OIR: 2324/688

17 November 2023

[redacted]

Tēnā koe [redacted],

Request for Information under the Local Government Official Information and Meetings Act 1987 (the Act) (the LGOIMA)

Thank you for your email of **28 September 2023** requesting the following information:

Could you please provide me with:

1. ***the number of specific tasks that Jacobs has been contracted for specific to CAP,***

   Jacobs have been contracted to support Takutai Kāpiti since 2020 and have been contracted to complete over 50 tasks. Some tasks have been added or removed through contract variations. The tasks required are documented within the contracts, which are attached.

2. ***the terms of reference for each task, a copy of the contract for each task,***

   Contracts and variations to-date between Council and Jacobs set out the description of the services sought, which is effectively the 'terms of reference' for each task. The details of the contracts and variations, per the response to question 1, include:

   Phase 1 of Takutai Kāpiti

   - Coastal Science and Engineering Services - Takutai Kāpiti Ref: 2020/ C340 (October 2020).
   - Variation 1 to Coastal Science and Engineering Services - Takutai Kāpiti Ref: 2020/ C340 (November 2020).

Please note that any information provided in response to your request may be published on the Council website, with your personal details removed.

- Variation 2 to Coastal Science and Engineering Services - Takutai Kāpiti Ref: 2020/C340 (June 2021) - *incorrectly labelled as Variation 1 on the variation document.*
- Variation 3 to Coastal Science and Engineering Services - Takutai Kāpiti Ref: 2020/C340 (March 2022).
- Variation 4 to Coastal Science and Engineering Services - Takutai Kāpiti Ref: 2020/C340 (March 2023).

Phase 2 of Takutai Kāpiti

- Phase 2 Part A: Coastal Science, Engineering Services - Takutai Kāpiti 2023-C025 (March 2023 and renamed through Variation 1, point below, to this contract).
- Variation 1, Phase 2 Part A: Coastal Science, Engineering Services and Planning Advice – Takutai Kāpiti 2023-C025 (October 2023).
- Phase 2 Part B: Coastal Science and Engineering Services – Takutai Kāpiti 2023-C091 (October 2023).

Some information, including details of hourly rate, is redacted from the contracts with Jacobs because it is commercially sensitive. This information is withheld under section 7(2)(b)(ii) of the Act which allows for Council to withhold information in order to protect information where the making available of the information would be likely unreasonably to prejudice the commercial position of the person who supplied or who is the subject of the information.

The curriculum vitae of Jacobs staff has been redacted from the contract with Jacobs. The decision to withhold this information is made under section 7(2)(a) of the Act which allows for Council to withhold information in order to protect the privacy of natural persons, including that of deceased natural persons.

In Council's view the reasons for withholding these details are not outweighed by public interest considerations in section 7(1) favouring their release.

3. payments made for each task and

Payments for contracted work are made in monthly instalments, rather than on per task basis. We therefore do not collect information around payments per task. On that basis, I must decline this part of your request as the documents alleged to contain the information requested do not exist, or despite reasonable efforts to locate them, they cannot be found, section 17(e) of the LGOIMA refers.

However, a list of the payments made, to date, for Jacobs' services for Takutai Kāpiti are as follows:

Contract Number	Invoice Ref	Invoice Date	Invoice Amount (Excl GST)
2020/ C340	15355300-005	31/03/2021	$24,936.25
2020/ C340	15355300-023	05/10/2022	$20,525.75
2020/ C340	1S355300-012	03/11/2021	$13,947.50
2020/ C340	1S355300-013	30/11/2021	$28,030.20
2020/ C340	1S355300-019	31/05/2022	$19,683.00
2020/ C340	1S355300-025	31/10/2022	$662.00
2020/ C340	IS355300-001	03/12/2020	$37,603.75
2020/ C340	IS355300-002	12/01/2021	$31,891.27
2020/ C340	IS355300-003	03/02/2021	$11,624.65
2020/ C340	IS355300-004	05/03/2021	$30,243.75
2020/ C340	IS355300-006	07/05/2021	$38,418.75
2020/ C340	IS355300-007	09/06/2021	$29,926.89
2020/ C340	IS355300-008	30/06/2021	$9,053.69
2020/ C340	IS355300-009	30/06/2021	$56,100.00
2020/ C340	IS355300-010	31/08/2021	$7,295.00
2020/ C340	IS355300-011	04/10/2021	$14,630.00
2020/ C340	IS355300-014	12/01/2022	$26,111.24
2020/ C340	IS355300-015	16/12/2021	$23,098.60
2020/ C340	IS355300-016	28/02/2022	$15,150.00
2020/ C340	IS355300-017	31/03/2022	$14,128.65
2020/ C340	IS355300-018	03/05/2022	$15,238.86
2020/ C340	IS355300-020	30/06/2022	$79,672.04
2020/ C340	IS355300-021	29/07/2022	$25,403.67
2020/ C340	IS355300-022	07/09/2022	$35,124.00
2020/ C340	IS355300-024	20/10/2022	$9,736.25
2020/ C340	IS355300-026	11/01/2023	$9,926.75
2023-C025	16355300-027	21/02/2023	$9,926.75
2023-C025	IS355300-028	12/04/2023	$24,450.13
2023-C025	IS355300-029	05/05/2023	$24,151.37
2023-C025	IS355300-030	31/05/2023	$24,994.38
2023-C025	IS355300-031	03/07/2023	$28,997.06
2023-C025	IS355300-032	31/07/2023	$15,408.88
2023-C025	IS355300-033	31/08/2023	$14,350.50
2023-C025	15355300-034	06/10/2023	$16,618.73

4. ***all communications between Council and Jacobs, Jacobs and CAP and CAP and Council regarding these tasks***

You confirmed via email dated 17 October 2023 that you did not require this information to be provided due to the significant volume of search results.

You have the right to request the Ombudsman to review this decision. Complaints can be sent by email to info@ombudsman.parliament.nz, by fax to (04) 471 2254, or by post to The Ombudsman, PO Box 10152, Wellington 6143.

Ngā mihi,

Kris Pervan
Group Manager Strategy and Growth
Te Kaihautū Rautaki me te Tupu

Contract for Services

Contract Details

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

Coastal Science and Engineering Services- Takutai Kāpiti (Reference: Ref: 2020/ C340)

The Parties

The Buyer:

Kapiti Coast District Council
NZBN 9429041907375
175 Rimu Road, Paraparaumu 5254, New Zealand

and

The Supplier:

Jacobs New Zealand Ltd
NZBN 9429037904685
Level 12, 55 Shortland Street, Auckland 1010, New Zealand

The Contract

Agreement

The Buyer appoints the Supplier to deliver the Services described in this Contract and the Supplier accepts that appointment. This Contract sets out the Parties' rights and obligations.

Parts of this Contract

The documents forming this Contract are:

1. **Contract Details**: This section
2. **Schedule 1**: Description of Services
3. **Schedule 2**: Standard Terms and Conditions GMC Form 2 SERVICES | Schedule 2 (3rd Edition) available at: www.procurement.govt.nz
4. Any other attachments described at Schedule 1.

How to read this Contract

- Together the above documents form the whole Contract
- Any Supplier terms and conditions do not apply
- Clause numbers refer to clauses in Schedule 2
- Words starting with capital letters have a special meaning. The special meaning is stated in the Definitions section at clause 17 (Schedule 2).

Acceptance

In signing this Contract each Party acknowledges that it has read and agrees to be bound by it.

Signed for and on behalf of the Buyer:

(signature)

Name: Sean Mallon

Position: GM Infrastructure

Date: 22/10/2020

Signed for and on behalf of the Supplier:

(signature)

Name: Juliet Woodward

Position: Executive Director Sales

Date 27.10.2020

Schedule 1
Description of Services

Contract Management and Personnel

Start Date	October 2020	*Reference Schedule 2 clause 1*
End Date	March 2022	*Reference Schedule 2 clause 1*
Renewal	The Buyer may renew this Contract up to 3 times for an additional period of 2 months	*Reference Schedule 2 clause 1*

Contract Managers

Reference Schedule 2 clause 4

	Buyer's Contract Manager	**Supplier's Contract Manager**
Name:	Lyndsey Craig	Bruce Clarke
Title / position:	Coastal Manager	Project Director
Address:	175 Rimu Road, Paraparaumu 5254, New Zealand	Level 12, 55 Shortland Street, Auckland 1010, New Zealand
Phone:	[redacted]	04 914 8417
Email:	[redacted]	[redacted]

Addresses for Notices

Reference Schedule 2 clause 14

	Buyer's address	**Supplier's address**
For the attention of:	The Contract Manager - Lyndsey Craig	The Contract Manager - Bruce Clarke
c.c. Contract Manager	N/A	N/A
Delivery address:	175 Rimu Road, Paraparaumu 5254, New Zealand	Level 12, 55 Shortland Street, Auckland 1010, New Zealand
Postal address:	Private Bag 60601, Paraparaumu 5254, New Zealand	Level 12, 55 Shortland Street, Auckland 1010, New Zealand
Email:	[redacted]	[redacted]

Supplier's Approved Personnel

Reference Schedule 2 clause 2.4

	Approved Personnel
Name:	Derek Todd, Anthony Kubale, Sam Watkin, Damian Debski, Kate MacDonald

	Approved Personnel
Position:	Techincal Team Leader, Project Manager, Coastal Engineering Technical Advisor, Flood Risk Technical Advisor, Coastal Scientist
Specialisation:	

Supplier's Approved Sub-contractor

Reference Schedule 2 clause 7

None

Description of Services

Context

Purpose

The Council is seeking the services of an expert coastal science and engineering provider to advise the KCDC Coastal Team and the Community Assessment Panel(s) in their work. The focus of the KCDC Coastal Team and the Community Assessment Panel(s) is to:

- provide input into a proposed coastal plan change to the Kāpiti Coast District Plan; and
- develop, assess and recommend preferred coastal adaptation pathways for Kāpiti coastal communities over a 100-year period.

Roles

KCDC's Coastal Team will undertake the functions of project management, community engagement, technical commissioning and policy and planning advice.

The supplier will provide technical advice and guidance to KCDC's Coastal Team and the Community Assessment Panel(s) to support the design and development of coastal adaptation options and recommended coastal adaptation pathways covering identified Kāpiti Coast District Council coastal units.

The successful respondent will advise on technical matters when the Community Assessment Panel(s) develop their initial long-list of adaptation options that might be suitable for each coastal unit. Further technical advice will be provided to assist the Community Assessment Panel(s) develop a short-list of 100 year adaptive pathways for each coastal unit, and through their subsequent assessment process.

As part of this technical advice it is expected the successful respondent will review all the relevant previous coastal hazard, risk and vulnerability assessments and prepare an updated assessment for use in the coastal adaptation pathways and district plan change processes. The previous coastal hazard, risk and vulnerability assessments have been collated and catalogued digitally in a coastal bibliography.

KCDC will appoint an independent party to peer review the Coastal Hazard and Risk Assessment Report.

Deliverable 1

A Coastal Hazard and Risk Assessment Report (including appropriate modelling scenarios) in line with 2017 Ministry for the Environment Guidance, to inform the adaptive pathways planning work of the Community Assessment Panels and a proposed Coastal Plan Change to the Kāpiti Coast District Plan.

Deliverable 2

Provision of best practice technical advice to the Takutai Kāpiti Community Assessment Panel(s) as they develop preferred coastal adaptation pathways, through participation as a Technical Adviser in the Community Assessment Panel process.

Description of Services

The services will be as set out in the **attached** The Suppliers Proposal dated 15 July 2020, The Suppliers updated project delivery schedule dated October 2020.

Deliverables and Milestones

None

Specific code of conduct / policies/ protective security / legislative requirement

None

Supplier's Reporting Requirements

Reference Schedule 2 clause 5.2

Report to:	Description of report	Due date
Contract Manager	Progress reports, Draft Coastal Hazard & Risk Assessment Report, Final Coastal Hazard & Risk Assessment Report. Ongoing reporting for CAO (as required and agreed).	Fortnightly, Feb 2021, March 2021, Ongoing March 2021-March 2022

Charges

The following section sets out the Charges. Charges are the total maximum amount payable by the Buyer to the Supplier for delivery of the Services. Charges include Fees, and where agreed, Expenses and Daily Allowances. The Charges for this Contract are set out below.

Fees

Reference Schedule 2 clause 3

The Supplier's Fees will be as set out in the **attached** Suppliers proposal dated 15 July 2020, Supplies optional additional services dated October 2020.

Expenses

Reference Schedule 2 clause 3

No Expenses are payable.

Daily Allowance

Reference Schedule 2 clause 3

No Daily Allowances are payable.

Invoices

Reference Schedule 2 Subject to clauses 3 and 11.7

The Supplier must send the Buyer an invoice for the Charges at the following times:

On completion of the Services.

Address for invoices

Reference Schedule 2 clause 3

	Buyer's address
For the attention of:	Buyer's contract manager
Address:	Accounts.payable@kapiticoast.govt.nz

Other instructions about invoices

None

Insurance

Reference Schedule 2 Clause 8.1

The Buyer does not require any specific insurance under this Contract other than the requirements under clause 8.1 of Schedule 2.

Changes to Schedule 2 and attachments

Liability

Clause 8 is amended by adding the following new clauses as clauses 8.2 and 8.3:

*"8.2 **Limitation**: Each Party's liability to the other Party (whether in contract, tort including negligence, or otherwise) under or in connection with this Contract:*
a. will not exceed:

- *for the Buyer – , and*
- *for the Supplier – NZ$1 million*

b. is limited to losses caused directly by that Party, and
c. does not include any loss of revenue or profits, loss of anticipated savings, loss of opportunity, loss of production or loss of data, however caused.

*8.3 **Exceptions**: Clause 8.2 does not limit a Party's liability:*
a. for any breach of clause 13 (Confidential Information)
b. for any breach of clause 12.2 (Supplier warranties)
c. for any deliberate breach of this Contract, malicious act or fraud, or
d. to pay any amount duly payable under this Contract. "

Attachments

Reference 'Contract documents' described at Page 1

The Suppliers Proposal dated 15 July 2020, The Suppliers updated project delivery schedule dated October 2020

Suppliers proposal dated 15 July 2020, Suppliers optional additional services dated October 2020

Schedule 2
Standard Terms and Conditions—Services

Length of Contract

1.1 **Start Date:** This Contract starts on the Start Date. Services must not be delivered before the Start Date.

1.2 **End Date:** This Contract ends on the End Date.

1.3 **Renewal:**

a. The Buyer may extend the End Date the number of times, and for the additional period (**Additional Period**), set out in Schedule 1 by giving the Supplier Notice at least 20 Business Days before the then current End Date (**Extension Notice**).

b. If the Buyer gives an Extension Notice, the Contract will be renewed for the Additional Period on the same terms, unless the Parties agree otherwise in a Variation.

The Services

2.1 **Both Parties' obligations:** Both Parties agree to:

a. act in good faith and honestly in their dealings with each other

b. discuss matters affecting this Contract or the delivery of the Services, whenever necessary

c. notify each other promptly of any actual or anticipated issues that could:
- significantly impact on the Services or the Charges, and/or
- receive media attention, and

d. comply with all applicable laws and regulations.

2.2 **Buyer's obligations:** The Buyer must:

a. provide the Supplier with any information and/or access to Buyer Personnel the Supplier has reasonably requested to enable the delivery of the Services

b. make decisions and give approvals reasonably required by the Supplier to enable delivery of the Services, within reasonable timeframes, and

c. pay the Supplier the Charges for the Services in accordance with this Contract.

2.3 **Supplier's obligations:** The Supplier must:

a. deliver the Services:
- on time (including meeting all Milestones on time), except where delay is caused by the Buyer, and to the required performance standards and quality set out in Schedule 1 or reasonably notified by the Buyer to the Supplier from time to time, and
- with due care, skill and diligence, and to the appropriate professional standard or in accordance with good industry practice as would be expected from a leading supplier in the relevant industry

b. ensure that its Personnel have the necessary skills, experience, training and resources to deliver the Services

c. provide all equipment and resources necessary to deliver the Services, and

d. comply with any relevant codes of conduct listed in Schedule 1, including (if applicable) the *Supplier Code of Conduct* issued by the Procurement Functional Leader (see www.procurement.govt.nz).

2.4 **Approved Personnel:** Where Approved Personnel have been agreed in Schedule 1, the Supplier must:

a. use those Approved Personnel in delivering the Services, and

b. obtain the Buyer's prior written approval if it wishes to change any Approved Personnel.

2.5 **Premises:** If the Supplier is at the Buyer's premises, the Supplier must observe the Buyer's policies and procedures, including those relating to health and safety, and security requirements, as provided to the Supplier.

2.6 **Health, Safety and Security:** The Supplier must:

a. consult, cooperate and coordinate with the Buyer regarding the Parties' overlapping obligations under, and what is required from the Supplier to assist the Buyer to comply with the HSW Act as it relates to, of affects, the Contract

b. comply, and ensure that its Personnel comply, with their obligations under the HSW Act as it relates to, or affects, the Contract

c. comply with all reasonable directions of the Buyer relating to health, safety, and security, and

d. report any of the following that applies to the Supplier or the Buyer, or relates to or affects the Contract:

- notifiable injury, illness, incident or event, or any notice issued under the HSW Act or any other health and safety legislation, and
- Protective Security Incident.

2.7 **Employment standards**: The Supplier must:

a. comply with its obligations under the Employment Relations Act 2000, Minimum Wage Act 1983, Wages Protection Act 1983, Holidays Act 2003 and the Parental Leave and Employment Protection Act 1987, and

b. report any instances where the Supplier is being investigated by the Labour Inspectorate, or where the Supplier has been found by the Labour Inspectorate, Employment Relations Authority, or the Employment Court to have breached any of the legislation referenced in clause 2.7.a.

2.8 **Respect:** The Supplier must deliver the Services in a manner that:

a. is culturally appropriate for Māori, Pacific and other ethnic or indigenous groups, and

b. respects the personal privacy and dignity of all individuals.

Charges and payment

3.1 **Maximum amount:** The Charges are the total maximum amount payable by the Buyer to the Supplier for delivery of the Services. Charges include Fees and, where agreed, Expenses and Daily Allowances.

3.2 **Valid tax invoice:** The Supplier must provide valid tax invoices for all Charges on the dates or at the times specified in Schedule 1. The Buyer has no obligation to pay the Charges set out on an invoice that is not a valid tax invoice. A valid tax invoice must:

a. clearly show all GST due, if any

b. be in New Zealand currency or the currency stated in Schedule 1

c. be clearly marked 'Tax invoice'

d. contain the Supplier's name, address, NZBN and GST number, if the Supplier is registered for GST

e. contain the Buyer's name and address and be marked for the attention of the Buyer's Contract Manager or such other person stated in Schedule 1

f. state the date the invoice was issued

g. name this Contract and provide a description of the Services supplied, including the amount of time spent in the delivery of the Services if the Charges are based on an Hourly Fee Rate or Daily Fee Rate

h. contain the Buyer's contract reference or purchase order number if there is one

i. state the Charges due, calculated correctly, and

j. be supported by GST receipts if Expenses are claimed, and any other verifying documentation reasonably requested by the Buyer.

3.3 **Payment:** Subject to clauses 3.4 and 11.4(e), if the Buyer receives a valid tax invoice:

a. on or before the 5th Business Day of the month, the Buyer will pay that invoice by the 20th calendar day of that month, or

b. after the 5th Business Day of the month, the Buyer will pay that invoice by the 20th calendar day of the following month.

3.4 **Dispute:** The Buyer must notify the Supplier within 10 Business Days of the date of receipt of a tax invoice if the Buyer disputes any part of that tax invoice, and the Buyer:

a. must pay the portion of the tax invoice that is not in dispute (and the Supplier will provide a further valid tax invoice for the undisputed amount if required), and

b. may withhold payment of the disputed portion until the dispute is resolved.

Contract management

4.1 **Contract Manager:** The persons named in Schedule 1 as the Contract Managers will manage the Contract, including:

a. managing the relationship between the Parties

b. overseeing the effective implementation of this Contract, and

c. acting as a first point of contact for any issues that arise.

4.2 **Changing the Contract Manager:** A Party may change its Contract Manager by telling the other Party, in writing, the name and contact details of the replacement.

Information management

5.1 **Information and Records**: The Supplier must:

a. keep and maintain Records in accordance with prudent business practice and all applicable laws

b. make sure the Records clearly identify all relevant time and Expenses incurred in providing the Services

c. make sure the Records are kept safe and are easy to access

d. give information to the Buyer relating to the Services that the Buyer reasonably requests, in a format that is usable by the Buyer, and within a reasonable time of the request

e. co-operate with the Buyer to provide information promptly if the information is required by the Buyer to comply with an enquiry or its statutory, parliamentary, or other reporting obligations

f. make its Records available to the Buyer during the term of the Contract and for 7 years after the End Date (unless already provided to the Buyer earlier), and

g. make sure that Records provided by, or created for, the Buyer are securely managed and destroyed on their disposal.

5.2 **Reports:** The Supplier must give the Buyer the reports, by the due dates, stated in Schedule 1.

The contractual relationship

6.1 **Independent contractor:** Nothing in this Contract constitutes a legal relationship between the Parties of partnership, joint venture, agency, or employment.

6.2 **No representing:** Neither Party has authority to bind or represent the other Party in any way.

6.3 **Transfer of rights or obligations:** The Supplier must not transfer any of its rights or obligations under this Contract without the Buyer's prior written approval. The Buyer will not unreasonably withhold its approval.

Subcontractors

7.1 **Subcontracting:** The Supplier must not enter into a contract with someone else to deliver any part of the Services without the Buyer's prior written approval.

7.2 **Supplier responsibilities:** The Supplier:

a. must ensure that each Subcontractor is suitable and has the capability and capacity to deliver that aspect of the Services being subcontracted

b. must ensure that:
   - each Subcontractor is fully aware of the Supplier's obligations under this Contract, and
   - any subcontract it enters into is on terms that are consistent with this Contract

c. is responsible for delivering the Services under this Contract even if aspects of the Services are subcontracted, and

d. is responsible for the acts and omission of any Subcontractor as if they were the acts and omissions of the Supplier.

Insurance

8.1 The Supplier is responsible for ensuring its risks of doing business are adequately covered, whether by insurance or otherwise. If required in Schedule 1, the Supplier must:

a. hold the insurance, with a reputable insurer, as specified in Schedule 1, and maintain that insurance cover for the term of this Contract and for a period of 3 years after the End Date, and

b. provide a certificate confirming the nature of the insurance cover and proving that each policy is current within 10 Business Days of any request from the Buyer.

Conflicts of Interest

9.1 **Avoiding conflicts of interest:** The Supplier:

a. warrants that as at the Start Date, it has no Conflict of Interest in providing the Services or entering into this Contract, and

b. must do its best to avoid situations that may lead to a Conflict of Interest arising.

9.2 **Obligation to tell Buyer:** The Supplier must tell the Buyer promptly, in writing, if any Conflict of Interest arises in relation to the Services or this Contract. If a Conflict of Interest does arise the Parties must discuss, agree and record in writing whether it can be managed and, if so, how it will be managed. Each Party must pay its own costs in relation to managing a Conflict of Interest.

Resolving disputes

10.1 **Negotiation:** The Parties agree to use their best endeavours to resolve any dispute that may arise under this Contract. The following process will apply to disputes:

a. a Party will notify the other if it considers a matter is in dispute

b. the Contract Managers will attempt to resolve the dispute through negotiation

c. if the Contract Managers have not resolved the dispute within 10 Business Days of notification, they will refer it to the Parties' senior managers for resolution, and

d. if the senior managers have not resolved the dispute within 10 Business Days of it being referred to them, the Parties shall refer the dispute to mediation or, if agreed by the parties, some other form of alternative dispute resolution.

10.2 **Mediation:** If a dispute is referred to mediation, the mediation will be conducted:

a. by a single mediator agreed by the Parties or if they cannot agree, appointed by the Resolution Institute

b. on the terms of the Resolution Institute Mediation Rules, and

c. at a fee to be agreed by the Parties or if they cannot agree, at a fee determined by the Resolution Institute.

10.3 **Costs:** Each Party will pay its own costs of mediation or alternative dispute resolution under this clause 10.

10.4 **Effect of dispute:** If there is a dispute, each Party will continue to perform its obligations under this Contract as far as practical given the nature of the dispute.

10.5 **Taking court action:** Each Party agrees not to start any court action in relation to a dispute until it has complied with the process described in clause 10.1, unless that Party requires urgent relief from a court.

Ending this Contract

11.1 **Supplier's request to terminate:** At any time during the term of this Contract the Supplier may notify the Buyer that it wishes to terminate this Contact. The Buyer will, within 20 Business Days following receipt of the Supplier's Notice, notify the Supplier whether, in its absolute discretion, it consents to the Supplier's Notice of termination. If the Buyer:

a. consents, the Contract will be terminated on a date that is mutually agreed between the Parties, or

b. does not consent, the Contract will continue in full force as if the Supplier's Notice requesting termination had not been given.

11.2 **Buyer's termination for convenience:**

a. The Buyer may terminate this Contract at any time by giving not less than 20 Business Days' Notice to the Supplier.

b. If the Buyer terminates the Contract under this clause then, subject to all other clauses of this Contract, the Buyer will pay the Supplier for all Services performed up to the End Date.

11.3 **Buyer's termination for cause:** The Buyer may terminate this Contract immediately, by giving Notice, if the Supplier:

a. becomes bankrupt or insolvent

b. has an administrator, receiver, liquidator, statutory manager, mortgagee's or chargee's agent appointed

c. becomes subject to any form of external administration

d. ceases for any reason to continue in business

e. does something or fails to do something that, in the Buyer's opinion, results in damage to the Buyer's reputation or business

f. has a Conflict of Interest that in the Buyer's opinion is so material as to impact adversely on the delivery of the Services, the Buyer, or

g. provides information to the Buyer that is misleading or inaccurate in any material respect.

11.4 **Termination for breach**:

a. If a Party breaches this Contract (**defaulting Party**), the non-defaulting Party may give a default Notice to the defaulting Party.

b. A default Notice must state:
   - the nature of the breach, and
   - the time and date by which it must be remedied.

c. The period allowed to remedy the breach must be reasonable given the nature of the breach.

d. The non-defaulting Party may terminate this Contract immediately by giving a further Notice to the defaulting Party if the defaulting Party does not remedy the breach as required by the default Notice.

e. If the Buyer gives a default Notice to the Supplier, the Buyer may also:

- withhold any payment of Charges due until the breach is remedied as required by the default Notice, and/or
- if the breach is not remedied as required by the default Notice, deduct a reasonable amount from any Charges due to reflect the reduced value of the Services to the Buyer.

