He Ara Kotahi - Implementation of the Palmerston North to Linton Shared Pathway

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Abstract

In July 2015, Palmerston North City Council (PNCC) approved the construction of a 7.6 km long off road shared cycle path from Palmerston North to Linton Army Camp with a connection to Massey University. The project includes a 195m long bridge across the Manawatu River in a residential part of the city plus four other smaller bridges ranging in span from 10m to 45m along the pathway route.

The pathway traverses variable topography including farm land, and steeply inclined area of significant indigenous vegetation. Three separate sections of pathway climb and then descend elevation differences of 20-25 metres with short lengths of pathway at 5-8% gradients. There are two registered Heritage New Zealand site adjacent to the pathway route.

This paper traces the various challenges in implementing a project of this nature including:

- A requirement to expend the Urban Cycleways portion of funding by 30 June 2018;
- Introduction of new New Zealand Transport Agency (NZTA approval) processes in 2015/16, which created uncertainty through the options selection phase;
- Balancing cost with aesthetic, environmental, and cultural considerations and community expectations;
- Planning, design, and construction of a major bridge in a residential area across a large river;
- Securing nineteen separate consents for the project; and
- Collaborating with iwi in a post-settlement environment.

Introduction

Over several years the New Zealand Defence Force (NZDF) had been making submissions to the Palmerston North City Council Annual Plan expressing concern about the safety of its staff in commuting to work at Linton Army Camp by cycle or walking. With Linton Camp being located 8kms to the southeast of the city those staff who chose to cycle or walk to work had to travel along SH 57. This route has no dedicated cycle/pedestrian facilities and is a 100km/hr. speed environment for vehicles and carries high numbers of heavy commercial vehicles which creates a safety issue and is a deterrent for active modes of transport.

Although NZDF had made submissions for many years raising safety concerns PNCC was never able to afford a solution by constructing an off road connection between the city and the Army Camp. The funding landscape changed, however, with Central Government announcing in 2015 that it had set aside $100m in an Urban Cycleways Programme (UCP) to assist in the construction of shared cycle/pedestrian facilities for commuters.

PNCC quickly undertook a feasibility study into potential routes for a pedestrian cycle pathway between the city and Linton Army Camp with a connection to Massey University. Any connection to Linton Army Camp from the city would mean that a new crossing of the Manawatu River would be required.

At the same time, Powerco, the local electricity lines company was looking to strengthen and provide additional resiliency to its electricity supply to the city. It too was considering options for laying electricity cables from one side of the Manawatu River to the city. Accordingly, Powerco was willing to provide funding assistance for construction of any new bridge across the river, on the proviso that it was located in a reasonably accessible position for the electricity connections to be made.

The possibility of obtaining UCP funding as well as assistance from Powerco obviously reduced the required PNCC contribution and made the prospect of constructing an off road route between the city and Linton Army Camp more realistic.

The time frame for submitting applications for funding assistance from the UCP was limited and a condition of the funding was that it be fully expended on each project by 30 June 2018.

PNCC commissioned a study aimed at identifying feasible routes for the off road pathway. As the prime access to the pathway would be via the new bridge across the Manawatu River it was vital that the bridge be located in a position that would attract the highest number of potential users. A road bridge across the river at Fitzherbert Avenue was already in existence and provided the only practical connection across the river. Once the new pedestrian/cycle bridge is constructed users would essentially have two options for accessing the new pathway – either the existing Fitzherbert Avenue Bridge or the new bridge which at that stage, was in an undetermined downstream location.

Selection of the siting for the new bridge was important in order to attract the maximum number of users as securing UCP funding was contingent upon maximising commuter use of the pathway. The initial feasibility study therefore focussed on options for the bridge location that provided the best linkage to existing city cycle connections. Route options on the south side of the river, to Linton Army Camp were much more limited. The initial challenge was in determining the appropriate siting for the new bridge and its linkage to existing streets in the city.

