



Preliminary Cost Estimate Report

Riverlink Project

Prepared for Greater Wellington Regional Council

By Beca Ltd (Beca)

27 April 18

© Beca 2018 (unless Beca has expressly agreed otherwise with the Client in writing).



This report has been prepared by Beca on the specific instructions of our Client. It is solely for our Client's use for the purpose for which it is intended in accordance with the agreed scope of work. Any use or reliance by any person contrary to the above, to which Beca has not given its prior written consent, is at that person's own risk.



Revision History

Revision N°	Prepared By	Description	Date
A	Melissa Cross MNZIQS BConst(QS)	Preliminary Estimate (Final) - First Issue	8 June 2017
B	Melissa Cross MNZIQS BConst(QS)	Preliminary Estimate (Final) - Second Issue	22 June 2017
C	Melissa Cross MNZIQS BConst(QS)	Preliminary Estimate (Final) - Third Issue	27 April 2018

Document Acceptance

Action	Name	Signed	Date
Prepared by	Melissa Cross MNZIQS BConst(QS)		22 June 2017
Reviewed by	Barry Calvert MNZIQS Reg QS		22 June 2017
Approved by			
on behalf of	Beca Ltd		

1 Introduction

This technical report, RiverLink Riverworks Preliminary Design (Report T-17/9) presents the preliminary design for the riverworks as part of RiverLink. RiverLink integrates the overlapping interests of three agencies – Greater Wellington Regional Council (GWRC), Hutt City Council (HCC) and New Zealand Transport Agency (NZ Transport Agency) – working in partnership to deliver better flood protection, better lifestyle and improved transport links for the people of central Lower Hutt.

The project area focuses on the three kilometre section of the Hutt River and its city and State Highway 2 interfaces between Kennedy-Good Bridge and the Ewen Bridge. For the full composite description of the design process, influences and its integrated elements of RiverLink refer to RiverLink Preliminary Design Report (Report T-17/08).

This estimate of preliminary project costs has been prepared for the works contained within the Riverlink Project as noted above and includes;

- River corridor – floor protection and river widening
- Landscape – urban landscape, wetlands, city promenade (Making Places) & Daly Street service lane
- Property - acquisitions and disposal
- Services – relocation and upgrade
- Transport Streetscape – local road network changes
- Melling bridge replacement & new pedestrian bridge

2 Executive Summary

With reference to the following estimate report and full detailed elemental estimate of costs, we summarise our estimate of project costs in the sum of **\$312,906,000.00** (excl. GST) including contingencies.

The estimate is based upon rates and prices as provided by the technical disciplines as noted within the 'Basis of Estimate' section below.

Please note that all values within this report and included in the attached Estimate Details are GST exclusive.

3 Basis of Estimate

The estimate of the project costs been allowed only as per the Preliminary Design quantities and rates information provided by;

- Boffa Miskell quantities & rates schedule dated 02-June-17
- Damwatch Preliminary Design quantities rates cost estimate schedule dated 31-March-17 with rates adjustment as discussed
- Opus Preliminary Design Report for Stopbanks report dated June-17 with changes to services as per GHD & MWH cost estimate

- GHD Transport Assessment Working Draft report and Preliminary Design Report (Services) both dated 31-March-17
- GWRC Property Forecast Cost Estimate received 23-May-17 and Demolition Cost Estimate for Property received 31-May-17
- Beca Preliminary Design Technical Reports for Daly St Interface Structures dated 31-March-17 and Pedestrian Bridge dated 3-April-17
- HCC Schedule of Cost dated 3-April-17
- GHD Services Preliminary cost estimate for Services Relocation dated 09-June-17
- MWH Base cost estimate for Wellington Water WHS Relocation provided by GWRC via email dated 18-April-17

4 Assumptions and Clarifications

General exclusions are noted below but refer to the individual Preliminary Design technical reports for specific details of assumptions and exclusions;

River Channel

- No allowances for the removal of contaminated waste
- Earthworks measures are based on in-situ and placed volumes. There is no correction for the difference in-situ and placed volumes.
- Cost included for in-situ berm materials to be cut to clean waste, but there are opportunities for inter-project use of this materials with associated cost savings.
- Cost included to process and cut to clean waste demolition material (reinforced concrete), but there may be a recycling opportunity with moderate cost savings possible

Stopbanks

- Costs included in the estimate for the inclusion of geogrid on the right bank within fault rupture zone
- Provisional sum of \$500,000 has been included in the estimate for ground improvement at wall sites
- It has been assumed that 85% of the existing stopbank material is suitable for re-use
- An allowance of \$2.1M has been included in the estimate for the demolition and/or removal of remaining building foundations

