

Contractors tender Submission



6 May 2019

Our ref: T13624

Rotorua Lakes Council
Private Bag 3029
Rotorua Mail Centre
ROTORUA 3046

Attention: Kerry Starling

Dear Kerry,

RE: C18/029 - ROTORUA LAKEFRONT DEVELOPMENT - STAGE 1 & 1A CONSTRUCTION CONTRACT

We welcome the opportunity to be considered to deliver this important project to construct Stage 1 and 1a of the Rotorua Lakefront Development. We offer our unmatched experience in delivering large multi-faceted projects with a high standard of workmanship, whilst providing you with value for money and the least disruption to the community, along with minimal environmental impact.

In assessing our tender, we respectfully ask that you understand the appended clarifications.

Should you have any queries we would be very pleased to answer them for you.

Yours faithfully

Andrew Hiscox
Area Manager, Structures Bay of Plenty
Mobile: +64 27 495 8978
Email: tenders@heb.co.nz

together @ VINCI

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roads
bridges
precast
marine
water
land

**Rotorua Lakefront
Redevelopment
Stage 1 & 1a
Contract 18/029**

Rotorua Lakes Council

Non-Price Attributes

May 2019



together @ VINCI

9.5	We have made no allowance for dealing with artesian water if encountered while drilling.
9.6	We have allowed to take 1 x set of 3 grout samples per day.
9.7	Standing time for delays outside of our control will be charged at \$475.00 +GST per hr per rig.
9.8	Grout use allowed for is based on 110% of the theoretical borehole volume, Extra grout will be charged at \$1.75/kg batched.
9.9	No allowance has been made for installing temporary casings if required to keep the drill holes open.
9.10	The Specification calls for an exceptionally large volume of proof and acceptance testing, which we estimate will take 12 weeks to complete. There would be a considerable time and cost saving if the specified testing requirement were relaxed.
10.0	Electrical
10.1	Alternative S1 lights have been allowed for, including the required Casambi controls
10.2	Our tender includes future stages 1.2 & 3 works, which are required for stage 1 & 1a to operate.
10.3	Brightlight LED's if required would be an additional \$28,220.00 +GST
10.4	OS1010 agent fees, electrical inspections and metering costs have been included.
10.5	No costs allowed for Unison Networks if required.
10.6	No allowance has been made for CCTV camera's or wiring for.
11.0	Tukutuku timber Decking
11.1	Our tender sum is based on installing the Tukutuku bridge timbers as per the original design.
11.2	We have been advised by a few timber suppliers that the detailed tukutuku decking timber will waste a considerable amount of timber and there is a risk that the exposed grains may split. So, our timber supplier has indicated that they won't warranty the product as its currently designed.
11.3	NT1 # 9 provides a revised timber detail for the large tukutuku bridges, the cost saving to install this would be \$328,570.00
11.4	If HEB becomes the preferred tender, we would work with the designer and our timber supplier to ensure that a best for project outcome is achieved. Which allows us to warranty our product.
12.0	Landscaping
12.1	Our tender allows to use Evergreen Landcare to undertake the landscaping works. At the time of tender, they provided HEB with a complete package, including maintenance as per the specification (scheduled items 9.13 & 9.14). If you wish to use Infracore then the landscaping works would cost an additional \$34k + GST. Infracore would also need to supply maintenance costs.
12.2	Trees identified to be removed will have their stumps ground to a max depth of 300mm.
12.3	All plants are subject to availability (the contract specification does not allow substitution) Evergreen Landcare can recommend substitutes if specified species are not available.
12.4	Irrigation of specified lawn areas, which is based on the following parameters; <ul style="list-style-type: none"> - Design, supply and installation of an automated irrigation system for two lawn areas. - A minimum flow of 31.5 litres per minute (l/m) at 300kpa is available from the existing water supply - All pipework to be LDPE pipe and MDPE pipe for the mainline - Insolation valves will be installed to control the irrigation system - Installation of 21 x rainbird 5004 sprinklers in lawn areas - As built drawings will be provided - Lawn area irrigation consists of 4 zones - No allowance has been made for the irrigation water main connection, not known at this stage - Irrigation equipment as per existing RLC local systems; <ul style="list-style-type: none"> ▪ 25mm LDPE pipe ▪ PN15 rain bird 5004 SAM sprinkler assemblies ▪ Rainbird PEB solenoid valves ▪ Rainbird T-Boss control system ▪ Carson std rectangular valve enclosure ▪ Associated fitting and installation
13.0	Hidden decking fixing details

HEB Construction Ltd

Tags & Clarifications

Rotorua Lakes Council's Rotorua Lakefront Development Stage 1 & 1A

In assessing our tender, we respectfully ask that you understand the following clarifications:

Item	Tag / Clarification
1.0	Schedule of Prices
1.1	Our tender is based on the enclosed schedule of prices.
2.0	Programme
2.1	Our tender is based on the enclosed programme, completing stage 1 first before moving onto stage 1a. Tukutuku bridges shown in stage 1 would be constructed in stage 1a with the other tukutuku bridges.
3.0	Variations
3.1	For the purpose of valuing variations our onsite over heads will be 10% and offsite overheads and profit 15%. Working day rate \$2650.00/day
4.0	Design & Consents
4.1	We have allowed to design the lawn irrigation and prestressed precast elements only. A PS1 & PS3 will be supplied for the precast components. All other elements have been designed by Tonkin & Taylor or Isthmus.
4.2	We have made no allowance to obtain building or resource consents, this is to be arranged prior by RLC, including the costs associated with these consents. We have allowed for the site management of these consents including arranging the relevant inspections.
4.3	We have allowed to supply PS1 certificates for temporary works elements
4.4	Resource Consent - As per our methodology we have allowed to install sheetpile coffer dams and use submersible pumps to dewater the coffer dams. We have also allowed for standard silt fences to control water runoff; temporary stockpiles will be covered in filter cloth and accessways will be stabilised with metal. Additional requirements to meet the resource conditions will be treated as a variation.
5.0	Archaeological
5.1	We have made no allowance for Iwi monitors or archaeologists to be on site during the works. If required these are to be supplied by RLC.
6.0	Salvaged Materials
6.1	Materials that have been identified to be salvaged will be placed on pallets and transported to an RLC depot for storage. We have allowed to transport items to a depot within 20km (round trip) of the site.
7.0	Sun Loungers
7.1	We have allowed a provisional sum for the sun loungers (item 11.5), final details & costs to be agreed, if it is decided by RLC to install sun loungers.
8.0	Slip Resistance
8.1	We have made no allowance for slip resistance testing; our tender is based on the specified / detailed products and surfaces having the require slip resistance. Testing if require will be additional to our tender sum.
9.0	Micro Piles
9.1	We have allowed to install 25mm dia hot dipped galvanised DSI GEWI bar, with 3 domed nuts per pile.
9.2	We have made no allowance for trial nails prior to starting the production drilling.
9.3	We have allowed to proof test 12 No. anchors by tension loading in accordance with table 4.2 and acceptance test 230 No. production anchors by tension load testing in accordance with table 4.4 of the Tonkin & Taylor specification.
9.4	We have allowed for testing as per the specification, which we estimate will take 12 weeks.

17.1.	We believe that it would be considerably cheaper to excavate the material from within the sheetpile coffer dam, run it through a pug mill mixed with cement and place back in the excavation or completely replace the excavated material and replace with low strength concrete.
17.2	The sheetpile lengths and temporary works design would need to be amended to allow for the excavation and it's likely that walers would be required.
17.3	We would be happy to investigate this further and provided cost savings if we become the preferred contractor.
18.0	General
18.1	No bio oil has been allowed for in the machinery, all machinery working on site will be new and well maintained. Services and refuelling will take place at least 20m away from the lakefront and within a bunded area.
18.2	We have made no allowance to test or undercut unsuitable subgrade material. If required, this will be treated as a variation and dayworks rates would be applicable.
18.4	We have allowed for warranty as detailed in 1237, section 3.1. No durations have been supplied so we have allowed for 12 months.
18.5	No guarantees have been allowed for, guarantees and warranties listed in 1237, section 2 are for residential buildings and aren't applicable.
18.6	We have made no allowance for galvanising of reinforcing steel
18.7	We propose the attached as the form of performance bond (attached form)
18.8	We have made no allowance for any anti-graffiti coatings.
18.9	We accept the provisions of clause 2.11 on the understanding that this will not apply to matters which an experienced contractor carrying out the Contract Works on a construct-only basis would not reasonably have been expected to identify.
18.10	We propose a new clause 7.1.5 as follows: <i>The Parties agree that the Contractor's liability under and in connection with the Contract shall be limited to the Contract Price, and that neither Party shall be liable to the other for consequential or indirect loss of any kind.</i>
18.11	There may be situations in which it will not be possible for the level of subcontractors' public liability insurance to match that of the Contractor's. We request a discussion around applying differing limits depending on the nature of the work required in each particular circumstance.
19.0	Sampling & Prototypes
	We have allowed a provisional sum of \$100k (item 1.10) for sampling and prototypes, upon award we would confirm the requirements with the designers and provide detailed pricing. RLC and the designers can then confirm which samples and prototypes they would like us to trial.
20.0	Vibration Monitoring
20.1	We have made no allowance to undertake vibration monitoring. If required by the resource consent, engineer or a complaint, then the cost to undertake vibration monitoring will be treated as a variation.
20.2	Installation of sheetpiles will generate vibrations, however due to the ground conditions and location of the sheetpiles it's unlikely that the vibration limits will be exceeded at the site boundaries.
21.0	Precast
21.1	We have made allowance for an off the form finish from our steel moulds, in accordance with NZS3114 clause 105.4 (F4 finish). This finish is not completely free of blemishes, blow holes and mould joints maybe visible.
21.2	We have made allowance for abrupt variations (in our steel moulds), in accordance with NZS3114 clause 304.1.2 & 304.1.3.
21.3	We have only made allowance for tolerances and concrete tests in accordance with NZS3109. We have not made allowance for any additional samples or trial batch tests.
21.4	We have made allowance for a PS1 & PS3 only.
21.5	We have allowed to use one (adjustable) mould to achieve all the inner deck curve profiles and one (adjustable) mould to achieve all the outer deck curve profiles. The procurement of additional moulds will incur additional costs.
21.6	For the 3m wide and 5m wide boardwalk decks as well as edge units, we have allowed for the recess underneath to be a local recess to the pile head only, and not tapered.
21.7	We have allowed for 150 kg/m3 of reinforcing steel in the pre-stressed decks.

13.1	Our tender allows to install the hidden fixings as per the design, however this may not result in a quality finish as it may allow the decking timber to twist and cup.
13.2	The cost saving to install 2No. 14g 120mm s/s decking screws as per NT1#1 would be \$12,635.00 + GST
14.0	Concrete Piers
14.1	As detailed in our methodology we have allowed to cast the concrete piers insitu rather than precast. The design is more suited to cast them insitu. We would construct steel moulds that would be secured to the foundation slab and then propped.
15.0	Stone
15.1	Our stone supplier Design Source has allowed to supply G3027, which is subject to availability at the time of order. The material is currently in short supply due to the government currently upgrading factories around the G3027 quarry.
15.2	13 of the modules may need to be made in two pieces due to their size. Rejointing will be required for the larger units. The maximum block dimensions will be 2.4 x 1.4m (FBC)
15.3	Total weight is approx. 200t
15.4	Current delivery lead time is 8 – 10 weeks
15.5	Design Source require a prepayment of 50% before the order will be placed with their supplier.
15.6	Due to the long lead time it may not be possible to produce prototypes and samples.
15.7	Our stone supplier has expressed serious concerns with sourcing this stone from China and have included an opt out tag in their submission. Their main concern is around quality and availability.
15.8	Prices are based on Forex rates of US\$0.665 and €0.581
15.9	Full AutoCAD dwg or dxf unit files to be provided, we have made no allowance for design elements
15.10	Stone tolerances are to be plus / minus 8mm for the finishing of the material
15.11	The nature of how basalt is formed means that the material is likely to have gas fissures/faults that may not become apparent until some time after the material has become installed and subject to environmental degradation.
15.12	As an alternative we have received another quotation to supply Zimbabwe black granite from Bagnara Italy, this would cost an additional \$1,033,850.00 +GST. Quality isn't a concern here.
16.0	Ground improvements (GI)
16.1	Due to recent events in the GI market, we have only been able to secure one quotation to undertake the GI work. This is from Brian Perry Civil (BPC) and their Canterbury branch is the only branch able to undertake deep soil mixing. Plant and labour needed to undertake the works would have to be mobilised from Christchurch.
16.2	The sulphate resistance cement contains a blend of fly ash, which may slow the strength gain and inevitably full strength may only be determined at 56 days.
16.3	The GI specification is very onerous. BPC have worked with Tonkin and Taylor in Christchurch on several GI project over the years and have together developed specifications and testing methods that would be more suitable for this project. There would be a considerable cost saving if the previously developed specification and testing could be used.
16.4	BPC's programme is based on being able to track on the previous days stabilised material, if the stabilised material does not gain enough strength due to the fly ash content then standing time may be charged.
16.5	Field trial testing (table 3-3) and stabilised material verification testing (table 3-4) – borehole samples in 2MPa improved soil will not be achievable as the cores will disintegrate. BPC propose to use dual tube soil sampling methods to obtain core samples from the freshly mixed soil layer for subsequent laboratory testing. BPC have allowed for the full suite of testing as per (table 3-3), however due to what appears to be a double up, have only allowed for the insitu sampling and laboratory testing from (table 3-4).
16.6	Our tender allows for insitu cement mass stabilisation with 300kg/m ³ of sulphate resistant cement, rates for other quantities are detailed below: 260kg/m ³ \$215.40/m ³ 280kg/m ³ \$224.81/m ³ 320kg/m ³ \$243.38/m ³ 350kg/m ³ \$257.95/m ³
17.0	Ground improvements (GI) - Alternative

attributes

huanga

experienced
innovative
capable

21.8	We have made allowance to epoxy the strand ends.								
22.0	Concrete Supply								
22.1	<p>Due to the varying specified mix designs and their makeup complexities we have been unable to source a concrete supplier who would supply rates for all of the varying mixes. So, our tender allows for the following plain concrete mixes;</p> <table border="1"> <thead> <tr> <th>Mix</th> <th>Tender Rate</th> </tr> </thead> <tbody> <tr> <td>25MPa 19mm std str AA2519AW</td> <td>\$231.60/m³</td> </tr> <tr> <td>25MPa 19mm std pump AP2519AW</td> <td>\$235.20/m³</td> </tr> <tr> <td>50MPa 19mm 8% microsilica super pump mix AP5019GSW</td> <td>\$337.20/m³</td> </tr> </tbody> </table> <p>Factors of concern from our concrete supplier (Firth Concrete) are as follows;</p> <ul style="list-style-type: none"> - Sourcing specified products and aggregates (some of the aggregates specified may no longer be available or expensive to source) - Plant contamination (there would be a considerable cost associated with cleaning the plant to ensure there is no contamination during mixing, this would need to be done prior to each pour because a common plant would be used) - There are too many trial mixes required and to undertake would be expensive, sourcing and mixing small quantities is costly. Ideally the number of trial mixes required would need to be reduced. - Storage and handling of specific aggregates and products can be problematic in a common batching plant. <p>All the above can be worked through and a suitable solution can be agreed. If we become the preferred contractor, we propose to work with the designers to undertake trials and confirm mixes and agree extra over concrete rates to the above.</p>	Mix	Tender Rate	25MPa 19mm std str AA2519AW	\$231.60/m ³	25MPa 19mm std pump AP2519AW	\$235.20/m ³	50MPa 19mm 8% microsilica super pump mix AP5019GSW	\$337.20/m ³
Mix	Tender Rate								
25MPa 19mm std str AA2519AW	\$231.60/m ³								
25MPa 19mm std pump AP2519AW	\$235.20/m ³								
50MPa 19mm 8% microsilica super pump mix AP5019GSW	\$337.20/m ³								
22.2	As an alternative to the specified mix designs, there are some very good concrete stains available that would be considerably cheaper. We would be happy to also explore these options during the trial period.								

Yours faithfully



Andrew Hiscox
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Executive Summary

The exciting vision Rotorua Lakes Council (RLC) has for the Lakefront Redevelopment is coming to fruition through RLC's detailed planning and commitment. Receiving the largest amount of funding for a single project from the Provincial Growth Fund signals the NZ Government's belief in the economic and social benefits this redevelopment will bring to Rotorua. RLC knows that the creation of a destination at the lake edge adjacent to the city centre will be a catalyst for further investment, draw locals and visitors to the area, provide a location for new recreational activities – and be a strong and long-lasting reflection of Rotorua's unique heritage and culture. Now it's important to select a contractor for the construction of Stage 1 and 1a who not only has the right technical capabilities, but also understands the wider purpose of the project and can make a strong contribution to it.



HEB has the technical capabilities and experience to construct this Lakefront project designed to re-connect people with the waterfront and celebrate Rotorua's unique heritage and culture. photo credit: GNS Science

Through the REOI stage, HEB showed RLC through previous projects such as Access to Water in Tauranga, Memorial Park Alliance and Te Wero, that we are a contractor with proven skills in large multi-faceted projects. Like the Lakefront Redevelopment, these projects were undertaken in busy urban areas, in the public eye, with connections to culture and heritage and are meaningful for the people who will use them. As well as being technically competent, we can work with Council, Te Tatau o Te Arawa, stakeholders and Iwi to bring the work in on time, on budget, and to the expected high quality deserving of well-designed civic projects. We also have experience with ECI contracts, providing valued inputs, innovations, and seeing issues before they happen. RLC can be confident that the team from HEB has a plan to self-perform the majority of the works, with specialist subcontractors directly managed by our nominated Project Manager. We also own the necessary specialist plant and we have the resources to deliver.

For the RFT stage, we'd like to emphasise the additional benefits and value that HEB will bring to the project:

- Innovative and capable of delivering the best possible high quality facility for Rotorua
- Our team is highly experienced with a track record of working well together
- Community focused, excited about the opportunities the project will endow and keen to involve locals and provide a positive local economic impact

Strong capabilities and able to add value

We can provide RLC with cost efficiencies by managing and self-performing the majority of the works using HEB resources and enabling site efficiencies. Potential cost savings we have identified include an alternative to insitu cement stabilising, casting piers insitu, using an alternative planting subcontractor, and optimising the testing requirements in the specification. These are further detailed in the Methodology and Price document.

Working collaboratively is a key component to delivering a high quality project to RLC. As shown on Memorial Park Alliance we are able to work well with specialist subcontractors and make them part of our team.

To create on-going enthusiasm for the project and limit disruption to the public and businesses, we plan to open Stage 1 to the public once it's finished. We'd like to have a grand opening and blessing of this area working in collaboration with the Lakefront Development Advisory Committee and other stakeholders.

Protecting the sensitive lake environment is highly important and HEB has an unblemished record in this area. Our Project Manager and Environment Manager will produce a detailed environmental management plan

Contents

Executive Summary	1
Schedule of Proposed Subcontractors	3
Schedule of Tenderer's Current Commitments and Resources	4
1. Tenderer's Current Work	4
2. Outstanding Tenders	4
3. Resources	4
Schedule of Key Personnel	8
Schedule of Methodology and Management Systems	16
Schedule of Local Economic Impact	34
Attachment 2 Questions – Meeting the PGF Objectives	36
Financial Viability	45
Health & Safety	46

Schedule of Proposed Subcontractors

We propose to use the following subcontractors on this contract as below. Wherever possible we have chosen to use local subcontractors and suppliers.

Subcontractor's name	Work to be undertaken	Value of work
Evergreen Landcare (Rotorua)	Landscaping	s7(2)(b)(ii) LGOIMA
Infracore (Rotorua)	Planting	
Brian Perry Civil	Ground Improvements	
Groundfix	Micro Pile	
Sefton Electrical (Rotorua)	Electrical	
Street Furniture NZ	Street Furniture (supply)	
European Stone Mason	Stone Pavilion Installation	
HEB Precast (BOP)	Precast Components	
Firth Concrete (Rotorua)	Concrete Supply	
Hynds Pipe Systems Ltd	Pipework Supply	
Design Source	Supply of stone for Pavilion	
Cutting Innovations	Supply and cutting of Tukutuku Bridge timbers	
Bay Sandblasting Ltd (BOP)	Sandblasting	
Henderson Quarry (Rotorua)	Aggregate	
Placemakers (Rotorua)	Timber Supplies	
Road Safe Traffic Management (BOP)	Traffic management	

and these names are submitted for approval as required by NZS3910:2013 Clause 4.1.2 of the Conditions of Contract.

With respect to NZS3910:2013 Section 4 of the General Conditions of Contract, all material suppliers are deemed to be Subcontractors.

Tenderer: HEB Construction Limited

Signature: 

Date: 6th May 2019

before we start on site. This plan will be followed and controls put in place and maintained for the duration of the works.

A highly experienced team, working well together

We've selected a team with directly relevant experience in creating projects that are similar to Rotorua Lakefront Redevelopment in terms of vision and technical requirements. For example, the Access to Water in Tauranga project involved extensive civil works in and around the water. This award-winning project was also council-led with the shared objective of re-connecting people with the waterfront and celebrating heritage and culture. Several members of our team on this project have been nominated for the Rotorua Lakefront Redevelopment, including Contract Manager Andrew Hiscox, Site Engineer Louie Gilmour, Site Supervisor Greig Mitchell, Health and Safety Manager Cathy Holden, and Environmental Manager Simon Cathcart. This team has been working on many BOP projects together including Waiāri Water Intake Project for Tauranga City Council.

We've made one change from our REOI team, nominating Cole Meiring as Project Manager. He was Structures Manager for the Arras Tunnel for the Pukeahu National War Memorial Park & Underpass – a project demonstrating our expertise in highly complex 'one-off' projects where design and aesthetics are important. Successful delivery of this project is testament to our capabilities in working with clients, stakeholders and other contractors to meet time, quality and HSE requirements. Contractor's Representative Steve Croft was Alliance Manager for the whole project, and had key stakeholder and community involvement such as getting local schools involved with site visits and in 'name the crane' competitions.

Community-focused, ready to contribute to the benefits the project will bring

The Lakefront Redevelopment project aligns with the funding criteria for the Provincial Growth Fund – lifting productivity potential in the provinces, creating jobs, and enhancing community benefits. It's also a key contribution to RLC's Vision 2030 – The Rotorua Way, aligning with the majority of its goals. Through undertaking the construction of this project, HEB can also make a positive impact to the local economy – one that goes beyond the completion of the contract and beyond HEB itself.

Wherever possible we are using local subcontractors such as Evergreen Landcare, Infracore and Sefton Electrical, and suppliers such as Firth Concrete, Placemakers and Henderson Quarry – J Swap. We'll need to fill around five contract positions for carpenters, labourers and machine operators, and will provide these new recruits with training and upskilling opportunities.




We want the communities of Rotorua to be as passionate about the project as we are. We hope to involve local schools where we can, and provide as much progress information to the public as we can. A comprehensive response to your Attachment 2 is included in this document.

We would welcome the opportunity to successfully deliver this landmark project for RLC and the community and visitors to Rotorua. HEB will provide early constructability input, price certainty, timely completion and a commitment to make a positive difference to the local economy and social objectives for Council.



To boost social inclusion and participation during construction of the Lakefront project, HEB hopes to involve the local primary school. This was done successfully in Wellington's Arras Tunnel project – one initiative was the 'name the crane' competition.

current commitments

Plant item – including details, size, capacity	Owned by	Description and suitability		Critical item Y/N
Cranes & Piling Equipment 13 Crawler Cranes from 5T to 280T capacity. 6 Mobile cranes from 7T to 125T capacity. 12 vibratory hammers 6 hydraulic impact hammers, including a 10T Bruce SGH-1015 and two 16T BSP HH1146s.	HEB	The cranes will be used for any type of lifting/placing operations that are required on this project. Cranes in combination with the piling equipment may also be used to carry out piling operations for temporary and permanent works. Our piling plant represents the largest in-house driven piling resource of any New Zealand contractor.		Yes
Excavators 30+ Excavators from 3T up to our 125T, 28m-long reach Komatsu PC1250, critical for safe and efficient work	HEB	Excavator sizes for all site purposes. Our GPS equipped 125t excavator can accurately dredge, form batters, and place armour rock – even underwater.		Yes
A total of 5 floating barges, 7 work boats and marine ancillary equipment.	HEB	For safe access to working areas in harbours and channels. All plant kept in our Te Puke and Mt Maunganui yards.		Yes
8 Dredging buckets	HEB	For dredging and rock placement from cranes.		No
10 Off road Trucks, 8 On road Trucks	HEB	Transportation of spoil offsite, aggregate to site, rocks and material within the site.		Yes

current commitments

Schedule of Tenderer's Current Commitments and Resources

1. Tenderer's Current Work

List current work being carried out by the Tenderer at the date of submitting the attached tender:

Principal	Project Name	Contract Value	Comp Date
Haydn & Rollett Construction	Ballance Reporoa Facility	\$2.2M	July 2019
Tauranga City Council	Waiāri Water Intake	\$18M	May 2021
Tauranga City Council	Te Maunga WWTP – Grit Handling Upgrade	\$1.2M	Nov 2019

2. Outstanding Tenders

List outstanding tenders for which advice of acceptance is awaited at the time of submitting this tender:

Principal	Project Name	Contract Value	Comp Date
KiwiRail	Bridge 91 ECMT - replacement	\$2.4M	Jan 2020


3. Resources

Describe the plant, equipment, labour, facilities and intellectual property to be used on the project.

Rotorua Lakes Council will benefit from HEB's extensive resources which are based in our Mt Maunganui and Te Puke yards. We run our own fleet of heavy haulage trucks and trailers for moving all of our own gear, so that no delays occur from external service providers.

In the table below we provide an overview of the current resources that will be used on this contract.

Plant and equipment

Plant item – including details, size, capacity	Owned by	Description and suitability		Critical item Y/N
Floating Plant Jack-up barge	HEB	For offshore investigation works. Enables investigation rigs to work over water to conduct CPT and boreholes without wave and tide hindrance.		No

current commitments

Roles	Number required
Carpenters	2-6
Labourers	3-10
TOTAL	Up to 26

Subcontractors

The subcontractors we will be using are detailed in the Schedule of Proposed Subcontractors.

Contingency resources

Plant

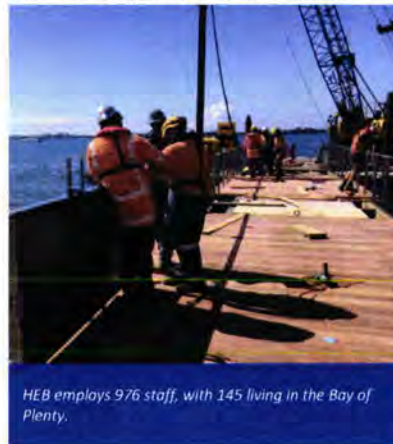
Contractor

As shown by our industry-leading and comprehensive range of plant, HEB has sufficient in-house resilience of all critical plant. Our Mt Maunganui and Te Puke yards hold our plant fleet along with units being utilised on projects, allowing selection from a full range of backup plant that can be brought to the nearby worksite immediately.