The feasibility study identified five potential sites for the bridge and the associated pathway to Linton. The consultants estimated the total cost of the project at just under $10m. On that basis an application was submitted for UCP funding. UCP funding was approved and PNCC then provided for programmes in its Long Term Plan for the construction of the bridge and 7.6kms of shared pathway to Linton. In addition to UCP and Powerco funding, the residual cost of the project qualified for assistance from the National Land Transport Fund (NLTF) at PNCC's prescribed financial assistance rate of 51%.

The estimated cost of the programmes at that time was $10m with funding being shared as follows:

- Urban Cycleways Fund - $3m
- Powerco - $0.5m
- NLTF - $3.3m

- PNCC – $3.2m

The UCP share was required to be expended by 30 June 2018 (only three years from the date of approval) and Powerco was anxious to improve the electricity supply across the river as soon as practicable. Consequently, there was significant pressure to finalise the planning and then construction of the pathway and bridge as soon as possible so as to not lose the UCP funding contribution. While a three year period seems a long time to deliver what is, at first glance, a relatively straightforward project there were many steps to be followed and difficulties to be overcome before the project was to become a reality. The remainder of this paper describes the journey in implementing the project once funding had been secured.

Project Governance

A Project Steering Group (PSG) was established at the outset which met monthly throughout planning and implementation phases of the project. Members of the PSG included representatives from organisations involved in funding the project, landowners and iwi:

- PNCC - General Manager – City Networks –Chairperson;
- PNCC Elected Member representative;
- New Zealand Defence Force (NZDF) – Linton Army Camp;
- Massey University;
- Horizons Regional Council;
- NZTA;
- Iwi representatives

Minutes from each PSG meeting were forwarded onto all of Council's Elected Members each month to ensure that each Councillor was kept fully informed

A Working Party was also established comprising officers from the above organisations, and iwi and NZDF. The Working Party also met monthly to discuss and agree on more detailed aspects of the project.

An overall Programme Manager was appointed to ensure that all elements of the project were undertaken in an integrated way and delivered within the established timeline (i.e. expenditure of the UCP share by 30 June 2018).

The PSG named the project "He Ara Kotahi".

NZTA Approval

NZTA approval was required for the project due to the significant government funding assistance. Just prior to the project commencing NZTA had changed its processes for approval of large capital projects whereby a sequential process was involved. Entry into the stepped process was dependent on the level of detailed work that had already been completed on the project. In this instance, an Indicative Business Case (IBC) followed by a Detailed Business Case (DBC), were required to be submitted for NZTA approval before the UCP funding contribution could be considered as secure.

There limited route options from the end of the proposed bridge to Linton so the focus of the IBC and the subsequent DBC, was on selecting the best location for the bridge to attract the largest number of users while taking into account any impacts on adjoining residents.

Four options were considered during the IBC phase. Each option was aligned with a principal road in the city that would provide a convenient access route for users of the bridge/pathway. The options evaluated during the IBC phase were almost identical to those identified in the original feasibility study.

A number of community open days were held where information was presented and members of the public could provide feedback on each of the options. A community meeting was also held for the general public and in particular, those residents living near the identified bridge sites to comment on the options.

It was clear from community input that the bridge should be aesthetically attractive, but within the budget constraints that had been set.

Based on community inputs the conceptual design of the bridge was based on the theme of a fallen karaka tree across the Manawatu River. The symbolic root structure would be represented by the approach ramps on the Massey side of the river with the bridge itself symbolizing the trunk of the tree fallen across the river. A plaza pavement treatment proposed on the city side of the bridge represented the tree branches and canopy. Karaka Grove, a unique reserve of karaka, trees situated on Massey land served as a visual backdrop to the proposed bridge.

