contexts or for any other purposes without our prior review and agreement.

The recommendations in this report are based on available data collected at specific locations with limited site coverage. Only a finite amount of information has been collected to meet the specific financial and technical requirements of the Client's brief and this report does not purport to completely describe all the site characteristics and properties. The nature and continuity of the ground between test locations has been inferred using experience and judgment and it must be appreciated that actual conditions could vary from the assumed model.

Subsurface conditions relevant to construction works should be assessed by contractors who can make their own interpretation of the factual data provided. They should perform any additional tests as necessary for their own purposes.

Subsurface conditions, such as groundwater levels, can change over time. This should be borne in mind, particularly if the report is used after a protracted delay.

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# 2 Site Conditions

#### 2.1 Site Description

The main features of the site are as follows:

- The site is located at 66 Colombo Street, Beckenham in Christchurch.
- The library building has an approximate footprint of 2,470m2.
- The site comprises two separate property titles with a total area of approximately 20,000m2.
- Hunter Terrace bounds the site to the north and east while Colombo Street runs along the western boundary and a driveway connecting Colombo Street to Hunter Terrace bounds the site to the south. The Heathcote River runs along the north side of Hunter Terrace.
- The library is positioned towards the south west part of the site. The library carpark runs along the south boundary and the rest of the site is covered by lawn and trees.
- The site slopes gently towards the Heathcote River.

## 2.2 Regional Geology

The regional geology of the site is described by GNS Science (2014) as "Unconsolidated to poorly consolidated mud, sand, gravel and peat of alluvial and colluvial origin."

## 2.3 Seismically Induced Ground Damage

The following sections summarise the likely levels of seismic shaking experienced, and the corresponding ground damage observed on site during the 2010-2011 Canterbury Earthquake Sequence (CES).

#### 2.3.1 Published Seismicity

Table 1 below summarises the magnitude and likely peak ground acceleration (PGA) experienced at South Christchurch Library during the CES, as published on the New Zealand Geotechnical Database (NZGD, 2021).

Table 1	Published CES	Activity

Parameter	Darfield Earthquake 4 September 2010	Christchurch Earthquake 22 February 2011	Major Aftershock 13 June 2011	Major Aftershock 23 December 2011
Distance from Epicentre <sup>(1)</sup>	38km east	4km northwest	8km west	11km west
Moment Magnitude	M <sub>w</sub> 7.1	M <sub>w</sub> 6.2	M <sub>w</sub> 6.0	M <sub>w</sub> 6.0
PGA on Site <sup>(2)</sup>	0.22g	0.43g	0.24g	0.17g
Scaled PGA on Site to $M_w = 7.5^{(3)}$	0.20g	0.31g	0.16g	0.11g
Comparison with IL3 Design Events <sup>(4)</sup>	> SLS EQ <uls eq<="" td=""><td><uls eq<br="">(~IL2 ULS EQ)</uls></td><td>&gt; SLS EQ</td><td>~SLS EQ</td></uls>	<uls eq<br="">(~IL2 ULS EQ)</uls>	> SLS EQ	~SLS EQ

(1) Institute of Geological and Nuclear Sciences (GNS, 2014).

<sup>(2)</sup> Peak Ground Accelerations (PGA) at site based on values by O'Rourke et al. (2015).

- <sup>(3)</sup> Calculated based on scaling factors by Idriss and Boulenger (2008)
- (4) Comparison with design events based on the equivalent PGA at Mw7.5 for an IL3 Structure, SLS PGA = 0.13g and ULS PGA = 0.44g, as recommended in MBIE Module 1 and NZS1170.5, respectively. NZS1170.5 was used as the PGA derived for IL3 buildings using the MBIE Module 1 method is lower than that derived using NZS1170.5 and Canterbury specific zone factors for IL2 buildings.

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Based on Table 1 the site, from a free-field perspective, has experienced seismic events greater than a SLS level event during the 4 September 2010, 22 February 2011 and 13 June 2011 events. The non-corrected PGA during the 22 February event was close to that of a ULS event.

#### 2.3.2 NZGD - Recorded Ground Damage

A review of the relevant information on the NZGD has been undertaken, and the recorded damage is summarised in Table 2 below.

Tahlo 2	Recorded	Froo	Fiold	Ground	Damado	from	NZGD
	Recoraca	1100	1 1010	oround	Dunnuge		HE OD

Information	4 September 2010	22 February 2011	13 June 2011	23 December 2011
Review of Aerial Photographs	No photos available.	Surface expression (sand boils) on Hunter Terrace north of the library, none on the site.	No surface expression observed.	No surface expression observed.
Liquefaction and Lateral Spreading Observations	Not inspected.	Liquefaction not mapped on the site. Roads on either bank of the Heathcote River had moderate to serve quantities of ejected material near the library.	Roads surrounding the site had no observed ground cracking or ejected liquefied material.	Not inspected.
Ground Cracking	No cracking mapped.	Crack along Hunter Terrace north of the library, 3.5m long with an unclassified width. Crack south of Eamlea Street across Colombo Street, 30m long with a width of less than 10mm.	Not inspected.	Not inspected.
Vertical Ground Movement, LiDAR (±0.1m) <sup>(1)</sup>	No data	No data	+0.1m to -0.2m	+0.1m to -0.1m

(1) Predominate movements at the site listed.

#### 2.3.3 Post-Earthquake Observations

Aurecon understand that the building was damaged during the CES with settlement and differential settlement of the floor slab and underlying pad foundations. This settlement has induced deformations in the frames of the library. A floor level survey was undertaken post-CES by Lewis Bradford and provided to Aurecon, is attached as Appendix A. This survey shows that the centre of the building, along an east to west axis, has settled approximately 60mm relative to the datum, while the sides have settled between 30mm and 60mm.

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# 3 Geotechnical Investigations

Aurecon have undertaken a review of the readily available geotechnical investigations carried out across the wider Christchurch South Library site and directly adjacent properties (if available). No additional physical investigations have been undertaken as part of the Aurecon's review process.

# 3.1 Existing Geotechnical Investigation Logs

Our review has identified the following information:

- Four historical geotechnical boreholes located on the wider site and two geotechnical boreholes close to the site.
- Three historical Cone Penetration Tests (CPT) located on the wider site and one CPT located within approximately 20m of the site.
- Four ECan wells located on the wider site.

## 3.2 Groundwater

Groundwater levels have been assessed from several sources:

- The historical bore logs had recorded groundwater depths between 1.2mbgl to 2mbgl.
- The water level of the Heathcote River is approximately 2.0m below the floor level of the library.

From this available information, considering the groundwater level is likely to be heavily influenced by the river levels, and the collar of the bore hole with the highest groundwater level has a lower elevation than the building, a groundwater depth of 2.0m will be assumed for this report. This level is expected to be hydraulically connected to the water level in the Heathcote River, and will vary seasonally or following periods of prolonged rainfall or drought.

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# 4 Engineering Considerations

#### 4.1 General

CCC is investigating the potential to repair earthquake damage at the South Christchurch Library. CCC's Structural Engineer for the project, Lewis Bradford Consulting Engineers, have proposed two repair strategies for the library foundation, comprising:

- Option A: Installing new isolated foundation pads under new structural columns, whilst retaining the existing non-structural floor slab. Localised removal of the existing floor slab is likely to be required to accommodate the new foundation pads. Hardfill and polystyrene would be placed over the existing slab as required to the underside of a new floor slab.
- Option B: Remove the entire existing non-structural floor slab and found the new pads and slab on a compacted hardfill system as required.

This section of the report presents Aurecon's Christchurch South Library ground model, seismically induced liquefaction assessment, and recommendations and discussions on the proposed relevelling/repair options put forward by the structural engineer.

## 4.2 Ground Model

Based on the available geotechnical information at the site, the inferred ground model for the site is detailed in Table 3 below.

 Table 3
 Inferred Geotechnical Ground Model

Geotechnical Unit	Depth to Top of Unit	Unit Thickness	Description
1	Surface	0.3m to 2.6m	Variable topsoil, landfill material or silt / sandy silt crust.
2	0.3m to 2.6mbgl	0.9m to 5.5m	Medium dense to dense gravel, sandy gravel and sand (predominately sandy gravel).
3	2.3m to 5.8mbgl	~10m	Soft to firm or medium dense silty sand and silt.
4	~15mbgl	>10m	Dense to very dense sandy-gravel (Riccarton Gravels).

## 4.3 Seismically Induced Liquefaction Hazard Assessment

The site and its immediate surrounding have experienced liquefaction induced ground damage during the CES. The liquefaction potential of the site has a significant impact on the viability of the proposed foundation and floor repair strategies.

In determining the liquefaction potential at the site, the main factors to be considered are:

- Which layers have liquefied?
- What is the likelihood of further liquefaction in the future?
- How the potential liquefaction affects the development?

Each of these is considered below.

#### 4.3.1 Potential for Liquefaction

Three primary factors contribute to liquefaction potential:

Soil grading and density.

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- Groundwater.
- Earthquake intensity and level of ground shaking.

#### Soil Grading and Density

The historical geotechnical bore logs at the site have shown layers of sand and non-plastic silty sand in the upper 15m of the ground strata. From a soil grading perspective, these soils have the potential to be liquefiable depending on their density and other factors discussed below.

#### Groundwater

Based on our assessment of the site conditions, Aurecon have adopted a depth to groundwater of 2.0mbgl. Therefore, soils are potentially liquefiable below this depth from a saturation criterion. It should be noted that groundwater levels are subject to seasonal changes. As South Christchurch Library is a shallow founded building, variations in the groundwater level could have a significant impact on the liquefaction hazard.

#### Earthquake Intensity and Level of Shaking

The level of ground shaking is one of the key factors in determining whether liquefaction will or will not occur. For this study, Aurecon have assessed three design levels of shaking. Aurecon understand that the building has been classified as an Importance Level 3 (IL3) structure in accordance with Table 3.2 of the New Zealand structural loadings standard (NZS 1170.0, 2002) and the building will have a nominal 50-year design life. To determine the design level of earthquake shaking Aurecon have adopted the MBIE/NZGS (2016) recommendations for the two SLS events. For the ULS event, Aurecon have adopted the NZS1170.5 event as this results in a larger, more appropriate earthquake event and MBIE Module 1 lacks specific guidance for ULS events and IL3 structures in the Canterbury Region.

The design seismic events for the liquefaction assessment are detailed in Table 4 below:

Table 4 Assessed Earthquake Events

Event		Magnitude	PGA
	1-in-25 Year – SLS-a	M <sub>w</sub> 7.5	0.13g
	1-in-25 Year – SLS-b	M <sub>w</sub> 6.0	0.19g
	1-in-1000 Year – ULS	M <sub>w</sub> 7.5	0.44g

#### 4.3.2 Methodology

The ability for subsoils to resist the effect of ground shaking associated with the various earthquake shaking levels has been assessed from the subsoil information obtained from the CPTs. In our assessment of the free-field liquefaction risk we have considered the following effects:

- Liquefiable layers.
- Liquefaction induced reconsolidation settlement.
- Liquefaction induced ground damage.

The liquefaction assessment has been carried out using the references in Table 5 below:

Table 5 Liquefaction Assessment References

Test	Liquefaction Assessment Method	Fines Content	Liquefaction Cut Off	Liquefaction Settlement Method
СРТ	Boulanger and Idriss (2014) with a 15% probability of liquefaction	Based on I <sub>c</sub> with $C_{fc} = 0.2^{(1)}$	Based on a 2.6 lc cut off	Zhang et al. (2002)

(1) Cfc of 0.2 is based on Aurecon experience and published literature for Christchurch (Lees et al., 2015).

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#### 4.3.3 Liquefaction Results

The results of the liquefaction assessment are summarised in Table 6 below. It should be noted that the historical CPTs on the wider site were predrilled to depths below the gravel layers, therefore soils above the predrill depth are not analysed. The maximum depth of this analysis was 10m.

Table 6 Liquefaction Assessment Results

Earthquake Event	Earthquake Effects	Results	
SLS-a (M <sub>w</sub> 7.5, 0.13g)	Potentially Liquefiable Layers	Silty sand and sand layers throughout the ground strata.	
	Indexed Settlement	15mm to 35mm	
	Expected Damage	No to little expression of liquefaction, minor effects.	
SLS-b (M <sub>w</sub> 6.0, 0.19g)	Potentially Liquefiable Layers	Silty sand and sand layers throughout the ground strata.	
	Indexed Settlement	25mm to 45mm	
	Expected Damage	No to minor expression of liquefaction with some sand boils.	
1/1000 Year ULS (IL3) (M <sub>w</sub> 7.5, 0.44g)	Potentially Liquefiable Layers	Silty sand and sand layers throughout the ground strata.	
	Indexed Settlement	45 to 65mm	
	Expected Damage	Little to moderate expression of liquefaction with sand boils and some structural damage.	
		This level of ground damage is expected to be similar to that which occurred during 22 February 2011 Christchurch Earthquake	

Note: Indexed settlements are calculated over the upper 10m of the soil column only.

#### 4.3.4 Lateral Spreading

Lateral spreading occurs when surface soils move downslope or towards a free edge, such as a river or basin. Lateral spreading can occur during an earthquake under seismic loading and following the earthquake until the excess pore water pressure caused by ground shaking dissipate and the soil regains strength.

When assessing the potential for liquefaction induced lateral spreading at the site, the following was considered:

- The proximately of the site to the Heathcote River.
- The site and surrounding area being relatively level.
- Very limited evidence of lateral spreading damage was observed or recorded at or around the site after any major earthquake in the CES

Based on the sandy gravel layers between 0.3m and 5.8m depth forming a crust near the surface and the observed / recorded historical site performance during the CES, the risk of lateral spreading at the site has been assessed as low.

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## 4.4 Foundation Repair Recommendations

#### 4.4.1 Site Ground Model and Historical Seismic Response

The site ground model comprises a thin silt/sand crust 1m to 2m thick, overlying sandy gravels to approximately 5m. Underlying these gravels are liquefiable silts and sands to at least 15m depth.

Due to predrilling the upper material of surrounding CPT traces, and a lack of intrusive testing within building footprint, the exact composition of the soil immediately below the building is currently unknown. However, numerical analysis indicates that from a geotechnical/liquefaction perspective the site has experienced the equivalent of an IL2 ULS design level earthquake during the 22 February 2011 Christchurch Earthquake. In combination with the lack of observed ground damage during the CES, including the lack of surface expression of liquefaction immediately surrounding the structure, and the lack of evidence of shallow bearing failures of the existing structure, Aurecon do not consider there to be any significant thicknesses of shallow liquefiable material in the upper 5m.

Therefore, Aurecon consider that both the building and site response is governed by the deeper liquefiable soils below the upper gravel layer (Unit 2, Table 3) and some localised shallow softening/settlement.

Due to the lack of physical testing within the building footprint, Aurecon are currently uncertain as to what the shallow footings are founded on i.e. compacted hardfill, natural silty or gravelly soils, or uncontrolled fill.

#### 4.4.2 Lewis Bradford's Proposed Repair Strategies

With regard to the proposed repair strategies from Lewis Bradford, Aurecon make the following comments and recommendations.

#### **Option A**

Option A comprises installing new isolated foundation pads under new structural columns, whilst retaining the existing non-structural floor slab. Localised removal of the existing floor slab is likely to be required to accommodate the new foundation pads. Hardfill and polystyrene would be placed over the existing slab as required to the underside of a new floor slab. When looking at this proposed foundation/slab repair strategy:

- Using the MBIE Concept of Index Liquefaction Settlements (upper 10m of soil profile only), under SLS EQ loading Aurecon calculate approximately 15mm to 35mm of indexed settlement (nominally 20mm of differential settlement) with little to no ground damage.
- Looking at historical site response during the CES Index Settlements, under ULS EQ loading are calculated to be approximately 45mm to 65mm settlement with little to no ground damage.
- Based on actual site behaviour during the CES and Aurecon's conceptual numerical analysis, shallow bearing failures of the existing pad foundations are unlikely to have occurred.

Therefore, based on the combination of our analysis, and site observations of historical seismic performance to date, Aurecon consider the proposed Option A to be suitable and expect it to meet SLS deformation requirements given in the NZBC. Aurecon does not see any significant benefit to carry out grouting/resin injection under the slab. See below for preliminary recommended bearing capacities for shallow pad design.

#### **Option B**

Option B compromises the removal of the entire existing slab and founding the new pads and slab on a compacted hardfill system.

Due to the lack of apparent shallow liquefaction risk and the site performance considerations noted in Option A, Aurecon consider this solution to be viable. Also due to the absence of shallow liquefiable soils, ground improvement by grouting is unlikely to be needed. The thickness of compacted hardfill is subject to detailed design consideration.

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Once the site is opened and the subgrade material can be inspected, localised soft spots of unsuitable material may need to be removed from the site and replaced with compacted granular hardfill or site concrete.

#### Alternative Foundation Option: Structural Concrete Raft Foundation

In addition to the advice provided on the proposed Repair Options 'A' and 'B' Aurecon recommend, for sites prone to seismically induced liquefaction, to tie all pads and footings with either ground beams or integrally to the floor slab in accordance with foundation design best practice.

If this approach is adopted, the footings could either be tied with ground beams as a grillage of footings with the floor slab between; or the entire floor slab could be treated as a double reinforced 'raft' slab with localised thickenings for column point loads. This foundation system provides significantly more continuity across footing locations and the ability to redistribute structural loads during a future major seismic event. In addition to improved seismic performance, an integral floor slab-footing / raft system will be better placed to withstand the potential effects of variable ground conditions in the upper soils immediately below the building footprint.

Considering the observed site performance during the CES and the conceptual numerical analysis undertaken by Aurecon, Aurecon consider the use of a structural concrete raft foundation will meet the requirements of the NZBC with appropriate detailed design input.

A structural raft foundation does not require specific design for a 'loss of support' case due to the lack of identified shallow liquefaction risk.

#### **Foundation Repair Summary**

Aurecon consider all three foundation repair options to be technically viable to meet the deformation and strength criteria of the New Zealand Building Code. The final solution adopted by CCC will need to factor cost, construction timing and resiliency requirements.

In the event that the library structure is to be demolished and reconstructed, Aurecon recommends the use of a structural concrete raft foundation, subject to detailed design confirmation.

#### 4.4.3 Preliminary Bearing Capacities

As a preliminary assessment, without confirmation of the exact founding material and foundation sizing, shallow pad foundations founded with a minimum embedment of 0.4m can be proportioned for an ultimate bearing capacity of 200kPa. This capacity shall be factored by 0.33 for SLS, and 0.5 for all ULS and EQ overstrength cases.

The bearing capacity values provided are indicative only for conceptual costing and shall not be used for a Building Consent Application.

## 4.5 Further Recommendations

A geotechnical engineer should be retained to:

- Undertake a detailed assessment of shallow foundation bearing capacities once the concept design has been developed further and proposed footings sizes are known. The scale of this investigation cannot be confirmed at this stage of the project however could comprise:
  - Shallow test pits surrounding the building footprint approximately 3m deep to confirm the depth to underlying gravel.
  - Install groundwater monitoring piezometers to confirm the depth to shallow groundwater.
  - Localised investigations within the building footprint through the existing floor slab using Scala probing and hand augers, or possibly CPT, should the floor slab be retained. The main purpose of investigations through the floor slab would be to confirm the presence, or absence, of unsuitable materials such as existing uncontrolled fill beneath the floorslab.

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- Provide design input if the raft foundation option is selected, e.g. subgrade reaction modulus values and limiting pressures.
- Prepare a detailed design report/letter to support building consent application.
- Undertake geotechnical inspections during construction to validate the design assumptions as required.

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Appendix A Library Floor Level Survey

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Attachment A Item 12

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# South Christchurch Library

Preliminary Site Investigation

# **Christchurch City Council**

Reference: 520809 Revision: 2 2021-12-02



Bringing ideas to life

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# **Executive Summary**

Christchurch City Council (CCC) engaged Aurecon New Zealand Limited (Aurecon) to undertake a contaminated land Preliminary Site Investigation (PSI) for the South Christchurch Library at 66 Colombo Street, Cashmere, Christchurch.

Aurecon understands that the library building was damaged during the Canterbury Earthquake Sequence between 2010 and 2012. CCC are currently investigating the feasibility of repair and strengthening options for the library. The site's soils may be disturbed as part of this process, and CCC have requested Aurecon to prepare a PSI to provide a high-level overview of possible contaminated land issues at and around the library site, and other adjacent areas also owned by CCC. The PSI has been completed in tandem with a geotechnical feasibility study, which has been reported on separately.

Historical aerials and records show the site has been used for various activities over the last 100 years, with potentially contaminating activities identified on the site including:

- Historical landfilling;
- Hydrocarbon storage, leaks and spills;
- Historical buildings and associated demolitions; and
- Possible gas works waste used for weed control along Hunter Terrace.

A Conceptual Site Model indicates that in the case of soil disturbance associated with redevelopment of the library site (and surrounds) there are potential risks of exposure to contaminants for construction workers associated with any repair of the foundations of the library building, as well as potential health risks to off-site adjacent residents, and to public users of the site. There are also potential pathways in which there is a risk of contamination of shallow groundwater, and to ecological receptors in the nearby Heathcote River.

This report meets the definition of a PSI detailed within the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

# Recommendations

Based on the information collated in this report, Aurecon recommend that:

- consideration be given to further intrusive investigation of the possible landfill extent and composition in relation to the proposed repairs. From a construction programme perspective, this would ideally be completed once the design of the repairs has been finalised and the locations, quantity and depths of any soil disturbance works are known. However, if there are other factors, such as tight timelines and consenting implications, it may be worthwhile working in parallel as the design progresses so that contaminated land can work collaboratively with other disciplines.
- If further consideration to the overall landfill extent is required, a Detailed Site Investigation (DSI) be undertaken to quantify the extent and level of contamination within the proposed areas of soil disturbance.
- the information and conclusions in this report be shared and incorporated into future discussions around additional development on the site.

# aurecon



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# 1 Introduction

# 1.1 Background

Christchurch City Council (CCC) engaged Aurecon New Zealand Limited (Aurecon) to undertake a contaminated land Preliminary Site Investigation (PSI) for the South Christchurch Library at 66 Colombo Street, Cashmere, Christchurch. The site location, including the adjacent CCC potable water pumping and treatment station (waterworks site) at 54 Colombo Street, is shown in *Drawing 520809-0000-DRG-KF-0001-01-A*, Appendix A.

Aurecon understands that the library building was damaged during the Canterbury Earthquake Sequence between 2010 and 2012. CCC are currently investigating the feasibility of repair and strengthening options for the library which include options for repair or replacement of the current foundation slab. Depending on the options selected to be progressed for further consideration the site's soils may need to be excavated. In order to allow time for these considerations to be made and not restrict option selection, the potential for contamination needs to be understood. As a result, CCC have requested Aurecon to prepare a PSI to provide a high-level overview of possible contaminated land issues at and around the library site and other adjacent areas also owned by CCC.

# 1.2 Objectives and Scope

The objectives of the contamination assessment are to:

- Identify current and historical activities with the potential to have caused contamination at the site; and
- Inform implications for the proposed development with regard to these activities, including any requirement for an intrusive site investigation.

The following scope of works was undertaken:

- Desktop study including review of:
  - Background information with specific focus on the library site, and the CCC owned land immediately south, including a review of historical aerial photos, Environment Canterbury's Listed Land Use Register (LLUR) of HAIL, and likely site conditions (geology, hydrogeology).
  - Preparation of a Conceptual Site Model (CSM) based on the desktop review information, to clearly outline the likely source-pathway-receptor (SPR) linkages and potential contaminants that may impact soil disturbance works at the site.
  - Summarise the findings of the desktop review and discuss implications with respect to contaminated land, associated with redevelopment of the site.

This report has been reviewed by SQEPs<sup>1</sup> has been produced summarising the desktop study information and provides high-level recommendations for further work and pragmatic future management of the site.

This report has been prepared in general accordance with the Ministry for the Environment (MfE) *Contaminated Land Management Guideline No. 1: Reporting on Contaminated Sites in New Zealand (Revised 2021)* (MfE 2021a).

The persons undertaking, managing, reviewing and certifying (verifying) this report are suitably qualified and experienced practitioners (SQEPs) as defined in the MfE's NES Users' Guide (MfE 2012).

<sup>&</sup>lt;sup>1</sup> SQEP: Suitably Qualified and Experienced Practitioner, as defined in MfE 2012 for compliance with legislative requirements (NES-CS)



# 1.3 Explanatory Statement

## 1.3.1 Review scope and use

- Aurecon has prepared this report for Christchurch City Council, exclusively for its use. It has been prepared in accordance with our scope of services and the instructions given by or on behalf of the Christchurch City Council. Data or opinions contained within the report may not be used in other contexts or for any other purposes without Aurecon's prior review and agreement.
- Aurecon accepts no responsibility or liability to any third party for the use of, or reliance on, the report by any third party and the use of, or reliance on, the report by any third party is at the risk of that party.

# 1.3.2 Limits on Investigation and Information

- Soil and rock formations are often variable, and this along with use, storage or disposal of hazardous substances on a site can result in heterogeneous distribution of contaminants. Contaminant concentrations may be evaluated at chosen sample locations however, conditions between sample sites can only be inferred based on geological and hydrological conditions and the nature and the extent of identified contamination. Boundaries between zones of contamination are often indistinct, and therefore interpretation is based on available information and the application of professional judgement.
- Only a finite amount of information has been collected to meet the specific technical requirements of the Christchurch City Council's brief and this report does not purport to completely describe all the site's characteristics and properties. The nature and continuity of the ground at test locations has been incorporated from previous reports prepared by parties other than Aurecon. It must be appreciated that actual conditions could vary from those presented in those reports.
- This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should further information become available regarding the conditions at the site, including previously unknown likely sources of contamination, Aurecon reserves the right to review the report in the context of the additional information.
- This report has been prepared for the Christchurch City Council for its own use and is based on information provided. Aurecon takes no responsibility and disclaims all liability whatsoever for any loss or damage that the Christchurch City Council may suffer as a result of using or relying on any such information or recommendations contained in this report, except to the extent Aurecon expressly indicates in this report that it has verified the information to its satisfaction. This report is not to be reproduced either wholly or in part without our prior written permission.



# 2 Site Description

# 2.1 Site Identification and Layout

Site identification details are presented in Table 1. A site layout plan showing the latest aerial imagery sourced from LINZ Data Service is presented in *Drawing 520809-0000-DRG-KF-0001-01-A*, Appendix A.

Table 1 Site Identification

Site Name	South Christchurch Library
Site Location	66 Colombo Street, Cashmere, Christchurch (also including 54 Colombo Street, immediately south of the library (CCC waterworks site)).
Legal Description/s	SO336314 & DP2527 (collection of multiple lots spanning the current library location and all of the CCC owned land immediately south).
Site Area (ha)	Approximately 3.1 ha total (1.11 ha for the current library site and 1.99 ha for the remainder of the CCC owned land to the south)
Site Coordinates	1570803 E 5176719 N
Site Zoning	Residential Suburban
Current Site Use	Library (with carpark and green areas), with CCC workshop and groundwater abstraction site to the south

# 2.1.1 Surrounding Land Use

The surrounding land uses are recorded in Table 2.