11.5 **Supplier's obligations**:

a. On giving or receiving a Notice of termination, the Supplier must immediately do everything reasonably possible to reduce its losses, costs and expenses arising from the termination of this Contract.

b. On termination or expiry of this Contract, the Supplier must, if requested by the Buyer, promptly return or securely destroy all Confidential Information and other material or property belonging to the Buyer.

11.6 **Accrued rights:** The termination or expiry of this Contract does not affect any rights of a Party which:

a. arose prior to the End Date, or

b. relate to any breach of this Contract that arose prior to the End Date.

11.7 **Buyer's rights:** Subject to clause 11.2(b), if this Contract is terminated the Buyer:

a. will only be liable to pay Charges that were due for Services delivered before the effective date of termination, and

b. may recover from the Supplier or set off against sums due to the Supplier, any Charges paid in advance for Services or Deliverables that have not been provided.

11.8 **Handing over the Services**:

a. The Supplier will provide all reasonable assistance and cooperation necessary to facilitate a smooth handover of the Services to the Buyer or any person appointed by the Buyer during the term of this Contract and for a period of 10 Business Days after the End Date.

b. If required by the Buyer, the Supplier will provide additional assistance to support any replacement supplier to deliver the Services, for a period of up to 3 months from the End Date at a reasonable fee to be agreed between the Parties, based on the Charges.

Intellectual Property Rights

12.1 **Ownership of Intellectual Property Rights**:

a. Pre-existing Intellectual Property Rights remain the property of their owner.

b. New Intellectual Property Rights in the Deliverables become the property of the Buyer when they are created, and the Supplier agrees to do all things necessary to give effect to this clause 12.1(b).

c. New Intellectual Property Rights that are not in the Deliverables will become the property of the Party that created them.

d. The Supplier grants to the Buyer a perpetual, non-exclusive, worldwide, transferable, sub-licensable and royalty-free licence to use, for any purpose, all Intellectual Property Rights in the Deliverables that are not owned by the Buyer to:
   - receive the full benefit of the Services and Deliverables, and
   - use, copy, modify and distribute the Deliverables.

12.2 **Supplier warranties:** The Supplier warrants that:

a. it is legally entitled to grant the licence in clause 12.1(d), and

b. the Buyer's use of anything provided by the Supplier and incorporated in the Services and Deliverables, for the purposes communicated to, or that are or ought to be known by, the Supplier, will not infringe the rights, including Intellectual Property Rights, of any third party.

The Supplier's liability for breach of the warranties in this clause is not subject to any limitation or cap on liability that may be stated elsewhere in this Contract.

Confidential Information

13.1 **Protection of Confidential Information:** Each Party agrees to not use or disclose the other Party's Confidential Information to any person or organisation other than:

a. to the extent that use or disclosure is necessary for the purposes of providing the Deliverables or Services or, in the case of the Buyer, using the Deliverables or Services

b. if the other Party gives prior written approval to the use or disclosure

c. if the use or disclosure is required by law (including under the Official Information Act 1982), Ministers, parliamentary convention or any other regulation, rules or policy that is binding on that Party, or

d. if the information has already become public, other than through a breach of the obligation of confidentiality by one of the Parties.

13.2 **Obligation to inform staff:** Each Party will ensure that its Personnel:

a. are aware of the confidentiality obligations in this Contract, and

b. do not use or disclose any of the other Party's Confidential Information except as allowed by this Contract.

13.3 **Security:** Each Party will:

a. put in place and maintain adequate security measures to safeguard the other Party's Confidential Information from unauthorised access or use by third parties,

b. notify the other Party if it becomes aware of any suspected or actual unauthorized use, copying or disclosure of the other Party's Confidential Information, and

c. comply with any reasonable direction of the other Party in relation to any suspected or actual breach of the obligations in this clause 13 as the other Party reasonably requests.

Notices

14.1 **Requirements:** All Notices must be:

a. in writing and delivered by hand or sent by post, courier or email to the recipient Party's address for Notices stated in Schedule 1, and

b. signed, or in the case of email sent, by the appropriate manager or person having authority to do so.

14.2 **Receipt of Notices:** A Notice will be considered to be received:

a. if delivered by hand or sent by courier, on the date it is delivered

b. if sent by post within New Zealand, on the 5th Business Day after the date it was sent

c. if sent by post internationally, on the 9th Business Day after the date it was sent, or

d. if sent by email, at the time the email enters the recipient's information system and it is not returned undelivered or as an error,

but a Notice received after 5pm on a Business Day or on a day that is not a Business Day will be considered to be received on the next Business Day.

Extraordinary Events

15.1 **No liability:** Neither Party will be liable to the other for any failure to perform its obligations under this Contract to the extent the failure is due to an Extraordinary Event.

15.2 **Obligations of affected Party:** A Party who wishes to claim suspension of its obligations due to an Extraordinary Event must notify the other Party as soon as reasonably possible. The Notice must state:

a. the nature of the circumstances giving rise to the Extraordinary Event

b. the extent of that Party's inability to perform under this Contract

c. the likely duration of that non-performance, and

d. what steps are being taken to minimise the impact of the Extraordinary Event on the performance of this Contract.

15.3 **Termination:** If a Party is unable to perform any obligations under this Contract for 20 Business Days or more due to an Extraordinary Event, the other Party may terminate this Contract immediately by giving Notice.

General

16.1 **Variations:** A Variation must be agreed by both Parties and recorded:

a. in writing and signed by both Parties, or

b. through an exchange of emails,

where the signatories or authors have delegated authority to approve the Variation.

16.2 **Entire contract:** This Contract, including any Variation, records everything agreed between the Parties relating to the Services. It replaces any previous communications, negotiations, arrangements or agreements that the Parties had with each other relating to the Services before this Contract was signed, whether they were oral or in writing.

16.3 **Waiver:** If a Party does not immediately enforce its rights under this Contract that:

a. does not mean that the other Party is released or excused from any obligation to perform at the time or in the future, and

b. does not prevent that Party from exercising its rights at a later time.

16.4 **New Zealand law, currency and time:** This Contract will be governed and interpreted in accordance with the laws of New Zealand. All money is in New Zealand dollars, unless Schedule 1 specifies a different currency. Dates and times are New Zealand time.

16.5 **Publication:** The Supplier must obtain the Buyer's prior written approval before making reference to the Buyer or this Contract in its publications, public statements, promotional material or promotional activities.

16.6 **No derogatory remarks:** Each Party undertakes not to publicly make objectionable or derogatory comments about the Services, this Contract, the other Party or any of the other Party's Personnel, and to ensure that its Personnel do not do so.

16.7 **Signing the Contract:** The date of execution is the date this Contract has been signed by both parties. This Contract is properly signed if each Party signs the same copy, or separate identical copies, including electronic copies, of the Contract Details section.

16.8 **No poaching:** During the term of this Contract and for a period of 6 months after the End Date neither Party shall, without the other's written consent, deliberately seek to employ or hire any person who is or has been employed by the other and involved in the delivery of the Services. This does not apply where a person has responded to a legitimate advertisement.

16.9 **Clauses that remain in force:** The clauses that by their nature should remain in force on expiry or termination of this Contract do so, including clauses 5 (Information management), 8 (Insurance), 10 (Resolving disputes), 11 (Ending this Contract), 12 (Intellectual Property Rights),13 (Confidential Information), 14 (Notices), 16 (General) and 17 (Definitions).

16.10 **Precedence:** If there is any conflict or difference between the documents forming this Contract (as stated in the Contract Details section) then the order of precedence is:

1. a Variation
2. Schedule 1
3. any Attachment to Schedule 1, and
4. Schedule 2.

Definitions

When used in this Contract the following terms have the meaning beside them:

Attachment Any supplementary document named in Schedule 1 as an Attachment to this Contract.

Approved Personnel A person who is engaged by the Supplier to deliver the Services and is named in Schedule 1.

Business Day A day when most businesses are open for business in New Zealand. It excludes Saturday, Sunday, and public holidays. A Business Day starts at 8.30am and ends at 5pm.

Buyer The Buyer is the entity named as the Buyer in the Contract Details section.

Charges The total amount payable by the Buyer to the Supplier as stated in Schedule 1, including Fees and any Expenses and Daily Allowances.

Confidential Information Information, including data and personal information, that:

- is by its nature confidential
- is marked by either Party as 'confidential', 'in confidence', 'restricted' or 'commercial in confidence'
- is provided by either Party or a third party 'in confidence', or
- either Party knows or ought to know is confidential.

Conflict of Interest A Conflict of Interest arises if a Party or its Personnel's personal or business interests or obligations do or could conflict or be perceived to conflict with its obligations under this Contract, such that the Party's or its Personnel's independence, objectivity or impartiality can be called into question. A Conflict of Interest may be:

- actual: where the conflict currently exists
- potential: where the conflict is about to happen or could happen, or
- perceived: where other people may reasonably think that a person is compromised.

Contract The legal agreement between the Buyer and the Supplier that comprises the Contract Details section, Schedule 1, this Schedule 2 and any other Schedule, and any Variation and Attachment.

Contract Manager The person named in Schedule 1 as the Contract Manager.

Daily Allowance An allowance to cover accommodation, meals and incidentals for the Supplier's Personnel if they are required in order to deliver the Services or to travel overnight away from their normal place of business, as agreed in Schedule 1.

Daily Fee Rate A fee payable for each day spent in the delivery of Services. A day is a minimum of 8 working hours.

Deliverables An output resulting from the delivery of the Services as stated in Schedule 1. A Deliverable may be a document, a piece of equipment, goods or information or data stored by any means.

End Date The earlier of the date this Contract is due to end as stated in Schedule 1, as may be extended under clause 1.3, and the date of termination as set out in a Notice of termination, or any other date agreed between the Parties as the date the Contract is to end.

Expenses Any actual and reasonable out-of-pocket costs incurred by the Supplier in the delivery of the Services and agreed to in Schedule 1.

Extraordinary Event An event that is beyond the reasonable control of the Party immediately affected by the event. An Extraordinary Event does not include any risk or event that the Party claiming could have prevented or overcome by taking reasonable care.

Fees The amount payable to the Supplier for the time spent in delivery of the Services calculated on the basis stated in Schedule 1, excluding any Expenses and Daily Allowances.

GST The goods and services tax payable in accordance with the New Zealand Goods and Services Tax Act 1985.

HSW Act means the Health and Safety at Work Act 2015.

Hourly Fee Rate A Fee payable for each hour spent delivering the Services.

Intellectual Property Rights All industrial and intellectual property rights whether conferred by statute, at common law or in equity, including, but not limited to copyright, trademarks, designs and patents.

Milestone A phase or stage in the delivery of Services resulting in a measurable output. Payment of Fees is usually due on the satisfactory delivery of a Milestone.

New Intellectual Property Rights Intellectual Property Rights developed under this Contract or in the performance of the Services.

Notice A communication from one Party to the other that meets the requirements of clause 14.

Party The Buyer or the Supplier, and together they are the **Parties**.

Personnel All individuals engaged by either Party in relation to this Contract or the delivery of Services. Examples include: the owner of the business, its directors, employees, Subcontractors, agents, external consultants and co-opted or seconded staff.

Pre-existing Intellectual Property Rights Intellectual Property Rights developed before the date of, or independently from, this Contract.

Protective Security Incident A security incident that is:

- a breach of protective security policy or procedures
- an approach from anybody seeking unauthorised access to officials or official information, or
- any other event that harms, or may harm, the security of the Buyer and/or the Buyer's Confidential Information.

Records All information and data necessary for the management of this Contract and the delivery of Services. Records include, but are not limited to, reports, invoices, letters, emails, notes of meetings, photographs and other media recordings. Records can be hard copies or soft copies stored electronically.

Services All work, tasks and Deliverables, including those stated in Schedule 1, that the Supplier must perform and deliver under this Contract.

Schedule An attachment to this Contract with the title 'Schedule'.

Start Date The date when this Contract starts as stated in Schedule 1.

Subcontractor A person, business, company or organisation contracted by the Supplier to deliver or perform part of the Supplier's obligations under this Contract.

Supplier The person, business, company or organisation named as the Supplier in in the Contract Details section.

Variation A change to any aspect of this Contract that complies with clause 16.1.

Jacobs Challenging today. Reinventing tomorrow.

Coastal Science and Engineering Services - **Takutai Kāpiti: Our community-led coastal adaptation project**

RFP Reference No.: 2020/C340

Prepared for: Kāpiti Coast District Council

15 July 2020

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Appendix A: CVs

Response Form

In response to Request for Proposals (standard version)

by: Kāpiti Coast District Council

for: Coastal Science and Engineering Services - Takutai Kāpiti: Our community-led coastal adaptation project

Ref: 2020/C340

Date of this Proposal: 15.07.20

Checklist for Respondents	✓
1. Complete all sections of the Response Form.	✓
2. Delete all 'supplier tip' boxes, guidance notes in ed font, a d yellow highlighting.	✓
3. Make sure that you have complied with all e instr ctions contained in the RFP.	✓
4. Arrange for the declaration to be sig ed.	✓
5. A for the Proposal to be s mitted elec onically before the Deadline for Proposals.	✓

1. About the Respondent

Our Profile

Item	Detail
Trading name:	Jacobs New Zealand Limited
Full legal name (if different):	As Above
Physical address:	Level 8, 1 Grey Street, Wellington 6011
Postal address:	PO Box 10283, Wellington 6143, New Zeala d
Registered office:	Level 12, 55 Shortland Street, Auckland 10 0, New Zeal d
Business website:	www.jacobs.com
Type of entity (legal status):	Limited Liability Company
Registration number:	9429037904685
Country of residence:	New Zealand
GST registration number:	069-626-947

Our Point of Contact

Item	Deta
Contact person:	B uce Cla e
Position:	Senior Environmental Principal Consultant
Phone number:	64 4 914 8417
Mobile number:	
Email add :	

2. Response to the Requirements

1. Proposed solution	Weighting 30%

Solution Overview

A. Project Understanding

Kāpiti Coast District Council (KCDC) have initiated the procurement of a Coastal Hazard a d Risk Assessment for the District coastal environment and technical advisory services o coastal aptation pathways. The Project will identify areas exposed to current and future coa tal inun tion a d erosion hazards over a 100-year time frame with climate change and have consi ation of how hese will interact with other hazards such groundwater, pluvial, and fluvial flooding wh h may also be exacerbated by climate change. The outputs from the project will in lude mappe hazard overlays setting the coastal hazard context of the Kāpiti Coast District Coastline om Otaki in the north Paekakariki in the south, identification of the high-hazard a as a the 2 kms of district coastline and vulnerability and risk assessments in these high-h zard are

It is our understanding e primary purpose f the co tal haza d and risk assessment is as input into the proposed coastal plan change to the Kāpit Co t District Plan and in the development of preferred coastal adaptation pathways fo h Kāpiti c astal c mmunities under the Takutai Kā project. In additional to these purpos , it is under ood t at that the outputs will also have a range of other u cluding in asset managem nt and resili nce planning for council assets identified as being in high-hazard risk areas. As such, is und rstood hat all information created from the hazard a k assessments must be easily understo d by th ommunity and council asset managers.

We are aware that the have b en severa previous coastal hazard assessments undertaken for the Kāpiti District coas line, an hat assessments undertaken under this project require a review and update of these previous asse ments, with consideration of review panel comments from the 2014 Coastal Ero n Hazard As essment (Carley et al., 2014) on the methodologies undertaken in some of those assessm nts. It is un rstood that the methodologies used in the updated assessments need to be s enti ally ro ust and defendable, and consistent with the relevant requirements of NZCPS (Doc 2 10) Policy 2 the MfE (2017) Coastal Hazard Guidance and any other best practice guidelines, and r sults are fit f purpose to assist KCDC and their coastal communities with future decision making for the coastal e vironments. These methodologies and results are to be presented in a comprehensive report that will be externally peer reviewed to ensure that they meet the above requirements.

It is our understanding that following the presentation of the Coastal Hazards and Risk Report, that the w will be required to act as a Technical Adviser to the Takutai Kāpiti Community Assessment Panel(s) to provide best practice technical advice on the development of preferred Dynamic Adaptative Planning Pathways for each community to manage their future coastal hazard risk.

B. Our Solution

Our team brings together a strong mix of international and local experience in coastal processes interpretation, coastal hazard identification, assessing the coastal and multi-hazard impacts of climate change and sea level rise, coastal management and development of Dynamic Adaptation Planning Pathways, coastal protection engineering and community engagement. This experience includes the use of innovative techniques to model and map future hazards under climate change scenarios. To provide a strong local knowledge to the New Zealand and International team, the project team will include and be managed by experienced members of our Wellington based office, who ave perience in successfully delivering stormwater projects for KCDC.

To ensure that we have correctly scoped the project and understand the req irem nts of K DC and the local site characteristics, the initial stage of our solution includes an incep on meeting nd si visit of key personnel from Jacobs with KCDC to confirm the approach to sea evel r e required fo both the District Plan provisions and the development of Adaptative Planni g Pathways, methodologies, availability and timeline for delivery. The initial phase of the project w ll also involv the review of previous assessments to confirm the scale of additional inv tigations re uired to bring the past assessments up to date with acceptable methodologies and modelling. Th eview will focus on the following previous assessments:

- 2012 coastal erosion assessment (CSL, 20 2),
- 2012 and 2019 storm surge assessments (NI A, 210 an 2019),
- 2012 KCDC fluvial and pluvial fl od mode ing fo co stal reaches of the Ōtaki, Waikanae, Wharemauku, Paekākāriki a Mazengarb tchments
- 2012 assessment of clim te cha e impacts on groundwater levels (SKM, 2012).

At the end of this review, w will pro uce a t hnical memo outlining the gaps and limitations in the previous assessments, a d confirmation f the investigations methodologies and data requirements required for updated ass sm nts. The purpose of this gap and limitation assessment is t t all past information used possible and that KCDC finances are not wasted duplicating work that is technically suitable.

Following the bove initi ase and gap analysis, we would proceed to update the hazard and risk asses s cov ring the following areas:

- **Coasta Erosion:** Probabilistic assessment of the future shoreline erosion for both open coast and inl t shorelines over agreed time frames up to 100 years to include extrapolation of histo cal trends, short-term storm erosion effects, and the impacts of a range of sea level rise scenarios. We recognise that different methodologies will be required to assess the different processes and shoreline morphologies operating along the open and inlet coast Coast District (e.g. sediment supply). Details of the proposed methodology for the coastal erosion assessment are provided in Section 1.3 of this response.
- **Coastal Inundation:** Update of the NIWA (2019) modelling to incorporate addit sea level rise scenarios, how these interact with agreed pluvial and fluvial flood scenarios with future sea level rise from existing KCDC flood modelling, and how they interact with elevated

groundwater levels because of sea level rise. Details of the proposed methodology for the coastal inundation assessment are provided in Section 1.3 of this response.

- **Vulnerability and Risk Assessment:** The hazard mapping will be used to develop vulnerability risk assessments for coastal erosion and inundation. This study will follow on from the work completed by GWRC (2019) which carried out a high-level vulnerability study based on infrastructural, ecological and cultural assets. This assessment would be more detailed on a property by property basis, which could be used for input into the District Plan. Details o he proposed methodology for the risk assessment are provided in Section 1.3 of this response.

In preparing the technical reporting and GIS map outputs from the above assessments, we will f us on presenting results within a coastal unit approach based on the eight coastal cells presente in GWRC (2019) vulnerability study. To ensure that the assessment methodologies, r orting and m pping outputs are acceptable to the KCDC external peer reviewer and avoid po ntial issues the nd of the project, we would like to work with the reviewer carrying out a rolling revie throughout ll stages of the project.

Due to the use of the information created from the hazard and risk ass sments being used co ty engagement for both the District Plan Review and for the d elop t of ommunity led Adap Pathways, easier to follow and understand summarie of the te hnical report and maps will be produced for these en ent sessions. Althou h interactive we based hazard and risk map outputs are not within the scope of this project, we could rodu e as a follow-on project to assist the Community Assessment Panel(s) with their discussio and de ion making.

Following the preparation of the Coa al Hazard a d Risk ssessment report, to assist with developing adapt stal pathways plans for e ch coastal community we will provide best practice advice in the role of Technical Adviser to the K DC Coa al team and Community Assessment Panel(s). It is anticipated that this role w l include ssisting ith the development of initial long-list of adaptation options that might be s itable for each c astal unit, then providing best practice advice in assessing these options to develop a sh rt-list of possible adaptive planning pathways over a 100-year timeframe for each coastal uni In pro iding this advice, we could use several analysis tools such as criteria for a Multi-Criteria Analysis (MCA), C st Benefit Analysis, sustainability and value by design tools, and an interactive adaptati a gement exercise tool developed by Jacobs. It is anticipated that this techni l adviso y role will involve the presentation of best practice advice to the KCDC Coastal Team a d the Community Assessment Panel(s) via technical memorandums and the presentation of technical formation at Community Assessment Panel workshops.

Key Deliverables

- **Deliverable 1** – An updated Coastal Hazard and Risk Assessment of both Coastal Erosion and Coastal Inundation Hazards. This will be delivered as a technical report. The report will show maps of the hazards under each SLR scenario and timeframe, and these will also be provided with the report as GIS layers.
- **Deliverable 2** – Technical advice to the Takutai Kāpiti Community Assessment Panel throughout the development of coastal adaptation pathways. This will be delivered during workshops/meetings and can be delivered by memorandums when written con irm ion of decisions is required.

Methodology

A. Stage 1: Coastal Hazard and Risk Assessment

A.1 Sea Level Rise Approach

It is recognised that a vital component of the hazard and risk assessment for both the District Plan Provisions and the development of Adaptive Planning Pathways is the consideration of magnitud and timing of future coastal inundation and erosion hazards with projected sea level rise Therefore, it is important to establish up front the approach to projections of sea level r se to e used in the assessment. The MfE (2017) coastal hazard Guidance recommends the use of ran e of sea level rise scenarios with clear identification of the uncertainties in the resu ing eros n and inundation hazard extents from the different scenarios.

While the District Plan instruments (e.g. Objectives, Policies, Rules) ar mor likely to be b sed on hazard extent over a specified time (e.g. 50 and/or 100 years), the developmen of Adaptative Planning Pathways requires triggers of action when the vulnerability t hazards reaches unacceptable levels. Therefore, requires an incremental ap ach to sea vel rise largely independent of time. To satisfy both these requiremen s, as w ll as the req irements of the MfE (2017) Guidance and the NZCPS (2010) Policy 24 (id ntification o hazard areas over a 100-year time frame), it is proposed that the coastal inun ation an erosion h zards be assessed under the following range of incremental sea level rise scenar s resented n Table 1:

Table 1: SLR projections in meter to e used o the K pi Coast coastal erosion assessment compared to projections in MfE (017) for the w der New Zealand region.

Year	Proposed KCDC hazards assess ent	NZ RCP2 M (m dian)	NZ RCP4.5 M (median)	NZ RCP8.5 M (median)	NZ RCP8.5 H (RCP 8.5 83rd percentile)
2030 (e.g. 30 yrs.)	0.2	0.13	0.13	0.15	0.18
2070 .g. 50 yrs.)	0.4, 0.6	0.32	0.36	0.45	0.61
212 (e g. 100 yrs.)	0.6, 0.8, 1.0, 1.35	0.55	0.67	1.06	1.36

The confirmation of these sea level scenarios and how they relate to the past hazard assessments undertaken for the Kāpiti Coast will be an item for discussion at the inception meeting. Note the time component is not relevant for the coastal inundation assessment (unless considering the effect of geomorphic shoreline responses associated with erosion in the inundation assessment), so there are proposed to be six sea level rise scenarios for coastal inundation and seven for coastal erosion.

A.2 Project Start-Up

The project start-up includes the following four tasks:

1. **Review of previous assessments of the coastal hazards** of the Kāpiti Coast to confirm that the methods proposed in this assessment are appropriate and to confirm the data needs to undertake the assessment
2. An **Inception Meeting** to confirm key components of the methodology and data requirements with key KCDC staff
3. A **Site Visit** for the key members of the Jacobs project team to gain a visual appreciation of the KCDC coastal area and processes particularly at areas with already identified hazard issues.
4. **Collation of required data**

A.2.1 Previous Hazard Ass sment Review

Based on our understanding of the criticism of some of the methodologies used in previous coastal hazard assessments or the Kā iti Dist coast (e.g. CSL, 2012), it is considered important that we gain an in-depth understanding f the methodologies and their limitations employed in these past assessments, nd to confirm the assessment areas required to be updated an methodologies pri to me ng with KCDC for the inception meeting. This comprehensive review will focus on the follo ing rel vant reports from Takutai Kāpiti's online coastal bibliography and any other considered important y KCDC staff:

- NIWA 2019) Storm Surge Inundation Maps for the Kāpiti Coast. Consultancy Report for GW C.
- Carley J et al., (2014) Coastal Erosion Hazard Assessment for the Kāpiti Coast: Review of the Sci nce and Assessments Undertaken for the Proposed Kāpiti Coast District Plan 2012. Panel Review.
- De Lange, W (2013) Kāpiti Coast Coastal Hazard Assessment. Submission to the Review Panel
- CSL (2013) Erosion Hazard Assessment: Northern Shoreline of Waimeha Inlet
- CSL (2012) Kāpiti Coast Erosion Hazard Assessment – 2012 Update. Report for KCDC
- NIWA (2012) Joint Probability of storm tide and waves on the open coast of We Report for GWRC.
- SKM (2012) High Level Assessment of Climate Change Impacts on Kāpiti's Groundwater. Report for KCDC.

- NIWA (2012) Assessing the storm inundation hazard for coastal margins around the Wellington region. Report for GWRC and KCDC.
- Kāpiti Coast District Council flood modelling for the for coastal reaches of the Ōtaki, Waikanae, Wharemauku, Paekākāriki and Mazengarb catchments
- CSL (2008) Kāpiti Coast Erosion Hazard Assessment (Parts 1, 2, & 3). Report for KCDC.
- Lumsden (2003) Strategies for Managing Coastal Erosion Hazards on the Kāpiti Coast. Report for KCDC.

