

INFORMATION

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Matamata Piako District Council commissioned this addendum report to the Te Aroha Spa Business Case in order to determine what if any impact the COVID-19 will have on the project. The addendum focuses on post COVID-19 visitor impacts, capital cost changes, a review of financial models, an examination of new or changed project risks (and potential mitigation steps), economic impacts and employment contributions that can aid the COVID-19 recovery.





POST COVID-19 UPDATE

2.1 OUTLINE OF COVID-19 VISITATION IMPACTS

The arrival of COVID-19 into New Zealand generated a significant government response which saw the country placed into lockdown and the borders heavily restricted. These measures saw the international tourism industry effectively shut overnight.

Up until these restrictions were implemented tourism was a significant part of the New Zealand economy, contributing over 20% of exports, 10% of GDP and employing nearly 400,000 people directly and indirectly. Despite the catastrophic impacts of COVID-19 on industry employment, tourism is expected to recover within 3-4 years and employment of New Zealanders will be a priority for government and industry throughout this time.

It is likely that New Zealand's borders will be closed to all but returning citizens and residents (and a small number of international visitors with exemptions) for some time. These restrictions may be eased based on the success of other countries in controlling the virus, but this is likely to be on a geographic basis (travel bubbles with other countries). Wider border access is unlikely until a vaccine is discovered and implemented.

Domestic travel is therefore likely to increase as New Zealanders have their traditional international travel patterns restricted. It is hypothesised that one of our first travel bubbles is likely to be formed with Australia. Should this occur and Australians have restricted access to other nations, New Zealand is likely to receive even greater numbers of trans-Tasman visitors than has historically been the case (at least in the short to medium term).

2.2 A CAPITAL COST STATEMENT

The revised cost estimate issued 17th June 2020 has updated costs to 2nd quarter 2020 for the Spa precinct work packages. Given the current post-covid construction market, it is envisaged that these cost estimates would be representative of tendered costs through to the 4th Quarter 2020. The Spa complex and carparking are assumed to be tendered circa 3rd quarter 2021 and construction completed 1st quarter 2023; therefore an additional escalation allowance at 4% p.a. has been included for this work package.

The updated costings for the core spa development (spa, landscaping and carparking) are in line with earlier cost estimates at \$19.2 million (see Appendix 1). Costs for the wider precinct have been updated to circa \$7 million and can be undertaken by Council in the future as funding becomes available (see Appendix 1).

2.3 A REVIEW OF THE FINANCIAL MODEL

A review of the financial model was undertaken by Deloitte and Visitor Solutions. This looked at the forecast impact of COVID-19 on capital costs, visits, COVID-19 pricing, operating costs and funding.

CAPITAL COST

The indicative capital cost of the proposal was summarised in the Business Case in Table 5.1 (set out below). The indicative capital cost is in today's dollars. Also included is an estimate assuming the facilities are built in three years, allowing for capital cost escalation at 4% per annum, based on Quantity Surveyor advice.

Business Case Table 5.1: Te Aroha Spa and Pool Facilities - Indicative Capital Cost

NZ000's	Option B	Life (years)
Land	Owned by MPDC	
Building	1 0,693	50
Plant	91 6	20
Pools	1,089	15
FFE	316	8
Parking	1,709	10
Services	2,658	50
Estimated Cost in Todays \$	1 7,381	
Escalation - say 3 years at 4% pa	1,794	
Estimated Cost when completed in June 2023	19,176	

Source: Rough Order of Cost Estimate for Te Aroha Spa - MPM/ Maltbys, Quantity Surveyors, 23 Jan 2020

MPM Quantity Surveyors have reviewed their cost estimates and believe they are still appropriate (see Section 2.2 above). No adjustments were required in the financial model.

VISITS

The level of patronage and price are key to the facility's viability. The Business Case forecast a volume of 6,000 spa treatment guests and 70,000 pool guests in the first year, with visitor numbers increasing 6% per annum, until they reach facility capacity (Table 5.2).

Business Case Table 5.2: Visitation Forecasts

			F							
	FY18	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	Capacity
Spa Treatment Guests	2,800	6,000	6,360	6,742	7,146	7,503	7,879	8,272	8,603	18,220
Pool Guests	29,000	70,080	74,285	78,742	83,466	87,640	92,022	96,623	1 00, 488	124,000

As part of the Business Case sensitivities were run at volumes of plus / minus 20%. In addition, sensitivities were run at prices of plus / minus 10% and minus 20%. The facility was forecast to still be viable under these scenarios, though the business was expected to require operational support in the early years. At volumes less 40% the business could still payback its capital cost over the life of the facility, but it was expected to require ongoing operational support for the first 16 years.

As noted in the original Business Case, the key and largest market for the Te Aroha Spa Development is believed to be domestic, from within the "Golden Triangle" included in the area of Auckland, Hamilton and Tauranga.

The domestic market is unrestricted by COVID-19 now that New Zealand has moved to Level 1. Though there may be some reduction in disposable income in parts of the domestic market in those areas, the Te Aroha Spa development is not expected to be completed for two years at least. It is believed that the middle and upper earning target group for the Te Aroha Spa will be less affected by the COVID-19 impact on the economy and that the economy will have largely recovered by the time the Spa is completed.

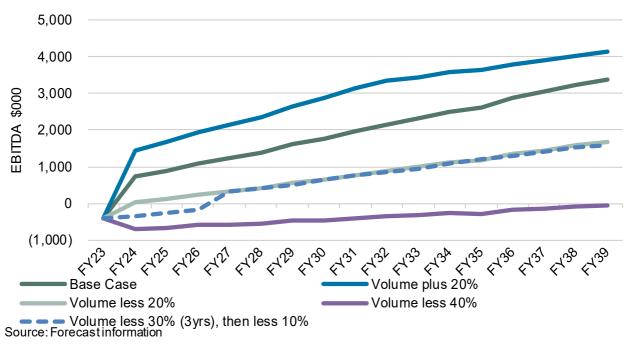
The next largest market expected for the Te Aroha Spa is the Australian tourist. As discussed above there are currently discussions of a trans-Tasman travel bubble including New Zealand and Australia. Again, by the time the Spa is completed it is believed the Australian market will have largely unrestricted access to New Zealand.