Table 2 Surrounding Land Use

North	Hunter Terrace on the site boundary, with the Heathcote River immediately north.
East	Hunter Terrace on the site boundary, with the Heathcote River immediately east.
South	Cashmere Club and residential houses beyond
West	Colombo Street and residential houses

# 2.2 Site Environment

# 2.2.1 Topography

The site is predominantly flat with less than 1.0 m variation in surface elevation within the site boundaries. The most notable topographic feature nearby is the Heathcote River which curves around the northern and eastern periphery of the library and is up to approximately 3.0 m below the site (based on LiDAR information).

# 2.2.2 Geology

The regional geology of the site is described by GNS Science (2014) as "Unconsolidated to poorly consolidated mud, sand, gravel and peat of alluvial and colluvial origin."

The site is also known to be the location of a historic landfill (see Section 3 below). As such, there is a variable thickness of landfill material overlying the natural in-situ alluvial deposits.



Additional information on the geology of the site is included in the Geotechnical Feasibility Assessment Report prepared for the site (Aurecon 2021).

# 2.2.3 Hydrology

The Heathcote River is present to the North and East of the site and it is assumed any overland flow from the site which is not directed to the CCC stormwater network will drain directly into the river. Most of the site though is comprised of open grass areas, and it is expected that most overland flow within the site will soak to ground. Water otherwise accumulating on the hardstand areas and building roofs of the site is assumed to be directed into the CCC stormwater network.

No surface water bodies are noted as being present within the site boundaries.

### Hydrogeology and Well Details 2.2.4

Using the regional council mapping software (Canterbury Maps Viewer), a search of registered wells was performed on 21 November 2021 and wells identified within 50 m of the site are detailed in Table 3.

Based on the available piezometric data, the shallow groundwater regime flows in an eastward's direction across the site.

Table 3	Wells	within	50	m	of	the	Site	

Well No	Distance from site (m)	Direction	Downgradient? (Y/N)	Depth and water level (WL) (m below mounting point)	Use
M36/1040	Within site	-	-	-	Sealed/grouted
M36/0910	Within site	-	-	-	Sealed/grouted
M36/1356	Within site	-	-	28.40m deep, 0.21m WL	Community supply
M36/1355	Within site	-	-	-	Sealed/grouted
M36/0931	Within site	-	-	-	Sealed/grouted
M36/1358	Within site	-	-	-	Sealed/grouted
M36/0985	Within site	-	-	29.30m deep, 0.3m WL	Community supply
M36/1085	Within site	-	-	-	Sealed/grouted
M36/1042	Within site	-	-	-	Sealed/grouted
M36/1041	Within site	-	-	-	Sealed/grouted
M36/4591	Within site	-	-	29.50m deep, 0.59m WL	Community supply
M36/1363	Within site	-	-	29.30m deep, +0.60m WL	Community supply
M36/1196	Within site	-	-	-	Buried
M36/1195	Within site	-	-	28.90m deep, +0.32m WL	Community supply
M36/2828	Within site	-	-	29.40 deep, 0.71m WL	Community supply
M36/1112	5m	NW	Ν	72.50m deep, No level recorded	Sealed/grouted
M36/1113	10m	NW	Ν	34.10m deep, 0.93m WL	Sealed/grouted
M36/0978	10m	N	Ν	74.90m deep, 1.02m WL	Sealed/grouted



M36/1129	15m	Ν	Ν	37.70m deep, No level recorded	Sealed/grouted
M36/0992	10m	Ν	Ν	72.20m deep, No level recorded	Sealed/grouted
M36/0997	10m	Ν	Ν	25.60m deep, No level recorded	Sealed/grouted
M36/8905	25m	Ν	Ν	3.05m deep, No level recorded	Geotechnical / Geological Investigation
M36/1359	10m	NE	Υ	26.80m deep, No level recorded	Sealed/grouted
M36/1360	10m	E	Y	22.90m deep, 1.29m WL	Sealed/grouted
M36/8904	30m	E	Y	3.05m deep, No level recorded	Geotechnical / Geological Investigation
M36/1109	10m	Е	Y	54.80m deep, No level recorded	Sealed/grouted
M36/1361	10m	E	Y	36.60m deep, No level recorded	Sealed/grouted
BX24/2177	20m	E	Y	4.00m deep, No level recorded	Geotechnical / Geological Investigation
M36/8903	25m	E	Y	3.05m deep, No level recorded	Geotechnical / Geological Investigation
M36/1110	15m	Е	Y	73.10m deep, 1.04m WL	Sealed/grouted
M36/8837	30m	E	Y	7.01m deep, No level recorded	Geotechnical / Geological Investigation
M36/8902	25m	SE	Y	3.05m deep, No level recorded	Geotechnical / Geological Investigation
M36/1357	10m	SE	Y	21.30m deep, No level recorded	Sealed/grouted
M36/1362	40m	SE	Y	29.00m deep, 0.81m WL	Sealed/grouted
M36/1005	35m	S	Y	114.00m deep, No level recorded	Not used (unknown if sealed)
M36/0975	20m	S	Y	185.90m deep, No level recorded	Sealed/grouted
BX24/2176	10m	SW	Ν	4.00m deep, No level recorded	Geotechnical / Geological Investigation
M36/8988	50m	W	Ν	2.13m deep, No level recorded	Geotechnical / Geological Investigation
M36/8987	50m	W	Ν	1.52m deep, No level recorded	Geotechnical / Geological Investigation

Note: + WL denotes flowing artesian pressure with the water level measured above the mounting point.

# 2.2.5 Ecology

Under the Resource Management Act (Section 30), regional councils and unitary authorities have responsibilities to safeguard the life-supporting capacity of soil and ecosystems and ensure any adverse effects on the environment are avoided or mitigated.



The site redevelopment will likely not result in a change of land use to a more sensitive land use, but the presence of potential on and off-site ecological receptors was investigated for completeness. The results are presented in Table 4.

Table 4 Ecological assessment checklist<sup>1</sup>

Ecological receptor	On site	Off-site	Comments
Marshes, swamps, tidal flats or other ecologically sensitive wetlands near <sup>2</sup> the site?	N	Y	The Heathcote River Drains to the Avon- Heathcote Estuary
Are other aquatic habitats such as rivers, lakes or streams near the site?	Y	Y	The Heathcote River is directly adjacent to the site
Are ecologically important marine or estuarine environments near the site?	N	Y	The Heathcote River Drains to the Avon- Heathcote Estuary
Are ecologically important or sensitive environments such as national parks or nature reserves located near the site?	Ν	Ν	
Are habitats for rare, threatened or endangered species near the site?	Ν	Ν	
Are forested, grassland or other habitats of significance located near the site	Ν	Ν	
Is the site used for food production (arable or livestock)?	Ν	Ν	
Summary: Based on the information collected the site is cons	idered eco	logically se	nsitive and data <b>should</b>

Summary: Based on the information collected, the site **is** considered ecologically sensitive, and data **should** include assessment using guidelines relevant to the assessment of ecological impact

1: Table adapted from Appendix 4I, MfE 2011c

2: Near is judged on a site-specific basis given the contaminant's potential for transport by wind, surface run-off, groundwater transport or preferential pathways from service lines etc and should include positive factors such as reticulation of stormwater away from the site

# 2.2.6 Summary of Environmental Conditions

Based on desk study information, and additional information sourced from the Aurecon Geotechnical Feasibility Report for the site (Aurecon 2021) the expected environmental conditions at the site are summarised in Table 5.

Table 5	Generalised	ground	profile
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Geotechnical Unit	Depth to Top of Unit	Unit Thickness	Description
1	Surface	0.3m to 2.6m	Topsoil, landfill material (of unknown composition) or silt / sandy silt.
2	0.3m to 2.6mbgl	0.9m to 5.5m	Gravel, sandy gravel and sand (predominately sandy gravel).
3	2.3m to 5.8mbgl	~10m	Silty sand and silt.
4	~15mbgl	>10m	Dense to very dense Sandy-Gravel (Riccarton Gravels)

The site is considered topographically flat and is known to be the location of a historic landfill. The Heathcote River adjacent to the site is identified as an ecological receptor and sensitive groundwater abstractions (community drinking water supply) are located within the site boundaries.



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# 3 Site History

# 3.1 Introduction

A search of readily available information sources was conducted with the objective of identification of past or present activities with the potential to contaminate land or other media such as sediment and groundwater. The nature and extent of any identified activities has also been assessed, where information was available.

# 3.2 Regional Council Register of HAIL Sites

Environment Canterbury Regional Council (ECan) hold a database (Listed Land Use Register (LLUR)) of sites that have, or have had in the past, an activity or industry that is detailed in the Hazardous Activities and Industries List (HAIL) (MfE 2012).

The web-based database was queried on 21 November 2021 and the following sites with HAIL activities were identified:

- SIT 208 CCC Waterworks
- SIT 10763 66 & 70 Colombo Street Landfill (Christchurch Landfill #51)

The HAIL activities noted on the LLUR include:

- G3 Landfill Sites
- A17 Storage tanks or drums for fuel, chemicals or liquid waste

The Property Statement from the regional council register is provided in Appendix B. Note that the register is incomplete as not all HAIL activities in the region have been identified. Reports held by ECan in relation to the site were reviewed, and a summary of each is provided in Section 3.5 below.

# 3.3 Regional Council Consents

Using the regional council mapping software, a search of active consents within a radius of 100 m was performed on 21 November 2021 and consents identified are detailed in Table 6.

Table 6 Active Consents

Consent type	Consent holder	Summarised details	Comments
CRC204470 Water permit	CCC	Groundwater take / use (On the site)	Issued and active, associated with wells M36/1195, M36/2828, M36/1363, M36/4591, M36/0985 & M36/1356
CRC202789 Discharge Permit	CCC	Discharge of contaminants to air associated with operation of a diesel-driven standby generator (On the site)	Issued and active
CRC182295 Water Permit	CCC	Dewatering consent for works along Colombo Street (Off site)	Issued 2017 – Currently inactive
CRC182296 Water Permit	CCC	Discharge of dewatering water for works along Colombo Street (Off site)	Issued 2017 – Currently inactive

# 3.4 Local Authority Property Files

The Property Files were requested from the Christchurch City Council for 66 and 54 Colombo Street. Over 1 GB of scanned documents and drawing data was included in the property files and as such only a high level review was completed (several thousands of pages were included).



The majority of the property files relate to earthquake damage assessments and repair documentation for the library building. With regard to any information about ground conditions during the original construction of the library, a review of the available civil plans, scanned consent documents and structural drawings from that time period within the property files was completed. We did not find any records detailing specific disposal requirements in any of the consent documentation, no reports associated with a contamination investigation, or any records for offsite disposal having occurred. However, a design document submitted as part of building consent of the current library stated:

"The site was a former rubbish tip which was closed in the 1960s – the type and depth of the fill is not known or if any compaction has been carried out – the filled areas extend from the corner of Colombo Street / Hunter Terrace along Hunter Terrace to the boundary between Pt Lot 18 DP2527 & 88 Hunter Terrace (Cashmere Club Inc).

There are no records indicating that it contains any contaminants"

The area suggested as being occupied by the landfill in the above quote encompass the entire northern and eastern boundaries of the library and waterworks sites, with the western extent undefined. As such, the landfill material could possibly extend across the site. With no available inspection records or other information on the subgrade encountered in original construction of the library, there is potential for the library to be founded on the landfill material.

# 3.5 Records of Title

The record of title and historic title were requested from Terranet. Land ownership by the Heathcote County Council, and more recently the Christchurch City Council was noted, but no historical titles for early 1990s ownership of the land were available. A review of Archives New Zealand failed to find any further information on historic ownership.

# 3.6 Review of Historical Aerial Photography

Publicly available historical aerial images for the site have been reviewed. A summary of features identified in these images is presented in Table 7. Historical Aerial Images with an overlay of the current library and the wider site boundary are provided in Appendix C.

Year and source	Site	Adjacent area
1925-1929 Canterbury Maps	Earliest aerial available – the site is open land along the river with what appears to be soil disturbance (bare ground, mounding etc.) in the NW and to the SE. A probable horse stables is present in the location of the current library (Hunter Cartage and Horse Stables Company, see Section 3.5 below), along with a stockpile of something (possibly hay) to the west. A small rectangular building is present in the south- eastern corner. The remainder of the current waterworks premises is occupied by probable residential houses, towards the western side and a large building likely associated with the Hunter Cartage Co. While the land overall doesn't appear to be an active landfill, it is notably more reworked and disturbed than any of the surrounding neighbourhood.	There are no available aerials for the land to the north of the site across the Heathcote River, but to the south of the current waterworks premises are open paddocks, with a small building and trees to the east. Across Colombo Street to the west there are few houses yet built, and mostly occupied by open paddocks. Elsewhere to the south and what can be seen to the east, the area appears to be already relatively densely populated with residential homes.

 Table 7
 Summary of historical aerial imagery

Year and source	Site	Adjacent area
1940-1944 Canterbury Maps	The stable buildings have been removed – but some bare ground is still noticeable where this building was. The grassed open areas appear to be more well-kept and a track (the future Hunters Terrace) has been formed along the river side, forming the northern and eastern boundaries of the site. One small building had been built at the southwestern end of the site, but otherwise no other changes are noted.	Some infilling with residential houses is notable to the north, east and west of the site. The southern boundary remains bordering on open paddocks.
1945-1949 Canterbury Maps	Two new structures have appeared, one in the open area to the east of the current library, and one in amongst the collection of houses in the SW. It appears that to the east of these buildings there is an area of disturbed ground, possibly indicative of gravel excavation/stockpiling, and/or topsoil removal (or landfilling?)	No major changes noted, but gradual increasing density of housing.
1955-1959 Canterbury Maps	Potential stockpiling of timber or long stacked pipe is noted across the open areas of the site, and an additional building has been constructed at to the east of the collection of buildings in the SW corner. Another small building has been built to the north of the site, just offset from the current library footprint. No further ground disturbance associated with the area identified in the 1945-49 aerial is noted.	No major changes noted. Gradual increasing density of housing.
1965-1969 Canterbury Maps	Stockpiles remain but in different locations and a new section of track/roading has been extended into the eastern side of the site. No other major changes noted.	No major changes noted. Gradual increasing density of housing.
1970-1974 Canterbury Maps	A new building (a clubrooms most likely) and associated car parking area, plus the first (sealed?) section of Hunter terrace is seen in the NW corner of the site (about half of the area of the clubrooms intersects the current library footprint). Otherwise, the site appears to be used in much the same way as previously. A long pipe extending out NE to the Heathcote River is present, unsure of use (Drainage? Pumping?).	Building south of the SE corner removed and a large area of bare ground appears scraped on the property to the south (likely site preparation).
1975-1979 Canterbury Maps	Poor quality photo, but not major changes noted. Hunter Terrace appears to be fully constructed.	Cashmere Club (building to the south of the site) has been constructed.
1980-1984 Canterbury Maps	A Bike track has been built in the SE corner of the waterworks site, and more of the overall site appears to be gravelled and more storage occurring. To the east of the clubrooms in the northwest corner of the site a carpark area and a small rectangular building have been constructed.	Cashmere Club building extended.
1985-1989 Canterbury Maps	Poor quality, but some buildings in the SW seem to have been removed.	Poor quality photo, no obvious changes.

Year and source	Site	Adjacent area
1990-1994 Canterbury Maps	Trees maturing, and some new building layouts noticeable in the SW and center of the site. The carpark in the northeast corner of the site has been sealed and the rectangular building visible there previously has been removed. (Note, orthorectification of the base image is distorted, and the boundary overlay appears shifted to the east approximately 10 m).	No changes noted.
1995-1999 Canterbury Maps	Poor quality, and colour. Small asphalt carpark constructed to the eastern end of the future library footprint. No other changes noted.	Poor quality, and colour. No changes noted.
2000-2004 Canterbury Maps	Poor quality, and colour. No changes noted. (The library was however constructed between 2002 and 2003).	Poor quality, and colour. No changes noted.
2010-2014 Canterbury Maps	Library and car parking have been constructed. To make way for this development, the clubrooms and car parking areas have been removed). The site otherwise appears to be in its current day layout.	This aerial is only a few days after the 2011 earthquake, and liquefaction and building damage can be noticed in the surrounding neighbourhoods. No major changes (or liquefaction ejecta) are noted in the immediate vicinity of the site.
2015-2019 Canterbury Maps	No major changes, except for some yard layout changes in the CCC waterworks site.	No changes noted.

# 3.7 **Results of Previous Environmental Investigations**

The site has been investigated by at least eight previous investigations, mostly centred around the waterworks premises, and including desktop studies as well as intrusive investigations targeting both surficial and near surface soils, and groundwater. Reports available from ECan, following the LLUR search, were requested and reviewed with a summary of each provided below.

# **Royds Consulting Limited – 1994**

A Detailed Site Investigation report produced by Royds Consulting in 1994 is the oldest report associated with the site. This report was not available for review, but a summary of the report held by ECan stated the DSI was completed in association with the removal of three 2,200L diesel underground storage tanks from the CCC water pumping station. During removal of the tanks, the summary indicated several holes were noted, and liquid phase hydrocarbons observed in the base of the tank pit. Sampling of the tank pit material confirmed high concentrations of total petroleum hydrocarbons (TPH) present in a non-aqueous phase. Two observational bores were installed in the backfilled excavation, for later monitoring (this monitoring is discussed below).

# Pattle Delamore Partners – 1995

An Environmental Assessment, and two short letter reports produced by Pattle Delamore Partners (PDP) Limited in 1995 detail the results of groundwater sampling related to the observations of contamination made during removal of the two underground storage tanks in 1994. Three boreholes were drilled (in addition the two observational bores installed in the tank pit excavations). Two of these new boreholes were placed between the tank pit and the Heathcote River, with the third placed in the tank pit backfill. The results from sampling of the groundwater reported high TPH concentrations within the PDP installed tank pit borehole and non-aqueous phase product was observed on two occasions in two of the tank pit boreholes.



No TPH was detected above the laboratory limit of reporting in the monitoring wells outside of the tank pit. It was inferred in the final letter report that the source of the TPH contamination had been removed with removal of the tanks, and that any free phase product was likely isolated to within the tank pit.

# Pattle Delamore Partners - 2010

The primary objectives of the PDP 2010 desktop study (Preliminary Site Investigation) were to assist Christchurch City Council determine potential risks in terms of land contamination for the proposed "Mid Heathcote River Master Plan" which included the eastern and northern boundaries of the South Christchurch Library and CCC waterworks premises. The development plans included cut to fill activities involving the excavation and re-contouring of soils along the Heathcote Riverbank. The information sourced for the report included interviews with previous site owners and official submitted material from previous works in the local area.

In summary, the information gathered by PDP suggested the site had been previously used as a landfill, but the landfill footprint could not be identified. An interview was conducted with the family of the previous landowner (Hunter Cartage and Horse Stables Company) and during that interview it was verbally confirmed that quarrying and backfilling had occurred on the site. The content of the landfill was not confirmed. Reportedly, some unexpected items such as vehicles have been uncovered at the site during previous works. The report surmised that if there was a landfill located on the site, the age of the indicated filling (around 1930s) suggests that gas and liquid leachate generation would potentially be past peak concentrations. The report included review of the CCC Closed Landfills Map, but the scale of these maps precludes any detailed interpretation of possible extent.

The site history account in this report identified HAIL activities in the vicinity of the Library and CCC waterworks site as: landfilling activity; possible gas works waste for weed control along Hunter Terrace; other uncontrolled filling across the site; and a limited area of hydrocarbon contaminated groundwater (associated with the reports above).

# Sephira Environmental Limited – 2019

A DSI completed by Sephira Environmental detailed the excavations and soil disturbance associated with a 60 m long trench on the CCC waterworks site, as part of inground infrastructure upgrades. The excavation was undertaken on the western half of the site through the waterworks premises and encountered sandy silt fill with fine to coarse gravel. No mention of landfill refuse was noted in the report. Laboratory results reported soil concentrations of contaminants of concern above local background concentrations, and one sample reported concentrations of arsenic above the commercial/industrial human health criteria.

# Beca Limited - 2019

CCC commissioned Beca to undertake a Groundwater Contamination Investigation at the CCC waterworks site, to assess potential sources of contamination in the context of New Zealand Drinking Water Standards. This investigation consisted of a desk study PSI, followed by intrusive investigation as part of a DSI.

The PSI summarised that the bore field extended across an area of historical landfilling and suggested intrusive investigation be carried out to determine the consistency of the fill material present and assess how contaminated this material may be.

The DSI involved the installation of six shallow groundwater bores on the site, one adjacent to each of the groundwater abstraction bores (with the abstraction bores shown in Appendix A of this report for reference). The soils from each bore hole were logged, and piezometer wells installed. Landfill material, generally comprising loosely pack topsoil and silt, with traces of brick, wood and metal were found to maximum depths of 0.3 - 1.5 m below ground level. A layer of topsoil was noted above the fill material in the boreholes, with landfill material present from approximately 0.3 m depth.

Groundwater levels were recorded between 1.2 - 2.0 m bgl during the investigation, which was above the base of landfill material in one location. No soil sampling of the collected soil/fill material was completed, but groundwater sampling of the installed piezometers indicated that contamination of the shallow groundwater



was occurring with groundwater results exceeding the NZ Drinking Water Standards for dissolved arsenic in one location (BH04, corresponding to Well M35/1195). Testing of the abstracted water from the drinking water bores, however, did not suggest any contamination of the deeper aquifer was occurring. These bores extract water from Aquifer 1, and a confining layer of approximately 10 m thickness separates the aquifer water from the shallow groundwater.

# 3.8 **Possible Extent of Landfilling Activities**

Based on the information contained in the available reports, it appears the extent (both lateral and vertical) of the former Colombo Street and Hunter Terrace landfill is not well understood, and the exact filling material is also not clear. The landfill is thought to have mostly been active during the 1930s. As this is a period of time no historical aerial photographs are available for, determining the extent using the available information is limited to interpretation. Soil sampling, we are aware of to date is very limited, with most previous investigation targeting groundwater and no specific investigation of the landfill itself has been completed.

Based on the layout of the site between the 1925 and 1940 aerial photos there are certain features (buildings and trees and roads) which have remained in place, and therefore it can be surmised that these areas were at least outside of any original landfilling activities. Similarly, the Heathcote River forms a natural boundary to the north and east, limiting the extent of landfilling in that direction. Capping of the landfill material, based on review of the previous intrusive investigations on the site appears to be at best, a layer of topsoil approximately 0.3 m thick.

Given the above assumptions, we have determined those areas where the landfill is unlikely to be located based on the changes noted in the aerial photographs, and from intrusive investigation data contained in the previous reports, refer to *Drawing 520809-0000-REP-KF-0001-02-A*, Appendix A. Note that this boundary is approximate only and derived solely from the available desktop data. Confirmation of the true landfill extent could only be completed with intrusive investigation.



# 4 Preliminary Conceptual Site Model

# 4.1 Introduction

The CSM outlines the potential source-pathway-receptor linkages that may be present. The CSM defines what contaminants could be present at a site, how they may travel and what receptors they could affect by doing so. Establishing these factors is essential to guide the preparation of an investigation plan.

# 4.1.1 Area of Relevance

To assist with aligning the CSM with the site area, an area of relevance has been defined.

The lateral extent of this area of relevance includes the entirety of the site extent as shown in *Drawing* 520809-0000-DRG-KF-0001-01-A, Appendix A. The CSM therefore includes the library building itself, and the remainder of the CCC owned land to the south.

# 4.2 Potential Sources

Potential for contamination to have occurred on the site from:

- Landfilling (unknown contaminants, but likely heavy metals, hydrocarbons, and organic compounds, asbestos possible if landfilling activities extended up until the 1960s)
- Hydrocarbon storage, leaks and spills (associated with three USTs removed in the 1990s)
- Historical buildings and demolitions across the site (uncontrolled filling, asbestos, lead paints)
- Possible gas works waste used for weed control along Hunter Terrace (anecdotal evidence)

# 4.3 Pathways

Pathways for contaminant exposure and offsite migration of contaminants generally include the transport of contaminants via air, solid phase, and water. The potential pathways identified from the desk information are:

- Direct contact (dermal and ingestion)
- Inhalation of contaminated dust
- Overland transport of contaminated sediment in surface water
- Migration of contaminants from the site via surface water runoff and groundwater

# 4.4 Receptors

Receptors include people and the environment (for example surface water ecosystems) that are or may be adversely affected by the identified contaminants. The potential receptors identified in the assessment include:

- Future site users
- Maintenance and construction/excavation workers
- Adjacent residents
- Ecology within the Heathcote River and its downstream environs
- Groundwater

Figure 1: Conceptual Site Model.





# 5 Summary and Recommendations

# 5.1 Summary

Christchurch City Council (CCC) engaged Aurecon New Zealand Limited (Aurecon) to undertake a contaminated land Preliminary Site Investigation (PSI) for the South Christchurch Library at 66 Colombo Street, Cashmere, Christchurch.

Historical aerials and records show the site has been used for various activities over the last 100 years, with notable changes including landfilling, multiple building demolitions, use as a cartage company premises, a rifle/gun club and current uses as a library with surrounding greenspace and parking area, plus a waterworks site and associated infrastructure in the south of the site.

The soils directly beneath the current library location may therefore be, at least in part, comprised of landfill material. With no readily available third party information specific to the subgrade encountered in the original construction of the library, this remains unknown. The extent of the landfill has not been determined in detail by any past investigations but is likely extend across much of the site.

Based on the available information for the library site, and the wider CCC owned piece of land, the Conceptual Site Model has been used to identify a potential risk of exposure to contaminants for construction workers associated with any repair of the foundations of the library building, as well as potential health risks to off-site adjacent residents, and to public users of the site. There are also potential pathways in which there is a risk of contamination of shallow groundwater, and to ecological receptors in the nearby Heathcote River.

# 5.2 Recommendations

Based on the information collated in this report, Aurecon recommend that:

- consideration be given to further intrusive investigation of the possible landfill extent and composition in relation to the proposed repairs. From a construction programme perspective, this would ideally be completed once the design of the repairs has been finalised and the locations, quantity and depths of any soil disturbance works are known. However, if there are other factors, such as tight timelines and consenting implications, it may be worthwhile working in parallel as the design progresses so that contaminated land can work collaboratively with other disciplines.
- if further consideration to the overall landfill extent is required, a Detailed Site Investigation (DSI) be undertaken to quantify the extent and level of contamination within the proposed areas of soil disturbance.
- the information and conclusions in this report be shared and incorporated into future discussions around additional development on the site.



# 6 Reference List

Aurecon 2021, *Christchurch South Library – Conceptual Geotechnical Foundation Repair Feasibility Report.* Prepared by Aurecon New Zealand Limited for Christchurch City Council. Dated 24 November 2021. Report Ref: 520809

Ministry for the Environment (MfE) 2011a, Contaminated Land Management Guidelines No. 1. Reporting on Contaminated Sites in New Zealand (Revised 2011), ME number: 1071, Ministry for the Environment, Wellington.

Ministry for the Environment (MfE) 2011b, *Guidelines for Assessing and Managing Petroleum Hydrocarbon Contaminated Sites in New Zealand*, Ministry for the Environment, Wellington.

Ministry for the Environment (MfE) 2012, Users' Guide. National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health), ME number: 1092, Ministry for the Environment, Wellington.

Parliamentary Counsel Office 2011, Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health Regulations 2011, Parliamentary Counsel Office, Wellington.