Landscaping

- Bulk earth works to form landforms outside of the urban edge not included
- Public toilets not included
- No allowance for ongoing maintenance
- Costs for some of the wider project opportunities as have been included

Pedestrian Bridge

- The preferred option is a four span bridge of constant structural depth
- No additional structure is required beyond the stop-banks to connect the pedestrian bridge to Margaret Street or Melling Station
- Light maintenance vehicles that may need to use the bridge can be accommodated within the assumed pedestrian loading and no special edge barriers are required for vehicle impact

Melling Bridge

- Melling Bridge Replacement (as per email from Steve Kamo dated 31/1/17) is based on a cost estimate from Boffa ROC July 2015

Services Relocations

- The assumption has been made that all water, storm-water & sewer services will be laid 50% in grassed service strip areas and 50% in road/pavement areas
- The cost estimate information from the service providers is high level rough order of costs with a significant degree of uncertainty
- Costs for some of the wider project opportunities as have been included ie. Western Hills main sewer relocation

Transport

- High-level intersection form changes and reconfiguration has been assumed in addition to the following assumptions in the preparation of this cost estimate:
 - 50% contingency applied to all cost estimates
 - Only transport related costs included
 - Intersection configurations are to be refined at later stages so only high levels costs provided at this stage

5 Risk Assessment

No specific Risk Assessment exercise has been undertaken, the level of contingency included in this cost estimate is judged appropriate based on the level of design information available.

However, risks identified at this stage and considered pertinent;

- Melling Interchange – NZTA work programme stages are running off-set to the other project design component stages
- Melling Bridge design and exact location yet to be defined
- Final river engineering design cannot be achieved until Melling Bridge is replaced
- Property acquisition costs are likely to be affected by the accelerating property market
- HCC Making Places strategy involves both public and private elements to be managed
- Ideally the RMA Consent strategy will be progressed as one integrated package to provide maximum benefits

6 Estimate Summary

A summary of the estimate is included below;

Ref	Breakdown of works	Estimate / \$
	Property	72,419,740
	River Corridor	26,857,000
	Landscape	44,708,770
	Melling Bridge Replacement	28,400,000
	Pedestrian Bridge	9,360,000
	Services Relocation	28,553,911
	Transport Streetscape	1,456,400
	Misc. & Rounding	4,179
	Sub-Total	211,760,000
	Main Contractor's Preliminary & Generals ~ 15 %	20,901,000
	Main Contractor's Overhead & Profit ~ 10 %	16,024,000
	Estimating Contingency ~ % varies	64,221,000
	TOTAL (excl. GST)	312,906,000

Note 1:- Main Contractor Preliminary & General (P&G) costs covers the cost of on-site overheads such as site supervision / management, site offices, stores, hoardings, amenities, plant, cranes, temporary works etc.

Note 2:- Main Contractor Overheads and Profit (OH&P) Margins covers the cost of contributions to cover the Main Contractor's Business operational costs, ie. off-site overhead costs such as executive management, accounts, quality and health & safety systems and company profits.

Note 3:- The Estimating Contingency sum is integral to the estimate total and is a general allowance for residual cost risk including design development, omissions, construction risk, sundry measured items and assumptions made for construction details not shown. This is not a project contingency which is expected to be held in addition to this estimating contingency. Typically the estimating Contingency decreases throughout the design development process – refer Project Contingency Profile diagram below.

7 Estimate Exclusions

Below we summarise items of work or likely project costs that are excluded from our estimate but that should be considered when establishing the likely project total budget;

7.1 General Estimate Exclusions

- Good and Services Tax
- Professional Fees
- Resource and building consent fees
- Legal fees
- Financial charges
- Effect of inflation or market conditions from the date of this estimate
- Funding Risk Allowance

7.2 Project Specific Exclusions

- Staging or phased development
- Traffic Management (unless specifically stated)
- Removal, treatment and disposal of contaminated or hazardous substances (unless specifically stated)
- Geotechnical investigations (unless specifically stated)
- Ongoing maintenance costs
- Melling Interchange
- Melling Railway Station relocation
- NZTA land requirements
- W2HV cycleway