Our large plant yard in Wiri, Auckland will provide primary backup beyond our Bay of Plenty yards. We also have:

- Preferred supply agreements in place with national plant hire firms, should we need to supplement our own plant in unexpected or emergency situations
- The significant financial backing of our parent company VINCI, which enables us to purchase the required equipment if necessary.

There are infrequent occasions where we may need to hire in to supplement our needs due to our own plant fleet being fully deployed on other construction sites. We have existing and well established preferential arrangements with large plant hire companies such as Porter Hire, Hirepool and Daniel Smith Industries (for cranes).



HEB employs 976 staff, with 145 living in the Bay of Plenty.

Construction workforce

HEB understands the importance of having resources available at all times during a contract, even when unexpected events occur. With our national size and depth of resource we have the ability to quickly move additional or replacement resource to the project.

HEB employs 976 staff, with 145 living in the Bay of Plenty. This large regional team means we can quickly access additional staff as required, across all levels from management roles to site workers.

Tenderer: HEB Construction Limited

Signature: _____

Date: 6th May 2019

current commitments

Plant item – including details, size, capacity	Owned by	Description and suitability		Critical item Y/N
Earth moving and compaction equipment (multiple units)	HEB	Bulldozers and compaction equipment used to create embankment in conjunction with off road trucks and excavators		
7 Heavy Haulage Trucks and Multiple Trailers	HEB	Heavy Plant, equipment and material deliveries based from our home base at Mount Maunganui, the Port of Tauranga and further afield.		No
Pumps, vibrators, hand tools – multiple items as required	HEB	Standard equipment for concrete works. We have sufficient numbers of all items to provide capacity for large-scale concrete works.		Yes
Small delivery/crew trucks	HEB	Small deliveries and crew transport.		Yes

Facilities

Being based only just over one hour from the site (we are located at Mount Maunganui) means ready access to our full range of support services; a large engineering workshop, mechanics shop and precast concrete yard. Our qualified mechanics in our engineering workshop maintain, repair and rebuild our plant and equipment. Our precast yard in Te Puke produces cost-effective concrete elements for our multi-million-dollar highway and wharf projects in a controlled factory environment.

HEB has a local presence, with an established business unit in Rotorua where we have seven permanent staff. We have carried out contracts for forestry roading with Timberlands, Tiaki and Tuamata for the past 14 years. As a subcontractor, we've recently completed road sealing contracts in Victoria Street and Spencer Road.

The location for a site compound for the Lakefront Redevelopment works will be on site in a location as discussed and agreed with the site representative.

The compound will be setup and will consist of site offices, storage containers, toilets, lunch facilities and a laydown area. The compound will be fully fenced with lockable gates to prevent unauthorised entry.

Labour

A skilled and experienced workforce is critical for completing works safely, to programme and to the highest level of quality. Our onsite construction team will comprise experienced, trained and competent staff.

We will resource the project sufficiently, with the right mix of own staff and locally hired staff, so that we always have the required number of staff on site to meet requirements at all work faces.

Construction workforce

Roles	Number required
Managers, engineers, supervisors	4
Concrete, marine and earthworks foremen	2
Crane operators	1
Machine operators	3

key personnel

Contract Manager

Andrew Hiscox – HEB Construction Limited

Experience Over 20 years of experience as a Project Engineer and Manager

Technical skills and experience relevant to project Andrew is an extremely competent and dedicated Engineer. His technical skills are broad and include major structures, heavy civil construction, piling, marine, drainage, water and wastewater, water retaining structures and maintenance. He held the Contract Manager role on Access to Water, and on the Tauranga Marine Precinct project (both Tauranga City Council projects), as well as the Opureora & Omokoroa Ferry Ramp Upgrades for Western BOP District Council.



Proposed project involvement *Andrew has been closely involved with the project since the REOI phase and knows it extremely well in terms of the technical detail and the Council's vision for a high quality facility and drawcard for locals and tourists alike.*

With Andrew estimating the project he will be able to provide the site team with a comprehensive handover upon award and will be heavily involved with the project right through to completion. He will use his experience on other similar projects, such as Access to Water in Tauranga, to work with Rotorua Lakes Council and the site team to ensure we work collaboratively together and have a best for project approach on every element. Andrew will make sure that resources are committed to the project so that key project dates are met and the overall construction programme is achieved. Both he and Project Manager Cole will be the contact point for initiatives under RLC's objectives for positive impacts for Rotorua's economy and social outcomes.

Health and safety responsibilities Andrew will be directly involved with health and safety by reviewing the site specific safety plan, undertaking health and safety inspections and safety engagements with site staff. He will attend at least one tool box and pre-start meeting per month.

Qualifications New Zealand Certificate of Engineering NZCE (Civil) | NZIHT Understanding NZS 3910:2003 Conditions of Contract | NZIHT Safe Working on Roads | Employers & Manufacturers Training Centre – Introduction to Supervision | Site Safe (Civil) Passport | Working at Heights | First Aid

Project Manager

Cole Meiring, HEB Construction Limited

Experience 11 years civil construction industry experience

Technical skills and experience relevant to project Cole has 11 years civil construction industry experience. He is a proficient Project Manager having had work experience gained on large projects with high performing teams. He has managed and planned several high risk / short duration activities that brought together various stakeholders to deliver phenomenal results. On SH16 Lincoln to Westgate project, as Structures Manager, he managed the demolition of two motorway overbridges within two 10-hour motorway shutdowns, a considerable feat in planning and management. As Project Engineer Structures for the Memorial Park Alliance he was responsible for overseeing construction of the Arras Tunnel and associated works, and was able to contribute to early delivery of this important project.



He is well versed in the various forms of structures construction, and managing works collaboratively with others, whether that be internally or externally. These skills were

key personnel

Schedule of Key Personnel

Rotorua Lakes Council has indicated the importance of having a construction team for Stage 1 and 1a with technical skills that are closely compatible with the Lakefront Redevelopment project. We have put together a team with the ideal mix of experience and skill and a shared commitment to achieving your vision for this important project.

To enhance our management team, we have changed our Project Manager (from the REOI stage) to Cole Meiring whose skills and experience are better aligned to the needs of this project. Cole has exceptional people skills – he not only binds the wider team together but also works and communicates well with stakeholders, Iwi and local communities. From his involvement in several high-profile projects he has demonstrated strong technical skills in structural and civil work. Importantly for the Lakefront project, he is details-oriented and meticulous when it comes to quality and finishing.

Our team profiled below are highly passionate about the development of the Bay of Plenty and are keen to be involved in and contribute to the success of the Rotorua Lakefront Redevelopment. With this vested interest in the region underpinning outstanding design and construction experience and skills, we are confident that we are the right partners for the job.

Contractor's Representative

Steve Croft – HEB Construction Limited

Experience 20 years' experience leading the delivery of complex infrastructure projects.

Technical skills and experience relevant to project Steve's leadership of infrastructure projects has included the \$240M Memorial Park Alliance (MPA). This included construction of the Pukeahu National War Memorial Park, which was completed in time to be the centrepiece of the ANZAC Day commemorations in 2015. He has exceptional skills in stakeholder management including interacting with Iwi, local residents, schools and businesses, and multiple client organisations. He played a key role in engaging the local community during delivery, to inform them of our works and take measures to limit impact on them. He has demonstrated leadership, technical and management expertise in guiding these and other challenging projects to on-time and on-budget completion within collaborative frameworks.



Proposed project involvement Steve will provide management oversight to the project and support to the team and ensure project outcomes are achieved in terms of performance. This is undertaken by attending bi-monthly project review meetings to discuss health and safety, environmental, quality, programme and methodology. For the Lakefront Redevelopment project, Steve will run these meetings on site so that he can interact with all of the staff working on the project and see the progress first hand.

Steve will work closely with RLC, drive positivity for the project through the HEB team, the stakeholders and the wider community.

Health and safety responsibilities Steve will be responsible for health and safety at a high level. He will set and monitor KPIs for the site team, review health and safety at the project review meetings and pass on key health and safety information from the senior management meetings.

Qualifications BE Civil (Hons) | Post Graduate Diploma of Business Administration | Chartered Professional Engineer (CPEng) | MEngNZ | IOD various Executive courses

key personnel

Quality Manager

with civil work taking place on the waterway edges with a temporary staging platform set up for the crane. His Quality Manager roles have included such projects as Northcote Safe Cycle Route Stage 1 for Auckland Transport, which had high stakeholder interest, and took place in a busy traffic corridor; and Nga Puna Wai Sports Hub Stage 1 Civils for Christchurch City Council - a premier outdoor sports facility with community playing fields and international standard sports facilities.

On these projects and many others he has been involved in project audits to the ISO9001:2015 standard, and ensuring HEB's internal quality practices are met. He has undertaken the development of effective and practically applied Project Management Plans, including comprehensive ITPs, supported by documentation control and the creation of handover packs to support practical completion.

Proposed project involvement

Gene will develop the site-specific Quality Plan which outlines the procedures to be adopted for undertaking the Contract Works. Construction inspections would be undertaken by the Engineer, and compliance testing in accordance with the Specification.

The site team consisting of Cole, Louie and Grieg will take ownership of the onsite quality and testing. They will produce and follow a detailed inspection and test plan (ITP). Gene will be involved at the start of the project to assist with setting up the ITP. He will visit site to check on progress and undertake quality audits, often working alongside Cathy Holden.

Qualifications

BSc Analytical Chemistry | Dip. Ag Eng | Dip. Marketing & Sales Mgmt | Cert Private Law (NZQA assessed) Professional Development | RABQSA AU Auditor, NZ Quality College | RABQSA TL Auditor, NZ Quality College | Internal Auditor, NZ Quality College | Project Management, Project Management Institute | Certified Quality Engineering, American Society for Quality Certifications

Safety Supervisor / Health and Safety Management

Cathy Holden, HEB Construction Limited

Experience

10 years' experience in health and safety roles.

Technical skills and experience relevant to project

Cathy is a committed support professional with an impressive record in health and safety. She is passionate about improving health and safety culture and compliance; a self-proclaimed advocate for 'Safety First - Always'. Recent relevant projects where she has provided SQE guidance, support and compliance systems implementation include Access to Water and Tauranga Marine Precinct. She also has experience working in geothermal environments from her early role as Health and Safety Office on an MB Century drilling rig in Taupo.

An advocate for open, honest and collaborative communication and liaison, Cathy has developed strong working relationships with key staff at local, district and regional councils. She has also liaised with Iwi monitors on HEB contracts such as Waianai Water Intake Scheme, Poike Road Cycleways and Sanctuary Point Civil Works.

She makes a point of getting to know the Iwi representatives, understanding their concerns, communicating the SQE compliance requirements, and being their point of contact. As a result Cathy has a sound understanding of cultural and heritage protocols.



key personnel

Project Manager

demonstrated for OO7 KiwiRail bridges. This was a Design and Construct contract and Cole was involved with the design management of the bridges, particularly looking at the construction challenges the Taumarunui landscape presented and electing a form of bridge to best suit these challenges. The replacement of these bridges was highly culturally sensitive given the negative history of the railway in this area which had involved land confiscation and Marae relocation in the late 1800s/early 1900s.

Cole worked hard to foster a positive relationship with the local Iwi, becoming actively involved and developing a very good relationship with the local community, ensuring that the project delivery was a positive experience for all those involved and effected by the project.

Proposed project involvement

Cole will lead our on-site project team, responsible for all aspects of managing the project including planning and programming, resourcing, health and safety, quality and environmental management, and input into technical delivery. He will ensure we are delivering to expectations, optimising the construction programme where possible, and develop strong and productive relationships across the project delivery teams.

He will liaise directly with Rotorua Lakes Council and local stakeholders to make sure all contractual obligations are met and that the works are progressing in line with programme. He will manage all communications, correspondence and documentation, management plans, reports and arranging meeting attendance.

Cole will be heavily involved with all aspects of the project. His keen eye for detail will ensure the project is constructed as per the specification and drawings.

Both he and Contract Manager Andrew will be the contact point for initiatives under RLC's objectives for positive impacts for Rotorua's economy and social outcomes.

Health and safety responsibilities

Systematic hazard identification and assessment is completed by work area evaluation and employee work practices and processes. This will be compiled by Project Manager Cole Meiring, Site Engineer Louis Gilmour and Site Supervisor Greig Mitchell. Hazards and their mitigation are listed in the Hazard Register, which is kept on site and discussed in toolbox and prestart meetings. New entries are reported to the Engineer and weekly and monthly reports identify hazards/controls.

Qualifications

BEng Hons - Civil Engineering | Master of Engineering Studies - Construction Management (Hons)

Quality Manager

Gene Grayling, HEB Construction Limited

Experience

20 years' experience as a professional Quality and Technical Manager

Technical skills and experience relevant to project

Gene is a professional Quality and Technical Manager, with hands-on experience in manufacturing, civil, environmental and structural project work.

He brings 20 years' experience as a Quality Manager in civil construction and manufacturing, and this broad background is of benefit to all works he now oversees with HEB

With relevance to the Lakefront Redevelopment project, in recent times Gene has worked with site-based project management teams on the quality management of several civil projects. This has included the Kennedy Road Bridge project for Tauranga City Council,



key personnel

Traffic Management

projects from large to small. Their experienced STMSs consist of 7x Level 1 STMSs and 8x L2 STMSs.

All staff are all trained through the NZTA system, along with in-house training, Construct Safe Qualifications and 1st Aid Training, Road Safe continues to develop their team to the highest standard in the industry.

They have a fleet of vehicles with 4x Utes, 5x Level 1 TTM Trucks and an Attenuator. The plant and equipment covers everything for your TTM needs, with all compliant signs, L1 and L2. They can supply Portable Traffic Lights and VMS Boards short term or long term.

Proposed project involvement

Critical factors in the project include working in a busy area with high traffic and pedestrian counts and special events that see peaks in pedestrian traffic, all taking place in a constrained working site on the lake edge. The Road Safe team will create traffic management plans for the Lakefront construction site. These will outline the measures to be implemented for traffic and pedestrian management, to ensure HEB keeps to programme deadlines, while the public can navigate safely and easily around the site with minimal disruption. Weekly internal CoPTTM audits would identify any areas for improvement.

Health and safety responsibilities

To achieve the delivery of the project safely, with minimal disruption and maintaining amenity for users around the site will require careful worksite management of which TTM is a key component. The HEB team will work with Road Safe to make sure all traffic and pedestrian management is operating safely. Weekly internal CoPTTM audits will be carried out.

Qualifications

Our experienced STMSs consist of 7x Level 1 STMSs and 8x L2 STMSs. Member of professional bodies - Road Safe Traffic Management is a proud member of Site Safe, SiteWise and the Tauranga Chamber of Commerce. Road Safe won the Emerging Business Award, and was a finalist for the ACC Workplace Safety Awards at the 2018 Westpac Tauranga Business Awards.

Environmental Management

Simon Cathcart, HEB Construction Limited

Experience

Over 16 years of experience in managing environmental protection on construction sites.

Technical skills and experience relevant to project

Simon has technical experience from projects with similar environmental concerns to the Rotorua Lakefront project. He was Environmental Manager for the Access to Water project in Tauranga, where he provided the site team with guidance while working in the harbour with a sheetpile coffer dam. Simon is also involved in our current Waiāri Water Intake Scheme for Tauranga City Council. As this project involves a considerable stream diversions and requires a stream realignment, there are a number of challenging resource conditions which need to be adhered to. Simon visits the site regularly to help manage the environmental controls.

Simon develops specific Environmental Management Plans that cover key areas such as sediment control; noise, dust, and vibration mitigation; ecological restoration; archaeological discovery; consent management and compliance; and site auditing. Simon has previously worked in environmental management for regional councils. This breadth of experience gives him valuable knowledge and insight to the expectations of regulatory



key personnel

Safety Supervisor / Health and Safety Management

Proposed project involvement

As Regional SQE Advisor and HEB's Site Safe facilitator for the Central NI Region, Cathy is based in HEB's Tauranga office. She will provide on-site and off-site support to the team, establishing key health and safety and environmental procedures and systems that will provide high quality, successful compliance outcomes on the project. Cathy will visit site weekly to assist the site team and undertake health and safety audits.

Cathy will build a strong working relationship with RLC's health and safety personnel. On previous local authority projects she has conducted joint health and safety audits with the Council's health and safety representatives. The benefits of this collaborative approach are consistency across the audits and the development of trust between the stakeholders and the project team. As Cathy and the Council representatives are on site undertaking the audit at the same time there are no surprises, and any corrective actions that are deemed necessary can be implemented immediately.

Health and safety responsibilities

Cathy will provide health and safety management and oversight for this project, having the required authority, technical skills and experience. She will develop a site-specific Health & Safety Plan which includes a list of identified hazards associated with the Contract Works and the measures to be implemented to manage the risk. This will be communicated to the project team, and she will run the weekly tool box meetings.

Cathy is also responsible for the management of any incidents or accidents in terms of reporting, following up, investigations, working with WorkSafe if required, through to working with the employee and managing the Return to Work process.

She will attend site to roll out any health and safety directives or new initiatives from head office. This is done regularly to keep health and safety front of mind for all people involved with the project.

Qualifications

HEB Site Safe facilitator for the Central NI Region | Site Safe (Civil) Passport | Safety Harness Use (Unit Standard # 23229) | First Aid certified

Traffic Management

Road Safe Traffic Management, Bay of Plenty (subcontractors)

Experience

Local Bay of Plenty company Road Safe Traffic Management is owned and operated by Logan Dawson. Backed by more than 10 years' experience in the traffic management industry, Logan was formally the Operations Manager at Christchurch-based Men at Work. After moving to Tauranga, Logan and his wife founded their own company based on Logan's prior expertise and success.

Today, rapid growth has seen Road Safe Traffic Management offer their experience to the wider Bay of Plenty region. The integrity of the 24-strong team, who are backed by seven traffic management trucks and specialist equipment, ensures Road Safe Traffic Management is quickly rising to the top of their industry. Road Safe has been working with HEB over the last three years. In Rotorua, Road Safe has undertaken projects ranging from events such as Xterra and the Rotorua Marathon, plus TTM for road construction and maintenance works.

Technical skills and experience relevant to project

Road Safe is a specialist in road traffic management for roadworks and civil construction, and provides planning and design for traffic management plans and full traffic control services. They have 15 STMSs, 9 TCs, and they are familiar with the management of

key personnel

Site Engineer

Health and safety responsibilities Systematic hazard identification and assessment is completed by work area evaluation and employee work practices and processes. This will be compiled by Project Manager Cole Meiring, Site Engineer Louis Gilmour and Site Supervisor Greig Mitchell. Hazards and their mitigation are listed in the Hazard Register, which is kept on site and discussed in toolbox and prestart meetings. New entries are reported to the Engineer and weekly and monthly reports identify hazards/controls.

Qualifications NZ Diploma in Civil Engineering | NZ 3789 Sling and Communicate | Site Safe

Site Supervisor

Greig Mitchell, HEB Construction Limited

Experience 10 years civil engineering and construction industry experience

Technical skills and experience relevant to project Greig is a highly experienced and technically proficient Supervisor. He has gained expert knowledge of civil construction with specialist skills in reinforced concrete construction – both precast and insitu. His relevant projects include Tauranga Marine Precinct, and Access to Water. Greig provided key input into the planning and implementation of the tight environmental controls for Access to Water to prevent contamination of the marine environment from water and cement runoff from the foreshore ground stabilising works. With Greig's input and supervision, the project was fully environmentally compliant.



Proposed project involvement Greig is a key supervisor in HEB's Structures team. He will be an efficient organiser of the work crews, plant and equipment, fostering a productive team culture, and making sure completion to contract specifications. He will be in charge of the site team, lead health and safety daily and weekly meetings, and supervise the subcontractor sand material suppliers.

Greig and his team will physically build this project and turn the vision and plans into reality.

Health and safety responsibilities As Site Supervisor, Greig will conduct the daily pre-start meeting and weekly tool box meetings to ensure that everyone on site works safely. The systematic hazard identification and assessment is completed by work area evaluation and employee work practices and processes. This will be compiled by Project Manager Cole Meiring, Site Engineer Louis Gilmour and Site Supervisor Greig Mitchell. Hazards and their mitigation are listed in the Hazard Register, which is kept on site and discussed in toolbox and prestart meetings. New entries are reported to the Engineer and weekly and monthly reports identify hazards/controls.

Qualifications Fall Arrest | Working at Heights | Confined Space | WTR License | Site Safe (Civil) Passport | First Aid.

Tenderer: HEB Construction Limited

Signature:

Date: 6th May 2019

key personnel

Environmental Management

Proposed project involvement authorities. This knowledge will help him ensure that we meet statutory approval conditions efficiently to allow a smooth start to the construction phase. With the project being located on the lake edge and in the lake, and within a geothermal area, the environmental risk is very high. Following the resource consent conditions, staging of the works and installing environmental controls will be key. Simon will develop the site specific Environmental Management Plan which outlines the procedures to be adopted to mitigate any environmental impacts caused by the works. He will be involved in the setup of the project and environmental management table, he will also provide advice on environmental controls. Day-to-day management of the site, installation of the environmental controls will be managed by the site team.

Simon's ability to understand and respond to resource consent conditions and requirements helps project teams get up to speed quickly. He then helps to develop onsite protocols and management systems that ensure all work meets consents and environmental requirements.

Health and safety responsibilities Environmental management is a key part of health and safety, and Simon will work with Cathy and the site team to make sure all environmental compliance is undertaken safely and everyone is aware of their responsibilities.

Qualifications MSc (Hons) Environmental Science | BSc Physical Geography | Erosion & Sediment Control Plan Preparers, Auckland Regional Council | Stormwater Management Design (TP10) Training, Auckland Regional Council | Chemical Treatment, Auckland Council | Erosion & Sediment Control Plan Preparers & Practical, Waikato Regional Council | Excavation Course (In-house) | Construction Noise & Vibration (In-house)

Site Engineer

Louie Gilmour, HEB Construction Limited

Experience 7 years civil engineering, predominately on projects involving structures in and over water.

Technical skills and experience relevant to project Louie is a competent and dedicated site Engineer. He is well respected by the workforce and has established good relations with clients and consultants. He has a sound technical knowledge and has the ability to ensure all the requirements of the drawings and specifications are undertaken. On the Tauranga Access to Water project, Louie oversaw and monitored the drawing development, fabrication, programming and delivery of the pre-cast concrete elements. His attention to quality meant the pre-cast elements were installed ahead of programme, saving time and money for the client.



Proposed project involvement *Louie is born and bred in Rotorua, and growing up enjoyed the many fun activities that Rotorua has to offer. He can see that the Rotorua and the tourism industry is going to benefit from this project, and is excited to get involved in a project in his home town.*

Louie has a high technical competency and a proven understanding of plant, personnel and cost management. These skills will provide quality, fit for purpose project outcomes for the Rotorua Lakes Council.

	<ul style="list-style-type: none"> • Prior to starting physical works, we will implement all environmental controls, which will be put in place as per an approved Environmental Management Plan (EMP). For example, signage, silt fences, dewatering tanks / ponds, metalled roadways, watercarts and controlled / covered stockpiled areas. <p>Site Induction</p> <p>Once established, and in accordance with HEB's Project Management Plan, a site induction will be held for all personnel assigned to these Contract Works. These inductions will be jointly undertaken by HEB's Project Manager (Cole Meiring) and Site Safety Supervisor (Cathy Holden), and will be carried out each time new personnel start on site. This induction will cover in detail the key elements of the project, Health & Safety, Environmental, Services, items of cultural significance, stakeholder and working around the public.</p> <p>Pre-Construction Survey & Photographic Records</p> <p>If required, pre-construction surveys including photos will be taken for accurate assessment of pre-existing surfaces affected by the works and nearby structures. Survey data and photos will be issued to the Engineer.</p> <p>Start-up and Plans</p> <p>From the site inspection and review of the tender documents and drawings, HEB propose the following methodology to undertake the Contract Works.</p> <p>On advice of award, the Contract Works will commence with the administration aspect as follows, prior to any physical works being undertaken on site. Initially, the following information would be submitted to the Engineer:</p> <ul style="list-style-type: none"> • Insurance certificates and Bond. • An updated (finalised) Construction Programme showing agreed/specified start and completion dates. It would also show the sequence of construction activities. • A site-specific Project Management Plan (PMP) encompassing management of health and safety, quality, the environment, and traffic, as outlined below. <p>The site-specific Health & Safety Plan would include a list of identified hazards associated with the Contract Works and the measures to be implemented to manage the risk.</p> <p>The site-specific Quality Plan would outline the procedures to be adopted for undertaking the Contract Works. Construction inspections would be undertaken by the Engineer, and compliance testing in accordance with the Specification.</p> <p>The site specific Environmental Management Plan would outline the procedures to be adopted to mitigate any environmental impacts because of the works.</p> <p>The site-specific Traffic Management Plans would outline the measures to be implemented for traffic and pedestrian management. Temporary Traffic Management (TTM) would be owned by our STMS, and traffic controllers as required. Weekly internal CoPTTM audits would identify any areas for improvement.</p> <p>Before starting any works on site, the following, in addition to the above, will be undertaken:</p> <ul style="list-style-type: none"> • Project file set up • Liaise and obtain underground services plans.
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Schedule of Methodology and Management Systems

As part of RLC's Lakefront Redevelopment project, covered by this RFT and in the methodology below include Stage 1 and 1a works which cover the main lakefront promenade, boardwalks over land, terracing, general amenities and planting. In developing our methodology, we have considered the over-riding critical factors of importance to RLC and to the success of this project, namely:

- Maximising ongoing public use of the lakefront
- Completing the works as efficiently as possible
- Continued public vehicle access to the remaining lakefront and play space.

We've also considered risk factors in the project - including working in a busy area with high traffic and pedestrian counts and special events that see peaks in pedestrian traffic, a constrained working site on the lake edge, and the need to protect the lake and geothermal environment. We are aware that works will be taking place on the Wai Ariki Spa site, and we will work with them and RLC to make sure the two sites align and provide a seamless transition.

To achieve the delivery of the project safely, with minimal disruption and maintaining amenity for users around the site, to a high quality and care for the environment will require careful worksite management.

It's of high importance that the cultural objectives of Rotorua Lakes Council and Te Tatau o Te Arawa – and the community as a whole – are acknowledged and enhanced with the delivery of this project.