# Drawings



City Council



City Council

R



# LLUR Property Statement



Customer Services P. 03 353 9007 or 0800 324 636

PO Box 345 Christchurch 8140

P. 03 365 3828 F. 03 365 3194 E. ecinfo@ecan.govt.nz

www.ecan.govt.nz

Dear Sir/Madam

Thank you for submitting your property enquiry from our Listed Land Use Register (LLUR). The LLUR holds information about sites that have been used or are currently used for activities which have the potential to cause contamination.

The LLUR statement shows the land parcel(s) you enquired about and provides information regarding any potential LLUR sites within a specified radius.

Please note that if a property is not currently registered on the LLUR, it does not mean that an activity with the potential to cause contamination has never occurred, or is not currently occurring there. The LLUR database is not complete, and new sites are regularly being added as we receive information and conduct our own investigations into current and historic land uses.

The LLUR only contains information held by Environment Canterbury in relation to contaminated or potentially contaminated land; additional relevant information may be held in other files (for example consent and enforcement files).

Please contact Environment Canterbury if you wish to discuss the contents of this property statement.

Yours sincerely

**Contaminated Sites Team** 

# Property Statement from the Listed Land Use Register

Visit ecan.govt.nz/HAIL for more information or contact Customer Services at ecan.govt.nz/contact/ and quote ENQ301006

Date generated: Land parcels: 21 November 2021 Part Lot 17 DP 2527 Part Lot 15 DP 2527 Part Lot 18 DP 2527 Part Rural Section 138 Part Lot 18 DP 2527 Part Lot 16 DP 2527 Part Lot 16 DP 2527 Part Lot 13 DP 2527



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

# Sites at a glance

# Sites within enquiry area

Site number	Name	Location	HAIL activity(s)	Category
208	CCC Waterworks	54 Colombo Street, Christchurch	A17 - Storage tanks or drums for fuel, chemicals or liquid waste;G3 - Landfill sites;	Partially Investigated

# More detail about the sites

Our Ref: ENQ301006 Produced by: LLUR Public 21/11/2021 6:53:08 PM



ltem 12

Site 208: CCC Wa	terworks (Interse	cts enquiry area.)			
Category:	Partially Investigated				
Definition:	Verified HAIL has been partially investigated.				
Location:	54 Colombo Street, Christchurch				
Legal description(s):	Rural Section 138; Pt Lot 13-18 DP 2527				
HAIL activity(s):	Period from Period to HAIL activity				
	?	present	Storage tanks or drums for fuel, chemicals or liquid waste		
	?	1965	Landfill sites		
Neter					
Notes:					
24 Feb 2000	1993 DG Licence: 3 u	1993 DG Licence: 3 underground storage tanks (USTs) containing class 3c product with a combined capacity of 6,750 L.			
	1994 Christchurch Ci	ity Council Information:	3 USTs with a capacity of 1,500 L and 2 aboveground storage tanks (ASTs) with a		
	capacity of 1,400 L.				
Investigati	ons:				
INV 2801	Soil Test Report	Soil Test Report: Christchurch City Council Waterworks, 54 Colombo Street, Christchurch			
	Royds Consulting Ltd - Detailed Site Investigation				
	1 Nov 1994				
INV 2800	Environmental	Assessment at Chris	stchurch City Council (CCC) Water Pumping Station at 54		
	Colombo Street, Christchurch				
	Pattle Delamore Partners Ltd - Detailed Site Investigation				
	3 Mar 1995				
INV 2802	Further sampling at CCC Waterworks water pumping station, 54 Colombo Street, Christchurch				
	Pattle Delamore	e Partners Ltd - Deta	iled Site Investigation		
	28 Jul 1995				
INV 2810	Further sampling at CCC Waterworks water pumping station, 54 Colombo Street. Christchurch				
	Pattle Delamore	e Partners Ltd - Deta	iled Site Investigation		
	7 Nov 1995				
Summary of investiga	tion(s):				

Site is a Christchurch City Council water pumping station. Three 2,200L diesel underground storage tanks were removed from the site in November 1994, two of which were found to be holed. Petroleum hydrocarbons were observed at the base of the tank pit. The tanks were replaced by a 5,000 L above ground storage tank. Two further above ground storage tanks are located on site, both with a capacity of 1,500 L, and both used for storing petrol.

The site is located within the confined aquifer zone. There are a number of public water supply wells located within the site that extract water from approximately 30 m below ground level. Shallow non-artesian aquifer occurs at 1.3 - 1.9 m below ground level, and it is considered as sensitive (MfE, 1999). The Heathcote River is the nearest surface waterway, located between 100 and 200 m from the current and historic tank locations.

Three samples were collected from the base of the tank pit at 1 m below ground level, and submitted for an unbanded total petroleum hydrocarbon (TPH) analysis. Concentrations of TPH in the three samples varied between 3,500 and 12,700 mg/kg, indicating that a non-aqueous phase has formed. Subsequently, spoil was partially removed by excavating down to approximately 1.6 - 1.9 m. Two observational bores were installed within the backfill of the excavation.

Additional soil sampling was conducted during the drilling of three boreholes for installation of new groundwater monitoring bores. Two boreholes were placed between the tank pit and the Heathcote River: in the north-east and south-easterly direction from the tank pit and distanced approximately 10 m and 20 m from the tank pit respectively. The last borehole was placed within the tank pit excavation. Two samples were collected from each bore, one within 1 m of the ground level and one immediately above the observed groundwater level. All were submitted for an unbanded TPH analysis, with the two samples collected from the within the tank pit excavation. Total petroleum hydrocarbons were only detected in the two samples collected from the borehole drilled within the tank pit excavation, reporting concentrations of 54 mg/kg and 4,640 mg/kg. Both samples contained PAHs compounds below the applicable guideline values.

Three groundwater monitoring events were carried out at the site: on February, July and October 1995. Groundwater samples were analysed for TPH. A February 1995 sample collected from the borehole within the tank pit excavation was also submitted for a PAH analysis.

A non-aqueous phase product was observed on two occasions in two of the three monitoring bores located within the tank pit excavation. The maximum thickness of 4 mm was observed during the February 1995 monitoring round, reducing to 1 mm in July 1995. Non non-aqueous phase layer was observed in October 1995; however a petroleum sheen and odour were noted in the water bailed from the three bores within the tank pit excavation.

Total petroleum hydrocarbons were not detected above the laboratory limits of detection in groundwater collected from outside of the tank pit excavation and in a water sample collected from the public supply suction tank. Shallow groundwater TPH concentrations were elevated in vicinity of the tank pit excavation,

Our Ref: ENQ301006 Produced by: LLUR Public 21/11/2021 6:53:08 PM

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with TPH concentrations of 30 mg/l and 1.5 mg/l recorded in February and October 1995 respectively. Benzo[a]pyrene was recorded above the NZ Drinking Water Standards during the first monitoring event.

The contaminant source was partially removed offsite, and the results of a limited groundwater monitoring programme indicated that the impact on groundwater was relatively isolated. It is therefore considered unlikely that the residual contamination continues to pose a risk to groundwater and surface water. Further work should be undertaken to determine the risk to human health posed by the residual soil contamination. Given the limited scope of the investigation, and the ongoing storage of fuel at the site, it is proposed that the site is classified as 'Partially Investigated'.

INV 7304 Phase 1 Desk Study of 66 Colombo Street Pattle Delamore Partners Ltd - Preliminary Site Investigation 10 Aug 2010

### Summary of investigation(s):

### Phase 1 Desk Study of 66 Colombo Street, Christchurch – Pattle Delamore Partners Ltd.:

The primary objectives of the desk study was to assist Christchurch City Council determine potential risks in terms of land contamination for the proposed "Mid Heathcote River Master Plan" in the area located around the site. The development plans include cut to fill activities involving the excavation and re-contouring of soils along the Heathcote River bank. The information sourced for the report included interviews with previous site owners and official submitted material from previous works in the local area.

The site has had a mixed use. The information gathered initially stated the site as previously being a landfill but the landfill footprint could not be identified. An interview was conducted with the family of the previous landowner and he confirmed that quarrying and backfilling had occurred on the site. The content of the landfill was not confirmed. Some unexpected items such as vehicles have been uncovered at the site. The information from City Care bore logs addresses specific areas of the site and cannot be extrapolated across the entire investigated area. If there was a landfill located on the site, the age of the indicated filling (around 1930s) suggests that gas and liquid leachate would potentially be past its peak concentrations.

The ECan LLUR identifies petroleum hydrocarbon contamination associated with the removal of underground storage tanks for the CCC Water Works facility which is located approximately 25m south of the site. This contamination is expected to be localised and occur at a distance of approximately 50m from the proposed re-development works and should not be an issue. The site history account in the report adequately identified HAIL activities in the vicinity of the site. Potential contaminants of concern are identified in the report and suggested soil analysis of heavy metals and other selected organic compounds is undertaken.

### INV 248246 Hand Auger Soil Sampling - Colombo Street Drinking Water Treatment Plant Sephira Environmental Ltd - Detailed Site Investigation 20 May 2019

### Summary of investigation(s):

Environment Canterbury has received a Detailed Site Investigation report that includes all or part of the property you have selected.

A DSI seeks to identify the type, extent and level of contamination (if any) in an area. Soil, soil-gas or water samples will have been collected and analysed.

This investigation has not been summarised.

5 Jul 2019

### INV 250368 WHSIP Desk-based Contamination Assessment for Main Pumps Wellheads Beca Limited - Preliminary Site Investigation

# Summary of investigation(s):

Environment Canterbury has received a Preliminary Site Investigation report that includes all or part of the property you have selected.

A Preliminary Site Investigation seeks to identify potential sources of contamination resulting from current and historical land uses.

The preliminary site investigation may not have found any potential sources of contamination on the property you have enquired about. Where potential sources of contamination have been identified, a site identification number (e.g. SIT 1234) and land uses from the Hazardous Activities and Industries List (HAIL) will be shown on your statement.

This investigation has not been summarised.

### INV 250525

Main Pumps Pumping Station - Groundwater Contamination Investigation Beca Limited - Detailed Site Investigation 1 Oct 2019

Our Ref: ENQ301006 Produced by: LLUR Public 21/11/2021 6:53:08 PM

Summary of investigation(s):

Page 3 of 4



Environment Canterbury has received a Detailed Site Investigation report that includes all or part of the property you have selected.

A DSI seeks to identify the type, extent and level of contamination (if any) in an area. Soil, soil-gas or water samples will have been collected and analysed.

This investigation has not been summarised.

# Disclaimer

The enclosed information is derived from Environment Canterbury's Listed Land Use Register and is made available to you under the Local Government Official Information and Meetings Act 1987.

The information contained in this report reflects the current records held by Environment Canterbury regarding the activities undertaken on the site, its possible contamination and based on that information, the categorisation of the site. Environment Canterbury has not verified the accuracy or completeness of this information. It is released only as a copy of Environment Canterbury's records and is not intended to provide a full, complete or totally accurate assessment of the site. It is provided on the basis that Environment Canterbury makes no warranty or representation regarding the reliability, accuracy or completeness of the information provided or the level of contamination (if any) at the relevant site or that the site is suitable or otherwise for any particular purpose. Environment Canterbury accepts no responsibility for any loss, cost, damage or expense any person may incur as a result of the use, reference to or reliance on the information contained in this report.

Any person receiving and using this information is bound by the provisions of the Privacy Act 1993.



# Canterbury Regional Council Kaunihera Taiao ki Waitaha

# Listed Land Use Register

What you need to know



Everything is connected

# What is the Listed Land Use Register (LLUR)?

The LLUR is a database that Environment Canterbury uses to manage information about land that is, or has been, associated with the use, storage or disposal of hazardous substances.

# Why do we need the LLUR?

Some activities and industries are hazardous and can potentially contaminate land or water. We need the LLUR to help us manage information about land which could pose a risk to your health and the environment because of its current or former land use.

Section 30 of the Resource Management Act (RMA, 1991) requires Environment Canterbury to investigate, identify and monitor contaminated land. To do this we follow national guidelines and use the LLUR to help us manage the information.

The information we collect also helps your local district or city council to fulfil its functions under the RMA. One of these is implementing the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil, which came into effect on 1 January 2012.

For information on the NES, contact your city or district council.

# How does Environment Canterbury identify sites to be included on the LLUR?

We identify sites to be included on the LLUR based on a list of land uses produced by the Ministry for the Environment (MfE). This is called the Hazardous Activities and Industries List (HAIL)<sup>1</sup>. The HAIL has 53 different activities, and includes land uses such as fuel storage sites, orchards, timber treatment yards, landfills, sheep dips and any other activities where hazardous substances could cause land and water contamination.

### We have two main ways of identifying HAIL sites:

- We are actively identifying sites in each district using historic records and aerial photographs. This project started in 2008 and is ongoing.
- We also receive information from other sources, such as environmental site investigation reports submitted to us as a requirement of the Regional Plan, and in resource consent applications.

<sup>1</sup>The Hazardous Activities and Industries List (HAIL) can be downloaded from MfE's website <u>www.mfe.govt.nz</u>, keyword search HAIL

# How does Environment Canterbury classify sites on the LLUR?

Where we have identified a HAIL land use, we review all the available information, which may include investigation reports if we have them. We then assign the site a category on the LLUR. The category is intended to best describe what we know about the land use and potential contamination at the site and is signed off by a senior staff member.

Please refer to the Site Categories and Definitions factsheet for further information.

# What does Environment Canterbury do with the information on the LLUR?

The LLUR is available online at <u>www.llur.ecan.govt.nz</u>. We mainly receive enquiries from potential property buyers and environmental consultants or engineers working on sites. An inquirer would typically receive a summary of any information we hold, including the category assigned to the site and a list of any investigation reports.

We may also use the information to prioritise sites for further investigation, remediation and management, to aid with planning, and to help assess resource consent applications. These are some of our other responsibilities under the RMA.

If you are conducting an environmental investigation or removing an underground storage tank at your property, you will need to comply with the rules in the Regional Plan and send us a copy of the report. This means we can keep our records accurate and up-to-date, and we can assign your property an appropriate category on the LLUR. To find out more, visit www.ecan.govt.nz/HAIL.

-

Item





# **IMPORTANT!**

The LLUR is an online database which we are continually updating. A property may not currently be registered on the LLUR, but this does not necessarily mean that it hasn't had a HAIL use in the past.



Sheep dipping (ABOVE) and gas works (TOP) are among the former land uses that have been identified as potentially hazardous. (Photo above by Wheeler & Son in 1987, courtesy of Canterbury Museum.)

# My land is on the LLUR – what should I do now?

**IMPORTANT!** Just because your property has a land use that is deemed hazardous or is on the LLUR, it doesn't necessarily mean it's contaminated. The only way to know if land is contaminated is by carrying out a detailed site investigation, which involves collecting and testing soil samples.

You do not need to do anything if your land is on the LLUR and you have no plans to alter it in any way. It is important that you let a tenant or buyer know your land is on the Listed Land Use Register if you intend to rent or sell your property. If you are not sure what you need to tell the other party, you should seek legal advice.

You may choose to have your property further investigated for your own peace of mind, or because you want to do one of

the activities covered by the National Environmental Standard for Assessing and Managing Contaminants in Soil. Your district or city council will provide further information.

If you wish to engage a suitably qualified experienced practitioner to undertake a detailed site investigation, there are criteria for choosing a practitioner on www.ecan.govt.nz/HAIL.

# I think my site category is incorrect – how can I change it?

If you have an environmental investigation undertaken at your site, you must send us the report and we will review the LLUR category based on the information you provide. Similarly, if you have information that clearly shows your site has not been associated with HAIL activities (eg. a preliminary site investigation), or if other HAIL activities have occurred which we have not listed, we need to know about it so that our records are accurate.

If we have incorrectly identified that a HAIL activity has occurred at a site, it will be not be removed from the LLUR but categorised as Verified Non-HAIL. This helps us to ensure that the same site is not re-identified in the future.

# Contact us Property owners have

Property owners have the right to look at all the information Environment Canterbury holds about their properties.

It is free to check the information on the LLUR, online at www.llur.ecan.govt.nz.

If you don't have access to the internet, you can enquire about a specific site by phoning us on (03) 353 9007 or toll free on 0800 EC INFO (32 4636) during business hours.

Contact Environment Canterbury: Email: ecinfo@ecan.govt.nz Phone: Calling from Christchurch: (03) 353 9007

Calling from any other area: 0800 EC INFO (32 4636)



Everything is connected

Promoting quality of life through balanced resource management. www.ecan.govt.nz E13/101



# Listed Land Use Register Site categories and definitions

When Environment Canterbury identifies a Hazardous Activities and Industries List (HAIL) land use, we review the available information and assign the site a category on the Listed Land Use Register. The category is intended to best describe what we know about the land use.

If a site is categorised as **Unverified** it means it has been reported or identified as one that appears on the HAIL, but the land use has not been confirmed with the property owner.

# If the land use has been confirmed but analytical information from the collection of samples is not available, and the presence or absence of contamination has therefore not been determined, the site is registered as:

### Not investigated:

- A site whose past or present use has been reported and verified as one that appears on the HAIL.
- The site has not been investigated, which might typically include sampling and analysis of site soil, water and/or ambient air, and assessment of the associated analytical data.
- There is insufficient information to characterise any risks to human health or the environment from those activities undertaken on the site. Contamination may have occurred, but should not be assumed to have occurred.

# If analytical information from the collection of samples is available, the site can be registered in one of six ways:

# At or below background concentrations:

The site has been investigated or remediated. The investigation or post remediation validation results confirm there are no hazardous substances above local background concentrations other than those that occur naturally in the area. The investigation or validation sampling has been sufficiently detailed to characterise the site.

# Below guideline values for:

The site has been investigated. Results show that there are hazardous substances present at the site but indicate that any adverse effects or risks to people and/or the environment are considered to be so low as to be acceptable. The site may have been remediated to reduce contamination to this level, and samples taken after remediation confirm this.





## Managed for:

The site has been investigated. Results show that there are hazardous substances present at the site in concentrations that have the potential to cause adverse effects or risks to people and/or the environment. However, those risks are considered managed because:

- the nature of the use of the site prevents human and/or ecological exposure to the risks; and/or
- the land has been altered in some way and/or restrictions have been placed on the way it is used which prevent human and/or ecological exposure to the risks.

# Partially investigated:

The site has been partially investigated. Results:

- demonstrate there are hazardous substances present at the site; however, there is insufficient information to quantify any adverse effects or risks to people or the environment; or
- do not adequately verify the presence or absence of contamination associated with all HAIL activities that are and/or have been undertaken on the site.

# Significant adverse environmental effects:

The site has been investigated. Results show that sediment, groundwater or surface water contains hazardous substances that:

- have significant adverse effects on the environment; or
- are reasonably likely to have significant adverse effects on the environment.

## **Contaminated:**

The site has been investigated. Results show that the land has a hazardous substance in or on it that:

- has significant adverse effects on human health and/or the environment; and/or
- is reasonably likely to have significant adverse effects on human health and/or the environment.

# If a site has been included incorrectly on the Listed Land Use Register as having a HAIL, it will not be removed but will be registered as:

### Verified non-HAIL:

Information shows that this site has never been associated with any of the specific activities or industries on the HAIL.

Please contact Environment Canterbury for further information:

(03) 353 9007 or toll free on 0800 EC INFO (32 4636) email ecinfo@ecan.govt.nz



E13/102



Customer Services P. 03 353 9007 or 0800 324 636

PO Box 345 Christchurch 8140

P. 03 365 3828 F. 03 365 3194 E. ecinfo@ecan.govt.nz

www.ecan.govt.nz

Dear Sir/Madam

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Please contact Environment Canterbury if you wish to discuss the contents of this property statement.

Yours sincerely

**Contaminated Sites Team** 

Environment Canterbury

Regional Council Kaunihera Taiao ki Waitaha

# Property Statement from the Listed Land Use Register

Visit ecan.govt.nz/HAIL for more information or contact Customer Services at ecan.govt.nz/contact/ and quote ENQ301007

Date generated:	21 November 2021
Land parcels:	Part Lot 2 DP 24288
	Part Lot 1 DP 24288
	Part Lot 6 DP 2527
	Part Lot 13 DP 2527
	Part Lot 12 DP 2527
	Part Lot 14 DP 2527
	Part Lot 7 DP 2527
	Part Lot 9 DP 2527
	Part Lot 8 DP 2527
	Part Lot 10 DP 2527
	Part Lot 11 DP 2527



The information presented in this map is specific to the property you have selected. Information on nearby properties may not be shown on this map, even if the property is visible.

# Sites at a glance

Sites within enquiry area

Site number	Name	Location	HAIL activity(s)	Category
10763	66 & 70 Colombo Street Landfill, northern portion of Christchurch Landfill #51	66 & 70 Colombo Street, Beckenham, Christchurch	G3 - Landfill sites;	Partially Investigated

Our Ref: ENQ301007 Produced by: LLUR Public 21/11/2021 6:57:21 PM

Page 1 of 3



# More detail about the sites

Cite 407C2. CC 8 7		Level Cill as earther		
area.)	u Colombo Street	Landfill, norther	n portion of ChristChurch Landtill #51 (Intersects enquiry	
Category:	Partially Investigated			
Definition:	Verified HAIL has been partially investigated.			
Location:	66 & 70 Colombo St	reet, Beckenham, Ch	ristchurch	
Legal description(s):	Part Lot 1 DP 24288,	Part Lot 10 DP 2527	Part Lot 11 DP 2527,Part Lot 12 DP 2527,Part Lot 13 DP	
	2527,Part Lot 14 DP 2527.Part Lot 9 DP 2	2527,Part Lot 2 DP 2 527.Section 1 SO 32	14288,Part Lot 6 DP 2527,Part Lot 7 DP 2527,Part Lot 8 DP 1170.Section 1 SO 336314.Section 2 SO 336314.Section 3 SO	
	336314			
HALL activity(s):	Pariad from	Pariod to		
HAIL activity(S).	pre 1926	?	Landfill sites	
Notes:				
11 Apr 2012	Sources of information r	egarding the northern p	ortion of CCC landfill #51 include CCC Webmap. Old Landfills of	
	Christchurch City, CCC rasite investigation report.	ting unit properties, 192	26, 46, 55 aerial photos, PDP desktop study, PDP management plan, PDP	
	This site reportedly had	uncontrolled filling in th	e 1920s.	
	· · · · · · · · · · · · · · · · · · ·	0		
Investigation	ns:			
INV 7304	Phase 1 Deck Study	of 66 Colombo Stra	et	
1117 7304	Pattle Delamore Par	rtners Ltd - Prelimina	ary Site Investigation	
	10 Aug 2010			
Summary of investigation	on(s):			
Phase 1 Desk Study of 66 Co	olombo Street, Christchu	rch – Pattle Delamore P	artners Ltd.:	
The primary objectives of th proposed "Mid Heathcote R	e desk study was to assist iver Master Plan" in the a	t Christchurch City Coun rea located around the	cil determine potential risks in terms of land contamination for the site. The development plans include cut to fill activities involving the	
excavation and re-contourin owners and official submitte	g of soils along the Heath ed material from previous	cote River bank. The inf works in the local area.	ormation sourced for the report included interviews with previous site	
The site has had a mixed use. The information gathered initially stated the site as previously being a landfill but the landfill footprint could not be				
identified. An interview was	conducted with the famil	ly of the previous lando	wher and he confirmed that quarrying and backfilling had occurred on the	
Care bore logs addresses spe	ecific areas of the site and	l cannot be extrapolated	d across the entire investigated area. If there was a landfill located on the	
site, the age of the indicated filling (around 1930s) suggests that gas and liquid leachate would potentially be past its peak concentrations.				
The ECan LLUR identifies petroleum hydrocarbon contamination associated with the removal of underground storage tanks for the CCC Water Works				
facility which is located appr 50m from the proposed re-c	roximately 25m south of t development works and sl	he site. This contaminat hould not be an issue. T	ion is expected to be localised and occur at a distance of approximately he site history account in the report adequately identified HAIL activities in	
the vicinity of the site. Potential contaminants of concern are identified in the report and suggested soil analysis of heavy metals and other selected				
organic compounds is under	taken.			
INV 250368	WHSIP Desk-based	Contamination Asse	essment for Main Pumps Wellheads	
	Beca Limited - Prelin	minary Site Investiga	tion	
Summary of investigation	on(s):			
Environment Canterbury has	s received a Preliminary S	ite Investigation report	that includes all or part of the property you have selected.	
A Preliminary Site Investigation seeks to identify potential sources of contamination resulting from current and historical land uses.				

Our Ref: ENQ301007 Produced by: LLUR Public 21/11/2021 6:57:21 PM



The preliminary site investigation may not have found any potential sources of contamination on the property you have enquired about. Where potential sources of contamination have been identified, a site identification number (e.g. SIT 1234) and land uses from the Hazardous Activities and Industries List (HAIL) will be shown on your statement.

This investigation has not been summarised.

### INV 250525 Main Pumps Pumping Station - Groundwater Contamination Investigation Beca Limited - Detailed Site Investigation 1 Oct 2019

Summary of investigation(s):

Environment Canterbury has received a Detailed Site Investigation report that includes all or part of the property you have selected.

A DSI seeks to identify the type, extent and level of contamination (if any) in an area. Soil, soil-gas or water samples will have been collected and analysed.

This investigation has not been summarised.

# Disclaimer

The enclosed information is derived from Environment Canterbury's Listed Land Use Register and is made available to you under the Local Government Official Information and Meetings Act 1987.

The information contained in this report reflects the current records held by Environment Canterbury regarding the activities undertaken on the site, its possible contamination and based on that information, the categorisation of the site. Environment Canterbury has not verified the accuracy or completeness of this information. It is released only as a copy of Environment Canterbury's records and is not intended to provide a full, complete or totally accurate assessment of the site. It is provided on the basis that Environment Canterbury makes no warranty or representation regarding the reliability, accuracy or completeness of the information provided or the level of contamination (if any) at the relevant site or that the site is suitable or otherwise for any particular purpose. Environment Canterbury accepts no responsibility for any loss, cost, damage or expense any person may incur as a result of the use, reference to or reliance on the information contained in this report.

Any person receiving and using this information is bound by the provisions of the Privacy Act 1993.

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Our Ref: ENQ301007 Produced by: LLUR Public 21/11/2021 6:57:21 PM


## Canterbury Regional Council Kaunihera Taiao ki Waitaha

## Listed Land Use Register

What you need to know



Everything is connected

## What is the Listed Land Use Register (LLUR)?

The LLUR is a database that Environment Canterbury uses to manage information about land that is, or has been, associated with the use, storage or disposal of hazardous substances.

## Why do we need the LLUR?

Some activities and industries are hazardous and can potentially contaminate land or water. We need the LLUR to help us manage information about land which could pose a risk to your health and the environment because of its current or former land use.

Section 30 of the Resource Management Act (RMA, 1991) requires Environment Canterbury to investigate, identify and monitor contaminated land. To do this we follow national guidelines and use the LLUR to help us manage the information.

The information we collect also helps your local district or city council to fulfil its functions under the RMA. One of these is implementing the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil, which came into effect on 1 January 2012.

For information on the NES, contact your city or district council.

## How does Environment Canterbury identify sites to be included on the LLUR?

We identify sites to be included on the LLUR based on a list of land uses produced by the Ministry for the Environment (MfE). This is called the Hazardous Activities and Industries List (HAIL)<sup>1</sup>. The HAIL has 53 different activities, and includes land uses such as fuel storage sites, orchards, timber treatment yards, landfills, sheep dips and any other activities where hazardous substances could cause land and water contamination.