Appendix A

Estimate Details

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Total
	<u>RiverLink Project</u>				
	Property (includes property acquisition & associated costs, compensation and disposal proceeds & associated costs)	1	item		72,419,740
	River Corridor - Ewan Bridge to Kennedy Good Bridge (includes stopbanks, river channel widening, edge strengthening)	1	item		26,857,000
	Landscape (includes promenade frontage, carpark, street, MSE wall, service lane, planting, wetlands, landscape features)	1	item		44,708,770
	Melling Bridge Replacement	1	item		28,400,000
	Pedestrian Bridge	1	item		9,360,000
	Services Relocation (includes Three-water Services Mains and Service Providers (electricity, fibre, gas etc)	1	item		28,179,911
	Transport Streetscape (includes local road network changes & Marsden St realignment)	1	item		1,456,400
	Rounding	1	Sum		2,179
	Subtotal				211,384,000
	Preliminary & General (Includes traffic management and temporary works)				20,845,000
	Contractor's Margin				15,981,000
	Estimating Contingency (varies)				63,985,000
	Expected Total Project Cost				312,195,000
	Basis of Estimate				
	<i>Based on Preliminary Design quantities and rates information provided by:</i>				
	* Boffa Miskell quantities & rates schedule dated 02-June-17				



Preliminary Design Est (Updated) Jul-17

Project: Hutt Concept	Details: Preliminary Design Estimate (Final) - Jun-2017
Building: RiverLink Project	

Code	Description	Quantity	Unit	Rate	Total
	<p>* Damwatch Preliminary Design quantities rates cost estimate schedule dated 31-March-17 with rates adjustment as discussed</p> <p>* Opus Preliminary Design Report for Stopbanks report dated June-17 with changes to Services as per GHD & MWH cost estimates</p> <p>* GHD Transport Assessment Working Draft report and Preliminary Design Report (Services) both dated 31-March-17</p> <p>* GWRC Property Forecast Cost Estimate received 23-May-17 and Demolition Cost Estimate for Property received 31-May-17</p> <p>* Beca Preliminary Design Technical Reports for Daly St Interface Structures dated 31-March-17 and Pedestrian Bridge dated 3-April-17</p> <p>* HCC Schedule of Cost dated 3-April-17</p> <p>* GHD Services Preliminary cost estimate for Services Relocation dated 09-June-17</p> <p>* MWH Base cost estimate for Wellington Water WHS Relocation provided by GWRC via email dated 18-April-17</p> <p>General Exclusions</p> <p><i>The following items are not included in the estimate:</i></p> <ol style="list-style-type: none"> 1. Professional Fees 2. Resource and building consent fees 3. Legal fees 4. Financial charges 5. Good and Services Tax 6. Effect of inflation or market conditions from the date of this estimate 7. Funding Risk Allowance 8. 9. 10. 11. <p>Specific Assumptions & Exclusions</p> <p>Refer to the individual Preliminary Design technical reports for specific details of assumptions and exclusions</p> <p><i>River Channel</i></p>				

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Total
	<p>No allowances for the removal of contaminated waste</p> <p>Earthworks measures are based on in-situ and placed volumes. There is no correction for the difference in in-site and placed volumes.</p> <p>Cost included for insitu berm materials to be cut to clean waste, but there are opportunities for inter-project use of this materials with associated cost savings.</p> <p>Cost included to process and cut to clean waste demolition material (reinforced concrete), but there may be a recycling opportunity with moderate cost savings possible</p> <p><i>Stopbanks</i></p> <p>Costs included in the estimate for the inclusion of geogrid on the right bank within fault rupture zone</p> <p>Provisional sum of \$500,000 has been included in the estimate for ground improvement at wall sites</p> <p>It has been assumed that 85% of the existing stopbank material is suitable for re-use</p> <p>An allowance of \$2.1M has been included in the estimate for the demolition and/or removal of remaining building foundations</p> <p><i>Landscaping</i></p> <p>Bulk earth works to form landforms outside of the urban edge not included</p> <p>Public toilets not included</p> <p>No allowance for ongoing maintenance</p> <p><i>Pedestrian Bridge</i></p> <p>The preferred option is a four span bridge of constant structural depth</p> <p>No additional structure is required beyond the stop-banks to connect the pedestrian bridge to Margaret Street or Melling Station</p> <p>Light maintenance vehicles that may need to use the bridge can be accommodated within the assumed pedestrian loading and no special edge barriers are required for vehicle impact</p> <p><i>Melling Bridge</i></p> <p>Melling Bridge Replacement (as per email from Steve Kamo dated 31/1/17) is based on a cost est from Boffa ROC July 2015</p> <p><i>Services Relocations</i></p> <p>The assumption has been made that all water, stormwater & sewer services will be laid 50% in grassed service strip areas and 50% in road/pavement areas.</p> <p>The cost estimate information from the service providers is high level rough order of costs with a significant degree of uncertainty.</p> <p><i>Transport</i></p> <p>High-level intersection form changes and reconfiguration has been assumed in addition to the following assumptions in the preparation of this cost estimate:</p>				