Methodology	Describe the methodology proposed to achieve the specified end result within the specified response periods
Construction Methodology	<p>Site Facilities & Establishment</p> <p>The location for a site compound for the works will be discussed and agreed with the Engineer's Site Representative. Public information signboards will be installed prior to work commencing on-site, and will be updated as the project progresses. We will arrange public information times where Cole (the Project Manager) or another site team member is available to answer questions.</p> <p>The compound will be setup and will consist of site offices, storage containers, toilets, lunch facilities and a laydown area. The compound will be fully fenced with lockable gates to prevent unauthorised entry.</p> <p>When setting up the site we will carry out the following:</p> <ul style="list-style-type: none"> • Site establishment / setup of temporary fencing and site facilities as detailed below under the next section. • We will develop service plans and associated mark outs in conjunction with local service authorities. We will undertake potholing to confirm existing service locations and prepare a detailed site service plan which will be displayed in the site offices and lunch room, as well as being discussed in detail at the site inductions and pre start meetings. • We will commence with the establishment of the traffic management in terms of the approved Traffic Management Plan (TMP). This will pay particular attention to maintaining traffic access to the lakefront area and ensure safe passages for pedestrians.

methodology

- We will stockpile suitable topsoil or aggregate material for reuse, and remove unsuitable material from site to waste.
- Pavers and cobbles will be uplifted and stacked on pallets and removed from site to a nominated location using a hiab truck
- Any tree identified for removal will be cut down by an arborist. We will remove or grind down stumps to below the subgrade level. Remaining trees will be protected by installing temporary fencing or tape around them.
- Items of cultural significance will be identified, protected and clearly marked on the site plan. The importance of protecting these items will be discussed at the site inductions.

Survey Setout

A registered surveyor will set out and install control points. Our team will then set out the works using a GPS or total station. Levels will be set out using dumpy or laser levels. A registered surveyor will be used to undertake QA checks on key dimensions.

Temporary Crane Pad

For our temporary staging, we will design and install driven steel piles, steel headstocks and beams to support our 150t or 280t crawler crane. This staging will be positioned so that the crane can undertake all the required lifts from one location. We have used this setup on several other projects such as Kennedy Road Bridge in Tauranga (see photo below) and have our own temporary staging platforms.

Coffer Dam

Our temporary works designer (Darren Bentham, introduced to RLC at the REOI stage) will design the temporary coffer dam allowing for construction equipment, existing surrounding ground, water or structures. The coffer dam will be constructed using interlocking sheetpiles and will be completely closed off to prevent water ingress. Due to the site location and environmental considerations we believe that sheetpiles are the best option and we have used them successfully on the Access to Water project.



For the Kennedy Road Bridge works in Tauranga we used our 280t crane on our temporary staging platform – a technique we'll use in Rotorua.

methodology

- Liaise with private land and business owners adjacent to the Contract Works via a letter drop and consultation meetings
- Procurement (and delivery instructions) of materials for the Contract Works.
- Procurement of plant and equipment required for the Contract Works.

Works Programme

A detailed finalised Construction Programme will be provided before the commencement of physical construction works, following a site walkover inspection with the Engineer's Site Representative and discussion with Council's Representatives to confirm key dates.

As the Contract Works progresses, any changes to the programme will be provided to the Engineer's Site Representative (monthly). Our Contractor's Representative will be responsible for tracking and reporting on the progress of the Contract Works.

Sequences Access /Staging

Cole will prepare a detailed site plan showing areas and sequencing of work, which will align with the detailed construction programme. We will construct temporary access tracks and crane pads, erect hoarding and designate lay down/storage areas. As the works progress, the plan will be updated regularly. The site will have a designated crawler crane on site, which will be of a suitable size and capable of undertaking the required tasks to construct the works. Multiple work faces will work concurrently to ensure that the construction programme is achieved.

We plan to fully construct Stage 1 first. This is currently the area less used by the public. This area will be opened to the public before fencing and closing off area 1a. Area 1a will then be fully completed before opening to the public.

Demolition

We will identify and clearly mark all items to be demolished, and will minimise waste and recycle where possible.

- Concrete will be crushed and used as subgrade improvements or as hardfill for temporary access tracks.
- Steel will be cut up and sent away for recycling.
- Timber will be stripped / de-nailed and stacked for reuse.
- Prior to demolition of the Wharewaka building, the Waka, signage and carvings located in the Wharewaka building will be carefully removed and transported to a nominated location where they will be stored for future use within a new Wharewaka in stage 5.
- Cobblestones will be uplifted, stacked on pallets and transported to a nominated storage depot.
- Rubbish bins will be removed and stored for reuse.

Site Clearance

The site will be cleared in stages as the works progresses. By staging the site clearance works we are maintaining existing surfaced areas and minimising potential environmental / dust nuisance.

methodology

will be closely managed by the site team. Alternatively, it will be removed off site using sucker trucks to a dump site. This will be closely managed by Cole and Louie.

Ground Improvements

Pre-construction Soil Sampling and Laboratory Testing will be undertaken - 28 days for results.

Soil Stabilisation Field Trial to be undertaken as per Clause 3.5.3. - 28 days for results.

Engineer Approval for mix design.

Soil Mixing Equipment required and to be established.

- a. Cat 330F Excavator
- b. PMX Mixing Arm
- c. Batching Plant
- d. 100KVa Generator
- e. Cement Silo
- f. Water Tanker
- g. Grout Pump

Soil Stabilisation – Clause 3.6. The supply of materials, and construction of in-situ mixed ground improvement. This operation involves:

- a. BPC to stockpile overburden and surplus soil to allow mixing process to commence.
- b. Supply of Sulphate Resistant Cement.
- c. Batching to produce approved grout mix.
- d. Pumping of grout to hydraulic excavator mounted mixing arm.
- e. Mixing of cells (cell size to be determined by volume of grout delivery and reach of excavator/mixer). Stage 1 will be progressed



Ground improvements / cement stabilisation at Access to Water using digger and mixing arm attachment.

methodology

Sheetpiles will be pitched using the crawler crane and installed using a vibro hammer to form a complete cofferdam around the proposed ground improvement area.

Dewatering

Dewatering procedures will fully comply with resource consent conditions. 6" Submersible pumps will be installed inside the cofferdam with solid or lay flat hoses that run back to a series of treatment tanks or lined ponds located on land.

Lake water from within the coffer dam will be pumped out and through the treatment tanks / ponds before discharging back into the lake. As it's likely that this water will have some silt sediment in it, it will need to settle before discharging. Water ingress into the cofferdam will be minimal once the lake water has been pumped out and if necessary, leaking sheetpile clutches will be sealed using timber or hessian rope. If the water ingress is considerable then the coffer dam will be sectioned off into bays using additional sheetpiles, so that the volume of water needing treatment is more manageable. Once the ground improvement, micro piling and foundation works begins the water inside the cofferdam will have a high PH level, CO² will be added to the treatment process to reduce the PH level. Constant water monitoring will be undertaken and only when the water is at an acceptable level will it be released into the lake. This



We will construct a coffer dam around the work area at the Lakefront similar to that used for Access to Water.



Dewatering pumps in progress on HEB's Access to Water project. For Rotorua Lakefront we will pump the lake water out into treatment tanks before discharging.

through the holes in the precast deck units. Hilt anchors will be installed as per the manufacturer's recommendations.

Decking timber

Nailing strips will be fixed to the precast units. We will lay out the tonka decking timber and secure it using hidden fixings or countersunk screws.

Electrical

Before installing the decking the lighting strip will be installed and cabling run.

Stone Pavilion

Stone will be imported and delivered to site in containers. The crane or a forklift will be used to unload the containers and the stone components will be carefully placed on dunnage.



Tonka decking will be laid out and secured on the Lakefront boardwalk – similar to Access to Water shown here.

Our specialist subcontractor European Stone Masons will place, grout and seal the stone units in place. Our crane will assist with this operation.

Retaining Wall Construction

We will install sheetpiles using a digger-mounted vibro hammer or the site crawler crane to form a cofferdam and use pumps to create a dry working area. Water will be pumped to the treatment tanks / ponds to be treated. To minimise the amount of water that needs to be treated, excavation for the retaining wall will commence in stages. Excavated material will be dewatered on site in a stockpile, before removing off site to a dump site. Dewatering stockpiles will be surrounded by super silt fences.

Bidum cloth will be placed in the excavation before we place and compact GAP 65 hardfill with plate compactors. We will pour a concrete strip footing.

We will prepare precast shop drawings and these will be submitted for approval. We will deliver the precast panels to site and lift these into position using the site crane. The panels will be placed on the site concrete and propped to concrete deadmen. The foundation will be formed using timber shutters, reinforcing tied and then poured. The team will form and pour the insitu corners and install joint sealant to the vertical joints. We will install the Novaflo pipe, geotextile and drainage aggregate progressively as the wall is backfilled. Rock rip rap will be installed prior to removing the sheetpile cofferdam.

Terrace Construction

A sheetpile coffer dam will be installed around the terrace areas, dewatering will be undertake as described above. Subgrade material will be excavated and removed off site to a dump site. Hardfill material will be imported and compacted before pouring site concrete to the underside of the terraces. Retaining wall will be constructed as

longitudinally in 6m increments per day. Stage 1a is able to be progressed longitudinally and/or laterally depending on best access and availability of working areas at the time.

- f. BPC programme is based on delivering 150m3 completed ground improvement per day.

2. Quality Control testing – Clause 3.7 and 3.8.

As an alternative to the designed insitu ground stabilisation, we believe that it would be considerably cheaper to excavate the material from within the sheetpile coffer dam, run it through a pug mill mixed with cement and place back in the excavation or completely replace the excavated material and replace with low strength concrete.

Micro Piles

Our micro piling subcontractor Groundfix will establish their piling rig on site and will operate on the cement-treated ground improvement area within the cofferdam. They will install and test micro piles as per the drawing and specification. Drilling fluids will be treated through the onsite treatment tanks / ponds or placed in skip bins and removed off site for disposal.

Concrete Pad & Pavilion foundations

We will fabricate the timber shutters which will be used to form the sides of the foundations. Pegs and braces will be used to support the shutter and ensure they are set at the correct height. Pre-cut and bent reinforcing steel will be delivered to site and tied insitu, starter bars for the piers will be installed and templates used to ensure they are in the correct location. Concrete will be delivered to site and either pumped or skipped into the foundation formwork. Concrete vibrators will be used to compact the concrete, screeds and finishing tools will be used to level the concrete. Polyrock fill will be placed on the pavilion foundation before forming and pouring the remainder of the pavilion foundation. The crawler crane will be used to lift formwork and reinforcing out to the boardwalk and pavilion.

Pier Construction

We propose to construct the piers insitu rather than precast. The design is more suited for casting insitu (as they need to be cast standing up which is how we will do it on site) and will reduce the costs considerably, The risks of damage during handling and transportation are also eliminated.

The current foundation connection detail means the precast unit would need to be suspend or chaired up, which would be difficult. Reinforcing for the piers will be tied insitu off mobile scaffolds. Steel muff moulds will be fabricated to the pier dimensions and will be easily dismantlable and fitted with a working platform. The muff mould will be lifted into position and bolted to the pad foundation, adjustable props will be used to plumb and support the mould. Concrete will be delivered to site and either pumped or skipped into the muff mould. Concrete vibrators will be used to inside the mould to compact the concrete. Once sufficiently cured the mould will be struck and removed, concrete will be tidied, and acid washed to the required finish. We will use environmentally-friendly acid wash.

Precast Installation

Using the crawler crane, we will deliver the pre-finished deck units to site and lift them into position on the piers. We will drill holes in the piers for the hilt anchor bolts

Shared footpaths / cycleways (P01 & P03)

Footpaths will be set out by the site engineer and will be formed, poured and finished to the specified surface finish honed or acid washed. We propose to use an eco acid wash which is gentle on the environment and produces the same surface finish as traditional methods.

Concrete Edge beams (E02, E03, E04, E08 & WS01)

Concrete edge beams will be set out by the site engineer, hardfill placed and compacted and then formed using steel or timber shutters. Specified concrete will be placed and finished. Formwork will be stripped, and concrete finished to the specified concrete finish, sandblast, bush hammer or acid wash.

Landscaping – Soft

Landscaped areas will be developed progressively, with areas being stripped / cleared and levelled using topsoil. Grassing and planting will take place progressively. Rotorua company Evergreen Landcare will work closely with the site team to maximise the optimum planting times where possible. Designed irrigation systems will be installed.

Landscaping – Hard

Hard landscaping items will be procured well in advance to allow for fabrication. We will prepare and submit detailed fabrication drawings for approval prior to fabrication. Our secure compound will be used to store items delivered to site such as seating, park benches, picnic tables, lighting and other items as specified in the design and drawings before being installed.

Roading / carparking

We will implement traffic controls prior to carrying out works on the existing roundabout, such as the installation of new kerbing installed, pouring hotmix etc. For stage 1a where the existing carparks will become part of the new works we will leave this as long as possible before closing them off to transform it into a grassed area.

Precast Components

HEB has the capability to precast all the precast components in-house – B01 & B03 boardwalk components, retaining walls and Tukutuku bridge components. We have the resources and skills to precast bespoke items as well as pre-stressed items. All precast components will be cast from steel moulds to ensure the highest surface finish is achieved.

Architectural Detailing

Due to the nature of the works and architectural finishes required, detailing will be key to ensuring a high level of finish is achieved. Cole and the site team will work with the designers to develop construction techniques that aid in the construction without affecting the finished look. Some examples would be:

- Minimal or hidden lifting anchors in the precast components
- Carefully placed construction joints in situ concrete and formwork designed to eliminate fixings into finished concrete
- Trial concrete mixes and samples with colours will be carried out prior to undertaking permanent works

described above. Terrace stairs will be formed using steel or form ply shutters, formwork shutters will be secured and braced to the site concrete, weights will also be used to eliminate temporary fixings to the newly poured terrace stairs.

Reinforcing steel will be tied in situ and concrete placed using a concrete pump, concrete finishers will use screed and hand tools to finish the concrete to the desired finish. Once cured, formwork will be removed, and all of the terraces formed and pour. We will use Bush hammer tools on the vertical faces to create the desired finish.



Terraces will be constructed within the coffer dams – similar to the process shown here during the Access to Water project.

Drainage

A drainage crew consisting of an excavator, competent operator and two labours will excavate and lay the drainage to the levels and grades specified on the drawings.

Tukutuku Bridge Construction (small & large)

Greig the Site Supervisor will oversee the construction of the Tukutuku bridges. The team will carry out the ground improvements and construct the micro piles as described above. They will pour the pad foundations, form and pour the piers using steel muff moulds. Precast elements will be delivered to site, placed and secured to the poured piers. Prefabricated tonka timber pieces will be delivered to site and fixed to the nailing strips attached to the precast decking units. Fixings will be as per the design with timber plugs being used to hide the fixing details. Our own carpenters will undertake the timber work.

Critical to the success of all HEB's marine projects has been the ability of HEB to self-perform the majority of the works. HEB provides the complete solution for marine construction projects, mitigating risk and removing programme uncertainty.

Boardwalk Construction (B01, B02, B03, B04 & B05)

Precast components will be fabricated off site in our precast yard and will be placed using the crawler crane. Fixings will be installed to secure the units. Nailing strips will be installed and secured to the precast deck units. Hardwood timber will be delivered and stored on site in secure containers. Decking timber will be laid out on the boardwalk and secured to the nailing strips using the designed hidden fixing detail, allowing a nominal gap of 5mm between the boards.

methodology

	<p>Working around Moving Heavy Machinery</p> <p>Minimise – Implementation of a Site Vehicle Movement Plan to identify haul routes, light vehicle access and egress points. HEB excavation and road construction plant are fitted with a Warning Approach light system above the cab. A red light indicates not safe to approach and a green light indicates when it is safe. Eye contact should be made with the operator and they have acknowledged you and confirmed it's safe to approach. Spotters and dogmen to be used to control plant movement on site.</p> <p>Deep Excavations / Cofferdams</p> <p>Minimise – Sheetpiles to be used to for coffer dams, temporary work design to be prepared and signed off prior to installing and undertaking the works. Use trench shields for pile laying and have approved temporary works. Edge protection in place on all excavations. Fence off all excavations with 1.8 Security fencing if excavation is left open. Backfill trenches as soon as practical to eliminate the hazard.</p> <p>Lifting Heavy Objects</p> <p>Minimise – Cranes to be rigged and signed off safe for use prior to undertaking and lifts. Ensure approved lift plan in place for specific lifts such as large dia. Manholes, sheetpiles, piles and precast unit. Exclusion zones to be established around work areas and clearly delineated. We will use current certified and tagged lifting equipment only, and crane lifts to be controlled by qualified dogman.</p> <p>Contaminated Land</p> <p>Minimise - Follow the recommendations provided in the resource consent, establish a contaminated site management plan. Clearly delineate the areas identified as contaminated and fence off to eliminate the chance that the area is disturbed prior to the agreed managed excavation and disposal.</p> <p>Public Safety: Isolating all work site activities from the public and traffic</p> <p>Eliminate – Site hoardings / security fencing to be installed to prevent unauthorised access to the site. Warning and Danger signs to be erected and clearly visible. Access / egress gates to be controlled and kept closed at all times.</p> <p>Ground Conditions</p> <p>Minimise – Temporary works designs will be carried out for temporary haul roads and crane / piling platforms. These will be constructed as stabilised working platforms, using geogrids and hardfill material.</p> <p>Working at Height</p> <p>Minimise – Where practical, fall preventions measures will be implemented by means of handrails and physical barriers. Where workers need to work near an open face at heights they will be working at heights-trained and wearing the appropriate PPE.</p> <p>Working Over Water</p> <p>Minimise – While working over water all workers will wear life jackets, rescue procedures will be developed and man overboard drill will be carried out. In addition to life jackets there will be life preservers positioned around the site that could be used in an emergency.</p> <p>Confined Space Working</p>
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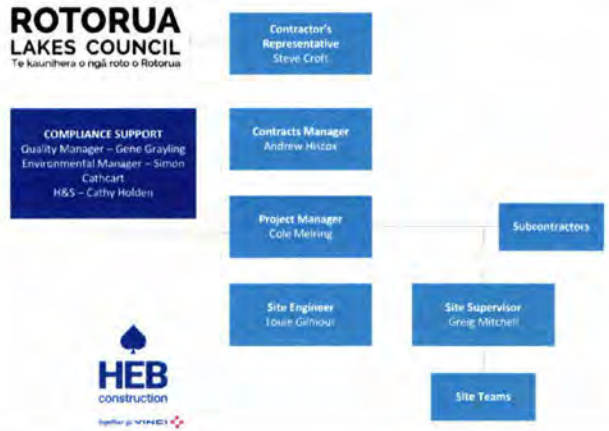
methodology

	<ul style="list-style-type: none"> Various surface finishes will be trialled on test slabs to determine the final acceptable finish Sources of hardwood timber will be proposed from sustainable forests: samples will be provided to the engineer and architect for approval.
<p>Traffic and pedestrian management</p>	<p>To make sure we minimise disruption at the lakefront, and enable on-going public use of the area outside the construction zone, traffic and pedestrian management and safety is a key consideration of our methodology plans.</p> <p>We will be using Road Safe Traffic Management as our subcontractor for traffic management. They will prepare and submit Traffic Management Plans (TMP) to the Engineer for approval prior to the commencement of works. These will be designed to minimise the inconvenience to road users and pedestrian traffic, whilst also allowing timely progress of the Contract Works. Traffic controls will be implemented and managed in accordance with the Temporary Traffic Management (TTM) requirements. And in compliance with CoPTTM and the contract specification, the nominated STMS would undertake ongoing inspections.</p> <p>To ensure the safety of the public and the minimisation of disruption in a well-used public area, we will hoard off the entire work site. Access gates would be manned to allow the safe passage of site and delivery vehicles and closed when not in use and locked after hours.</p> <p>Measures implemented would include, but would not be limited to, hoarding, safety fencing, cones, barriers, lighting and warning and directional signage (i.e. RG17 arrow signs) to direct pedestrians and motorists through or around the work areas.</p> <p>We will implement site security as required and it will consist of a lockable compound, lunchroom, offices and storage container, security surveillance as necessary, and CCTV cameras.</p>
<p>Health & Safety</p>	<p>During the planning stage of the contract a detailed Project Management Plan (PMP) will be completed. The Health & Safety section of this document will identify any significant hazards by using HEB's hazard matrix.</p> <p>Systematic hazard identification and assessment is completed by work area evaluation and employee work practices and processes. This will be compiled by Project Manager Cole Meiring, Site Engineer Louis Gilmour and Site Supervisor Greig Mitchell. Hazards and their mitigation are listed in the Hazard Register, which is kept on site and discussed in toolbox and prestart meetings. New entries are reported to the Engineer and weekly and monthly reports identify hazards/controls. For this project key risks and their controls are:</p> <p>Working in a Geothermally Active Area</p> <p>Minimise – Working in a geothermally active area can potentially create several various hazards that need to be carefully thought through during the design period and as the construction methodologies are developed. HEB will work with your designers to ensure the proposed design and temporary works don't create unnecessary hazards during construction. Some on the hazards to be considered would be piping of geothermal gases and liquids, high concentrations of poisonous gases such as carbon dioxide, sulphur dioxide and hydrogen sulphide, sudden hydrothermal eruptions and infections from geothermal water. We would propose that a monitoring regime is setup to test and monitor the geothermal activity during construction. This may consist of temperature and gas monitoring, water sampling and monitoring ground levels.</p>

methodology

	<ul style="list-style-type: none"> Correspondence to and from Rotorua Lakes Council and the Engineer is registered and actioned Records of all communications with suppliers and subcontractors are maintained Records of enquiries and/or complaints from external sources are maintained Communication with key stakeholders is recorded and maintained. <p>Project Manager Cole Meiring will collate all inputs to create our project monthly reports. Key features will include health and safety, environmental, quality, financial, risk and opportunities, stakeholder liaison, traffic management, and construction progress against programme. Reporting to RLC will include key operational and management data covering compliance, financial, risk and opportunity, and the required quarterly reporting for our contributions to the Provincial Growth Fund objectives.</p>														
Quality Assurance Procedures	<p>At HEB we know that the quality of our work defines us, and we take pride in satisfying the requirements of our customers and their stakeholders.</p> <p>Some of the key risks to quality for this project and their mitigations are as follows:</p> <table border="1" data-bbox="338 644 978 999"> <thead> <tr> <th>Risk to quality</th> <th>Mitigation</th> </tr> </thead> <tbody> <tr> <td>In situ cement stabilisation</td> <td>Sampling and testing will be undertaken to confirm the design strengths</td> </tr> <tr> <td>Concrete finishes</td> <td>Use the same crews to ensure consistency with finishes</td> </tr> <tr> <td>Timber work</td> <td>Use skilled carpenters</td> </tr> <tr> <td>Environment</td> <td>PH & sediment testing before discharging water into the lake</td> </tr> <tr> <td>Precast</td> <td>Samples and prototypes to be prepared for approval</td> </tr> <tr> <td>Micro piles</td> <td>Use experienced subcontractor and undertake acceptance testing</td> </tr> </tbody> </table> <p>We communicate the importance of quality to our employees through engagement, practical examples and training. Through direction and support, we strive to ensure that each employee and subcontractor has a proper understanding of our quality process, their responsibility to contribute to its effectiveness, and its direct relevance to the success we all share.</p> <p>A culture of quality</p>	Risk to quality	Mitigation	In situ cement stabilisation	Sampling and testing will be undertaken to confirm the design strengths	Concrete finishes	Use the same crews to ensure consistency with finishes	Timber work	Use skilled carpenters	Environment	PH & sediment testing before discharging water into the lake	Precast	Samples and prototypes to be prepared for approval	Micro piles	Use experienced subcontractor and undertake acceptance testing
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Precast	Samples and prototypes to be prepared for approval														
Micro piles	Use experienced subcontractor and undertake acceptance testing														

methodology

	<p>Minimise – All personnel working within or assisting with confined space working will be trained and competent. HEB's confined spaces emergency plan and procedures will be followed. Gas detectors and PPE will be used.</p>
Implementation and Supervision	<p>Our team for implementation and supervision of this project are detailed in the Schedule of Key Personnel. Steve Croft is the Contractor's Representative, and will provide management oversight and support with bi-monthly meetings. Andrew Hiscox will provide comprehensive handover to the team upon contract award, and remain closely involved throughout the project. Cole Meiring as Project Manager will lead the team and be responsible for planning and programming. Greig Mitchell will be the on-site supervisor, organising the work crews, plant and equipment, with Site Engineer Louie Gilmour providing his sound technical knowledge to ensure all the requirements of the drawings and specifications are undertaken. Our organisational chart for the project is below.</p> 
Communications and Reporting	<p>Communication Systems</p> <p>HEB's internal communications processes will be in place to ensure that information and guidelines are clear and understood among the project team. These include:</p> <ul style="list-style-type: none"> Project and scope information Technical queries Minutes of meetings Corrective actions Customer feedback Report requirements as defined in the contract. <p>Our Contract Manager, Andrew Hiscox will ensure that:</p>

methodology

Ensuring key quality aspects have been achieved

The key instrument of our QMS is the Project Quality Plan (PQP) – part of the Project Management Plan. This will outline:

- Management responsibilities and authorities;
- Quality control procedures;
- Non-conformance reporting;
- Systematic record-keeping including document control and compliance reporting; and
- Regular QA reviews and auditing, providing continuous improvement.

Quality Testing Method

Our testing methodology is based on detailed Inspection and Test Plans (ITPs), which will be developed for each of the construction elements and will include all Engineers Hold Points, material approvals and quality testing. Our site engineers will be responsible for the development ITPs to ensure that all specified testing is carried out and documented appropriately.

Our Site Engineers and Site Supervisors will directly manage the ITPs at the work locations, and sign-off of the inspection check sheets to allow construction to proceed. Where hold points require the Engineer's sign-off, we will work closely with the Engineer's Representatives to keep them informed of the testing and sampling programme.

Our quality control recording system will record all test results spatially as they are surveyed in the field. This will be transferrable to layout plans showing the location and level of each test result. The spatial plot of test results will be held on a database and clearly indicate on layout drawings where testing has been carried out and which areas are still to be tested. The plots will be colour coded to show up any results needing rework.

Our approach to quality management is an 'open book'; one that fosters a cooperative environment. All quality results will be submitted to the Engineer, and we encourage the sharing of the Engineer's random verification test results. This approach not only ensures that all parties work together in the best interests of the contract, but that any quality issues are immediately addressed.

Auditing

To ensure the integrity of our PQP and our quality systems, our HEB Quality Manager, Gene Greyling, will audit our project.

Non-Conformances

Any test failures or other non-conformances will be managed through:

- Documentation of Non-Conformance Report (NCRs) from initial identification to close-out and sign-off;
- Agreeing corrective actions with the Engineer; and
- Implementing actions to prevent re-occurrence.