#### We have two main ways of identifying HAIL sites:

- We are actively identifying sites in each district using historic records and aerial photographs. This project started in 2008 and is ongoing.
- We also receive information from other sources, such as environmental site investigation reports submitted to us as a requirement of the Regional Plan, and in resource consent applications.

<sup>1</sup>The Hazardous Activities and Industries List (HAIL) can be downloaded from MfE's website <u>www.mfe.govt.nz</u>, keyword search HAIL

## How does Environment Canterbury classify sites on the LLUR?

Where we have identified a HAIL land use, we review all the available information, which may include investigation reports if we have them. We then assign the site a category on the LLUR. The category is intended to best describe what we know about the land use and potential contamination at the site and is signed off by a senior staff member.

Please refer to the Site Categories and Definitions factsheet for further information.

## What does Environment Canterbury do with the information on the LLUR?

The LLUR is available online at <u>www.llur.ecan.govt.nz</u>. We mainly receive enquiries from potential property buyers and environmental consultants or engineers working on sites. An inquirer would typically receive a summary of any information we hold, including the category assigned to the site and a list of any investigation reports.

We may also use the information to prioritise sites for further investigation, remediation and management, to aid with planning, and to help assess resource consent applications. These are some of our other responsibilities under the RMA.

If you are conducting an environmental investigation or removing an underground storage tank at your property, you will need to comply with the rules in the Regional Plan and send us a copy of the report. This means we can keep our records accurate and up-to-date, and we can assign your property an appropriate category on the LLUR. To find out more, visit www.ecan.govt.nz/HAIL.

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## **IMPORTANT!**

The LLUR is an online database which we are continually updating. A property may not currently be registered on the LLUR, but this does not necessarily mean that it hasn't had a HAIL use in the past.



Sheep dipping (ABOVE) and gas works (TOP) are among the former land uses that have been identified as potentially hazardous. (Photo above by Wheeler & Son in 1987, courtesy of Canterbury Museum.)

#### My land is on the LLUR – what should I do now?

**IMPORTANT!** Just because your property has a land use that is deemed hazardous or is on the LLUR, it doesn't necessarily mean it's contaminated. The only way to know if land is contaminated is by carrying out a detailed site investigation, which involves collecting and testing soil samples.

You do not need to do anything if your land is on the LLUR and you have no plans to alter it in any way. It is important that you let a tenant or buyer know your land is on the Listed Land Use Register if you intend to rent or sell your property. If you are not sure what you need to tell the other party, you should seek legal advice.

You may choose to have your property further investigated for your own peace of mind, or because you want to do one of

the activities covered by the National Environmental Standard for Assessing and Managing Contaminants in Soil. Your district or city council will provide further information.

If you wish to engage a suitably qualified experienced practitioner to undertake a detailed site investigation, there are criteria for choosing a practitioner on www.ecan.govt.nz/HAIL.

## I think my site category is incorrect – how can I change it?

If you have an environmental investigation undertaken at your site, you must send us the report and we will review the LLUR category based on the information you provide. Similarly, if you have information that clearly shows your site has not been associated with HAIL activities (eg. a preliminary site investigation), or if other HAIL activities have occurred which we have not listed, we need to know about it so that our records are accurate.

If we have incorrectly identified that a HAIL activity has occurred at a site, it will be not be removed from the LLUR but categorised as Verified Non-HAIL. This helps us to ensure that the same site is not re-identified in the future.

## Contact us

Property owners have the right to look at all the information Environment Canterbury holds about their properties.

It is free to check the information on the LLUR, online at www.llur.ecan.govt.nz.

If you don't have access to the internet, you can enquire about a specific site by phoning us on (03) 353 9007 or toll free on 0800 EC INFO (32 4636) during business hours.

Contact Environment Canterbury: Email: ecinfo@ecan.govt.nz Phone: Calling from Christchurch: (03) 353 9007

Calling from any other area: 0800 EC INFO (32 4636)



Everything is connected

Promoting quality of life through balanced resource management. www.ecan.govt.nz E13/101



# Listed Land Use Register Site categories and definitions

When Environment Canterbury identifies a Hazardous Activities and Industries List (HAIL) land use, we review the available information and assign the site a category on the Listed Land Use Register. The category is intended to best describe what we know about the land use.

If a site is categorised as **Unverified** it means it has been reported or identified as one that appears on the HAIL, but the land use has not been confirmed with the property owner.

## If the land use has been confirmed but analytical information from the collection of samples is not available, and the presence or absence of contamination has therefore not been determined, the site is registered as:

#### Not investigated:

- A site whose past or present use has been reported and verified as one that appears on the HAIL.
- The site has not been investigated, which might typically include sampling and analysis of site soil, water and/or ambient air, and assessment of the associated analytical data.
- There is insufficient information to characterise any risks to human health or the environment from those activities undertaken on the site. Contamination may have occurred, but should not be assumed to have occurred.

## If analytical information from the collection of samples is available, the site can be registered in one of six ways:

#### At or below background concentrations:

The site has been investigated or remediated. The investigation or post remediation validation results confirm there are no hazardous substances above local background concentrations other than those that occur naturally in the area. The investigation or validation sampling has been sufficiently detailed to characterise the site.

#### Below guideline values for:

The site has been investigated. Results show that there are hazardous substances present at the site but indicate that any adverse effects or risks to people and/or the environment are considered to be so low as to be acceptable. The site may have been remediated to reduce contamination to this level, and samples taken after remediation confirm this.





#### Managed for:

The site has been investigated. Results show that there are hazardous substances present at the site in concentrations that have the potential to cause adverse effects or risks to people and/or the environment. However, those risks are considered managed because:

- the nature of the use of the site prevents human and/or ecological exposure to the risks; and/or
- the land has been altered in some way and/or restrictions have been placed on the way it is used which prevent human and/or ecological exposure to the risks.

#### Partially investigated:

The site has been partially investigated. Results:

- demonstrate there are hazardous substances present at the site; however, there is insufficient information to quantify any adverse effects or risks to people or the environment; or
- do not adequately verify the presence or absence of contamination associated with all HAIL activities that are and/or have been undertaken on the site.

#### Significant adverse environmental effects:

The site has been investigated. Results show that sediment, groundwater or surface water contains hazardous substances that:

- have significant adverse effects on the environment; or
- are reasonably likely to have significant adverse effects on the environment.

#### **Contaminated:**

The site has been investigated. Results show that the land has a hazardous substance in or on it that:

- has significant adverse effects on human health and/or the environment; and/or
- is reasonably likely to have significant adverse effects on human health and/or the environment.

## If a site has been included incorrectly on the Listed Land Use Register as having a HAIL, it will not be removed but will be registered as:

#### Verified non-HAIL:

Information shows that this site has never been associated with any of the specific activities or industries on the HAIL.

Please contact Environment Canterbury for further information:

(03) 353 9007 or toll free on 0800 EC INFO (32 4636) email ecinfo@ecan.govt.nz



E13/102

C



# Historical Aerial Photographs



C. GIBBONS

VERIFIED R. LARKIN







C. GIBBONS



ltem 12 Attachment **B** 





















C. GIBBONS

 PROJECT
 WBS
 TYPE
 DISC
 NUMBER
 SHEET
 REVISION

 DOCUMENT
 520809
 0000
 DRG
 KF
 0002
 06
 A







C. GIBBONS

VERIFIED R. LARKIN





























TYPE		DISC		NUMBER		SHEET		REVISION
DRG	-	KF	-	0002	-	14	-	А

 PROJECT
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 DOCUMENT
 520809
 00000

C. GIBBONS

VERIFIED R. LARKIN

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## lewis bradford CONSULTING ENGINEERS

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# South Christchurch Library / Te Kete Wānanga o Wai Mōkihi Concept Design Report - Seismic Strengthening December 2021

## Contents

- 1. Introduction
- 2. Site and Geotechnical
- 3. Existing Structure and Seismic Rating
- 4. Damage to Building
- 5. Seismic Strengthening and Repairs
- 6. Construction Risk and Safety In Design

**Concept Stage Structural Drawings** 

Report Prepared By:

Report Reviewed By:

Joe Byrne ASSOCIATE CMEngNZ, CPEng

Seler Trapport

Helen Trappitt DIRECTOR FEngNZ







#### 1. Introduction

Lewis Bradford Consulting Engineers (LBCE) has been engaged by Christchurch City Council to provide structural engineering assistance with decision making around the future of the South Christchurch Library. In particular, this report is focused on seismic strengthening works.

The South Christchurch Library was damaged by the Canterbury Earthquake Sequence. The building was subsequently assessed by Opus as earthquake prone and temporary strengthening works were carried out in 2012. Several reports relating to damage assessment and strengthening options have been produced since this time and a more permanent solution is now required.

#### 2. Site and Geotechnical

South Christchurch Library is located within a large open site at 66 Colombo Street, Christchurch. The site is bordered by Hunter Terrace to the north and east, Colombo Street to the west, and a driveway accessing the carpark to the south. The Heathcote River is approximately 50m to the north.



Site Location Plan

Aurecon have produced a geotechnical report dated 1st December 2021 (Rev. 1) to assist with the structural design. Based on this report, the ground conditions at the site are summarised as follows:

\*Variable topsoil / landfill material to 2.6m below ground. \*Medium dense gravel and sand to 5.5m below ground.

\*Soft to firm silty sand / silt to 15m below ground.

\*Dense sandy gravel to depth (Riccarton Gravels).

The silt and sand layers below the water table (approximately 2.0m below ground) are expected to liquefy in both SLS and ULS earthquakes. Expected settlement ranges from 15-45mm (SLS) to 45-60mm (ULS). There is a low risk of lateral spreading towards the Heathcote River. The ground performance in a ULS seismic event is expected to be similar to that observed during the 22nd February 2011 earthquake.



#### 3. Existing Structure and Seismic Rating

The existing library building is a single-storey structure with plan area of approximately 2500m2. Built in 2002, it consists of a light-weight saw-tooth shaped roof over various purlin types. The purlins span east-west between structural steel portal frames which are typically 250UB31 rafters supported by 150UC23 columns. There are partial-height precast concrete panels to the south perimeter and internally around the toilet block. There is a concrete moat structure around the perimeter of the building.

The foundations consist of a 100-225mm thick reinforced concrete slab on-grade and local thickenings under the columns and posts. The slab on-grade has extensive isolation, contraction, expansion, and tied joints to deal with thermal movements associated with the in-slab heating system.

The lateral structure consists of very flexible structural steel portal frames in both orthogonal directions. The columns rely on weak-axis flexure in the east-west direction. Detailing of these frames is poor. There is roof bracing in sporadic locations which appears to have an incomplete loadpath. The precast concrete panels are supported for face load by cantilever stubs from the rafters above.

CCC has provided us with a 2012 Detailed Engineering Evaluation by Opus. This report assessed the building at 10-20%NBS (IL3), which we agree with. According to the New Zealand Society for Earthquake Engineering, this puts building occupants at approximately 25 times greater risk during an earthquake compared to a new, code compliant building.

The building was subsequently strengthened to 34%NBS (IL3) in 2012 by the installation of temporary propping to the precast panels along the south perimeter. This propping was designed by Opus / WSP who also inspected it in 2019 to confirm it remains fit for purpose.

#### 4. Damage to Building

CCC has provided us with the following reports in relation to building damage, all produced by Opus / WSP:

\*Opening up works summary (2012)

- \*Foundation damage assessment report (2013)
- \*Damage assessment report (2015)

\*Structural repair and strengthening schemes report (2016)

Based on these reports and our site inspection on 18th October 2021, the earthquake damage is summarised below:

\*Differential slab settlement, approximately 90mm.

\*Total slab settlement, approximately 245 - 335mm.

\*Cracking to the slab, foundations, and external moat.

\*Cracking to precast panels, particularly at connections to structural steel elements.

\*Cracking to wall and ceiling linings.

There was no obvious damage to the structural steel portal frames. This is likely due to seismic load being resisted by the internal linings instead, as they provide a stiffer load path. Similarly for the roof bracing system, there was no obvious load path to activate this. Note it is possible that further damage exists but was not visible during our observations i.e. intrusive investigations would be required to identify this.

Beyond structural and amenity implications, the slab settlement also significantly increases the flood risk to the building. The design finished floor level (FFL) is 16.350m RL (Christchurch Drainage Datum). Based on the settlement figures above, current FFL is approximately 16.015 - 16.105m RL. CCC Asset Planning advise that the District Plans requires an FFL of 15.890m RL. Appropriate advice should be sought with regards to floor level requirements and flood hazard.

We understand from CCC that the function of the in-slab heating pipes has been compromised. However, this is not necessarily due to earthquake damage alone.

There may also be damage to non-structural building elements. We recommend condition surveys are carried out as required.

## 5. Seismic Strengthening and Repairs

#### **Client Requirements**

CCC is investigating strengthening works to increase the current 34%NBS (IL3) rating to 100%NBS (IL3). We note that, given the current rating, there is no legislative requirement to carry out strengthening works on this building. However, given the building is damaged and relies on temporary propping to achieve this low rating, we consider further strengthening to be prudent.

We understand CCC has the following requirements in relation to any strengthening works:

1) The solution must be insurable and obtain a building consent. This means the strengthening works and finished floor level must meet NZ Building Code and Territorial Authority requirements. 2) The solution must achieve a suitable level of seismic resilience, as measured by the 100%NBS (IL3) target. 3) The solution must achieve a level of environmental sustainability.

#### Previous Strengthening Schemes

A number of concept strengthening schemes have been prepared by Opus.

The first of these, dated 2013, involves re-levelling the superstructure and construction of a new suspended slab. This impractical scheme involves removing the entire existing slab on-grade, installing 226 new screw piles, 57 new pile caps, and new tie beams between these - all within an existing building.

Christchurch City Council

SOUTH CHRISTCHURCH LIBRARY Structural Concept Design Report - Dec 2021 Estimated to cost over \$6.6million - a figure that is almost certainly out of date - this solution will not achieve requirements 1 and 2 above. This solution is unlikely to be seen as sustainable given the existing slab is removed and replaced with significantly more structure. Extensive excavations are required to install the piles, jacking beams, and jacks. Finally, the gap between the excavations and new slab will be filled with grout.

The second scheme, dated 2016, has several options as outlined below:

A) Repair and strengthen superstructure only.

B) Repair and strengthen building, replace slab.

C) Repair, strengthen, and re-level building, replace slab.

These are all designed for 100%NBS (IL3) and so achieve requirement 2 above. Options A and B do not raise the finished floor level so are unlikely to be insurable from a flood hazard perspective, meaning requirement 1 is only partially achieved. These partial repair options would also likely create issues with warranties, guarantees, and complicate the construction contracts. Note, it is likely building consent would be obtained given the works render the building no less compliant than its current condition (i.e. Section 112 of NZ Building Act).

The three options achieve various levels of sustainability. All require new structural steelwork within the superstructure to achieve seismic resilience. In addition, Options B and C require removal of the existing slab to enable construction of a new 400mm thick reinforced concrete raft slab and associated excavations to facilitate this. We understand the site is potentially contaminated so resource consent and disposal would need to be considered.

Option C also requires grout injection to re-level the entire building, although the practicalities of this are not covered in the Opus report. There are also non-structural implications which are covered later in this section.

#### Proposed Strengthening Scheme

Our proposed strengthening scheme is summarised below:

1) Remove all existing internal walls, including precast concrete and timber-framed. The concrete walls in particular add to the seismic loads and restrict future layout flexibility.

2) Install new 300mm thick reinforced concrete raft slab over the existing slab on-grade. Depending on the chosen finished floor level, high points on the existing slab may need to be locally removed to achieve a consistent slab thickness. This would also likely be required at local slab thickenings under the new columns. Similarly, local areas of compacted hardfill or site concrete may be required over low points.

This foundation system has been reviewed and endorsed by Aurecon as the geotechnical engineer and is expected to perform better than the original slab during a future earthquake.

3) Install new 310UB / 410UB structural steel columns adjacent to the existing columns and connect these to the existing 250UB31 rafters. The existing columns act as temporary props to support the roof and will be removed after the new columns are installed.



4) Install new 310UB / 410UB structural steel mullions along the Grid J perimeter panels to provide out-of-plane support.

5) Install new tension-only cross bracing and brace struts within the roof and wall planes. These are also required within the clerestories between adjacent sections of saw-tooth roof.

Refer to attached concept issue drawings for more details.

With reference to the CCC requirements, this strengthening scheme will be insurable, obtain building consent, and restore the finished floor level to provide improved resilience against flooding. It will also achieve the seismic resilience criteria with a rating of 100%NBS (IL3).

In terms of sustainability, the superstructure works are similar to Options A-C from the 2016 Opus report. However, given this solution requires limited (if any) removal of the existing slab on-grade, no bulk excavation, smaller replacement foundations, and no grout injection, it is considerably more sustainable in this respect.

#### **Implications on Non-Structural Elements**

All options, both Opus and LBCE, presented above impact on non-structural elements to varying extents. In all cases, strengthening of the superstructure will require removal and reinstatement of the ceiling and services in the ceiling void.

All re-levelling options, both Opus and LBCE, require removal and reinstatement of the internal partitions and fit-out. Similar will be required for the exterior envelope although the extent may be reduced for Opus Option C given the perimeter foundations are being raised to level (as opposed to rebuilt at level).

In-slab and below slab services will need to be replaced in all cases. Note that the reinforced concrete raft slab options are not compatible with reinstatement of the current in-slab hydronic heating system. This would require an insulation layer and separate topping slab over the raft slab, resulting in additional excavation quantity or higher finished floor level.

Finally, it is important to consider the condition / design life of existing non-structural elements that need replacement as part of the strengthening works. These elements may have deferred maintenance or even require replacement in the near future given the building is almost 20 years old.

#### **Comparison to New-Build Option**

Given the extent of strengthening and repair works, the significant impact on non-structural elements, and risk compared with new build construction (refer Section 6), we recommend a new build option is considered.

From a seismic performance perspective, a new building will always be better than an existing building that has been strengthened. This is because the %NBS rating only addresses ULS performance and life-safety. In addition, current detailing, design standards, and design practice have improved compared to 20 years ago.

Amenity of the building should also be considered. Is the existing building still fit for purpose? If so, will this be compromised by the strengthening works? For example, our re-leveling option will reduce the clearance at the roof low points. This could be addressed by raising the new ceiling level but how does this affect services? The external ground levels will also need to be revised due to the increased floor level how does this impact on the carpark, pathways, and landscaping?

We understand sustainability is an important consideration for CCC with respect to the future of this building. On the face of it, strengthening an existing building appears to be a more sustainable solution than a new building. However, in order to meet CCC's other key requirements, a significant amount of new structural and non-structural elements are required. With the exception of the roof cladding, almost every other major element is impacted to some extent.

For an equivalent new building, the structure would be similar to what is currently proposed for the strengthening works. Most importantly, the same reinforced concrete raft slab could be used over the existing foundations. This removes the need for extensive excavation and backfilling which is usually required for such foundation systems in new builds.

Finally, based on our experience with similar projects and initial conversations with the project quantity surveyor, we expect the cost of strengthening will be similar to that for a new build. We also expect that a new building would be faster and simpler to construct.

## 6. Construction Risk and Safety In Design

By default, strengthening and repair works are carried out within existing buildings. The design stage is informed by existing building documentation (which can be limited for older buildings and not accurately reflect the as-built conditions) and on-site investigations.

Construction risk and complexity is also increased for strengthening and repair projects. Examples of increased risk compared to new build construction are outlined below:

\*As-built conditions require changes in documentation. \*Increased risk to workers (e.g. hazardous materials within existing building / working in confined spaces).

\*Inefficient and complex construction methodologies (e.g. limited crane access under existing roof / temporary propping / working around existing building elements). \*Increased construction duration.

\*More complex contractual arrangements. \*Warranty / guarantee issues given existing building elements are retained.

\*Increased contingency required due to less defined scope (e.g. extent of building fabric retained vs. replaced).

The chosen contractor should have relevant experience in strengthening projects.

Christchurch City Council

SOUTH CHRISTCHURCH LIBRARY Structural Concept Design Report - Dec 2021

# South Christchurch Library / Te Kete Wānanga o Wai Mōkihi CONCEPT DESIGN STAGE - STRUCTURAL DRAWINGS Dec 2021



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## lewis bradford consulting engineers

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#### Note:

This concept issue covers proposed strengthening work to the superstructure only (100%NBS, IL3)

Foundation and slab works require Geotechnical input These drawings present an indicative structural design intended for information only.

Geometry is based on original building CAD and not an as built survey.

## Structural Drawing Index - Concept Issue 7th December 2021

\$1-1 \$1-2	Ground floor plan Roof framing plan
S2-1 S2-2	Frame Elevation - Gridlines 2 and 3 Frame Elevation - Gridlines 4 and 5
S2-3	Frame Elevation - Gridline 10
S2-4	Frame Elevation - Gridline E
S2-5	Frame Elevation - Gridline F
\$2-6	Frame Elevation - Gridline 1

# South Christchurch Library / Te Kete Wānanga o Wai Mōkihi SEISMIC STRENGTHENING

Colombo Street, Christchurch 6 6

# ltem 12 Attachment C



# lewis bradford CONSULTING ENGINEERS









ROOF FRAMING PLAN





# note: \* denotes existing columns remain as temporary structure. Remove after installation of new columns and bracin

note: Foundation strengthening t.b.c. following Geotechnico Engineering investigation.

SLAB TYPE A 300 thick insitu concrete ground floor slab with 150 kg /m 3 reinforcing content build over existing slab to new FFL determined by the Architect. allow to locally remove existing slab at high point as required.

## S DRAWING AND ALL INFORMATION CONTAINED WI IPERTY OF LEWIS BRADFORD. ITS CONTENTS ARE CO ST NOT BE REPRODUCED OR DISTRIBUTED TO ANY O MPANY UNLESS AGREED TO IN WRITING BY LEWIS BRA CONTRACTOR TO VERIFY ALL DIMENSIONS ON SIT REFER TO ARCHITECT'S DRAWING FOR ALL SETOU NOTES: Not for Construction. Suitable for high-level costing/estimation only Member sizes/details subject to detailed design and building consent. Construction staging 1.b.c. between Enginee and Contractor prior to commencing work on site.

#### COLOUR LEGEND:

denotes Existing denotes New

denotes To be demolished

ltem 12



Christchurch City Council





## SOUTH CHRISTCHURCH LIBRARY SEISMIC STRNGTHENING

## DRAWING TITLE

#### FRAME ELEVATION GRIDLINES 2 AND 3

DRAWN: MMI ENGINEER: EL SCALE 1:50 at A1 1:100 at A3 CHECKED: JDB/HRT E: 120054 DRAWING NO. S2-1 1



















# South Christchurch Library

JASMAX

EQ Refurbishment Report

Document Prepared by Jasmax for Christchurch City Council Ltd. 21 January 2022



Rev B

# **Revision history**

Date	Revision	Description
21/12/2021	Rev A	Draft for review and pricing
21/01/2022	Rev B	Final Issue



South Christchurch Library EQ Refurbishment Report **21 January 2022** Rev B



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# **Terms of Reference**

Jasmax has been engaged by Christchurch City Council (CCC) to provide information about the future earthquake repair of the South Christchurch Library. The 2,462m<sup>2</sup> community facility is located on Colombo Street at the foot of the Christchurch Port Hills with the Heathcote River to the east and north, and sits within a generous park landscape.

During the sequence of Christchurch earthquakes, the South Christchurch Library was damaged. The building was assessed by Opus and temporary seismic strengthening works were carried out in 2012. Since then, several partial conditions investigations have been carried out. No significant permanent repair work has been completed, aside from ongoing maintenance and essential repairs to keep the facility operational.

CCC and Lewis Bradford Consulting Engineers have provided Jasmax with the following reports and drawings of the building for review and to inform this report.

- Warren and Mahoney Architectural Drawings (2002)
- Warren and Mahoney Feasibility Options Report (2015)
- Newfield Roofing Condition Report (2016)
- Aurecon Preliminary Site Investigation Contamination (2021)
- Lewis Bradford Existing Floor Level Mark-up (2021)
- Lewis Bradford Structural Repair Concept (2021)
- Enlightened Fire Solutions Means of Escape Preliminary Fire Report (2022)

The South Christchurch Library is approaching a 20-year life span, which brings several building elements to their considered "end of life" and will require replacement in the near future. The necessary structural repairs require building consent, and due to Building Code changes since the building was consented and constructed, elements of the building design and fabric will require upgrade.

Jasmax are engaged to compare two options for facility upgrades, providing architectural scope definition based on the proposed structural repair design, and commentary on buildability, insurability, sustainability and Building Code compliance.



Figure 1. Site Plan, Warran and Mahoney original plans

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Executive Summary	<b>Decision Criteria</b>	Option A		
	Cost, whole of life cost against the remaining life of any reused	- High risk of being more expensive due to complexity and programming for building sequencing.		
The two potential options considered in this report for the future of the South Christchurch Library are:	components	- Increased contingency and additional unknown costs with altering existing.		
Option A - Comprehensive repair and refurbishment of the existing building.	Flood management zone and associated finished floor level requirements.	-Satisfactory proposed finished floor level.		
Option B - A new building slab and superstructure of the same footprint on top of the existing concrete slab and foundations.	Insurability, code compliance, warranties	-Likely that not all warranties will be available.		
Each option is summarised in the adjacent table by outlining the pros and cons against key decision criteria. Pros are highlighted in blue with cons noted in red.		- Quantity of unknowns may result in insurance issues post compliance.		
The next section of this report 'Assessment Review', provides a comprehensive description of the likely repair scope, and detailed options		-Minimum code compliance (only) may be acheivable for some aspects, with compromises (eg head height)		
comparison and commentary under the following headings:		- Intensive repair completed to code requirements.		
<ol> <li>Sustainability.</li> <li>Functionality and fitness for future use.</li> </ol>	Comfort and ease of operation (building services)	- Building services solutions impacted by height and weight limitations, no opportunity for underfloor heating, risk of comfort and sustainability compromises		
3. Implications of insurance.		- New higher performing facade to north and potential for		
4. Compliance and building code upgrades.	Constructability - risk, time and	- Higher health and safety risk with partial demolishion		
<ol> <li>Buildability and construction sequencing.</li> <li>Recommendations for next steps and commentary around the level of information available, is made under each of the above sections.</li> </ol>	Health & Safety	and repair strategy. - Longer duration of works, due to complexity and risk associated with the extensive refurbishment and partial demolishion.		
	Sustainability considerations (Carbon emissions and Life Cycle Analysis in particular)	<ul> <li>Partial reuse of the existing steel with current structural solution.</li> <li>Keep southern basalt cladding and facade system.</li> <li>Utilise existing slab as a sub-slab to remove requirement for ground improvement work.</li> <li>Requires a new slab and a significant amount of additional steel which have a high carbon footprint.</li> </ul>		
	Future functionality and the benefits/constraints of new planning vs reuse of existing planning Continuity of use and operational considerations (decant and recant, continuity of staffing and service in the area)	<ul> <li>Additional structure (columns and braces) protrude into the existing footprint.</li> <li>Opportunity to alter the planning with all internal walls removed.</li> <li>Relocation to another facility is required.</li> <li>Longer expected construction programme.</li> </ul>		

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### **Option B**

-Traditional building programme with reduced construction risk = reduced cost.