Project: Hutt Concept Building: RiverLink Project	Details: Preliminary Design Estimate (Final) - Jun-2017
--	--

Code	Description	Quantity	Unit	Rate	Total
------	-------------	----------	------	------	-------

	<ul style="list-style-type: none"> • 50% contingency applied to all cost estimates • Only transport related costs included • Intersection configurations are to be refined at later stages so only high levels costs provided at this stage 				
--	--	--	--	--	--

GFA: 0.00 m2

312,195,000

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
Property (includes property acquisition & associated costs, compensation and disposal proceeds & associated costs)						
	Property					
	Property acquisition - email from Steve Kamo dated 23/5/17:					
	Property purchase	1	sum	64,656,000.00		64,656,000
	Landowner compensation	1	sum	14,332,800.00		14,332,800
	GWRC property acquisition costs	1	sum	1,602,000.00		1,602,000
	Non-property specific acquisition cost	1	sum	560,600.00		560,600
	sub total					81,151,400
	Property disposal proceeds	-1	sum	14,833,500.00		-14,833,500
	Less costs of disposal	1	sum	1,101,837.50		1,101,838
	sub total					-13,731,663
	Total GWRC costs (gross)					67,419,738
	Land / Property req'd by HCC:					
	- Stage 1 (\$3.5M)	1	sum	3,500,000		3,500,000
	- Stage 2 (\$1.5M)	1	sum	1,500,000		1,500,000
	Total HCC costs					5,000,000
	Land / Property req'd by NZTA projects	1	sum			0
	Demolition - email from Steve Kamo dated 31/5/17 cost est for Scenario 2 from GWRC (included in Stopbank estimate)	1	sum	2,100,000		
	Section Total					72,419,738

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

River Corridor - Ewan Bridge to Kennedy Good Bridge (includes stopbanks, river channel widening, edge strengthening)

River Channel						
River Channel Widening & Edge Strengthening						
<u>Prelim Design Est from Damwatch dated 31/3/17</u>						
Reach 1 - Ewan Bridge to Mills St						
	Channel	1	sum	453,620.00		453,620
	Left Berms	1	sum	1,435,626.00		1,435,626
	Right Berms	1	sum	1,254,162.00		1,254,162
	Left Bank - Riprap Edge Protection	1	sum	2,347,860.00		2,347,860
	Right Bank - Riprap Edge Protection	1	sum	3,494,885.00		3,494,885
	Left Bank - Vegetative Edge Protections / Bench	1	sum	330,600.00		330,600
	Right Bank - Vegetative Edge Protections / Bench	1	sum	191,660.00		191,660
	sub total					9,508,413
Reach 2 - Mills St to KGB						
	Channel	1	sum	668,090.00		668,090
	Left Berms	1	sum	1,112,334.00		1,112,334
	Right Berms	1	sum	2,637,885.00		2,637,885
	Left Bank - Riprap Edge Protection	1	sum	597,000.00		597,000
	Right Bank - Riprap Edge Protection	1	sum	0.00		0
	Left Bank - Vegetative Edge Protections / Bench	1	sum	255,330.00		255,330
	Right Bank - Vegetative Edge Protections / Bench	1	sum	485,940.00		485,940
	sub total					5,756,579
	Strip topsoil, stockpile, replace and re-grass	100,000	m2	7.50		750,000
	sub total					750,000
Stopbanks						