The IBC considered a range matters in identifying the preferred bridge location options including:

- Landscape and visual effects;
- Ecological factors;
- River hydraulics and flood control;
- Land use planning;
- Accessibility;
- Projected commuter user numbers; and
- Recreational cycling and pedestrian benefits

While UCP funding was contingent on maximizing commuter use PNCC also considered that recreational use of the bridge and pathway were important. With an existing network of over 30kms of shared pathways around the city and Council believed that the new route to Linton would provide further options for recreational users. The variable topography on the Massey side of the river potentially offered a very different cycling/walking experience than the relatively flat terrain of the existing pathway network.

The IBC recommended that the bridge be sited within a 200 m long zone along Dittmer Drive between the intersections of Ruha and Katene Streets. Within that zone the bridge would have an effective usable width of 3m (4.2m total width) with four spans totaling 195 m across the river. The initial concept design also included the widening of the deck to 9m at mid-span to provide for a viewing platform for the public

The IBC was approved by NZTA and the project then progressed to the DBC stage where the final siting of the bridge would be determined and preliminary design undertaken. A further round of community discussion ensued and the DBC recommended that the bridge be situated opposite the end of Ruha Street. Preliminary design plans were completed to show the community what was envisaged for the bridge.

The DBC confirmed the overall project estimate at $10m. On that basis PNCC resolved to approve the project for implementation.

Pathway

Unlike the rest of the city's pathway network none of the He Ara Kotahi pathway to the south of the river is situated on Council owned land. The pathway is being constructed on land that is occupied entirely by either Massey University or NZDF at Linton Army Camp. The city side approach to the proposed bridge is on Council reserve land and the river bed is Crown land under the administration of Horizons Regional Council.

Massey land comprises working farms and Linton Army Camp is a defense base with associated buildings and other defense related training facilities. Thus, finalizing an appropriate route required extensive discussion with

the landowners so that both construction and then use of the pathway would not cause undue disruption to the landowners' normal daily activities.

Both Massey and NZDF welcomed the benefits of improved safer off road access for commuters and visitors to their sites, but wished to ensure that any effects from usage of the pathway by the public could be mitigated to the fullest extent.

Topographical challenges

The total length of the pathway from the existing Fitzherbert Bridge to its termination point at Bells Road, Linton is approximately 7.6kms (Figure 1).