- Life expectancy for entire building is extended with all

-Satisfactory proposed finished floor level.

elements new.

- New code compliant building with all associated warranties and fully insurable.

- Opportunities to design cost effectively whilst achieving above code performance.

- Greater opportunity to reduce maintenance and facilities management cost and time.

- Opportunity for new services, heating and ventilation solutions designed to a a future brief, without impediments.

New higher performing envelope for higher thermal comfort.

- Traditional construction methodology and process.

- Existing steel elements are only recycled, with less opportunity for reuse (in this or other projects).

- Existing concrete pre-cast panels crushed and used as fill

· Simplification of structure and opportunity for an alternative material solution.

- Utilise existing slab as a sub-slab to remove requirement for ground improvement work.

- Larger opportunity to improve operational energy efficiency of the building through passive design and mechanical systems.

- Requires a new slab and a significant amount of additional steel which have a high carbon footprint.

- Controlled by slab footprint for new building planning.

- Opportunity to alter grid spacing and provide a more open plan/flexible interior.

- Relocation to another facility is required.

Shorter expected construction programme.

# **Assessment Review**

### 1. Sustainability

There is a direction from CCC to consider all sustainability implications with respect to the future repair of the South Christchurch Library building. The environmental sustainability comparison of the two proposed options is based on whole-life thinking, including likely remaining lifespan to replacement and end of life disposal/reuse.

It is noted that Christchurch Council adopted a Climate Resilience Strategy in 2021. This includes targets for net zero greenhouse gas emissions by 2045, and a 50% reduction from the baseline financial year 2016/2017 levels, by 2030. Life cycle carbon use will therefore be used as a key metric for decision making. The strategy also closely aligns to the United Nations Sustainable Development Goals , which can also be used to shape any proposed solution.

Option A repair strategy aims to re-life the existing built facility. Re-lifing refers to the process of rejuvenating/extending a building's lifespan by retaining the inherently valuable elements of a building, replacing the endof-life building elements, and upgrading all aspects to acheive current code compliance while optimising the operational and commercial performance of the built asset. Re-lifing can be a sustainable alternative to new construction. When considering re-lifing the South Christchurch Library under the proposed Repair and Refurbish solution (Option A), the building elements that require replacement (the structure) also have the largest embodied carbon footprint (concrete and steel). The proposed structural repair design aims to retain the steel roof purlins, rafters and some of the pre-cast concrete panels and steel columns. The design necessitates most of the non-structural fabric of the building to be replaced, proposes a new 300mm thick reinforced concrete slab across the entire building floor plate and adds significant quantity of additional steel columns, struts, and braces. Further, the quantum of non-structural building fabric which must be replaced as a result of the necessary structural repairs is unlikely to be able to be carried out efficiently (reducing waste/construction time and energy) due to the complexity in buildability and sequencing.

For both options, some of the building materials may be separated

and recycled or components (such as internal/external joinery) reused elsewhere. In the case of a new superstructure built over the existing slab and foundations (Option B), there is greater scope for the building design to improve insulation and reduce operational energy (and therefore operational carbon) use, and minimise embodied carbon by using low-carbon alternatives or salvaged material. For example, use of timber structure, existing concrete panels crushed and used as clean fill, structural steel recycled, and basalt cladding tiles reused. The structural solution can be more efficient, along with more efficient building services driven by improved thermal envelope performance. Building on top of the existing slab removes risks around known poor ground conditions and contamination, and extends the life of the existing high-carbon intensity concrete foundation elements.

To comprehensively compare sustainability across the two options, the life cycle of all elements should be considered (from raw materials through to disposal or reuse). Option A offers a greater level of re-lifing to existing building fabric. Option B offers the greatest potential to improve the environmental impact of the structure, thermal performance, servicing strategy, comfort and daily performance of the building. An embodied carbon emissions comparison of structure and building fabric will be carried out in the next phase of this assessment.

Both options will impact operational carbon use over the life of the building so this will also be considered in the assessment.

### 2. Functionality and fitness for future use.

Jasmax has attended a workshop with staff and managers associated with the building to listen and engage in an open discussion around how the building is being used and what aspects of the building could be improved from a functionality perspective. Refer to the appended Improvements Plan which visually captures all the items discussed at the workshop.

Within Option A, the structural concept necessitates removing all internal walls and fitout elements for a new slab to be installed, allowing scope for spatial arrangement changes within the current floor plate. However, the

inclusion of the new concrete slab, steel columns and cross braces have both a functional and visual impact. The added concrete slab signifcantly reduces the head height clearances and changes the internal proportions of the space. The added steel columns are significantly larger and intrude on useable space. The additional internal cross braces reduce the flexibility of spaces inside the library. Height constraints mean heating (and ventilation) will likely be mounted below the existing ceiling height rather than under floor. The combined visual effect inside the building will be very different to the current building, with a much more enclosed feel, considerably lower ceilings and thick columns and wall structure.

In Option B, the structural grid system can be simplified to allow for greater flexibility through open plan areas. The roof form can be simplified to reduce moisture ingress risks generated by the length of internal gutters and enable opportunities like solar panels and warm roof design, which cannot be entertained in Option A due to the weight limitation of the retained roof purlins/structure.

With wholesale changes to interior fabric required for both options, it is strongly advised that additional briefing is completed to understand and optimise building function and efficiency, providing best value for future library and community use.

### 3. Implications of Insurance

The solution for the South Christchurch Library needs to enable the best possible insurance position for the Christchurch City Council going forward. Whether considering the repair strategy of Option A or a new build of Option B, all existing earthquake damage will need to be rectified, and the building consented under the Building Act.

The South Christchurch Library is adjacent to the Heathcote River, and is directly affected by the Flood Management Zone within Christchurch. This Flood Management Zone dictates the required finished floor level (FFL) of the building to be 15.890m RL for code compliance. As per Lewis Bradford's floor level assessment, the current building is sitting between 245-335mm



Figure 2. Library main entrance external access

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Figure 4. Internal view through central section of the library

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Figure 3. Internal view through northern section of the library with existig structural columns

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below the original designed FFL of 16.350m RL. The analysis indicates an existing variation of 16.015 – 16.105m RL across the floor plate which, is above the required code compliance minimum - hence both options will comply.

For Option A, the structural design proposes a 300mm reinforced concrete slab over the existing slab FFL. This structural slab needs to be finished level and insulated for compliance. This can be achieved by installing insulation underneath, or by adding a separate insulated floating slab. A minimum total additional thickness of 400mm above existing FFL has been estimated. The lower side of the steel portals (along grids D, F and H) will determine the final slab design and thickness/type of insulation to ensure compliant head heights are retained in these areas. For Option B, a similar slab design is proposed, however underfloor heating can be utilised as the design will not have areas of restricted head height due to a new superstructure design. The reduced head height in Option A creates a design risk for any overhead heating and ventilation ductwork/services design.

It is also noted that climate change will continue to have a greater impact on finance and insurance through legislation (eg. climate related disclosures) introduced under the Zero Carbon Act to support New Zealand's committments under the Paris Agreement.

### 4. Compliance and Building Code Upgrades

The current building has been reviewed at a high level in relation to code compliance. For Option A, the proposed structural repair is significant and will trigger several additional building upgrades to ensure the proposed construction is code compliant. Key considerations are noted below. Option B does not have any significant building compliance risks to note, however for both options, access to the higher internal floor level will need to be managed by introducing new ramps and gradients external to the building. This is likely to affect/require changes to the existing carparking area and entry verandah.

#### B1 – Structure

This building code section sets out the requirements for the combination of loads that buildings and building elements are likely to experience. The performance requirements outline how buildings should be stable and withstand physical conditions to protect lives and other neighbouring properties. It makes specific allowance for the intended use of the building and consequence of failure.

The structural concept provided by Lewis Bradford will bring the current building structure up to code compliance, changing it from the current 34%NBS (IL3) to 100%NBS (IL3). The design solution will add a new 300mm reinforced concrete slab over the existing slab, with isolated areas of slab potentially needing to be removed to ensure a consistent thickness and allow for thickening under the new columns. All internal walls (both timber frame and concrete pre-cast) are to be removed, and additional steel columns, cross braces, and struts are added. Refer to the Lewis Bradford report for further information.

There is still a level of risk and assumption within the current repair design

due to the early design stage and lack of as-built information. Lewis Bradford have outlined this risk in their report, and it will need to be accounted for within the cost assessment of the repair strategy.

#### B2 – Durability

This section of the building code must always be considered when demonstrating compliance with each of the other clauses of the building code. The consideration of specified building materials, components and construction methods are required to be sufficiently durable to ensure that a building will intend to satisfy the function and performance requirements of the building code throughout its intended life. B2 specifies minimum durability periods building elements must meet, with only normal maintenance, being not less than 50, 15 or 5 years (depending on the element). The building is coming up to a 20-year lifespan, which means some building materials will be at the end of their expected lifespan. We recommenda a full building condition report be provided before assessing which elements of the existing building fabric are suitable for an extended life expectancy.

Since the consenting and construction of the South Christchurch Library, minimum durability requirements of timber-based building products have been updated (2014). The Building Code update outlined the requirement for treated timber within New Zealand construction. The specification of timber used within the current building is unknown, which generates a level of risk to the building envelope (all internal timber walls will be removed under the current structural solution). If there are any areas of the envelope with untreated timber construction (external walls and roof) these will need to be replaced with treated timber (H1.2 - H3.1) to achieve a minimum 50-year durability performance.

A compliance review of the existing external glazing against NZS4223.2:2016 in particular, is recommended to be undertaken by a registered supplier. This standard provides the minimum current requirements for the strength and durability charactaristics of insulated glazing units. These factors impact the deemed suitability of the units for continued use, versus replacement.



Figure 6. NZBC B2 Timber durability requirements

#### C1-C5 – Protection from Fire

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Sections C1-C5 within the building code set out to safeguard people from an unacceptable risk of injury or illness caused by fire, protect other property

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from damage caused by fire, and facilitate firefighting and rescue operations. Enlightened Fire Solutions Ltd. have provided a Means of Escape Preliminary Fire Report, reviewing the existing facility against current Building Code Compliance requirements.

In summary Enlightened Fire Solutions have confirmed the following:

- hardware required and egress signage locations updated.
- lininas

Note, this is for the existing building layout and design only. When considering both Option A and B further fire egress input will be required if the location of the internal partitions and external doors change.

#### **D1 – Access Routes**

This section ensures people can move safely into, within and out of buildings. Access routes include the approach to the main entrance of a building, corridors, doors, stairs, ramps, and lifts.

As noted above, Access routes around and into the building will need to be raised and slopes adjusted to suit the proposed internal floor level. Localised ramps and changes to surfacewater drainage may need to be designed for areas where roads and car parking restrict gradual level changes.

#### E1 – Surface Moisture

This section of the Building Code outlines the requirements for managing the disposal of rainwater from external surfaces and away from the building to eliminate water entering. It sets out the performance requirements to ensure drainage systems are in place and any blockages/leakages are avoided.

Post Christchurch earthquakes, the South Christchurch Library has been left with an uneven floor slab which directly impacts the levels of the steel superstructure, and therefore the roof, gutters, and cladding/glazing. The roof comprises of areas of both profile zincalume and butyl rubber. The butyl rubber roof is a "flat" roof at minimum falls directing the storm water to both internal and external downpipes. With the change in slab levels across the building, there is a risk that the areas of flat roof are no longer at the correct falls and directing the storm water as intended. A condition assessment of these areas of roof and associated storm water connections is required before determining they are to current code requirements.

#### E2 – External Moisture

Section E2 looks at the prevention of external moisture causing any undue dampness or damage within the building. It contains requirements for roofs, wall claddings and external openings to prevent water entry; prevent water absorption and transmission; prevent the accumulation of water; and allow for dissipation.



• Occupancy of 500 maximum people has been confirmed with a single fire cell and inclusion of a maintained building sprinkler system.

Escape paths have been confirmed as acceptable, with additional door

Building material group ratings are outlined for the current fire protection requirements, with specific note of the current timber panel interior wall

A high-level desktop assessment of the original Warren and Mahoney architectural drawings has been undertaken in relation to the current building code requirements and potential re-use of envelope elements. Jasmax has not completed an on-site assessment of what is constructed or reviewed any as-built drawings. A detailed conditions report is advised if Option A is preferred.

Below is a breakdown of the main building envelope elements, highlighting any potential risks when considering alignment with current E2 requirements.

Northern cladding - 18mm Hardies Compressed Sheet on building paper on timber battens on timber framing.

• The building paper under the compressed sheet cladding is fixed over the timber batten and not under. This results in a non-ventilated cavity which restricts the movement of any moisture within the system or ability to drain to the exterior. The battens and timber framing within the façade system are of an unknown treatment level and durability.

Southern cladding - Basalt cladding on building paper on timber battens fixed to 120 Pre-cast concrete wall panel.

• There is a ventilated cavity behind the basalt cladding allowing any moisture within the cavity to drain the exterior. There is thermal insulation between the building paper and concrete panels, locating the insulation on the exterior of the concrete panels assists with the dew point within the wall build up. The timber battens installed to the exterior of concrete panels are of an unknown treatment level and durability.

Curtain wall cladding - Double glazed aluminium frame curtain wall suite.

The condition of the air seals is unknown, if there is deterioration in the air seals this will affect the thermal and weather tightness performance of the envelope. There are currently minimal aluminium flashings documented at the sill, head and jamb, with the weather tightness of the building heavily relying on the large roof overhangs and seals around the window suites. The unevenness of the floor slab may have caused racking in the aluminium suites. These elements should therefore be assessed by a certified supplier of aluminium joinery to determine the current condition and useful life left in the units.

Seismic movement aligned with structural proposal for deflection. A structural engineer will need to review and confirm that the current curtain wall suite will work within the proposed structural design and the SLS movements. This design confirmation is usually undertaken by the window designer/manufacturer and it may be challenging to gain such confirmation for a suite that is no longer in production.

Existing Roof – V-Rib Zincalume long run roofing on building paper on 12mm construction ply sarking.

- There was a condition report completed on the roof of the library in 2016, which states the condition of the V-Rib Zincalume long run is in good condition. However, this report was completed 5 years ago and outlines areas of rust to the exposed structure and decay of roofing screws. If the existing roofing were to be kept, an updated condition report is advised. The timber battens are of an unknown treatment level, so there is a risk that the roof would need to be removed to upgrade the timber underneath and it would be very difficult if not impossible to reinstate the long run with no risk of leaking through existing penetrations.
- The current roof design is a "cold roof", which locates the insulation below the roof and structure which results in several cold bridges being formed at the steel structure. These cold bridges can cause moisture issues as condensation can form. The V-Rib profile is closed off at each end by foam closure strips which lessens drying potential and further increases the risk of concealed decay within the roof cavity.

Existing Roof – Butyl rubber waterproof membrane on 18mm Construction Ply on timber framing.

- The condition of the membrane is noted in the Newfield Roofing which adds to the level of risk.

#### G1 - Personal Hygiene

This clause confirms facilities for personal hygiene are provided to a required standard and ensure there are amenities for people with disabilities to carry out normal activities. It sets the requirements for privacy and the numbers and location of sanitary fixtures within a facility.

The current toilet calculations appear to be adequate for the building size and function. However, with needing to upgrade the toilet facilities and associated services due to replacement of the concrete slab and in slab services, there is an opportunity to assess the current toilet layout within the building and how the facilities service the users. This in turn will address the current ventilation and drainage issues already experienced by the users.

#### H1- Energy Efficiency

This section of the Building Code sets out provisions for the efficient



Figure 7. Double glazed aluminium framed curtain wall system



Figure 8. Compressed sheet and Basalt cladding systems



Figure 9. V-Rib zincalume long run roofing

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When considering the current floor level analysis provided by Lewis Bradford, there is a considerable risk that the associated internal gutters and butyl rubber roofing is no longer to the required falls and diverting the storm water as originally designed. The butyl rubber roof system is considered a "flat roof" set to minimum falls therefore, the movement in the slab has a direct impact on the roof and external moisture.

Condition Report, however this was a non-invasive assessment issued in 2016. Therefore, the existing condition of the envelope is unknown and is now reaching its expected "end of life". The condition of the structural ply and treatment level of the associated timber framing is also unknown

use of energy and sets physical conditions for energy performance. It requires enclosed spaces where temperature or humidity are modified to provide adequate thermal resistance and to limit uncontrollable airflow in certain buildings. It also sets out physical conditions likely to affect energy performance of the building like heating and lighting.

The building was designed with under floor heating as an environment control. We have been advised this system has never worked and is suffering from likely earthquake damage and a lack of maintenance. Therefore, the building has not been performing in the way it was designed, leaving the occupants of the building uncomfortable.

For Option A, it is not possible to reinstating the underfloor heating and return the building to a level of comfort through this heating method. The current requirement for a 300mm concrete slab and additional insulation does not allow for enough head-height to include under floor heating as well. Therefore, a services engineer should be engaged to provide a new heating, cooling and ventilation design for the building as part of the repair strategy.

Restrictions on life cycle carbon use will also be introduced into the Building Code in the coming years so actions to reduce emissions through the proposed LCA will support future consenting requirements.

### 5. Buildability and Construction Sequencing

To ensure a holistic approach is taken when considering Option A, both the constructability and construction sequencing of the Lewis Bradford structural repair design should be reviewed in parallel with the condition / life expectancy of existing building materials and systems. The structural repair design includes a new reinforced concrete slab across the entire floor, requiring the removal of all internal walls, leaving only the external envelope (façade and roof) to be assessed. Below is a breakdown of each main external envelope element and the implications/risks that are associated to it. These notes can be read in conjunction with the following diagrams.

#### 1. Northern cladding and curtain wall system – Replacement is required.

- The installation of a new 300mm reinforced concrete slab over approximately 100mm insulation directly conflicts with the curtain wall system. To install the concrete slab, the bottom section of the curtain wall system would need to be removed.
- With the post-earthquake floor differential settlement of approximately 90mm, the transoms will not sit parallel to the new floor slab. The out of level curtain wall poses significant risks to the condition of the existing seals and flashings within the system.
- The solid infill sections of Hardies cladding adjacent to the curtain wall are constructed without a draining cavity which is non-compliant to current code requirements. The treatment level of the timber within the wall is also unknown, leaving a large level of risk.
- New columns are proposed to be installed in the same location as the existing ones around the northern perimeter of the building. These columns are significantly larger than the existing and required to sit centre on the grids to connect into the roof structure, impacting the curtain wall either side of the new structure and the alignment of the Hardies cladding, requiring these sections to be replaced.
- A patchwork repair to the system may well be unattainable. It would be difficult to find a contractor to complete the job and there would be an

added cost premium for the risk and out of construction sequence of works. The level of risk and unknowns outweigh the benefits of a new system.

Providing a new modern performing façade system to the northern aspects of the building to the outside line of the new steel structure is required. This solution will remove the risk of any residual earthquake damage and any potential weather tightness issues caused by the condition of existing system. A new continuous facade system will also have a positive impact on the thermal performance of the building and internal comfort level.

#### 2. Southern basalt cladding and window system - Keep intact.

- The basalt cladding is fixed with steel brackets to concrete pre-cast walls. The pre-cast walls are insulated on the exterior and lined with building paper, forming a ventilated cavity behind the basalt panels. For the purposes of this report an assumption has been made that the timber within this system is to a suitable treatment level for durability and this façade system has not been negatively impacted by the past earthquakes. A detailed condition report would need to be completed to confirm these assumptions to ensure the façade system is suitable for reuse and has the required life expectancy.
- On this basis from a desk-top assessment there are no evident risks to warrant removal of this system. However, there are several areas of this façade system that will need to be replaced because of the structural repair requiring the demolition of the external concrete pre-cast panels on grids 1, 13 and H.

#### 3. V-Rib Zincalume long run roofing – Two replacement options.

- The design and construction of this roof does not align with current building practice. The roof system is considered a "cold roof" and has several large thermal bridges created by the exposed steel structure at each end. The Newfield Roofing Condition Report outlines the condition of the roof in 2016 from a non-invasive assessment. This information is now 5 years old and only looks at the aspects of the roof that are visible. The report highlights areas of aggravated corrosion with 10% of the Tek screw fixings showing signs of rust. As well as insufficient and noncompliant flashing details, specifically the absence of back flashings to all roof penetrations cause risk to the long-term durability and weather tightness of the roof system.
- The current architectural drawings show a non-ventilated roof system. This poses an additional durability risk due to the potential for condensation on the internal surface of the long run roofing. The recent roof condition report was non-invasive, meaning the condition of the internal purlins, ply sarking and insulation is unknown, posing a significant risk.
- Option 1 Replace the existing v-rib profile with new long-run roofing over additional Cavibats to ventilate the roof space. Install all associated flashings and required roof penetrations to current code requirements. The thermal bridges at the ends of the roof created by the steel structure need to be insulated with either PIR board or spray insulation to control the associated dew point and moisture.
- Option 2 Replace the existing v-rib profile, ply sarking and insulation with a Kingspan trapezoidal roof system. The thermal bridges at the ends of the roof would need the same solution as option 1. This option

improves the thermal performance of the building however, with removing the ply sarking (due to weight limitations of the structure), the acoustic performance from rain/hail noise is compromised.

#### 4 Butyl rubber membrane roof - Replacement is required.

- in the slab has a direct impact on the roof.
- and added overflow preventions.

### 5. Clerestory / High-level façade system - Replacement is required.

Option B enables a simple buildability methodology and traditional construction sequence with demolition of all building elements (other than the current concrete slab). This reduces risks associated with assumptions around the current condition of the building materials and elements and enables a holistic design and construction process.

An additional option for a new build in a different location on the site could also be considered, but this option is not covered off in this report. This option would enable the current library to remain functioning while a new one is constructed allowing for continuous operation and seamless decanting from one facility to another. However, risks arising from the unknown extent of existing site contamination, necessity for resource consent and reduced visibility from Colombo Street deem this option as unfavourable.



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When considering the current floor level analysis provided by Lewis Bradford, there is a large risk that the associated internal gutters and butyl rubber roofing are no longer to the required falls and diverting the storm water as originally designed. The butyl rubber roof system is considered as a "flat roof" set to minimum falls therefore, the movement

The membrane roofing extends across the gutter and up the face of the envelope to below the clerestory glazing units. The condition of this element is noted in the Newfield Roofing Condition Report, but this was a non-invasive assessment and is 5 years old. Therefore, the existing condition of the envelope is unknown and is now reaching its expected "end of life". The condition of the structural ply and treatment level of the associated timber framing is also unknown which adds to the level of risk.

In the absence of an invasive conditions report the recommendation is to replace the butyl rubber roofing and associated storm water system to ensure long term durability and weather tightness is achieved for the future of the South Christchurch Library. With a new structural slab being installed, the associated in ground services will also need to be reinstated, allowing for additional storm water connections if required

Like the curtain wall façade system, the structural repair solution has a significant impact on the clerestory window units, with the new steel columns coinciding with the existing glazing units. The floor level differentiation of approximately 90mm, poses significant risk to the condition of the existing seals and flashings within the system.

With the above, a patch work repair to the system is unattainable with a high level of risk and unknowns outweighed by the benefits of a new system. A new façade system to the outside line of the new steel will provide continuity and simplification of the construction and sequencing with the butyl roof/envelope also requiring replacement. This solution will remove the risk of any residual earthquake damage and any potential weather tightness issues caused by the condition of existing system. A new continuous façade system will also have a positive impact on the thermal performance of the building and internal comfort level.

# **Option A - Plan Analysis**

Each envelope element is highlighted with the corresponding colour to demonstrate visually the extent of what will need to be replaced vs what can potentially stay intact under the current structural repair scheme.





Structural repair - Demolish



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# **Option A - Section Analysis**

Each envelope element is highlighted with the corresponding colour to demonstrate visually the extent of what will need to be replaced vs what can potentially stay intact under the current structural repair scheme.



Structural repair - Demolish



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# Appendix



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# South Library - Improvements Plan

#### Comments:

- 1. Define each entry into the building for easier way finding with the ability to monitor foot count at the entry.
- 2. Clear visibility to council service desk, cafe and into the library.
- 3. Public computers are only used 30% of the time. More locations and technology support for people to bring their own devices.
- 4. Exterior and interior sensor lighting for staff and after hours security.
- 5. Facilities team has a list of suggestions for refurbishment.
- 6. There is huge demand for bookable meeting rooms, additional and of varying sizes, with some smaller spaces free to the public could be considered.
- 7. Upgraded and larger playground area would improve exterior amenity.

#### Additional General Comments:

- More power and data points required.
- Providing flexibility in the building with the way it is can be used and enjoyed by both the staff and public.
- Sensor lighting within the building would provide for a better sustainability and security outcome.
- Moat decommissioned, but could potentially be developed into a new amenity for the building (decking or rain garden).
- Successful open plan library space with associated quiet study/reading areas.
- The original building concept was to create a public "square", which all spaced connected to.



Relocation of doors would enable the meeting rooms to be within the bookable system and public space.

Underutilised back of house space and out of date service desk design.

Spaces used by the Civil Defence teams, could be rationalised and utilities by a wider range of people.

Community boardroom - back-up space for Civic Council Chambers.

- Cold in winter and doors open for cooling in summer
- Kitchen facilities could be rationalised
- Adjacent lobby waiting area would assist
- Services/IT upgrade required

Heating and cooling issues, but space is a good size for current staff requirements.

Prevailing southerly weather enters through current wind lobby. Issue with leaves.



Revision B 29th November 2021

# City Council



Highly utilised bookable exhibition space.

Reconfiguration of public toilets to improve way-finding and upgrade to services

Location of study space in relation to children's area to be considered Bi-folds (or similar) to open up the learning spaces to the library

Under utilised storage space.

Alternative external access for Learning Centre for Covid and after hours access.

Shared Workroom for Library and Learning Centre staff.

 Current issues with temperature control

Consideration required of the returns area and delivery process.

- Storage assessment
- Courier delivery and waste management

# Thank you.

# JASMAX



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# Christchurch South Library

Whole-of-Life Carbon Report

Document Prepared by Jasmax 17 March 2022

# JASMAX

# SUSTAINABILITY REPORT

**Christchurch South Library** 





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Christchurch South Library

Whole-of-Life Carbon Report

# Christchurch South Library Introduction

Jasmax have been engaged by Christchurch City Council (CCC) to analyse and compare the whole-oflife carbon generated by both Option A (Repair) and Option B (Green Rebuild) for the Christchurch South Library repair.

This report provides detailed life cycle carbon assessments and should be read in conjunction with the "EQ Refurbishment Report" (21 January 2022) issued by Jasmax, which gives background to the extent of the repair for Option A. Option A (Repair) offers a greater level of re-lifing to the existing building fabric. Option B (Green Rebuild) offers greater scope to improve the environmental performance of the structure, envelope, servicing strategy, comfort and operational performance of the building.

This report then concludes by assessing each option against the CCC Ōtautahi Climate Resilience Strategy issued in 2021. The Strategy sets four Climate Goals for Christchurch, supported by ten Climate Action Programmes on specific areas, to help achieve the regions climate goals in response to the NZ Climate Change Response (Zero Carbon) Amendment Act 2019. The Climate Resilience Strategy also closely aligns to the United Nations Sustainable Development Goals, which can be used to shape the design of both options.