The progress of all NCR will be tracked through a spreadsheet to formal close out by our Construction Manager. Our monthly reporting will also include data on the number of NCRs to be closed out.

methodology

Our approach to quality assurance is to achieve and demonstrate full contract compliance. We place great emphasis in having experienced, well trained staff who will use our quality system effectively to achieve the quality objectives.

We instill a quality culture on site by ensuring each staff member takes personal ownership and accountability for quality, rather than expecting this to be the responsibility of the Construction Manager alone. Our site engineers and supervisors will drive this culture from the top and set expectations for the team to follow.

Our Quality Method

HEB operates a Quality Management System (QMS) that is certified to ISO 9001:2015. This Quality Management System (QMS) provides the over-arching controls and guidance to our quality assurance systems to ensure that our clients receive two key things:

- the highest-quality final product at the end of physical works
- works delivered safely, efficiently, and with minimal disturbance to surroundings.

Our QMS is used as a guideline to produce our project specific Project Management Plan's (PMP's). The PMP includes:

- A Project Quality Plan (PQP) that describes the performance measures to be achieved.
- Work Instructions (work method statements) for supervisors to ensure work requirements are conveyed and all required tasks covered.
- Inspection and Test Plans that detail testing required for deliverables, including check-lists, standards, hold points and testing frequencies.
- Links between Work Instructions and ITPs that include specific testing at hold points.
- Quality reviews and audits by our Quality Manager to monitor compliance.
- Quality compliance reporting to our management staff and the Engineer.

The PMP incorporates the requirements for Health and Safety, Quality Control, Environmental Management, Noise Mitigation, and Customer Relations.



Environmental protection is paramount in HEB's current Waiani Water Intake Scheme where we have diverted the stream to rebuild the existing stream bed. We will take the same care when working in the Rotorua Lake edge.

methodology

Enclosed with this tender is a preliminary programme confirming the various project milestones and completion within the required contract period.

Tenderer: HEB Construction Limited

Signature: 

Date: 6th May 2019

methodology

	<p>Project Quality Close</p> <p>Our Quality System requires our Construction Manager to formally closing out a project and take responsibility for signing the required closeout documentation. Prior to this, any defect remedial works are managed through a proven process.</p> <p>Ahead of practical completion, HEB will arrange a final walkover with client representatives to verify any outstanding issues or defects to be remedied. Where materials or workmanship fail to comply with the specifications, we will formally raise a Non-Conformance Report (NCR). Our Construction Manager will clearly identify the works in question to prevent it being covered over by subsequent operations or contaminated with conforming materials until the corrective action has been approved and completed. We will work closely with the Engineer to ensure these works are prioritised and dealt with swiftly.</p> <p>Regular Remedial Work Reports will be submitted to the Engineer during the Defects Liability Period. These will be produced right through to the end of the Defects Notification Period, with all defects remedied. The nature and frequency of this report can be confirmed at the start of this contract. As part of this process, for non-urgent defects, it is proposed that the timing for rectification works be discussed and agreed with the Engineer's Representative.</p> <p>After the defect list is complete, a close-out report will be issued to the Engineer for (final) completion.</p>
<p>Project Management, Systems and Training</p>	<p>Historically, HEB's supporting management systems have been narrative in nature. The acquisition by VINCI, coupled with the aligned issue of new health and safety legislation in New Zealand and the re- issue of the new 2015 ISO standards, has afforded HEB with the opportunity to revisit, review and update both the management system's content and their method of delivery within the wider organisation. The VINCI acquisition has also provided HEB with the opportunity to adopt the VINCI 'Orchestra' principles. These principles are constructed around a key set of project deliverables that reflect effective planning, delivery and review techniques, which are strongly aligned to a Plan, Do, Check, Act improvement process. In combination, HEB's own management system review, coupled with the adoption of the 'Orchestra' principles, has resulted in a transition to a new process-based management system approach that is also supported by the new 2015 ISO standards, and means that we can provide a 'no surprises' environment at all times.</p> <p>Key to this transparency will be the use of our financial operating system - Microsoft Dynamics GP (formerly Great Plains software). HEB went live with Dynamics GP in April 2017 as an upgrade to the former MS Great Plains 2016 version software. More than just accounting software, Dynamics GP is an ERP solution that facilitates the financial control of financials, inventory, and operations. The systems and processes within this package encompass all relevant aspects of sound financial management.</p> <p>In addition to upgrading to Microsoft Dynamics GP in 2017, we also upgraded our payroll system to Pay Global. Other integrated systems, such as plant management and project controls methodology were also implemented at HEB Construction from our parent Company in Paris – VINCI. In the fourth quarter of 2016, HEB Construction also implemented Office 365 (O365). We continue to use Construction Computer Software (CCS) Candy as our project estimating and cost to complete technology.</p> <p>In terms of training, HEB uses online Performance and Learning Management System Silk Road. The Silk Road system gives transparency to Learning Records and the ability for staff to book training and manage their individual learning plans.</p>

local economic impact

	<p>opportunities here that HEB can help with during the construction of the Lakefront Redevelopment and beyond.</p> <p>At HEB we are always on the lookout for young keen people to join our workforce. We offer on-site mentoring programmes, as well as machinery training and competency assessments. Foreman and supervisor training are also offered to those who are keen to progress their career path.</p> <p>HEB has strong relationship with Industry Training Organisations, in particular Connexis and BCITO, which represent our sector and these organisations operate nationwide with training advisers in all regions including the Rotorua/Bay of Plenty area. Many of our current employees in the Tauranga/Rotorua area have also completed qualifications at Toi Ohomai Institute of Technology (previously Bay of Plenty Polytechnic). HEB works closely with a Private Training Establishment (BMINZ) based in Tauranga to deliver behavioural-based training programmes in Health & Safety and First Line Management. BMINZ has strong connections in Rotorua as well.</p> <p>To help with the need to expose youth to a variety of workplaces and vocations we plan to involve the local primary school and high schools by arranging site visits and competitions. For high schools we provide opportunities through Gateway, and will be involved with Career Days where possible.</p> <p><i>Full details of HEB's initiatives in other projects and locations which can be undertaken in Rotorua are outlined in our responses to the 'Attachment 2 Meeting the PGF Objectives' questions which follows.</i></p>
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Tenderer: HEB Construction Limited

Signature: 

Date: 6th May 2019

local economic impact

Schedule of Local Economic Impact

Aspect	Provide specific details of how your proposal will positively impact the local Rotorua economy
Engagement of staff and subcontractors from within the district	<p>Most of the HEB staff working on the project are based in the BOP area. At times during the construction we will need to employ additional staff on a contract basis, and often these positions become full-time positions.</p> <p><i>It is estimated that we will seek to fill five full-time positions for the duration of the contract – carpenters, machine operators and labourers. We will look locally first to fill these positions.</i></p> <p>Almost 100% of HEB Construction's permanent staff earn above the living wage with only a very small number of apprentices below this level. However, all have the capacity to earn the living wage within six months of commencing their apprenticeship.</p> <p>At times during the construction of this project there will be up to 26 staff working on site. Some of these people will be coming from out of town and will be staying at local accommodation and purchasing food, fuel, and other goods locally.</p> <p>As shown on the Schedule of Proposed Subcontractors we plan to use the following Rotorua-based companies:</p> <ul style="list-style-type: none"> • Evergreen Landcare – landscaping • Infracore – planting • Sefton Electrical – electrical work • Firth Concrete – concrete supply • Placemakers Rotorua – timber supply • Henderson Quarry – aggregate supply. <p>The combined value of work across these four companies is \$1,433,000. Additionally we will be using BOP-based companies such as Bay Sandblasting, HEB Precast, and Road Safe Traffic Management.</p>
Procurement of materials or resources from within the district	<p>We will build relationships with local suppliers and where possible purchase materials locally in the first instance. We will be using Firth Concrete for concrete supply, Placemakers for timber and building supplies, Henderson Quarry – J Swap for aggregates, and local Z Energy for fuel.</p> <p>With up to 26 staff working on the Lakefront site there will be an uplift of economic activity with the purchasing of food, fuel, accommodation and other items. Further details are provided in our responses to Attachment 2 which follows this Schedule.</p>
Apprenticeships, sponsorships and training opportunities provided within the district	<p>In 'Rotorua District Vital Signs 2018' Geyser Fund Research found that for the youth of Rotorua there was a need for growth in job opportunities. Local youth needed to be exposed to a variety of workplaces and vocations to help them understand their choices, and improvements are needed in education and training opportunities. The skill levels of the workforce need to be increased, and the qualifications in demand are engineering and related technologies. There are</p>

local economic impact

Please indicate if you own or lease operating premises within the district?

We lease premises at Goodrick Contracting Ltd's yard at 42 Ferguson Place, Fairy Springs, in Rotorua where our specialist surfacing team with seven full time employees operates from.

Build resilient communities

Please identify current and planned contribution towards community projects in the Rotorua district? Include the value of in kind or voluntary work.

HEB has a proud history of contributing to community developments and initiatives and we are keen to look at how we could participate in this way for Rotorua. Some examples of what we have been involved with recently in other areas includes:

- Sponsorship of the ANZAC Day 2017 and 2018 events for Hamilton City Council
- Warm clothing appeal for newborns - Middlemore Hospital
- Working with local school children in Otago on a bridge-building project
- Raising funds for Starship Hospital through HEB team-building exercises
- Safety mural competition at Darfield High School in Selwyn.

Please identify any programmes you deliver locally which support youth (15 – 24 years old) to gain skills? (cadetships etc)

At present we do not have any local programmes, however nationwide HEB has a range of initiatives to support young people into training including apprenticeships in civil works, building and mechanical. We also support employee and community programmes through Work & Income, Connexis and Oceania Career Academy. HEB is an active partner in Engineering NZ and supports initiatives such as Week of Engineering and FUTURE In Tech events, which encourage and inspire young people to think about engineering as a career.

HEB initiated Programmes

HEB Construction is involved with the following programmes that specifically support schools and/or the community.

- A Day in the Life of HEB - a programme to support STEM students who are considering an engineering or Civil Trades career.
- Girls on the Move and Girls with Hi-Vis*- programmes aimed at getting women into Engineering roles.
- We are also involved in the ENZ Wonder Programme for primary schools - Engineering New Zealand's free schools programme designed to get young Kiwis excited about science, technology, engineering and maths (STEM). We would be very keen to talk to Rotorua Primary (or other local primary schools) about this initiative.



INVOLVING LOCAL SCHOOLS

HEB is keen to involve local schools such as Rotorua Primary School during the construction of the Lakefront project. This was done successfully during the Arras Tunnel project in Wellington. Mt Cook School was directly adjacent to part of the works, and went from being a vocal opponent to the shifting of SH1 onto its doorstep, to being our strongest advocate. This was achieved by engaging the school from the outset in as many positive ways as possible, including:

- Visits to the school from our engineers, site and office workers.
- Visits by the school to our site conducted by site engineers.
- A booklet 'Right beside our school' that describes the project and is written in plain English language the children can understand.
- The children held a competition to name two of our cranes.

We built a noise wall by Mt Cook School to reduce the amount of noise reaching the classrooms during the excavation and underpass building phases of the project. The wall became a gallery to exhibit school artwork and our progress posters.

local economic impact

Attachment 2 Questions – Meeting the PGF Objectives

Receiving funding from the Provincial Growth Fund is a huge boost to the Lakefront Redevelopment project and will enable it to proceed. With the funding comes responsibility for showing how the project has lifted productivity potential in the region.

HEB Construction has always been aware of the role we play in being a socially responsible business, demonstrating corporate social responsibility and promoting high levels of commitment to social sustainability practices. The values we demonstrate were a key influence in VINCI's decision to purchase HEB in September 2015, acknowledging that we already shared many of its own core values. VINCI's wider commitments in this regard are described in the VINCI Manifesto.

Four of the eight Manifesto commitments (shown at left) are directly aligned with social sustainability and sustainable procurement practices. We understand the importance you place on these topics, and their connections to the Lakefront Redevelopment project, in particular the desire to develop prosperity and opportunity within our local communities. HEB can work with Rotorua Lakes Council to meet the objectives of the Provincial Growth Fund and we've answered your specific questions below.

Lift productivity potential of the region

Please identify Rotorua district based suppliers that will be used in the project and the value of their contract/s?

Supplier's name	Work to be undertaken	Value of work
Infracore	Planting	s7(2)(b)(ii) LGOIMA
Evergreen Landcare	Landscaping	
Sefton Electrical	Electrical	
Firth Concrete	Concrete supply	
Placemakers	Timber supply	
Henderson Quarry – J Swap	Aggregates	

Please identify wider BOP suppliers that will be used in the project and the value of their contract/s?

Supplier's name	Work to be undertaken	Value of work
HEB Precast	Precast components	s7(2)(b)(ii) LGOIMA
Bay Sandblasting	Sandblasting	
Road Safe Traffic Management	Traffic management	

local economic impact

this has recently taken another step forward with the appointment of a woman into the role of General Manager – Winning Work.

HEB is involved with the international initiative Girls on the Move programme aimed at getting women into Engineering roles, and with New Zealand-based Girls with Hi-Vis®, led by Ultimit – Women in Infrastructure, whose objective is to raise awareness and increase the number of women working in trade and technical roles in the Infrastructure Industries.

Youth schemes

HEB supports many youth schemes such as:

- Working with local high schools through Gateway
- Working with training establishments such as Manukau Institute of Technology (MIT) and Tamaki Jobs and Skills Hub
- Supporting youth programmes such as Southern Initiative.

Please identify if these programmes are delivered or planned to be delivered locally?

HEB's initiatives are applied right across our business nationwide, and are supported internationally through our parent company VINCI. Our CEO Derrick Adams has said recently "...our workforce is changing and becoming more diverse and it's something we want to actively cultivate, not just with our engineers, but right across our organisation. We need to be vigilant that we are doing everything we can to be an inclusive employer, welcoming to everyone. The VINCI Manifesto carries this key point – which is Together! Foster equality and diversity. Our culture is based on bringing together people of different backgrounds and experience. We fight all forms of discrimination in hiring, workplace relations and in the career paths of our employees."

Please identify any other means in which you plan to contribute to this objective

To boost social inclusion and participation in the Lakefront project we need to make sure that local communities are involved with what's going on, that they are excited about progress, and feel proud about the creation of this new public space. The project has been designed to celebrate Rotorua's unique environment and culture, and should be welcoming to everyone.

How HEB can contribute to this particular objective is by:

- Having monthly information days where the Project Manager (Cole) or a member of the site team stand at the information sign board and provide progress updates to the public and answer any questions
- Involve locals through the use of local subcontractors
- Employment of locals
- Using local materials suppliers where possible
- Working with local schools such as Rotorua Primary – involving them in the project by having 'name the crane' competitions, visits to site, poster competitions – we will collaborate with RLC and the school on this initiative
- Providing site tours for local high school students interested in civil works
- Once we complete Stage 1 we would like to have this area made open to the public, and would work with RLC and stakeholders – especially Te Tatau o Te Arawa - to have an official opening ceremony.

Enable Māori to reach their full potential

Please identify the number of staff members planned to work on the project that identify as Māori and/or Te Arawa?

In our experience, and from past project statistics, we envisage that at any one time up to 30% of the staff members working on-site would be NZ Māori depending on the operation being undertaken. As part of the VINCI Group, HEB Construction's strategic direction incorporates the VINCI strategic direction while remaining independent. One of the eight strategic objectives of the HEB/VINCI 'Together' Manifesto is 'Together, we foster equality and diversity'. As well as this, HEB Construction has always been an equal opportunity employer with a strong belief in having a very diverse range of cultures working for us throughout NZ. Currently, 75% of our staff

local economic impact

Please outline the relationships you have with local education providers and whether you support their students in to training and/or employment?

It is our intention to approach the local high schools to be involved with Career Days and see if they are interested in pursuing training initiatives for their students. HEB has strong relationship with Industry Training Organisations, in particular Connexis and BCITO, which represent our sector and these organisations operate nationwide with training advisers in all regions including the Rotorua/Bay of Plenty area. Many of our current employees in the Tauranga/Rotorua area have also completed qualifications at Toi Ohomai Institute of Technology (previously Bay of Plenty Polytechnic). HEB works closely with a Private Training Establishment (BMINZ) based in Tauranga to deliver behavioural based training programmes in Health & Safety and First Line Management. BMINZ has strong connections in Rotorua as well.

Boost social inclusion and participation

Please identify how you contribute to diversity as a company? This could include the ways in which you support youth, women and people from diverse backgrounds.

In line with our commitments to social sustainability, HEB actively seeks to provide quality employment opportunities to new entrants from targeted groups. HEB implements VINCI's proactive equality and diversity policy, combating all forms of discrimination in recruitment and work relations, notably against women, the disabled, senior people or because of a person's origin. We work to ensure that all our people feel valued, safe and respected.

We have an equal opportunities policy at HEB Construction. For us that means all ethnicities are treated equally, and where extra support is needed this is put in place. We have a broad mixture of ethnicities within HEB as shown by the table below.

Ethnicity	Number of HEB employees
Asian, Chinese & Korean	13
Pacifica	62
NZ Maori	174
Bangladesh, Pakistani, Indian	36
Malaysian, Filipino	40
NZ European	286

Within HEB we are very proud of the increasingly diverse make-up of our workforce. We have people from more than 40 nationalities, with many different faiths and ethnic backgrounds. It is part of our deep-seated culture that everyone is made to feel welcome and not just accepted, but fully included within our work community. This was perhaps most recently demonstrated after the mosque tragedy occurred in Christchurch. Our HEB CEO and VINCI Chairman sent emails offering (company paid) counselling/support to any staff member affected by the event. Further, on the day when the country held two minutes silence for the victims, many women in our office wore headscarves to support our Muslim colleagues, and we all gathered and stood together to observe the silence.

Increasing women's participation

During 2019, we are exploring opportunities to develop programmes to support our diverse workforce. The 2019 Graduate Programme intake saw 25% female employed and we hope to increase this in the future. In terms of cadets, 50% of our cadets were female for the 2019 intake.

HEB is a founding partner in the Diversity Agenda Initiative of New Zealand, NZ Institute of Architects and ACENZ. The goal, which HEB supports, is to get 20% more women in engineering and architecture roles by 2020. HEB is sponsoring women engineers to take part in an industry wide Growing Greatness programme that aims to help mid-career women in engineering fulfil their potential. HEB actively works to ensure that women are well represented amongst new entrants. Another goal we have is to increase the ratio of female General Managers –

local economic impact

Please identify any other means in which you are contributing to this objective.

HEB is involved in a number of ready-to-work programmes and will bring valuable experience from these. We are very much of the opinion that employing local people and supporting those who may be disadvantaged is a great way of achieving buy-in from the community. People can see that they have contributed to building a better community for themselves.

HEB has a formal structure for developing staff from the ground-up, with proven results. Our structure accommodates people who may join us with no skills or qualifications. It covers the long-term, from their joining our workforce to their potential role a decade into the future. We look to apply this same structure to all of our projects, knowing that its ongoing application leads to a future of possibilities for the employee.

HEB has strong relationship with Industry Training Organisations, in particular Connexis and BCITO, which represent our sector and these organisations operate nationwide with training advisers in all regions including the Rotorua/Bay of Plenty area. Many of our current employees in the Tauranga/Rotorua area have also completed qualifications at Toi Ohomai Institute of Technology (previously Bay of Plenty Polytechnic). HEB works closely with a Private Training Establishment (BMINZ) based in Tauranga to deliver behavioural based training programmes in Health & Safety and First Line Management. BMINZ has strong connections in Rotorua as well.

Internship Programme

Annually HEB Construction takes up to 20 Summer Interns to give engineering students work experience throughout New Zealand.

Apprenticeships

HEB Construction has a well-established Apprenticeship Programme, which runs nationally. In particular, this programme has both a Civil construction and Concrete construction focus. The Civils programme allows students to gain trade certification in:

- Road construction and maintenance
- Pipeline construction and maintenance
- Road surfacing.

The qualification pathway that leads to Trade Certificate includes a three-year apprenticeship, which allows the apprentices to gain a Level 3 & 4 NZ Certificate in Infrastructure Works (in either bitumen surfacing, civils, forestry earthworks, pipeline construction and maintenance). On completion of the qualification and completion of 8000 hours, as well as relevant verification and letters of recommendation, the candidate can apply for Trade Certification through the Civils Trades Certification.

Apprentices are also given a Literacy Programme (funded through ELWN) at the beginning of the Apprenticeship Programme, which supports them to gain increased skills to ensure success on the programme. The Literacy Programme is a 20-week programme focused on increasing written and verbal communication to a sustainable level. This is offered throughout the country and all apprentices are encouraged to participate in this prior to starting the actual apprenticeship.

Increasingly, we are working with local communities and community organisations such as Employ NZ in Tauranga; to source young people who want to complete an apprenticeship in areas that we can offer. Some examples of that would be Trades Academies, such as through Tamaki College and Manurewa High School, and recently with the

A HEB success story

Enoka Puata joined HEB fresh from Te Puke High School in 2000 as a labourer.

As a 17-year old he was quickly exposed to a wide variety of construction activities. We soon recognised that Enoka had excellent skills in operating cranes.

Enoka was sponsored by the company to complete a National Certificate in Crane Operation. Over the following years, Enoka advanced his career with us, from labourer to crane operator to leading hand, right up to piling foreman on the \$350m Tauranga Eastern Link (TEL) Project. Enoka has recently progressed to become our Piling and Crane Supervisor, managing all of our piling and crane set-up operations across the country. *He will be involved with the Rotorua Lakefront Redevelopment project for the crane set-up and working with the site staff on competency assessments.*

local economic impact

make-up is a combination of Pacifica (10%), NZ Māori (28%) and NZ European (47%), with the other 25% made up of Asian, Chinese, Korean, Indian, Bangladeshi, Pakistani, Malaysian, and Filipino.

Please identify local or wider BOP iwi or Māori owned suppliers that will be involved in the project?

HEB will strive to include Māori and socially innovative businesses in our supply chain for this project wherever possible. Whilst our company model is largely based around high levels of self-performance, we target engaging approximately 10% of Māori and Pasifika Registered companies. HEB has a proud history of engaging Māori-owned businesses in Auckland and we will extend this initiative to the BOP area.

Please identify any other means in which you plan to contribute to this objective.

HEB has a strong track record in socio-economic benefits for clients and residents, and is committed to support further training, development and labour market participation for Māori communities. We have a history of actively engaging youth on work training schemes, and in opportunities for people to learn about a career in the construction industry.

Southern Initiative

HEB is a partner with the Southern Initiative consortium under the umbrella of Auckland Council. The Southern Initiative (SI) is a programme focused on bringing Māori and Pacific young people into sustainable longer-term work.

HEB has demonstrated our success in training and upliftment through our involvement with this programme.

The 12-week course is focused on work-readiness which includes obtaining licenses and essential certifications such as Site Safe.

HEB took on five apprentices for the Wero project which was detailed in the Lakefront REOI. All five are still part of our team, following promising careers.

Create sustainable jobs

How many new local jobs will the project create for yourself and subcontractors?

HEB is perfectly placed to work with Rotorua Lakes Council to enhance employment opportunities for local people by offering employment opportunities to suitable local candidates. For the Rotorua Lakefront Redevelopment project we will assess opportunities to bring local people into our project team, to train them and support them in gaining appropriate qualifications. It is our hope that once employed, they will remain with the Company beyond the end of the contract. We look to employ new recruits in specific areas to supplement our existing self-perform teams.

At this stage we are planning to recruit for up to five new positions in roles such as labourers, machine operators and carpenters – all new staff will receive the appropriate training and inductions.

Of these jobs could we get a breakdown of those that are temporary and those that are permanent?

The positions offered will last the duration of the contract, but we will endeavour to move them to other contracts afterwards where possible, depending on workload and performance.

Please identify the number and percentage of staff based on the project that are making at least a living wage (\$20.55 per hour)?

Almost 100% of HEB Construction's permanent staff earn above the living wage; with only a very small number of apprentices below this level. However, all have the capacity to earn the living wage within six months of commencing their apprenticeship.



Ace Leaf, Driver/Labourer, HEB Northern Civils Roading. Ace was part of our Southern Initiative programme. "I was in a HEB placement for six months and in that time got my tickets. Since October 2015 I have worked for HEB. I enjoy it. It's the company, it's the people, and the variety of work."

local economic impact

- Auckland University of Technology (AUT) STEM Career Expo.
 - UNITEC, MIT and NZMA career days.
- If there are any local career expos during the construction period, or any local high schools are interested in hearing what HEB has to offer, we are keen to be involved.

E-learning

HEB Construction has developed an innovative online induction programme to introduce new staff to HEB cultural values as well as Health & Safety, Environmental standards for HEB (and the sector) and Quality Assurance. The pre-induction online is followed by a face to face site induction when the employee actually starts, which encourages common behaviours and reinforces the online learning. Further E-Learning modules are being developed to support training across the business.

Workplace Literacy Programme

HEB Construction has set up a HEB Workplace Literacy Scheme to upskill our people. This will support both our Learn to Learn Programmes and Health & Safety.

Meet New Zealand's Climate Change targets and sustain natural assets

In your proposal please detail how you will consider environmental sustainability in procurement and practice?

The Lakefront Redevelopment is an initiative which will 'enhance the health and well-being of the environment and our relationship with it'. During construction it's of the highest importance that our activities avoid all harm to the local environment, sustain the natural assets of the lake-edge environment and, in every way possible, promote environmental sustainability.

HEB's sustainability philosophy focusses on our people, emission reduction, fuel efficiency, recycling, saving energy, waste reduction, and working with our communities. The table below shows how we will include environmental sustainability for the Lakefront project:

Objective	How HEB will contribute
Emission reduction	<ul style="list-style-type: none"> • Use of fuel-efficient fleet • Regular fleet servicing to reduce emissions • A no-idling rule – switch equipment off when not in use • Car-pooling initiatives for staff coming to site – for those travelling from Tauranga there will be a van supplied for daily transportation • Encourage locals to cycle to site if possible • Using on-site or locally sourced materials where practical to reduce transportation distances e.g. landscaping materials from Evergreen Landcare and Infracore, concrete supplies from Firth in Rotorua, aggregates from Henderson Quarry – J Swap, building supplies from the local Placemakers.
Fuel efficiency	
Saving energy	

Success story: HEB & Tamaki Jobs & Skills Hub

The email below explains HEB's contribution to this flagship community training programme currently running in Tamaki. We look to engage with similar programmes operating in the proximity of our projects.