In the unlikely event COVID-19 is still restricting border access and travel at the time of the spa opening higher domestic travel volumes (and potentially trans-Tasman volumes) are likely to offset any losses from other markets.

Therefore, the original visitor forecast from Visitor Solutions and Spa Evolution are still believed to be reasonable.

As a further check a sensitivity was run at base volumes of less 30% in the first three years, then less 10% after that. This indicates that the business would require some funding assistance for 3 years, before becoming profitable. The payback period is forecast at 27 years (Addendum Table 1).





PRICING

In the Business Case pricing was based on similar facilities and the market knowledge of Visitor Solutions and Spa Evolution.

Proposed pricing was:

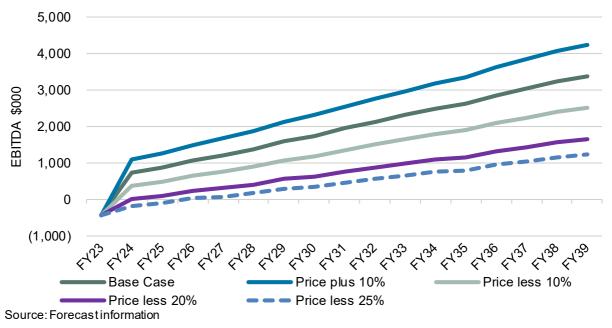
- Average Spa Treatment lasting 75 minutes: \$201 including GST.
- Average Private Pool fee: \$40 per person including GST.

Pricing is assumed to increase by the CPI each year.

Again, by the time the Spa development is completed it is believed the economy for the target group will have improved. Therefore, the forecast pricing is considered reasonable.

Scenario analysis on lower pricing was included in the Business Case, which showed the Spa development still had a reasonable payback period even at a 10% and a 20% reduction in pricing. A more conservative 25% price reduction scenario has been run for the purposes of the COVID-19 Addendum which indicates that the business remains viable although it may need a small amount of operating support in the first two years of operation, before becoming profitable. The payback period extends from 14 years in the base case to 34 years (See Addendum Table 2).





OPERATING COSTS

A review of operating costs indicates they are still reasonable in a post COVID-19 New Zealand. Opportunities do however exist to refine costs if required to match lower visitation (see Section 2.4 and Appendix 3).

FUNDING

The Business Case was based on 50% of the funding (\$9.4 million) being a grant from the Provincial Growth Fund. Due to COVID-19 the MPDC recently approved the submission of a PGF application for \$16 million of the \$19.8 million total cost.

This does not change the forecast financial viability of the proposed Spa development but would mean it would have a lesser financial impact on MPDC, who expect some adverse financial impacts from COVID-19.

PROJECTED FINANCIAL POSITION

The analysis undertaken indicates that the original financial modelling for the spa outlined in the Business Case remains valid in a post COVID-19 environment. This is primarily because estimates were based on realistic projections that were heavily focused on domestic (inter regional), and to a lesser degree trans-Tasman, visitation. The spa development is also projected to open in an economic recovery phase. Based on available data and the estimated volumes, pricing, operational costs, and capital costs, the development of the spa and pools in Te Aroha are still considered financially viable.

2.4 REVIEW OF THE PROJECT'S RISK PROFILE AND MITIGATION OPTIONS

A review has been undertaken of the post COVID-19 risk and mitigation options. The spa risks and mitigation options in Section 4.3 of the Business Case were found to be valid in a post COVID-19 environment.

Additional consideration which could be heightened in a post COVID-19 environment were considered under both the design and construction phase and the operational phase. In reality these risks are not new although they may be potentially magnified by COVID-19 (see Addendum Table 1 and 2 below).

DESIGN AND CONSTRUCTION PHASE

Spa Risks	Potential Severity	Likelihood	Mitigation Options
Financial Stability of Design Team and Construction Company.	Moderate to severe given: This may lead to lead companies going into liquidation and the project pausing.	Relatively unlikely given: Increased focus will be placed on selecting appropriate companies.	 Bring in a specialist project manager. Take care in selecting the architectural team and lead construction company. Use a selected tender process and carefully vet potential organisations' financial stability and track record in advance. See Business Case Management Case section for further mitigation steps.
Construction Risk – poor construction leading to building having operational issues.	Moderate to severe given: Remediation after the fact will likely be more expensive.	Relatively unlikely given: Proposed project management approach (see Management Case).	 Employ a qualified and experienced Project Manager. Implement strong project management supervision over contractors. Be aware of past problems with "low ball' construction tenders leading to cost cutting in other areas.

Addendum Table 1: DESIGN AND CONSTRUCTION PHASE - Spa risks and mitigation options.

OPERATIONAL PHASE

Addendum Table 4.2 OPERATIONAL PHASE - Spa risks and mitigation options.

Spa Risks	Potential Severity	Likelihood	Mitigation Options
Guest numbers for pool & spa do not meet budget expectations	Moderate to severe given: This may have significant and negative revenue implications.	Low to moderately likely given: There is already significant turn-away business at the existing spa property. The market is growing within the catchment area. The Spa would open after the works	 Ensure the property brings on the Spa Director early enough to assist in executing a robust spa/pools sales & marketing plan alongside a specialist sales and marketing / PR company. Structure staffing levels to match expected demand and ramp up staff capacity over time (see Appendix 3).

Spa Risks	Potential Severity	Likelihood	Mitigation Options
		impacts of the COVID-19 restriction have passed.	 Set good initial marketing budgets and start marketing pre-opening. Have a specialist spa consultant or company conduct ongoing financial oversight for 12 months post-opening to assess monthly business and suggest / train the operational team in property-specific strategies for improvement.

The majority of mitigation approaches in the design and construction phase are focused on appointing an experienced project manager and undertaking appropriate due diligence and project structuring.