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
River Corridor - Ewan Bridge to Kennedy Good Bridge (includes stopbanks, river channel widening, edge strengthening) <i>(Continued)</i>						
	Demolition - email from Steve Kamo dated 31/5/17 cost est for Scenario 2 from GWRC					
	- Demolition & Relocation of existing buildings etc	1	sum	2,100,000.00		2,100,000
	sub total					2,100,000
	<u>Prelim Design Est from Opus dated June-17</u>					
	Reach 1: Rightbank - EB to MB					
	Temporary Works	1	sum	226,000.00		226,000
	Stopbank Construction	1	sum	3,273,300.00		3,273,300
	- Remove & dispose residential foundations	1	sum	2,420,000.00	-1.00	-2,420,000
	- Remove & dispose hard materials	6,250	m2	10.00		62,500
	Retaining Walls	800	m2	1,200.00		960,000
	- Allowance for "beautification" at Marsden St	100	m	200.00		20,000
	Ground Improvement	1	sum	250,000.00		250,000
	Access Ramps	2,090	m2	80.00		167,200
	sub total					2,539,000
	Reach 2: Rightbank - MB North					
	Temporary Works	1	sum	145,000.00		145,000
	Stopbank Construction	1	sum	1,012,000.00		1,012,000
	- Remove & dispose hard materials	1,100	m2	10.00		11,000
	Retaining Walls	600	m2	1,200.00		720,000
	Ground Improvement	1	sum	150,000.00		150,000
	Access Ramps	0	m2	80.00		0
	sub total					2,038,000
	Reach 3: Leftbank - EB to MB					
	Temporary Works	1	sum	226,000.00		226,000
	Stopbank Construction	1	sum	1,234,150.00		1,234,150
	- Remove & dispose residential foundations	1	sum	180,000.00	-1.00	-180,000

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

River Corridor - Ewan Bridge to Kennedy Good Bridge (includes stopbanks, river channel widening, edge strengthening) *(Continued)*

	- Remove & dispose hard materials	2,085	m2	10.00		20,850
	Retaining Walls	100	m2	1,200.00		120,000
	Ground Improvement	1	sum	30,000.00		30,000
	Access Ramps	0	m2	80.00		0
	sub total					1,451,000
	Reach 4: Leftbank - MB to Mills St					
	Temporary Works	1	sum	146,000.00		146,000
	Stopbank Construction	1	sum	2,031,550.00		2,031,550
	- Remove & dispose hard materials	12,565	m2	10.00		125,650
	Retaining Walls	230	m2	1,200.00		276,000
	Ground Improvement	1	sum	70,000.00		70,000
	Access Ramps	810	m2	80.00		64,800
	sub total					2,714,000
	Section Total					26,856,992

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Landscape (includes promenade frontage, carpark, street, MSE wall, service lane, planting, wetlands, landscape features)

Landscaping						
Daly Street Service Lane						
<u>Prelim Design Est by Beca (see sep workbook)</u>						
	MSE Wall/Inspection service lane 5m wide	390	m	27,500.00		10,725,000
<u>Prelim Design Est by GHD for Transport Elements date 31/3/17</u>						
Pavement Reinstatement						
	- 150 basecourse	500	m3	150.00		75,000
	- 300 sub-base	1,000	m3	100.00		100,000
	- 50 asphalt	1,500	m2	60.00		90,000
	- Road markings	1	sum	20,000.00		20,000
Footpaths, vehicle crossings and K&C						
	- Kerb & channel	1,200	m	100.00		120,000
	- 100 basecourse	120	m3	150.00		18,000
	- 30 asphalt	1,200	m2	30.00		36,000
	P&G	1	sum	50,000.00		
	Contingency 50%	1	sum	254,500.00		
	sub total					11,184,000
HCC - Making Places						
Dudley St - upgrade as a shared space						
	- Light poles, paved surface, trees and furniture	1	sum	1,200,000.00		1,200,000
Andrews Ave - upgrade as a shared space						
	- Light poles, paved surface, trees and furniture	1	sum	3,500,000.00		3,500,000
Laneways incl lighting, paving and signage						

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
Landscape (includes promenade frontage, carpark, street, MSE wall, service lane, planting, wetlands, landscape features) <i>(Continued)</i>						
	- Daly St / Dudley St	1	sum	150,000.00		150,000
	- Dudley / High / Queens / Knight, High/ Daly, High / Rutherford	300	m	2,000.00		600,000
	Daly St service lane	3,870	m	1,000.00		
	Promenade					
	- Paving	8,400	m2	340.00		
	- Lighting	84	no	10,000.00		
	- Misc lighting	1	sum	160,000.00		
	- Street furniture	70	no	10,000.00		
	- Trees & planters	1	sum	1,000,000.00		
	- Walking connections	1	sum	2,800,000.00		
	Roading					
	Daly St - reconfiguration	1	sum	500,000.00		
	Services	1	sum	500,000.00		
	Pedestrian Bridge	1	sum	7,000,000.00		
	sub total					5,450,000
	Landscaping incl furniture, structures and ecology plantings					
	<u>Prelim Design Est from Boffa Miskell dated 19/5/17</u>					
	Urban Edge					
	- City edge Promenade (concrete)	3,600	m2	176.00		633,600
	- City edge Promenade (timber clad lid)	1,990	m2	130.00		258,700
	- Feature furniture / structural elements	1	sum	2,000,000.00		2,000,000
	- Lighting	1	sum	750,000.00		750,000
	- River edge steps	200	m2	447.00		89,400
	- Sculptural grading	20,970	m2	150.00		3,145,500