"The Tamaki Jobs & Skills Hub has been partnering with HEB over the last year to support our goal of creating local jobs for the local community. HEB has been instrumental in providing employment to Tamaki locals and encouraging their sub-contractors to promote construction apprenticeships to their employees. The collaboration between the Hub and HEB has proven highly beneficial and has resulted in nine apprentices from two of HEB's sub-contractors signing onto construction apprenticeships. HEB initially hired a few candidates through the Tamaki Hub who progressed to applying for apprenticeships; Vincent Elliott from Cornerstone Civil, Ziovani Petera, Jesse Carmichael and Chase Pihama from Argiv Civil. This has encouraged 5 more employees from Cornerstone Civil to sign up. Not only is our collaboration with HEB and other contractor's imperative to creating job opportunities, but it also enables and sustains employment through in-work upskilling." Sheeam Achmats, Business Development Manager, Tamaki Jobs & Skills Hub

local economic impact

Tamaki Skills & Jobs Hub where we have taken on a young man for an apprenticeship in Road Construction. Wherever possible we like to work with regional organisations to identify youth that will benefit from an apprenticeship and a career at HEB.

Cadetships

This year we have committed to a Cadetship Programme for cadets who have already completed their NZ Diploma in Engineering (Civils) through a Polytechnic provider. The cadet then gets to complete a two year programme to complete the NZ Diploma in Engineering Practice (Civils). This is a practical on job programme to apply the knowledge they learnt at Polytechnic to real world projects.

Graduate Programme

HEB has a well-established graduate programme for those young engineers who have a BEng Hons (Civils). The two-year programme accepts candidates from throughout the country. It is a structured two-year programme with four six-month rotations. In addition to broad practical experience offered, this programme includes a range of soft skills, including communication skills, presentation skills, report writing, time management, and a continuous improvement programme.

Currently we have a diverse range of cadets with Māori, Samoan, Tongan, Asian, Indian and European New Zealanders all participating in the programme.

SilkRoad

This is HEB's online Performance and Learning Management System. It gives transparency to Learning Records, the ability for staff to book training, and manage their individual learning plans.

Leadership programmes

HEB Construction offers, and has staff currently engaged in, the following leadership education courses:

- New Zealand Diploma in Management & Leadership Level 5 (Operational or Strategy).
- New Zealand Diploma in Business (Project Management) Level 6.
- New Zealand Certificate in First Line Management Level 4.

Career Expos

HEB Construction attends and has stands at Career Expos each year. For example, in 2018 we attended:

- NZ Careers Expo – Auckland.
- NZ Careers Expo – Christchurch.
- University of Auckland -Engineering School Career Expo.
- University of Canterbury STEM & Engineering Career Expo.

Success story: Graduate Engineer working for HEB in Rotorua

Faireka (Fai) Fairua joined HEB Construction's Graduate Engineer Programme and has been with the Specialist Operations Surfacing team since 3 December 2018; starting with their Asphalt team. His current rotation is with the HEB Stabilising crew who operate out of Rotorua for various contracts around the Bay of Plenty region. As well as in Rotorua, their projects extend out to Tauranga, Tokoroa, Taupo, and Whakatane.

Fai's comments on living and working in Rotorua: *"I've very much enjoyed my time in Rotorua so far and have admitted to my Managers, friends, and family that if the work opportunities were good, I would definitely consider moving here. The lifestyle, environment, and the people are what caught my attention; before even looking at the scope of the projects. In my downtime, I like to go for walks around the lakefront; exploring the nearby shops and bars. It's super convenient as our accommodation is based near town. During the summer period, I brought my bike down to try some of the mountain bike trails near the Timberlands Log Yard."*

Financial Viability

HEB Construction has the financial resources to enable Rotorua Lakes Council's Rotorua Lakefront Redevelopment Stage 1 & 1A project to be delivered efficiently and to the highest quality standard.

HEB is 100% owned by VINCI, one of the top 50 companies on the European Stock Exchange and the largest construction company in the world outside China, with Total Revenue of Euro 43.5bn and Net Profit before Tax of Euro 3.6bn. This means that HEB's financial standing is now complemented by the financial support of VINCI Construction International Network.

HEB Construction's turnover is currently (as at March 2019) more than \$530M and our bonding capacity is currently \$72M. Total assets of \$195M, includes our owned plant and equipment fleet valued at circa \$52M. This, coupled with our extensive resources and skill sets, provides us with the capability to undertake a wide range of civil construction projects ranging from \$100K to over \$200M. Collectively, this demonstrates our financial strength and standing to readily resource and deliver this contract.

HEB's extensive resources and skill sets provides us with the capability to undertake a wide range of civil construction projects. Our largest project to date as Principal Contractor was NZTA's \$220M Hobsonville Deviation Design & Construct (D&C) project (2008-2011). What followed was participation in several Joint Venture/Alliance projects; including the HEB Construction/Fulton Hogan JV to undertake NZTA's \$340M Tauranga Eastern Link (2010-2015) and \$330M Waikato Expressway Huntly Section (2015-2020). The Company's first Alliance was the highly successful \$140M Pukeahu National War Memorial Park & Arras Tunnel 2012-2015 (the Memorial Park Alliance), which went on to construct the \$56M Waitangi Wharf Replacement in the Chatham Islands (2016-2018). 2016 was also the year that HEB entered into the North Canterbury Transport Infrastructure Recovery Alliance; set up to undertake permanent road and rail repairs around Kaikoura after the devastating November earthquake. In 2017, HEB became part of the Mt Messenger Alliance, which was formed to deliver the Mt Messenger Bypass project; the largest and most complex of the three projects that comprise the SH3 Awakino Gorge to Mt Messenger programme. But perhaps our highest profile project to date is the \$850M D&C portion of the \$3.2Bn Transmission Gully project, delivered by the HEB Construction/CPB Contractors JV as part of the Wellington Gateway Partnership; New Zealand's first Public Private Partnership (PPP). Due for completion in 2020, the project involves the construction of a 27km highway through challenging terrain; incorporating around 6 million cubic metres of earthworks and 27 major structures.

HEB Construction is fully supported by VINCI and its bankers, ANZ and HSBC. VINCI are committed to providing adequate financial resource to HEB to undertake any work in NZ, including ownership participation in Special Purpose Vehicles in relation to Public Private Partnerships in the NZ market.

Contact persons

HEB Construction's financial contact is Guy Pierce, Director of Finance, HEB Construction Ltd, T. 09 295 9000, M. 027 455 2552, E. guy.pierce@heb.co.nz. Further financial details are available from our Corporate Banker, John Vetter, T. 09 252 3485.

Waste reduction	<ul style="list-style-type: none"> • We re-use excavated materials such as pavement aggregate. Re-use of this material onsite eliminates the environmental impact of cartage and disposal • Recycling vegetation debris, from site clearance, as mulch or removing landscape recycling centres where it can be processed into compost • Recycling or re-using demolition materials such as concrete - crushed and used as subgrade improvements or as hardfill for temporary access tracks; steel will be cut up and sent away for recycling; timber will be stripped / de-nailed and stacked for reuse.
Environmental sustainability in procurement	<p>We will be using locally-sourced materials and suppliers such as Evergreen Landcare, Infracore, Firth Concrete, Henderson Quarry – J Swap, and the local Placemakers. Electrical work will be done by local electricians Sefton Electrical.</p>
Protecting the environment and sustaining local assets Tiakina to taiao (enhanced environment)	<ul style="list-style-type: none"> • All temporary works will be designed and constructed to cause as little impact as possible on the environment – we are working in an environmentally sensitive area at the lakefront which needs protection • All works will be covered by the EMP, including site specific ESCPs as required. We will keep the extent of works to a minimum and ensure finished works provide an improved amenity e.g. enhanced aesthetics, high quality natural environment, being vigilant with our environmental controls to ensure that our works cause no harm to the lake. • Our Environmental Management System (EMS) is certified to AS/NZS ISO 14001:2015. • HEB will comply with all Resource Consent conditions; Council requirements and regulations; specific requirements of the RMA 1991 and any other applicable Environmental Laws, Bylaws, Acts and/or Regulations. • The system for environmental management on this site will be documented in the Environmental section of the site specific PMP. This will be in the form of an Environmental Management Plan (EMP) that will show locations, extents and types of control measures to be implemented and managed for the Contract Works. • All environmental procedures are communicated regularly during our toolbox talks.

Signs explaining the works will be placed at such location(s) that the general public can easily access this information.

There will be a representative on site during the works who can answer any questions from the public.

Inductions

All visitors to any HEB site participate in a safety induction led by the Project Manager, Supervisor, Safety Manager or Project Engineer. Visual documentation and often video are used to make sure the visitor is aware of the site hazards. Once completed, the visitor is requested to sign the induction material confirming they understand their responsibilities and obligations on site.

All visitors to site must wear a hard hat, hi-visibility vest and suitable footwear (i.e. sturdy, fully enclosed with sensible height heels). These will be supplied for RLC representatives visiting site. Safety glasses and gloves are also required if the project risk assessment deems these necessary. Visitors will also be escorted by HEB personnel during the duration of their visit.

General Safe Practices for Employees

Emergencies

The HSMP will contain an Emergency Management Plan for this specific project.

The plan outlines roles and responsibilities in an emergency or crisis, as well as the actions for all staff to take. For example, in the event of a worker falling into water there are clear actions for staff to take. These actions are also referenced within the specific method statement for the activity in question, and explained to all relevant staff during the activity's pre-start meeting.

For larger-scale emergencies, such as natural disasters, the Plan contains standard emergency actions to secure the site, provide site evacuation, and to ensure the safety of staff.

Project management will be contactable via mobile phone and available where necessary in case of emergency. HEB site staff are contactable at all times by cell phone. After hours emergency contacts will also be nominated in the Plan. It is expected that day to day issues can be resolved on site between the Contractor's Representative and Engineers' Representative.

Training

HEB provides suitable training for our employees to enable all work on site to be carried out in a safe manner. It is the responsibility of the Supervisor to ensure that they are closely supervised and work alongside a trained and competent employee (or 'buddy') until they have demonstrated that they are competent in the designated task. Health and Safety training may include, as appropriate:

- First aid
- Hazard identification and control
- Job safety and environmental analysis
- Confined space and breathing apparatus
- Incident reporting and investigation
- Use of spill kits
- Use of gas monitoring equipment
- Traffic Management
- Permit to work and isolation systems
- Safe use of tools, plant, equipment and vehicles
- Use of ladders, scaffolding and staging.

An employee's level of understanding of the training material will be evaluated at the completion of the training. This evaluation may be either written or verbal questioning, or practical demonstration by the employee. Further monitoring is undertaken to ensure competency levels are maintained in the weeks after the training.

Health & Safety

Health and safety statistics

HEB Construction is committed to providing a safe and healthy work environment for all employees, site visitors, and the public. This commitment is reflected in our largely unblemished safety record (see table below).

SUMMARY	2018	2017	2016	2015
Description	Year to Dec	Year to Dec	Year to Dec	Year to Dec
Number of Employees	1002	914	809	767
Hours Worked	5,301,845	4,936,302	3,863,962	3,348,871
No. Fatality	0	0	0	0
No. Lost time injuries (LTI)	9	11	9	10
No. Medical Treatment Injuries (MTI)	5	7	23	Not Recorded
No. Restricted Work Injuries (RWI)	1	0	9	Not Recorded
No. Serious Harm Accidents	1	0	2	6
ACCIDENT RATINGS				
LTI Accident Frequency rate (No LTI's x 1,000,000/Manhours worked)	1.70	2.23	2.33	2.99
Total recordable injury frequency rate (No TRIs x 1,000,000/Manhours worked)	2.84	3.65	10.61	7.76

Note: that all statistics include subcontractor hours and incidents

Health & Safety Policy

HEB's Health and Safety Policy reflects our commitment to provide a healthy and safe workplace on all company sites and premises, with the desire to 'send every one home safely, every day' a specific element of our company objectives.

Safety is the responsibility of every person on site. To achieve this, we actively involve our workforce in the identification, assessment and management of associated risks. Once management solutions have been determined, their methodologies are communicated via toolbox talks and pre-start discussions. On larger projects such as this, we often introduce initiatives that work to maintain high levels of personal ownership in our health and safety culture. These may include regular competitions between the work crews, perhaps based on inspection results or the number of ideas for improvement that are raised, where the winning crew host a BBQ for the wider project team.

The following statements demonstrate HEB's standardised safe work practises and methods that will be utilised on this project. The statements are all written to comply with the requirements of the health and safety policies and procedures of Clients (e.g. RLC), best industry practices, Approved Codes of Practice, proven best practice on HEB sites, and the statutory provisions of the Health and Safety at Work Act.

Public Safety and Visitors Management

Prior to commencement of the works, and in close consultation with RLC representatives, a meeting will be set up with the local residents and business owners.

During this meeting HEB's representative will inform residents and business owners about the work to be carried out including addressing key risks such as access/egress to the construction site from the main highway. Questions can be answered at that stage and contact details will be provided if people have any additional questions after the meeting.

during construction. Some of the hazards to be considered would be piping of geothermal gases and liquids, high concentrations of poisonous gases such as carbon dioxide, sulphur dioxide and hydrogen sulphide, sudden hydrothermal eruptions and infections from geothermal water. We would propose that a monitoring regime is setup to test and monitor the geothermal activity during construction. This may consist of temperature and gas monitoring, water sampling and monitoring ground levels.

Working around Moving Heavy Machinery

Minimise – Implementation of a Site Vehicle Movement Plan to identify haul routes, light vehicle access and egress points. HEB excavation and road construction plant are fitted with a Warning Approach light system above the cab. A red light indicates not safe to approach and a green light indicates when it is safe. Eye contact should be made with the operator and they have acknowledged you and confirmed it's safe to approach. Spotters and dogmen to be used to control plant movement on site.

Deep Excavations / Cofferdams

Minimise – sheetpiles to be used to form coffer dams, temporary work design to be prepared and signed off prior to installing and undertaking the works. Use trench shields for pile laying and have approved temporary works. Edge protection in place on all excavations. Fence off all excavations with 1.8 Security fencing if excavation is left open. Backfill trenches as soon as practical to eliminate the hazard.

Lifting Heavy Objects

Minimise – Cranes to be rigged and signed off safe for use prior to undertaking and lifts. Ensure approved lift plan in place for specific lifts such as large dia. Manholes, sheetpiles, piles and precast unit. Exclusion zones to be established around work areas and clearly delineated. Only use current certified and tagged lifting equipment, crane lifts to be controlled by qualified dogman.

Contaminated Land

Minimise – we will follow the recommendations provided in the resource consent, and establish a contaminated site management plan. The areas identified as contaminated will be clearly delineated and fenced off to eliminate the chance that the area is disturbed prior to the agreed managed excavation and disposal.

Public Safety: Isolating all work site activities from the public and traffic

Eliminate – we will install site hoardings / security fencing to prevent unauthorised access to the site. Warning & Danger signs will be erected and clearly visible. Access / egress gates to be controlled and kept closed at all times.

Ground Conditions

Minimise – we will carry out Temporary works designs for temporary haul roads and crane / piling platforms. These will be constructed as stabilised working platforms, using geogrids and hardfill material.

Working at Height

Minimise – by using handrails and physical barriers we will prevent falls. Where workers need to work near an open face at heights they will be trained at working at heights and wearing the appropriate PPE.

Working Over Water

Minimise – while working over water all workers will wear life jackets. Rescue procedures will be developed and man overboard drill will be carried out. In addition to life jackets there will be life preservers positioned around the site that could be used in an emergency.

Confined Space Working

Minimise – all personnel working within or assisting with confined space working will be trained and competent. HEB's confined spaces emergency plan and procedures will be followed. Gas detectors and PPE will be used. AA

Site Safe Gold Card

All staff in a supervisory role in construction will complete this two-day course which looks closely at the Supervisor's role to influence, train and instruct staff. The programme is broken up into eight interactive modules which focus on higher level health and safety for supervisors, as well as management skills. Trainees can earn NZQA unit standard credits for completing the course.

Key areas of the course cover:

- The effect that accidents have on an individual's wellbeing and the project as a whole
- Improving the Supervisor's ability to identify at-risk operations and the associated hazards
- Recognising inappropriate behaviour and how to eliminate the associated risks
- Improving the Supervisor's ability to carry out their safety responsibilities and better manage their safety programmes
- Providing training in the completion of effective Observations and Inspections
- Improving the Supervisor's ability to support investigations into accidents, incidents and near misses.

Subcontractors

Site Induction

In addition to the HEB safety induction, all subcontractors will be required to take their employees through the subcontractor's own induction material prior to their commencement on site.

All subcontractors are required to submit a Safety Management Plan for their works. It must be site specific, and include a completed schedule of risks identified and methods of control.

The Safety Management Plan provided by the subcontractor must reflect systems of work that are safe and without risk to the subcontractor's employees or any other person on site. Typically, this plan will include as a minimum:

- A description of the works to be carried out on the site
- A management system for the identification and control of hazards
 - Job safety and environmental analyses for all work to be carried out
- The subcontractor's safe work practices and operating procedures for carrying out the work
- Identification of the health and safety roles and responsibilities of all employees working on site
- The subcontractor's health and safety inspection procedures
- Establish what site permits are required, obtain permits and work in accordance with all such permits.
- Regular safety check inspections are made (at least monthly) of all sites by the designated safety supervisor using the Site Health & Safety Checklist.

Identifying and Managing Significant Risks Specific to the Lakefront project

During the planning stage of the contract a detailed Project Management Plan (PMP) will be completed. The Health & Safety section of this document will identify any significant hazards by using HEB's hazard matrix.

Systematic hazard identification and assessment is completed by work area evaluation and employee work practices and processes. This will be compiled by Project Manager Cole Meiring, Site Engineer Louie Gilmour and Site Supervisor Greig Mitchell. Hazards and their mitigation are listed in the Hazard Register, which is kept on site and discussed in toolbox and prestart meetings. New entries are reported to the Engineer and weekly and monthly reports identify hazards/controls. For this project key risks and their controls are:

Working in a Geothermally Active Area

Minimise – Working in a geothermally active area can potentially create several various hazards that need to be carefully thought through during the design period and as the construction methodologies are developed. HEB will work with your designers to ensure the proposed design and temporary works don't create unnecessary hazards

programme

hōtaka

**organised
motivated
dependable**

Appendices

H&S Policy

SHEQ certification

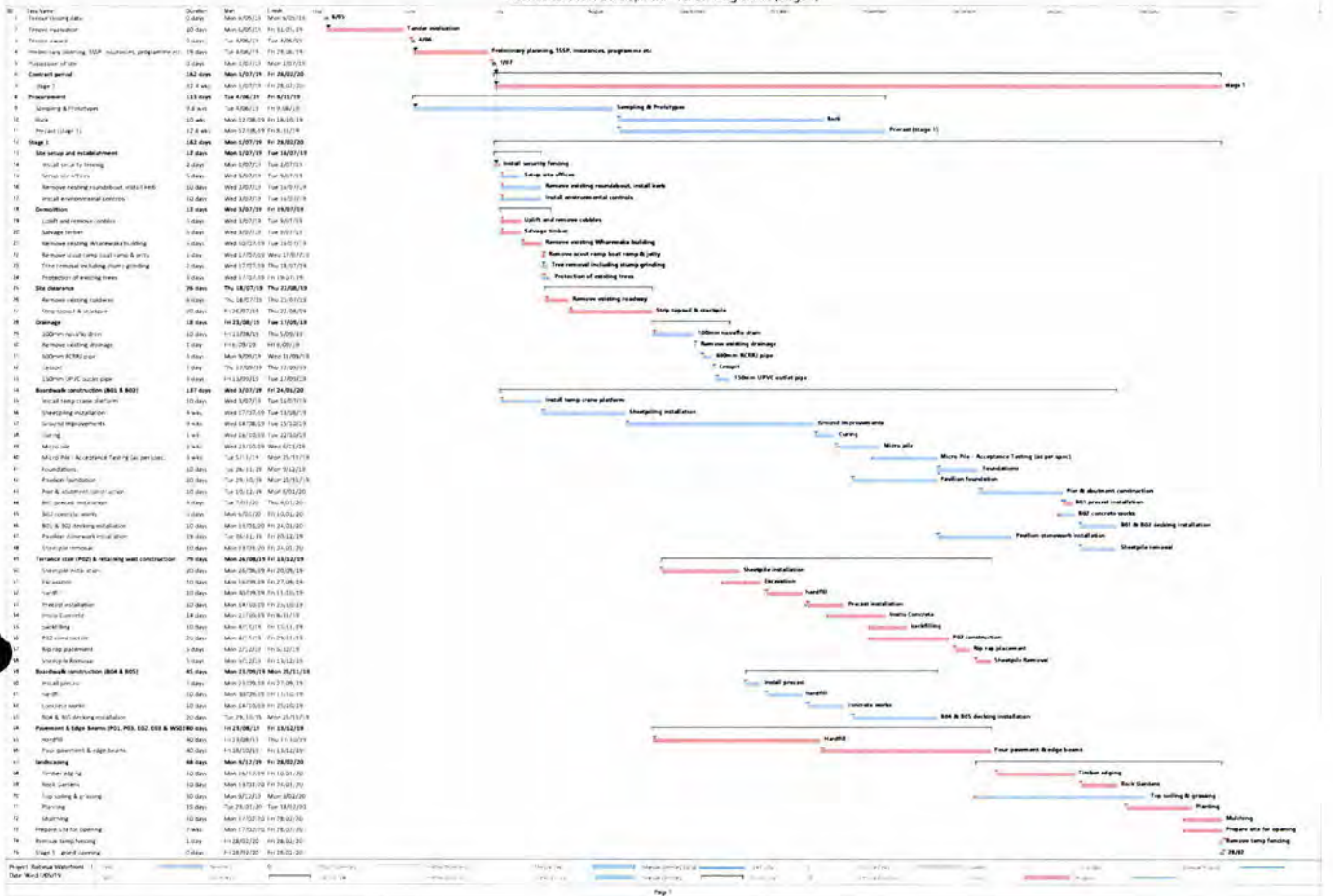
Impac Prequal certification

Site Safe certification

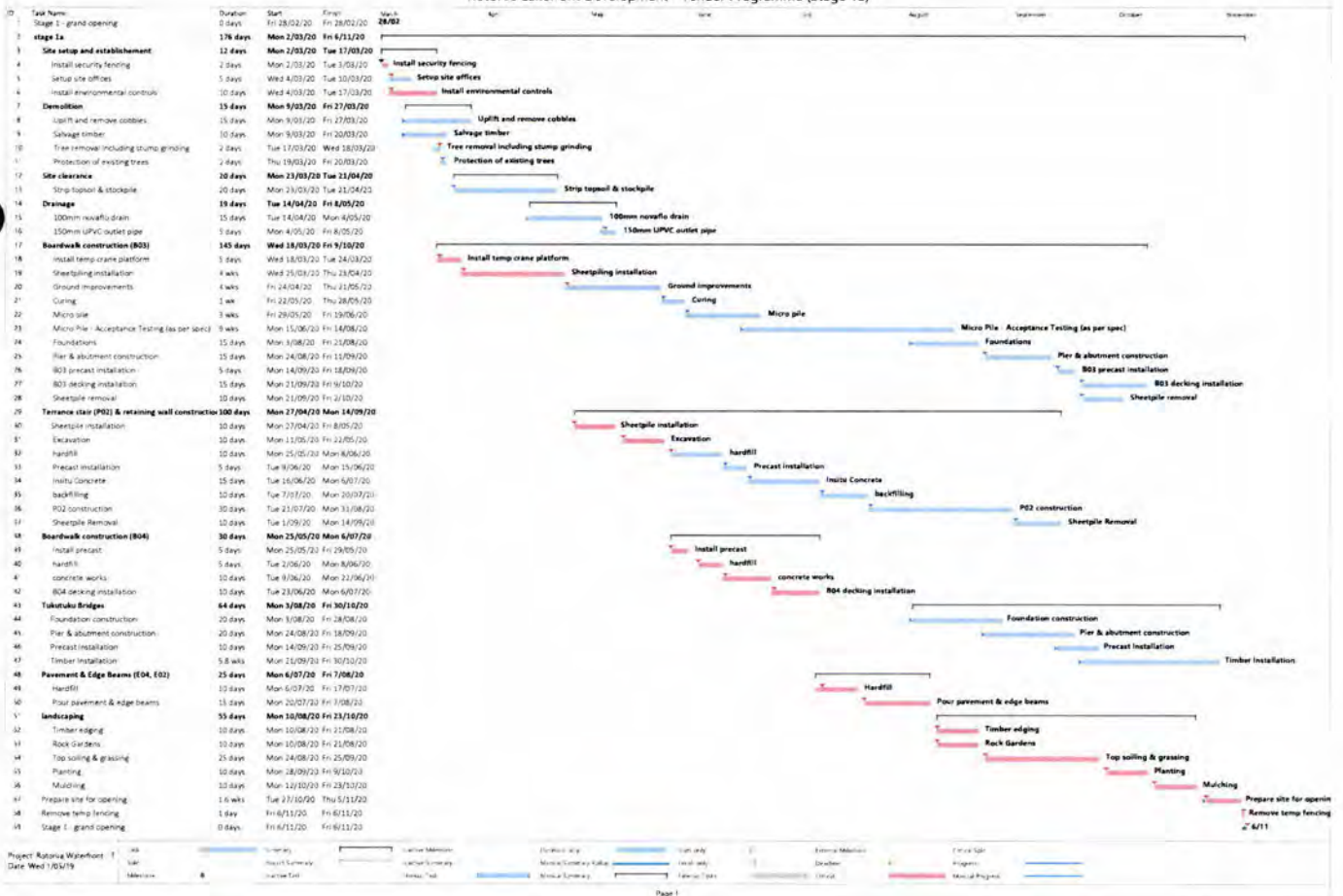
Telarc certification

Curriculum Vitae

Rotorua Lakefront Development - Tender Programme (Stage 1)



Rotorua Lakefront Development - Tender Programme (Stage 1a)



appendices

āpitihanga

proven
certified
authentic

Our policies

The management and staff of HEB Construction are committed to the following company policies:

Health and Safety

Our commitment:

To provide a workplace that is healthy and safe. In doing so, we will comply with all relevant legislation, codes of practice and regulations.

Our health and safety culture actively encourages the engagement and participation of all employees, to openly discuss and consult on health and safety matters. A programme is in place to ensure that all workplace hazards and associated risks, are effectively managed.

Induction, training, planning, risk assessment and project monitoring are used to ensure that our health and safety processes are suitable for their intended purpose. Any accident or incident is reported to the supervisor or manager, with appropriate investigations conducted to prevent recurrence.

Quality

Our commitment:

To achieve quality outcomes in everything we do. We know that the quality of our work defines us and we take pride in satisfying the requirements of our customers and their stakeholders.

We communicate the importance of quality to our employees through engagement, practical examples and training. Through direction and support, we strive to ensure that each employee has a proper understanding of our quality process, their responsibility to contribute to its effectiveness, and its direct relevance to the success we all share.