Should COVID-19 result in a decrease in visitation below what is projected and other mitigation initiatives such as increased marketing do not deliver the necessary improvements, staffing numbers can be altered over the required period to match demand. Appendix 3 outlines how this could be achieved.

2.5 EXPANSION OF THE PROJECT'S ECONOMIC / SOCIAL IMPACTS

Market Economics calculated that under the base case the cost benefit ratio (CBR) is 1.01 (generating positive benefits). The spa would need to experience a 20% drop in both visitor numbers and spending to see the CBR drop to a CBR of 0.94 – below one meaning that the costs outweigh the benefits.

Based on the work of the wider team, the substantial drop in the visitor numbers is considered unlikely given the spas target markets are primarily domestic and Australian and any decline would need to be prolonged because the spa would only start to operate in 2-3 years' time.

It is also worth noting that the spa development will have an immediate, and local, impact on the local labour force. These impacts will be in the form of supporting jobs and injecting money into local households during the construction phases. This will be important in the economic recovery period.

2.6 CONSTRUCTION EMPLOYMENT

Job creation during the construction period was also recalculated (to incorporate the parking development and the supply chain). It was found that the spa project will provide an average of 28.5 full time equivalent jobs for 13 months in pre-construction, an average of 83 in construction for 18 months and 20 in the supply chain for 18 months (a total 131.5 FTE jobs).

2.7 CONCLUSION AND RECOMMENDATIONS

Having reviewed the Business Case in light of the likely impacts from COVID-19 it has been concluded that the original financial modelling still stands. This is primarily because of the focus of the Spa being

on domestic and to a lesser extent trans-Tasman visitors. The original spa market positioning was well conceptualised to withstand impacts from events such as COVID-19.

Additional sensitivity analysis indicates that even if numbers are softer than projected the project is well positioned to cope.

The capital costs outlined in the Business Case have also been re calculated and found to be appropriate in the current market. A recalculation of the project's job creation potential to incorporate both the car park development and the inclusion of supply chain jobs, has identified that the project will generate a total 131.5 FTE jobs to assist with the COVID-19 recovery.



APPENDIX 1: CAPITAL COST UPDATE

mpm projects

Te Aroha Spa Development

Rough Order of Cost Estimate

17/06/2020 R1

MPM Projects Limited, 6 Kirk Street, Grey Lynn, Auckland PO Box 3257, Auckland <> Phone (09) 303 4920

mpm projects

Te Aroha Spa Development

Rough Order of Cost Estimate - June 2020 Clarifications & Exclusions

Clarifications

Estimates are based on the following :

PENZL Schedule of Spaces dated 29/08/19

Boffa Miskell Site zoning plan dated 3 Sept Rev A

Estimates assume a traditional procurement process

Provisional Allowances have been made where noted for items where scopes have been assumed.

Additional escalation costs have been allowed for the Spa complex development to a completion date of 1st Quarter 2023.

No escalation costs have been allowed beyond 2nd Quarter 2020 for the Spa Precinct items

Exclusions

The following are excluded from these estimates:

Boffa Miskell Plan Key references as follows:

4 I -Site

- 5 Existing Public parking
- 6 On street Parking
- 7 Existing playground
- 8 Rotunda
- 9 Cadmen Bathhouse
- 13 Existing pool
- 14 #2 Bathhouse

16 Low impact Zip line/ropes experience

- 17 Shared space road zone
- 18 Key Connection between domain & river
- 21 Minigolf course
- 22 Café & Function Venue

Site specific allowances including geotech issues

Development Contributions & Infrastructure Growth charges

Land, Finance & Legal costs

GST

Te Aroh	a Spa Precinct							mp	m pro	ojects
Rough C	order of Cost Estimate - June 2020								-	
Map Ref	Item	Qty	Unit	Rate	Total		Professional Fees & consents	Contingency	Total	Rounded Total
1	Destination Playground						16.5%	10%		Total
	Demolition & site clearance		Sum	40,000	40,000					
	Provisional Sum Allowance for Destination Playground	1	Sum		1,000,000					
	Provisional Sum Allowance for Landscaping	1	Sum	200,000	200,000	1,240,000	204,600	288,920	1,733,520	1,700,000
2	Croquet Lawns									
	Demolition & site clearance	1	Sum	70,000	70.000					
	Relocate existing clubrooms		Sum	20,000	20,000					
	x1 new croquet lawn	1	Sum	160,000	160,000					
	Provisional allowance to make good x3 existing lawns		Sum	75,000	75,000	325,000	53,625	37,863	416,488	450,000
	Event Area									
3	Demolition & site clearance	1	Sum	10,000	10.000					
	Grade & regrass lawn areas	1	Sum	80,000	80,000					
	Provisional Sum Allowance for Landscaping	1	Sum	100,000	100,000					
	Provisional allowance for BBQ sites x 4		Sum	25,000	100,000	290,000	47,850	33,785	371,635	400.000
		- 4	Sum	23,000	100,000	290,000	47,000	55,765	571,055	400,000
10	New Spa Complex (Refer separate Estimate)									
11	Service Zone									
	Allowance for new service access road	1	Sum	200,000	200,000					
	Provisional Sum Allowance for Landscaping		Sum	50,000	200,000	250,000	41,250	29,125	320,375	350,000
	Provisional Sum Allowance for Landscaping	- 1	Sum	50,000	50,000	230,000	41,230	29,125	320,375	350,000
12	Remove existing Spa Building									
	Demolition & site clearance	1	Sum	65,000	65,000					
	Allowance for making good tracks	1	Sum	20,000	20,000					
	Provisional Sum Allowance for Landscaping	1	Sum	75,000	75,000	160,000	26,400	18,640	205,040	200,000
15	Carparking									
	Allowance for Carparking (4Nr locations)									
	Included within New Spa Complex (refer separate estimate)									
40	Outomouth and During									
19	Gateway Threshold Points Provisional Sum Allowance for Sculptures/gateway treatments	2	Sum	200,000	400,000	400,000	66,000	46,600	512,600	500,000
	Trovisional outri Allowance for occuptures/gateway treatments	2	oum	200,000	400,000	400,000	00,000	40,000	512,000	500,000
20	Reinstate maori ngawha as key node point									
	Provisional Sum Allowance for making good building		Sum	150,000	150,000					
	Provisional Sum Allowance for pathway realignments		Sum	150,000	150,000					
	Provisional Sum Allowance for Landscaping	1	Sum	50,000	50,000	350,000	57,750	40,775	448,525	500,000
23	Relocation of Services Shed		-							
	Provisional Sum Allowance for relocating services shed	1	Sum	170,000	170,000	170,000	28,050	19,805	217,855	250,000
			0	500.000	500.000	500.000	00.500	50.050	040 750	050.000
	Provisional Sum Allowance for site wide landscaping	1	Sum	500,000	500,000	500,000	82,500	58,250	640,750	650,000
	Te Aroha Spa Precinct Sub Total									\$ 5,000,000
	Site Interpretation									
	Refer Separate Budget Allowance for Interpretation, wayfinding signage, maps, themed installations sculpture installations									
	Option "A"	1	Sum	2,820,000	2,820,000	\$2,820,000				
		- ·	- Carl	_,0_0,000	_,020,000	,,,000				