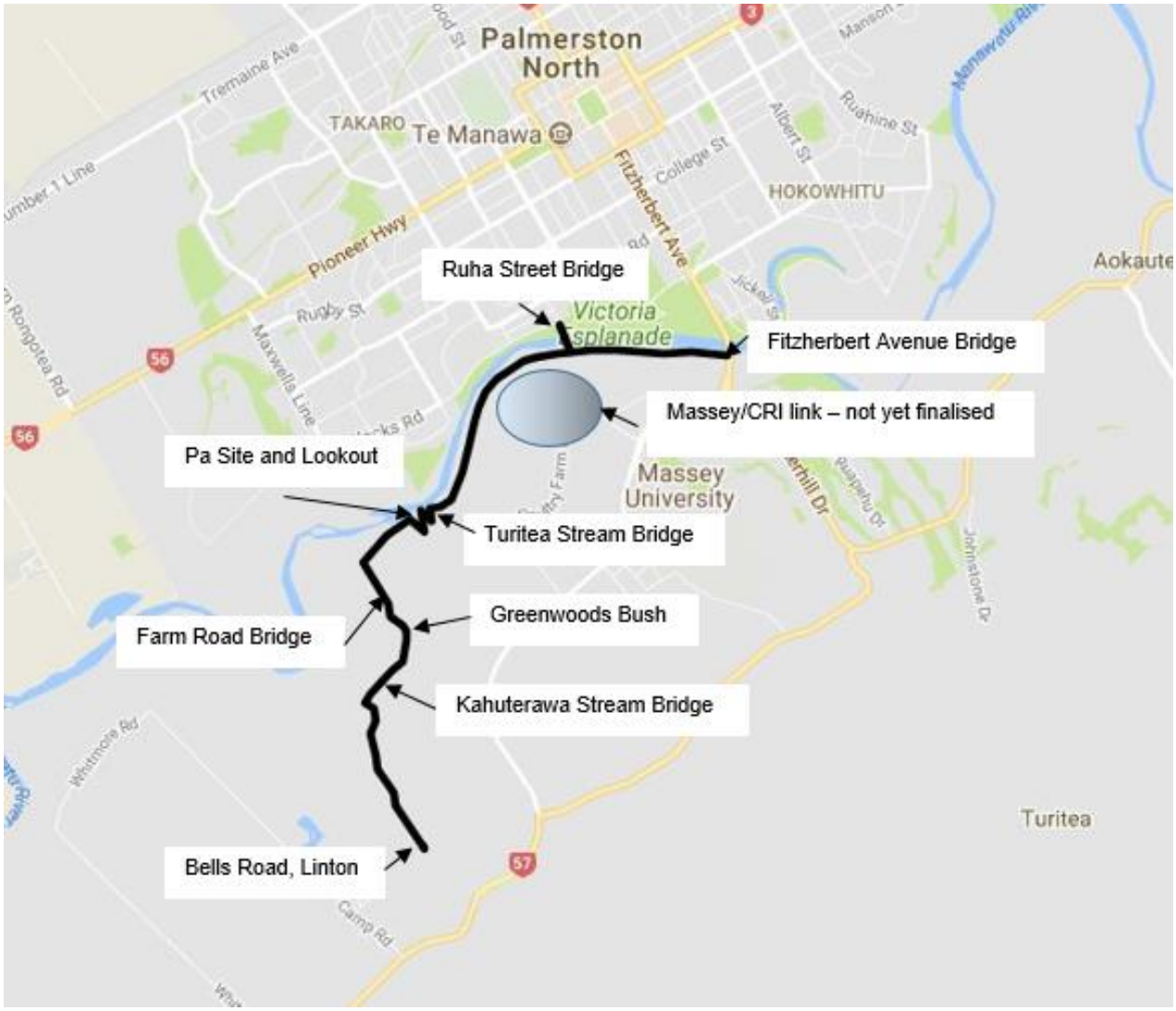

Figure 1 - Pathway Route and Bridge Sites

The proposed new bridge across the Manawatu River connects to the pathway approximately 1.2kms downstream from the existing Fitzherbert Bridge. Completion of the bridge and pathway will provide a convenient walking/cycling loop for recreational users of approximately 2.8kms in length on both sides of the river and crossing both bridges. Recreational users also have the option of using the entire 7.6 km length of the pathway, which also presents a number of topographical and landscape variations along the route.

The initial 2.9km of pathway from the Fitzherbert Avenue Bridge is on river floodplain and adjoins Massey farm land. The proposed Ruha Street Bridge connects via approach ramps approximately 1.2kms along this section of pathway.

The next 500 m of pathway involves a two span 36 m long bridge across the Turitea Stream followed by a steep section of boardwalk approximately 70m in length that will be constructed up the face of a sheer vertical

bluff. (Figure 2) There is a large cut proposed through the top of the bluff and then the pathway meanders through steep heavily vegetated land which traverses two valleys.

Figure 2 - Turitea Bluff (approximately 15m high) as Viewed across the Turitea Stream

An old pa site is recorded in this area on the NZ Heritage Register. A lookout section high above the Manawatu River is also proposed for this area. The pathway then emerges onto Massey pasture land for a section before entering an area known as Farm Road where it passes through a short section of mature pine trees, across another 36m length two span over-bridge across a farm race.

It then traverses a further section of farm land before entering a very steep section of highly sensitive vegetation known as Greenwoods Bush - an area managed by a group of Trustees who are passionate about the native bush and tree plantations in the area.

The PSG, Programme Manager and pathway designers undertook extensive consultation with the Trustees to finally agree on a route that minimizes any impacts on the vegetation in the area while providing a unique experience for pathway users. A series of side cuts and boardwalks have been designed for the 250m length of pathway through the Greenwoods Bush section to achieve the required pathway gradients, while preserving as many trees and important vegetation as possible.