Environmental

Our commitment:

To protect the environment and promote sustainable construction practices. We ensure that our work reflects the responsibility and ownership we take in preventing pollution and other environmental impacts during our construction activities.

Effective training, planning, risk assessment and project monitoring help us to fulfil our compliance obligations, whilst promoting the social, environmental and sustainable outcomes that value considerations allow.

Our promise:

We promise to provide a highly collaborative service that continually strives to:

- Send everyone home safely, every day
- Make employment within HEB 'more than just a job' for our staff
- Add value to our customers
- Actively encourage innovation
- Demonstrate our culture of pride in the work we do

These commitments are based on the use of management systems that are founded on an established set of company objectives, which are measured and reviewed within a process of continual improvement.



Derrick Adams, CEO

1 March 2017



THIS IS TO CERTIFY THAT:
HEB Construction Ltd

**HAS BEEN ASSESSED  FOR
CONTRACTOR PRE-QUALIFICATION**

Valid from **31 May 2017** to **31 May 2019**

Primary Work Type **Project Management**

Category **4**




Paul Kennedy
Chief Executive

impac
Risk & Safety Management Solutions

 working to keep your work safe

THIS IS TO CERTIFY THAT:
HEB Construction Ltd

**IS APPROVED AND REGISTERED ON THE
LOCAL AUTHORITY CONTRACTOR
PRE-QUALIFICATION DATABASE**

Contractor Reference Number: **82DNOH3G2S**

Valid From : **02/07/2018 — 02/07/2020**

* This approval date range does not take into account insurance expiry dates.

SCOPE OF SERVICES

INDUSTRY SECTOR / SERVICE	SUB INDUSTRY / SERVICE CATEGORY
Construction, Engineering, Manufacturing and Diving	Civil Engineering Services



SITE SAFE

MEMBERSHIP CERTIFICATE

THIS IS TO CERTIFY THAT

HEB Construction Ltd

is a valued member of Site Safe New Zealand Inc.

Site Safe membership demonstrates commitment to the development of a culture of health and safety in the New Zealand construction industry.

SIGNED:

[Signature]

Alison Molloy
CHIEF EXECUTIVE
SITE SAFE NEW ZEALAND INC

SIGNED BY MEMBER:

MEMBERSHIP STATUS:

Year 5+ Loyalty

MEMBERSHIP EXPIRES:

31 May 2019

MEMBERSHIP NUMBER:

704304

0800 SITE SAFE (748 372)
sitesafe.org.nz

Proud to be safe



SITE SAFE

CERTIFICATE

THIS IS TO CERTIFY THAT

HEB Construction Limited

HAS ACHIEVED SITEWISE GREEN STATUS

SIGNED:

[Signature]

Brett Murray
CHIEF EXECUTIVE
SITE SAFE NEW ZEALAND INC

ASSESSED ON:

21 February 2019

SITewise GREEN 2019/20

0800 SITE SAFE (748 372)
sitesafe.org.nz



Telarc.
The Mark of Success

SCHEDULE TO CERTIFICATE OF REGISTRATION

Registration Number: 76

Certificate issued: 10 May 2018

HEB Construction Ltd

Site Details:

Organisation	Address	Suburb	City	
HEB Construction Ltd - Auckland - Head Office (Q03674)				
Auckland - Head Office	Cnr Firth Street & Norrie Road	Drury	Auckland	NZ
Mt Maunganui Office	21 Aerodrome Road	Mt Maunganui South	Mt Maunganui	NZ
Blenheim Office	9 Sheffield Street	Riverlands	Blenheim	NZ
Christchurch Office	17/2 Barry Hogan Place	Addington	Christchurch	NZ
Darfield Office	30B Horndon St		Darfield	NZ
Waikato Office	81 Ruffell Road	Te Rapa	Hamilton	NZ

Scope of Certification:

The design and provision of services with respect to civil engineering projects throughout New Zealand including roading and bridge construction, industrial and residential subdivision development, marine structures, piling and foundations, precast and pre-stressed concrete, structural steel fabrication and erection, landscaping, infrastructure maintenance and management, drainage and water reticulation works, crane hire and heavy lifting.



Telarc.
The Mark of Success

This is to certify that

HEB Construction Ltd

Cnr Firth Street & Norrie Road Drury Auckland

having been assessed by Telarc Limited and having been found to operate a health and safety management system conforming to

OHSAS 18001:2007

is hereby designated

Telarc Registered

for the following goods and services

No. 76

The design and provision of services with respect to civil engineering projects throughout New Zealand including roading and bridge construction, industrial and residential subdivision development, marine structures, piling and foundations, precast and pre-stressed concrete, structural steel fabrication and erection, landscaping, infrastructure maintenance and management, drainage and water reticulation works, crane hire and heavy lifting.

Certificate issued: 10 May 2018

Current Registration: 10 May 2018

Chairperson

David Bone

Original Registration: 16 March 2012

Expiry Date: 29 May 2021

Chief Executive

Philip Coyer





Telarc.
The Mark of Success

SCHEDULE TO CERTIFICATE OF REGISTRATION

Registration Number: 182

Certificate Issued: 10 May 2018

HEB Construction Ltd

Site Details:

Organisation	Address	Suburb	City	
HEB Construction Ltd - Auckland - Head Office (Q03674)				
Auckland - Head Office	Cnr Firth Street & Norrie Road	Drury	Auckland	NZ
Mt Maunganui Office	21 Aerodrome Road	Mt Maunganui South	Mt Maunganui	NZ
Blenheim Office	9 Sheffield Street	Riverlands	Blenheim	NZ
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Waikato Office	81 Ruffell Road	Te Rapa	Hamilton	NZ

Scope of certification:

The design and provision of services with respect to civil engineering projects throughout New Zealand including roading and bridge construction, industrial and residential subdivision development, marine structures, piling and foundations, precast and pre-stressed concrete, structural steel fabrication and erection, landscaping, infrastructure maintenance and management, drainage and water reticulation works, crane hire and heavy lifting.



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Telarc.
The Mark of Success

This is to certify that

HEB Construction Ltd

Cnr Firth Street & Norrie Road Drury Auckland

having been assessed by Telarc Limited and having been found to operate a environmental management system conforming to

ISO 14001:2015

is hereby designated

Telarc Registered
for the following goods and services

NO. 182

The design and provision of services with respect to civil engineering projects throughout New Zealand including roading and bridge construction, industrial and residential subdivision development, marine structures, piling and foundations, precast and pre-stressed concrete, structural steel fabrication and erection, landscaping, infrastructure maintenance and management, drainage and water reticulation works, crane hire and heavy lifting.

Certificate Issued: 10 May 2018

Original Registration: 26 January 2010

Current Registration: 10 May 2018

Expiry Date: 29 May 2021

Chairperson

David Bone

Chief Executive

Philip Cryer



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Telarc.
The Mark of Success

SCHEDULE TO CERTIFICATE OF REGISTRATION

Registration Number: QEC13735

Certificate Issued: 10 May 2018

HEB Construction Ltd

Site Details:

Organisation	Address	Suburb	City	
HEB Construction Ltd - Auckland - Head Office (Q03674)				
Auckland - Head Office	Cnr Firth Street & Norrie Road	Drury	Auckland	NZ
Mt Maunganui Office	21 Aerodrome Road	Mt Maunganui South	Mt Maunganui	NZ
Blenheim Office	9 Sheffield Street	Riverlands	Blenheim	NZ
Christchurch Office	17/2 Barry Hogan Place	Addington	Christchurch	NZ
Darfield Office	30B Horndon St		Darfield	NZ
Waikato Office	81 Ruffell Road	Te Rapa	Hamilton	NZ

Scope of certification:

The design and provision of services with respect to civil engineering projects throughout New Zealand including roading and bridge construction, industrial and residential subdivision development, marine structures, piling and foundations, precast and pre-stressed concrete, structural steel fabrication and erection, landscaping, infrastructure maintenance and management, drainage and water reticulation works, crane hire and heavy lifting.



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Telarc.
The Mark of Success

This is to certify that

HEB Construction Ltd

Cnr Firth Street & Norrie Road Drury Auckland

having been assessed by Telarc Limited and having been found to operate a quality management system conforming to

ISO 9001:2015

is hereby designated

Telarc Registered

for the following goods and services

No. QEC13735

The design and provision of services with respect to civil engineering projects throughout New Zealand including roading and bridge construction, industrial and residential subdivision development, marine structures, piling and foundations, precast and pre-stressed concrete, structural steel fabrication and erection, landscaping, infrastructure maintenance and management, drainage and water reticulation works, crane hire and heavy lifting.

Certificate Issued: 10 May 2018

Current Registration: 10 May 2018

Chairperson

David Bone

Original Registration: 17 December 2003

Expiry Date: 29 May 2021

Chief Executive

Philip Cryer



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curriculum vitae

subcontractors, into a high performing team.

Highlights of Steve's work:

- Steve took a prominent role in the development and agreement of five separate Target Cost Estimates with NZ Transport Agency's independent expert.
- Delivered works one month ahead of the ANZAC Day deadline, on budget, while maintaining accurate cost to complete estimates.
- Led the design, consenting and construction teams through concept design, resource consents, detailed design and delivery for Waitangi Wharf in record time.

A significant part of Steve's site leadership for Arras Tunnel was resolving stakeholder concerns. Steve and the MPA Stakeholder Manager often combined to work with stakeholders to find ways to limit impact.

Cashin Quay 1 Earthquake Repairs ECI, Lyttelton Port of Christchurch, 2011, \$22.5M, Project Manager

Steve managed the final four months of this 12-month earthquake repair project at the Cashin Quay 1 coal loading wharf. This project saw HEB respond very quickly to the client's need to deliver emergency repairs to the badly earthquake-damaged wharf. Work was delivered as an ECI, with HEB working alongside the client's consultants Opus.

Downtown Ferry Terminal Pier 1C, Auckland Council, 2012, \$2.1M, Project Manager

Steve was onsite managing works for an extension to the ferry berth alongside the existing Downtown Wharf and Terminal. Works included piling, deck construction, structural steel works, and a new timber fender system.

Birkenhead Ferry Terminal Upgrade, Auckland Council, 2012, \$1.5M, Project Manager

Steve was onsite managing the construction of a new outer ferry berth terminal alongside the existing terminal and wharf. Key to this project was safe working within a terminal space that was always open to the public. Pedestrian management was successful with zero incidents.

SH16/18 Hobsonville Deviation D&C, NZ Transport Agency, 2008 - 2012, \$220M

Jun 2008 to Jun 2010: Contractor's Design Manager & Deputy Contractor's Representative

For the first 2 years of the project Steve was the Contractor's Design Manager & Deputy Contractors Representative. This involved being the sole point of contact for the 40-strong consultant design team and managing the delivery of 52 individual design packages. Each package went through an independent peer review and client acceptance procedure. Key aspects of the Design Manager role were selecting the most cost-effective design solutions, delivering the design packages to programme and maintaining a productive relationship between the

design and construction teams. As the design was completed Steve focused on time critical aspects of the construction, managing the new scope added by NZTA.

Jul 2010 to Dec 2011: Contractor's Representative

From July 2010 Steve was promoted to Contractor's Representative when there was approximately \$120M of work remaining on this D&C contract. Over an 18-month period he led a team of 55 HEB engineering staff to successfully deliver works to a high health and safety, quality, and environmental standards, and completion six months ahead of programme.

A major project risk was reducing traffic delays: interface with live traffic was substantial at four local road crossings, tie-ins, and along the live motorway at Hobsonville interchange. Across both design and construction, Steve worked closely with HEB's onsite TTM team and NZTA to ensure the best solutions were designed and then accurately implemented.

SH2 Mangatawhiri Deviation, NZ Transport Agency, 2007 - 2008, \$39M, Project Manager

On his first major Transport Agency project, Steve managed onsite works involving a 7.4km realignment of SH2. The project was completed four months ahead of time, within budget, with no LTIs. Key elements of work included: two interchange bridges over SH2; 1.2M m³ of earthworks in wet soils, and several MSE retaining walls.

Channel Tunnel Rail Link 2 - Contract 342, working for Hochtief UK, NZ\$390M, 2003 - 2004

Senior Project Planner

This 5km section of rail corridor included 24 bridges and 1.9Mm³ of earthworks. Steve planned works in coordination with rail closures, including sliding new rail-over-road bridges into place under strict closure periods.

Work History

- 2008 to Present, HEB, General Manager Structures and Specialised Operations; Project Director; Alliance Manager; Construction Manager; Contractor's Representative
- 2005 - 2008 Multiplex, Senior Project Engineer
- 2003 - 2004 Hochtief (UK), Senior Project Planner, Channel Tunnel Rail Link
- 2003 Black & Veatch - Costain JV (UK), Project Engineer/Planner
- 2001 - 2002 London Transport, Upgrade Manager
- 1999 - 2000 Balfour Beatty (UK), Section Engineer
- 1996 - 1999 Works Infrastructure, Site Engineer

curriculum vitae

Steve Croft

Contractor's Representative



Steve has 20 years' experience in leading the delivery of large and complex infrastructure projects, including the \$240M Memorial Park Alliance (MPA), \$60M Cashin Quay 4 ECI, \$23M Cashin Quay 1 ECI, and the \$220M SH16/18 Hobsonville Deviation D&C. He has demonstrated leadership, technical and management expertise in guiding these and other challenging projects to on-time and on-budget completion within collaborative frameworks.

Rotorua Lakes Council's Lakefront Redevelopment project will benefit from the governance skills that Steve has developed while working with client, designer and contractor teams on ECI projects; particularly in their critical design and optioneering phase. Steve will lead our team as we collaborate with designers to maximise the use of constructability considerations, optimising solutions to develop a robust, cost-effective, on-time design that meets the project objectives. Through the construction phase, Steve will utilise his highly relevant project leadership experience in directing the multi-discipline team within the constrained waterfront site. Steve's work as Construction Manager then Alliance Manager at MPA Arras Tunnel and Pukeahu Park demonstrate his ability to lead teams in their on-time delivery of complex projects. Those projects share many similar features to those on the Lakefront Redevelopment; such as a significant public and stakeholder interest, and the high importance on quality and on-time delivery for this landmark project for Rotorua.

Qualifications and Training

- BE Civil (Hons)
- Post Graduate Diploma of Business Administration
- Chartered Professional Engineer (CPEng)
- MEngNZ
- IOD various Executive courses

Key Technical and Management Skills

- Project governance, ensuring the project team will be focused on achieving the client's outcomes
- Practical ECI and Alliancing skills, working with the client and design teams
- Collaborative team-builder able to integrate design-construct teams, making use of his design knowledge and onsite practical experience

- Liaison with high-level stakeholders and political figures
- Design and buildability optioneering in D&C/ECI/Alliance
- Staging to minimise disruption to traffic and neighbours

PROJECT EXPERIENCE

Cashin Quay 4 Cruise Berth Extension ECI, Lyttelton Port of Christchurch, 2017 - current, \$60M

Project Governance

Steve is providing leadership to the HEB team and overall project governance on this collaborative ECI being delivered with designers Beca. Steve attends monthly project review meetings with the team, manages HEB's resourcing for the project, and reviews design solutions and associated cost estimates. At the start of 2018 the ECI team have completed options assessment and preliminary design. HEB's Gerard Kelly was engaged to produce a budget estimate. Detailed design is now underway.

Three other governance roles on marine projects

Steve is providing a matching governance role on three other HEB wharf projects, with two completing in 2018:

- \$60M Waitangi Wharf (Project Alliance Board Member)
- \$19M Port Otago Wharf Extension (130m wharf)
- \$24M CentrePort Container Wharf Recovery project

MPA, NZ Transport Agency, 2012 - 2016, \$240M

Construction Manager, then Alliance Manager from Jan 2016 to Dec 2016

At Arras Tunnel and Pukeahu Park, as Construction Manager Steve held overall responsibility for onsite delivery, including managing a team of 25 engineers, surveyors and supervisors and a total workforce that peaked at 200. At the start of 2016 he became Alliance Manager, and through 2016 he led MPA for delivery of Mt Victoria Tunnel Upgrade and Waitangi Wharf Upgrade projects. As Alliance Manager he had full control of MPA's finances, and he directed the work of MPA's design and stakeholder management teams. Steve was a member of the Alliance Management Team. In 2017 Steve took over from HEB's CEO Derrick Adams to represent HEB on the Project Alliance Board. In both roles as Construction Manager and Alliance Manager, Steve was successful in bringing together HEB, Alliance-partner staff and local

curriculum vitae

PROJECT EXPERIENCE

Andrew has performed as Contract Manager or Project Manager on the following pertinent projects:

[Tauranga Marine Precinct, Tauranga City Council, Nov 2016 – February 2018, \\$6.5M](#)

A marine environment adjacent to the harbour, works comprise piling, sheetpiling, precast, pumpstation & water treatment facility, earthworks, D & C of post tension concrete hardstand.

[Access to Water, Tauranga City Council, Oct 2016 – Apr 2017, \\$3M](#)

Construction of the new tidal stairs, pier and pontoon at Tauranga's waterfront. Works included 49m of tidal stairs, a new 27m pier and a new 24m by 3m floating pontoon.

[SH29 Poike Road Overbridge and Cycleway, NZTA, July 2016 to May 2018, \\$2M](#)

Installation of a pedestrian overbridge over SH29 with footpath and boardwalk installations. Works also included road improvement works on Poike Road.

[Opureora & Omokoroa Ferry Ramp Upgrades WROPDC, June 2017 to March 2018, \\$561,000](#)

An ECI for marine works including the extension of the existing ferry ramps, piling, dredging, rock revetment, timber and concrete works. Additional works awarded.

[Kennedy Road Bridge Construction, Tauranga City Council, Nov 2016 – Dec 2017, \\$4M](#)

Contract works include earthworks, stone columns, piling and bridge construction, rock rip rap protection, pavement and footpath work and watermain installation.

[Joyce Road Reservoir No. 2, Tauranga City Council, Nov 2016 – Dec 2017, \\$5.7M](#)

The works comprise the construction of a 10,000m³ treated water reservoir together with associated piping valving and appurtenant works.

[Roxanne Place Stormwater Improvements, Stage 2, Tauranga City Council, Jan 2016 – July 2016, \\$650k](#)

Installation of permanent sheetpile wall, complete with 1500mm dia floodgate and walers. Installation of PVC sheetpile cut off wall within the new stop bank. Earthworks, including rip rap protection, import, place and compaction of 2,200m³ of fill to raise the existing bund height.

[Te Maunga WWTP, New Receiving Chamber and Headworks Modifications, Tauranga City Council, Oct 2015 – Apr 2016, \\$1M](#)

Construction of new precast receiving chamber,

including excavation, dewatering, sheetpile ground improvements, HDPE lined precast panels, cast insitu internal walls and precast lid. Headworks modifications, including detailed staging and temporary works to ensure flows to the plant were maintained at all times. Partial demolition of the existing headworks chamber and extension to accommodate the new twin 900mm dia pipes from the receiving chamber. Application of epoxy coating system to the walls of the existing headworks chamber. Commissioning including over-pumping of the flows to the plant.

[Grahams Stream Bridge, Taiua, Thames-Coromandel District Council, Oct 2015 – Dec 2015, \\$480k](#)

Traffic management and full road closure to undertake the works. Installation of six bottom driven steel piles, 600mm dia x 12m deep. Construction of new cast insitu abutment and pier, including jacking up of the existing bridge deck to suit the new bridge level.

Excavation of the existing causeway and rip rap protection around the abutment. Placement of client supplied hollow core beams and pouring of upstands. Walkway fabrication and construction to new span. Hotmix surfacing and guardrail construction.

[SH25 Wentworth Bridge, NZTA, Feb 2015 – Mar 2015, \\$270k](#)

Road closure and diversion in place for duration of the works. Removal and replacement of timber running boards. Supply and installation of nine new timber piles. Fabrication and installation of new steel piers including jacking of the existing bridge beams and removal of old timber piers.

[Tsunami Evacuation Bridges, Papamoa, Tauranga City Council, June 2015 – July 2015, \\$390k](#)

Construction of two new pedestrian evacuation bridges, with screw piles, cast insitu abutments and Timber Bridge spans constructed from glulam beams.

[RMD Building, Haydn & Rollett, Mar 2015 – Sept 2015, \\$3.4M](#)

Precast onsite and erection of 155 precast panels (35t each), 1500m³ of cast insitu foundations, temporary propping of panels, joint sealing and carpentry works for a 9,000m³ bulk storage warehouse.

[Ngaroto Weir Construction, Waipa District Council, Feb – Mar 2015, \\$250k](#)

Fabrication and installation of a new weir structure on Lake Ngaroto. The weir included 310 UC piles, sheetpiling and steel structure / Walkway Bridge.

curriculum vitae

Andrew Hiscox

Contract Manager



NZCE (Civil)

Andrew has over 20 years of experience as a Project Engineer and Manager. He is based in Tauranga and has worked for HEB locally for the past 12 years. He is an extremely competent and dedicated Engineer. His technical skills are broad and include major structures, heavy civil construction, piling, marine, drainage, water and wastewater, water retaining structures and maintenance.

His experience with relevance to the Rotorua Lakefront project for Rotorua Lakes Council includes many marine-based projects in the Bay of Plenty area. A key project was Access to Water for Tauranga City Council, which was designed to improve the connection between the city centre and the waterfront for the public, involving complex civil engineering and cultural and artistic works. As Contract Manager, Andrew contributed strongly to bringing this landmark project in before time and to budget and quality expectations.

Andrew has recently been Contract Manager on the Tauranga Marine Precinct, which involved works in a marine environment and works included piling, sheetpiling, precast, and earthworks.

For the Rotorua Lakefront Development, Andrew brings his experience in managing staff and developing innovative construction techniques in a collaborative team environment with the client and consultants.

Andrew is often involved in the set-up of contracts and is well-versed in the development and implementation of Health & Safety, Environmental and Quality Plans and work Method Statements. He organises and manages day to day construction activities and ensures site activities are carried out in an efficient, safe and to standard manner for the delivery of projects to clients.

Qualifications and Training

- New Zealand Certificate of Engineering NZCE (Civil)
- NZIHT Understanding NZS 3910:2003 Conditions of Contract
- NZIHT Safe Working on Roads

- Employers & Manufacturers Training Centre – Introduction to Supervision
- Site Safe (Civil) Passport
- Working at Heights
- First Aid
- Environmental Protection
- Quality Management
- Technical Experience
- Bridges and culverts
- Retaining walls
- Piling – all types
- Rail bridges
- Industrial pipework
- Water retaining structures – reservoirs
- Marine works
- Wastewater and water treatment plants
- Pump stations

Management Experience

- Project management
- Directing and motivating personnel
- Financial management
- Estimating
- Project reporting
- Planning and programming
- Subcontract management
- Producing safe Work Plans and Methodologies

Work History

- Feb 2005 – Present, HEB Construction Ltd (Structures Division), Area Manager – Tauranga, Contract Manager / Project Manager
- Oct 2000 – Feb 2005, Contract Construction Engineer working on multiple civil construction projects in London, UK
- Dec 1995 – Aug 2000, Works Infrastructure (Bay of Plenty), Project Manager, Estimator and Assistant Engineer

curriculum vitae

Nov 2012 – Nov 2014, Downer NZ, Project Engineer
Arras Tunnel

Feb 2012 – Oct 2012, Downer NZ, Project Engineer
SH16 Trial Embankment

Jan 2010 – Jan 2012, Fletcher Construction, Site
Engineer Victoria Park Tunnel

Dec 2007 – Dec 2009, Fletcher Construction, Site
Engineer Dowse to Petone

PROJECT EXPERIENCE

[SH16 Lincoln to Westgate, NZTA, Aug 2017 – Nov 2018, \\$100M, Structures Manager / Alternates Design Manager](#)

The SH16 Lincoln to Westgate project involves the widening of SH16 from Lincoln to Westgate Road, a 2.1km stretch of motorway. To do this, the two over bridges spanning SH16 at Huruheru Rd and Royal Rd. were replaced in stages (and the existing structures demolished) to allow the bridges to remain operational during their construction. The bridge over the Huruheru stream, on SH16 was replaced (Lincoln Bridge No. 1). This again was completed in stages, to allow the bridge to remain operational while the existing structure was demolished. 22 retaining structures were constructed along the SH16 alignment to allow the widening of the motorway. 8 noise wall structures were constructed along the SH16 corridor.

Cole managed the delivery of the structures. Several of these were offered as alternatives at the time of tender. Cole managed the design of these alternatives. The demolition of the Huruheru and Royal Rd bridges were completed over 2No. 10-hour motorway shutdowns, a significant achievement considering that in the past similar works have required a full motorway shut down for a whole weekend.

[OD7 KiwiRail Bridges, KiwiRail, Dec 2014 – June 2016, \\$35M, Project Manager](#)

Cole was the Project Manager for five of the eight bridges that formed part of the KiwiRail OD7 Project on the North Island Main Trunk Line. 7 of these bridges were spread out over a 20km distance north of Taumarunui. The bridges were generally replaced on the same alignment as the existing bridges. This required works in, under and around live bridges, executed carefully to not disrupt the rail network. Generally, this project involved the replacement of the substructure of the bridges whilst the bridges remained live, and then replacing the superstructure during a Block of Line, generally a 24-hour period during which the rail line was closed, the existing spans removed replaced with new spans. To do this, the new

steel ballast tray spans were either erected on temporary works constructed to the side of the existing bridges and jacked into place or lifted into place.

This was a Design and Construct contract. Cole was involved with the design management of the bridges, particularly looking at the construction challenges the Taumarunui landscape presented and electing a form of bridge to best suit these challenges. When the bridges were originally constructed in the late 1800's/early 1900's, land was confiscated from the local iwi, and several Marae relocated to make way for the railway. As such, the replacement of these bridges was highly culturally sensitive given the negative history of the railway in this area. Cole worked hard to foster a positive relationship with the local iwi. For each bridge, a member of each of the local iwi was elected as a representative and they actively monitored the construction of the bridges, ensuring they were constructed in a manner that was sensitive to the environment. Cole became actively involved in and developed a very good relationship with the local community, ensuring that the project delivery was a positive experience for all those involved and effected by the project. This was a challenging project, undertaken in a very remote area, in an environment with a very strong focus on health and Safety.

[Arras Tunnel, NZTA, Nov 2012 – Nov 2014, \\$90M, Project Engineer Structures](#)

As part of the Memorial Park Alliance, this high-profile project involved diverting a section of SH1 in central Wellington underground, to facilitate the construction of Pukeahu National War Memorial Park in front of the National War Memorial in time to commemorate the 100-year anniversary of ANZAC day. As Structures Project Engineer, Cole was responsible for overseeing construction of the Arras Tunnel and associated works.