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
Landscape (includes promenade frontage, carpark, street, MSE wall, service lane, planting, wetlands, landscape features) <i>(Continued)</i>						
	- Tree planting to promenade	60	no	1,000.00		60,000
	sub total					6,937,200
	Pathways					
	- Primary path (concrete)	7,496	m2	176.00		1,319,296
	- Secondary path (concrete)	10,000	m2	176.00		1,760,000
	- Tertiary path (gravel)	17,500	m2	85.00		1,487,500
	- Gravel road (Harcourt Werry Dr)	100	m	50.00		5,000
	sub total					4,571,796
	Furniture					
	- General furniture elements	1	sum	800,000.00		800,000
	- Cycle infrastructure	1	sum	750,000.00		750,000
	- Lighting (primary pathway)	1	sum	500,000.00		500,000
	sub total					2,050,000
	River Access					
	- Timber platforms	10	sum	10,000.00		100,000
	- River ramp	58	m2	550.00		31,900
	- Wetland outlet bridges	10	no	100,000.00		1,000,000
	sub total					1,131,900
	Stopbank Access	1	sum	2,600,000		2,600,000
	sub total					2,600,000
	Carparking					
	- New in corridor	5,020	m2	80.00		401,600
	- Modified existing riverside	11,340	m2	25.00		283,500
	sub total					685,100
	Landscape & Planting					
	- Shrub planting	14,573	m2	50.00		728,650

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
Landscape (includes promenade frontage, carpark, street, MSE wall, service lane, planting, wetlands, landscape features) <i>(Continued)</i>						
	- Tree planting (Harcourt Werry Dr)	150	no	220.00		33,000
	- Enrichment trees	1,400	no	22.00		30,800
	- Tree planting with understorey	550	no	24.00		13,200
	- Tree planting with no understorey	120	no	24.00		2,880
	- Formal tree planting	100	no	200.00		20,000
	- Tree planting for cultural reasons	40	no	200.00		8,000
	- River edge planting	862	m2	7.00		6,034
	- River edge enrichment planting	680	m2	7.00		4,760
	- River edge rip rap planting	3,700	m2	10.00		37,000
	- Terrestrial planting	35,000	m2	7.00		245,000
	- Tree planting to bush areas (Ecology planting)	33,916	m2	9.00		305,244
	sub total					1,434,568
	Ecology In-stream					
	- In-channel boulders	25	no	500.00		12,500
	- Log structures	15	no	100.00		1,500
	- Rip rap spurs	150	m2	750.00		112,500
	Ecology Wetlands					
	- Earthworks	12,600	m3	60.00		756,000
	- Liner	13,000	m2	8.00		104,000
	- Additional rip rap	400	m3	50.00		20,000
	- Inlet structure	5	no	12,500.00		62,500
	- Outlet structure	5	no	5,000.00		25,000
	- Soil mix	13,000	m2	40.00		520,000
	- Planting	13,000	m2	15.00		195,000
	sub total					1,809,000
	Wider Project Opportunities					

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
Landscape (includes promenade frontage, carpark, street, MSE wall, service lane, planting, wetlands, landscape features) <i>(Continued)</i>						
	- Informal sports fields	8,400	m2	10.00		84,000
	- Recreation infrastructure	1	sum	1,000,000.00		1,000,000
	- Linear skate path	200	m2	400.00		80,000
	- Park'n'Ride - Pharazyn St	8,640	m2	80.00		691,200
	- Sculpture	5	no	1,000,000.00		5,000,000
	sub total					6,855,200
	Section Total					44,708,764
	<p>Note - HCC Making Places, these figures were taken from the schedule provided and now exclude margins & costs included elsewhere as noted.</p>					

Project: Hutt Concept Building: RiverLink Project	Details: Preliminary Design Estimate (Final) - Jun-2017
--	--

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Melling Bridge Replacement

	Melling Bridge Replacement					
	Melling Bridge Replacement - as per email from Steve Kamo dated 31/1/17 cost est from Boffa ROC July 2015	1	sum	28,400,000		28,400,000
	Section Total					28,400,000