Following this comprehensive review, we will prepare a technical memo to be tabled at e inception meeting outlining the gaps and limitations in the previous assessments, and confirmation of the investigations methodologies and data requirements requir d for upd te assessments. The purpose of this gap and limitation assessment is to ensure hat a past information is used if possible and that KCDC finances are not wasted du cating work hat is technically suitable.

As outlined above, one of the key aspects to be considered in this r view is the m gnitudes and timeframes of sea level rise considered in the previous assessments, and how they relate to th increments of sea level rise proposed to be used in this ass me

A.2.2 Inception Meeting

Following the review of the previous assessment key Jacobs technical staff will travel to KCDC t have an inception meeting with the key project part rs which ill allow us to confirm the approach to be adopted in the hazard a sessmen Key p in of discussion at the inception meeting include:

- Tabling of the review of p rvious sessme ts with focus on limitations, ability to use th past assessments, a d the updates re u ed in the current the assessment;
- Confirmation of he methodolog s of be used in the inundation, erosion and risk assessments (de ils o proposed methodologies given below);
- Confirmatio of proposed sea level rise projections from section A above;
- Confirmation of robab stic outputs (e.g. P50, P95, P33, P66 etc);
- Con mat f ass mptions on continuation of existing coastal processes, particularly sedimen supply to the coastal sediment budget and transport;
- Conf mati of transfer of available information and data (see section A.4 Data Collation below)
- Confirmation of timeline for outputs;
  Conf mation of the use of the assessment outputs so that the technical reporting and mapping can be pitched to the correct audience;
  Confirmation of whether the optional post assessment results workshop with key KCDC staff and elected members is required or not; and
- Confirmation of requirement to attend Community Assessment Panel meetings and other community engagement during the preparation of the Hazards and Risk Assessment phase.

It is recommended that the KCDC external peer reviewer be engaged right from the inception meeting to ensure that they are party to all discussions on methodologies.

A.2.3 Site Visit

We consider that understanding the local coastal process environment is important for the correct interpretation of coastal hazards. Therefore, coupled with the inception meeting we will undertake a site visit to various locations along the Kāpiti District coastline to gain a visual appreciation of coastal processes operating along both the open coast and within the coastal inlets, particularly at areas with already identified hazard issues such as the northern Q I coast, and seawall sections at Paekakariki and Raumati. This site visit will also allow us to dete mine t changes in morphology and processes occurring at the boundaries of the eight coastal cel identified in the GWRC Vulnerability Study (2019) and shown in Figure 1, which co ld drive differences in the methods used within each cell to assess the erosion imp cts of acc lerate future sea level rise. KCDC staff will be invited to attend the site visit so t discussion from the inception meeting can continue site.

gure 1: Coastal Cells from the GWRC Vulnerability Study (2019).

A.2.4 Data Collation

Geographic Information Systems (GIS) will be used to collect, store, integrate and visualise datasets from various sources required for the updated assessment. It is anticipated that the

following data may need to be collated in the initial stage of the project for use in the assessment either as inputs in the modelling or for validation of the models:

- The most recent LiDAR and RPAs (drone) surveys for ground elevation inputs in the inundation modelling;
- Flood models results and water levels for the coastal reaches of the Ōtaki, Waikanae, Wharemauku, Paekākāriki and Mazengarb catchments;
- Bathymetry mapping or data;
- Digital data on past shoreline positions mapped from aerial imagery in previous astal erosion assessments;
- Recent aerial imagery since the CSL coastal erosion assessments in 2008 and 2012
- Beach profile surveying/ monitoring data;
- Any wave data relevant for the Kāpiti Coast
- InfraRed imagery to get overland roughness for inundation m dellin
- Council Asset Data (storm water, floor levels, roading leve building fo prints)
- Any additional digital information on coastal seawall position nd elevations and drain inverts;
- Any records or database of coastal storm even to pro ide storm wave inputs into short-term storm erosion models.

It is understood that some of this data will need t be requested from GWRC and NIWA.

The link, http://www.iapad.org/wp-content/uploads 015/0 /p3dm arcbc.pdf is to a methodology and principles used in the engagement of va ous components of the community to unders digenous and local knowledge using Participatory GIS. Although a few years old, the principles remain the same but with the technology updated to a more reliable and efficient technology to engage and understand people's and community's knowledge of their environment.

A.3 Coastal Inundation Hazard Assessment

The NIWA coastal inundation modelling (2012, 2019) has already considered case of purely storm tide driven flooding from the joint probability of tides, storm surge and waves (but not coincident with pluvial/fluvial) over the whole district, so it is considered that there is no need to replicate this modelling.

H wever, the is a need to better define the interaction between coastal storm tide inundation a d fluvial and luvial flooding and how this may change under sea level rise and associated po ible eleva on of groundwater levels. For this assessment, we will make use of the seven existing DC stormwater models which were used to define the current flood hazard maps. We are familiar with these coupled MIKE11-MIKE21 models MIKE URBAN coupled models of the sto mwater pipe network for some catchments, having developed them and use them day to day o support KCDC in assessing development proposals and updating the flood hazard maps and district plan maps. We note that new models are being developed under a separate pro for efficiency and programming purposes we consider that it makes sense to use existing available models. The Current flood hazard maps are for a 1 in 100 AEP pluvial/fluvial event combined with

a 1 in 20 AEP storm tide event including climate change allowances for rainfall intensity (16% increase) and mean sea level rise of 0.8 m.

Our proposed methodology is to model simulations for each catchment to assess effects of smaller AEP storm tide and higher AEP pluvial/fluvial (e.g. 1 in 100 AEP storm tide and 1 in 10 AEP or 1 in 20 AEP pluvial/fluvial). The actual combinations to be modelled are proposed to be confirmed with KCDC at the inception meeting. It is proposed that the storm tide to include th increments of mean sea level rise as set out in Table 1 above, or any variations as agreed with KCDC at the inception meeting. For costing purposes, we allowed for 6 separate scenar of storm tide + SLR + pluvial/fluvial AEP for each of the existing models (e.g. 42 simulations in tota

The models are to include initial water levels representing estimated groundwat ponding for each scenario (assuming these are available, costs include allowance for pr cessing ta to required input data for model but not for generating GW levels themse e)

For efficiency (e.g. time/cost), the existing models will be used "as is" with only minor modifications if/where needed to successfully simulate these scenari s. Model res lts will provide indications of extent and degree of impact of coastal hazards on pluvial/ uvial hazards rather than detailed flood risk assessment.

We have not allowed for future changes in coastlin position to e sion (or accretion) to be represented in model, however, this can be inclu ed as e tra scenarios at extra cost if required

A.4 Coastal Erosion Hazard Assessment

A.4.1 Erosion Hazard Zone Calculation

Our methodology will involve a probabilistic approach to produce mapped future shoreline positions over pre-determined planning timeframes from the combination of:

- continuation of long-term retreat/accretion;
- the effects of future accelerated sea level rise; and
- the occurrence of short-term storm erosion at the end of the planning timeframe.

These components are combined in the following formula to produce a Coastal Erosion Zone, termed here as a Projected Future Shoreline Position (PFSP)

$$PFSP = (LT \times T) + SL + ST$$

Where:

LT = Extrapol ion of the long-term erosion rate (zero if accreting coast);

SL Erosion due to future accelerated sea level rise erosion for agreed sea level rise increments or sce arios

T = Time frame of 30, 50 and 100-year selected to correspond to Adaptative planning pathway, asset management, Building Consent and Resource Management Act land-use planning timeframes.

ST = Short term storm erosion.

This approach is consistent with the requirements of Policy 24 of the NZCPS: *Identification of coastal hazards*, and with the best practice recommendations in MfE (2017) *Coastal Hazard and climate Change Guidance to Local Government* and Ramsay et al (2012) *Defining coastal hazard zones for setback lines: A guide to good practice.*

The proposed methodology to determine each of the above erosion components are described in the following sections. Each of these methods are recommended based on our knowledge of t e Kāpiti Coast, considering the following factors specific to the local coast that will shape the future erosion response:

- Shoreline and coastal inlet morphology, including sand beaches exposed to wave overtopping;
- Coastal processes: wave climate, water levels, sediment supply and ranspor and
- Anthropogenic influences e.g. Shoreline protection structures.

A.4.2 Probabilistic Approach

In line with the approach taken by Jacobs (2020) for the Timaru Distric and NIWA (2019) for t Waitaki District coast, a 'probabilistic' approach will be use o ge th uncertainty in the three erosion components (LT, SL, ST). This approach sumes normal or triangular distribution of erosion rate for each component (depending on he amount of ata available on each component) and using MATLAB to run Monte Ca o simu ations where 10,000 random realisati of the erosion distance for each component are mad and then combined to provide a distribution of 10,000 random projections of the total C HZ width from the current shoreline position for each SLR scenario. Probability statistics are applied to this distribution to obtain the "most likely" (e.g. 50th or 33rd-66th percentile) and "very unlikely" (e.g. 95th percentile – so only 5% chance that they will be exceeded) shoreline position for each SLR scenario.

A.4.3 Long-Term Erosion Determination

Long term (historical) erosion rates will be determined from digitised shoreline positions from past aerial photo imagery. If possible, this will use the previous digitised past shoreline positions up to 2007 from CSL (2012, 2008), and updated to include the shoreline from the 2017 aerial images. For costing it is assumed that the CSL shoreline mapping is accurate and available in digit for at. If not, then shorelines from the six to ten photo series available over the last 80 y ars will nee to be digitised, with the early images also needing to be geo-referenced and o thorectified t provide a measure of relative accuracy of shoreline position.

The SAS (Di ital Shoreline Analysis System) tool from ArcGIS will be used to calculate the change in shoreline position at 50m alongshore intervals and develop linear regression trends of rate of sho eline movement over the complete time series of images at each transect. The regression co-ef cient (r^2) will be used to test trends in rates of shoreline movements, and further analysis of coastal processes and any anthropogenic effects (e.g. seawalls, river mouth training structures) will be considered for locations that do not fit a linear trend.

If the resulting historical rates of movement from the DSAS are erosional or indicate a long-term trend towards erosion, the extrapolated future retreat distances over timeframes of 30 years

(2050), 50 years (2070) and 100 years (2120) will be calculated for input into the coastal erosion hazard zones. For sites where the rates of retreat have been artificially held by seawalls, an assessment of potential future likely erosion without the structure will be also be made based on coastal processes and local site conditions.

It is recognised that due to the nature of erosion processes, the erosion rates from the DSAS could have a high degree of variability across adjacent transects, which will create difficulty for the mapping of erosion hazard zones. To overcome this problem, a moving average filter across 10 transects will be used to smooth the erosion rates for hazard mapping. The LCI95 calcul d in the DSAS will be used to determine the max and minimum from the distribution that enters he Monte Carlo simulation.

A.4.4 Accelerated Sea Level Rise Erosion Impacts

It is proposed that the erosion impacts of accelerated sea level rise wi be a essed for all he increments of rise and timeframes presented in Table 1, which cover the range f scenarios recommended by MfE (2017) and meet the requirements of NZCPS (2010) for up to a 100-year timeframe. These increments will be confirmed in the ince ion meeting

To avoid double accounting of sea level rise impacts o erosion hazard zones, as identified in the 2014 review of the previous CSL (12) assessment, t e future rates f rise will be discounted for the contemporary rates of rise over the last 50 years aken s average of 2mm/yr.), as this rate of i is already included in the extrapolation of historical astal eros on. Therefore, the erosion impacts from this component of hazard zone calculation re or the future acceleration of sea level rise.

The main beach type found along the Kāpiti Coast is sand beaches. For this beach type, the most widely used geometric two-dimensional beach response model applied to determine the effect of sea level rise on shoreline position is a Bruun Model approach (Bruun 1962, 1988). The best practice guidelines for defining coastal setbacks (Ramsay et al, 2012) state that the Bruun applicable for use on open sandy beaches and it has been accepted for use by the Environment Court as an appropriate approach for determining sea level rise impacts on coastal erosion. The model involves the assumptions of conservation of an equilibrium profile shape with the volume eroded seaward from the beach being that required to raise the nearshore profile out to the clo ure dept for cross-shore sediment transport by the same vertical magnitude as the magnitude of s a level rise. Therefore, the resulting horizontal shoreline retreat is depe th beach-nea hore slope from dune crest to the closure depth and is expressed by the following equa on

$$Retreat = S \frac{L}{(h+d)}$$

Where: S is SLR; h is dune crest height; d is closure depth; and L is distance from dune c closure depth.

Data inputs for the Bruun Rule calculations include beach topography from the monitored profiles and LiDAR surveys, bathymetry data and wave data to calculate "closure depth" for the offshore

limit of beach sediment exchanges. Maximum and minimums for the probability distribution are determined from adjusting the nearshore slope. The impact of longshore plan shape considerations and cross shore changes in the coastal topography on the SLR erosion outputs will be considered at each of the assessed timeframes.

However, it is noted that CSL (2008, 2012) applied an alternative model from Komar et al (1999) which is based on the concept of conservation of the form of the inter-tidal beach as sea level changes. This model is expressed by the following equation

$$\text{Retreat} = S/\tan\beta$$

Where S is SLR; and tan β is the slope of the inter-tidal beach.

It is our methodology to undertake sensitivity testing on the results of both eomet c beac response models to determine the range of possible shoreline responses or each incre ent of sea level rise to define the probability distribution for input into the Monte C rlo simulation.

A.4.5 Short-Term Storm Erosion

The assumption for inclusion of this component when calc l ting erosion hazard zones is that the storm resulting in this erosion will occur at or near the end of he planning meframe under consideration, and therefore the beach will not hav the opportu ity to recover within the designated timeframe.

We understand that the 2014 review of the CSL (201 erosion ssessment conducted for the Kāpiti Coast found that the method used (i.e. a statistica ap roach attributing change from outside of the long-term linear trend to short term change) was not sufficiently robust and recommended that the methods used in the Lumsden et al (2003) hazard assessment (i.e. methods from Ruggiero et al., 2001) should be used and updated with the most recent profile and wave data. We have adopted this recommendation in our proposed methodology.

In this model, the erosion of the foredune is dependent on the water-level elevation com with the elevation of the toe of the foredune, with the components of the calculation being

shown in Figure 2.

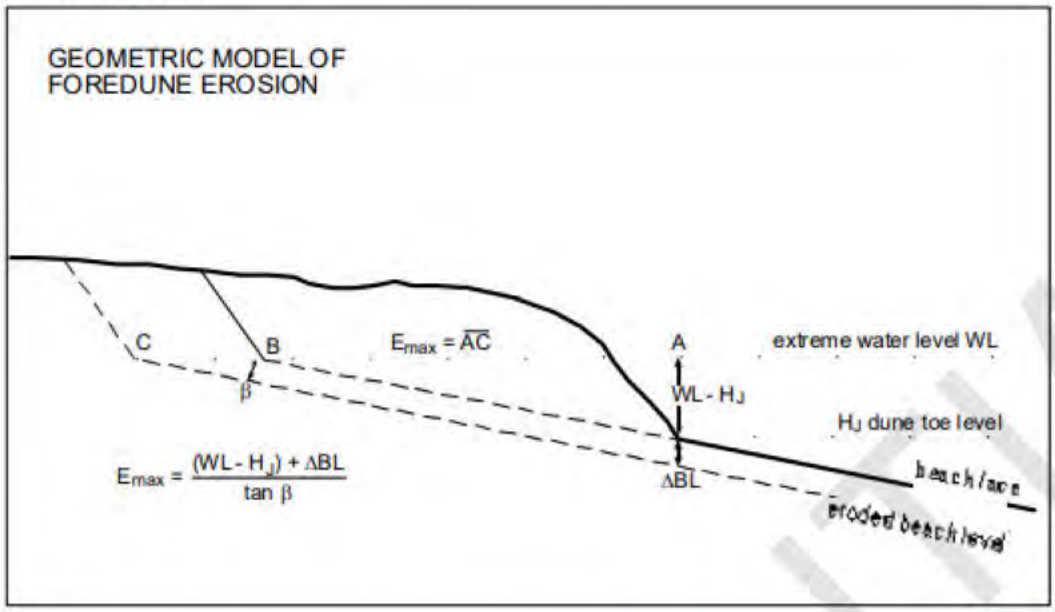


Figure 2: Geometric model of foredune erosion from Ruggier l (001), as taken from Lumsden et al (2003).

The total water level (W[redacted]he combined resul nt tidal evation a d storm wave run-up. At any specific location, the beach face is dominated by w ve wash an has a typical uniform slope angle (β). The model assumes that this slope is mainta ed as he dunes are eroded back so the analysis focuses on the right triangle depicted in Figure 2 where erosion due to high water alone cuts ba[redacted] foredune to point B. Additional erosion could result from the lowering of the beach due to the presence of a rip current or general beach erosion during the storm. This vertical shif in the profile is represented by the beach-level change ΔBL, which results in a further retreat of the dunes to point C in Figure 2. The total retreat of the foredune is now given by the line segment AC, which is taken as equivalent to E_{max} (the theoretical maximum dune erosion during extreme storms).

For this assessment of short-term erosion, data from beach profiles extrapolated out to the start of the bathymetry data will be used to attain a 'typical' profile at each site.

A.5 Eros n Zone Mapping

F llowing the c mbination of the individual erosion components as per the Projected Future Sh eline Posi on (PFSP) formula given earlier, manual interpretation and smoothing of the resulting shoreline position will be applied to obtain lines appropriate for planning purposes.

Arc IS will be used to map the resulting erosion zones for each of sea level increments at the 30 ye r, 50 year and 100 year timeframes (or alternatives agreed on at the inception meting) along with the agreed range of likelihoods to express the uncertainty in the results (e.g. from 50% or 66% probability as 'most likely' maximum erosion distances, and 5% probability of occurrence as an 'very unlikely' maximum erosion distance). All GIS shape files will be made available to KCDC

along with the presentation of the results and erosion zones maps for each coastal cell in the final Hazard and Risk assessment report

A.6 Vulnerability and Risk Assessment

It is our understanding that the risk assessment will be following on from the high-level vulnerability study carried out by GWRC in 2019. This assessment looked at 24 different criteria (e.g. Roads, 3 Waters, Lifelines Infrastructure) and their intersection with a 1 in 100-year storm event with 1 m of SLR, to determine what coastal cells are most vulnerable. While this assessment was useful in identifying vulnerable coastal cells at a high level, a more detailed assessment required to inform adaptive pathway planning, to get an indicative idea of what magnitu es, potential timeframes and frequencies of when sea level rise begins to have a sign ficant im act on the coastal communities. To do this, both erosion and inundation hazards will be ass sed against their intersection with dwellings, properties and infrastructure to get a in ication on a ore detailed level of how communities and their assets will be impacted.

Risk, in line with the MfE (2017) guidance, is defined as:

Risk = Consequence x L el d

For this risk assessment, we propose to use the resul s of the ha ard assessment (outlined in 1.3.2 and 1.3.3) to inform th ssessment. In each oastal ce , we wi use property boundary data and building footprint data from LINZ data service o d ermine the intersection of the hazard footprints with the data. Building footprint data will b filtere for one building per property as the assumed 'dwelling' to remove any garages and sheds he inundation risk will be assessed on both d s and properties, whereas erosion risk will be determined from the intersection of the projected future shoreline position with properties.

The intersection of the hazard footprint will also be assessed against key infrastructure, includin

- Roads
- Three waters infrastructure
- Sites of cultural significance
- Parks
- Schools
  Hos itals/ medical centres
- Civil D fence Sites

Th list of infra tructure and assets will be confirmed at the inception meeting with council.

The results of the risk assessment will be presented in tabular form showing the number or me erage (e.g. 500m of road affected) of assets/dwellings/properties affected, and this pa of the hazard and risk assessment report. The results of this assessment will help council dentify in more detail which coastal cells are likely to be impacted, and when this is likely to occur. Knowing this timeline of when private and public assets are likely to be impacted council in planning adaptive pathways and develop trigger points for when an action is required.

Where possible the RiskScape tool (NIWA/GNS) will be used to assist with the risk assessment, however it is understood that that there is limited support for the current version of the model while a significant new version is being developed.

A.7 Final Reporting

The key deliverable for stage one of this project will be a report detailing the results of the review and updated erosion and inundation hazard assessment, as well as the results of the risk assessment. The methodology and results of the above tasks will be reported alongside the maps and outputted GIS layers.

It is important that people's knowledge is captured, structured and can be viewed spatiall G S tools such as web apps will be used to interactively input local knowledge and visio This w ll also be used to provide expert knowledge from the team. With GIS we will be able to see here e overlaps lie in these 2 sources of knowledge. This can be the starting oint f collaboratio and understanding with the aim of empowering and enabling resilienc in the communities.

The structure of the report will be confirmed at the inception meeting ut could follow the ma task headings outlined above. We have allowed for issue o a d final eports, following review by KCDC, as well as a peer review. Derek Todd ill be th primary author of the report, drawing on his extensive experience of technical w iting for a rang of audiences, including to support public consultation.

A.8 Optional workshopping of results

As an optional extra, following submission of the final report, we would be available to workshop the key findings of the hazard and risk assessment to the relevant KCDC staff and council members. It is our experience that the opportunity to explain and discuss the findings of the project to key members of the client's team has been a very valuable addition to projects of this nature.

A.9 Risks and Limitations

The most significant risk to the study is around the supply and quality of the data required to input into the erosion and coastal inundation modelling, and the uncertainties about future chan ground and flood bank levels. These include:

- That th previous digitised past shoreline positions up to 2007 from CSL (2012, 2008) are technic lly accurate and digitally available, and if not, that errors associated with aerial phot graphs georeferencing and shoreline digitising can be minimised to a satisfactory level to allow meaningful extrapolation of results into the future.
  That trends in erosion rates over time are appropriate to extrapolate into the fu
- Assumption that the future sediment supply from the Otaki River and the Waikanae River and transport alongshore will be at similar volumes and directions as at present.
- Assumption that present day shoreline protection structures will be the same as at present, or if removed/destroyed/overwhelmed, they are not replaced.

- That the information on wave climate, water levels and bathymetry is enough to define the closure depth (for SLR erosion assessment) and 1% storm (for short-term erosion effects).
- That the 1% AEP storm wave characteristics will still represent a similar storm frequency at the end of the planning period being considered.

These risks and limitations will be managed by consideration of the methods to be employed a d reporting of the additional levels of uncertainty of results.

Stage 2: Technical Advice to the Takutai Kāpiti Community Assessment Panel

Following the successful delivery of the Coastal Hazard and Risk Assessment, we will prov e ongoing technical advice and support as required to the Takutai Kāpiti Community ssessm nt Panel to assist in the development of coastal adaptation pathways and w king towar a dis rict plan change.

In this role, we will offer technical advice drawing on our experienc to identify p tential adaptation options that might be suitable for each coastal unit to mana e coastal hazards over the next 100 years. We can then support the panel to asse th its and applicability of each of the options in a structured multi-criteria assessmen to refin down to a short-list of adaptive pathways for each of the eight coastal units. Jacob has extensive xperience in the development of robust coastal adaptation strategies assisting o r clie s in planning and managing their risks into the future with phased actions and confident trig ers for i plementation. Our team provides KCDC with access to expertise in a broad range of mitiga o options ranging from hard coastal engineering solutions such as seawalls, rock revetments, groynes etc. to softer nature-based solutions such as beach re-nourishment, dune planting, vegetation etc.

We see our role in stage two as a technical advisory role, in which we can provide high level advice on an as required basis.

Derek Todd will be our nominated Technical Team Leader, who will be available to be present at the six-weekly Community Assessment Panel meetings. Derek is NZ based and has completed numerous coastal hazard and risk assessments across New Zealand in the context of adaptive planning and inputs into district planning, will be on hand to provide local expertise and advice on a reg ar sis. Derek will draw on his experience in working with other NZ councils to define and manage coast l hazards and in providing quality control in presenting information to c mmunities.

KCD and th Community Assessment Panel can also draw upon advice from our international expertise, Adam Hosking who has led the development of the UK Defra 2006 Shoreline Ma agement Plan Guidance, and Samuel Watkin, our APAC coastal engineering technical director who has led the delivery of a range of coastal management strategies globally including the development of both hard engineering and nature-based coastal protection solutions. Jacobs also has extensive in-house coastal modelling capability which can be drawn upon by KCDC as required to test the effectiveness of the selected short-list adaptive pathways. This would enable the Community Assessment Panel to quantify and compare the performance of the adaptive pathways to assist in the selection of preferred options. From our extensive experience in

conducting risk assessment projects, our team knows that it is important that the focus is on the level of risk reduction achieved by an adaptive pathway, not the straight cost benefit analysis which can lead to selection of an option that provides little in terms of risk reduction. For example; the use of posters to warn people against the carriage of dangerous goods in the mail stream against the installation and use of x ray machines to scan all mail items.

Following the preparation of the Coastal Hazard and Risk Assessment report, to assist with developing adaptive coastal pathways plans for each coastal community we will provide best practice advice in the role of Technical Adviser to the KCDC Coastal team and Communi Assessment Panel(s). It is anticipated that this role will include assisting with the develo ment o initial long-list of adaptation options that might be suitable for each coastal unit then pro di g best practice advice in assessing these options to develop a short-list of poss ble ad ptive planning pathways over a 100-year timeframe for each coastal unit. In pr viding adapt ive pathways advice, we would use several analysis tools such as criteria or a M lti-Criteria Analysis (MCA), Cost Benefit Analysis, sustainability and value by design to ls, and an int ractive adaptative management exercise tool developed by Jacobs. Jacobs de eloped an Adaptive pathways tool for Christchurch multi hazard study to assist i ion make s in identifying the best adaptive pathway options to be considered going forw rd. Th tool can be adapted for use for KCDC and the Community Assessment Panel.

It is anticipated that this technical advisory role w l invo ve the presentation of best practice advice to the KCDC Coastal Team and the Community Assessm nt Panel(s) via technical memorandums and the presentation of technical inform i n at Community Assessment Panel worksh

2. Capability to Deliver	Weighting 40%

Capability Overview

At Jacobs, we're challenging today to reinvent tomorrow by solving the world's most critical problems for thriving cities, resilient environments, mission-critical outcomes, operational advancement, scientific discovery and cutting-edge manufacturing. We turn abstract ideas int realities that transform the world for good.

With USD13 billion in revenue and a talent force of approximately 52,000, Jacobs prov des a ll spectrum of professional services including consulting, technical, scientific and project d liver for the government and private sector.