To construct the tunnel, a large temporary retaining wall was required either side of the tunnel's alignment. This wall was comprised of sheet piles, kingposts, lagging and approx. 600 no. ground anchors in what was a very congested and constrained site. Cole oversaw the excavation of 30,000m³ of earth, installation of 95 tension piles, construction of the 250m long in-situ underpass structure (of which 120m was enclosed), and placement of decorative precast panels. Despite the site experiencing two earthquakes during construction, the Arras Tunnel was opened one month early.

curriculum vitae

Cole Meiring

Project Manager

BE Hons (Civil Engineering), MEngSt (Construction Management)



Cole has 11 years civil construction industry experience. He is a proficient Project Manager and due to his work experience gained on larger projects, and with high performing teams, Cole understands how to deliver a project well. Cole is especially capable of managing works to meet a tight deadline, is well versed in the various forms of bridge construction, and managing works collaboratively with others, whether that be internally or externally.

One of Cole's key strengths is his ability to work closely with others and get the most out of his team. Cole has managed and planned several high risk / short duration activities that brought together various stakeholders to deliver phenomenal results. In Taumarunui, Cole successfully managed 5 Block of Lines whereby 5 bridges were replaced in a 24-48 hr period. On one of these occasions 2No. two span bridges (50m long) were replaced in a single weekend. In Auckland, Cole oversaw the demolition of 2 bridge structures over SH16. Due to traffic volumes, only two 10-hour windows were available to complete this demolition. In the past, similar works have required a full shutdown of the motorway over a weekend. However, Cole was able to complete these demolition works in the time allotted. Cole's ability to plan, communicate well, and manage risks proactively, meant that on both these instances these works were delivered successfully.

Cole's ability to plan well, communicate well (including with critical suppliers), and manage risk well, is invaluable when applied to the delivery of civil construction projects.

Qualifications and Training

• Bachelor of Engineering – Civil Engineering (Hons), University of Canterbury, 2007

• Master of Engineering Studies – Construction Management (Hons), University of Auckland, 2015

Technical Experience

• Various structural construction methods, including a wide range of piling and foundation construction

- Identifying and managing temporary works requirements
 - Preparation of material schedules, cost estimates, and project plans
 - Experience in writing specifications and technical reports
 - Ensuring work is undertaken in a manner that complies with the Project Technical Specification and other Specifications, and necessary quality control is completed
 - Purchasing materials, negotiation with suppliers and subcontractors
 - Experience in the provision of environmental, quality, health and safety and traffic management plans and systems
 - General project administration, including the management of plant and labour daily
 - Good understanding of legislative requirements in terms of consents, Health and Safety and Environmental requirements
 - Executing a NZS3910 contract
- ### Management Experience
- Programming and programme management, particularly for complex projects requiring staging
 - Proven ability to work collaboratively in large D&C projects
 - Financial management and risk management
 - Health, Safety, Quality and Environmental management
 - Stakeholder and traffic management

Work History

Aug 2017 – Nov 2018, Downer NZ, Project Manager (Structures Manager) SH16 Lincoln to Westgate

July 2016 – July 2017, Stellar Projects, Senior Project Manager

Dec 2014 – June 2016, Downer NZ, Project Manager OD7 KiwiRail Bridges

curriculum vitae

- Established a program for transferring and active tracking of all historical and overdue corrective actions to a Vault database.
- Improved the completion of site-specific quality inspections to 168 in 2017

A small selection of civils projects quality audited by Gene is as follows:

- Wiri Southern KiwiRail Pavement Stage 2, Ports of Auckland Ltd, \$1.5m, 2017/2018
- Nga Puna Wai Sports Hub Stage 1 Civils, Christchurch City Council, \$23m, 2017/18
- Northcote Safe Cycle Route Stage 1, Auckland Transport, \$6.4m, 2017/2018
- West Kaipoi New Arterial Road, Waimakariri DC, \$5.8m, 2017
- Wesley New-Town Phase 1 Civil Subdivision, Grafton Downs Ltd, \$12m, 2016/17
- WBP Balance Earthworks, Waterloo Business Park Ltd, \$4.2m, 2016/2017
- Donegal Glen Stage 9 & 11, Hugh Green Ltd, \$4.1m, 2016/2017
- Kennedy Rd Bridge Construction, Tauranga City Council, \$3.9m, 2016/2017
- McLennan Housing Development (Negotiated Stages), Housing NZ, \$11m, 2017
- Summerset Retirement Village (Casebrook), Summerset Villages (Casebrook) Ltd, \$9.8m, 2016/2017
- Central East Road Corridor Maintenance (HEB/Higgins JV-Liveable Streets), Auckland Transport, \$28m per annum

United Civil Construction, Quality Advisor

- Developed an integrated Management System manual, integrated the HSQE systems and published it on the Company's intranet
- Established and monitored key performance indicators for integrated management system with monthly reporting to Group Manager
- Developed and published the Project Delivery System manual
- Coordinated the successful recertification to ISO 14001 & 9001
- Established an audit program for active projects
- Scheduled and completed audits for all high risk, high value projects as per audit program
- Identified and implemented process improvements using smart targets
- Trained staff with respect to quality issues, project compliance, project audits and systems improvements
- Researched many mapping tool options and recommended and implemented ProMapp as preferred process mapping option.

URS New Zealand Ltd, Quality Manager NZ

- Prepared and implemented the New Zealand business annual quality improvement plan (QIP) which included KPIs & PIs for all project offices.
- Introduced the monthly tracking and reporting to management on quality improvement opportunities and initiatives.
- Managed quality management programs for 700+ specialised, diverse and complex assignments, and large multiphase projects across 4 main NZ offices.
- Worked with group managers in civil, structural, environmental, electrical and geoscience departments on identifying project quality risks.
- Established an active tracking and reporting program to deal with all historical and overdue non-conformances and corrective actions.
- Prepared and implemented a comprehensive audit program for project works to verify quality requirements are being met. This was rolled out across 700+ active projects. Exceeded project audit targets by 20 - 30% for 3 years in a row.
- Identified and managed the New Zealand implementation of the URS Global Quality Management Plans and quality systems.
- Assisted 80+ project managers and support staff with developing project specific ITP's, project inspections, testing, QA documentation, distribution and publishing to Source.
- Prepared and completed a successful external audit by Bureau Veritas against ISO 9001, 14001 & 4801 within 3mths of joining URS and thereafter annually.
- Set up and managed quality controls and documentation with a tool to track progress.

Transfield Services/CHH, Quality Coordinator

- Coordinated successful alignment of both the QMS of Carter Holt Harvey & Transfield Services following the new alliance at the Kawerau Paper and Pulp Mill.
- Developed and managed the quality goals and targets in the organization's strategic plan
- Created reports of quality control tests and analysed the data ensuring changes in the production process were implemented when and where necessary
- Developed and implemented quality improvement activities and policies thru the Better-Way initiative
- Developed, introduced, and managed performance improvement targets for quality, service & efficiency
- Conducted RCA with full investigations, documentation and reports on quality issues

Manukau City Council (MCC), Quality Advisor

- Successful ISO9000 & 14001 (Telarc) recertification.

Copalcor Manufacturing (Pty) Ltd, Bass Extruders SA, Technical Manager, 1997 - 2007

curriculum vitae

Gene Greyling

Quality Manager

BSc (Analytical Chemistry)

Gene has 25 years' experience as a professional Quality and Technical Manager, including hands-on experience in manufacturing, civil, environmental and structural project work. This is coupled with skills in research and development and business-process improvements.

He has proven leadership skills involving marketing and sales, managing, developing and motivating teams to achieve their objectives. Gene also has first class analytical, design and problem-solving skills, and is dedicated to maintaining high quality standards.

Gene has worked in quality management roles, across multiple sites and disciplines, on large and complex projects, for Local Authority, consulting, and private sector employers. This gives him a broad exposure to quality management within the civil and construction industries.

Qualifications & Training

- BSc Analytical Chemistry - University Pretoria
- Diploma Agriculture Engineering - Lyceum College
- Dip. Marketing & Sales Management - Union College
- Certificate Private Law University of South Africa
- (NZQA assessed) Professional Development
- RABQSA AU Auditor, NZ Quality College
- RABQSA TL Auditor, NZ Quality College
- Internal Auditor, NZ Quality College
- Project Management, Project Management Institute
- Certified Quality Engineering, American Society for Quality Certifications
- NZIM Influencing and Motivational Skills
- Advance First Aid Red Cross
- AED Certificate St Johns
- SAR Marine Medic
- Civil Defence (MCC) - CIM54
- Lean Six Sigma
- Software Training
- ProMapp
- MS PowerPoint, Word, Works, Excel, Visio
- XSol and Visio
- SmartDraw



Recognitions

- Manukau City Council First Aid Team
- Treaty of Waitangi Educational Program - 'The Cloaks of Learning'
- MCC Certificate of Recognition - 2008
- MCC Certificate of Recognition - 2010

Technical Experience

- Lead Auditor
- ISO 9001, 17025 & 14001 implementation
- Supplier and subcontractor auditing
- Root cause analysis, training, and quality inductions
- Process improvements and mapping

Management Experience

- Project Management
- Integrated Management System developer
- Business improvements and Lean Six Sigma
- Quality management and project delivery systems

Work History

- January 2017 to Date, HEB Construction Limited, Auckland Quality Manager
- 2015/16, United Civil Construction, Quality Advisor
- 2012 - 2015, URS New Zealand (NZ) Limited (now an AECOM Company), Quality Manager NZ
- 2010/11, Transfield Services (CHH Tasman Paper & Pulp Mill), Quality Coordinator
- 2007 - 2010, Manukau City Council, Quality Advisor
- 1992 - 2007, Copalcor Manufacturing (Pty) Ltd, Technical Manager

PROJECT EXPERIENCE

HEB Construction Limited, Quality Manager

- Current role overseeing development of Company quality systems and their application on our projects.
- Migrated all HEB HSQE forms and procedures to a ProMapp BMS
 - Upgraded the quality management system to the new ISO 9001:2015 standard with certification
 - Established a comprehensive internal audit program for active projects, scheduled and conducted 43 compliance audits for all high risk, high value projects as per audit program in 2017.

curriculum vitae

Work History

- May 2015 to Current, HEB Construction Ltd, Regional SQE Coordinator – Central Region, Health and Safety Coordinator, Stakeholder Manager, Administrator
- Nov 2013 – Nov 2014, Marine Civil Contractors (Queensland), OHS and Contracts Administrator
- Apr 2013 – Jun 2013, Bentonite Resource Mine (Queensland), OH and S Consultant
- Sep 2011 – Aug 2012, fulltime student, DipOHS
- Jul 2008 – Sep 2011, Elco Solutions Pty Ltd (Queensland), Domestic / Export Sales / Logistics Coordinator
- Aug 2007 – Mar 2008, MB Century Resources (Taupo), Health, Safety, Training Officer, Rig 27.

PROJECT EXPERIENCE

HEB Construction, Regional SQE Coordinator – Central Region, Health and Safety Coordinator, Stakeholder Manager, Administrator

- Health, safety, quality and environmental support to HEB's Central Region operations
- Discuss, recommend and implement improvements approved by management
- Investigate, design, consult and implement policy change
- Conduct incident investigations, manage corrective actions and follow up with senior management
- Design, research and build health and safety resources for multiple disciplines within HEB
- Working understanding of Vault
- Conduct Transport Department toolbox talks
- Administration for the Transport Department
- Site contact for drug and alcohol testing
- Facilitating Site Safe (Civil) Passport course.

Marine Civil Contractors (Australia), OHS and Contracts Administrator

Marine salvage, commercial diving and artificial reef construction Company. Cathy was employed to assist in ensuring the occupational health and safety management system was compliant with current legislation to enable the Company to gain ISO 9001:2008 and AS/NZS 4801 registration. Her contributions to the process included discussing and recommending any improvements required to maintain compliant and assisting in completing tender documents for submission.

Bentonite Resource Mine (Australia), Occupational Health and Safety Consultant

Provider of Bentonite products to domestic and industrial sector. Employed on a fixed term consultant contract to ensure the Company health and safety management system became compliant with current legislation. Cathy developed and implemented policies and procedures to meet and exceed ISO 9001:2008 and AS/NZS 4801, providing gap analysis, reports and recommendations to management.

Fulltime Student, successfully studying for a Diploma of Occupational Health and Safety

Elco Solutions Pty Ltd (Australia), Domestic / Export Sales / Logistics Co-ordinator

Engineered land, coastal and oceanic solutions for erosion control. Cathy ensured all health and safety policies and procedures are adhered to by staff, visitors and contractors. She was an active member of the health and safety committee, conducted site visitor inductions and toolbox safety meetings, and assisted in the cultural change to new health and safety policies and procedures. Cathy's achievements included streamlining the export order process, successfully implementing the cyclic stock counting system, and improving the site safety culture.

Cathy's role included:

- Discussion, recommendation and implementation of improvements approved by management
- Full Customer order management, organising containers for export orders, ensured dispatch and production dates were in line with customer expectations
- Full transport logistics quoting, planning, management, inventory and reporting
- Weekly management reports, and coordinated trucks for domestic orders and DIFOT (Delivery in Full and On Time)
- Order forward planning, liaising between production planning and the customer.

MB Century Resources (Taupo, NZ), Health, Safety and Training Officer Rig 27

Logistics and resource supplier to the geothermal and energy supplier sectors. Cathy's responsibilities included all health and safety coordination on Rig 27. This included administering hazard registers and regularly checking all safety equipment, including breathing apparatus, fire extinguishers, lanyards, harnesses, slings, first aid kits, and emergency eyewash stations and showers.

Cathy also conducted site visitor inductions, and in-house training of crews and attended and contributed to pre tour/toolbox safety meetings. She also completed reports, incident/accident investigations, recorded hazards.

curriculum vitae

Cathy Holden

SQE Coordinator

Dipl. Occupational Health and Safety

Cathy is a highly skilled SQE and support professional, who is passionate about improving health and safety culture and compliance - a self-proclaimed advocate for 'Safety First - Always'.

As Regional SQE Advisor and HEB's Site Safe facilitator for the Central NI Region, Cathy is based in HEB's Tauranga office. Her role is to provide health, safety, quality and environmental support to all of HEB's operations in the Central region.

She is highly conversant with company policies and procedures, particularly around health and safety and importantly, zero harm. She is focused on working to develop strong supporting relationships with site teams, and helping them to build and maintain compliance with all recognised SQE requirements.

An effective communicator, Cathy is highly experienced at working with a diverse range of personnel to drive and support compliance. She develops and maintains stakeholder relationships, facilitating training and toolbox meetings, managing all facets of communication.

Her experience in compliance systems implementation on the Tauranga Marine Precinct development and on the Access to Water project is directly transferable to the Rotorua Lakefront contract. This will enable Cathy to establish key health and safety and environmental procedures and systems that will provide high quality, successful compliance outcomes on the Rotorua project.

She has developed strong working relationships with key staff at district and regional councils promoting open, honest and collaborative communication and liaison. She has also liaised with Iwi monitoring staff on past HEB contracts and has a sound understanding of cultural and heritage protocols.

Her hands-on, industry experience has given her a strong knowledge of legislative and company policy. Cathy will proactively drive health, safety and environmental best practice and performance on the



Rotorua Lakefront project.

Qualifications and Training

- TechNZISM (Technician and Professional Member, New Zealand Institute of Safety Management)
- Diploma of Occupational Health and Safety, BS851307 (2012) –
- National Certificate in Adult Education and Training, Level 4 (2015)
- National Certificate in Adult Education, Level 4 (current study)
- ICAM (Incident Cause Analysis Method) Trained
- Hazardous Management Trained
- HEB Site Safe facilitator for the Central NI Region
- Site Safe (Civil) Passport – ID # 523763
- Safety Harness Use (Unit Standard # 23229)
- First Aid certified
- NZ Licence: Class 1 and 2
- Logbook Course/Workshop
- Vintel (Vault Report Writing Tool) Training

Technical Experience

- Equipment operation
- Client liaison, stakeholder management
- Incident management
- Company policy and procedures
- Compliance management
- Site Safety audits
- Facilitating health and safety training

Management Experience

- Ability to prioritise
- Able to interact with all levels of people
- Proactive problem solving
- Strong organisational and communication skills
- Strong administration skills.

curriculum vitae

on major HEB projects. He also provides leadership of company and project sustainability initiatives.

Over the last three years Simon has held the role of Environmental Manager on multiple projects, including a number in the Bay of Plenty:

[Waiāri Water Intake Scheme, Tauranga City Council, 2018 to present, \\$115M](#)

This project involves the construction of a water intake facility within the Waiāri Stream, and an underground water supply pipeline from Te Puke to Papamoa. As Environmental Manager, Simon is involved with ensuring the project maintains compliance with resource consent conditions relating to maintaining the health of the sensitive stream. This includes inspections to check that erosion and sediment control devices are operating efficiently and correctly and that no damage to the sensitive aquatic habitat and species is taking place. Planting is also planned for the stream edges to re-establish shade and prevent erosion.

[Access to Water, Tauranga City Council, Oct 2016 – Apr 2017, \\$3M](#)

On Tauranga city's waterfront, the project involved construction of 49m of tidal stairs, a new 27m pier and a 24m by 3m floating pontoon. Simon provided the site team with guidance while working in the harbour with a sheetpile coffer dam specifically the management of hazardous substances and construction processes involving cement, concrete, and hydrocarbons.

[Kennedy Road Bridge, Tauranga City Council, 2017 to present: construction of a 50m long and 15.5m wide vehicular bridge, piled foundations for pier and abutments, barriers and footpath on both sides.](#)

[Joyce Road Reservoir, Tauranga City Council, 2017-2018, \\$6.5M](#) construction of a 46 metre, 10 mega litre reinforced concrete reservoir.

Other wharf and water-edge projects have included:

- 2017-2018, Port Otago Multipurpose Wharf Extension: D&C project for a 135m-long extension to an existing 300m-long wharf at Port Chalmers.
- 2014 to date, Various Lyttelton Port Company (LPC) contracts, including an ECI contract to develop the new Cruise Berth Facilities, replacement of Cashin Quay No.2 (CQ2) wharf, deconstruction of Gladstone Pier, and upgrade and strengthening of Inner Harbour Jetties #2, 3 & 7 wharves, and overbridge remedial works.

[Waikato Expressway Huntly Section D&C, NZ Transport Agency, 2014 – 2019, \\$458M, Environmental Manager \(early phase\)](#)

HEB is currently delivering this D&C project as part of a

construction JV. Simon was influential in the facilitation of a fast start to onsite works to meet a challenging programme. Simon worked with Waikato Regional Council (WRC) and the client NZ Transport Agency to modify the volume of management plans required from day one. Working collaboratively with all parties and the design team, Simon helped the client and WRC give agreement for an early works package to take place while most of the management plans were still being written. The key to this was working with WRC so they could understand the proposed early works and how they could be completed without requiring the full suite of management plans in place. Simon and the team's pragmatic approach continued further, with the successful reduction of required management plans from 30 to 20. This was achieved by combining plans of a similar nature, such as including dust management within the ESC Plan, rather than as a separate document. WRC were happy with this, and it reduced workload and timeframes at the start of the project. The result of this re-analysis of consents and management plans was that construction could take advantage of the project's first summer earthworks season.

[Waikato Expressway Cambridge Section D&C, NZTA 2013 – 2016, \\$150M, Environmental Manager](#)

Simon successfully oversaw the development, implementation and approval of 19 environmental management plans for this 16km project that allowed early work onsite. Archaeological and iwi involvement was part of the character of the project, which Simon managed in a sensitive and collaborative manner. Environmental outcomes were to an excellent standard, with the regulatory authority Waikato Regional Council viewing the work as a major success. Under Simon's direction, the corridor's sediment retention ponds were extremely well-built. They were used as an example for industry training run by Waikato Regional Council. The project won Waikato Regional Council's Earthworks Site of the Year for 2015. Through the project start-up phase, Simon was involved in the management of a range of specialist technical consultants including ecologists, contaminated site specialists, geotechnical specialists, air quality technicians, noise and vibration technicians, and water quality specialists.

curriculum vitae

Simon Cathcart



Environmental Manager

Simon has over 18 years of experience in managing environmental protection on construction sites.

He has project experience relevant to the Rotorua Lakefront Redevelopment project from roles as Environmental Manager on the Access to Water project and Waiāri Water Intake Scheme, both for Tauranga City Council.

On projects he develops specific Environmental Management Plans that cover key areas such as sediment control; noise, dust, and vibration mitigation; ecological restoration; archaeological discovery; consent management and compliance; and site auditing.

Simon has previously worked in environmental management and enforcement for regional councils. This breadth of experience gives him valuable knowledge and insight to the expectations of regulatory authorities. This knowledge will help him ensure that we meet statutory approval conditions efficiently to allow a smooth start to the construction phase.

Simon's ability to understand and respond to resource consent conditions and requirements helps project teams get up to speed quickly. He then helps to develop onsite protocols and management systems that ensure all work meets consents and environmental requirements.

Qualifications and Training

- MSc (Hons) Environmental Science
- BSc Physical Geography
- Erosion & Sediment Control Plan Preparers, Auckland Regional Council
- Stormwater Management Design (TP10) Training, Auckland Regional Council
- Chemical Treatment, Auckland Council
- Erosion & Sediment Control Plan Preparers & Practical, Waikato Regional Council
- Hazardous Substances Management
- Advanced Erosion & Sediment Control

Technical and Management Experience

- Construction Environmental Management Plan preparation, development and implementation for large scale, multi-million-dollar infrastructure

projects

- Compliance with Construction Noise Vibration Management Plans including implementing noise reduction measures onsite
- Development and implementation of contamination monitoring and management
- Preparation of assessment of environmental effects (AEE) reports and resource consent applications for both regional council and local authorities
- Resource consent monitoring/compliance
- Stormwater treatment design and implementation
- Archaeological site management and accidental discovery protocols
- Erosion and Sediment Control Plan design and implementation including chemical treatments
- Development and implementation of dust management systems
- Environmental project management, including strategic development, enforcement, compliance monitoring and risk assessment
- Procurement, technical oversight and management of a range of specialist technical consultants

Work History

- May 2013 - Present, HEB Construction Limited, National Environmental Manager
- Jan 2012 – May 2013, Fulton Hogan, Environmental and Quality Manager
- Dec 2010 – June 2012, Te Rapa Alliance, Environmental Manager
- Oct 2008 – Dec 2010, Transfield Services NZ Ltd, Environmental Advisor
- May 2007 – Oct 2008, Waikato Regional Council, Environmental Enforcement
- September 1997 – May 2007, NZ Police, Detective
- Dec 1995 – Sep 1997, Auckland Regional Council, Rural Soil Conservator
- 1992 – 1995, Auckland Regional Council, Water Resources Officer

PROJECT EXPERIENCE

HEB CONSTRUCTION, NATIONAL ENVIRONMENTAL AND SUSTAINABILITY MANAGER, 2013 – PRESENT
Simon oversees consenting, management plans, environmental design, monitoring, and performance

curriculum vitae

Included road improvement works on Poike Road.
[Access to Water, Tauranga City Council, Oct 2016 – Apr 2017, \\$3M](#)

HEB was appointed as the civil works contractors for constructing the new tidal stairs, pier and pontoon at Tauranga's waterfront. Works included 49m of tidal stairs, a 27m pier and a 24m x 3m floating pontoon.

Louie was responsible for the contract engineering and project management as well as:

- Set out and installation of coffer dam
- Pre-cast mould design and fabrication
- Pre-cast fabrication and install procedures
- Walkway pile installation
- Material procurement
- Stakeholder and client liaison.

[Balance Morrisville Pre Cast Bulk storage building \\$800,000, Site Engineer](#)

Pre-cast 4000m² bulk storage shed. As the Site Engineer, Louie was responsible for the set out of the footings and erection of precast panels.

[Barge / Marine Works, Various Clients \\$100-300K, Site Engineer](#)

Kotuku Jetty pontoon installation for Tauranga City Council. Louie supervised the piling from HEBs Barge, the construction of the abutment and the installation of the gangway.

[Blake Park Cricket Oval- Bleachers and Foundations \\$200,000, Site Engineer](#)

This project was under a tight deadline as the facility was to be used for an international cricket match, one day after completion. The project required the construction of concrete bleachers to specific radii as well as foundations for TV/commentary towers.

[Tsunami Evacuation Bridges \(2\), Papamoa, \\$400,000, Site Engineer](#)

This contract included the installation of 25m screw piles, reinforced concrete abutments and timber spans. One of the timber bridges was lifted in as complete unit and the other constructed on site over an existing waterway. Multiple subcontracts had to be successfully managed on this project along with careful planning and sequencing of works.

[Farm / Forestry Bridges, Various Clients, \\$100-500K, Site Engineer](#)

Single span steel beam bridges were installed on driven steel piles. Pre-cast concrete abutments and pre-cast concrete deck units were then placed on the beams. Various barrier/handrail options were installed depending on client's needs.

[Lake Ngaroto Outlet Walkway/Weir, \\$300,000, Site Engineer](#)

Construction and installation of a steel walkway structure over a sheet pile weir, which needed to be set at a precise level to ensure the correct lake level was achieved. All work was performed with a 60t crawler crane on soft swamp land. Temporary piles were driven under the crane pad and the walkway structure was lifted in as a complete unit.

[Various Precast construction projects](#)

Louie was responsible for project / site management, liaison, pricing, and job closeout on these projects:

- VIE Tank Panels –Tauranga Hospital
- Pipe Trench – BST
- Port of Tauranga – Precast Panels
- Hamilton KiwiRail -14m Precast Slot Drain.

[Grahams Stream Bridge, Tarrua, \\$475,000, Site Engineer](#)

A 17m bridge extension included the excavation of an existing causeway. Six bottom driven steel piles were installed along with concrete pier and abutment construction. An existing bridge was jacked up to realign with the new design. Louie was on site for the duration of the project to achieve tight construction programme (8wks).

[Roxanne Place Stormwater Improvements- Tauranga, \\$630,000, Site Engineer](#)

Installation of steel sheetpiles, RipRap protection. 400m of PVC sheet piles 3m long. PVC sheet piles capped with a clay bund approx. 4000m³ placed in testing swap conditions.

[Huntly Timber Piles, Huntly, Site Engineer](#)

Responsible for design and fabrication/erection of specialised timber piling leader that connected for HEB 65t crawler crane. Crane and leader have installed over 2500 timber piles; 12-15m long, 300mm SED.

[Hamilton City Cycleway, \\$1M, Project Manager](#)

Project manager for structural aspects. The site was directly adjacent to KiwiRail's main line in Hamilton. The project consisted of installing various sized precast panels the use of polystyrene blocks as light weight fill and concrete a capping over the blocks to create a ramp up to Lake Rd in Hamilton. Finished off with a complex handrail system.