Figure 1: Site Plan, Warren and Mahoney original plans

Christchurch South Library

Whole-of-Life Carbon Report

### **Project Information**

**Existing Building** 

Building Type	Civic & Community
Analysis Date	March 2022
Building Location	Christchurch
Building Completion / Open	2003
Design Life	50 years
Gross Floor Area	2462 m <sup>2</sup>
Occupancy	Maximum 500 inc. visitors. 25 Fulltime Staff
Storeys	One
Heating System	Heatpump units, supplementary electric heaters
Cooling System	Passive via opening windows
Use of PVs	No
Use of Rainwater Tanks	No
Energy Use Intensity EUI	115 kW.hr/m²/yr (estimated)



Christchurch South Library



### **Carbon Assessment Assumptions**

To enable meaningful analysis without detailed design for Option A (Repair) and Option B (Green Rebuild), the following assumptions have been made:

- 1. Assessment has been carried out under a like-for-like comparison for the primary structure. For example, the original grid setout and spans are used for both Option A and Option B. In reality, if a timber LVL structure were to be selected a bespoke structural grid layout would be designed to maximise timber use efficiency.
- 2. The Energy Use Intensity (EUI) for the proposed repair (Option A) was based on the existing library's annual kWh usage, with efficiency improvements assumed for the new fan coil units.
- 3. An EUI of 80kWh/m2/yr was applied to the Option B Green Repair and this is considered to be a conservative estimate for mixed mode systems. A new design could reasonably achieve lower EUI.
- 4. Demolition of the existing building fabric cannot be included in the life cycle carbon results as it falls outside the scope of the system boundary, as defined in the International Standard (EN15978). However, there are opportunities for both reuse and recycling of building elements in both options to divert waste going to landfill, reducing the environmental impact of demolition. These opportunities are summarised below.

### **Demolition and Salvage Opportunities**

A significant percentage of building fabric is required to be removed for Option A as a result of the complexity of the structural repair; existing condition of building elements; current code requirements; and considerations towards buildability and programme. The repair strategy retains the following building elements:

- Existing concrete slab However, this is primarily to remove risks associated to ground improvement works and a new 300mm reinforced concrete slab is required over the existing one. The same solution is used for Option B.
- Structural steel elements The structural steel purlins, rafters and columns along the south wall and external walkway are retained, with new columns and bracing elements required throughout.
- External south wall The retention of the south wall still requires upgrading to meet more stringent thermal requirement under H1 of the NZ Building Code, which poses potential durability, moisture and thermal risks.

When comparing these building elements directly against Option B, the steel structure can be reused and recycled; there are opportunities to reuse the south wall Basalt cladding tile in a new building design; and a new envelope provides opportunities for enhanced thermal performance and reduction of operational carbon through passive solar design features. For more detail on the demolition requirements of Option A, refer to the Jasmax "EQ Refurbishment Report" (21 January 2021).

For both Option A and B, all efforts are to be made to ensure reuse firstly, and then recycling of the existing building elements within the demolition strategy. Collaboration with a demolition contractor to assist with minimising the building materials ending up in landfill will be crucial to ensure a positive outcome for either option. Local recycling opportunities consist of and are not limited to the following:

- Clean concrete Crushed for re-use.
- Glass separated from window joinery units Window Glass Recovery recycle double glazing.
- Aluminum joinery separated from the glass Recycling.
- Structural and reinforcing steel There are a range of scrap metal sites within and around Christchurch. Structural steel can also be assessed onsite for reuse opportunities for non-structural elements.
- Roofing iron Dependant on condition for reuse.

Further information on these opportunities can be provided.

Christchurch South Library

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### **Project Information**

Option A - Repair

Building Type	Civic & Community
Analysis Date	March 2022
Building Location	Christchurch
Design Life	60 years (10 years beyond 50 year minimum code requirement)
Gross Floor Area	2462 m <sup>2</sup>
Occupancy	Maximum 500 inc. visitors. 25 Fulltime Staff
Storeys	One
Heating System	Fan Coil Units (sealed envelope)
Cooling System	Fan Coil Units (sealed envelope)
Use of PVs	No
Use of Rainwater Tanks	No
Energy Use Intensity EUI	115 kW.hr/m²/yr (estimated)

### Option A - Repair overview

Option A is a repair with partial rebuild.

A new 300mm deep reinforced concrete raft slab will be laid on top of the existing out-of-level slab.

The majority of the steel structure within the building will be retained but new steel columns and beams are required to meet 100% New Building Standard (NBS). New tension-cross-bracing is also required in the roof and walls throughout.

A new 'warm-roof' will be installed above the existing steel rafters and purlins.

The glass canopy is retained along with the basalt-clad walls along the south face of the building.

A new curtain wall system is required for remaining elevations with new clerestory windows at roof level.

Operational data has been based on performance of the existing Library with allowances made due to the faulty in-slab heating system and new installed HVAC.

Christchurch South Library



### **Definition of Building Element Categories**

**Option A - Repair** 

The 3d building model images below summarise the proposed construction of Option A, broken down into building element categories.





### **Carbon Distribution Across Building Element Categories**

### **Option A - Repair**

The pie charts to follow illustrate the breakdown of life cycle carbon use when considered across building element categories, life cycle modules and building materials. They all show the same total life cycle carbon but each allows the carbon components to be interrogated differently in order to identify carbon hot-spots, where improvements can then be optioneered against project criteria.



Building Category								
Substructure	Superstructure	Enclosure	Interior Fitout/ Finishes	Services/ MEP	Operational Energy & Water Use	kgCO₂e/m²		
323.84	66.79	67.39	196.18	27.76	670.91	1,352.87		

Option A - Repair



Embodied Carbon (Global Warming potential [kgCO <sub>2</sub> eq.]) per sq. metre (kgCO <sub>2</sub> e/m²)									Оре	erationa (kgCO <sub>2</sub>	al Carbon e/m²)			
Mat Cor	Materials and Construction		Use Stage		End of Life Stage			Benefits beyond L.C	Embodied Carbon Total	Opera Carl	tional con	Operational Carbon Total		
A1-A3	A4	A5	B1	B2	B4	C1	C2	C3	C4	D	A, B1-B4, C, D	B6	B7	B6, B7
Product Stage	Transport	Construction	In Use	Maintenance	Replacement	Deconstruction and Demo	Transport	Waste processing	Disposal	Reuse	kgCO₂e/m²	Operational Energy Use	Operational Water Use	kgCO₂e/m²
427	60			159.32		53.69			-18.60	681.4	670	).9	670.9	

Christchurch South Library

### **Carbon Distribution Across Building Materials**

**Option A - Repair** 



Material							
Timber	er Concrete Steel Floor Glazing Miscellaneous						
-4.69	175.11	227.37	65.83	15.75	155.13	634.51	

Christchurch South Library

Whole-of-Life Carbon Report

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### **Project Information**

**Option B - Green Rebuild** 

Building Type	Civic & Community
Analysis Date	March 2022
Building Location	Christchurch
Estimated Lifespan	60 years (10 years beyond 50 year minimum code requirements)
Gross Floor Area	2462 m <sup>2</sup>
Occupancy	Maximum 500 inc. visitors. 25 Fulltime Staff
Storeys	One
Heating System	Radiant heating
Cooling System	Mixed Mode
Use of PVs	No
Use of Rainwater Tanks	No
Energy Use Intensity EUI	80 kW.hr/m²/yr

### Option B - Green Rebuild overview

Option B requires a full rebuild of the existing structure and envelope.

The new 300mm deep concrete slab and superstructure will retain the same footprint on top of the existing concrete slab and foundations. A 30% fly-ash concrete blend will be used to reduce the 'product' stage carbon. New timber LVL columns, beams and roof structure will also lower the embodied carbon of structure.

A new 'warm roof', glass canopy and enclosure is required but these will be designed to facilitate passive solar design principles and use of natural ventilation for mixed mode operation and low energy use.

A conservative EUI of 80kW.hr/m2/yr is used to represent the new mixed mode HVAC system, which should be bettered in practice.

Low carbon carpet has been modelled to further lower the embodied carbon of the new building.

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### **Definition of Building Element Categories**

**Option B - Green Rebuild** 

The 3d building model images below summarise the proposed construction of Option A, broken down into building element categories.





### **Carbon Distribution Across Building Element Categories**

### Option B - Green Rebuild

The pie charts to follow illustrate the breakdown of life cycle carbon use when considered across building element categories, life cycle modules and building materials. They all show the same total life cycle carbon but each allows the carbon components to be interrogated differently in order to identify carbon hot-spots, where improvements can then be optioneered against project criteria.



Building Category								
Substructure	Superstructure	Enclosure	Interior Fitout/ Finishes	Services/ MEP	Operational Energy & Water Use	kgCO₂e/m²		
286.00	33.68	75.10	157.48	45.82	497.45	1,095.53		

Christchurch South Library

Option B - Green Rebuild



Embodied Carbon (Global Warming potential [kgCO <sub>2</sub> eq.]) per sq. metre (kgCO <sub>2</sub> e/m²)									Operational Carbon (kgCO₂e/m²)					
Materials and Construction Use Stage End of Life Stage		e	Benefits beyond L.C	Embodied Carbon Total	Operational Carbon		Operational Carbon Total							
A1-A3	A4	A5	B1	B2	B4	C1	C2	C3	C4	D	A, B1-B4, C, D	B6	B7	B6, B7
Product Stage	Transport	Construction	In Use	Maintenance	Replacement	Deconstruction and Demo	Transport	Waste processing	Disposal	Reuse	kgCO₂e/m²	Operational Energy Use	Operational Water Use	kgCO₂e/m²
320	58.	30		143.46		94.99		-18.10	598.70	497	.50	497.50		

Christchurch South Library

### **Carbon Distribution Across Building Materials**

Option B - Green Rebuild



Material								
Timber	Concrete	Steel	Floor Finishes	Glazing	Miscellaneous	kgCO₂e/m²		
-19.62	138.60	198.72	38.29	27.90	174.76	558.65		

Christchurch South Library

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### **Embodied Carbon Reduction Strategies Summary**

**Option B - Green Rebuild** 

The following charts depict how the 'Green Rebuild' design strategy was formulated with carbon reductions accrued. A standard concrete and steel structure rebuild, built to current New Zealand Building Code, is shown on the left. The use of a full timber superstructure including timber LVL frames resulted in a significant carbon reduction of 172.3kgCO2e/m2 during A1-A3 product stage and then sequestered carbon throughout the product's lifespan.

Substituting a 30% fly-ash blend in the 300mm deep concrete raft slab lowered embodied carbon by a further 28.6kgCO2e/m2. Finally, by using recycled nylon carpet in the building's finishes, an additional carbon reduction of 35.1kgCO2e/m2 can be realised.

These measures result in an overall carbon reduction of 238.1kgCO2e/m2 for the final Option B Green Rebuild.



Attachment E





Whole-of-Life Carbon Report

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Christchurch South Library







### Total Life Cycle Carbon Comparison

The table below shows Jasmax 'Net Zero Carbon' targets for the years 2020, 2025, and 2030. Option A – Repair exceeds the 2020 benchmarks for embodied and operational targets however falls short of 2025 and 2030. Option B - Green Rebuild exceeds the 2025 target for embodied carbon and the 2030 target for operational carbon.

### Option A - Repair

Metric	Current Benchmark	2020	2025	2030
<b>Embodied Carbon</b> kgCO <sub>2</sub> e/m <sup>2</sup> (60yr, LCA: A, B1-4, C,D)	1000	68 750	600	500
<b>Operational Carbon</b> kgCO <sub>2</sub> e/m <sup>2</sup> (60yr, LCA: A, B1-4, C,D)	2310	67 900	1 600	500

### **Option B - Green Rebuild**

Metric	Current Ben	chmark	2020	2025	2030
<b>Embodied Carbon</b> kgCO <sub>2</sub> e/m <sup>2</sup> (60yr, LCA: A, B1-4, C,D)	1000		750	60059	98500
<b>Operational Carbon</b> kgCO <sub>2</sub> e/m <sup>2</sup> (60yr, LCA: A, B1-4, C,D)	2310		900	600	500 <sup>497</sup>
<ol> <li>Structure</li> <li>Laminated Lumber ( and Beams</li> <li>Timber Purlins</li> <li>Timber Rafters</li> </ol>	<ul> <li>2. Product Substitution</li> <li>30% Fly-Ash Concrete</li> </ul>		<ul> <li>3. Product Substitution</li> <li>Low Carbon CushionBacRE Nylon Modular Carpet</li> </ul>		
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### Carbon Comparison - Option A Repair vs Option B Green Rebuild

The bar chart below compares the total expected life cycle carbon for each option as well as breakdown by life cycle module. Option B Green Rebuild performs better across all categories except C1-C4 End of Life as the assessment assumes the worse case scenario of all sequestered carbon in the timber being released at this stage.




# Whole-of-life Carbon Across Building Life Cycle

**Option A - Repair** 

The following charts show the amount of carbon released at each building life cycle stage. Climate change occurs as a result of accumulated greenhouse gases in the atmosphere so limiting upfront carbon is an important strategy to delaying emissions and resulting climate impacts.





# Whole-of-life Carbon Across Building Life Cycle

Option B - Green Rebuild

While Option B Green Rebuild has greater emissions at end of life stage it most importantly has the lowest upfront emissions and total life cycle emissions, thus having lower climate impact than Option A Repair.



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# **Christchurch South Library** LCA Carbon Results

Jasmax has completed a whole-of-life carbon analysis for the repair of Christchurch South Library. Two options were analysed.

Option A Repair proposes a typical steel and concrete repair resulting in large emissions during the A1-A3 Product Stage 427kgCO2e/m2. The "make good" repair approach also results in relatively high operational carbon 670.9kgCO2e/m2 as a result of still having to air-condition the library, albeit with a better performing fan coil unit system. Total life cycle carbon is approx. 1352.3kgCO2e/m2

The Option B Green Rebuild utilises a LVL timber superstructure, greatly reducing embodied carbon emissions through reduced production impacts and sequestered carbon. Embodied carbon is lowered further by 28.6kgCO2e/m2 and 37.2kgCO2e/m2 respectively via lower carbon concrete and carpet products. Total embodied carbon is lowered by (681.4kgCO2e/m2) to (598.1kgCO2e/m2). There is also a significant reduction in operational carbon from (670.9kgCO2e/m2) to (497.5kgCO2e/m2) as the redesign provides an opportunity to incorporate passive solar design principles and a mixed mode ventilation strategy with perimeter radiant heating. Total life cycle carbon emissions are around (1,095.6kgCO2e/m2), approximately 257.3kgCO2e/m2 less than Option A, resulting in lower impacts on climate.

This study has focused primarily on life cycle carbon emissions, and it shows how a green rebuild can result in lower life cycle emissions than a conventional repair. Other factors such as capex, opex, time to build etc must also be considered. From a sustainability perspective, both options have also been assessed against the Ōtautahi Climate Resilience Strategy (pages to follow). The Option A repair "business as usual" approach tends to also perform poorly against this framework.

# **Christchurch City Council** Climate Resilience Strategy

Christchurch City Council (CCC) recognises climate change as the biggest challenge of our time. In 2019, it declared a Climate and Ecological Emergency and adopted ambitious greenhouse gas emissions (GHG) targets to achieve net zero greenhouse emissions by 2045, and to halve emissions by 2030, from 2016-17 levels.

The resulting Ōtautahi Climate Resilience Strategy provides a framework for addressing climate change challenges and opportunities. The strategy aligns to the United Nations Sustainable Development Goals (UN SDGs), which can also improve the wider wellbeing of our communities. Building rating tools such as Green Star are also now increasingly responding directly to the UN SDGs so they provide a useful frame of reference.

The Climate Resilience Strategy set's four Climate Goals for Christchurch, supported by ten Climate Action Programmes on specific areas, to help achieve the climate goals. The primary opportunities for both library options are summarised below.

Goals	Background	Option A - Repair	Option B – Green Rebuild
1. Net zero emissions Christchurch	Target net zero GHG emissions by 2045, and a 50% reduction from the baseline financial year 2016/2017 levels, by 2030. Target net carbon neutral for Council's operations by 2030. This will require Council to track and monitor progress, and demonstrate leadership and commitment as an organisation towards climate action.	The repair option largely replicates the original building construction. Lower carbon options of steel, concrete etc can be substituted but there is little opportunity for substantial improvements to life cycle emissions and few opportunities to illustrate the Strategy "signs of success".	The rebuild can be used as an example of sustainable low carbon design and provide valuable cost, energy, water and carbon benchmarking data for future projects in Ōtautahi and Aotearoa. It responds more directly to the expressed need to address embodied carbon, especially in the production of the materials such as concrete and steel, and transitions towards more sustainable materials and construction techniques. There is also greater opportunity to display the following Strategy "signs of success": Climate Leadership, demonstrating how to build more sustainably with lower emissions in a more climate adaptive way. Action pathways - educating the community (users) about the need to reduce emissions and develop pathways to achieving a net zero Christchurch. Low emission transport can also be supported through better integration of end of trip amenity and support for low carbon modes of transport.

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Attachment E

# Christchurch City Council Climate Change Goals

Goals	Background	Option A - Repair	Option B – Green Rebuild
2. We understand and are preparing for the ongoing impacts of climate change	Climate change will affect everyone and communities need to adapt. Resilient communities need to be aware of how and where they will be impacted by climate change and then to plan infrastructure accordingly.	The repair option represents a business-as-usual approach that is limited by the existing structural setout. For example, there are risks to comfort and sustainability as building services solutions are impacted by height and weight limitations and there is no opportunity for underfloor heating.	The rebuild illustrates Strategy "signs of success" including Resilient Communities, where the project demonstrates understanding of, and preparation for, current and future impacts of climate change. For example, higher floor to ceiling, passive solar design features and mixed mode ventilation can be used to mitigate higher ambient temperatures in future.
3. We have a just transition to an innovative low-emission economy	The move to a low- emission and more environmentally sustainable economy creates new opportunities, businesses, and jobs. Innovative solutions to climate change contribute to workforce transition away from resource intensive industries. Education, training and an openness towards innovation will be vital to ensure all of the community benefits and Christchurch continues to be a city of opportunity for all.	Strong communities can be supported where the library forms a community hub. The library also has inherent opportunities for signs of success including planning together, lifetime learning and upskilling. However, the repair option represents a business- as-usual approach with little innovation from a climate change perspective.	The rebuild also supports strong communities through its hub function. Other innovative solutions to climate change can be shaped around Strategy signs of success. Lifelong learning and reskilling – for example, the rebuild can be an education tool where occupants experience innovative design both passively and actively (eg. energy use displays, passive solar controls), while enabling potential through equitable access to education, training, and lifelong learning.
4. We are guardians of our natural environment and taonga	By restoring the natural environment, we will reduce the impacts of climate change, as trees, soils, and wetlands absorb large amounts of carbon dioxide that would otherwise further heat the atmosphere.	Both projects offer similar potential to incorporate the Strategy signs of success. In particular, site design can enhance valuing nature, restoring ecosystems, contributing to the garden city and natural carbon absorption.	The rebuild also offers opportunities, and tells a story of, natural carbon absorption through its timber structure and material selection.

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# **Christchurch City Council Climate Action Programmes**

Programmes	Background	Option A - Repair	Option B – Green Rebuild
3: Proactive climate planning with communities	Supporting communities to plan for and adapt to future climate change challenges empowers them to use their own knowledge and social networks to take action. Change is an opportunity for innovation, and for our communities to have a say in shaping their future. Council will help communities thrive by identifying shared values, and the local changes we need to make together. Key focus areas include: Provide climate education in schools and promote youth voices and leadership. Develop holistic, long-term responses to natural hazards and climate change with community and all Council activity areas.	The repair will provide an opportunity for the community to incorporate innovative learning spaces. The repair option is an example of how a building needs to be adapted for natural hazards. There will be very little existing building fabric remaining and therefore it will not exemplify adaptive reuse of building stock as a means of reducing carbon emissions.	The green rebuild will provide an opportunity for the community to incorporate innovative learning spaces. The rebuild can be used as an education tool to illustrate broader climate change issues and how we can respond through built form. The project is in itself a holistic, long term response to natural hazards and climate change with community.
4: Adapting and greening infrastructure	Buildings and infrastructure are increasingly under threat to the impacts of climate change, impacting quality of life and risking one of the biggest investments for Christchurch. Any new infrastructure will utilise low- energy solutions, and be designed to minimise the amount of embodied carbon in the materials used so it is as efficient and sustainable as possible. Green infrastructure (such as swales, rain gardens, sand dunes, street trees, natural waterways, plants, stormwater retention basins, and permeable paved paths) helps manage flooding, storm surges, and erosion along our coasts and hillsides, and cleans rivers and air. Council will continue to incorporate greener infrastructure to respond to our changing climate, lower our infrastructure's carbon footprint, and allow nature to thrive while supporting our wellbeing.	The repair option represents a business-as-usual approach that is limited by the existing structural setout. For example, there are risks to comfort and sustainability as building services solutions are impacted by height and weight limitations.	The rebuild illustrates Strategy "signs of success" including Resilient Communities, where the project demonstrates understanding of, and preparation for, current and future impacts of climate change. For example, higher floor to ceiling, passive solar design features and mixed mode ventilation can be used to mitigate higher ambient temperatures in future.

Christchurch South Library

# **Christchurch City Council Climate Action Programmes**

Programmes	Background	Option A - Repair	Option B – Green Rebuild
5: Carbon removal and natural restoration	Our biodiversity and ecosystems will be increasingly threatened by climate change. By protecting and expanding natural areas in our district, we will help capture carbon dioxide, while benefiting natural ecosystems and biodiversity. While native forests provide many biodiversity benefits, some exotic plantations will still be required to help quickly capture carbon and provide timber for low carbon building materials.	The repair option represents a business-as-usual approach that relies on carbon offsetting.	The rebuild uses sustainably harvested timber that directly contributes economically to this action programme, while also promoting use of timber in buildings over more carbon intensive materials.
6: Economic transformation and innovation	To reach our goal of zero net greenhouse gas emissions, we need innovative climate solutions and an economic transformation to move away from resource intensive, high emission industries. A move towards low- emission, high value local businesses will create significant new opportunities for entrepreneurs, social enterprises and agile businesses.	The repair option represents a business-as-usual approach.	The rebuild is based around low carbon materials (eg. mass timber, recycled steel, low carbon concrete), technologies and construction techniques, directly supporting development of these industries.
7: Low-emission transport system	Road transport is the biggest single contributor to Christchurch's emission footprint. The transport sector contributes 54% of Christchurch GHG emissions with 36% coming from road transport. Reducing transport emissions is essential to achieve emissions targets. Christchurch has high levels of private car use and low levels of public transport use compared to Auckland or Wellington.	Both library options have opportunities to promote lower carbon, alternative modes of active and public transport. The site can encourage more walkable neighbourhoods, where short trips to services can be taken on foot or by bike/e-scooter to further reduce transport-related emissions. EV infrastructure and electric car sharing could also be considered.	The rebuild has greater design scope so can more effectively incorporate a wider range of solutions such as end of trip facilities.

Christchurch South Library

# **Christchurch City Council Climate Action Programmes**

Programmes	Background	Option A - Repair	Option B – Green Rebuild
8: Energy efficient homes and buildings.	Homes, buildings, businesses and infrastructure consume large amounts of resources such as energy, water and materials to build, operate, maintain, repair and replace. We will design our homes, businesses, buildings, and infrastructure to be more energy and resource efficient, and powered by affordable, renewable energy. This will lower emissions, reduce costs, deliver healthier buildings, create businesses that are more efficient and conserve our precious resources.	The repair option represents a business-as-usual approach.	The rebuild directly responds to this action programme, including the following Strategy focus areas. Increase business resource efficiency (low energy and water usage) and reduce greenhouse gas emissions. Maximise resource efficiency in our existing infrastructure and facilities, and minimise embodied carbon when designing and building new facilities and infrastructure. Investigate the use of wind and solar energy for individual houses, small communities, kāinga nohoanga, marae and businesses.
9: Towards zero waste	About 9% of Christchurch's greenhouse gas emissions come from our waste. However, approximately 40% of waste currently going to landfill in Christchurch has the potential to be recycled or composted, using the services currently available. We will move towards a zero waste, circular economy, enabling resources to be reused or recycled, supporting new jobs and innovation, and creating a low- emission, resilient and more sustainable economy.	Libraries inherently promote a "sharing economy" and both library options will be designed to minimise waste where possible, moving towards a zero waste, circular economy.	The rebuild has greater design scope to include additional waste minimisation strategies (eg. modularity) and circular economy principles including design for disassembly and reuse.
10: Sustainable food system	The changing climate will threaten the resilience of our food supply. In addition, the production, distribution, consumption and disposal of food generates significant greenhouse gas emissions. Changing the way we grow and consume food can create a more resource efficient, low-emission and resilient local food economy.	Both library options h encourage urban farm gardening through ind	ave opportunity to ning and community clusion on site.

References: Christchurch City Council (2021), Kia tūroa te Ao - Ōtautahi Christchurch Climate Resilience Strategy. Pp1-2

Christchurch South Library

Whole-of-Life Carbon Report





Thank you.



# JASMAX

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ΑΞϹΟΜ

Prepared for Christchurch City Council Co No.: N/A

# South Christchurch Library Repair and Rescoping

**Cost Report** 

27-Apr-2022



AECOM

South Christchurch Library Repair and Rescoping

## South Christchurch Library Repair and Rescoping

Cost Report

#### Client: Christchurch City Council

Co No.: N/A

#### Prepared by

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#### 27-Apr-2022

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South Christchurch Library Repair and Rescoping

## **Quality Information**

Document South Christchurch Library Repair and Rescoping

Ref 60672875

Date 27-Apr-2022

Prepared by Ross Davidson

#### **Revision History**

Rev	Revision Date Details	Details	Authorised	
			Name/Position	Signature
2	27-Apr-2022	Final Cost Report	Ross Davidson Technical Director	N

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South Christchurch Library Repair and Rescoping

## 1.0 Basis of Cost Report

This Cost Report has been derived from:

- Jasmax Architects EQ Refurbishment Report dated 21 January 2022
- Lewis Bradford Consulting Engineers Concept Design Report Seismic Strengthening dated December 2021
- Enlightened Fire Solutions Means of Escape Preliminary Fire Report dated 20 January 2022
- Mainzeal Construction Tender Trade Summary for original South Christchurch Library project dated August 2002
- AECOM benchmarking data analysed from current and recently completed Library projects including original South Christchurch Library

### 2.0 Benchmarking

AECOM (including its legacy companies Davis Langdon and Shipston Davies) has cost managed numerous Library facilities over the past 20 years including the original South Christchurch Library project.

Specifically, we have analysed the cost data from the following list of Library projects to derive a likely construction cost and overall project cost for the replacement or repair of the South Christchurch Library:

- Ashburton Community Library and Civic Offices (current)
- Te Ara Atea Rolleston Library (completed 2021)
- Sumner Library and Community Centre
- Kaiapoi Library
- Halswell Library
- Lincoln Library
- Upper Riccarton Library
- South Christchurch Library

Our benchmarked data from these projects shows that it would likely cost <u>circa \$6,000 - \$6,500</u> <u>per square metre of gross floor area</u> to construct the Building Works component of a new single storey suburban Library building of same size and quality today.