Te Aroha Spa Development		m	ipm p	orojeo	cts
Rough Order of Cost Estimate Spa Complex Option B (based on 124m2 pool surface area,	no heat pu	(amp)			
BUILDING					
RECEPTION/RETAIL/WAITING/KITCHENETTE		m2	4,500	337,500	
MULTI-USE TREATMENT ROOM-WITH SHOWER		m2	6,700	87,100	
MULTI-USE TREATMENT ROOM-WITH SHOWER		m2	6,700	87,100	
MULTI-USE TREATMENT ROOM-WITH SHOWER		m2	6,700	87,100	
MULTI-USE TREATMENT ROOM-WITH SHOWER		m2	6,700	87,100	
MULTI-USE TREATMENT ROOM-WITH SHOWER		m2	6,700	87,100	
MULTI-USE TREATMENT ROOM-WITH SHOWER COUPLES TREATMENT ROOM	13 26	m2 m2	6,700 6,700	87,100 174,200	
COUPLES TREATMENT ROOM		m2	6,700	174,200	
BOH SPA AREAS		m2	4,500	675,000	
LAUNDRY		m2	4,500	67,500	
DRYING ROOM		m2	4,500	90,000	
RELAXATION AREAS	40	m2	5,700	228,000	
FEMALE SPA CHANGE/WC/SHOWERS	48	m2	6,600	316,800	
MALE SPA CHANGE/WC/SHOWERS		m2	6,600	316,800	
FEMALE HAMAM	25	m2	9,000	225,000	
MALE HAMAM	25	m2	9,000	225,000	
FEMALE EXPERIENCE SHOWER	8	m2	7,600	60,800	
FEMALE EXPERIENCE SHOWER	8	m2	7,600	60,800	
MALE EXPERIENCE SHOWER	8	m2	7,600	60,800	
MALE EXPERIENCE SHOWER	8	m2	7,600	60,800	
FEMALE SAUNA	16 16	m2 m2	8,000	128,000	
MALE SAUNA FEMALE STEAM ROOM		m2	8,000 8,200	128,000 131,200	
MALE STEAM ROOM	16	m2	8,200	131,200	
OUTDOOR POOL 1	-	m2	7,500	-	
OUTDOOR POOL 2	-	m2	7,500	-	
STANDARD PRIVATE POOL 1	17	m2	7,500	127,500	
STANDARD PRIVATE POOL 2	17	m2	7,500	127,500	
STANDARD PRIVATE POOL 3	17	m2	7,500	127,500	
STANDARD PRIVATE POOL 4	17	m2	7,500	127,500	
STANDARD PRIVATE POOL 5	17	m2	7,500	127,500	
STANDARD PRIVATE POOL 6		m2	7,500	127,500	
STANDARD PRIVATE POOL 7		m2	7,500	127,500	
STANDARD PRIVATE POOL 8		m2	7,500	127,500	
DELUXE PRIVATE POOL 1		m2	7,500	150,000	
DELUXE PRIVATE POOL 2 O/D EXPERIENCE SHOWER 1		m2	7,500 7,600	150,000	
O/D EXPERIENCE SHOWER 1	-	m2 m2	7,600	-	
WATER PLANT		m2	2,700	- 108,000	
BUILDING PLANT	115		2,700	310,500	
GENERAL SERVICES		m2	2,700	67,500	
GENERAL STORE		m2	2,700	135,000	
RUBBISH		m2	2,700	54,000	
CIRCULATION	280	m2	4,500	1,260,000	
Gross floor area	1,378	m2			
POOLS					
OUTDOOR POOL 1	1	Sum	120,000	120,000	
OUTDOOR POOL 2		Sum	120,000	120,000	
STANDARD PRIVATE POOL 1	1	Sum	50,000	50,000	
STANDARD PRIVATE POOL 2		Sum	50,000	50,000	
STANDARD PRIVATE POOL 3	1	Sum	50,000	50,000	
STANDARD PRIVATE POOL 4	1	Sum	50,000	50,000	
STANDARD PRIVATE POOL 5	1	Sum	50,000	50,000	
STANDARD PRIVATE POOL 6	1	Sum	50,000	50,000	
STANDARD PRIVATE POOL 7		Sum	50,000	50,000	
STANDARD PRIVATE POOL 8		Sum	50,000	50,000	
DELUXE PRIVATE POOL 1		Sum	60,000	60,000	
DELUXE PRIVATE POOL 2		Sum	60,000	60,000	
O/D EXPERIENCE SHOWER 1	1	Sum	50,000	50,000	