After leaving the Greenwoods bush are the pathway again traverses the edge of Massey's farms and then crosses the Kahuterawa Stream via a proposed 45 m long suspension bridge to NZDF land on the other side of the stream. The final 1.2km of pathway will be constructed along land owned by NZDF that is currently used for training activities.

Over its 7.6 km length there are three sections where the pathway changes in elevation by in excess of 20 m over relatively short distances. There are four bridges (in addition to the main Ruha Street Bridge and 25 culverts to be constructed. The pathway will be 3m wide with 0.6m shoulders and will be surfaced using lime chips. The width reduces to 2.5m plus shoulders from the point of the proposed lookout over the Manawatu River to Bells Road. Also there will be approximately 200 m of boardwalk constructed in various locations along the pathway.

Regulatory Requirements

A total of nineteen different regulatory approvals are required before construction of the pathway and bridges can proceed. Table 1 below presents a list of consents that needed for the project to proceed.

Description	Authority Issuing Consent				
	PNCC District Plan	Horizons Regional Council One Plan	Building Act	Heritage New Zealand Act	Land Information New Zealand
Pathway	✓✓✓			✓	
Ruha Street Bridge	✓	✓	✓		✓
4 Other bridges	✓✓✓✓	✓✓✓	✓✓✓✓		

Table 1 - Consents Required

The above table does not include two further short term consents that were required to enable geotechnical testing of bridge foundations during the design phase of the Ruha Street Bridge.

Resource Consents

Most consents for the project, except for the consent for the main bridge, were issued on a non-notified basis, although comprehensive applications were submitted in all cases which included assessments of environmental effects of the pathway and bridges.

Ruha Street Bridge

The consent application for the Ruha Street Bridge was deemed to have sufficient public interest to warrant public notification. Council submitted a very comprehensive application with assessments of:

- Visual effects
- Landscape effects
- Traffic and parking
- Ecological effects of the work in the river channel
- Construction effects over the projected 18 month bridge construction period including:
    - Customer Management
    - Construction traffic
    - Noise
    - Vibration
    - Landscape planting
    - Erosion and sediment controls
    - Flood contingency plan
    - Hydraulic assessments of the effects of the bridge abutments, and pies on flood flows

Submissions to the application were received from those most affected by the bridge – residents near the bridge site as well as members of the community. Two submitters lived well outside the area affected by the bridge proposal but, in any event, were negative about the whole project proceeding. There were also a number of submissions from the general community who were supportive of what was seen as an exciting extension to the city's walking and cycling infrastructure.

Because the PNCC was applying to itself as well as to Horizons Regional Council for consent a Panel of Independent Commissioners was appointed to conduct a hearing and to determine the consent applications.

All of the necessary consents were granted in May 2017 with no appeals being received.

Both consents (granted by PNCC and Horizons Regional Council) included a large number of conditions. In particular, there were requirements for a number of construction management plans to be submitted for approval by the consent authorities prior to any construction commencing. The plans were aimed at identifying how any potential effects during construction activities would be managed. The requirement for the management plans to all be approved prior to commencement of construction proved to be somewhat onerous as there were several activities that were intended to be undertaken by Council prior to the Contractor starting work on the site – such as vegetation and tree removal. It was deemed however that these activities signified the start of construction and thus were not permitted to commence until the full suite of management plans had been submitted and then approved.

Due to factors explained later there were some delays in preparing and submitting the construction management plans. From an overall programme perspective and to assist in meeting the UCP expenditure deadline it became vital that those components of the bridge structure needing to be constructed in the river channel – piles, and piers - be completed while river flows remained low during the summer of 2017/18. Consequently, timely submission and approval of the construction management plans became critical to enable the Contractor to commence work early enough so as to complete construction of those elements of the bridge structure that are in the active river channel prior to the onset of higher river flows that typically occur from April to November each year.