A key advantage of Jacobs relates to the breadth of our offices through t Australia & New ealand and the depth of our global resources. We are committed to bringin Glob Solutions and Technology Leaders to work with our local team, to actively cont bute to proj ts. For this pro[redacted], we have compiled a team of local and international experts in the fie ds of Coasta Science, Co[redacted] Hazards, Coastal Engineering, Coastal Modelling and Envi ental.

The team has the ability, experience and local knowledge to sist KCDC in t comprehensive assessment of coastal ha ards and the development of sustainable adaptation pathw s to for a robust strategy. **Adam Hosking** – one of our Technical Ad i ors, base n the UK - is Jacobs' Global Solutions Director for Resilience nd h s led the development of the **UK Defra 2006 Shoreline Management Plan Guidance**, which outlines the framework by which the governing body (Environment Agency) assess and manage coastal hazards in the UK.

Complementing our global reach is our local experience of delivering coastal hazards projects and other related studies for local councils in New Zealand. Jacobs Technical Team Lead, **Derek Todd**, is our principal coastal scientist based in New Zealand. Derek has extensive experience over the last 35 years in monitoring and investigating coastal processes and hazards, assessing potential future changes in coastline and rive[redacted] stability, in defining coastal erosion and inundation hazard zones, and appearing in Environment C urt as a expert witness. Derek has delivered numerous coastal hazard assessments throughout his career which includes setting up the regional coastal profile database for the South Canterbury Coast, mapping initial coastal hazard zones for Ecan, and numerous hazard assessments of Timaru district Council and PrimePort Timaru.

The Jacobs multidisciplinary coastal and spatial team has delivered, and is currently delivering, numerous coastal projects in New Zealand over the last few years, including sea level rise hazard assessments for the Waimakariri District Council and the Hurunui District Council, multi-hazard and shoreline condition projects for Christchurch City Council.

All the work our coastal team delivers involves a component of coastal process assessments, whether it be from a coastal hazards or coastal science perspective. Often these assessments will also involve a geological component, given the diverse nature of the New Zealand coastline. A recent project we delivered for the Hurunui District Council involved an assessment of the earthquake effects of an alluvial cliff in a coastal setting. We have a specialist geotechnical engineering team situated in our local team who can be drawn upon to assist with geological assessments.

Due to a large amount of Jacobs work being in the local government arena, we have e nsive experience in presenting and disseminating technical information in a range of formats o a ran of audiences. In our recent Estuary Edge Condition Inventory project for Christchurch City C uncil we were involved with engagement and presentations with council planning a d tech ical sta f throughout the project, as well as with Councillors, Community Boards nd commun y me ings. A key part of this engagement was the production of clear and easy to under and maps by our in-house spatial team. [redacted]

Derek Todd also has an extensive amount of experience in presenting echnical information a[redacted] RMA and Environment Court hearings. Complimenting th expe e of dam & Derek, we also [redacted] have **David Cobby** from Jacobs as a Technical Adviso in this p ject. David has stayed in New Zealand for many yea[redacted]eliver complex land ainage, conom c and strategic multi-hazard [redacted] projects required because of the Christchurch ea thqu kes, and to drive adaptation to future [redacted] climate change and, particularly, sea level rise. Pres ntly locat d in UK, he continues to lead key [redacted] projects in New Zealand while presenting work at inter at onal conferences. He has been a Tech[redacted]rector in Jacobs' Climate Resilience and Adaptation Group, with a key role in growing and delivering Jacobs business with Lead Local Flood Authorities. He also led development of a [redacted] range of Flood Risk Management and Water Resource Management tools based in GIS and other [redacted] industry standard packages

The project manager from Jacobs will be **Anthony Kubale** who has worked as an Enviro[redacted] Consultant with 10 years' experience specialising in Environmental Sciences and Management services across a range of marine and terrestrial industries. Anthony has worked with KCDC on [redacted] previous projects including the Kenakena Stormwater Upgrade project and as part of the Jacobs team that undertook regular stormwater sampling programme. Anthony is experienced in oordinating and managing large multidisciplinary teams and delivering complex projects that meet lient expecta ons whilst ensuring any potential environmental issues are identified an[redacted]

Samuel Watk n is our Coastal Engineering Specialist and a Chartered Civil Engineer (CEng) with extensive experience in the field of coastal engineering. Sam has led the delivery of strategic coastal ha ard management strategies and the design of coastal erosion and inundation mitig[redacted] su port the sustainable management and development of coastlines around the world.

Sam has significant experience in the design of both coastal protection and management solutions including rock and armour unit breakwaters, rock revetments, wave return and vertical walls, beach [redacted] re-nourishment, scour protection, groynes and natural vegetation solutions.

In addition to this, the support team includes Joris Jorissen & Damien Debski who have a wealth of applied coastal-hazard and coastal modelling experience to support the team.

2.1 Health & Safety

Jacobs are deeply committed to ensuring the health and safety of our staff and clients and have developed mandatory health and safety management systems that are regularly audited and reviewed to ensure compliance with legislation and industry practice. The Jacobs ANZ HSE system is certified to AS/NZS 4801:2001 (Safety Management Systems), OHSAS 18001:2007 (Occupational Health & Safety Management Systems) and AS/NZS 14001:2015 (Environmental Management Systems). These certifications are valid until November 2022.

All Jacobs site offices have a health and safety management plan wh ch ensures t health and safety for Jacobs employees in our site office and clients who visit.

Additional health and safety requirements for project are addressed through our Project HSE Work Procedures documents, in which the project man ger will develo a Health and Safety Field W Pack. The health and safety fieldwork package clude a isk assessment and job safety evaluation 'Step back' forms are completed in the field by site orkers wh n on site to identify any additional risks which were not addressed in the field work pack nd lows the site worker to evaluate the safety of the job and decide if it is safe to carry out the fieldwork on the day.

We anticipate that the fieldwork for this project will involve a site visit to various spots along th Kāpiti Coast coastline to help determine any boundaries of morphological cells along the shoreline that will require different approaches to future erosion modelling, and to get a more detailed appreciation for coastal processes operating within the cells. KCDC staff will be invited t site visit for which we will develop a Health and Safety Plan for staff attending using our internal systems. This health and safety plan will be reviewed and approved internally at Jacobs and can be supplied to the Council if requested.

With dynamic and changing environment surrounding the recent COVID-19 outbreak, Jacobs so has the apability for staff to work remotely. This is to ensure the health and safety of staff and lients as they emain our top priority. We understand that this is an evolving situation, K DC can be ssured that works can still be carried out should the staff require self-isolation. Should this o , we also have an ability to host online meetings between Jacobs and KCDC to allow for st ff to connect in remotely to minimise exposure to the virus.

2 2 Quality Assurance & Control

Jacobs is committed to providing you with quality services, delivered in a reliable and responsible fashion.

Jacobs's quality system has been certified by DNV certifier around the globe as meeting the requirements of ISO 9001:2008 "Quality Management Systems - Requirements". The system applies

to all facets of Jacobs operations and includes a quality manual, mandatory quality procedures, and a set of guideline manuals procedures, flowcharts and forms, for a range of activities.

Quality Assurance is defined as "all those planned and systematic actions necessary to provide adequate confidence that agreed requirements will be met" Confidence that services with appropriate quality will be delivered for every project comes from adequate preparation and planning. Our Management Systems have been constructed in a manner which makes them compliant with international standards.

We have developed and operate total quality management procedures under which we e ure all design documentation, together with programme objectives are independently checked and cl se monitored throughout the commission.

In addition, we carry out regular 'peer' reviews of all our projects to ensu e that the eliver bles are most appropriate for the client brief and that the best practices are b ing ffered. More pecifically than the mentioned accreditations, we would note that our quali y assurance rocedures are designed primarily to provide a quality service that delivers effectiv solutions an provides exceptional value to our Clients as their consultant of choice The achie ement of this goal is supported by the Group's management systems that embra e both qu assurance and cor improvement of our service.

- Quality Assurance provides confidence o our Cl ents' our own management and our shareholders that our service will meet the expectati ns on quality. Our Quality Assurance System which complies with ISO 9001:2008 em ha ses the importance of adequate planning and review in the delivery of a quality service and aims to meet our Client's requirements on each consulting commission undertaken.
- Continuous improvement addresses another of our key goals, which is to develop our reputation, people, and technologies and finances so that we have a sustainable practi includes improved Client interaction, more effective learning from our project experience and more support for our Project Managers so that they can apply the right technology and enhanced risk management to projects. Our service targets exceptional value and is reinforced by our culture of openness, teamwork and sharing of experience.
- Personal attitudes, co-operation, teamwork and a keen sensitivity to the continual provement of our services are strongly encouraged.
- On e ch project, a Project Quality Plan is developed and maintained. This includes a plan for forma design reviews of the project, which are carried out at key stages in the project by a dedi ated review team. Records of these meetings are retained within the Quality file, noting the actions required and taken. This system aims to bring the best concepts and ideas to each project, and to achieve design documentation of the highest sta
- Audits of quality on each project are regularly carried out by our Regional Quality Manager and in addition to this; each one of our global offices is fully, rigorously and internally audited by our global Group Quality Manager. Although they are not related t accreditation purposes, we take these internal audits very seriously as a measure of how we are delivering our intended quality to clients.

In addition, several our offices have recently received accreditation to ISO 14001 as part of the firm's policy to hold international recognition for its Quality, Environment and Health & Safety Management Systems and their application on our business.

We also recently received an accreditation to BS 10500:2011 Anti-Bribery and Anti-Corruption (ABC) as part as our approach to ensure to meet our corporate legal and moral obligations. The approach mitigates risk of non-compliance with the UK Bribery Act 2010, Foreign Corrupt Practices Act United States), and legislation in any other jurisdiction pertaining to anti-bribery and corruption. The UK Bribery Act sets the highest bar in terms of obligations and compliance. By complying h this Act, Jacobs ensures that we meet or exceed the obligations required in other jurisdictions in which operate. Jacobs's processes have been reviewed and meet the British Standard for Anti-Brib ry Management Systems. Jacobs encourages all employees to report any insta ces o attemp s of bribery and corruption.

2.3 Specialist Software

In addition to the standard reporting & analysis software and spatia tools based ESRI ArcGIS and/or Feature Manipulation Engine environments, we can provide the following specialist software relevant to this project, the first two of which are unique to acobs.

- **CLIMSystems Software and Services for C mate Change Assessments:** Jacobs part ov CLIMSystems, which is based in Hamilt and p ovides state-of-the-art climate change risk and adaptation assessment tools and servi . CLIMSy ems designs and develops advanced software systems for assessing impacts and ad pta ons to climate variability. CLIMSystems has assembled an excellent team of climate change adaptation and risk assessment experts with a combined experience of over 200 years with projects in over 50 countries. Jacobs, through its acquisition of CH2M in 2017, acquired a part share in CLIMSystems and our combined experience includes iconic projects in Africa, the Middle East and the United States. Six members of the extended team were part of the large team named as part of the UNFCCC Nobel Peace Prize award in 2007 and, as such, represent the strong scientific underpinning of the CLIMSystems suite of data products, software and services. In New Zealand, CLIMSystems is a member of the recently convened Science & Research Services Panel under the Ministry of the Environment. Through Jacobs part ownership, and our ationship with the company and its managing director Dr Peter Urich based in Hamilton, we o fer Council unique access to this world-class resource.
- **Flood X Flood Management Cost Benefit Software:** Jacobs has developed a GIS-based tool and ethodology (termed FloodFX) for Christchurch City Council, to appraise the economic benefits and costs of stormwater infrastructure schemes across the city. Delivery required joint working between expert Jacobs resources in Christchurch, UK and Austra cutting-edge GIS-based calculation and viewing tool, based on international best practice in flood economics. The study facilitated closer working between Council, NIWA and other parties in the relevant area of the economics of flood management and adapti change. Using the same theory and spatial framework, we could develop a similar tool for Council.

- **Coastal Process and Engineering Packages:** We hold licenses and are proficient users of many coastal processes and engineering packages, including:
  - DHIs **MIKE coastal modelling software packages.** MIKE is the leading software package for 2D/3D modelling of hydrodynamics, waves, sediment dynamics, water quality and ecology. It includes simulation engines for tidal flows, storm surge, wave propagation, sand and mud transport, water quality, harbour and structure impacts, advection-dispersion, and oil spills. The team also runs the LITPack suite of mode which simulates sediment transport to project potential beach erosion and shoreline change over time.
  - The Delft University of Technology's **SWAN** spectral wave modelling softwa is a hird generation spectral wave model that computes random, short-crest d wind-g nerated waves. The model considers propagation in time and space w th shoalin and r fraction due to depth included. Waves can be generated applying win throughout e model or by specifying boundary conditions, or a combination of both.
  - Veritech **CEDAS** (Coastal Engineering Design & Analys System), an nteractive windows-based software package for engineers and scien ist working in coastal environment including modules for wave pre ction, tr f mation, set-up and up, sediment transport, shoreline ero on, inlet p ocesses, structural and harbour design.
  - Interactive version of US Army Corp of E gineers **CEM** (Coastal Engineering Ma), containing formulas and int ive gra hs for oastal hydrodynamics, sediment processes and geology

2.4

We have access and experience f using range o coastal data for analysis, optioneering and presentation for coastal pl nning. Fo examp we have access and experience of the NZ Coastal Sensitivity Index Data w ich is only avai ble from NIWA, and similarly for the NZ coastal hydro system database. More ecif cally, through our team's delivery of work for both Kāpiti and Greater Welling on Reg onal Councils, we have a good understanding of the data available and insights into past decis ns, as ell as community feedback and views.

Relevant experience and track-record

Jacobs has a long history of delivering projects collaboratively with KCDC. One of the longest ongoing Projects with KCDC that Jacobs had was the **Global Stormwater Discharge Consent Monitoring and Reporting Program**. Jacobs (then SKM) prepared the original resource consent application for global network stormwater discharge consents in 2006, and during the ten-year duration of that consent we undertook a range of environmental monitoring (stormwater, freshwater, coastal, and sediment quality) and submitted annual consent monitoring reports on behalf of KCDC to Greater Wellington Regional Council, fully compliant with the consen requirements. Jacobs also designed and consented several stormwater treatment wetlan s to mitigate the impacts of stormwater quality on the receiving aquatic environmen from se al higher risk catchments. In 2016 KCDC engaged Jacobs to prepare a new glo al storm ater consent application under the proposed Natural Resource Plan for the We ington Regio (pNRP). Jacobs prepared the application and consent conditions, and liaised with GWRC consents team with KCDC, and KCDC received their new 5-year global stormwater discharge consent in 2018. Jacobs are now successfully helping KCDC to manage this new consent through the first year, in consultation with the three iwis in the District. Jacobs have a strong and trusted relationship with KCDC through this and our work w h the solid waste management eam.

Jacobs has extensive na ional coast hazards experience across New Zea nd recently working with the Hurunui s t Counc l Christchurch City Council and Otago R ginal Council, Environment Canterbu y, Timaru Dis ict Council and Waima riri Di trict Council to support them in the assessmen and management of their coastal hazards We h v also advised the New Zealand Ministry o Foreign Affairs and Trade (MFAT) with oastal ha ards and resilience issues to support th r fo eign aid programs across the Pacific Islands.

Since 2013, Jacobs have anaged KCDC's three landfill onsen for Otaihanga Landfill (nearing closure), and Otaki and Waikanae closed landfills. Jacobs h ve suc ssfully conducted compliance monitoring since 2014 and gained full complian e on K C' half each year. Jacobs successfully sought and designed the resource consent and co ulted with iwi to design and build several landfill leachate treatment wetlands, and we are s ervis ng the construction about to begin.

J cobs (and pre iously SKM) built Kāpiti's flood models and developed flood hazard maps for the en e District hat were incorporated into the District Plan. KCDC continue to engage Jacobs for ongoing flood queries for new developments seeking to build in sometimes flood prone areas. Jac bs query the models and advise KCDC on these new developments and their poten exacerbate existing flood levels and risks to properties.

Jacobs has been at the forefront of developing coastal hazard assessment procedures internationally and in the UK have been instrumental in the development of Shoreline Management Plans (SMP) for large areas of the UK coastline which include the assessment of coastal hazards and risk assessment. This included the development of eleven first round SMPs in the UK between 1994 and 1999 and leading the production of the 2006 central government

Procedural Guidance. In developing this guidance, we undertook three 'pilot' SMPs in the UK (Kelling to Lowestoft, South Foreland to Beachy Head, and Beachy Head to Selsey Bill), and subsequently went on to complete a third of all Plans produced. Further to this UK experience, we have evolved and tailored the UK SMP approach for application to the specific needs of several international locations, including Belize and Louisiana.

We have chosen the following projects to demonstrate relevant experience and track record fo the Kāpiti Coast community-led coastal adaptation project. These project examples highlight our national and internationally-recognised capability in the assessment of coastal hazards d the development of targeted adaptation pathways. The project examples also include proje s wher we have worked collaboratively with Kāpiti Coast District Council over the last 2 years, to pr vide the sustainable solutions for the local communities.

Project Name	**Hurunui District Coastal Hazard and Risk Assessment**
Client Name	**Hurunui District Council**
Project Dates	**August 2019 – May 2020**
Team Members	**Derek Todd (Technical Team leader), Kate MacDonald**

Project Scope: Jacobs have been commissioned by Hurunui District council to undertake a coastal and groundwater hazard assessment at six different coastal settlements situated within the Hurunui District coastline to determine the impact in which sea level rise will have on their coastal residents. This project is using historical litera re, rial imagery, ECan beach profile data and LiDAR surveys to asses coasta erosion and coastal inundation hazards under RCP8 5 and RCP 5 scenarios for 30, 50- and 100-year projections The vu erability and risk of these coastal settlements was assessed using populations, building footpr nts and prop rty boundaries to assess how the populations and assets will be affected. We wi no be involved i community engagement as the start of adaptive planning pathways in the Hurunui D trict.

Relevance: The erosion hazard assessment methodology and risk assessm nt methodolo y are very similar to what we are proposing in this project. We found on delivery that by provid ng a risk assessment on a dwellings/properties basis that the council could use this inform ion form d cisions around when communities are likely to become impacted in the future w th SLR, nd how significantly they may be impacted.

Project Name	**Molyne Bay Cluth Delta limate Change and Geomorphology Inves igation**
Client Name	**Otag Regional Cou cil**
Project Dates	**ne 202 – Prese t**
Team Members	**Dere Todd (echnical Team leader), Kate MacDonald, Damian Debski, am Watkin**

Project Scope: Jacobs is currently undertaking work with Otag Regional Council conducting a climate change and morphological investigation into the expected shoreline change with future sea level rise along Molyneux Bay, at the two mouths of the Clutha R assessment is looking at shoreline change over the next 50 years with consideration of the future presence of river mouth training wall structures, which have had a severe impact on sediment transport and subsequent erosion along this section of shoreline since the his assessmen is also taking a two-stage inundation approach in the lower Clutha using a 'bathtub' ap oach with a 1% AEP storm event and SLR, which will proceed to stage 2 (hydrodynamic modelling) if it is flood banks are seen to be overtopped in the stage 1 assessment.

Re vance: This project uses a similar methodology for determining the erosion hazard along a a has consideration of coastal protection and river mouth training structures. This assessment is looking at coastal hazards in terms of asset management for a council, in which the information will help ORC determine how much maintenance they will need to do on their structures over the next 50 ye what the effects of maintaining these structures might have.

Project Name	**Waimakariri District Coastal Hazards Assessment**
Client Name	**Waimakariri District Council**
Project Dates	**2018**
Team Members	**Derek Todd (Technical Team Leader), Damian Debski, Joris Jorissen (Reviewer)**

Project Scope: Jacobs was commissioned by the Waimakariri District Council to provide information on the extent of future coastal erosion and sea water inundation hazards including the impacts of sea level rise and other climate change effects on coastal processes, to h lp istricts approach to managing natural hazards over a 50- and 100-ye r plann time frame. Stage 1 of the project involved bathtub modelling f c astal inundation using LiDAR surveys, as well as coast l eros on zone mapping using historical aerial imagery and GIS softwa e to determ ne his rical shoreline change rates. With stage 1 havi g i ntified areas risk of coastal inundation as per the bathtub modelling, tage 2 undertook hydrodynamic modelling to further d fine the inter tion of sea water inundation with fluvial flooding and elev ted groundwater levels u coupled fluvial flood and sea l vel rise scen rios.

Relevance: This project used a s milar methodology as is proposed for the KCDC coastline here similar ethods including DSAS tools to define the histor coastal e osion rate and a staggered approach was used to determine the level of inundation required. T s pr ect shows that this methodology has been successfully tried and tested in a local governm nt setting n the co ext of a plan review before. This assessment also looked at the interaction fluvial f oding a d evated ground water levels rise sea-level rise, which would be also explored in th KCDC district.

Project Name	**Souths ore Ero on Management**
Client Name	**Christchur City Council**
Project Dates	**2020 - Ongoing**
Team Members	**Derek Todd (Technical Team Leader), Sam Watkin, Kate MacDonald**

Project Scope: Jacobs have been commissioned by Christchu Council to undertake an assessment of possible engineering options to implement along the Southshore estuary edge to mitigate the erosion hazard. When developing options, consideration was had to the ability for the structures to be able to be adapted in the future as sea Through this process, Jacobs have liaised with the community nominated technical expert to help develop some possible solutions and have continued to engage with the community through public drop-ins, community board meetings and Residents Association Annual General Meetings. Jacobs have l transparent process with the council to ensure the community continue to be informed about the future of heir shoreline.

Relevance: This project demonstrates Jacobs experience in working with communities and cou develop adaptable strategies to tackle erosion issues in coastal communities.

Project Name	**Timaru Coastal Erosion Hazard Assessment**
Client Name	**Environment Canterbury and Timaru District Council**
Project Dates	**October 2019 to July 2020**
Team Members	**Derek Todd (Technical Team Leader), Damian Debski, Joris Jorissen (Reviewer)**

Project Scope: Jacobs were commissioned by Environment Canterbury to undertake a coastal erosion assessment along the entire Timaru Distric coastline for input into their next District Plan. This assessment used a probabilistic approach to calculate projected future shoreline w h varying degrees of sea level rise across many complex morpho gies along the coastline, including gravel barriers, mixed s nd and gr vel beaches, loess cliffs, alluvial cliffs, basaltic headlands an sand be ches. The assessment looked at coastal erosion over 50 and 10 year timeframe under various sea level rise scen rio A parallel ass sment of coastal inundation hazards was undertaken by NI A acting a s a sun consultant to Jacobs.

Relevance: This project used a similar meth dology in assessing the erosion hazard as is proposed KCDC coa tline. This methodology aligned with the MfE (2017) guidance and is being used in e distr t planning process. This methodology underwent an independent review and shows that this pproach is ap ropriate for use in the public domain, and to help inf[redacted]ure planning in the di trict.

Project Name	**Temaik Land and ban D lopment Project**
Client Name	**New Z land Ministr for Foreign Affairs and Tourism**
Project Dates	**20 7 – 201**
Team Members	**Sam W kin (Te hnical Team Leader), Joris Jorissen (Coastal Modeller), Anthony K bale (Marine Science) and Bruce Clarke (ESIA Lead)**

Project Scope: The New Zealand Ministry for Foreign Affairs and Tourism (MFAT) is supporting the Government of Kiribati (GoK) in the onsideration of undertaking a land reclamation and urban development project in the Temaiku Bight, South Tarawa, Kiribati. The Pro[redacted] assist Kiribati in adapting to climate change through raising the height of the land by 2 m within 290 hectares of land, which is estimated to ovide prote tion ag inst sea level rise over the next 200 years. Other benefits of the Project would nclude reclam ion of low-lying land for development, which will to some extent help to addres[redacted] ercrowding o South Tarawa in the short-term. The project included assessment of coastal hazards to as ss the res ience of the existing land and the proposed development. Coastal management practices were ingrained into the design to mitigate future risk of erosion and inundation including adaptive designs to ddress long term future rick such as coastal management buffer zones and future modificati[redacted] se walls to address future sea levels.

Relevance: Undertaking stakeholder engagement in a culturally appropriate manner to develop adaptive climate change mitigation options and demonstrated experience and skills in conducting coasta[redacted] to predict the impacts of sea level rise.

Project Name	**Reducing Coastal Hazards Risks in Tokelau**
Client Name	**New Zealand Ministry for Foreign Affairs and Tourism | Tokelau**
Project Dates	**2018 - Ongoing**
Team Members	**Joris Jorissen (Coastal Hazard Specialist), Derek Todd (Coastal Hazard Specialist), Sam Watkin (Coastal Engineering) and Anthony Kubale (Marine Science)**

Project Scope: Tokelau comprises three remote coral atolls with fragil environments. As a nation consisting of three low lying coral atolls, coastal hazards have impacted built and natural assets acro kelau in the past. Climate change effects and sea level rise are expected to significantly exacerbate the existing levels of coastal hazards.

Jacobs has an on-going commission with MFAT nd the overnm nt of Tokelau to define impacts of coastal change nd climate ch nge to develop a focused resilience strategy and dap ve pathways f coastal hazards and a business case for investing in a management plan. Extensive commun consultation on a national level with atoll councils, Fatupaepae (women's committees) and umaga (able died men) on each of the atolls was undertaken to inform the programme design.

Relevance: Undertaking stakeholder engagement in a culturally ppropr a er to develop adapt climate change mitigation options and demonstrated exp ience an skills in the Coastal hazard and risk assessment of sea level rise on marginal low-lying land

Project Name	**Resilienc Planni for Ec nom c Development in Belize**
Client Name	**Inte merican Deve pment Bank**
Project Dates	**October 016 – April 018**

Pro ct Scop : Ja bs (Adam Hosking) developed a strategy for long-term c astal re ilience for the Corozal Bay region of northern Belize 85km of ast) against vulnerabilities to natural disasters and climate change. Key project elements included:

- Definition of coastal hazards, including climate change.
  Development of a long-term SMP for the Corozal Bay, based on an evolution of the UK SMP approach
- Planning a d design of four demonstration nature-based shoreline stabilization projects
- Engag ment o local community groups and stakeholders to inform development of outputs.
  Training t ensur stakeholders can apply lessons from demonstration projects and SMP.
  Socio-env nmental and economic feasibility studies for sustainability of recommendations.