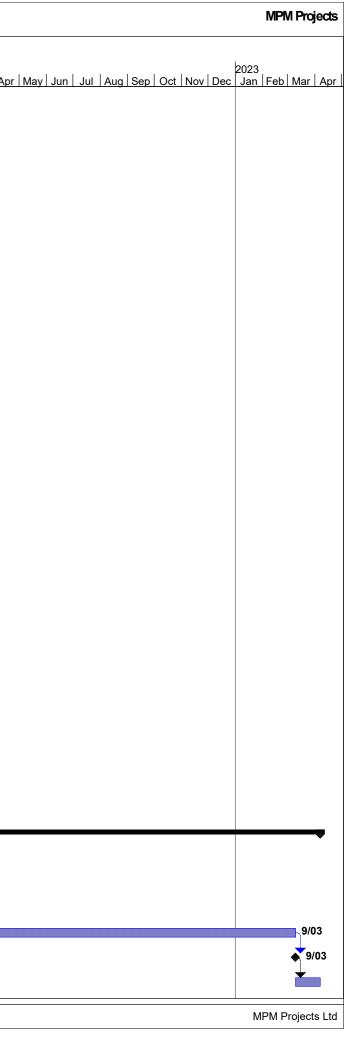
O/D	EXPERIENCE SHOWER 2	1	Sum	50,000	50,000
SPE	CIALIST PLANT				
FEM	IALE HAMAM	1	Sum	33,000	33,000
MAL	E HAMAM	1	Sum	33,000	33,000
FEM	IALE EXPERIENCE SHOWER	2	Sum	27,000	54,000
MAL	E EXPERIENCE SHOWER	2	Sum	27,000	54,000
FEM	IALE SAUNA	1	Sum	20,000	20,000
MAL	E SAUNA	1	Sum	20,000	20,000
FEM	IALE STEAM ROOM	1	Sum	23,000	23,000
MAL	E STEAM ROOM	1	Sum	23,000	23,000
OUT	DOOR POOL 1	1	Sum	50,000	50,000
OUT	DOOR POOL 2	1	Sum	50,000	50,000
STA	NDARD PRIVATE POOL 1	1	Sum	20,000	20,000
STA	NDARD PRIVATE POOL 2	1	Sum	20,000	20,000
STA	NDARD PRIVATE POOL 3	1	Sum	20,000	20,000
STA	NDARD PRIVATE POOL 4	1	Sum	20,000	20,000
STA	NDARD PRIVATE POOL 5	1	Sum	20,000	20,000
STA	NDARD PRIVATE POOL 6	1	Sum	20,000	20,000
STA	NDARD PRIVATE POOL 7	1	Sum	20,000	20,000
STA	NDARD PRIVATE POOL 8	1	Sum	20,000	20,000
DEL	UXE PRIVATE POOL 1	1	Sum	25,000	25,000
DEL	UXE PRIVATE POOL 2	1	Sum	25,000	25,000
O/D	EXPERIENCE SHOWER 1	1	Sum	27,000	27,000
O/D	EXPERIENCE SHOWER 2	1	Sum	27,000	27,000
					8,853,200
Prov	Allowance for excavation/retaining to form building platform	1	Sum		600,000
Prov	Allowance for access paths, ramps etc	1	Sum		400,000
Prov	Allowance for hard paving around building	1	Sum		200,000
	Allowance for landscaping	1	Sum		200,000
Prov	Allowance for outdoor structures	1	Sum		200,000
Pro	Allowance for services infrastucture	1	Sum		1,400,000
Pro	Allowance for mineral water supply/ storage	1	Sum		100,000
Pro	Allowance for bore for additional hydrothermal supply	1	Sum		100,000
Prov	Allowance for loose furniture fittings & equipment	1	Sum		250,000
Prov	Allowance for carparking (x4 locations)	1	Sum		1,350,000
Spa	Facility Sub Total				13,653,200
Prof	essional Fees	15%			2,049,600
Con	sent fees				100,000
Con	tingency	10%			1,581,000
					\$17,383,800
ΔΙΙο	wance for escalation 2.5yrs at 4%	10%			1,738,380
	ws for completion 1st Qtr 2023	1070			1,700,000
					\$19,122,180
1					Say \$19.2M

APPENDIX 2: UPDATED PROJECT PROGRAMME

Te Aroha Spa Develpoment ID Task Name Duration Start Finish 2023 Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr Project Start Up Mon 6/07/20 Fri 25/09/20 1 60 days 2 Appoint Project Manager 10 days Mon 6/07/20 Fri 17/07/20 6/07 17/07 3 20 days Mon 20/07/20 Fri 14/08/20 20/07 14/08 Prepare Project Plan 4 20/07 7/08 Appoint Design Consultants for Prelim Design 15 days Mon 20/07/20 Fri 7/08/20 5 Mon 10/08/20 Fri 25/09/20 10/08 25/09 Procure Design Team for "post" Prelim Design 35 days 6 Preliminary Design -Spa Development 40 days Mon 10/08/20 Fri 2/10/20 7 Fri 21/08/20 10/08 21/08 Site investigations Mon 10/08/20 10 days 8 Mon 10/08/20 Fri 18/09/20 10/08 18/09 Preliminary Design 30 days 9 21/09 25/09 Fri 25/09/20 **Review Cost Estimate** 5 days Mon 21/09/20 10 Client approval of Prelim Design Mon 28/09/20 Fri 2/10/20 28/09 22/10 5 days 11 **Resource Consent** 155 days Mon 5/10/20 Wed 9/06/21 12 Prepare Resource Consent Application documents Mon 23/11/20 5/10 23/11 Mon 5/10/20 35 days 13 Consultation 20 days Tue 24/11/20 Mon 21/12/20 24/11 21/12 14 Tue 22/12/20 Wed 9/06/21 22/12 Lodge Resource Consent (assume Itd notification) 100 days 9/06 15 Developed Design 65 days Mon 5/10/20 Tue 26/01/21 16 Developed design 55 days Mon 5/10/20 Mon 21/12/20 5/10 21/12 17 **Review Cost Estimate** Tue 22/12/20 Tue 19/01/21 22/12 19/01 5 days 20/01 26/01 18 Client Approval of Developed Design Wed 20/01/21 Tue 26/01/21 5 days 19 **Detailed Design** Wed 9/06/21 90 days Wed 27/01/21 20 Detailed Design 80 days Wed 27/01/21 Tue 25/05/21 25/05 27/01 21 26/05 1/06 **Review Cost Estimate** 5 days Wed 26/05/21 Tue 1/06/21 22 2/06 39/06 Client Approval of Detailed Design Wed 2/06/21 Wed 9/06/21 5 days 23 **Building Consent** Thu 10/06/21 Wed 25/08/21 55 days 24 **Building Consent Application & approval** 55 days Thu 10/06/21 Wed 25/08/21 10/06 25/08 25 77 days Thu 10/06/21 Fri 24/09/21 Procurement 26 Prepare Tender documents 10/06 16/06 5 days Thu 10/06/21 Wed 16/06/21 27 17/06 21/07 Tender period 25 days Thu 17/06/21 Wed 21/07/21 28 22/07 _____11/08 Tender evaluation & report 15 days Thu 22/07/21 Wed 11/08/21 29 26/08 27/08 Appoint Contractor 2 days Thu 26/08/21 Fri 27/08/21 30 Mobilise Mon 30/08/21 Fri 24/09/21 30/08 24/09 20 days 31 Construction 350 days Fri 24/09/21 Thu 6/04/23 32 Fri 24/09/21 Fri 24/09/21 24/09 Ground Breaking Ceremony 0 days 33 27/09 1/10 Fri 1/10/21 Site set up 5 days Mon 27/09/21 34 Enabling Works & Bulk Earthworks Mon 4/10/21 Mon 6/12/21 4/10 6/12 45 days 35 7/12 **Building Works** Tue 7/12/21 Thu 9/03/23 280 days 36 Thu 9/03/23 Practical Completion Thu 9/03/23 0 days 37 Code Compliance Certificate issued 20 days Fri 10/03/23 Thu 6/04/23