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Pedestrian Bridge

	<p><u>Pedestrian Bridge</u></p> <p>Based on Waterview Bridges as per Grant Welch email dated 5-Apr-17</p> <p style="text-align: right;">rate / m2</p>	720	m2	13,000.00		9,360,000
	<p>Hendon Footbridge</p> <p>Arched 'gateway' bridge, very similar cross section but with arch & suspension cables to support the deck. Also has diamond shaped piers and angled balustrades</p> <p>Total 252m long (abutment to abutment) x 3m wide</p> <p>\$7.1m estimated final cost</p> <p style="text-align: right;">rate / m2</p>	756	m2	9,391.53		
	<p>Alford St Bridge</p> <p>Another 'gateway' bridge. Structure has been modified to be organic looking - e.g. wave in bridge deck & balustrades, and piers to appear like trees</p> <p>Total 90m long x 3.5m wide</p> <p>\$4.6m estimated final cost. Probably around \$800k spent on changes to the aesthetics (piers, curved deck, fancy balustrade)</p> <p>Difficult ground conditions in this site. It crosses a stream and is on an active slip. So could be similar to your one in that respect</p> <p style="text-align: right;">Final Cost rate / m2</p> <p style="text-align: right;">Final Cost less addt'l design cost rate / m2</p>	315	m2	14,603.17		
		315	m2	12,698.41		
	<p>Note - the costs above are for direct work only, so exclude design, P&G, margins, risk etc</p> <p style="text-align: right;">Section Total</p>					9,360,000

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Services Relocation (includes Three-water Services Mains and Service Providers (electricity, fibre, gas etc))

Services Relocations						
Three-Water Services Main						
<u>Prelim Design Est by GHD for Wastewater & Water Services dated 9 June 17</u>						
Services Mains						
	- Marsden St realignment of:	1	sum	614,000.00		614,000.00
	* 100 dia watermain					
	* 300 dia sewer main					
	* 750 stormwater rmain					
	- Replace Daly St 100 dia watermain	1	sum	113,000.00		113,000.00
	- Southern High St / Queens Dr	1	sum	348,000.00		348,000.00
	* 300 dia watermain					
	* 300 dia sewer main					
	* 750 stormwater rmain					
	- Mills St termination of services	1	sum	21,000.00		21,000.00
	sub total					1,096,000
Service Providers - Services Relocations						
<u>Prelim Design Est by Opus for Stopbank dated 8 June 17</u>						
Service Provider						
	- Chorus	1	sum	1,550,500.00		1,550,500.00
	- Stormwater (includes Water, Sewer & Stormwater)	1	sum	8,200,000.00		
	- Powerco	1	sum	7,000,000.00		7,000,000.00
	- Vodafone	1	sum	115,000		115,000.00
	- Wellington Electricity	1	sum	10,576,000.00		10,576,000.00

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
Services Relocation (includes Three-water Services Mains and Service Providers (electricity, fibre, gas etc)) <i>(Continued)</i>						
	- HCC Fibre	1	sum	2,242,500.00		2,242,500.00
	- LINZ	1	sum	50,000.00		50,000.00
	sub total					21,534,000
	Western Hill Main Sewer Relocation (Opportunity Cost)					
	- P&G	1	sum	505,991.00		
	- Supply pipe material	1,770	m	665.70		1,178,289.00
	- Lay pipe	1	sum	2,618,152.00		2,618,152.00
	- Pipe jacking, mobilisation, demobilisation	1	sum	20,000.00		20,000.00
	- Pipe jacking construction, pits, reinstatement	60	m	7,000.00		420,000.00
	- Reinstatement - major road	844	m	300.00		253,260.00
	- Reinstatement - minor road	400	m	250.00		100,000.00
	- Reinstatement - berm	452	m	100.00		45,210.00
	- Relocating services	1	sum	50,000.00		
	- Manholes	21	no	15,000.00		315,000.00
	- Connection to existing network	5	sites	30,000.00		150,000.00
	- Unknowns (contingency)	1	sum	252,996.00		
	- Site investigation (potholes, survey, geotech)	1	sum	252,996.00		
	- Consultant costs (planning, design, admin etc.)	1	sum	389,613.00		
	- WW costs (management)	1	sum	581,536.00		
	sub total					5,099,911
	Northern Sewer Relocation - Pharazyn Street	1	sum	450,000.00		450,000.00
	sub total					450,000
	Section Total					28,179,911

Project: Hutt Concept Building: RiverLink Project	Details: Preliminary Design Estimate (Final) - Jun-2017
--	--