[Joyce Road Reservoir No2, Site Engineer/Project Manager \(Currently still on site\)](#)

Responsible for build of the new 10,000m³ pre-cast reservoir with aluminium geodesic dome roof. The project had a tight programme and challenging reinforcing details to construct.

curriculum vitae

Louie Gilmore

Site Engineer

NZ Diploma in Civil Engineering



Louie is a competent and dedicated Site Engineer with a sound practical knowledge and experience base. He is well respected by the workforce and has established good relations with clients and consultants.

Louie plans his work ahead, communicates his requirements with his team and delivers the work on time. He works easily with subcontractors and coordinates his operation cooperatively when working with clients in an existing operational facility/plant. His open communication style obtains feedback from clients and staff, addressing issues and constraints effectively to achieve high quality results.

Planning is a key element of his management style and extends into contract reporting and subcontractor management. In addition to project engineering and management, Louie is often involved in contract scoping, tender pricing and estimating and contracts claims management.

Louie possesses strong leadership and management skills, effectively managing resources and motivating teams. He is focused on detail and accuracy, undertaking quality management duties and making sure specification requirements are communicated to site teams. His proven technical knowledge ensures all the requirements of the drawings and specifications are programmed and completed.

On the Tauranga Access to Water project, Louie oversaw and monitored the drawing development, fabrication, programming and delivery of the pre-cast concrete elements. His attention to quality meant the pre-cast elements were installed ahead of programme, saving time and money for the client.

Louie is passionate about ensuring the projects he works on are a reflection of how he and the company are perceived by others. As a result of this, he ensures that his projects quality, environmental and health and safety compliance systems are focused on delivering fully compliant, high quality results.

Louie is a diligent and proactive engineer, with a high technical competency and a proven understanding of

plant, personnel and cost management. These skills will provide quality, fit for purpose project outcomes for the Rotorua Lakes Council.

[Qualifications and Training](#)

- NZ Diploma in Civil Engineering
- NZ 3789 Sling and Communicate
- Site Safe

[Technical Experience](#)

- General civil engineering construction
- Piling and foundations
- Bridge construction
- Pre-cast / concrete construction
- Survey and set out
- Tendering
- Health, safety, quality, and environmental controls implementation
- Crane Lift plans

[Management Experience](#)

- Construction management
- Programming and resource allocation
- Project cost control and reporting
- Staff management
- Subcontract and supply management
- Proactive stakeholder liaison and management
- Site construction and subcontractor liaison and management.

[Work History](#)

- 2013 to Present, HEB Construction Limited, Structures Division, Site Engineer
- 2012 – 2013, Concrete Structures, Site Engineer

PROJECT EXPERIENCE

[SH29 Poike Road Overbridge and Cycleway, NZTA, July 2016 to May 2018, \\$2M](#)

Installation of a pedestrian overbridge over SH29 with footpath and boardwalk installations. Works also

curriculum vitae

PROJECT EXPERIENCE

Tauranga Marine Precinct, Tauranga City Council, 2016 – February 2018, \$6.42M

The Tauranga Harbour Marine Precinct is an \$11.4M project to deliver a purpose-built marine servicing facility at Sulphur Point. The precinct will provide a base for boat building and refit businesses in Tauranga and will be managed by Tauranga City Council under the Vessel Works brand.

By mid-2017 (Stage 1 development), the precinct will include lots in a range of sizes for marine businesses, a 6300m² vessel storage area (hardstand), deep-water marina berths for large vessels and New Zealand's largest vessel hoist (350-tonne haulage capacity and extra-wide).

HEB was selected as the civil works contractor for the Marine Precinct primary works. Greig's supervisory role has included key interface management of subcontractors to complete earthworks and hardstand activities. This project also included the construction of a wastewater treatment plant to manage the dirty water runoff from the hardstand areas.

Access to Water, Tauranga City Council, Oct 2016 – Apr 2017, \$3M

HEB was appointed as the civil works contractors for constructing the new tidal stairs, pier and pontoon at Tauranga's waterfront. Works included 49m of tidal stairs, a new 27m pier and a new 24m by 3m floating pontoon.

This project had strict environmental controls due to the proximity of construction and ground stabilising works to the marine environment. Greig was instrumental in providing full compliance with consent and environmental requirements.

Greig was responsible for the supervision of the project from start to finish. This required management of a small tight site in a high pedestrian area with delivery safely and on time. Greig completed the full range of project, staff and sub-contractor management duties along with client and stakeholder interaction and liaison.

Foreman, Brian Perry Civil

During this period, Greig worked on a variety of projects from reinforced concrete pump station construction to chemical plant silo base construction.

Greig's role included:

- Planning weekly and daily tasks for the construction team
- Delegation of daily tasks

- Working with a team of up to 10 staff
- Managing up to 10 subcontractor crews
- Developing and optimising work methodologies with project managers
- Preparing job safety environmental analysis documents
- Implementation of health and safety
- Running permit to work system
- Site set out
- Close working with site cranes
- Detailed reading of plans.

Greig's experience includes suspended and insitu pours, suspended floors, using doka shuttering and other systems, vertical timber shutters and shore loading. He also has expertise with false and form work, reinforcing steel placement, concrete placement, laying of drainage systems and participating on health and safety committees.

Tauranga Harbour Link Stage 2, NZTA, 2008 – 2009, \$130M, Carpenter, Fletcher Construction

Greig's role on this project included:

- Positioning of key structural elements of bridge
- Design and build shuttering
- Building abutments and edge beams
- Installing expansion joints
- Widening existing harbour bridge
- Building of new cross head
- Setup of cantilevered steel beams, false deck and working / safety scaffolding
- Concrete placement, steel tying/fixing and various types of form work
- Working directly with site engineers to meet project goals and targets.

Carpenter, Livingstone Bros

Greig's responsibilities for light commercial and commercial projects cover all aspects of work including:

- Wall framing, roof trusses, internal gutters, roofing, fascia, flooring, cladding, installing windows, doors, joinery, panelling, gib, finishing lines and all other aspects of building work
- Working from site plans
- Setting out building, laser and dumpy levels, excavation of buildings, site cuts, footings
- Shuttering and formwork
- Tying steel cages, boxes
- Pouring concrete, concrete cutting
- Working closely with other sub-contractors

curriculum vitae

Greig Mitchell

Site Supervisor

10 years industry related experience

Greig is a highly experienced and technically proficient Supervisor, with 10 years civil engineering and construction industry experience. During his career, he has gained expert knowledge of civil construction with specialist skills in reinforced concrete construction – both precast and insitu.

On joining HEB, Greig established himself in a key supervisory role to the Structures team, with responsibility for leading our site crews and our close subcontractors.

He consistently displays a real commitment to achieving excellent outcomes, and this attitude results in a very efficient organisation of work crews, plant and equipment. He can manage works crews across multiple fronts and he has a natural aptitude for team building and can quickly foster a productive team atmosphere.

He has demonstrated his strengths in planning and procedures, and maintaining quality, safety and environmental practices to a very high standard. On the Access to Water project in Tauranga, Greig provided key input into the planning and implementation of the tight environmental controls.

These controls were required to prevent contamination of the marine environment from water and cement runoff from the foreshore ground stabilising works. With Greig's input and supervision, the project was fully environmentally compliant.

He is an accomplished supervisor and manager of resources, planning and putting together methodologies to complete projects to a high standard and on schedule. He has a sound knowledge of health and safety, quality and environmental requirements, and their practical application onsite.

His detailed management and supervision style helps deliver projects to the contract specifications and fully compliant with HSE systems and processes.

Greig has excellent working relationships with a vast range of different trades throughout the construction industry and has good local knowledge of key

suppliers and subcontractors.

Greig was a key part of the successful delivery of the Access to Water and Tauranga Marine Precinct projects, and will use this experience for the benefit of the Rotorua Lakefront project.

Qualifications and Training

- Fall Arrest
- Working at Heights
- Confined Space
- WTR Licences
- Site Safe (Civil) Passport
- First Aid training.

Technical Experience

- Pump station construction
- Civil / structural construction
- Marine civil works
- Precast operations.

Management Experience

- Management of site teams
- Working with Project Managers
- Interface with other contractors in small footprints
- Client, engineer and designer liaison
- Health, safety, quality and environmental systems implementation and compliance.

Work History

- 2016 – Present, HEB Construction Ltd, Supervisor – HEB Structures
- 2010 – 2016 Brian Perry Civil, Foreman
- 2008 – 2009 Fletcher Construction, Carpenter
- 2007 – 2008 Livingstone Bros, Carpenter
- 2006 – 2006 Certified Renovations, Operations Management.



Who we are

Road Safe Traffic Management are a team of professional traffic management specialist's servicing Bay of Plenty. Road Safe Traffic Management pride themselves on delivering to the highest standard for their clients on all levels of temporary traffic management.

Through years of experience, and a brilliant team of STMS's and TC's, Road Safe TM ensures your safety and the travelling publics safety by mitigating risks compliantly daily.

No job is to big or to small, we can do it all. From lane closures to NZTA training, we've got you covered.

What we do

Covering all aspects of temporary traffic management, Road Safe works with their clients to suit their requirements. Understanding that we work for multiple industries, we cater to service everything.

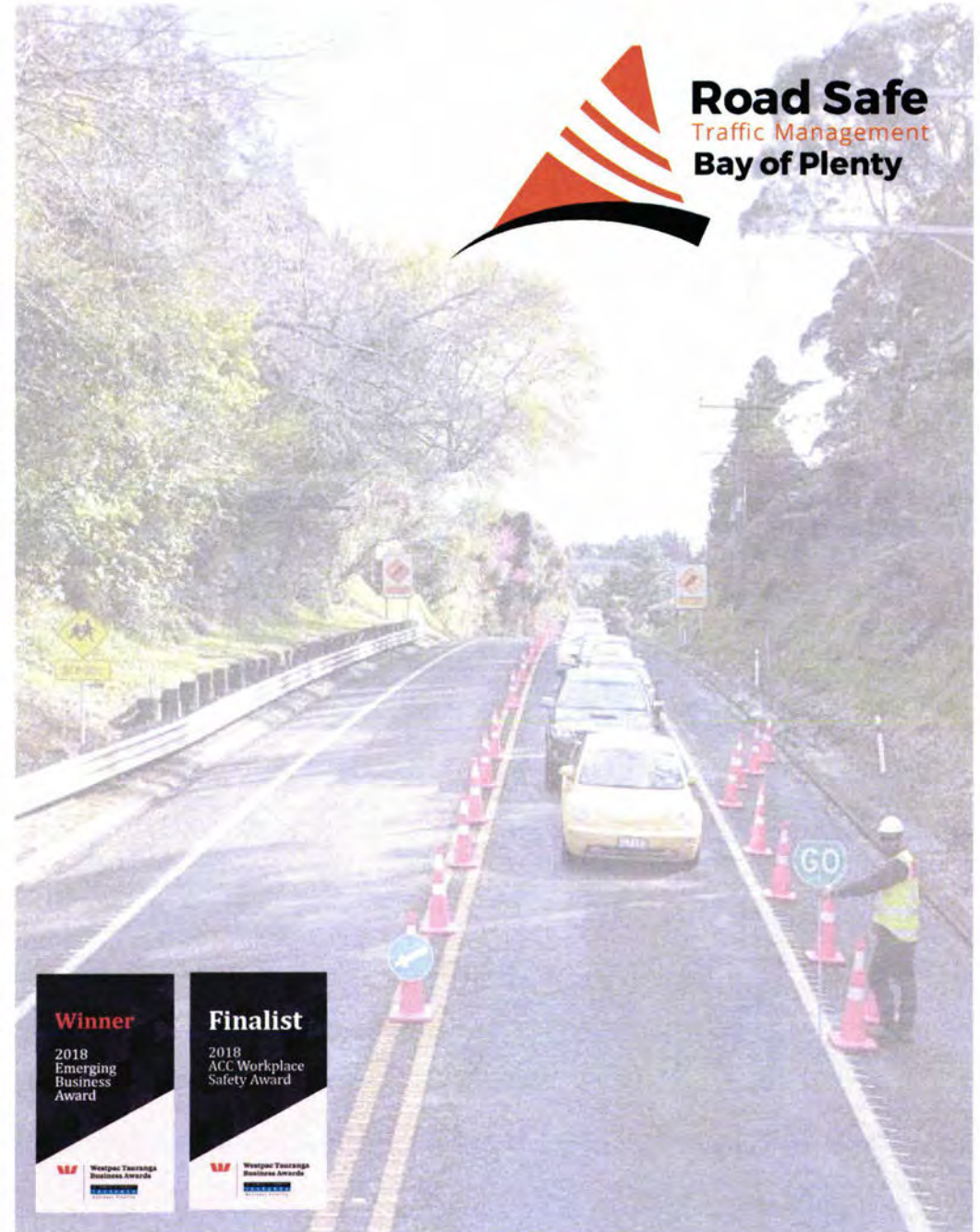
Our services include but not limited to:

- Full L1 Temporary Traffic Management
- Full L2 Temporary Traffic Management
- Event Traffic Management
- Traffic Management Plan design & submission to RCA Nationally
- Plant Hire – Level 1, Level 2, Cones, Traffic Lights and VMS Boards
- Full L1 TC and L1 STMS Training Courses
- Emergency Response

Road Safe now has branches in Tauranga and Whakatane enabling us to cover the Bay of Plenty region.



Road Safe
Traffic Management
Bay of Plenty



Our Clients



Our resources

With a strong team of 24 staff, we have a range of capabilities, from 15 STMSs, 9 TCs we can manage all size projects. Our experienced STMS's consist of 7x Level 1 STMS's and 8x L2 STMS's.

Our staff are all trained through the NZTA system, along with our in-house training, Construct Safe Qualifications and 1st Aid Training we continue to develop our team to the highest standard in the industry.

We have a continual growing fleet of vehicles with 4x Utes, 5x Level 1 TTM Trucks and an Attenuator.

Our plant and equipment cover everything for your TTM needs, with all compliant signs, L1 and L2. We also can supply you with Portable Traffic Lights and VMS Boards short term or long term.

Contact Details

Operations Manager

Leo Jones

P: 027 696 9048

E: leo@roadsafetm.co.nz

Managing Director

Logan Dawson

P: 027 696 9047

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www.roadsafetm.co.nz



Schedule 3 - Form of Contractor's Bond

Schedule 3 - Form of Contractor's Bond
(This form replaces NZS 3910:2013 Schedule 3)

DATE:

THIS BOND IS GIVEN BY ANZ BANK NEW ZEALAND LIMITED (the *Bond Provider*)
..... (address of Bond Provider for service)

TO: ROTORUA LAKES COUNCIL (the *Principal*)

FOR: (the *Contractor*)

BACKGROUND

A. The **Principal** and the **Contractor** are party to a contract dated [dd/mm/yyyy] for the Rotorua Lakefront Redevelopment Stage 1 & 1a Construction Contract (the **Contract**).

B. The Contract requires the Contractor to provide the Principal with a performance bond.

C. At the request of the Contractor and, in consideration of the Principal agreeing to enter into the Contract with the Contractor, the Bond Provider has agreed to provide this bond for the benefit of the Principal.

BY THIS BOND:

- 1 Words and expressions defined in the Contract and not otherwise defined in this bond have the same meanings when used in this bond.
 - 2 The Bond Provider irrevocably and unconditionally (subject to clause 3) undertakes to the Principal to pay immediately any sum or sums which may from time to time be demanded by the Principal up to a maximum aggregate amount of NZ\$0.00 (in words *New Zealand currency*) (the **Guaranteed Amount**) without any reference to the Contractor, and notwithstanding any notice or representation of the Contractor to the Bond Provider not to pay the same.
 - 3 Any demand made by the Principal under clause 2 must:
 - 3.1 be in writing;
 - 3.2 be addressed to the Bond Provider at the address specified for service;
 - 3.3 state the amount required to be paid;
 - 3.4 state the bank account to which the amount demanded is to be paid; and
 - 3.5 be accompanied by a certificate from the Engineer stating that, in the Engineer's opinion (acting independently and impartially), the Principal is entitled to call on this bond pursuant to the Contract and confirming the Engineer's agreement as to the amount demanded by the Principal.
- The amount demanded (up to the Guaranteed Amount) shall be paid to the bank account advised by the Principal to the Bond Provider in the demand.
- 4 The liability of the Bond Provider under this Bond will not be discharged or impaired by reason of any variation or variations (with or without the knowledge or consent of the Bond Provider) in any of the stipulations or provisions of the Contract or the Works or acts or things to be executed, performed and done under the Contract.
 - 5 The undertaking contained in clause 2 is a continuing undertaking and will remain in force until the earlier of the following:
 - 5.1 receipt by the Bond Provider of written notification signed for and on behalf of the Principal that the Bond is no longer required by the Principal which notification may be given at any time by the Principal in its discretion;

Sample Form of Contractors Bond

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Schedule 3 - Form of Contractor's Bond

5.2 return of the original Bond by the Principal to the Bond Provider at the address stated above, or

5.3 payment by the Bond Provider to the Principal of the Guaranteed Amount under this bond.

6 All payments under this Bond shall be made in New Zealand dollars and shall be free of any set-off, withholding or deduction of any kind whatsoever.

7. For the avoidance of doubt, this Bond may not be assigned or transferred.

8. The Bond Provider may at any time, without demand having been made, pay to the Principal the Guaranteed Amount, less any sum or sums it may have previously paid against demands by the Principal under this bond and thereafter the liability of the Bond Provider under this Bond shall cease and determine.

9 This bond is governed by and will be construed in accordance with the laws of New Zealand and the Bond Provider irrevocably submits to the non-exclusive jurisdiction of the courts of New Zealand and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to proceedings being brought in those courts.

Standard ANZ Signing Block

Rotorua Lakes Council**Contract No. 18/029****For: ROTORUA LAKEFRONT REDEVELOPMENT - CONSTRUCTION CONTRACT
UNDER THE LOCAL GOVERNMENT ACT 2002 AND ITS AMENDMENTS****TENDER FORM**

To Rotorua Lakes Council
Private Bag 3029
Rotorua Mail Centre
ROTORUA 3046

Having inspected the site and examined the Tender documents for the above contract I/we hereby tender to undertake these Contract Works. We acknowledge the various Special Conditions of Contract and confirm that our tender is in accordance with all of those special conditions. Our tender is for the sum of:

Fifteen million, eight hundred and sixty-five thousand, five hundred and fifty dollars (\$15,865,550.00) exclusive of GST. Attached is a completed Schedule of Prices showing how we have calculated our tender sum.

Except as otherwise specified, this tender includes the supply of all plant and labour, the purchase and procurement of all materials and the performance of all services necessary to construct, complete and maintain the Contract Works described in the drawings and specifications.

Unless and until a formal Agreement is prepared and executed, this Tender, together with written acceptance thereof, shall constitute a binding agreement between us. I/We further understand that no payment will be made until the Contract Agreement is signed by both Parties and, if successful, we will sign without delay.

This tender is open for acceptance by the Principal for a period of 30 days from the closing date for tenders.

I/We acknowledge receipt of Notice to Tenderers Numbers: 1 – 10 (plus Forum Posts 1 – 4)

Dated this 6th day of May 2019.

Name: Steve Croft

Signature: 

Designation: General Manager, Specialised Operations

Telephone: 0272 140 789

Email: tenders@heb.co.nz

For and on behalf of: HEB Construction Limited
(Company Name or Tenderer's Full Name)

Postal Address: P.O Box 4049, Mt Maunganui South

Postal Code: 3149

roads
bridges
precast
marine
water
land

**Rotorua Lakefront
Redevelopment
Stage 1 & 1a
Contract 18/029
Rotorua Lakes Council**

**Price
May 2019**


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Item	Description	Unit
5.2	E04 - Terrace concrete edge beam 200 x varies x 300	m ²
5.3	E06 - Precast conc boardwalk edge & edge beam tie ins	m
5.4	E07 - Tukutuku bridge - Foundations & Large Piers	ea
5.5	E07 - Tukutuku bridge - foundations & small piers	ea
5.6	E08 - Insitu concrete edge beams 175 x varies x 295	m
Subtotal for Edge materials and precast		
6.0	Walls	
6.1	LW01 - Concrete lake wall, type 1 & 5	m
6.2	LW02, 03 & 04 - Concrete lake walls, type 2,3 & 4	m
6.3	WS01 - Concrete wall seat	m
Subtotal for Walls		
7.0	Boardwalks & bridges	
7.1	B01	ea
7.2	B02	ea
7.3	B03	ea
7.4	B04	ea
7.5	B05	ea
7.6	TBL01 - Large tukutuku bridge	ea
7.7	TBL02 - Large tukutuku bridge	ea
7.8	TBL03 - Large tukutuku bridge	ea
7.9	TBS01 - Small tukutuku bridge	ea
7.10	TBS02 - Small tukutuku bridge	ea
7.11	TBS03 - Small tukutuku bridge	ea
7.12	Small Tukutuku bridge butterfly joints	ea
7.13	Boardwalk piles & foundations- 3m wide	ea
7.14	Boardwalk piles & foundations- 3m wide	ea
7.15	Stone Pavilion	ea
Subtotal for Boardwalks & bridges		
8.0	Ground Improvements	
8.1	Sheetpile coffer dam (stage 1)	m
8.2	Sheetpile coffer dam (stage 1a)	m
8.3	Dewatering (Stage 1 & stage 1a)	LS
8.4	Mass cement stabilisation - 3.5m deep	
8.4.1	Stage 1 - P & G	LS
8.4.2	Stage 1a - P & G	LS
8.4.3	excavate material and removal from site to waste	m ³
8.4.4	Soil Mixing trial	m ³
8.4.5	Trial testing	LS
8.4.6	Soil mixing standby rate	day
8.4.7	Stage 1 - insitu cement stabilisation with Sulphate resistant cement (300kg/m ³) - baseline design	m ³
8.4.8	Stage 1a - insitu cement stabilisation with Sulphate resistant cement (300kg/m ³) - baseline design	m ³
8.4.9	Soil mixing lab testing	LS
8.5	Micro piles	
8.5.1	Micro piles	ea
8.5.2	Proof tests (tension load test) as per table 4-2	ea
8.5.3	Acceptance testing (tension load test) as per table 4-4	ea
Subtotal for Ground Improvements		
9.0	Landscaping	
9.1	Remove trees - as per the information within the drawings	sum
9.2	Uplift from stockpile, place and prepare soil to gardens areas (400mm)	m ²
9.3	Uplift from stockpile, place and prepare soil to lawn areas (150mm)	m ²
9.4	Design, supply and install Irrigation to irrigated lawn areas	m ²
9.5	Supply and install Bark mulch to bark mulched gardens (100mm)	m ²

s7(2)(b)(ii) LGOIMA

Contract Name: Rotorua Lakefront Redevelopment (Stage 1 & 1a)
Contract No. 18/029

Item	Description	Unit
1.0	Preliminary and General	
1.1	Establishment.	LS
1.2	Construction administration.	wks
1.3	Liaison, location and protection of existing services.	LS
1.4	Setout of works	LS
1.5	Site clean-up and disestablishment.	LS
1.6	As-built drawings (are these required?, if so whats required)	LS
1.7	Insurances	LS
1.8	Site fencing and hoarding (stage 1)	m
1.9	Site fencing and hoarding (stage 1a)	m
1.10	prototypes & Sampling (refer to spec & dwgs 1_0.303 & 1_0.304 for details)	PS
1.11	Traffic / Pedestrian Management	wks
1.12	Environmental controls	wks
Subtotal for Preliminary and General		
2.0	Demolition	
2.1	Stage 1	
2.1.1	Uplift cobble stone place on pallets and transport to depot	m ²
2.1.2	Salvage timber and transport to depot	LS
2.1.3	Remove existing wharewaka building, carvings to be protected & stored	LS
2.1.4	Remove scout hall boat ramp & jetty	LS
2.1.5	salvage existing rubbish bins for reuse	ea
2.1.6	Remove existing roundabout, install new kerb	LS
2.1.7	Protection of trees	ea
2.1.8	remove existing roadway (300m x 7.5m)	m ²
2.2	Stage 1a	
2.2.1	Uplift cobble stone place on pallets and transport to depot	m ²
2.2.2	Salvage timber and transport to depot	LS
2.2.3	Remove jettys	ea
2.2.4	salvage existing rubbish bins for reuse	ea
2.2.6	Temporary timber edge	m
Subtotal for Demolition		
3.0	Site Clearance / Earthworks / Drainage / watermain	
3.1	Strip topsoil and stockpile (on site)	m ³
3.2	Remove surplus material from site - loose measure	m ³
3.3	Remove existing cesspits	ea
3.4	Remove cesspit leads	m
3.5	K100 aco drain	m
3.6	110mm dia novaflo drain	m
3.7	110mm dia UPVC subsoil collector pipe	m
3.8	Replace 600mm dia RCRRJ pipe - class 4	m
3.9	150mm UPVC pipe	m
3.10	New field catchpit	ea
3.11	New 1050mm dia manhole	ea
3.12	Watermain installation inc. valves, thrustblocks etc	LS
Subtotal for Site Clearance / Earthworks / Drainage / watermain		
4.0	Paving	
4.1	P01 - Insitu concrete paving (200mm thick, honed 150 grit)	m ²
4.2	P02 - Insitu concrete paving (200 thick, pipe rolled & bush ham)	m ²
4.3	P03 - Insitu concrete paving (200 thick, acid wash)	m ²
4.4	P04 - Hoggin	m ²
4.5	P05 - Compacted aggregate	m ²
Subtotal for Paving		
5.0	Edge materials and precast	
5.1	E02 & E03 - Concrete edge beams, 200 x varies x 200 or 300	m

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Item	Description	Unit	Quantity	Rate	Amount
9.6	Supply and install gravel stone mulch to gravel stone gardens (100mm)	m2			
9.7	Supply and install Rock to rock garden areas	m2			
9.8	Supply and install timber edging between lawns and gardens	lin/m			
9.9	Supply and install timber edging between hoggins and lawns	lin/m			
9.10	Excavate Tree pits	ea.			
9.11	Supply and install grass areas as per specification provided	m2			
9.12	Supply and install of planting	sum			
9.13	DLP maintenance of Grass areas	month			
9.14	DLP maintenance of Landscape garden areas	month			
Subtotal for Landscaping					
10.0	Electrical				
10.1	Electrical	LS			
10.1	Lamp posts	ea			
Subtotal for Electrical					
11.0	Street Furniture (Supply and Install)				
11.1	Bench seat (type A)	ea			
11.2	Bench seat (type B)	ea			
11.3	Picnic tables	ea			
11.4	Bollards	ea			
11.5	Sun loungers (provisional)	ea			
11.6	Reinstate rubbish bins	ea			
Subtotal for Street Furniture (Supply and Install)					

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