Re ommenda ons were made for coastal resilience priority areas, targeting support for tourism and economic growth. Preliminary shoreline stabilization designs were developed, integrating nature-based ap roaches and complementary non-structural measures. These will act as demonstrations for delivering su ainable resilience elsewhere in Belize and the wider region. The outputs were also used to underpin a c mprehensive SMP for Corozal Bay, which sets out the long-term coastal resilience strategy.

Relevance: Experience in developing long-term coastal resilience using adaptative pathways and community engagement.

Project Name	**KCDC Stormwater Monitoring and Resource Consenting**
Client Name	**Kāpiti Coast District Council**
Project Dates	**2004-2020**

Project Scope: Jacobs (SKM) has been undertaking stormwater quality monitoring for KCDC in 2004. In 2005 we prepared the application for the first stormwater discharge consent, which expired in 2015. We have provided stormwater monitoring, reporting and consenting services since 2004. Earlier work included routine monitoring of water quality and specific technical studies, however in this section we ha focused on more recent (past five years) activities. Key activities have nclud

- Developing a technical report on the actu and pote ia effects of stormwater discharges on water qualit in th district o support the application for temporary stormwater discharge resource cons nt as requir d by th Regional Plan.
- Creating an AEE to support the application for resource consent.
- Drafting an Adaptive Monitoring Plan (AMP) outlining the proposed monitoring to upport the consent application.
- Applying for the resource consent and then responding to requests wh ch resulted in resource consent being granted.
- Working with KCDC and GWRC on an application to hange the nditions of the consent which has involved close liais the Regional Council t discuss and seek greement on potential changes.

Relevance: Familiar with the KCDC personnel and the āpit area.

Project Name	**KCDC C sed Landfill M nitoring and Consenting**
Client Name	**Kā iti Coas District C uncil**
Project Dates	**Contra comm ed 2013-Present**

Project Scope: Jacobs ha been providing th Solid Waste Services team at KCDC with professional consulting services since 11. Our engagement with KCDC started as a review of the original re consents at Otaihanga Landf which we re-wrote and then successfully obtained a s127 (change of conditions) for. In 2013, we too ver the routine monitoring of the three KCDC closed landfills at Otaihanga Waikanae and taki. This work includes quarterly monitoring of storm water quality groundwater nd landfill g

Ov the ration f our engagement with KCDC, we have also completed a review of the Ōtaki and aikanae res urce c sent conditions, design and construction supervision of three treatment wetlands n the Otaihan a landfill site and many other smaller pieces of work.

R evance: Familiar with the KCDC personnel and the Kāpiti area and acting as KCDC 's trusted adviser over a num years.

Project Name	**High Level Assessment of Climate Change Impacts on Kāpiti's Groundwater**
Client Name	**Kāpiti Coast District Council**
Project Dates	**2012**

Project Scope: Jacobs to undertake a preliminary, high level assessment of future climate change impacts on Kāpiti's coastal groundwater system. Groundwater levels are strongly influenced by the amount of rainfall recharge entering an aquifer system and by changes to system boundary conditions, such as sea level. The project provided understanding of how climate change (i.e. a wetter climate and sea level rise) will affect groundwater levels and saltwater intrusion, and hence the implications for both resi ntial and commercial properties on the Kāpiti Coast. This preliminary study has been designed to investig te th sensitivity of the Kāpiti coastal aquifer system to a wetter climate and sea level rise.

Relevance: Familiar with the Kāpiti groundwater regime and its reactions to sea lev l rise

Table 3: Summary of projects we have worked upon in New Zealand & Globally which highlights our exper en e specifica ly in Coastal Hazards.

	Project	Project summary	Multi H zard Analysis	astal Erosion A es ment	Coastal In dation Assess nt	Vulnerability and R k Assess nt	Community Engagement	Technical Advisory/ review Role	Use in District Planning Process	Adaptive Management Planning
New Zealand Coastal Hazards Work	**Hurunui District Coastal Hazard Assessment** (Hurunui District Council) 2019- 2020	Coastal and groundwater hazard assess ent at six different coastal settlements situated with th Hurunui District coastline to d rmi he imp t in which sea level rise will ha e on their coas l reside t over 30, 50- and 100-year t eframes.	✓	✓	✓	✓				
	Christchurch Multi-Hazards Investigation (Christchurch City Council) 2018-Ongoing	Multi-hazards i estigat n for co al c chments for Christchur City. Hazards c sidered included fluvial & pluvial f ding; se level rise effects on coastal erosion, inu dation, & oundwater levels; tsunami; earthquake, liquefac on, and ass movement.	✓	✓						
	Porirua Coastal Hazards Assessment Review (Porirua City Council) 2020	Ind p t er reviewer for recent Porirua City uncil commissioned report for coastal hazard asse ment.						✓		

	Project	Project summary	M lti Hazard Analysis	Coastal Ero n ssessment	Coa l Inundation A essment	Vulnerability nd Risk A essmen	Community Engagemen	Technical Advisory/ review Role	Use in District Planning Process	Adaptive Management Planning
	Waimakariri District Coastal hazards Assessment (Waimakariri District Council) 2018	Provide information on the extent of future co tal erosion and sea water inundation hazards i uding the impacts of sea level rise and other climat change effects on coastal processes, to help dis cts app ach to managing natural hazards over a 50- and 0 year planning time frame.	✓	✓	✓				✓	
	Timaru Coastal Erosion Assessment (Environment Canterbury and Timaru District Council) 2019-2020	Coastal erosion assessme along the enti Timaru District coastline for input in their next Di rict Plan.		✓					✓	
	Molyneux Bay – Clutha Delta Climate Change and Geomorphology Investigation (Otago Regional Council 2020 - Ongoing	Clim te chang and morphological investigation into the predicte shoreli change with future sea level rise at M lyneux B looking at shoreline change over the next 50 years with consideration of the future presence of riv mouth training wall structures.		✓	✓	✓				✓

	Project	Project summary	M lti Hazard Analysis	Coastal Ero n ssessment	Coa l Inundation A essment	Vulnerability nd Risk A essmen	Community Engagemen	Technical Advisory/ review Role	Use in District Planning Process	Adaptive Management Planning
	Southshore Erosion Management Strategy (Christchurch City Council) 2020 - Ongoing	This assessment is looking at conceptual desi of appropriate shoreline protection strategie ncluding both naturalized edges and hard engin ing struc res to provide erosion protection for the nex 20 ye s, with the potential for adaptivity into the future w sea level rise.				✓	✓			✓
	Estuary Edge Condition Inventory (Christchurch City Council) 2019	This project was an assess ent of the coas structures in the Avon Heathco e Estua where a det led map of each structure and su unding nd cond on was mapped along he 7km s tch of s r ne to determine e change pre-p t-earthquake.		✓		✓				
	New Brighton Hot Pools Coastal Hazards Assessment (Development Christchurch) 2019	Assessme of c stal hazards and sea level rise effects like to affec hot pools development on the beach at New B ghton. luded recommendations on coastal protectio options r the development and adjacent d dunes a d preparation of Coastal Protection Manageme n for ongoing occupation of the beach nt site.		✓	✓	✓				✓
	Auckland Sandspit aste Enclosure Hazards A essment	Coastal hazard assessment looking at the inundation hazard at a new waste enclosure site and determining options to mitigate risks.			✓	✓				✓

	Project	Project summary	M lti Hazard Analysis	Coastal Ero n ssessment	Coa l Inundation A essment	Vulnerability nd Risk A essmen	Community Engagemen	Technical Advisory/ review Role	Use in District Planning Process	Adaptive Management Planning
	(Auckland City Council) 2019									
	Evans Bay Cycleway Detailed Design and Hazards Assessment (Wellington City Council) 2018	Coastal hazards assessment for the Evans Bay ycleway. This included an overtopping sessing rrent overtopping volumes alon he extent of e existi seawall, and likely change due to sea level se over the next 50 (2070) and 100 (212 years. For se ons of the cycleway where seaw ls are no present e potential for shoreline e sion due sea le l ri was also investigated		✓	✓	✓		✓		✓
International Jacobs Projects	**Resilience Planning for Economic Development in Belize** (Inter-American Development Bank) 2016-2018	Developm t of strategy for long-term coastal res ence for e Corozal Bay region of northern Belize (85km f coast) ainst vulnerabilities to natural disasters d clima change.		✓	✓	✓	✓	✓		✓
	Temaiku Land and rban Development Proje (NZ Mini y of oreign ffairs and	Multi isciplinary feasibility study comprising coastal processes and geotechnical engineers (Joris Jorrissen, Sam Watkin), marine and terrestrial environmental scientists, social impact and stakeholder engagement specialists to determine the feasibility of raising 290		✓	✓	✓	✓	✓		✓

	Project	Project summary	M lti Hazard Analysis	Coastal Ero n ssessment	Coa l Inundation A essment	Vulnerability nd Risk A essmen	Community Engagemen	Technical Advisory/ review Role	Use in District Planning Process	Adaptive Management Planning
	Trade) 2017-2019	hectares of land by 2m to provide protection a inst SLR for the next 200 years.								
	Tokelau Coastal Hazard Risk Mitigation Plan (NZ Ministry of Foreign Affairs and Trade) 2018	Strategic project to reduce the coastal hazard isks of three low lying coral atolls in e Pacif Ocean. e project scope included tro cal cyclone m elling, assessment of the coasta undation risks, cluding wave overtopping modelling d developm t of the risk mitigation option		✓	✓	✓	✓	✓		✓

Relevant skills and qualifications

We have put together an experienced and established multi-disciplinary team from Jacobs which has all the required local knowledge and international experience to deliver this project and meet the requirements. Our team will communicate with you through our experienced project manager Anthony Kubale and will be technically led by Derek Todd. The relevant qualifications and experience of our team are outlined below. For more details, please find attached their CVs as **Appendix A.**

Derek Todd	Technical Team Leader

Derek Todd is our Technical Team Leader due to his long experience in coastal hazard assessment and management. Derek is a astal Geomorphologist with over 35 years' experience i managing coasta resources, monitoring and investigating coasta pr esses and ha ards, and assessing the potential future changes in coastline an iver mouth stability. This experience includes time work ng in consult ncy, local and central government, and universities in both New Zealand and Australia. Within this experience is 12 years of running his own spe alised C Management consultancy, DTec Consulting Ltd (DTec), in which Derek was volved in over 100 coastal projects throughout [redacted]ealand, including ov r 30 coa al haza d assessments for a range of clients. Derek has developed a large degree of peri nce and skills at providing science adv on coastal hazards to inform planning d ions. Hi areas o expertise include Coastal Hazards Coastal Planning & Management, Co tal Proces s & R r Mouth Processes. His experience is furth[redacted]plemented by working o projects like Environment Canterbury on the Timaru District Coastline, working with Christ urch C y Counci Hurunui District Council, Waimakariri Distri Council & Tokelau Sea Level Rise C astal E s on Assessment for the Ministry of Foreign Affairs amongst many others

Anthony Kubale	Pr jec Manager

Anthon is an Environmental Consultant with 10 years' experience sp cialising in Environmental Sciences and Management Servic[redacted] private and public sector clients across a range of marine and terrestrial industries. Anthony has worked with KCDC on previous projects including the Kenakena Stormwater Upgrade project and as part of the Ja[redacted] that undertook regular stormwater sampling programme. Anthony has also been a core member of project teams delivering coastal resilience and adaptation in the Pacific for Kiribati and Tokelau and is excited to bring this experience to this project. He is experienced in coordinating and managing arge multidisciplinary teams and delivering complex projects that meet client expectations whilst ensuring any potential environmental issues are identified and mitigated.

Bruce Clarke	Project Director

Bruce has worked on a number of projects where the impacts of climate change coastal infrastructure need to be assessed and mitigated, including Temaiku Urban Development and Cirebon Flood Risk Assessment development in Indonesia. As Project Director, Bruce will be responsible for the technical quality of the deliverables and will support the Project Manager in day to day management of the Project. He will liaise regularly with the KCDC Coastal team and other Project team members and provide strategic advice on impact assessment and issues as they arise. Bruc is highly experienced in this role, regularly working for a range of m nicipa , industrial and state sector clients in Indonesia, South East Asia, New Zealand, A stralia, e Pacific Islands and the United Kingdom. Bruce was also a resident of the āpiti Coa t for 1 years and has family which continues to reside there and as a result is very a iliar with the rea.

Adam Hosking	Technical Advisor

Adam Hosking has responsibility within Jacobs f r Water Resources and Ecosystem Management, including s ormw flo d and coastal risk management, and climate cha ge adap tion. With a background in coastal [redacted]rphology, he is a Fe ow of th Chart ed Institute of Water and Environmental Manageme t wit more than 23 years' experience in projects and program addres ng coas l resilience. He has led shoreline management projects globally, inclu ng New Y rk wa water infrastructure resilience strategy follo[redacted]urricane Sandy, and in t e UK, USA an the Caribbean.

David Cobby	Technical Advisor

Dav d is a Char red Sc ntist and Water and Environmental Manager wi[redacted] 6 years' xperien e in consultancy and academic research environments pa ic arly on the sustainable management of flood risk (stormwater and groun water) and interactions with other natural hazards. Up to 2015, he w s a Te nical Director in Jacobs' Climate Resilience & Adaptation Group, it key role in growing and delivering Jacobs business with Lead Local Flood Authorities. He also led development of a range of Flood Risk Management and Water Resource Management tools based in GIS and other industry standard packages. David relocated to New Zealan[redacted] 2015 and 20 9 to deliver complex land drainage, economic and strategic multi-hazard projects re uired a a result of the Christchurch earthquakes, and to drive adaptation to future climate change and, particularly, sea level rise.

[redacted]

avid relocated back to Jacobs UK in June 2019 but continues to lead key projects in New Zealand. He presents work at international conferences and has authored numerous journal papers.

[redacted]

Sam Watkin	Coastal Engineering Technical Advisor

Sam Watkin has extensive experience in Coastal Engineering, having led the delivery of strategic coastal hazard management strategies and the design of coastal erosion and inundation mitigation designs to support the sustainable management and development of coastlines around the World. Sam has significant experience in the design of both coastal protection and management solutions including rock and armour unit breakwaters, rock revetments, wave return and vertical walls, beach renourishment, scour protection, groynes and natural vegetation solutions. Sam has worked on projects in Kirib i Micronesia, Papua New Guinea, Naru, Indonesia, Phillipines, Morocco, Mexico and Ma aysia

Joris Jorissen	Coastal Modelling Technical Advisor

Joris has worked across many parts of the world as n engineer a d numerical modeller on port development, mining, oil a d gas and (water) infrastructure projects. His experience spans a wide range f specialist fields including natural hazards investigations, coastal rocesses assessments, coastal management studies, engine ring d o oastal structures a dredging programs, and receiv ng water modelling. He has extensive [redacted]ence in the assessm nt and n merica modelling of coastal and estuarine processes, parti larly n relation to waves, (flood) hydrodynamics, sediment transport and w ter qua ty issues and has provided technical leadership to numerous challenging ngineerin proje s during all phases of project deve[redacted]nt, from pre-feasibility, asibility, des n and construction.

Damian Debski	Flood Risk echnic Adviso

D mian is a civil ngineer with 25 years' experience, specialising in hydraulic modelli g, analysis and assessment for a variety of applications fr[redacted] and astal flood risk studies and protection works to the detailed design of water a d wastewater treatment works and major water conveyance syst ms. This experience includes two years working with physic[redacted] the hydraulic research laboratory at Bristol University in the UK and over wenty y rs' ex erience in international engineering consultancy, working for Halcrow Group Ltd, CH2M H LL and, most recently, Jacobs.

ased in the UK for most of this period, Damian has worked on consulting projects elsewhere in Eur nd in Asia. He relocated with Jacobs to New Zealand in 2018 where he has worked on rojects to assess fluvial and coastal flood risk and flood protection measures in the Wellington Manawatu-Whanganui and Canterbury regions. Clients include city, district and regional councils, national government agencies, water and power utility companies and commercial property developers.

Damian has also contributed to the development of the Flood Modeller Pro flood modelling software system, marketed and supported by Jacobs, and has provided training courses in flood modelling and using the software to a range of public and private sector clients. His areas of

expertise include River flood modelling and flood risk assessment, Coastal flood modelling and tidal flood risk assessment & Open channel and pipe system hydraulics.

Jasmin Callosa-Tarr	Spatial Specialist

Jasmin has over 25 years of GIS experience working in different disciplines and projects in New Zealand. She had been involved in a few hazard and resilience related projects. She was the main GIS resource in the NZTA National Resilience Project completed in 2018. The project reviewed and analysed the national road network based on its resiliency to tsu ami, earthquake, flood and storm, and volcanic hazards using GIS. She was lso involved in the Wellington Region Road Network Resiliency Project looking at ts nami an earthquake vulnerabilities over a few years (2008, 2012, 2017). Jasmin i also expe enced n participatory GIS where communities are the main stakeholders we en aged to prov de input in various community collaborative research and environmental and conser tion activities. [redacted]

Kristin Stokes	Flood Risk Specialist

Kristin is a senior hydrologist and hy aulic mo who is experience[redacted] modelling of rivers, stormwa er network flood investigations, hydrological [redacted] ydraulic modelling nd the an lysis of ydrological data. Kristin's hydrological modelling exp rie ce includ s rainfall-runoff modelling us[redacted] the MIKE suite, HEC MS and ORB, b seflow modelling and low flow [redacted] estimation. Kri tin has had wide in olvement in leading one- and two-dime[redacted]al modelling projects usin hydraulic m delling software MIKE FLOOD, Innovyze ICM and HEC-RAS for flood hazard a sessm ts, dam reaks, bridge replacement and road design [redacted] She is proficient in using IS softw e for p aration of topographic inputs to models, analysis [redacted] of input information nd results and th presentation of output. [redacted]

Tim Baker	Hy rogeologist / Ground Water Specialist

m is an xperienced Senior Water Resource Scientist and Hydrogeologist wit over 25 Years' experience. Tim's technical expertise is groundwater [redacted] quality and assessing the impacts of land use on groundwater, however he is proficient in a range of water resource science including hydrology and water quality studies. Tim is based in our Wellington office and ha[redacted] delivered numerous projects to Kāpiti Coast District Council. He understands KCDC drivers well in respect to coastal inundation and the impacts of seas level rise on the local groundwater regimes [redacted]

[redacted]

Nick Cooper	RMA Planner

Nick has 20 years' experience in environmental planning. This has primarily been in the provision of resource consent applications and the management of RMA processes. As a local government RMA Planner, Nick has been involved mainly with the case management of resource consents including completeness checks, notification assessments, preparation of public notices, conducting prehearing meetings, drafting of officer's reports, presenting evidence to Hearings Panels, drafting of conditions, and the provision of evidence to the Environment Court

Kate MacDonald	Coastal Scientist

Kate has been involved in several coastal hazard ass ssment p ojects including Coastal Hazard Assessments both the Hu nui District C astline and the Timaru District Coastline, where Kate played a ital role in helping develop robust methodologies for determin g the effect f sea level rise on different coastal environments, in order for the ork to be used in the District Planning process. Kate has a o bee lv d in collecting data in coastal setting for the Estuary dge Con tion Inventory project for [redacted]hurch City Council a d has develope skills in reviewing and collating data for other coastal proj cts in uding a hazard review for Paramount Group Ltd. in Barrytown, and for Christch ch City ouncil a ound the Akaroa Wharf. Kate is proficient is GIS and uses these skills o clearly esent fi dings of coastal hazard assessments to be u[redacted]the public domain.

3. Capacity to deliver	Weighting 10%

Capacity overview

Jacobs has put together a team and the right resources to meet the project deliverables' timeline. The Deliverable 1 - A Coastal Hazard and Risk Assessment Report by **December 2020** & the Deliverable 2 - Provision of best practice technical advice to the Takutai Kāpiti Community Assessment Panel(s) by **January 2021.**

Jacobs project management systems and resource trackers allow us to track workloads for individuals over time to decide the capability for future workload. Our Project Manage is Wellington based and will be responsible for ensuring that our team is well resourced, d ive ng on time and to the budget. Anthony Kubale will manage the team to ensure th t the roject on track to deliver on time, within budget, and in line with Jacobs Health and Saf y policy. D ek (nominated Technical Lead) and Kate will have the availability to ens e th the inputs f r the Coastal hazard & risk assessment report are provided on time. For the Deliver le 2, Jacobs wi [redacted] its extensive experience in community engagement for other climat change adap ation projects in the Pacific & NZ to assist the council in an effective and culturally appro riate consultation process with the affected communities. We will ensure that the Tec nical Lead D k Todd is available to attend Community Assessment Plant (s) meetings n a six week y cycle either in person or by video conferencing or if he i [redacted] vailable, an alterna e from the Jacobs eam will be supplied as required.

In case required, we shall recruit additi nal loca resou ces which will have the skills required to undertake some work if necessary.

With the dynamic and changing ircums nces sur ounding the recent COVID-19 outbreak, Jac has the capability for staff o work r motely h uld any members of our team be required to self-isolate. We understand hat this is an e olving situation, however we do not anticipate that this would affect the timeli of t is investigation at this stage. Jacobs utilises Microsoft Tea [redacted] Zoom video confer ncing s rvices on a regular basis for personnel and clients working remotely from our offices. We a so hav HDVC conferencing facilities in our offices.

4.	Supporting local residents, local businesses and the local economy	Weighting 10%

4.1 Jacobs Relationship with the Kāpiti Coast

Jacobs has over a **30-year history** of providing consultancy services to the Kāpiti Coast and particularly to the Kāpiti Coast District Council in the areas of water resources, flood risk, transport and traffic studies, stormwater management, monitoring services, landfill rehabilitation and resource consenting. These services have enabled KCDC to meet its statutory obligations under t Local Government Act and Resource Management Act and to deliver valued engineer g nd science advise for policy development and for servicing ratepayers needs. Jacobs has a strong ommit t to the Kāpiti Coast and to its development in a sustainable manner. We have b en invol d in sustainable housing developments on the Kāpiti Coast namely **Waikanae N rth an Ngara a** which are looked up to as models for the future developments in the area. Ja bs has also b en involved in assisting businesses on the Kāpiti Coast including extensions to the **Kāpit Cheese factory, Master planning of the Coastlands redevelopment.**

In addition, Jacobs has several staff members who reside on the Kāpiti Coast and are actively involved in the community.

4.2 Future Plans for association with Kāpiti Coas

If we are successful in securing this project, we ould a tively aim to continue to broaden our service offering to the Kāpiti area to assist in the sus ainable e onomic growth of the area including local communities and businesses. Se level ris and th r sulting coastal erosion effects along the Kāpiti Coast are key concerns for th Council and l cal communities which have historically had some strong rigorous debate gi en sev al propert es along coast have suffered loss of land due to storm events. Jacobs intent on is t at thro gh t is project a large degree of certainty can be provided to businesses nd the comm nity going forward as to the level of risk posed by climate change including chang s to a eas of coastal erosion, flood inundation levels, impacts o groundwater regi e and Council underground services , the mitigation measures that can be implemented in cost ffectiv and sustainable manner so that ongoing development on the Kāpiti Coast can l nned for nd managed accordingly.

The aim is to p vide solutions that are effective in managing the level of risk posed but will not entail exces ve co s and place undue financial burden of Council ratepayers and businesses.

CDC, like ma y councils that we work with, aim to achieve the best project outcome for the best c t to maximise the return from rate payer investment. This is also an important objective for us, and we are committed to bringing value for money to KCDC from our services. To measure this va ue, we conduct assessments and performance appraisals on the value for money as b anced scorecard. This way we stay accountable by tracking our delivery with our commitments and taking responsibility for our own performance. Ultimately, delivery on time, cost and programme is the underlying measure, but how we do that the value for money assess critical.

Jacobs Value Plus is method of measuring the capital value savings from our engineering (design) work. To date, globally, we have saved 70% of our fees through Value Plus, which is unprecedented

in the consulting market. In NZ, our Value Plus is supported by Sustainability Plus, which measures environmental, community and programme (time) savings that do not necessarily have an easily quantifiable dollar value. Jacobs and our panel partners are committed to KPI measures to demonstrate evidence of our Value for Money to KCDC.

4.3 Sustainability Framework

The Jacobs framework for sustainability, **PlanBeyond**, sets out how we integrate sustainability into our business and is outlined in the graphic below. We are committed to establishing sustainable practices in our ow offi s and contributing to the communities in which we ve and work. The outcomes of the work we d with ou clients reaches far beyond individual p ojects.

4.4 Diverse Networks

Globally, Jacobs is focus d on inclusi and diversity. Our willingness to embrace div sity of thought, backgr and experience elp create imaginative and responsive solutions for our clients and the commun y. In Fe ruary 2020, **Jacobs in New Zealand joined the Diversity Agenda and become an Acc d signatory**. I is a joint initiative from Engineering New Zealand, the New Zealand Inst ute of Architects and the Association of Consulting Engine s New Zealand. Launched in early 2017 with an initial g al to s e 0% more women engineers and archite s, the campa n has since expanded beyond gender to en apsula the full r nge of diversity and inclusion.

4.5 Priority Social Group: Maori, P cifica a d ther ethnic minorities

We also honour the u que pos ion of Māori as tāngata whenua within Aotearoa/New Zealand and seek to foster an nviron nt that is inclusive, supportive and respectful of Māori tikanga / culture and te reo / languag As an qual opportunity company, we encourage understanding of cultural beliefs and protocols an foster an understanding of a broad world viewpoint. Our strategy also recognises t close geog hical and cultural relationship that exists with neighbouring Pacific nati d the people. Our key aims are:

- To id ntify and create opportunities for Māori and Pasifika within our industry
- To im rove cultural awareness and representation through education, mentoring and eng gement interventions

R nked in the top quartile of **Forbes' Best Employers for Diversity**, Jacobs continue to advance in usion and diversity to create an environment where all employees can thrive. We know that if e are inclusive, we're more connected, and if we are diverse, we're more creative. We promote diversity because it makes us a stronger company, where brilliant people of all backgrounds feel at home.

Assumptions

Please state any assumptions you have made in relation to the Requirements. Where you have made assumptions in relation to the costs and pricing information please state these in the next section.