The requirement whereby at least $3m needed to be spent by 30 June 2018 as a condition of the UCP funding placed additional pressure on the Contractor to ensure that the components of the structure situated within the river channel could be completed during the summer of 2017/18.

Provision for interacting with affected residents during the construction period and for the setting up noise and vibration monitoring equipment in several houses, were included in the management plans. For engagement purposes during construction, affected residents were split into three groups – Tier 1, 2 and 3 based on proximity to the site. Differing engagement requirements were stipulated for each tier of resident.

A number of other non-notified consents were obtained for the project as set out in Table 1 above. In most cases, the effects of the pathway and bridges were very minor as the pathway was in situated in a rural setting and often not able to be seen from residential properties.

In all instances the required affected party agreements were obtained from the respective landowners (Massey, or NZDF) and from iwi as part of the consent approval process. Despite the Programme Manager and consultants arranging application pre-lodgement meetings with the relevant consent authorities requests for further information under section 92 of the RMA were made by the consent authorities. Often these were made on the day immediately prior to the statutory deadline for a decision on the consent application to be granted. Section 92 requests effectively re-set the clock on approving the applications, and became somewhat of a frustration for the project team. Many of the matters raised in those requests had already been covered in the applications or were simply matters requiring clarification that could have been resolved by a telephone call rather than a formal process resulting in delays in granting consent.

Building Consent Exemptions

There is a provision in the Building Act which allows a local authority to issue an exemption from obtaining a building consent for building work where design and key construction elements will be supervised by a Chartered Professional Engineer, and where it is deemed that no value would be gained by having a building consent. In such circumstances the designer is basically supplanting the role of the building consent authority by certification through issuing and signing Producer Statements that the design and construction meets the provisions of the Building Act. This provision was used to obtain exemptions from building consents for all of the five bridges on the project.

Archaeological Approval

Approval was required under the Heritage Act as there are two culturally significant sites along the route of the pathway. One is a pa site at the top of the Turitea Bluff, and the other is a collection of hangi stones that must not be damaged during construction. A full archaeological assessment was undertaken prior to seeking approval.

LINZ Approval

The bed of the Manawatu River is considered Crown land. Accordingly any structure placed on, over (or under) the bed of the river requires an easement to be granted from Land Information New Zealand (LINZ). PNCC, as owner of the bridge structure applied for and was granted an easement with a term of 99 years for the bridge structure over the river bed. Standard LINZ easement conditions apply and the value of the easement was assessed and payment made to the Crown for the value of the easement.

Ruha Street Bridge Construction

Being the most costly component of the project, expeditious commencement of construction of the Ruha Street Bridge was critical if the UCP funding deadline was to be met. However, the PSG was acutely aware that the construction market was particularly buoyant and that it might be difficult to secure competitive tenders and timely commencement of construction at the time required. Regionally, large numbers of resources had been diverted to nationally significant roading construction projects further to the south of Palmerston North, which had the flow on effect of reducing the potential number of competitors likely to tender for the Ruha Street Bridge project.

In an endeavor to reduce procurement risk two initiatives were undertaken. Firstly, detailed design of the bridge was commenced prior to the resource consents being granted, and secondly, Council and its consultants embarked on an Early Contractor Involvement (ECI) process. An ECI is a process whereby two or more (generally two) Contractors are engaged at the outset and paid a sum of money to attend meetings with the designers to provide comment on the constructability of the final design. The Contractors enter into the process knowing that only one of them ultimately be awarded the contract – hence it is worth each of them devoting time and effort to the process. The aim of an ECI process is to encourage innovation in the final design and construction and to engage with the construction market early in order to secure resources at a competitive price for the project.

At the conclusion of the ECI process the final design of the bridge and approach ramps was completed (Figure 3). The project estimate was updated which again confirmed that the bridge could be constructed for approximately the budget that had been set.