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Services Relocation (includes Three-water Services Mains and Service Providers (electricity, fibre, gas etc)) *(Continued)*

	<p>* Note - Opus email 5/4/17 confirm that both the Gas and Western Hills Trunk Sewer cost estimates are included within the report:</p> <p>Trunk Sewer - the figure for this was taken from the MWH report and excludes margins & costs included elsewhere as noted.</p> <p>Gas - the estimate was obtained from Powerco, that had later been revised upwards.</p>					
--	---	--	--	--	--	--

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Transport Streetscape (includes local road network changes & Marsden St realignment)

Transport Streetscape						
<u>Prelim Design Est by GHD for Transport Elements date 31/3/17</u>						
Local Road Network Changes (Reconfigurations / Alterations)						
	High St / Daly St reconfig	1	sum	115,000		115,000
	Daly St / Dudley St / Andrews Ave reconfig	1	sum	270,000		270,000
	High St / Andrews Ave reconfig	1	sum	320,000		320,000
	Daly St / Dudley St / Margaret St reconfig	1	sum	60,000		60,000
	Daly St service lane entrance (nth of Margaret St)	1	sum	65,000		65,000
	Dudley St - 2-way alterations	1	sum	50,000		50,000
	High St / Andrews Ave alterations	1	sum	50,000		50,000
	P&G	1	sum	150,000.00		
	Contingency 50%	1	sum	540,000.00		
	sub total					930,000
Marsden Street Road Realignment (North of Bridge St)						
Pavement						
	- Cut to subgrade, disposal of material	1,400	m3	50.00		70,000
	- Saw cutting to seal to 50 deep	50	m	50.00		2,500
	- 150 basecourse	390	m3	150.00		58,500
	- 300 sub-base	800	m3	100.00		80,000
	- 50 asphalt	2,600	m2	60.00		156,000
Footpaths, vehicle crossings and K&C						
	- Kerb & channel	500	m	100.00		50,000
	- Trim to subgrade	600	m2	7.00		4,200
	- 100 basecourse	80	m3	150.00		12,000

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
Transport Streetscape (includes local road network changes & Marsden St realignment) <i>(Continued)</i>						
	- 30 asphalt	600	m2	30.00		18,000
	- Saw cutting to seal to 50 deep	20	m	10.00		200
	Traffic Services					
	- New streetlight	1	sum	50,000.00		50,000
	- New signage	1	sum	5,000.00		5,000
	- Road markings	1	sum	20,000.00		20,000
	P&G	1	sum	50,000.00		
	Contingency 50%	1	sum	254,500.00		
	sub total					526,400
	Section Total					1,456,400



Elemental Summary

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Preliminary & General (Includes traffic management and temporary works)

<u>Preliminary & General</u>						
	Property	0	%	72,419,740		0
	River Corridor	15	%	26,857,000		4,028,550
	Landscape	15	%	44,708,770		6,706,316
	Melling Bridge	15	%	28,400,000		4,260,000
	Pedestrian Bridge	15	%	9,360,000		1,404,000
	Services	15	%	28,179,911		4,226,987
	Transport	15	%	1,456,400		218,460



Elemental Summary

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Contractor's Margin

Contractor's Margin						
	Property	0	%	72,419,740		0
	River Corridor	10	%	30,885,550		3,088,555
	Landscape	10	%	51,415,086		5,141,509
	Melling Bridge	10	%	32,660,000		3,266,000
	Pedestrian Bridge	10	%	10,764,000		1,076,400
	Services	10	%	32,406,898		3,240,690
	Transport	10	%	1,674,860		167,486

Project: Hutt Concept
Building: RiverLink Project

Details: Preliminary Design Estimate (Final) - Jun-2017

Code	Description	Quantity	Unit	Rate	Factor	Total
------	-------------	----------	------	------	--------	-------

Estimating Contingency (varies)

<u>Estimating Contingency</u>						
	Property	7.5	%	72,419,740		5,431,481
	River Corridor	30	%	33,974,105		10,192,232
	Landscape	30	%	56,556,594		16,966,978
	Melling Bridge	30	%	35,926,000		10,777,800
	Pedestrian Bridge	30	%	11,840,400		3,552,120
	Services					
	- Three-water	30	%	1,386,440		415,932
	- Service Providers	50	%	27,240,510		13,620,255
	- Western Hills Sewer Main	30	%	6,451,387		1,935,416
	- Northern Length Sewer Main	30	%	569,250		170,775
	Transport	50	%	1,842,346		921,173

312,190,917