Below are some of our assumptions that we have made in relation to the requirements:

- That all meetings for Deliverable 1 apart from an initial site visit will be conducted via video conferencing.
- We have allowed for one round of consolidated review comments from KCDC on Deliverab 1.
- That the mapping of historical shorelines by CSL (2012) was technically accurate a d dig lly available.
- We can extrapolate the GW impacts for the different SLR scenarios from th SKM (2 12) report.
- We do not need to update NIWA storm surge inundation repor (20 2 & 2019).
- We have access to GIS layers of the inundation outputs from both NIWA torm surge rep (2012 & 2019) to undertake the risk assessment.
- We have access to KCDC stormwater flood models.
- That Covid-19 related issues (such as travel restriction does not o r preventing the ability to hold any face-to-face meetings or si e visits.

3. Price

Price as a weighted criterion

5. Price	Weighting 10%

Pricing schedule

Item		
Deliverable 1. Please provide an all-inclusive fixed price, excluding GST. Please include a breakdown to show how the fixed price was calculated.		$ 46,76
Project Mobilisation and Kick-Off		[redacted]
Data Collation & Review		[redacted]
Coastal Inundation Assessment		[redacted]
Coastal Processes and Erosion Assessment		[redacted]
Risk Assessment and Mapping		[redacted]
Draft and Final Reporting		[redacted]
Total Fixed Price		**$146,768**
Option 1: Attendance at Community ssessm nt Panel Meeting (per meeting)		[redacted]
Option 2: Workshop with KC C and CAP o Final Re ults		[redacted]
Deliverable 2. Pl ase provide daily a d/or hourly rates, e cluding GST, fo each type of resource in lved with th delivery of Deliverable 2.	Junior Specialist – Kate MacDonald, GIS Specialist	$[redacted]
	Technical Specialist – Anthony Kubale, Kristin Stokes, Nick Cooper (RMA planner)	[redacted]
	Senior Technical Specialist – Damien Debski, Derek Todd, Tim Baker, David Cobby	$[redacted]
	Technical Lead – Sam Watkin, Adam Hosking, Bruce Clarke, Joris Jorissen	[redacted]
Disbursements. Please detail any travel-related disbursements, excluding GST, not included in the fixed price or hourly/daily rates.		[redacted] Christchurch to Wellington Flight and car hire relating to Deliverable 2. All other

	disbursements are included in Deliverable 1 Fixed Price

Assumptions

Please state any assumptions you have made in relation to the cost and pricing information.

Below are some of our assumptions that we have made in relation to price:

- We have assumed that all meetings for Deliverable 1 apart from an initial site vis will conducted via video conferencing.
- We have allowed for one round of consolidated review comments from KC C on De verable 1. Any additional rounds will be subject to a variation.
- All disbursements including travel are at cost.
- Deliverable 2 rates are set for the 31st December 2021. Any work beyo d this date will b subject to an annual rate review.
- Based on the RfP we understand there may be need for attendan e at the 6 weekly Community Assessment Panel Meeting in Deliverable At this we do not know th number of assessment panel meetings that require atten ance. As such we proposed an optional sum of per meeting basis excluding GST) wh ch includes travel costs. If required, this can be incorporated into the ntr ct on a as needed basis.
- Jacobs also proposes as an option t fixed p ice, to onduct a workshop with KCDC a CAPs on the final outputs relati g to delive ble 1. his would be an additional cost of (excluding GST).

4. Proposed Contract

Having read and understood the Proposed Contract, in the RFP Section 5, I confirm that these terms and conditions are acceptable. If successful, I agree to sign a Contract based on the Proposed Contract, or such amended terms and conditions of Contract as are agreed with the Buyer following negotiations, subject to the Professional Indemnity and Public Liability Insurance levels being capped at $1 million.

5. Referees

First referee	
Name of referee:	Peter Kingsbury
Name of organisation:	Christchurch City Council
Goods/services provided:	Preparation of a Shoreline Protection Structure and land condition inventory for the East side of the Avon-Heathcote Estuary ost the 2010-2011 Christchurch Earthquake Sequence, followed b investigation and recommendations on how to manage sho elin future erosion protection for communities and pub c recrea on space along the earthquake damaged estuary edge en ironm nt that has suffered subsidence and liquefac n. Includes a sessment and design of best possible repair or re lacem nt options to meet community expectations for ongoin erosion pro ction. External Technical Reviewer of Christch rch Coastal azards Assessment project.
Date of provision:	2019-2020
Address:	53 Hereford St, Chr tchurch Central, PO Box 73011 Christchurch 8154
Telephone:	03-9418 87
Email:	[redacted]
Second referee	
Name of referee:	Lucy Bak r
Name of organisa ion:	Greater Wellington Regional Council
Goods/services provid d:	astal Water Quality Science Services (investigation and review) Catchment Water Quality and Hydrological Modelling Hydrogeological and Contaminated Land Services
ate of prov ion:	2013 – Present
ddress:	Fryatt Quay, Wellington
Telep n	04 384 5708
Email:	[redacted]

Please contact me before you approach a referee for a reference	Yes

6. Our declaration

Respondent's declaration		
Topic	**Declaration**	**Respondent's declaration**
RFP Process, Terms and Conditions:	I/we have read and fully understand this RFP, including the RFP Process, Terms and Conditions (shortened to RFP-Terms detailed in Section 6, as amended by Section 1, paragraph 1.6. if applicable). I/we confirm that the Respondent/s agree to be bound by them.	**Agree**
Collection of further information:	The Respondent/s authorises the Buyer to: a. collect any information about the Respondent, except commercially sensitive pricing information, from any relevant third party including a referee, or previo or ting c nt b. use such information in he evalu tion of this Proposal. [redacted] The Respondent/s agree that l such information will be confidential to the Buye	**Agree** [redacted]
Requirements: [redacted]	I/we have rea and fully nders d the nature and extent of th Buyer's Requ ements as described in Section 2 I/we onfirm tha the Respondent/s has the necessary apacity nd c pability to fully meet or e ceed the R quirem nts and will be available to deliver througho t the relevant Contract period.	**Agree** [redacted]
Notices:	I/ confirm receipt of Notices to Respondents No(s): NON other than "Q&A" and confirm that my/our ropos includes full allowance for these notices.	**Agree** [redacted]
Ethics:	In submitting this Proposal, the Respondent/s warrants that it: a. has not entered into any improper, illegal, collusive or anti-competitive arrangements with any Competitor b. has not directly or indirectly approached any representative of the Buyer (other than the Point of Contact) to lobby or solicit information in relation to the RFP c. has not attempted to influence, or provide any form of personal inducement, reward or benefit to any representative of the Buyer.	**Agree** [redacted] [redacted] [redacted]

Offer Validity Period:	I/we confirm that this Proposal, including the price, remains open for acceptance for the Offer Validity Period stated in Section 1, paragraph 1.6.	**Agree**
Conflict of Interest declaration:	The Respondent warrants that it has no actual, potential or perceived Conflict of Interest in submitting this Proposal or entering into a Contract to deliver the Requirements. Where a Conflict of Interest arises during the RFP process the Respondent/s will report it immediately to the Buyer's Point of Contact.	**Agree**

Details of conflict of interest: Not Applicable

DECLARATION

I/we declare that in submitting the Proposal and this declaration:

a. **the information provided is true, accurate and complete and no misleading in ny material respect**
b. **the Proposal does not contain intellectual property that w l breach a th d party's rights**
c. **I/we have secured all appropriate authorisations to submit thi Proposal, to make the statements and to provide the information in the P p l and I/we am/are not aware of any impediments to enter into a Contract to delive the R quirements.**

I/we understand that the falsification of informa on, supplying misleading information or t suppression of materi l information in this de aration nd the Pr posal may result in the Proposal being eliminated from further participation in th RF process nd may be grounds for termination of any Contract awarded as a result of the R

By signing this declaration, the signa ory below prese ts, warrants and agrees that he/she has been autho by the Respondent/s to ake this dec ration on its/their behalf.

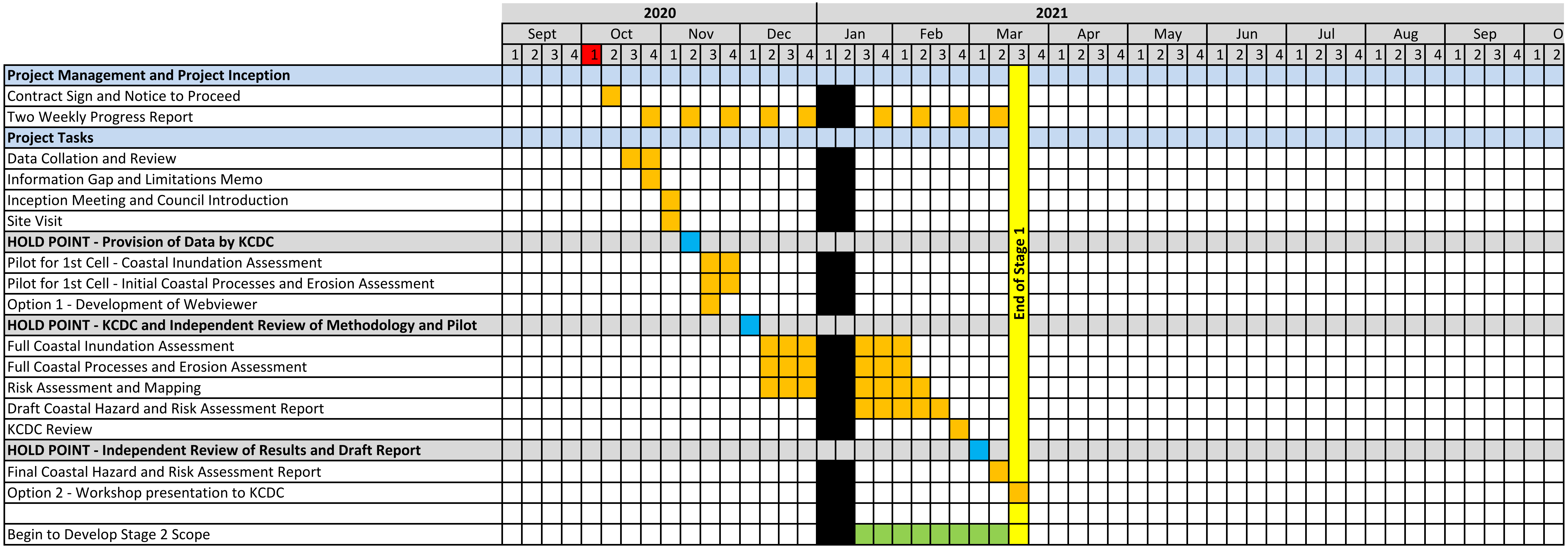
Signature:	
Full nam	Van sa McGrath
Title / p sition:	S tion Lead - Cities and Places Solutions – Strategic Planning, Engag and Su inability
Name f organ sation:	Jacobs New Zealand Limited
Date:	15th July 2020

Appendix A: CVs

Under section 7(2)(a) of the LGOIMA, Jacobs staff members' CVs have been removed for privacy reasons.

Jacobs

www.jacobs.com



2020
2021
Sept
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
O
Project Management and Project Inception
Contract Sign and Notice to Proceed
Two Weekly Progress Report
Project Tasks
Data Collation and Review
Information Gap and Limitations Memo
Inception Meeting and Council Introduction
Site Visit
HOLD POINT - Provision of Data by KCDC
Pilot for 1st Cell - Coastal Inundation Assessment
Pilot for 1st Cell - Initial Coastal Processes and Erosion Assessment
Option 1 - Development of Webviewer
HOLD POINT - KCDC and Independent Review of Methodology and Pilot
Full Coastal Inundation Assessment
Full Coastal Processes and Erosion Assessment
Risk Assessment and Mapping
Draft Coastal Hazard and Risk Assessment Report
KCDC Review
HOLD POINT - Independent Review of Results and Draft Report
Final Coastal Hazard and Risk Assessment Report
Option 2 - Workshop presentation to KCDC
Begin to Develop Stage 2 Scope
End of Stage 1

ct		Nov				Dec			
3	4	1	2	3	4	1	2	3	4

From:	Kubale, Anthony
To:	Mailbox - Coastal; Lyndsey Craig
Cc:	Clarke, Bruce P
Subject:	Takutai Kāpiti: Our community-led coastal adaptation project - Jacobs Insurance Details, Provisional Items, Contract for Services
Date:	Wednesday, 7 October 2020 11:42:32 am
Attachments:	RQ-020198 - Kapiti Coast District Council - PI SFC PL SFC.pdf Contract for Services.pdf

Hi Lyndsey & Coastal Team,

Please find attached Jacobs Certificate of Insurance covering Commercial Professional Liability and Commercial General and Public Liability. Please note, the insurance certificate details that the policy provides limits sufficient for the purposes of the proposed contract. Please can you confirm whether this wording is suitable or whether you require a stated sum to be shown i.e. 1,000,000 as discussed in the meeting on Friday. If you require a sum to be stated our insurance team just needs the insurance box completed in the attached Contract for Services document reflecting a formal request at the stated value.

I am just in the process of finalising the proposed schedule for Stage 1, this will be sent through either today or tomorrow.

In terms of Provisional Items for inclusion in the Contract, '*Option 2: Workshop with KCDC and CAP of Final Results'* on page 51 of our proposal can be included. However, '*Option 1: attendance at Community Assessment Panel Meetings*' will not occur until Stage 2 so can be left out for now. In addition, one further provisional item discussed in the meeting on Friday was around preparing an Interactive GIS Webviewer/Storyboard which can be used to store data collected, present results from the Stage 1 and present it in an interactive format. The costs for this are as follows:

- Development of GIS Webviewer / Storyboard: [redacted]
- Monthly maintenance and management of GIS Webviewer / Storyboard: [redacted]
- **Total: $6,560**

If possible please can you provide a completed version of the Contract for Services. There are a few internal processes our end to get the project up and running in our internal system and we require the completed Contract for Services to start these.

Kind Regards,

Ant

Anthony Kubale, MIEMA CEnv | Jacobs | Senior Environmental Consultant
T:+64 4 914 8404 | anthony.kubale@jacobs.com
Level 8, 1 Grey Street | Wellington, 6011 | New Zealand

Contract for Services

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Ka Titiro Whakamua

Phase 2: Coastal Science and Engineering Services – Takutai Kāpiti
Ref: 2023-C025

The Parties

Kapiti Coast District Council	**(Buyer)**
175 Rimu Road, Paraparaumu, 5254, New Zealand	
Jacobs New Zealand Limited NZBN 9429037904685	**(Supplier)**
Level 12, 55 Shortland Street, Auckland 1010, New Zealand	

The Contract

Agreement

The Buyer appoints the Supplier to deliver the Services described in this Contract and the Supplier accepts that appointment. This Contract sets out the Parties' rights and obligations.

The documents forming this Contract are:

1. This page **Page 1**
2. Contract Details and Description of Services **Schedule 1**
3. Standard Terms and Conditions **Schedule 2**

   GMC Form 2 SERVICES | Schedule 2 (3rd Edition) available at: https://www.procurement.govt.nz/
4. Any other attachments described at Schedule 1.

How to read this Contract

5. Together the above documents form the whole Contract.
6. Any Supplier terms and conditions do not apply.
7. Clause numbers refer to clauses in Schedule 2.
8. Words starting with capital letters have a special meaning. The special meaning is stated in the Definitions section at clause 17 (Schedule 2).

Acceptance

In signing this Contract each Party acknowledges that it has read and agrees to be bound by it.

For and on behalf of the **Buyer**:		For and on behalf of the **Supplier**:	
(signature)		(signature)	
name:	Kris Pervan	**name:**	
position:	Group Manager Strategy and Growth	**position:**	

date:	06/03/2023	**date:**	

Schedule 1

Contract Details and Description of Services

Start Date	20 February 2023	Reference Schedule 2 clause 1
End Date	31 October 2023	Reference Schedule 2 clause 1

Contract Managers Reference Schedule 2 clause 4		Buyer's Contract Manager	Supplier's Contract Manager
	Name:	Abbey Morris	
	Title / position:	Coastal Manager	
	Address:	175 Rimu Road, Paraparaumu 5032	
	Phone:	[redacted]	
	Email:		

Addresses for Notices Reference Schedule 2 clause 15		Buyer's address	Supplier's address
	For the attention of:	Contract Manager	
	c.c. Contract Manager		
	Delivery address:	175 Rimu Road, Paraparaumu, 5032	
	Postal address:	175 Rimu Road, Paraparaumu, 5032	
	Email:	[redacted]	

Description of Services

Requirements

The Council requires services of an expert coastal science and engineering provider for assisting the Kāpiti Coast District Council Coastal Project team with coastal adaptation support for the first part of Phase 2 of Takutai Kāpiti project. The required tasks are reflective of the draft Decision Making Framework Report (version dated 10/06/2022) and the February 2023 version the CAP work programme. These tasks include:

1	Core Technical Advisory Group (TAG) and wider TAG meetings	Derek Todd, Kate MacDonald, Tim Hegarty and Ian Wiseman to attend regular online fortnightly 1hr Core TAG meetings - assumed 20 meetings between January 2023 to Oct 2023) Wider TAG meeting, monthly 2hr meetings online attended by Derek Todd, Kate MacDonald, Damian Debski, Brittany Coff, Tim Hegarty and Ian Wiseman - assumed 9 meetings between January 2023 to Oct 2023).	N/A – Ongoing over year
2	Further advice on coastal hazards, consultation support, assisting council with information requests and other general support to KCDC and CAP support.	This item is intended to be used for smaller support tasks that are additional to those specifically listed and cost estimated in this table. The intent is to provide for council to access the ongoing support it needs in a timely manner by agreeing with the KCDC PM that specific tasks and requests from KCDC to Jacobs can be done under this item. These tasks and costs would be tracked weekly by Jacobs. Exact deliverables and programme will be agreed with KCDC for each item and for the other elements	N/A – Ongoing over year

		of support provided under this element of the contract.	
4	Planning Memorandums on: 1. Planning Framework Relevant to Natural Character of the Coastal Environment. 2. Cultural values and considerations memorandum (Cultural values memo).	The Jacobs planning team will develop these planning memos covering the following: 1. Planning Framework Relevant to Natural Character of the Coastal Environment. ***A draft of this memo has been released to KCDC for comment in September 2022. Review KCDC comments and finalisation is still required.*** 2. How cultural values are considered in district plan change processes including the important role of Māori and tangata whenua in resource management processes and the influence of Iwi Management Plans, Cultural Impact Assessments and other information provided by iwi during statutory process. This memorandum will be developed through ongoing engagement with Te Atiawa, Nga Hapu Otaki, Ngati Toa; and provided to CAP once both Iwi and KCDC are comfortable with the content of the memo. ***This task has been previously started.*** The presentation of the cultural values memorandum has been priced based on: a. Three online meetings for discussion with Te Atiawa, Nga Hapu Otaki, Ngati Toa, and KCDC as follows: b. Discussion to confirm scope of memorandum; c. Preparing draft memorandum d. Workshop with Iwi, KCDC and Jacobs to work through and edit the content of the draft memorandum. e. Preparing the final memorandum f. Internal review and sign off associated with the three opportunities for Council review.	Delivery of Planning Memos have not been scheduled as is not tied to the CAP meeting programme. Delivery dates will be confirmed following further discussions between KCDC and Jacobs.
5	Risk threshold-based approach for district planning Report (see details in Appendix 1 the of Jacobs Variation #4 proposal, dated 17/02/2023)	Jacobs will develop technical advice around a Risk Threshold Based Planning approach to identifying low to high hazard areas in which different District Planning approaches may apply. It is anticipated that the Risk Based approach would be identified and uniform across the whole region rather than being undertaken for each coastal adaptation area. The recommended methodology for the Thresholds and Scenarios to be used to define low to high hazard areas will be presented in a detailed report that could be one of the supporting documents for a future Coastal Plan Change. A core output will be a series of maps showing suggested low to high hazard zones in which Council and may consider different planning approaches and provisions within the Coastal Plan Change. The full details of this task item methodology are listed in attached Appendix 1 of Jacobs Variation #4 proposal, dated 17/02/2023.	***Initial workshop with KCDC staff was held in August 2022.*** Second workshop is proposed to be held in early April 2023, followed by presentation of final report. Presentation of recommended hazard areas to CAP proposed to in April 2023 Workshop. This CAP workshop is proposed to be

		This task has been partially completed, with Jacobs hosting an online workshop with KCDC staff to discuss initial thinking on Risk Based Thresholds and Scenarios for both coastal erosion and flooding hazard, and the undertaking of discussions on standardising risk thresholds for coastal and fluvial flooding. A second workshop with KCDC staff will be held following completion of the draft report. Following approval of thresholds and scenarios, the information and mapping of resulting hazard areas will be presented to the CAP at their April 2023 Workshop so they can be considered in development of short-listed adaptation pathways for the northern adaptation area. ***This task has been previously started.***	attended in person by Derek Todd and Damian Debski
6.	Funding principles memo	A memo will be developed outlining at a high-level funding principles for how adaptation options may be paid for. Brittany Coff will lead the development of this memo. It will document options for payment through targeted versus general rates and splits between those benefitting from works and the wider district. This memo will be presented in an online meeting to the KCDC Senior Leadership Team in April, and following incorporation of feedback from that meeting, presented to CAP for information at their May meeting. ***This task has previously been started.***	Presentation of memo to SLT in April 2023, and to CAP workshop in May 2023. CAP Workshop proposed to be attended in person by Brittany Coff
7	**Northern Adaptation Area:** • Risk assessment report/visuals • Develop Draft Coastal Hazard Adaptation Objectives	**Risk Assessment Report/Visuals** Jacobs will create a risk assessment for the northern adaptation area which will combine existing information on the hazards and existing values and uses of the adaptation area. This will identify the spatial intersection of the hazard exposure with the values and uses of the coastal environment and use this to develop the vulnerability and risk to these values and uses with climate change over time. It is envisaged that this risk assessment would include visual presentation/mapping of data where possible to build up a spatial understanding of the changing spatial distribution of values and uses at risk in the northern adaption area with climate change. This Risk assessment will form the baseline "do nothing" option against which various adaptation actions and pathways can be assessed. ***This task has been previously started.*** **Coastal Hazard Adaptation Objectives** Jacobs will develop appropriate draft hazard management adaptation objectives for the northern area for discussion and confirmation by the CAP. These objectives will focus on "what we are trying to achieve" for the adaptation area and will be based on values and uses of the coastal environment with the adaptation area and the risks to these from coastal hazards obtained from the risk assessment. The draft objectives will be presented in the form of a memo.	Both the risk assessment report and the draft coastal hazard adaptation objectives memo to be presented to the March 2023 CAP Workshop. This workshop to be attended in person by Derek Todd and Kate MacDonald.

		Kate MacDonald will lead development of the risk assessment report and the draft coastal hazard adaptation objectives memo with review provided by Derek Todd and Damian Debski.	
8	**Northern Adaptation Area:** • Draft pathways development • Define MCDA weightings	**Pathway Development** Jacobs will short list appropriate coastal adaptation actions for the northern adaptation area and provide technical advice to CAP at their April workshop on the performance and benefits of fitting these actions together within adaptation pathways. The outcome of this workshop will be a short-list of potential pathways for MCDA scoring. **MCDA Weightings** Jacobs will prepare a template for CAP to record their development of potential pathways at the workshop. Also at the April 2023 CAP workshop, Jacobs will assist the CAP to define the MCDA weightings for the northern adaptation area for each of the seven MCDA technical and impact criteria confirmed at the July 2022 CAP meeting under Task 2 above. These weightings are required to reflect the relative importance of the criteria for achieving the coastal hazard management adaptation objectives for the northern adaptation area.	Development of a short-list of potential Pathways is scheduled for the April 2023 CAP workshop. This workshop will be attended by in person by Derek Todd and Damian Debski under Task 5.
9	**Northern Adaptation Area:** • MCDA prescoring workshop and scoring tables • Economic assessment memo	**MCDA Prescoring Workshop and Scoring Tables** Jacobs will facilitate a prescoring of the MCDA criteria with the TAG group and relevant iwi for each of the short listed pathway options chosen by the CAP. This pre-scoring will provide in a Excel spreadsheet the MCDA score and reasoning for each criteria for each pathway option, which will form a baseline for the CAP's scoring discussions at their May 2023 workshop. **Economic Assessment Memo** Economic analysis of each of the short listed pathways would be undertaken. This will include developing the two financial metrics identified in the Decision Making Framework report. These are the "cost + Loss" and "Value for Money" metrics. These will be costed at a high level using existing available information for the options once they have been combined into pathways. This will be presented in a short memo by Brittany Coff and then presented to the CAP May 2023 workshop.	A full day CAP workshop in May 2023 to be attended in person by Derek Todd and Brittany Coff
10	**Central Kapiti Adaptation Area:** • Risk assessment report/visuals • Develop Draft Coastal Hazard Adaptation Objectives	A risk assessment report and draft coastal hazard adaptation objectives will be developed for the central adaptation area using the same approach as the northern area noted in Task 7 above.	Both the risk assessment and draft objectives are scheduled to be presented at the June 2023 CAP workshop to be attended in person by Derek

			Todd and Kate MacDonald.
11	**Central Kapiti Adaptation Area:** • Draft pathways development • Define MCDA weightings	Draft pathway options and draft MCDA weightings will be developed for CAP consideration using the same approach as the northern area noted in Task 8 above.	Scheduled for the July 2023 CAP Workshop to be attended in person by Derek Todd.
12	**Central Kapiti Adaptation Area:** • MCDA prescoring workshop and scoring tables • Economic assessment memo	Pre-scoring of the MCDA criteria spreadsheets and economic assessment memo's will be developed using the same approach as the northern area noted in Task 9 above.	Scheduled to be presented at a full day CAP workshop in August 2023 to be attended in person by Derek Todd and Brittany Coff, with Kate MacDonald and Damian Debski available online if required
13	**Raumati Adaptation Area:** • Risk assessment report/visuals • Develop Draft Coastal Hazard Adaptation Objectives	A risk assessment report and draft coastal hazard adaptation objectives will be developed for the Raumati adaptation area using the same approach as the northern area noted in Task 7 above.	Both the risk assessment and draft objectives are scheduled to be presented at the September 2023 CAP Workshop to be attended in person by Derek Todd and Kate MacDonald
14	**Raumati adaptation area:** • Draft pathways development • Define MCDA weightings	Draft pathway options and draft MCDA weightings will be developed for CAP consideration using the same approach as the northern area noted in Task 8 above.	Scheduled for the October 2023 CAP meeting to be attended in person by Derek Todd.
15	**Community Engagement Sessions:** • May 2023 (Northern Area) • August 2023 (Central Area)	Derek Todd, Kate MacDonald and Damian Debski will attend the two scheduled community engagement events in May 2023 (northern adaptation area) and August 2023 (central adaptation area). It is assumed that these sessions will involve a full day (incl travel time) and are likely to be on a weekend. We have also allowed a day of preparation time for presentations etc.	Derek Todd, Kate MacDonald and Damian Debski to attend two separate community meetings.
16	Mana whenua house support	Involves providing additional support to iwi representatives on the CAP and iwi technical advisors to bring them up to speed with the background to the hazard exposure and vulnerability, and additional on-going opportunity to raise questions of clarity on the adaptation process	Monthly on-line iwi support meetings prior to CAP Workshops.

		outside of the CAP workshop schedule. These additional support sessions are scheduled to occur on-line around 1 week before each CAP workshop. The iwi support also involves visits to Nga Hapu Otaki and Te Ātiawa ki Whakarongotai Marae to explain the hazard results, risk assessment and adaptation approaches for the northern, central and Raumati areas. A visit to the Ngāti Toa Marae is not understood to be necessary for these adaptation areas. It is assumed that these visits will occur in conjunction with CAP workshops to reduce travel costs.	Marae visits to tie in with appropriate CAP Workshops in 2023.
17	Coordinating Awa hydrodynamic flood modelling results into risk assessments	It is understood that the hydrodynamic flood modelling being undertaken by Awa will become available following the preparation of the northern adaptation area risk assessment. Before this information is applied in the risk assessments for the other adaptation areas, the following tasks will be checks of the data will be required: a. Confirming that the sea level input parameters into the Awa modelling are consistent with the Jacobs scenarios. b. Checking the spatial extent of the Awa catchment flooding models and identifying areas not covered by these models. c. Sensitivity checking of the results of the Awa hydrodynamic modelling against the Jacob bathtub modelling to understand the differences in the extent and depths. d. Adding the AWA results to the Jacobs webviewer for distribution to the other subject matters involved in the preparation of the risk assessments e. For areas not covered by the Awa modelling, determine and document (e.g memo) how the Jacobs bathtub modelling is to be applied.	Scheduled to be undertaken as soon as Awa flood modelling data is available, assumed to be in March- May period.
18	Project Management	Ian Wiseman will continue to manage the project over this year. This will include tracking project costs on a weekly basis, regular communication with Abbey as KCDC's PM, invoicing, managing the Jacobs team and coordinating delivery of the project deliverables. Andrew Henderson will continue as Jacobs' Designated Project Executive providing oversight for the project and review/approval for all deliverables.	N/A – Ongoing over year

Deliverables

Delivery dates for individual tasks will be agreed with Kapiti Coast District Council as required. Indicative timing has been outlined, however will remain flexible and can be reordered in order to align with any adjustments made to the CAP work programme. However overall, all tasks must be completed by 31 October 2023, unless specified otherwise.