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APPENDIX 3: OPERATIONAL COST STRUCTURING OPTIONS

Ana Crawford

Spa Evolution Limited 11 View Road, Ostend Waiheke Island 1081, New Zealand



18/6/2020

Craig Jones

Managing Director Visitor Solutions Level 2, 8 Teed Street, Newmarket, Auckland 1023, New Zealand

Dear Craig,

Following our discussion re: any potential future impact of Covid-19 to the proposed Te Aroha hot pools & spa project, Spa Evolution have reviewed all project financial assumptions for the business case.

Whilst three key considerations do minimise any potential Covid-19 impact to the proposed spa & wellness business, we have nevertheless assessed our current operational and manning costs based on your suggested careful estimate of a potential 20% - 30% drop in business:

- 1. The current layout of the facility does already allow for safe social distancing within most of the pool areas (where currently over 61% of revenue comes from).
- 2. The proposed project is not assumed to be opened for at least two years (giving Covid-19 impact adequate time to subside).
- 3. The majority of the assumed market for the Te Aroha Hot Pools & Spa is domestic (therefore the project would be less impacted by any potential border closures)

With an assumed potential 20% drop in business, manning expenses could be adjusted within the spa & hot pools accordingly, without impacting overall service quality. Reductions would be made in both Spa Therapist, Spa Concierge and Spa/Private Pool Attendant numbers. Manning costs vs revenue could subsequently be assumed at approximately 47.6% (in comparison to 44.2% in our current assumptions). Similarly, as many operational costs are variable (& in direct relation to guest numbers – e.g. cleaning & guest supplies, operational supplies, uniforms, laundry/dry cleaning etc.) the assumption can be made that operational costs could still be managed at approximately 12.3% of total revenue (currently at 12.2%).

Further, it is also possible to adjust manning and operational costs to account for a potential 30% drop in business. In this scenario, manning numbers are not advised to drop too low (to ensure that service standards are maintained, and peak hours are accounted for), but Spa Therapist, Spa Concierge and Spa/Private Pool Attendant numbers could again be reduced (with more part-time staff recommended), and manning costs would be assumed to sit at approximately 51.7% of total revenue. Again, all variable operational costs could be adjusted to have the overall operational costs sit at approximately 12.4% of total revenue. The only further consideration here is that (based on an assumed 30% drop in revenue), treatment room utilisation would be lower than global norms during the period of business impact (meaning that solutions would need to be found by the operator for maximising the use of constructed treatment rooms – e.g. outsourcing 2+ rooms to a beauty specialist etc) to maximise the space built and subsequently revenue per sqm during the business downturn.

In conclusion, whilst a more detailed spa & hot pool financial summary would be required for the Te Aroha project if a 20-30% drop was assumed, upon initial assessment, the risks of this occurring are reduced based on the key project factors listed above. It is also certainly possible (to a large extent) to scale back manning and operational costs to ensure that the impact to the project bottom line is minimised. An operator would simply need to ensure that initial recruitment numbers and operational items orders are carefully managed, and that auxiliary revenue potential is secured based on the currently proposed design model.

Sincerely, Ana Crawford

Managing Director, Spa Evolution Limited www.spaevolutionconsult.com

APPENDIX 4: MARKET ECONOMICS BENEFIT UPDATE



Date:

19/06/2020

Craig Jones Director Visitor Solutions Ltd Via -email

Re: TE AROHA SPA DEVELOPMENT BUSINESS CASE - ECONOMIC ASSESSMENT UPDATE

Thank you for your briefing (18/06/2020) regarding the additional analysis and updating of the financial estimates associated with the Te Aroha Spa Development. Based on the information you have shared, the economic assessment completed to date remains appropriate. I understand that two aspects changed since the earlier analysis:

- 1) Changes to the capital costs to reflect some additional items.
- 2) Allowing for the effects of Covid-19 on visitor numbers.

Changes to the capital cost

Based on our discussion, I understand that the financial information I based my original analysis on, did not change (\$17.4m, uninflated). Therefore, there is no reason to believe that the cost-benefit analysis will deviate from the original numbers.

Different visitor numbers

I understand the wider project team considered the effects of Covid-19 on visitor numbers. As indicated, it the original analysis, the cost-benefit ratio is sensitive to shifts in the visitor numbers (based on visitor spending as a proxy). Under the base case, the CBR is 1.01 and a 20% drop in visitor numbers and spending will see the CBR drop to CBR to 0.94 – below one meaning that the costs outweigh the benefits.