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South Christchurch Library Repair and Rescoping

**Attachment F** 

## Existing Building (minimal retention of existing) AECOM's preliminary assessment of likely cost for Option A, given very little of the existing building can be retained, is **\$26,634,000** calculated as follows:

3.0 Option A – Comprehensive Repair and Refurbishment of the

Trade / Cost Centre	Option A Cost	%	\$/m <sup>2</sup> rate
Preliminary & General	1,980,000	13.0%	804
Excavation	0	0.0%	0
Concrete Work	1,165,000	7.7%	473
Precast Concrete Work	21,000	0.1%	8
Reinforcing Steel	186,000	1.2%	76
Structural Steelwork	2,216,000	14.6%	900
Stone Masonry	33,000	0.2%	14
Metalwork	54,000	0.4%	22
Windows & Exterior Doors	1,986,000	13.1%	807
Carpentry	1,212,000	8.0%	492
Joinery Doors & Fittings	358,000	2.4%	145
Roof Coverings	259,000	1.7%	105
Plumbing	222,000	1.5%	90
Drainage	93,000	0.6%	38
Mechanical Services	1,857,000	12.2%	754
Fire Protection Services	246,000	1.6%	100
Electrical Services	1,309,000	8.6%	532
Plasterboard Linings	699,000	4.6%	284
Grid Suspended Ceilings	360,000	2.4%	146
Tiling	395,000	2.6%	161
Floor Coverings	308,000	2.0%	125
Painting	235,000	1.5%	95
Glazing	<u>7,000</u>	0.0%	<u>3</u>
Total Building Works Cost:	15,201,000	100.0%	6,174
Demolish Existing Building	440,000		
External Works	<u>300,000</u>		_
	15,941,000		
Construction Contingency (10%)	<u>1,594,000</u>		_
Total Construction Cost:	17,535,000		
Professional Fees, Internal Costs & Consents	3,750,000		
Library Fitout	1,000,000		
Service Centre Fitout	250,000		
Miscellaneous Expenses	125,000		
Relocation & Temporary Accommodation Costs	<u>500,000</u>		
	23,160,000		
Escalation (based on Early 2024 Construction Start & Late 2025 Completion) (15%)	<u>3,474,000</u>		
Total Project Cost:	<u>\$26,634,000</u>		
Gross Floor Area (GFA):	2462		

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# 4.0 Option B – A New Building Slab and Superstructure of the Same Footprint on Top of the Existing Concrete Slab and Foundations (completely rebuilt)

AECOM's preliminary assessment of likely cost for Option B is **\$24,861,000** calculated as follows:

Preliminary & General     1,800,000     12.0%     731       Excavation     0     0.0%     0       Concrete Work     971,000     6.5%     394       Precast Concrete Work     209,000     1.4%     85       Reinforcing Steel     186,000     1.2%     750       Structural Steelwork     1,847,000     12.4%     750       Structural Steelwork     1,847,000     12.4%     750       Stone Masonry     333,000     2.2%     135       Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     1,309,000     8.8% <td< th=""><th>Trade / Cost Centre</th><th>Option B Cost</th><th>%</th><th>\$/m<sup>2</sup> rate</th></td<>	Trade / Cost Centre	Option B Cost	%	\$/m <sup>2</sup> rate
Excavation     0     0.0%     0       Concrete Work     971,000     6.5%     394       Precast Concrete Work     209,000     1.4%     85       Reinforcing Steel     186,000     1.2%     750       Structural Steelwork     1,847,000     12.4%     750       Structural Steelwork     1,847,000     12.4%     750       Stone Masonry     333,000     2.2%     135       Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     2.4%     146<	Preliminary & General	1,800,000	12.0%	731
Concrete Work     971,000     6.5%     394       Precast Concrete Work     209,000     1.4%     85       Reinforcing Steel     186,000     1.2%     76       Structural Steelwork     1,847,000     12.4%     750       Stone Masonry     333,000     2.2%     135       Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Rod Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.4%     1	Excavation	0	0.0%	0
Precast Concrete Work     209,000     1.4%     85       Reinforcing Steel     186,000     1.2%     76       Structural Steelwork     1,847,000     12.4%     750       Stone Masonry     333,000     2.2%     135       Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     308,000     2.4%     146       Tiling     308,000     2.4%     145       Painting     308,000     2.4%     145 </td <td>Concrete Work</td> <td>971,000</td> <td>6.5%</td> <td>394</td>	Concrete Work	971,000	6.5%	394
Reinforcing Steel     186,000     1.2%     76       Structural Steelwork     1,847,000     12.4%     750       Stone Masonry     333,000     2.2%     135       Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,21,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     1,857,000     18.8%     532       Plasterboard Linings     699,000     4.7%     284       Tiling     395,000     2.4%     146       Tiling     395,000     2.4%     146       Tiling     395,000     2.4%     145       Painting     308,000     2.1%     125	Precast Concrete Work	209,000	1.4%	85
Structural Steelwork     1,847,000     12.4%     750       Stone Masonry     333,000     2.2%     135       Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     336,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     306,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     2305,000     1.6%     95 <td>Reinforcing Steel</td> <td>186,000</td> <td>1.2%</td> <td>76</td>	Reinforcing Steel	186,000	1.2%	76
Stone Masonry     333,000     2.2%     135       Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7.000     0.0%     3	Structural Steelwork	1,847,000	12.4%	750
Metalwork     54,000     0.4%     22       Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7,000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070	Stone Masonry	333,000	2.2%	135
Windows & Exterior Doors     1,986,000     13.3%     807       Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7_000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Metalwork	54,000	0.4%	22
Carpentry     1,212,000     8.1%     492       Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7.000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Windows & Exterior Doors	1,986,000	13.3%	807
Joinery Doors & Fittings     358,000     2.4%     145       Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7,000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Carpentry	1,212,000	8.1%	492
Roof Coverings     259,000     1.7%     105       Plumbing     222,000     1.5%     90       Drainage     93,000     0.6%     38       Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7_000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Joinery Doors & Fittings	358,000	2.4%	145
Plumbing   222,000   1.5%   90     Drainage   93,000   0.6%   38     Mechanical Services   1,857,000   12.4%   754     Fire Protection Services   246,000   1.6%   100     Electrical Services   1,309,000   8.8%   532     Plasterboard Linings   699,000   4.7%   284     Grid Suspended Ceilings   360,000   2.4%   146     Tiling   395,000   2.6%   161     Floor Coverings   308,000   2.1%   125     Painting   235,000   1.6%   95     Glazing   7,000   0.0%   3     Total Building Works Cost:   14,946,000   100.0%   6,070     Demolish Existing Building   400,000	Roof Coverings	259,000	1.7%	105
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Mechanical Services     1,857,000     12.4%     754       Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7_000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Drainage	93,000	0.6%	38
Fire Protection Services     246,000     1.6%     100       Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7_000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Mechanical Services	1,857,000	12.4%	754
Electrical Services     1,309,000     8.8%     532       Plasterboard Linings     699,000     4.7%     284       Grid Suspended Ceilings     360,000     2.4%     146       Tiling     395,000     2.6%     161       Floor Coverings     308,000     2.1%     125       Painting     235,000     1.6%     95       Glazing     7,000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Fire Protection Services	246,000	1.6%	100
Plasterboard Linings   699,000   4.7%   284     Grid Suspended Ceilings   360,000   2.4%   146     Tiling   395,000   2.6%   161     Floor Coverings   308,000   2.1%   125     Painting   235,000   1.6%   95     Glazing   7,000   0.0%   3     Total Building Works Cost:   14,946,000   100.0%   6,070     Demolish Existing Building   400,000	Electrical Services	1,309,000	8.8%	532
Grid Suspended Ceilings   360,000   2.4%   146     Tiling   395,000   2.6%   161     Floor Coverings   308,000   2.1%   125     Painting   235,000   1.6%   95     Glazing   7,000   0.0%   3     Total Building Works Cost:   14,946,000   100.0%   6,070     Demolish Existing Building   400,000	Plasterboard Linings	699,000	4.7%	284
Tiling   395,000   2.6%   161     Floor Coverings   308,000   2.1%   125     Painting   235,000   1.6%   95     Glazing   7,000   0.0%   3     Total Building Works Cost:   14,946,000   100.0%   6,070     Demolish Existing Building   400,000	Grid Suspended Ceilings	360,000	2.4%	146
Floor Coverings   308,000   2.1%   125     Painting   235,000   1.6%   95     Glazing   7,000   0.0%   3     Total Building Works Cost:   14,946,000   100.0%   6,070     Demolish Existing Building   400,000	Tiling	395,000	2.6%	161
Painting     235,000     1.6%     95       Glazing     7,000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000     -     -       External Works     600,000     _     _       Construction Contingency (5%)     797,000     _     _       Total Construction Cost:     16,743,000     _     _       Professional Fees, Internal Costs & Consents     3,000,000     _     _	Floor Coverings	308,000	2.1%	125
Glazing     7,000     0.0%     3       Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000     -     -     -       External Works     600,000     _     _     -     -       Construction Contingency (5%)     797,000     _     _     -<	Painting	235,000	1.6%	95
Total Building Works Cost:     14,946,000     100.0%     6,070       Demolish Existing Building     400,000	Glazing	<u>7,000</u>	0.0%	<u>3</u>
Demolish Existing Building     400,000       External Works     600,000	Total Building Works Cost:	14,946,000	100.0%	6,070
External Works     600,000	Demolish Existing Building	400,000		
15,946,000       Construction Contingency (5%)       797,000       Total Construction Cost:       16,743,000       Professional Fees, Internal Costs & Consents       3,000,000	External Works	<u>600,000</u>		_
Construction Contingency (5%) 797,000   Total Construction Cost: 16,743,000   Professional Fees, Internal Costs & Consents 3,000,000   Liber Filter 1,000,000		15,946,000		
Total Construction Cost: 16,743,000   Professional Fees, Internal Costs & Consents 3,000,000   Liller Film 1,000,000	Construction Contingency (5%)	<u>797,000</u>		_
Professional Fees, Internal Costs & Consents 3,000,000   Litture Filture 1,000,000	Total Construction Cost:	16,743,000		
Professional Fees, Internal Costs & Consents 3,000,000				
	Professional Fees, Internal Costs & Consents	3,000,000		
Library Fitout 1,000,000	Library Fitout	1,000,000		
Service Centre Fitout 250,000	Service Centre Fitout	250,000		
Miscellaneous Expenses 125,000	Miscellaneous Expenses	125,000		
Relocation & Temporary Accommodation Costs 500,000	Relocation & Temporary Accommodation Costs	<u>500,000</u>		
21,618,000		21,618,000		
Escalation (based on Early 2024 Construction Start & Late	Escalation (based on Early 2024 Construction Start & Late	2 2 4 2 0 0 0		
Z025 Completion (15 /o)     S.243,000       Total Project Cost:     \$24,964,000	Total Project Cost:	<u>3,243,000</u>		
Gross Eloor Area (GEA): 2.462	Gross Floor Area (GFA)	9.4001.000		



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AECOM

South Christchurch Library Repair and Rescoping

## 5.0 Commentary

- 1. Cost estimates have been developed for both a repair and new build on the same footprint
- 2. These costs are similar because the extent of fabric replacement required in the repair is like a full replacement
- 3. The cost of repair exceeds the cost of a new build because of the complexity and inefficiency of construction within an existing building
- 4. The new build cost estimate has utilised the original South Christchurch Library tendered trade breakdown, escalated to today's dollars
- 5. The repair cost estimate has been calculated by adjusting specific new build line items for likely repair differences

### 6.0 Exclusions

- 1. Separate Project Contingency (if desired)
- 2. GST



# 13. Local Government Funding Agency - Quarter 3, 2021/22 Performance Report

<b>Reference / Te Tohutoro:</b>	22/573842
Report of / Te Pou	Linda Gibb, Performance Advisor, Resources Group
Matua:	(linda.gibb@ccc.govt.nz).
General Manager /	Leah Scales, General Manager, Resources Group
Pouwhakarae:	(leah.scales@ccc.govt.nz).

## 1. Brief Summary

- 1.1 The purpose of this report is to present the Local Government Funding Agency's (LGFA's) Quarter 3 2021/22 Performance Report which is at **Attachment A**.
- 1.2 The report has been written as a result of receiving LGFA's performance report on 28 April 2022 in accordance with section 66 of the Local Government Act 2002 (if requested by a local authority, a Council-controlled organisation is to report on its operations to its shareholders within two months after the end of the first and third quarters of each financial year).
- 1.3 The LGFA is owned by the New Zealand Government (11.1%)<sup>1</sup> and 30 councils hold the remainder.

## 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

1. Receives the Local Government Funding Agency's Quarter 3 2021/22 Performance Report.

## Quarter 3 2021/22 outturn

2.1 The LGFA's financial performance targets and year to date outturn to 31 March 2022 is as follows:

Target	Actual \$m	Target \$m	Last year \$m
Total operating income	14.4	14.8	15.9
Issuance, on-lending and operating expenses	(5.0)	(5.3)	(4.8)
Approved Issuer Levy	(0.33)	N/A	(0.59)
Net Profit	9.05	N/A	10.5

- 2.2 The LGFA's performance is largely in line with its SOI targets, with all variances less than 5%.
- 2.3 Its performance against the same period in 2020/21 shows a material negative variance in income a reduction of \$1.5 million (14%). This is due to a sharp increase in interest rates in the quarter coupled with a reduction of 5 basis points on lending to Councils from 1 July 2021 (this reduction was made based on the LGFA's forecast operating costs being lower than previously expected).
- 2.4 The following table shows the change in LGFA lending, and total assets:

<sup>&</sup>lt;sup>1</sup> The Government's shareholding of 11.1% is based on its share of total capital including both paid and uncalled capital. The Government is the only shareholder exposed to calls for capital. Excluding the uncalled capital, the Government's shareholding is 20% and local authorities hold the remainder.



Target	Actual \$m	Target \$m	Last year \$m		
Total lending to participating councils	13,825	13,800	12,350		
Total bonds and bills issued	15,798	N/A	13,910		

- 2.5 Lending of \$13.8 billion is in line with its SOI target and approximately \$1.5 billion (+11.9%) higher than for the same period in 2020/21. This reflects councils' on-going funding requirements for capital investment.
- 2.6 Borrowing of \$15.8 billion is approximately \$1.9 billion (+14%) higher than the same period in 2020/21. Borrowing is incurred to fund LGFA's lending and to maintain a portfolio of investment assets (currently \$2.6 billion) to comply with liquidity and capital adequacy regulations. Interim targets for borrowing are not provided. Borrowing levels broadly match movements in lending.
- 2.7 LGFA advises that there have been no breaches of its Treasury Policy or any regulatory or legislative requirements including health and safety.
- 2.8 As reported previously, the two non-financial targets that LGFA advises it is not on target to meet by year end are "to have an 85% market share of all council borrowing in New Zealand" and "to review each participating local authority's financial position, headroom under LGFA policies and arrange to meet each at least annually". The market share of all council borrowing cannot be met while Auckland Council continues to hold a large amount of private debt. The LGFA has not been able to meet each participating local authority due to COVID-19 travel difficulties.

## Attachments / Ngā Tāpirihanga

No.	Title	Page
A 🕹 🛣	Local Government Funding Agency - Quarter 3 2021/22 Performance Report.	274

In addition to the attached documents, the following background information is available:

Document Name	Location / File Link
Nil	Nil

## Confirmation of Statutory Compliance / Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002). (a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.



# Signatories / Ngā Kaiwaitohu

Author	Linda Gibb - Performance Monitoring Advisor CCO
Approved By	Bruce Moher - Acting Head of Finance
	Leah Scales - General Manager Resources/Chief Financial Officer





New Zealand Local Government Funding Agency Te Pūtea Kāwanatanga ā-rohe

# LGFA Quarterly Report to Shareholders

March Quarter 2022

#### Contents

A. March quarter highlights	02
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C. Summary financial information (provisional and unaudited)	06
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F. Investor relations	

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## A. March Quarter highlights

		Maturity	2022	2023	2024	2025	2026	2027	2028	2029	2031	2033	2035	2037
Bonds issued \$m	400	N/A	-	-	120	-	-	60	60	90	-	30	40	-
Term Loans to councils \$m	675.9	338	-	-	14	26	14	25	39.8	19	155.1	5	40	-
Term Loans to councils #	59	16	-	-	4	5	4	7	9	5	7	1	1	-
Year to date	Total	Bespoke	April	April	April	April	April	April	May	April	May	April	May	April
		Maturity	2022	2023	2024	2025	2026	2027	2028	2029	2031	2033	2035	2037
Bonds issued \$m	2,455	Maturity N/A	2022	<b>2023</b> 90	<b>2024</b> 240	<b>2025</b> 150	<b>2026</b> 150	<b>2027</b> 205	<b>2028</b> 760	<b>2029</b> 190	<b>2031</b> 80	<b>2033</b> 120	<b>2035</b> 440	<b>2037</b> 30
Bonds issued \$m Term Loans to councils \$m	2,455 2318.2	Maturity N/A 1057.65	<b>2022</b> - 10	<b>2023</b> 90 17.7	<b>2024</b> 240 149.1	<b>2025</b> 150 137	<b>2026</b> 150 112.3	2027 205 123	<b>2028</b> 760 82.8	<b>2029</b> 190 254.13	<b>2031</b> 80 321.1	<b>2033</b> 120 5	<b>2035</b> 440 48.4	<b>2037</b> 30 -

Total Bespoke April April April April April April May April May

#### Key points and highlights for the March quarter:

- The LGFA bond yield curve rose and steepened over the quarter as the RBNZ tightened monetary policy through increasing the OCR by 0.25 bps to 1.00% and markets began pricing in more aggressive tightening over the 2022 and 2023 calendar years. LGFA 2024 bond yields rose 111 bps while the 2037 yields rose 80 bps.
- LGFA issued \$400 million of bonds during the quarter through two tenders in what remained a difficult environment for issuance. The average term of issuance during the quarter was a shorter than normal 5.73 years compared to 7.28 years for the financial year to date.
- LGFA borrowing margins widened with spreads to swap wider between 3 bps (2023s) and 15 bps (2027s) as global high grade credit spreads widened on softer equity markets and global central banks adopting quantitative tightening. LGFA spreads to NZGB also widened between 5 bps (2029s) and 16 bps (2024s).
- Long dated lending to councils during the quarter of \$675.9 million was in line with the long run averages. The average term of lending at 8.01 years was longer than the prior quarter and the previous financial year average of 6.65 vears.
- LGFA has an estimated market share of 78.5% of total council borrowing for the rolling twelve-month period to March 2022 compared to a historical average of 75% since 2012.
- Short-term lending to councils has increased by \$5 million to \$389 million of short-term loans outstanding on 31 March 2022 to twenty-eight councils.
- LGFA Net Operating Gain (unaudited management estimate) for the nine-month period to 31 March 2022 was \$9.05 million which was \$184k below budget, comprising total operating income at \$407k below budget and expenses at \$190k below budget.
- · We have achieved or on track to achieve seven out of our ten performance objectives over the financial year with our market share, financial performance and the number of council visits tracking below our target.
- There were no new council members during the quarter. We currently have seventy-four councils and one CCO as members and are expecting another two councils to join in the next six months.

Attachment A

## B. LGFA bond issuance over quarter

We issued \$400 million of bonds via two tenders during the quarter (February and March) as we do not tend to issue during January. Issuance conditions were difficult with rising interest rates, widening credit spreads and subdued investor sentiment.

Tender 87 / 02 February 2022	15 Apr 2024	15 May 2028	15 Apr 2029	15 May 2031
Total Amount Offered (\$million)	60	60	60	40
Total Amount Allocated (\$million)	60	60	60	40
Total Number of Bids Received	11	11	12	15
Total Amount of Bids Received (\$million)	150	138	157	126
Total Number of Successful Bids	3	1	2	8
Highest Yield Accepted (%)	2.470	2.990	3.035	3.125
Lowest Yield Accepted (%)	2.455	2.990	3.030	3.090
Highest Yield Rejected (%)	2.530	3.050	3.140	3.205
Lowest Yield Rejected (%)	2.470	3.000	3.065	3.125
Weighted Average Accepted Yield (%)	2.463	2.990	3.033	3.103
Weighted Average Rejected Yield (%)	2.484	3.026	3.115	3.166
Amount Allotted at Highest Accepted Yield as Percentage of Amount Bid at that Yield*	100	100	100	13.9
Coverage Ratio	2.50	2.30	2.62	3.15
NZGB Spread at Issue (bps)	39.00	51.00	52.00	53.00
Swap Spread at Issue (bps)	1.75	20.50	24.75	30.50
Swap Spread: AA council (bps)	16.75	37.25	39	45.5
Swap Spread: AA- council (bps)	21.75	42.25	44	50.5
Swap Spread: A+ council (bps)	26.75	47.25	49	55.5
Swap Spread: Unrated council (bps)	36.75	57.25	59	65.5

The February tender of \$220 million was a larger amount than the usual \$200 million but reflected our assessment of stronger market conditions as well as a large amount of council borrowing to be financed. We tendered tranches of 2024s, 2028s, 2029s and 2031s to meet demand from the bank credit trading books.

Offshore investor and domestic institutional demand since the previous early December 2021 tender had left the trader market short. Price support was strong for all maturities with yields flat to 2 bps below prevailing market mid rates at the time of the tender. Coverage was good at 2.6x given the larger tender size.

The average maturity of the LGFA bonds issued was 5.97 years but we deliberately kept the tenor short to avoid a failed tender given the larger amount of bonds being auctioned. While we issued \$220 million of LGFA bonds we on-lent \$290 million to fourteen councils with an average term of 8.83 years.

Tender 88 / 09 March 2022	15 Apr 2024	15 Apr 2027	15 Apr 2029	14 Apr 2033
Total Amount Offered (\$million)	60	60	30	30
Total Amount Allocated (\$million)	60	60	30	30
Total Number of Bids Received	12	10	12	13
Total Amount of Bids Received (\$million)	230	110	57	56
Total Number of Successful Bids	4	7	7	9
Highest Yield Accepted (%)	3.055	3.450	3.600	3.745
Lowest Yield Accepted (%)	3.030	3.405	3.535	3.660
Highest Yield Rejected (%)	3.180	3.500	3.660	3.850
Lowest Yield Rejected (%)	3.055	3.450	3.600	3.745
Weighted Average Accepted Yield (%)	3.039	3.434	3.581	3.713
Weighted Average Rejected Yield (%)	3.078	3.465	3.622	3.810
Amount Allotted at Highest Accepted Yield as Percentage of Amount Bid at that Yield*	60	50	90	70
Coverage Ratio	3.83	1.83	1.90	1.87
NZGB Spread at Issue (bps)	48.00	64.00	72.00	76.00
Swap Spread at Issue (bps)	3.50	27.50	41.50	54.50
Swap Spread: AA council (bps)	18	44	54	70.5
Swap Spread: AA- council (bps)	23	49	59	75.5
Swap Spread: A+ council (bps)	28	54	64	80.5
Swap Spread: Unrated council (bps)	38	64	74	90.5

The March tender size of \$180 million was a normal size tender and we tendered four tranches with a high degree of confidence in the front-end maturities but were unsure of the long-dated demand given the lack of secondary market turnover and poor market sentiment.

Price support was strong for the 2024s with yields 2 bps below market but then weakened the further along the curve with 2027s (5 bps above), 2029s (7 bps above) and 2033s (7 bps above) despite the smaller volumes for the 2029s and 2033s. Overall bidding volume was good at 2.5x coverage but much of the demand was for the 2024s with that maturity receiving a greater volume of bids than the other three tranches combined. The tails ranged between 2.5 bps (2024s) out to 8.5 bp (2033s) and the number of successful bids ranged between four (2024s) and nine (2033s).

The average maturity of the LGFA bonds issued was shorter than normal at 5.44 years compared to the average for the financial year to date of 7.28 years.

We on-lent \$275.6 million to fourteen councils. The average term of lending was a lengthy 8.83 years which was the second longest term of lending (after February's tender) for nearly three years and above the long-term average of 7.7 years.





LGFA NZX-listed bonds on issue (NZ\$ million, face value) As at 31 March 2022 NZ\$ 16,335 million

Includes N7\$1 200 million treasury stock

In addition to the retail bonds listed on the NZX, LGFA has NZ\$130 million of wholesale floating rate notes on issue.

Our issuance volume on a rolling 12-month basis of \$3.405 billion is unchanged from the prior quarter and just below the record \$3.84 billion in the year to July 2020.

### Rolling 12 month Issuance (\$ millions)



Quarterly Report to Shareholders // Quarter 3: 2021 – 2022 // Period ended: 31 March 2022

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## C. Summary financial information (provisional and unaudited)

The following results are management estimates only and are unaudited.

Financial Year (\$m)	YTD as at Q1	YTD as at Q2	YTD as at Q3
Comprehensive income	30-Sep-21	31-Dec-21	31-Mar-22
Interest income	88.98	185.89	285.91
Interest expense	83.83	176.71	272.26
Net interest revenue	5.15	9.18	13.65
Other operating Income	0.26	0.53	0.79
Total operating income	5.41	9.70	14.44
Issuance and On-lending costs	0.58	1.31	1.90
Approved issuer levy	Nil	0.33	0.33
Operating expenses	1.05	2.14	3.16
Issuance and operating expenses	1.62	3.77	5.39
Net Profit	3.79	5.94	9.05
Financial position (\$m)	30 Sep 2021	31 Dec 2021	31 Mar 2022
Retained earnings + comprehensive income	72.68	74.82	77.94
Total assets (nominal)	14,635.29	15,854.9	16,441.3
Total LG loans (nominal)	12,960.37	13,496.1	13,825.0
Total LGFA bills (nominal)	600	535.0	533.0
Total LGFA bonds (nominal)	13,465.00	14,865.0	15,265.0
Total borrower notes (nominal)	233.8	250.0	260.6
Total equity	97.68	99.8	102.9



## D. Key performance indicators (Section 5 of SOI)

#### Section 5 of the SOI sets out the ten key performance targets for LGFA.

We are currently meeting or on track to meet seven out of our ten performance targets with our operating income, council visits and market share targets the objectives we are currently tracking behind budget. The COVID related lockdowns has impacted our ability to travel although we did undertake some council meetings by Zoom over the quarter. While we undertook 51 council and CCO visits during the twelve-month period to March 2022, many will roll off by June 2022 if we are unable to travel. A sharp increase in interest rates has had a short-term negative impact on net interest income.