Costs will continue to be tracked weekly and invoiced on a monthly basis. Payment will be made upon satisfaction of the tasks completed.

Supplier's Reporting Requirements Reference Schedule 2 clause 5	There are no reporting requirements in addition to the requirements set out in the Description of Services.

CHARGES: The following section sets out the Charges. Charges are the total maximum amount payable by the Buyer to the Supplier for delivery of the Services. Charges include ***Fees***, and where agreed, ***Expenses*** and ***Daily Allowances.*** The Charges for this Contract are set out below.

Fees
Reference Schedule 2 clause 3

Individual Personnel Rates

Hourly Fee Rates for each of the Personnel set out below, up to a total maximum for each task as set out below.

Jacobs New Zealand Ltd Personnel

Name	Title	Role	2023 Rate ($/hr ex GST)
Derek Todd	Principal Coastal Hazards Scientist	Technical Lead	[redacted]
Kate MacDonald	Senior Coastal Scientist	Technical Advisor (Coastal Processes)	[redacted]
Damian Debski	Principal Hydraulic Engineer	Technical Lead (Coastal Inundation)	[redacted]
Ian Wiseman	Senior Associate Environmental Scientist	Project Manager	[redacted]
Keith Hastings	Senior Associate Spatial Analyst	GIS Advisor	[redacted]
Greta Stuthridge	Graduate Environmental Scientist	Coastal Processes Support	[redacted]
Andrew Henderson	Principal Planner	DPE	[redacted]
Mazhar Ali	Associate Water Resources Engineer	Flood Modeller	[redacted]
Brittany Coff	Associate Consultant – Strategic Advisory	Economist	[redacted]
Devon Alexander	Senior Associate Planner	Planner	[redacted]
Tim Hegarty	Principal Planner	Planner	[redacted]
Hugo Moran	Graduate Planner	Planning Support	[redacted]
Sameer Vinnakota	Environmental Planner	Planning Support	[redacted]

	Task	Maximum Fee ($ ex GST)
1	Core Technical Advisory Group (TAG) and wider TAG meetings - Assumed 20 x TAG and 9 x wider TAG meetings from Jan 2023 – Oct 2023	[redacted]
2	Further advice and discretionary tasks on coastal hazards, consultation support, assisting council with information requests and other general support to KCDC and CAP support.	[redacted]
4a	Finalise memorandum on Planning Framework Relevant to Natural Character of the Coastal Environment	[redacted]
4b	Planning Memorandum on Cultural Values - Includes 3 online meetings with KCDC and Iwi	[redacted]

5	Risk threshold-based approach for district planning: • Review existing approaches to hazard management • Develop Thresholds and Scenarios • Data Review and Mapping • Draft and Final reporting, spatial data hand over, Presentation to CAP (April) o Includes one internal workshops with KCDC and Damian's time in presentation to April CAP workshop.	[redacted]
6	Funding principles memo Includes travel for Brittany to May CAP Workshop	[redacted]
7	Northern adaptation area risk assessment report/visuals Draft objectives Development - Includes travel for Derek and Kate to attend March CAP workshop	[redacted]
8	Northern area draft pathways options - Includes travel for Derek to attend April CAP workshop	[redacted]
9	Northern area MCDA prescoring Economic assessment memo - Includes travel for Derek to attend May CAP Workshop (Brittany's attendance budgeted under Task 6)	[redacted]
10	Central Kapiti adaptation area risk assessment report/visuals Draft objectives Development - Includes travel for Derek and Kate to attend June CAP Workshop	[redacted]
11	Central area draft pathways options - Includes travel for Derek to attend July CAP workshop	[redacted]
12	Central area MCDA prescoring memo Economic assessment memo - Includes travel for Derek and Brittany to attend August CAP Workshop	[redacted]
13	Raumati adaptation area risk assessment report/visuals Draft objectives development o Include travel for Derek and Kate to attend September CAP Workshop	[redacted]
14	Draft pathways options – Raumati adaptation area - Includes travel for Derek to attend CAP meeting	[redacted]
15	Community meetings (2) - Includes travel for Derek, Kate and Damian to attend meetings	[redacted]
16	Iwi support - 9 x 1 hr Online Pre-CAP meeting (Kate and Derek attend) - 2 x Marae Visits (assumed half day, only Derek attends – travel assumed to be included with CAP visit)	[redacted]
17	Coordinating Awa hydrodynamic flood modelling results into risk assessments	[redacted]

	18	Project Management Includes: - Development of variation (internal set up) - Team management - Weekly cost tracking and reporting - Monthly invoicing	[redacted]
		Total	**$352,636**

Expenses Reference Schedule 2 clause 3	**Actual and reasonable — general Expenses** The Buyer will pay the Supplier's actual and reasonable Expenses incurred in delivering the Services provided that: a. the Buyer has given prior written consent to the Supplier incurring the Expense b. the Expense is charged at actual and reasonable cost c. the claim for Expenses is supported by GST receipts, and d. travel, accommodation, and meals (where applicable) are included in the maximum fee for each task shown under Fees above. Other disbursements (eg printing costs) must not exceed $1,000 excluding GST.
Daily Allowance Reference Schedule 2 clause 3	No daily allowances are payable.
Invoices Reference Schedule 2 Subject to clauses 3 and 11.7	The Supplier must send the Buyer an invoice for the Charges at the following times: At the end of the month, for Services delivered during that month.

Address for invoices Reference Schedule 2 clause 3	**Buyer's address**
For the attention of:	
Physical address:	175 Rimu Road, Paraparaumu, 5032
Postal address:	175 Rimu Road, Paraparaumu, 5032
Email:	Accounts.payable@kapiticoast.govt.nz

Insurance Reference Schedule 2 Clause 8.1	**INSURANCE: (clause 8.1 Schedule 2)** It is the Supplier's responsibility to ensure its risks of doing business are adequately covered, whether by insurance or otherwise. The Buyer does not require any specific insurance under this Contract.

Changes to Schedule 2 and additional clause/s	**Schedule 2 of this Contract is amended as follows:** Clauses 2.8-2.11 are added as follows: **Health and Safety** 2.8 The Supplier must ensure, so far as is reasonably practicable, the health and safety of workers who work for the Supplier while they are at work in the Supplier's business, and of workers whose activities are influenced or directed by the Supplier. The Supplier must also ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out. The Supplier has primary responsibility for their own health and safety management at whatever site they are undertaking work for the Buyer, and overall primary responsibility for health and safety at a worksite they are in control of. The Supplier is responsible for providing their own incident and emergency response plan and resources. 2.9 The Buyer may request evidence of the Supplier's Health and Safety management system and plan to ensure they have provisions in place to comply with applicable legislation. The Supplier agrees to provide the Buyer access to any workplace to which this agreement applies for the purposes of monitoring compliance. 2.10 The Supplier is required to report any serious incidents to the Buyer as soon as practicable and in all cases within 24 hours, and any other incidents or near misses within three days of the incident occurring. The Supplier will provide a report to the Buyer detailing the outcome of any investigation and any actions taken. The Supplier is also required to inform the Buyer as soon as practicable and in all cases within 24 hours of any formal or other enforcement actions by the regulator (generally WorkSafe NZ). For the purposes of this clause a serious incident includes one which meets the definition of a notifiable event under section 25 of the Health and Safety at Work Act 2015. The Supplier must notify the regulator of the occurrence of a notifiable event as soon as possible after becoming aware of it. 2.11 In the event the Supplier fails to comply with the requirements of clauses 2.8-2.10 above, this Contract may be terminated immediately. **Liability** Clause 8 is amended by adding the following new clauses as clauses 8.2 and 8.3: **8.2 Limitation:** Each Party's liability to the other Party (whether in contract, tort including negligence or otherwise) under or in connection with this Contract: a) will not exceed: • for the Buyer – zero • for the Supplier – NZ$1 Million b) is limited to losses caused directly by that Party, and c) does not include any loss of revenue or profits, loss of anticipated savings, loss of opportunity, loss of production or loss of data, however caused. **8.3 Exceptions:** Clause 8.2 does not limit a Party's liability: a) for any breach of clause 13 (Confidential Information) b) for any breach of clause 12.2 (Supplier warranties) c) for any deliberate breach of this Contract, malicious act or fraud, or d) to pay any amount duly payable under this Contract.
Attachments Reference 'Contract documents' described at Page 1	• Jacobs contract variation proposal – dated 17/02/2023 • CAP workshop and CAP community engagement event work programme – February 2023 • Jacobs draft Decision Making Framework Report, dated 10/06/2022.

Contract for Services

Kāpiti Coast DISTRICT COUNCIL
Me Huri Whakamuri, Kā Titiro Whakamua

Phase 2 Part B: Coastal Science and Engineering Services – Takutai Kāpiti

The Parties

Kapiti Coast District Council	**(Buyer)**
175 Rimu Road, Paraparaumu, 5254, New Zealand	
Jacobs New Zealand Limited	**(Supplier)**
Level 12, 55 Shortland Street, Auckland 1010, New Zealand	

The Contract

Agreement

The Buyer appoints the Supplier to deliver the Services described in this Contract and the Supplier accepts that appointment. This Contract sets out the Parties' rights and obligations.

The documents forming this Contract are:

1. This page **Page 1**
2. Contract Details and Description of Services **Schedule 1**
3. Standard Terms and Conditions **Schedule 2**
   GMC Form 2 SERVICES | Schedule 2 (3rd Edition) available at: https://www.procurement.govt.nz/
4. Any other attachments described at Schedule 1.

How to read this Contract

5. Together the above documents form the whole Contract.
6. Any Supplier terms and conditions do not apply.
7. Clause numbers refer to clauses in Schedule 2.
8. Words starting with capital letters have a special meaning. The special meaning is stated in the Definitions section at clause 17 (Schedule 2).

Acceptance

In signing this Contract each Party acknowledges that it has read and agrees to be bound by it.

For and on behalf of the **Buyer**:		For and on behalf of the **Supplier**:	
(signature)		Juliet Woodward (signature)	
name:	Kris Pervan	**name:**	Juliet Woodward
position:	Group Manager Strategy and Growth	**position:**	Director
date:	25 / 10 / 2023	**date:**	13.11.2023

Schedule 1

Contract Details and Description of Services

Start Date	16 October 2023	**Reference Schedule 2 clause 1**
End Date	30 June 2024	**Reference Schedule 2 clause 1**

Contract Managers Reference Schedule 2 clause 4		Buyer's Contract Manager	Supplier's Contract Manager
	Name:	Abbey Morris	Ian Wiseman
	Title / position:	Coastal Manager	Senior Associate Environmental Scientist
	Address:	175 Rimu Road, Paraparaumu 5032	Level 2, 47 Hereford Street Christchurch 8013
	Phone:	[redacted]	[redacted]
	Email:		

Addresses for Notices Reference Schedule 2 clause 15		Buyer's address	Supplier's address
	For the attention of:	Contract Manager	
	c.c. Contract Manager		
	Delivery address:	175 Rimu Road, Paraparaumu, 5032	
	Postal address:	175 Rimu Road, Paraparaumu, 5032	
	Email:	[redacted]	

Description of Services

Requirements

The Council requires services of an expert coastal science and engineering provider for assisting the Kāpiti Coast District Council Coastal Project team with coastal adaptation support for the second part of Phase 2 of Takutai Kāpiti project. The required tasks are reflective of the draft Decision-Making Framework Report (version dated 10/06/2022) and the October 2023 version the CAP work programme.

This work is being undertaken as directed and required by KCDC, and includes (but is not limited to):

- Advice regarding the coastal hazards assessment work
- Further development of the coastal hazards and adaptation pathways
- Decision making support advice to KCDC and Community Advisory Panel (CAP)
- Development of consultation materials
- Engagement with the community and stakeholders
- Project management and travel costs for CAP workshops.

Jacobs have priced in-person attendances to include the staff that they think are best placed to lead discussions and address questions on key topics at various points in the process. Depending on the content of the sessions (or preference from KCDC) Jacobs can alter the staff that attend in person, and online.

These tasks include:

1	Technical Advisory Group meetings	Derek Todd, Kate MacDonald, Monique Eade and Ian Wiseman to attend online TAG Meetings as required – assumed one per fortnight. Then for Damian Debski and Tim Hegarty to attend as required.	N/A – Ongoing over year
2	Further advice on coastal	This item is intended to be used for smaller support	N/A – Ongoing

	hazards, consultation support, assisting council with information requests and other general support to KCDC and CAP support.	tasks that are additional to those specifically listed and cost estimated in this table. The intent is to provide for Council to access the ongoing support it needs in a timely manner by agreeing with the KCDC PM that specific tasks and requests from KCDC to Jacobs can be done under this item. These tasks and costs would be tracked weekly by Jacobs.
		
		This also includes attendance to CAP meetings and community engagements between November 2023 – May 2024 covering:
		
		• 4x extended CAP meetings
		• 1x CAP meeting
		• 5x online mini CAP meetings
		  o 2x excluding options from long list
		  o 2x thresholds, triggers and signals
		  o 1x planning memo
		• 5x online feedback sessions
		• 1x webinar update session
		
		Exact deliverables and programme will be agreed with KCDC for each item and for the other elements of support provided under this element of the contract.
			over year

3	Raumati Adaptation Area: MCDA criteria weighting and scoring of shortlisted pathways	Jacobs will facilitate a prescoring of the MCDA criteria with the TAG group for each of the short-listed pathway options chosen by the CAP in Task 14. This pre-scoring will be provided in an Excel spreadsheet which notes the MCDA score and reasoning for each criterion for each pathway option, which will form a baseline for the CAP's scoring discussions at the December 2023 CAP meeting. Jacobs will score the technical criteria: • Effectiveness of managing erosion • Effectiveness of managing inundation • Policy and consenting risk. Members of the TAG will be tasked with scoring the other five criteria. Jacobs will host one meeting with the TAG to discuss the scoring and refine any changes. KCDC will coordinate the pre-scoring of the te ao Māori values criterion separately. Jacobs will also prepare a set of graphics which described each shortlisted pathway at a high-level conceptually, showing the indicative position of where the option could be applied (if possible) or conceptually what it would look like. These graphics will also include key notes about the steps in the pathway over time. These will be presented to KCDC as a PowerPoint package and presented in the CAP as prior reading to assist the CAP with scoring their pathways. It is assumed that the Raumati Adaptation Area could have a maximum of 4 management units (2 erosion and 2 inundation), with 5 short-listed pathways per management unit (e.g. 20 pathways in total). Jacobs will provide advice to CAP as required at the workshop for their weighting of the MCDA criteria.	Extended CAP meeting in Dec 2023 to cover MCDA criteria weighting and scoring of short-listed pathways. Meeting proposed to be attended in person by Derek Todd and Damian Debski, with either Monique Eade or Kate MacDonald attending online as required.
4	Paekākāriki Adaptation Area:	Jacobs will prepare a risk assessment report for the Paekākāriki adaptation area. The risk assessment	An extended CAP

	Risk assessment report/visuals	report will be informed by the intersection of the hazard with the identified elements, combined with subject matter specialist opinion on what the sensitivity, consequences and adaptive capacity is for each element assessed. The risk assessment report will cover five domains – built environment, human domain, ecological domain, natural character domain, cultural domain. Jacobs will undertake the risk assessment for the built environment; and will coordinate pulling together the results of the other domains into one summary report. Jacobs will also manage an internal webviewer to assist the TAG to identify the intersection of the hazard with elements and will be responsible for collating and providing additional layers to the KCDC GIS team to update their public webviewer. This risk assessment will form the baseline "do nothing" option against which various adaptation actions and pathways can be assessed. The output of all the risk assessments will be a summary report with appended 'risk assessment templates' for each domain; as well as a summary slide deck (prepared by Jacobs) that is presented to the CAP at an extended CAP meeting in February 2023. Kate MacDonald will lead development of the risk assessment report with review provided by Derek Todd and Damian Debski.	meeting in March 2024 to be attended in person by Derek Todd and Damian Debski. Monique Eade and Kate MacDonald will attend on-line as required.
5	Paekākāriki Adaptation Area: • Discounting actions from long-list • Development of shortlisted pathways • Define MCDA criteria weighting	Jacobs will prepare a list of possible adaptation actions proposed to be discounted from the long list due to be being inappropriate to be included in pathways for the Paekākāriki Adaptation Area. This list will be presented to CAP for their confirmation at mini CAP meeting in January 2024. At this workshop Jacobs will also present for CAP's approval the proposed division of the adaptation area into appropriate management units for erosion and inundation. The proposed discounted actions and management units will be workshopped with the TAG prior presenting to CAP. Jacobs will prepare draft adaptation pathways, along with technical advice on the likely performance and benefits for presentation to CAP at an extended workshop for their selection of short-listed pathways for MCDA scoring. This will be to the CAP at the extending CAP meeting in February 2023. For costing this task, we have assumed that Paekākāriki will have 2 management units (1 erosion and 1 inundation), with 5 short-listed pathways per management unit (e.g. 10 pathways in total). Also at this extended CAP meeting, Jacobs will assist the CAP to define the MCDA criteria weightings for each of the eight MCDA technical and impact criteria for the Paekākāriki Adaptation Area. These weightings are required to reflect the relative importance of the criteria for achieving the adaptation objectives for the Paekākāriki adaptation area.	Mini CAP meeting in January proposed to be attended online by Derek Todd The extended CAP meeting on 9th February 2024 will be in combination with Task 20 for development of shortlisted pathways and define MCDA criteria weighting Meeting proposed to be attended in person by Derek Todd and Damian Debski and online by Kate MacDonald.
6	Paekākāriki Adaptation Area:	Jacobs will facilitate a prescoring of the MCDA criteria with the TAG group for each of the short-listed pathway options selected by the CAP. This	An extended CAP meeting in March 2024 to be

	MCDA scoring of shortlisted pathways	pre-scoring will be provided in an Excel spreadsheet which notes the MCDA score and reasoning for each criterion for each pathway option, which will form a baseline for the CAP's scoring discussions at their March 2024 meeting. Jacobs will score the technical criteria: • Effectiveness of managing erosion • Effectiveness of managing inundation • Policy and consenting risk. Members of the TAG will be tasked with scoring the other five criteria. Jacobs will host one meeting with the TAG to discuss the scoring and refine any changes. KCDC will coordinate the pre-scoring of the te ao Māori values criterion separately. Jacobs will also prepare a set of graphics which described each shortlisted pathway at a high-level conceptually, showing the indicative position of where the option could be applied (if possible) or conceptually what it would look like. These graphics will also include key notes about the steps in the pathway over time. These will be presented to KCDC as a PowerPoint package and presented in the CAP as prior reading to assist the CAP with scoring their pathways.	attended in person by Derek Todd and Damian Debski. Monique Eade and Kate MacDonald will attend on-line as required.
7	Develop project fact sheets	Jacobs will update factsheets for each adaptation area with the results of the updated scenario mapping (e.g. SSP2-4.5 and SSP5-8.5). This will involve updating the methodology, erosion distances, and updating the number of properties impacted by each hazard within the settlement area. Jacobs will also prepare factsheets for adaptation options. Five factsheets will be developed for each of the following: - Enhancement (inundation protection, dune/wetland resilience) - Accommodate (flood proofing buildings, relocatable buildings, raising floor levels) - Hard Engineering – inundation protection (stopbanks, culverts and floodgates, pump stations, earth bunds) - Hard engineering – erosion protection (sea walls of different material & structures, breakwaters) - Planning and retreat (retreat, zoning/setback controls, trigger-based or time limited land use controls, building design, reducing further intensification/development) A soft engineering factsheet has already been developed.	N/A
8	Project Management	Project management of the Jacobs team including: - Team management - Weekly cost tracking and reporting - Monthly invoicing	N/A

Assumptions/Exclusions

- It is assumed that one set of collated KCDC comments will be provided on any draft Jacobs reports or deliverables.
- For attendance at CAP workshops, it is assumed that no overnight accommodation is required, with any Jacobs staff travelling from the Christchurch or Auckland offices being able to reach Wellington airport in time to catch the last evening fight.

Deliverables

Delivery dates for individual tasks will be agreed with Kapiti Coast District Council as required. Indicative timing has been outlined, however will remain flexible and can be reordered in order to align with any adjustments made to the CAP work programme. However overall, all tasks must be completed by 30 June 2023, unless specified otherwise.

Costs will continue to be tracked weekly and invoiced on a monthly basis. Payment will be made upon satisfaction of the tasks completed.

Supplier's Reporting Requirements
Reference Schedule 2 clause 5

There are no reporting requirements in addition to the requirements set out in the Description of Services.

CHARGES: The following section sets out the Charges. Charges are the total maximum amount payable by the Buyer to the Supplier for delivery of the Services. Charges include ***Fees***, and where agreed, ***Expenses*** and ***Daily Allowances***. The Charges for this Contract are set out below.

Fees
Reference Schedule 2 clause 3

Individual Personnel Rates

Hourly Fee Rates for each of the Personnel set out below, up to a total maximum for each task as set out below.

Jacobs New Zealand Ltd Personnel

Name	Title	Role	2023 Rate ($/hr ex GST)	2024 Rate ($/hr ex GST)
Derek Todd	Principal Coastal Hazards Scientist	Technical Lead	[redacted]	[redacted]
Kate MacDonald	Senior Coastal Scientist	Technical Advisor (Coastal Processes)		[redacted]
Damian Debski	Principal Hydraulic Engineer	Technical Lead (Coastal Inundation)		[redacted]
Ian Wiseman	Senior Associate Environmental Scientist	Project Manager		[redacted]
Keith Hastings	Senior Associate Spatial Analyst	GIS Advisor		[redacted]
Greta Stuthridge	Graduate Environmental Scientist	Coastal Processes Support		[redacted]
Andrew Henderson	Principal Planner	DPE		[redacted]
Monique Eade	Associate Consultant	Adaptation Advice		[redacted]

	Task	Maximum Fee ($ ex GST)
1	Technical Advisory Group meetings	[redacted]
2	Further advice and discretionary tasks on coastal hazards, consultation support, assisting council with nformation requests and other general support to KCDC and CAP support.	[redacted]
3	Raumati Adaptation Area: MCDA criteria weighting and scoring of shortlisted pathways	[redacted]
4	Paekākāriki Adaptation Area: Risk assessment report/visuals	[redacted]
5	Paekākāriki Adaptation Area: • Discounting actions from long-list • Development of shortlisted pathways	[redacted]

	• Define MCDA criteria weighting	
6	Paekākāriki Adaptation Area: MCDA scoring of shortlisted pathways	[redacted]
7	Develop project fact sheets	[redacted]
8	Project management	[redacted]
	Total	**$149,334**

Expenses **Reference Schedule 2 clause 3**	N/A – included with cost for associated tasks.
Daily Allowance **Reference Schedule 2 clause 3**	No daily allowances are payable.
Invoices **Reference Schedule 2 Subject to clauses 3 and 11.7**	The Supplier must send the Buyer an invoice for the Charges at the following times: At the end of the month, for Services delivered during that month.

Address for invoices
Reference Schedule 2 clause 3

	Buyer's address
For the attention of:	Accounts Payable
Physical address:	175 Rimu Road, Paraparaumu, 5032
Postal address:	175 Rimu Road, Paraparaumu, 5032
Email:	Accounts.payable@kapiticoast.govt.nz

Insurance **Reference Schedule 2 Clause 8.1**	**INSURANCE: (clause 8.1 Schedule 2)** It is the Supplier's responsibility to ensure its risks of doing business are adequately covered, whether by insurance or otherwise. The Buyer does not require any specific insurance under this Contract.