The sensitivities and risks associated with the visitor numbers are documented and explored in the business case and subsequent further analysis by the wider team explore these sensitivities in greater detail. That analysis presents additional insights into the sensitivities and likely impact on the payback period and overall return. It highlights the timing of when Spa is expected to open and points to the anticipated level of visitor activity at that point.

While uncertain, it is expected that visitor spending would have returned to close to pre-Covid levels. This is because the development's target market is the mid- to upper income cohorts of the NZ market. In addition, a Trans-Tasman bubble should also be operational in that timeframe, opening the doors to the second market segment.

Concluding remarks

Based on the visitor estimates of the wider team, the economic assessment is unlikely to change. The original work took a conservative position and showed that CBR to be robust under pessimistic conditions. At a 20% decline in the visitor numbers, the economic costs outweigh the benefits. Based on the work from the wider team, this is seen as a very downbeat position.

It is worth noting that, while not part of the original assessment, the construction activity associated with the Spa development will align with Covid-recovery period, providing a short-term impulse to the local economy.

Confidential

This will support jobs and incomes at a local level. The business case (and this addendum update) provides detail on the total spending (capex) and the number of jobs that will be supported. These type of local development projects will be very important in the Covid-recovery period and allocating funds to long term, financially sustainable projects and ventures is important to optimise the long-term benefits of stimulus funding.

Lawrence McIlrath MARKET ECONOMICS LTD Mobile: 021 042 1957 Lawrence@me.co.nz.