Measure		Q1 Sept 2021	Q2 Dec 2021	Q3 Mar 2022	Q4 June 2022		
LGFA total operating income for the	Target (\$)	\$4.8 m	\$9.4 m	\$14.8 m	\$19.1 m		
period to June 2022 will be greater than \$19.1 million	Actual (\$)	\$5.2 m 🗸	\$9.7 m 🗸	\$14.4 m 🗙			
Annual issuance and operating	Target (\$)	\$1.7 m)	\$3.5 m	\$5.3 m	\$7.2 m		
expenses (excluding AIL) will be less than \$7.2 million	Actual (\$)	\$1.6 m	\$3.4 m	\$5.06 m 🗸			
Total nominal lending (short and long	Target (\$)	\$12.6 b	\$13.2 b	\$13.8 b	\$13.29 b		
term) to participating councils to be at least \$13.294 billion	Actual (\$)	\$12.96 b	\$13.5 b	\$13.8 b			
Conduct an annual survey	Target (\$)	August 2021 sur	vey outcome 99.2	2%			
added by LGFA to council borrowing activities	Actual (%)	4	4	1			
Meet all lending requests from PLAs	Target (%)	100%	100%	100%	100%		
	Actual (%)	100%	100%	100%			
Achieve 80% market share of all council borrowing in New Zealand	Target (%) Rolling annual average	>80%	>80%	>80%	>80%		
	Actual (%)	91%	78.8%	78.5%			
Review each PLA financial position,	Target	Council visits to total 74 over one year					
and arrange to meet each PLA at	(number)	Financial Position + Headroom Review Undertaken in December Quarter					
least annoally	Actual	51 council and 0 due to COVID r	CCO visits over p elated travel disr	ast 12 months an Tuption 🗙	d below target		
No breaches of Treasury Policy, any	Target	nil	nil	nil	nil		
regulatory or legislative requirements including H&S	Actual	Nil	Nil	Nil			
Successfully refinance of existing	Target (%)	100%	100%	100%	100%		
Ioans to councils and LGFA bond maturities as they fall due	Actual (%)	100% 🗸	100% 🗸	100%			
Maintain a credit rating equal to	Target	AAA/AA+					
where both entities are rated by the same credit rating entity	Actual	ААА/АА+ 🗸	AAA/AA+ 🗸	ААА/АА+ 🗸			





## E. Performance against SOI objectives

We have two primary and eight secondary objectives outlined in our Statement of Intent (SOI) Primary objectives (Section 3 of SOI)

#### **Primary Objective:**

LGFA will optimise the debt funding terms and conditions for Participating Borrowers. Among other things, this includes:

- Providing interest cost savings relative to alternative sources of financing;
- Offering flexible short and long-term lending products that meet Participating Borrowers' borrowing requirements;
- Delivering operational best practice and efficiency for its lending services;
- Ensuring certainty of access to debt markets, subject always to operating in accordance with sound business practice.

LGFA reduced the base lending margin by 5 bps from 1 July 2021 to 15 bps for all borrowing terms. The base margin covers our operating costs and provides for capital to grow in line with the growth in our balance sheet. There is an additional credit margin added to the base margin depending upon whether a council has a credit rating or is a guarantor or non-guarantor of LGFA. There is a negative impact on Net Operating Income from a lower base lending margin but we are comfortable with current levels of profitability.

LGFA continues to borrow at very competitive spreads compared to the AAA rated SSA issuers (who borrow in the New Zealand debt capital markets), the domestic banks and our closest peer issuer Kainga Ora.

70 Sop 2021	Comparison to other high-grade issuers – secondary market spread to swap (bps)												
30 Sep 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2033	2035	2037
LGFA (AAA)	2	7	13	25	28	38	41	44	46	54	65	70	47
Kainga Ora (AAA)	12		22	27		41		48			70		
Asian Development													
Bank (AAA)	6	8	15	17	19	27			40				
IADB (AAA)	7	12	16	19	21	38							
International													
Finance Corp (AAA)	11	11	15	16	21								
KBN (AAA)	10	15	18		27			46					
Rentenbank (AAA)	5	10	16		19								
World Bank (AAA)	5	10	11	17	21	27		38					
Nordic Investment													
Bank (AAA)	6		16										
ANZ (AA-)	49	52											
BNZ (AA-)	24		62	74									
Westpac Bank (AA-)	35	58	65	74	88								
SSA Average	7	11	15	17	21	31	31	42	40				
Bank Average	36	55	64	74	88								

#### Comparison to other high-grade issuers - secondary market spread to swap (bps)

During the quarter LGFA issued across seven bond maturities from 2024 to 2035 to capture as much investor demand as possible in the short to mid dated part of the yield curve. There was greater demand for the shorter maturities as investors were defensive and it was difficult to issue bonds beyond 2029 e.g. we issued \$330 million of bonds shorter than 2029 and only \$70 million longer than 2033.

Standby facilities outstanding to councils and CCOs were \$522 million as at 31 March 2022 and there was no change in this amount over the quarter. We are expecting a further two councils to enter into facilities with us in the June quarter.



The LGFA bond yield curve rose and flattened for the second consecutive quarter. Front end yields (2024s) rose by 111 bps while long dated yields (2037s) rose by 80 bps. The front end of the curve rose aggressively as the RBNZ increased the OCR by 25 bps in February to 1.0% and the markets began pricing in substantial increases over the 2022 calendar year. The rise in yields and curve flattening trend is common across all global bond markets as central banks have commenced tightening monetary policy as inflation reaches multi decade highs on pent up demand, supply shortages and the Ukrainian conflict lifting commodity prices. Over the past nine months the 2024 LGFA bond yield has risen 2.38% (to 3.36%) while the 2037 LGFA bond yield has risen 1.33% (to 4.05%).

LGFA borrowing margins to swap widened between 3 bps (2023s) and 15 bps (2027s) as global credit spreads widened on softer equity markets and central banks tightening monetary policy. Central Banks had been large buyers of credit as part of their Quantitative Easing (QE) programmes over the past two years. LGFA spreads to NZGB also widened over the quarter between 5 bps (2029s) and 16 bps (2024s) as swap spreads to NZGB widened and it was announced that NZGBs would be included in the global bond indices at the end of 2022. The underperformance of LGFA bonds relative to both swap and NZGB was surprising given the large amount of offshore investor buying of our bonds over the quarter. We closely monitor the Kauri market for ongoing supply and price action as high-grade issuance by "AAA" rated Supranational issuers such as the International Finance Corporation (IFC), Inter-American Development Bank (IADB) and the Asian Development Bank (ADB) influences LGFA demand and pricing. These borrowers are our peer issuers in the NZD market and have the most influence on our pricing. The March quarter was an active period for Kauri bond issuance with five issues totalling \$2.8 billion and all issuance was in the 5-year (2027) maturity. January is always the busiest month for Kauri issuance with three issues in January, two in February and no issuance in March.

### LGFA Bond Issuance Yields (%)

Last 30 tenders



Quarterly Report to Shareholders // Quarter 3: 2021 - 2022 // Period ended: 31 March 2022

Attachment A





The average borrowing term (excluding short-dated borrowing) for the March quarter by council members was a lengthy 8.01 years compared to the average term of 6.89 years for council borrowing for the year to June 2021. For the nine-month period to 31 March 2022 the average term of borrowing was 6.43 years and we think this general shortening is due to the recent sharp rise in interest rates and councils borrowing for terms to coincide with the June 2024 expected transition date for the Three Waters Reform Programme.



#### Average total months to maturity - on lending to councils

Last 15 tenders





Short-term borrowing by councils and CCOs with loan terms of between one month and 12 months remains well supported with \$389.9 million of loans outstanding as of 31 March 2022 to twenty-eight councils. The number of councils and CCOs using this product decreased by four over the quarter while the total amount outstanding increased by \$5 million.

For LGFA to provide certainty of access to markets for our council borrowers we need to have a vibrant primary and secondary market in LGFA bonds. The primary market is the new issuance market, and we measure strength through participation by investors at our tenders through bid-coverage ratios and successful issuance yield ranges. The secondary market is the trading of LGFA bonds following issuance and a high turnover implies a healthy market.

Activity in LGFA bonds in both the primary market (tender or syndicated issuance) and secondary market (between banks and investors) during the quarter was more subdue than recent quarters. We issued only \$400 million of bonds and secondary market turnover of \$1.9 billion during the quarter was the lowest compared to the past five quarters.



#### LGFA Primary and Secondary Market Activity - Quarterly (NZ\$ million)

LGFA commenced issuing LGFA Bills and short dated (less than 1 year) lending to councils in late 2015. As at 31 March 2022 there were \$533 million of LGFA Bills on issue and the amount on issue has been relatively constant for the past eighteen months. We use proceeds from LGFA bills to fund short term lending to councils and invest the balance in our liquid asset portfolio.

LGFA documented an Australian Medium-Term Notes Programme in November 2017. We have no immediate intention to use this programme, but it provides flexibility if there is a market disrupting event in the future.

Over the past quarter we have seen mixed support for our bond tenders with strong bidding, tight spreads and good bid coverage ratios for shorter dated maturities but less strength in demand for long dated tenors.





#### LGFA bond issuance (\$ million)

Last 15 tenders and syndications. Excludes issuance of treasury stock (\$1,200m)







We survey our council members each year on their satisfaction with LGFA and the latest stakeholder survey result in August 2021 was a 99% result to the question "How would you rate LGFA in adding value to your borrowing requirements?". We also received a 98% result to the question "How satisfied are you with the pricing that LGFA has provided to your Council?" Both outcomes are slightly better than last year.

### **Primary Objective:**

LGFA will ensure its asset book remains at a high standard by ensuring it understands each Participating Borrower's financial position, as well as general issues confronting the Local Government sector. Amongst other things, LGFA will:

- Proactively monitor and review each Participating Borrower's financial position, including its financial headroom under LGFA policies;
- Analyse finances at the Council group level where appropriate and report to shareholders;
- Endeavour to visit each Participating Borrower annually, including meeting with elected officials as required, or if requested; and
- Take a proactive role to enhance the financial strength and depth of the local government debt market and work with key central government and local government stakeholders on sector and individual council issues.

We had sixty- five meetings with fifty-one councils and CCOs over the past twelve months to 31 March 2022. LGFA continues to review council agendas and management reports on an ongoing basis for those councils on the LGFA borrower watch-list.

All councils and CCO borrowers provided compliance certificates for LGFA covenants and no council has requested that they be measured on a group basis.

We continue to have dialogue with Central Government on the proposed Three Waters reforms and provided feedback regarding financing of the proposed entities during and beyond the transition period. We are waiting for clarification from Central Government as to the role that LGFA could play, if any in providing financing. The annual LGFA Board Strategy Day was held in March and the focus was solely on Three Waters Reform and Sustainability.

We co-sponsored the KangaNews Australasian high grade investor book that showcases high grade borrowers such as LGFA and the underlying local government sector to global investors.

We provided an update on LGFA and key development to a Special Interest Group of council CFOs and Corporate Services Managers.

In March we launched the LGFA Future Directors Programme that offers a council or CCO staff member the opportunity to work alongside the LGFA board for an 18-month period starting in July 2022. Applications close in April with an appointment likely in May 2022.

We continue to assist the sector and their advisers in finding ways for LGFA to play a supporting role in providing solutions to off balance sheet financing for councils. LGFA continues to provide technical expertise to the proposed Ratepayer Financing Scheme (RFS).

#### Additional objectives (Section 3 of SOI)

1. Maintain LGFA's credit rating equal to the New Zealand Government sovereign rating where both entities are rated by the same Rating Agency.

LGFA has an annual review process regarding our credit ratings from Standard and Poor's ("S&P") and Fitch Ratings ("Fitch") and meets with both agencies at least annually.

On 2 March 2022, S&P affirmed our long-term local currency credit rating of AAA and our long-term foreign currency credit rating of AA+. Both ratings are the same as the New Zealand Government.

On 1 November 2021 Fitch affirmed both our local currency credit rating of AA+ (stable) and foreign currency credit rating of AA (positive outlook.

#### 2. Provide at least 80% of aggregate long-term debt funding to the Local Government sector.

We use the PwC Local Government Debt Report as our source of market share. Our estimated market share for the rolling twelve-month period to 31 March 2022 was 78.5%. If we adjust for Auckland Council borrowing of \$500 million over the past year in the domestic market, then our market share increases to 89.7%. This compares to a historical average of 75.0% and our market share remains high compared to our global peers.



As at 31 March 2022, there are seventy-four councils and one CCO as members of LGFA. There were no new council or CCO members during the quarter and the number of guarantors was unchanged at sixty-five. Invercargill City Holdings joined as a member in July 2021. As at 31 March 2022 they have borrowings outstanding

#### Council Membership (as at 31 March 2022)

of \$90.3 million.



# 3. Achieve the financial forecasts outlined in section 4 for net interest income and operating expenses, including provision for a shareholder dividend payment in accordance with approved dividend policy.

For the nine-month period to 31 March 2022, Net Interest Income ("NII") was estimated by management on an unaudited basis to be \$407k under budget while expenses are \$190k below budget. Net Operating Gain of \$9.05 million was \$184k below budget.

Included in the NII is the unrealised mark to market movement in fixed rate swaps that are not designated effective for hedge accounting purposes. We have used these swaps to reduce exposure to fixed rate loans made outside of the normal tender process and to reduce mismatches between borrowing and on-lending terms in our balance sheet. The unrealised loss increases as interest rates fall but turns to a profit if interest rates rise. Due to a rise in interest rates since June 2021, the year-to-date revaluation is a profit of \$1.78 million.









Expenses for the nine-month period forecast by management and on an unaudited basis were \$5.387 million which is \$190k below budget. This variance is the consequence of:

- Issuance and on-lending costs (excluding AIL) at \$1.895 million were \$94k below budget. A lower NZ Government Liquidity Facility fee was offset by higher NZX fees due to the additional amount of bond issuance.
- Operating costs at \$3.167 million was \$102k below budget due to lower consultants, travel and IT costs offset by higher personnel costs relative to budget.
- Approved Issuer Levy (AIL) payments of \$325k were \$6k above budget. We pay AIL on behalf of offshore investors at the time of semi-annual coupon payment for a small number of LGFA bond maturities.

#### 4. Meet or exceed the Performance Targets outlined in section 5.

See Section D on page 7 of this report.

For the first half period of the financial year ended 30 June 2022 we are on track to achieve seven (and possibly eight) out of the ten performance targets.

#### 5. Comply with the Health and Safety at Work Act 2015

LGFA has a Health and Safety staff committee and reporting on Health and Safety issues are made to the LGFA board on a regular basis by the Risk and Compliance Manager. There were no Health and Safety incidents during the quarter.

Both the Auckland and Wellington based staff were working from home during the lockdown period and we have adopted safety protocols to keep our staff safe during COVID upon returning to the offices. All staff, directors and visitors are required to be double vaccinated before entering LGFA offices.

#### 6. Comply with Shareholder Foundation Polices and the Board-approved Treasury Policy at all times.

There were no compliance breaches during the three-month period ending 31 March 2022.

7. Assist the local government sector with significant matters such as COVID-19 response and the proposed Three Waters Reform Programme.

Over the 2020 and 2021 calendar years, LGFA has

- Made changes to the Foundation Policy covenants to provide short term relief from a temporary reduction in revenue and allows councils to coinvest alongside central Government in infrastructure projects in response to COVID-19.
- Been contributing expertise to the Ratepayer Financing Scheme project that if successful could offer temporary financial relief to ratepayers via rates postponement.
- Offer the Standby Facility product to provide greater certainty of access to emergency funding for councils at a lower cost than going to the traditional bank provider. This has been well supported by councils with \$522 million of standbys written with nine councils.
- Responded to a request from the Shareholders Council to outline its views on the proposed Three Waters Reform. The Shareholders Council distributed this response to all council members.
- 8. Improve sustainability outcomes within LGFA and assist the local government sector in achieving their sustainability and climate change objectives.

Over the 2021-22 financial year, LGFA has

- Established a Sustainability committee comprising
  - Three LGFA staff members and
  - Four external members Alison Howard, Chris Thurston, David Woods and Erica Miles
- In October 2021 we launched a Green, Social and Sustainable Lending Programme for council and CCO members. Projects that meet one of the sixteen green or social lending categories will now be eligible for a discounted loan margin. Wellington City (WCC) and Greater Wellington Regional (GWRC) Councils have borrowed under this programme
  - WCC have borrowed to finance the construction of the Takina, the Wellington Convention and Exhibition Centre.
  - GWRC have borrowed to finance the council's flood protection work on the RiverLink project in the Hutt Valley.
- We have an Intern from Massey University researching the councils that declared a climate change emergency and what that means for additional related capex and borrowing.


### F. Investor relations

Managing relations with our investor base is very important as the amount of LGFA bonds on issue has yet to peak and we require investors and banks to support our ongoing tender issuance.

Over the three-month period to 31 March 2022 we issued \$400 million of LGFA bonds. The change in holdings amongst our investor groups during the quarter was

- Offshore investor holdings increased by \$508 million (and increased by \$1.65 billion from 31 March 2021) with holdings estimated to be \$4.91 billion on 31 March 2022.
- Domestic bank holdings decreased by \$227 million (and down \$141 million from 31 March 2021), with holdings estimated to be \$3.76 billion on 31 March 2022.
- Domestic investor (retail and institutional) holdings increased by \$60 million (and up \$739 million from 31 March 2021), with holdings estimated to be \$4.89 billion as of 31 March 2022.
- The Reserve Bank of New Zealand (RBNZ) holdings were unchanged over the quarter and totalled \$1.69 billion as of 31 March 2022.



### LGFA Bond Holdings by Investor Group

Quarterly Report to Shareholders // Quarter 3: 2021 – 2022 // Period ended: 31 March 2022



### 14. Christchurch Foundation - Budget 2022/23

Reference Te Tohutoro:	21/1785138	
Report of Te Pou Matua:	Linda Gibb, Performance Advisor, Resources Group (linda.gibb@ccc.govt.nz).	
General Manager Pouwhakarae:	Leah Scales, General Manager/CFO, Resources Group (leah.scales@ccc.govt.nz).	

### **1.** Purpose of the Report Te Pūtake Pūrongo

- 1.1 The purpose of this report is to seek the Finance and Performance Committee's approval of the Christchurch Foundation's funding request for 2022/23 of \$200,000 which is consistent with the provision made in the Council's Long Term Plan 2021-31. The funding request is the <u>final</u> call on the Council under the Support Agreement with the Foundation, and signals the end of the Foundation's establishment phase.
- 1.2 The Foundation's budget, at **Attachment A** projects total expenditure of \$704,438 and revenue of \$710,000 for 2022/23 (including the \$200,000 sought from the Council). It is lower than provided for in the Support Agreement between the Council and the Foundation by \$400,000. The balance of revenue of \$510,000 required to meet the projected expenditure has been sourced from third parties, including from new programmes (such as the Better City Business) and growing its fee-for-service programme and pro-bono partnerships.
- 1.3 The Foundation has expressed a strong desire to be self-funding and has made significant progress towards this over the past two years. In the event it requires funding support from the Council in future, these would need to be considered by the Council in a future annual or long term plan.
- 1.4 This report has been written following the receipt of the Foundation's 2022/23 budget on 16 May 2022. The decisions in this report is of low significance in relation to the Christchurch City Council's Significance and Engagement Policy. The level of significance was determined by considering the impact the decision would have on the community.

### 2. Officer Recommendations Ngā Tūtohu

That the Finance and Performance Committee:

- 1. Approves funding support to the Christchurch Foundation for 2022/23 of \$200,000; and
- 2. Notes the funding allocation in 2022/23 is the Christchurch Foundation's final call under the Support Agreement dated 19 December 2018.

### 3. Reason for Report Recommendations Ngā Take mō te Whakatau

3.1 The Council is required to provide funding support to the Foundation under the Support Agreement between the two parties. The Foundation's budget for 2022/23 supports the funding request of \$200,000.

### 4. Alternative Options Considered Etahi atu Kowhiringa

4.1 Other options have not been considered since the Council has a legal obligation to provide funding support.



### 5. Policy Framework Implications Ngā Hīraunga ā- Kaupapa here

### Strategic Alignment Te Rautaki Tīaroaro

5.1 This report is consistent with the financial provisions of the <u>Council's Long Term Plan (2021 - 2031).</u>

### Policy Consistency / Te Whai Kaupapa here

5.2 The decision is consistent with the Council's Plans and Policies, reflecting the Council's commitment to meet its legal obligations.

### Impact on Mana Whenua Ngā Whai Take Mana Whenua

5.3 The decision does not involve a significant decision in relation to ancestral land or a body of water or other elements of intrinsic value, therefore this decision does not specifically impact Mana Whenua, their culture and traditions.

### Climate Change Impact Considerations Ngā Whai Whakaaro mā te Āhuarangi

5.4 Not relevant.

### Accessibility Considerations Ngā Whai Whakaaro mā te Hunga Hauā

5.5 Not relevant.

### 6. Resource Implications Ngā Hīraunga Rauemi

### Capex/Opex Ngā Utu Whakahaere

- 6.1 Cost to Implement \$200,000.
- 6.2 Maintenance/Ongoing costs nil.
- 6.3 Funding Source Long Term Plan 2021-31.

### 7. Legal Implications Ngā Hīraunga ā-Ture

### Statutory power to undertake proposals in the report Te Manatū Whakahaere Kaupapa

7.1 Local Government Act 2002.

### Other Legal Implications Ētahi atu Hīraunga-ā-Ture

7.2 The Council has a legal obligation to provide funding of up to \$600,000 per annum to the Foundation, ending in 2022/23. This obligation is set out in the Support Agreement between the Council and the Foundation, dated 19 December 2018.

### 8. Risk Management Implications Ngā Hīraunga Tūraru

8.1 Not relevant.



### Attachments Ngā Tāpirihanga

No.	Title	Page
A 🕂 🛣	Christchurch Foundation - Budget 2022/23	294

Additional background information may be noted in the below table:

Document Name	Location / File Link
Nil	Nil

### Confirmation of Statutory Compliance Te Whakatūturutanga ā-Ture

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002). (a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.
- (b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

### Signatories Ngā Kaiwaitohu

Author	Linda Gibb - Performance Monitoring Advisor CCO
Approved By	Leah Scales - General Manager Resources/Chief Financial Officer



# The Christchurch Foundation

Annual Operational Budget FY2023 – 1 July 2022 to 30 June 2023

May 2022

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## FUELLING > PROSPERITY

We passionately believe that the flow-on effect from focusing on helping **fuel the prosperity** of our clients significantly contributes to ensuring that our communities, and ultimately our country and all New Zealanders, will enjoy a more prosperous future.



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# **Compilation Report**

### Annual budget report to the CEO & Trustees of The Christchurch Foundation ("the Foundation")

#### Scope

On the basis of the information provided by you we have compiled, in accordance with our engagement letter dated 13 September 2017, the annual operational budget report for the period ended 30 June 2023.

### Responsibilities

The annual budget report has been prepared based on information provided by the CEO and the Foundation. The CEO and the Foundation are solely responsible for the information upon which the annual budget report is based.

### **Disclaimer of liability**

We have compiled the annual budget report in accordance with the limited procedures agreed in our letter of engagement dated 13 September 2017.

As part of our engagement, the CEO and the Foundation has provided records, information, documents and explanations on which we have relied. Our procedures do not involve verification or validation procedures. No audit or review has been performed and accordingly no assurance is expressed. We do not accept any responsibility for the accuracy and completeness of the accounting records and other information the CEO and the Foundation has supplied to us or for the reliability, accuracy and completeness of the financial information compiled on the basis of those records and information. We also do not accept any responsibility for the maintenance of adequate accounting records, an adequate internal control structure and the selection and application of appropriate accounting policies within your organisation. In addition the CEO and the Foundation are solely responsible to users of the financial information we compile.

KPMG – Christchurch Dated: 13 May 2022



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### DRAF



FY2023 Budget



# Annual Budget FY2023 - Summary

The Christchurch Foundation Annual Operational Budget FY2023	
Year 6 Operational Surplus/(Deficit) (GST Exclusive)	
	FY2023 Budget (NZ\$
Revenue	
Operational Revenue	710,000
Total Revenue	710,000
Operating Expenditure	
Staff	484,198
Administration	159,240
Marketing	43,000
Other	18,000
Capital	-
Total Operating Expenditure	704,438
Net Operating Surplus (Deficit)	5,562





# Annual Budget FY2023 - Revenue Detail

#### The Christchurch Foundation Annual Operational Budget

#### EV2023\*

P12023"	
	FY2023 Budget (NZ\$)
Revenue	
Operating Revenue	
CCC Establishment Grant	200,000
Other Grants	5,000
Fees for Service	225,000
Business Partners	100,000
Business Club	75,000
Patrons Programme	50,000
Establishment Gifts	10,000
Sponsorship	45,000
Total Operating Revenue	710,000

\*Interest Income has been excluded



## **DRAFT** Annual Budget FY2023 - Expenditure Detail

The Christchurch Foundation Annual Operational Budget

### The Christchurch Foundation

Annuai	Oher	alionai	Duuge	۰.

	FY2023 Budget (NZ\$)
Expenditure	
Operating - Staff	
Staff salaries	384,190
Contractor - Green Philanthropy Fund	50,004
Contractor - Stronger Greener Christchurch	50,004
Total Operating - Staff	484,198
Operating - Administration	
ACC Levies	750
Accounting & finance	45,000
Audit	14,500
Conferences	1,000
Entertainment	6,000
Fund Manager	5,000
General	3,300
Insurance	3,000
Legal Expenses	10,000
Phone / Computer / Softw are	14,500
Rent	21,640
Subscriptions	4,000
Travel	30,550
Total Operating - Administration	159,240

\*Fund Administration Expenses, Depreciation and Amortisation have been excluded

FY2023*	
	FY2023 Budget (NZ\$)
Operating - Marketing	
Advertising	10,000
Marketing	25,000
Events	8,000
Total Operating - Marketing	43,000
Operating - Other	
UK Entity Support during establishment	15,000
US Entity set up	-
Diaspora Programme	-
Vital Signs	3,000
Total Operating - Other	18,000
Capital Expenditure	
Website refresh	-
Grant Making software	-
Brand refresh to include UK and all its materials	-
Total Capital Expenditure	-
Total Expenditure	704,438
Net Operating Surplus (Deficit)	5,562



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# Thank you

### **James Hickmott**

Director, Private Enterprise

### **Thomas Mills**

Assistant Manager, Private Enterprise

Although we endeavour to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

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### 15. Resolution to Exclude the Public

Section 48, Local Government Official Information and Meetings Act 1987.

I move that the public be excluded from the following parts of the proceedings of this meeting, namely items listed overleaf.

Reason for passing this resolution: good reason to withhold exists under section 7. Specific grounds under section 48(1) for the passing of this resolution: Section 48(1)(a)

### Note

Section 48(4) of the Local Government Official Information and Meetings Act 1987 provides as follows:

- "(4) Every resolution to exclude the public shall be put at a time when the meeting is open to the public, and the text of that resolution (or copies thereof):
  - (a) Shall be available to any member of the public who is present; and
  - (b) Shall form part of the minutes of the local authority."

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public are as follows:

### Finance and Performance Committee 26 May 2022



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ITEM NO.	GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED	SECTION	SUBCLAUSE AND REASON UNDER THE ACT	PLAIN ENGLISH REASON	WHEN REPORTS CAN BE RELEASED
16.	PUBLIC EXCLUDED FINANCE AND PERFORMANCE COMMITTEE MINUTES - 28 APRIL 2022			REFER TO THE PREVIOUS PUBLIC EXCLUDED REASON IN THE AGENDAS FOR THESE MEETINGS.	
17.	INSURANCE RENEWAL UPDATE	S7(2)(B)(II)	PREJUDICE COMMERCIAL POSITION	INSURANCE RENEWALS ARE UNDERTAKEN ON A CONFIDENTIAL BASIS DUE TO THE COMMERCIAL SENSITIVITIES INVOLVED.	31 JULY 2023 THIS REPORT MAY BE RELEASED AFTER THE END OF THE 2022 / 2023 COVER YEAR. POLICY DETAILS AROUND TERMS, CONDITIONS AND PRICING MUST REMAIN CONFIDENTIAL.