Also, the final design was completed in close collaboration with iwi to ensure that the karaka theme was reflected in the final design.

Both of the ECI contractors were invited to tender for the work. Tender documents were compiled in such a way as to allow either Tenderer to also submit an alternative Tender if it could be completed at less cost. Tenders closed in late October 2017. The Tenderer who submitted the lowest conforming tender also submitted an alternative which offered a $1m saving from the complying tender. Despite the savings the alternative tender was still well above the cost estimate that had been provided by the design consultants only a few months prior. This was likely to be reflective of the very limited supply and high demand in the market.

Figure 3 - Perspective View of Ruha Street Bridge

Acceptance of the alternative tender by Council in late October 2017 meant that there would need to be a period of delay while the Contractor re-designed the bridge based on the alternative tender. Consequently construction of the bridge had essentially transformed to a design-build contract.

To save time the construction management plans required for consent compliance were prepared and submitted while the final re-design was still proceeding. However, the building consent exemption could not be approved until the final design plans were prepared.

After several iterations the construction management plans were finally approved by the regulatory agencies in mid – January 2018. The final peer reviewed design was completed in early February 2018. Construction work then commenced in mid-February 2018.

Figure 4 – View of Abutments and Piers from City End of Ruha Street Bridge – April 2018

As at the end of April 2018 all of the bridge piers and abutments have been completed (Figure 4) so the risks have been related to working in the river have been mitigated for the oncoming winter. There was one high river level event while pier construction was proceeding. Immediately prior to the event, the Contractor implemented its pre-agreed Flood Contingency Plan by removing all of his plant and equipment from the river. The high river levels washed way a temporary causeway that had been formed by the Contractor for access to construct the piles in the river. The causeway was fully re-instated once the river levels had dropped.

Steel for the support girders has arrived from offshore and is being tested for suitability (it is being imported from China). It will then be fabricated into sections in preparation for lifting onto the bridge piers and abutments early next summer. The bridge approach ramps and associated roading works will then be completed with a projected opening date for the bridge of April 2019.

To date, apart from one minor breach of the construction traffic management plan, the Contractor has been fully compliant with all requirements of the construction management plans. Continuous monitoring of noise and vibration indicates that measured noise and vibration levels at the houses nearest to the site are within consent limits.

Powerco Ducts

Council agreed that Powerco could lay four bundles of ducts on the bridge as part of its electricity supply strengthening project. The arrangement between Powerco and PNCC was documented in a signed agreement with certain milestones to be met before Powerco would make its contribution to the cost of the bridge. Design details for the ducts on the bridge needed to be changed once the alternative tender was accepted. Those details have now been finalized and the ducts are to be installed at the same time as the girders – early next summer.

Pathway Construction

The pathway (Figure 1) is being constructed in four stages. Stage 1 comprising the first 2.9km length on Massey land from the Fitzherbert Avenue Bridge along the river floodplain to approximately 200m from the Turitea Stream was completed in early 2016. This section was essentially flat and followed the existing ground profile. Being located in the flood zone no consents were required for this section of pathway so it was able to be constructed early, without any impediments.

The second stage of the pathway comprises a further 2.9km section from its current end point near the Turitea Stream to approximately 50 m from the Kahuterawa Stream. A contract has been awarded for Stage 2 and some construction has been completed. Stage 2 is expected to be finished by April 2019. Consents for some elements of Stage 2 have still yet to be finally approved.

Stage 3 of the pathway includes a 45m long suspension bridge across the Kahuterawa Stream and construction of the final 1.2km section of pathway in NZDF land to Bells Road, where it connects to existing pedestrian/cycle facilities. Detailed design of Stage 3 has now been completed and agreement on the alignment of the pathway from NZDF is being finalised. Applications for the various consents are expected to be submitted shortly and it is anticipated that Stage 3 will be tendered to the market in the third quarter of 2018 with a view to completion by April 2019.