Changes to Schedule 2 and additional clause/s	**Schedule 2 of this Contract is amended as follows:** Clauses 2.8-2.11 are added as follows: **Health and Safety** 2.8 The Supplier must ensure, so far as is reasonably practicable, the health and safety of workers who work for the Supplier while they are at work in the Supplier's business, and of workers whose activities are influenced or directed by the Supplier. The Supplier must also ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out. The Supplier has primary responsibility for their own health and safety management at whatever site they are undertaking work for the Buyer, and overall primary responsibility for health and safety at a worksite they are in control of. The Supplier is responsible for providing their own incident and emergency response plan and resources. 2.9 The Buyer may request evidence of the Supplier's Health and Safety management system and plan to ensure they have provisions in place to comply with applicable legislation. The Supplier agrees to provide the Buyer access to any workplace to which this agreement applies for the purposes of monitoring compliance. 2.10 The Supplier is required to report any serious incidents to the Buyer as soon as practicable and in all cases within 24 hours, and any other incidents or near misses within three days of the incident occurring. The Supplier will provide a report to the Buyer detailing the outcome of any investigation and any actions taken. The Supplier is also required to inform the Buyer as soon as practicable and in all cases within 24 hours of any formal or other enforcement actions by the regulator (generally WorkSafe NZ). For the purposes of this clause a serious incident includes one which meets the definition of a notifiable event under section 25 of the Health and Safety at Work Act 2015. The Supplier must notify the regulator of the occurrence of a notifiable event as soon as possible after becoming aware of it. 2.11 In the event the Supplier fails to comply with the requirements of clauses 2.8-2.10 above, this Contract may be terminated immediately. **Liability** Clause 8 is amended by adding the following new clauses as clauses 8.2 and 8.3: **8.2 Limitation:** Each Party's liability to the other Party (whether in contract, tort including negligence or otherwise) under or in connection with this Contract: a) will not exceed: • for the Buyer – zero • for the Supplier – NZ$1 Million b) is limited to losses caused directly by that Party, and c) does not include any loss of revenue or profits, loss of anticipated savings, loss of opportunity, loss of production or loss of data, however caused. **8.3 Exceptions:** Clause 8.2 does not limit a Party's liability: a) for any breach of clause 13 (Confidential Information) b) for any breach of clause 12.2 (Supplier warranties) c) for any deliberate breach of this Contract, malicious act or fraud, or d) to pay any amount duly payable under this Contract.
Attachments **Reference 'Contract documents' described at Page 1**	• CAP work programme schedule – October 2023

Käpiti Coast

DISTRICT COUNCIL

Variation Order

1 1 November 2020

Variation No: 1

Coastal Science and Engineering Services- Takutai Kãpiti

Ref: 2020/ C340

We are pleased to inform you that approval has been granted to make the following variations to the above contract.

Variation detail	Cost in $NZ excluding CST
Original contract price at award stage	$237,000
Total value of previous variations:	N/A
Cost associated with this variation: VO-I (Please see attachment 1 for details.)	$8,600
Amended Contract Price at VO-4 stage	$245,600

Terms and Conditions: Other than the changes required by the additional tasks listed above there are no amendments to the Terms and Conditions of the Contract.

Lyndsey Craig

Coastal Manager

NB: Please use the most updated price schedule (attachment 1) for future claims.

Contract Variation – SERVICES

Contract Variation #1

Buyer: Kāpiti Coast District Council

Supplier: Jacobs New Zealand Limited

Contract: ~~Phase 2: Coastal Science and Engineering Services – Takutai Kāpiti~~

Phase 2 Part A: Coastal Science, Engineering Services and Planning Advice – Takutai Kāpiti

Contract reference number: 2023-C025

Contract dated: 24/03/2023

Variation

The Buyer and the Supplier are Parties to the Contract.

The Parties agree to vary the Contract. The scope of the Variation is set out in the attached Schedule of Changes. The Variation is effective from the Effective Date stated in the Schedule of Changes.

Subject to the changes made in any Variation, the terms and conditions of the original Contract remain in effect.

Words used but not defined in this Variation have the same meaning as they do in the Contract.

Acceptance

Signed for and on behalf of the Buyer:		**Signed for and on behalf of the Supplier:**	
Name:	Kris Pervan	**Name:**	Juliet Woodward
Position:	Group Manager Strategy and Growth	**Position:**	
Date:	25/10/2022	**Date**	1 .11.202

Schedule of Changes

Effective Date: 16/10/2023

Changes

Contract name changed in alignment of scope

Original contract name	Phase 2: Coastal Science and Engineering Services – Takutai Kāpiti
New contract name through variation	Phase 2 Part A: Coastal Science, Engineering Services and Planning Advice – Takutai Kāpiti

Changes to Schedule 1

1. Change to contract End Date

2.1 The contract End Date stated in Schedule 1 is updated from 31 October 2023 to 22 December 2023.

2. Change to description of Services

2.1 The description of the Services stated in Schedule 1 is updated to:

This variation amends the contract tasks to refine the scope to better suit the needs of the Takutai Kāpiti project for the first half of Phase 2.

The existing contract lists 18 tasks. Modifications to these are required as the needs of the Takutai Kāpiti project have changed. The specific changes are noted below:

	Tasks	**Variation Required**
1	Core Technical Advisory Group (TAG) and wider TAG meetings	No scope change required. Unrequired budget for the remainder of the first half of Phase 2 is removed.
2	Further advice on coastal hazards, consultation support, assisting council with information requests and other general support to KCDC and CAP support.	No scope change required. Requires budget and programme extension in order to cover the remaining first half of Phase 2.
3	*Task 3 does not exist – number '3' was skipped by accident*	
4	Planning Memorandums on: 1. Planning Framework Relevant to Natural Character of the Coastal Environment.	Change of scope – removing and associated a fee value of [redacted] for the natural character memo and [redacted] for the cultural values memo.

	2. Cultural values and considerations memorandum (Cultural values memo).	
5	Risk threshold-based approach for district planning report Details from the original contract regarding the details in Appendix 1 of the Jacobs Variation #4 proposal, dated 17/02/2023 are overridden by the update scope as outlined within this variation.	Amendment made to scope and therefore subsequently budget. The report will be present to the CAP at the 6 December CAP meeting. Final delivery date to be agreed with KCDC. Time extension required for this task. Scope and budget to be reduced, Draft Version A of the Coastal Risk Based Planning: Thresholds and Scenarios report has been provided to KCDC in June 2023. This outlines a possible approach to developing risk-based approach to managing coastal hazards through the district plan. This is developed as a discussion document for the Takutai Kapiti project. The scope now required is a removal of any mapping of hazard areas that could apply should the risk thresholds be used and any further workshopping of options. The required scope to finalise this task is: • Respond to Gina Sweetman's (independent planning consultant) comments on Jacobs draft report and Jacobs provide a final version reflective of comments. • Prepare a presentation to present the material to the mini CAP on the 6th Dec 23. • Attend the mini CAP and present presentation. This will be online and attended by Derek Todd, Damian Debski and Tim Hegarty.
6.	Funding principles memo	No further work required on this task, remaining deliverable to be removed from scope, and unspent budget of [redacted] to be removed as negative variation.
7	Northern Adaptation Area: Risk assessment report/visuals ~~Develop Draft Coastal Hazard Adaptation Objectives~~	Jacobs Built Environment risk assessment completed Incorporating the cultural domain is required to finalise the report – no changes required besides time extension. Removal of Develop Draft Coastal Hazard Adaptation Objectives task. Despite objective element removed, budget not reduced due to the requirement to undertake combined built environment risk assessment and risk assessment report are greater than originally anticipated.
8	Northern Adaptation Area: Draft pathways development Define MCDA weightings	Task complete – no changes required.

9	Northern Adaptation Area: MCDA prescoring workshop and scoring tables ~~Economic assessment memo~~	MCDA prescoring workshop and scoring tables task complete – no changes required. Economic assessment is being removed from the scope. Unspent budget [redacted]) to be removed as negative variation.
10	Central Kāpiti Adaptation Area: Risk assessment report/visuals ~~Develop Draft Coastal Hazard Adaptation Objectives~~	Jacobs Built Environment risk assessment report task completed – no changes required besides time extension. Awaiting inputs from other domains to finalise report, but no change to budget required. Removal of Develop Draft Coastal Hazard Adaptation Objectives task. Despite objective element removed, budget not reduced due to the requirement to undertake combined built environment risk assessment and risk assessment report greater than originally anticipated.
11	Central Kāpiti Adaptation Area: Draft pathways development Define MCDA weightings	Task complete – no changes required.
12	Central Kāpiti Adaptation Area: MCDA prescoring workshop and scoring tables ~~Economic assessment memo~~	MCDA workshop and scoring tables element completed – no change required. Economic assessment is being removed from the scope. Unspent budget [redacted] to be removed as negative variation.
13	Raumati Adaptation Area: Risk assessment report/visuals ~~Develop Draft Coastal Hazard Adaptation Objectives~~	Task started – Jacobs have completed risk assessment for Built Environment Domain. Awaiting inputs from other domains to finalise report. Time extension required for this task. CAP presentation for this task is to be combined with Task 14 – time extension required. However, the budget for this task is proposed to be unchanged as attendance in-person at CAP meeting is still required. Removal of Develop Draft Coastal Hazard Adaptation Objectives task. Despite objective element removed, budget not reduced due to the requirement to undertake combined built environment risk assessment and risk assessment report are greater than originally anticipated.

14	Raumati adaptation area: • Discounting actions from long-list. • Draft pathways development • Define MCDA weightings	Task un-started – time extension required for this task. Rescope includes presentation of outputs to CAP for Task 13 and Task 14 will now involve: • One mini-CAP meeting to present discounting of long list adaptation actions. Jacobs to attend online (Kate) • One extended CAP meeting to cover: o Higher level risk assessment overview o Defining adaptation objectives and MCDA criteria weighting o Developing short listed pathways. This meeting to be attended in person by Derek and Damian, with Kate attending online as required.
15	Community Feedback Engagement Sessions	Northern Adaptation Area engagement sessions complete. Central Adaptation Area engagement session delayed, but still programmed and scope changed to be done online instead of in-person. Subsequently budget reduced and time extension required for this task.
16	Iwi Support	No change to scope or budget – time extension required for this task.
17	Coordinating Awa hydrodynamic flood modelling results into risk assessments	No further work required on this task – change to remove remaining scope and budget ([redacted] as a negative variation.
18	Project Management	No changes required.

Assumptions/Exclusions

- It is assumed that one set of collated KCDC comments will be provided on any draft Jacobs reports or deliverables.
- In Task 5, development of possible planning provisions (e.g. objectives, policies, rules and spatial delineation / mapping of potential hazard zones) is excluded from the task. As discussed with KCDC planning Manager Jason Holland, the development of these provisions is a task for KCDC.
- Should any of the named Jacobs staff not be available to attend any of the scheduled CAP workshops or community engagement sessions, appropriate alternative Jacobs staff from the Core or Wider TAG team will stand-in.

3. Changes to Fees

3.1 The Fees stated in Schedule 1 are amended to:

1. Update the list of Jacobs Personnel
2. Include the fees associated with the removal of tasks and elements that are being removed from the scope as part of this variation.

Name	Title	Role	2023 Rate ($/hr ex GST)
Derek Todd	Principal Coastal Hazards Scientist	Technical Lead	[redacted]
Kate MacDonald	Senior Coastal Scientist	Technical Advisor (Coastal Processes)	[redacted]
Damian Debski	Principal Hydraulic Engineer	Technical Lead (Coastal Inundation)	[redacted]
Ian Wiseman	Senior Associate Environmental Scientist	Project Manager	[redacted]
Keith Hastings	Senior Associate Spatial Analyst	GIS Advisor	[redacted]
Greta Stuthridge	Graduate Environmental Scientist	Coastal Processes Support	[redacted]
Andrew Henderson	Principal Planner	DPE	[redacted]
~~Brittany Coff~~	~~Associate Consultant – Strategic Advisory~~	~~Economist~~	[redacted]
Devon Alexander	Senior Associate Planner	Planner	[redacted]
Tim Hegarty	Principal Planner	Planner	[redacted]
Hugo Moran	Graduate Planner	Planning Support	[redacted]
Monique Eade	Associate Consultant	Adaptation advice	[redacted]
~~Mazhar Ali~~	~~Associate Water Resources Engineer~~	~~Flood Modeller~~	[redacted]
~~Sameer Vinnakota~~	~~Environmental Planner~~	~~Planning Support~~	[redacted]

	Task	Original Contract Maximum Fee	Maximum Fee Adjustments through Variation	Total Maximum Fee
		(ex GST)	(ex GST)	(ex GST)
1	Core Technical Advisory Group (TAG) and wider TAG meetings	[redacted]	[redacted]	[redacted]
2	Further advice on coastal hazards, consultation support, assisting council with information requests and other general support to KCDC and CAP support.	[redacted]	[redacted]	[redacted]
4a	Finalise memorandum on Planning Framework Relevant to Natural Character of the Coastal Environment *(removed through variation)*	[redacted]	[redacted]	[redacted]
4b	Planning Memorandum on Cultural Values *(removed through variation)*	[redacted]	[redacted]	[redacted]
5	Risk threshold-based approach for district planning report	[redacted]	[redacted]	[redacted]
6	Funding principles memo *(removed remaining task and unspent budget through variation)*	[redacted]	[redacted]	[redacted]
7	Northern adaptation area risk assessment report/visuals Draft objective development *(removed task through variation)*	[redacted]	[redacted]	[redacted]
8	Northern adaptation area draft pathways options & define MCDA weighting	[redacted]	[redacted]	[redacted]
9	Northern adaptation area MCDA prescoring and economic assessment memo *(remove remaining economic assessment task and unspent budget through variation)*	[redacted]	[redacted]	[redacted]
10	Central adaptation area risk assessment report/visuals Draft objective development *(removed task through variation)*	[redacted]	[redacted]	[redacted]
11	Central area draft pathways options & define MCDA weighting	[redacted]	[redacted]	[redacted]
12	Central adaptation area MCDA prescoring memo and economic assessment memo *(remove economic assessment scope and budget through variation)*	[redacted]	[redacted]	[redacted]
13	Raumati adaptation area risk assessment report/visuals Draft objective development *(removed task through variation)*	[redacted]	[redacted]	[redacted]
14	Raumati adaptation area draft pathways options & define MCDA weighting	[redacted]	[redacted]	[redacted]
15	Community meetings	[redacted]	[redacted]	[redacted]
16	Iwi support	[redacted]	[redacted]	[redacted]

17	Coordinating Awa hydrodynamic flood modelling results into risk assessments – *(remove remaining scope and unspent budget)*	[redacted]	[redacted]	[redacted]
18	Project Management – Additional seven months form additional project delivery (from 1st Nov 2023 to 31st May 2024)	[redacted]	[redacted]	[redacted]
	Other disbursements as outlined within 'Expenses' within the original contract	[redacted]	[redacted]	[redacted]
	Total	**$352,636.00**	**-$112,782.17**	**$239,853.83**

The total Fees under the Contract are:

Total Fees in original contract	$352,636 + GST
Additional Fees - Variation #1	-$112,782.17 + GST
Total cumulative Fees	$239,853.83 + GST

Variation Order

3 June 2021

Variation No: 1

Coastal Science and Engineering Services- Takutai Kāpiti

Ref: 2020/ C340

We are pleased to inform you that approval has been granted to make the following variations to the above contract.

Variation detail	**Cost in $NZ excluding GST**
Original contract price at award stage	$237,000 (Deliverable 1: $146,768)
Total value of previous variations:	$8,600
Cost associated with this variation: VO-1 (Please see attachment 1 for details.)	$58,331
Amended Contract Price at VO-4 stage	**$303,931** **(Deliverable 1: $213,699)**

Terms and Conditions: Other than the changes required by the additional tasks listed above there are no amendments to the Terms and Conditions of the Contract.

Lyndsey Craig

Coastal Manager

Sean Mallon

Group Manager, Infrastructure

NB: Please use the most updated price schedule (attachment 1) for future claims.

Variation Order

23 March 2022

Variation No: 1

Coastal Science and Engineering Services- Takutai Kāpiti

Ref: 2020/ C340

We are pleased to inform you that approval has been granted to make the following variations to the above contract.

Variation detail	**Cost in $NZ excluding GST**
Original contract price at award stage	$237,000
Total value of previous variations:	$8,600 $58,331
Cost associated with this variation: VO-1 (Please see attachment 1 for details.)	$150,000
Amended Contract Price at VO-4 stage	**$453,931**

Terms and Conditions: Other than the changes required by the additional tasks listed above there are no amendments to the Terms and Conditions of the Contract.

Lyndsey Craig

Coastal Manager

Sean Mallon

Group Manager, Infrastructure

NB: Please use the most updated price schedule (attachment 1) for future claims.

Contract Variation – SERVICES

Contract Variation #4

Buyer: Kāpiti Coast District Council - 9429041907375

Supplier: Jacobs New Zealand Limited - 9429037904685

Contract: Coastal Science and Engineering Services – Takutai Kāpiti 2020-C340

Original Contract Dated: 22/10/2020

Contract Variation #1 Dated: 11/11/2020

Contract Variation #2 Dated: 3/06/2021

Contract Variation #3 Dated: 23/03/2022

Variation

The Buyer and the Supplier are Parties to the Contract.

The Parties agree to vary the Contract. The scope of the Variation is set out in the attached Schedule of Changes. The Variation is effective from the Effective Date stated in the Schedule of Changes.

Subject to the changes made in any Variation, the terms and conditions of the original Contract remain in effect.

Words used but not defined in this Variation have the same meaning as they do in the Contract.

Acceptance

Signed for and on behalf of the Buyer:

Name: Kris Pervan

Position: Group Manager Strategy and Growth

Signed for and on behalf of the Supplier:

Name: Juliet Woodward

Position: Director

Name:	Kris Pervan	**Name:**	
Date:	6/03/2023	**Date**	

Schedule of Changes

Effective Date: 24/02/2023

Changes

Changes to Schedule 1

1. Change to Description of services

1.1. The description of the Services stated in Schedule 1 is updated to extend Deliverable 2 to cover **retrospective** work for tasks preformed in the period from 3rd June 2022 to 31st January 2023 which were not covered in a previous contract variation. Retrospective tasks undertaken in the period 3rd June 2022 to 21st October 2022 **have already been invoiced and paid.**

1	Core Technical Advisory Group (TAG) and wider TAG meetings	Derek Todd, Kate MacDonald, Tim Hegarty and Ian Wiseman to attend regular online fortnightly 1hr Core TAG meetings for the period between July 2022 to October 2023 (Assumed 20 meetings between January 2023 to Oct 2023) Wider TAG meeting, monthly 2hr meetings online attended by Derek Todd, Kate MacDonald, Damian Debski, Brittany Coff, Tim Hegarty and Ian Wiseman (Assumed 9 meetings between January 2023 to Oct 2023). **This task has been completed.**	
2	Further advice on coastal hazards, consultation support, assisting council with information requests and other general support to KCDC and CAP support.	This item is intended to be used for smaller support tasks that are additional to those specifically listed and cost estimated in this table. The intent is to provide for council to access the ongoing support it needs in a timely manner by agreeing with the KCDC PM that specific tasks and requests from KCDC to Jacobs can be done under this item. These tasks and costs would be tracked weekly by Jacobs. **This task has been completed.**	
3	Draft MCDA Criteria and descriptions. Draft long list of interventions/options.	Develop report containing draft Multi Criteria Decision Analysis (MCDA) tools and approach proposed for the Takutai Kapiti project. This will document: • Overview of decision making framework and tools • Relationships, roles and responsibilities • Decision making framework for the	Presented to CAP meeting on 22nd July 2022. Meeting was attended in person by Derek Todd

		Takutai Kapiti recommendations. This will also document the planned implementation of this approach through CAP meetings and workshops. The long list of options will be developed to document options that could be applied in Kapiti. This will provide a high level overview of each option, what it does, where it could be applied and some positive and negative elements of the options. This will be appended to the above report. Kate MacDonald and Neil Blazey led development of this report with review by Derek Todd. Budget included travel expense to CAP meeting. **This task has been completed.**	and Kate MacDonald
4	Planning Memorandums on: 1. Planning Considerations in relation to Natural Hazard Thresholds. 2. Marine and Coastal Areas Act (MACA memo) 3. Planning Framework Relevant to Natural Character of the Coastal Environment. 4. Cultural values and considerations memorandum (Cultural values memo).	The Jacobs planning team will develop these planning memos covering the following: 1. Planning Considerations in relation to Natural Hazard Thresholds. Jacobs will discuss how the technical advice in relation to low to high hazard areas (discussed in Task 5 below) could be applied in the Coastal Plan Change to the Kapiti Coast District Plan. The memo will provide examples of risk based planning approaches that have been used elsewhere. **This memo has been presented and task has been completed.** 2. Initial drafting of MACA memorandum. **The need for this memo has been superseded by information provided by Lyndsey Craig 30 June 2022.** 3. Planning Framework Relevant to Natural Character of the Coastal Environment. This memorandum will discuss the district council obligations in relation to natural character, high natural character and outstanding natural character. The memo will discuss how the information presented in the Boffa Miskell Natural Character Evaluation may be used in the Coastal	Planning memo 1 was presented to CAP meeting on 31st Aug 2022 Meeting was attended in person by Tim Hegarty to present the memo.

		Plan Change. **A draft of this memo has been released to KCDC for comment in September 2022.** 4. How cultural values are considered in district plan change processes including the important role of Māori and tangata whenua in resource management processes and the influence of Iwi Management Plans, Cultural Impact Assessments and other information provided by iwi during statutory process. This memorandum will be developed through ongoing engagement with Te Atiawa, Nga Hapu Otaki, Ngati Toa; and provided to CAP once both Iwi and KCDC are comfortable with the content of the memo. **This task has been partially completed.**	
5	Risk threshold-based approach for district planning Report (see details in Appendix 1 the of Boffa Miskell Variation #4 proposal, dated 17/02/2023)	Jacobs will develop technical advice around a Risk Threshold Based Planning approach to identifying low to high hazard areas in which different District Planning approaches may apply. It is anticipated that the Risk Based approach would be identified and uniform across the whole region rather than being undertaken for each coastal adaptation area. The recommended methodology for the Thresholds and Scenarios to be used to define low to high hazard areas will be presented in a detailed report that could be one of the supporting documents for a future Coastal Plan Change. A core output will be a series of maps showing suggested low to high hazard zones in which Council and may consider different planning approaches and provisions within the Coastal Plan Change. The full details of this task item methodology are listed in attached Appendix 1 of Boffa Miskell Variation #4 proposal, dated 17/02/2023. **This task has been partially completed, with Jacobs hosting an online workshop with KCDC staff to discuss initial thinking on Risk Based Thresholds and Scenarios for both coastal erosion and flooding**	Initial workshop with KCDC staff was held in August 2022.

		hazard, and the undertaking of discussions on standardising risk thresholds for coastal and fluvial flooding.	
6.	Funding principles memo	A memo will be developed outlining at a high-level funding principles for how adaptation options may be paid for. Brittany Coff will lead the development of this memo. It will document options for payment through targeted versus general rates and splits between those benefitting from works and the wider district. This memo will be presented in an online meeting to the KCDC Senior Leadership Team in April, and following incorporation of feedback from that meeting, presented to CAP for information at their May meeting. **This task has been partially completed.**	
7	**Northern Adaptation Area:** • Risk assessment report/visuals • Develop Draft Coastal Hazard Adaptation Objectives	**Risk Assessment Report/Visuals** Jacobs will create a risk assessment for the northern adaptation area which will combine existing information on the hazards and existing values and uses of the adaptation area. This will identify the spatial intersection of the hazard exposure with the values and uses of the coastal environment and use this to develop the vulnerability and risk to these values and uses with climate change over time. It is envisaged that this risk assessment would include visual presentation/mapping of data where possible to build up a spatial understanding of the changing spatial distribution of values and uses at risk in the northern adaption area with climate change. This Risk assessment will form the baseline "do nothing" option against which various adaptation actions and pathways can be assessed. **This task has been partially completed.**	
8	**Community Engagement Session:** • July 2022 (district wide engagement)	Derek Todd and Kate MacDonald attended the district wide community engagement session in July 2022. **This task has been completed.**	

9	Project Management	Ian Wiseman will continue to manage the project over this year. This will include tracking project costs on a weekly basis, regular communication KCDC's PM, invoicing, managing the Jacobs team and coordinating delivery of the project deliverables. **This task has been partially completed.**	

4. Changes to Price

4.1 The Charges stated in Schedule 1 are amended by the addition of the following items:

	Task	Fee already invoiced
1	Core Technical Advisory Group (TAG) and wider TAG meetings ***Completed***	[redacted]
2	Further advice and discretionary tasks on coastal hazards, consultation support, assisting council with information requests and other general support to KCDC and CAP support. ***Completed***	[redacted]
3	• Draft MCDA Criteria and descriptions • Draft long list of interventions/options ***This was completed pre-October 2022***	[redacted]
4a	Memorandum on Planning Considerations in relation to Natural Hazard Thresholds ***Completed pre-October 2022*** Memorandum on Planning Framework Relevant to Natural Character of the Coastal Environment ***Draft completed pre-October 2022***	[redacted]
4b	Planning Memorandum on Cultural Values ***Partially completed***	[redacted]
5	Risk threshold-based approach for district planning: • Review existing approaches to hazard management • Develop Thresholds and Scenarios • Data Review and Mapping • Draft and Final reporting, spatial data hand over, Presentation to CAP (April) ***Partially completed and one workshop already completed***	[redacted]
6	Funding principles memo ***Partially completed***	[redacted]
7	Northern adaptation area risk assessment report/visuals Draft objectives Development - Includes travel for Derek and Kate to attend March CAP workshop	[redacted]

	Partially completed	
8	Community meeting - Includes travel for Derek, Kate and Damian to attend meetings ***One event has already been completed (July 2022)***	[redacted]
9	Project Management Includes: - Development of variation (internal set up) - Team management - Weekly cost tracking and reporting - Monthly invoicing ***Completed***	[redacted]
	Total	**$108,208**

5.1 The total Fees under the Contract are:

Maximum Total Fees in original contract	$237,000 + GST
Additional Fees - Variation #1	$8,600 + GST
Additional Fees - Variation #2	$58,331 + GST
Additional Fees - Variation #3	$150,000 + GST
Additional Fees - Variation #4	$108,208 + GST
Total Cumulative Fees	**$562,139 + GST**

6.1 Attachments:

- Jacobs contract variation proposal – dated 17/02/2023
- Jacobs draft Decision Making Framework Report, dated 10/06/2022.