The fourth and final stage is the Massey University/Crown Research Institute connection (Figure 1) where the final route is currently being negotiated with the landowner.

Project Cost

The final cost of the project is expected to be around $15m which is approximately 50% above the original budget estimates. The original estimate was completed very quickly to accompany the original application for

UCP funding and clearly it did not allow for some of the more difficult aspects of the construction that have been encountered. Moreover, the construction market is very buoyant and tenders for most projects across the country and particularly in this region are now coming in well in excess of budget. In many cases only one or sometimes two tenders are being received for large contracts such as these.

Iwi Partnership

The He Ara Kotahi project is the first being completed working in partnership with iwi since the Treaty Settlement was finalised. Iwi have been represented on the PSG and brought valuable insight at all stages of the project. A Memorandum of Understanding, setting out the way in which the parties would collaborate, was signed by the Council with iwi at the outset of the project. As result of the high level of engagement, obtaining iwi support for consent applications and for all elements of the project has been straightforward.

A mauri stone (Figure 5) was provided by local iwi for incorporation into the bridge foundations to represent the spiritual connection between the bridge structure and the earth beneath. The stone was tied to the bottom of the reinforcing cage before lowering into the casing prior to the concrete pier to being poured. A blessing event was also organised by iwi prior to construction of the first pier.

Figure 5 - Mauri Stone at Bottom of Pile Reinforcing Cage Before Placement in the River

Allied Projects

A number of allied projects are being planned for implementation once the bridge and pathway construction are finished. All will be funded separately.

The projects comprise:

- Lighting of the walking/cycle loop from the Fitzherbert Avenue bridge to the Ruha Street Bridge
- Development of the pa and lookout area at the top of the Turitea Bluff
- Provision of a public toilet at the city end of the Ruha Street Bridge

Conclusion

He Ara Kotahi is one of the largest projects undertaken by PNCC in recent years. With a span of over 190m the Ruha Street Bridge is a significant structure, and is only the second bridge in the city to be constructed across the Manawatu River. Pathway design and construction has also presented a diverse range of challenges in terms of topography, land ownership, pressure on timing due to funding conditions, the need to ensure that heritage preservation occurs, and that iwi cultural views are respected during a period where construction resources are scarce.

Establishment of an effective governance structure from the start with establishment of clear responsibilities, delegations, and lines of communication have all contributed significantly to the successful achievement of the project.

Moreover, existence of the 30 June 2018 deadline for expending the UCP funding, while challenging to achieve, has provided a focus for both the PSG and the Council to be proactive to ensure that decisions have not been unduly delayed.

There is little doubt, however that the need for extensive consultation, combined with consenting requirements through the RMA have resulted in additional costs for the project. RMA processes are both costly and time consuming, and often result in conditions being imposed on consents that incur further expenditure on the project owner in achieving compliance.

Typically, approximately 10% of the total cost of capital projects is incurred in planning, design and project management fees. By the time this project is complete the share of non-construction related costs is projected to be well in excess of 20% of the total when all of the feasibility studies, business case development, consenting, easements, other approvals and design costs are taken into account.

The project is likely to be finished in April 2019 and will provide for a safe off road commuter route for persons to walk or cycle to Massey University, Crown Research Institutes and to Linton Army Camp. It will also provide a unique experience for recreational users of the city's network of shared pathways.

Acknowledgements

The author wishes to acknowledge both co-authors Jon Schwass and Peter Kortegast for their respective roles in the project and their inputs to the content of this paper.

Contributions of other individuals and organisations in delivering this exciting project are also gratefully acknowledged. Those include: PNCC Officers, and Elected Members, WSP – Opus, Tonkin and Taylor, Frame Group Consultants, The Property Group, Via Strada, Powerco, Horizons Regional Council, New Zealand Defence Force, Massey University, Keebles Trustees, Concrete Structures, Blackley Contractors, and Fulton Hogan.

Declaration of competing interests

The author(s) declare(s) no competing financial interests.