APPENDIX 5: UPDATED PROJECT JOB NUMBERS

mpm projects

Te Aroha Spa Development Job Number Estimate

& carparking		r	1		
	Full Time	Part Time	Total FTE	No Months	FTE jobs /month
Project Manager	1	2		13	26.0
	2				52.0
Heritage Architect		1	0.5	13	6.5
Cultural Architect		2	1	13	13.0
Structural Engineer	1	3	2.5	13	32.5
Civil Engineer	1	3	2.5	13	32.5
Mechanical Services Engineers	1	3	2.5	13	32.5
Electrical Services Engineers	1	3	2.5	13	32.5
	1			13	32.5
					13.0
					6.5
					13.0
					4.0
					2.0
					16.0
					2.5
					1.5
					5.0
					6.5
Consents/others		10	5	8	40.0
	Total FTE jobs p	er month over 13	3 months		370.0
	Therefore Ave	29 jobs for 13 mo	onths preconstruct	ion period	28.5
	Full Time	Part Time	Total FTE	No Months	FTE jobs /month
Project Manager		2	1	18	18.0
Architect	1	2	2	18	36.0
	1			18	27.0
			-		18.0
-					2.5
					9.0
-					9.0
					9.0
					9.0
Quantity Surveyor					9.0
Geotech Engineer		1	0.5		2.5
Archaeologist		1	0.5	5	2.5
Landscape Architect		1	0.5	4	2.0
Consents/others		3	1.5	18	27.0
Main contractor	5	4	7	18	126.0
					52.5
-					10.0
	6	2	7	6	42.0
Concrete Work				0	
Concrete Work				C	
Precast Concrete	6	2	7	6	42.0
Precast Concrete Reinforcing Steel	6 5	2 2	7 6	6	42.0 36.0
Precast Concrete Reinforcing Steel Blockwork	6 5 6	2 2 2	7 6 7	6 4	42.0 36.0 28.0
Precast Concrete Reinforcing Steel Blockwork Structural steel	6 5 6 5	2 2 2 2 2	7 6 7 6	6 4 4	42.0 36.0 28.0 24.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork	6 5 6 5 4	2 2 2 2 2 2 2	7 6 7 6 5	6 4 4 4 4	42.0 36.0 28.0 24.0 20.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows	6 5 6 5 4 4	2 2 2 2 2 2 2 2	7 6 7 6 5 5 5	6 4 4 4 3	42.0 36.0 28.0 24.0 20.0 15.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry	6 5 6 5 4 4 12	2 2 2 2 2 2 2 3	7 6 7 6 5 5 13.5	6 4 4 4 3 17	42.0 36.0 28.0 24.0 20.0 15.0 229.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows	6 5 6 4 4 12 8	2 2 2 2 2 2 3 3 3	7 6 7 5 5 13.5 9.5	6 4 4 3 17 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry	6 5 6 5 4 4 12	2 2 2 2 2 2 2 3	7 6 7 6 5 5 13.5	6 4 4 4 3 17	42.0 36.0 28.0 24.0 20.0 15.0 229.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping	6 5 6 4 4 12 8	2 2 2 2 2 2 3 3 3	7 6 7 5 5 13.5 9.5	6 4 4 3 17 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery	6 5 6 5 4 4 12 8 5	2 2 2 2 2 2 2 3 3 3 2 2	7 6 5 5 13.5 9.5 6	6 4 4 3 17 5 4	42.0 36.0 28.0 20.0 15.0 229.5 47.5 24.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing	6 5 6 4 4 12 8 5 4	2 2 2 2 2 2 2 3 3 3 2 3 3 3 2 3	7 6 7 5 5 13.5 9.5 6 5.5 6 4.5	6 4 4 3 17 5 4 4	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.0 13.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing	6 5 6 4 12 8 5 4 4 5 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5	2 2 2 2 2 2 2 2 3 3 3 2 3 1 1	7 6 7 6 5 13.5 9.5 6 5.5 6 5.5 4.5 5.5	6 4 4 3 17 5 4 4 3 3 3	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.0 13.5 16.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Membrane roofing	6 5 6 4 4 12 8 5 4 4 4 5 5 5 5 5 5	2 2 2 2 2 2 3 3 3 2 3 3 1 1 2 2 3 2 2 3 2 2 3 3 1 1 2	7 6 7 6 5 13.5 9.5 6 5.5 6 5.5 4.5 5.5 6	6 4 4 3 17 5 4 4 3 3 3 3	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Membrane roofing Plumbing,Gas & Downpipes	6 5 6 4 4 12 8 5 4 4 4 5 5 5 8	2 2 2 2 2 2 3 3 3 2 3 1 1 1 2 2 2	7 6 7 6 5 5 13.5 9.5 6 5.5 6 5.5 4.5 5.5 6 9	6 4 4 3 17 5 4 4 3 3 3 3 8	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage	6 5 6 4 4 12 8 5 5 4 4 4 5 5 5 8 5 5 5 5 5 5	2 2 2 2 2 2 3 3 3 2 3 3 1 1 1 2 2 2 2 2	7 6 7 5 5 13.5 9.5 6 5.5 6 5.5 4.5 5.5 6 9 9	6 4 4 3 17 5 4 4 3 3 3 3 3 8 6	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Membrane roofing Plumbing,Gas & Downpipes Drainage Electrical	6 5 6 4 4 12 8 5 4 4 4 5 5 5 8 8 5 6	2 2 2 2 2 2 3 3 3 2 3 3 1 2 3 1 1 2 2 2 2	7 6 5 5 13.5 9.5 6 5.5 4.5 5.5 6 9 9 6 9 9 6 7	6 4 4 3 17 5 4 4 3 3 3 3 3 8 6 8	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Membrane roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation	6 5 6 4 4 12 8 5 5 4 4 4 5 5 5 8 5 5 6 2	2 2 2 2 2 3 3 3 2 3 3 2 3 1 1 2 2 2 2 2	7 6 5 5 13.5 9.5 6 5.5 4.5 5.5 4.5 5.5 6 9 6 7 2.5	6 4 4 3 17 5 4 4 3 3 3 3 3 6 8 6 8 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security	6 5 6 5 4 12 8 5 4 5 8 5 8 5 6 2 2 2	2 2 2 2 2 2 3 3 3 2 3 3 2 2 3 1 1 2 2 2 2	7 6 5 5 13.5 9.5 6 5.5 4.5 5.5 6 9 6 7 7 2.5 2.5	6 4 4 3 17 5 4 4 3 3 3 3 3 6 8 6 8 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual	6 5 6 5 4 12 8 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 6 2 2 2 2	2 2 2 2 2 2 3 3 3 2 3 3 2 3 1 1 2 2 2 2	7 6 7 5 5 13.5 9.5 6 5.5 4.5 5.5 4.5 5.5 6 9 6 7 7 2.5 2.5	6 4 4 3 17 5 4 4 3 3 3 3 3 8 6 8 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 12.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels	6 5 6 5 4 12 8 5 4 4 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 2 2 2 2 4	2 2 2 2 2 2 3 3 3 2 3 3 2 3 3 2 3 3 2 2 2 2 2 2 2 1 1 1 1	7 6 7 5 5 13.5 9.5 6 5.5 6 5.5 6 9 6 7 7 2.5 2.5 2.5 2.5 4.5	6 4 4 3 17 5 4 4 4 3 3 3 3 3 8 6 8 6 8 5 5 5 5 5 5 3	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 220.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 12.5 13.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services	6 5 6 5 4 12 8 5 4 5 4 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 2 2 2 2 4 6	2 2 2 2 2 2 2 3 3 3 2 3 3 2 3 3 1 1 2 2 2 2	7 6 7 6 5 13.5 9.5 6 5.5 6 5.5 6 9 6 7 2.5 2.5 2.5 2.5 2.5 4.5 7.5	6 4 4 3 17 5 4 4 4 3 3 3 3 3 3 8 6 8 6 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels	6 5 6 5 4 12 8 5 4 4 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 2 2 2 2 4	2 2 2 2 2 2 3 3 3 2 3 3 2 3 3 2 3 3 2 2 2 2 2 2 2 1 1 1 1	7 6 7 5 5 13.5 9.5 6 5.5 6 5.5 6 9 6 7 7 2.5 2.5 2.5 2.5 4.5	6 4 4 3 17 5 4 4 4 3 3 3 3 3 8 6 8 6 8 5 5 5 5 5 5 3	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 220.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 12.5 13.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services	6 5 6 5 4 12 8 5 4 5 4 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 2 2 2 2 4 6	2 2 2 2 2 2 2 3 3 3 2 3 3 2 3 3 1 1 2 2 2 2	7 6 7 6 5 13.5 9.5 6 5.5 6 5.5 6 9 6 7 2.5 2.5 2.5 2.5 2.5 4.5 7.5	6 4 4 3 17 5 4 4 4 3 3 3 3 3 3 8 6 8 6 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 220.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services Fire Alarms	6 5 4 12 8 5 4 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 6 2 4 6 2 4	2 2 2 2 2 2 3 3 3 3 2 3 3 1 2 2 3 3 1 1 2 2 2 2	7 6 5 5 13.5 9.5 6 5.5 4.5 5.5 6 9 9 6 7 7 2.5 2.5 2.5 2.5 4.5 7.5 2.5 4.5	6 4 4 3 17 5 4 4 3 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 13.5 13.5 12.5 13.5 37.5 12.5 37.5 12.5 36.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Mebrane roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services Fire Alarms Fire Sprinklers Lift	6 5 6 5 4 12 8 5 4 4 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 6 2 4 2 4 2	2 2 2 2 2 2 3 3 3 3 2 3 3 2 3 3 1 1 2 2 2 2	7 6 5 5 13.5 9.5 6 5.5 4.5 5.5 6 9 6 9 6 7 7 2.5 2.5 2.5 2.5 4.5 7.5 2.5 4.5 2.5	6 4 4 3 17 5 4 4 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 22.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5 12.5 37.5 12.5 36.0 5.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Membrane roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services Fire Alarms Fire Sprinklers Lift Floor Coverings	6 5 4 4 12 8 5 4 5 4 5 6 2 2 2 4 6 2 4 6 2 4 6 2 4 2 6 2 4 6 2 4 2 6 2 4 5	2 2 2 2 2 2 3 3 3 3 2 3 3 2 2 2 2 2 2 2	7 6 5 5 13.5 9.5 6 5.5 4.5 5.5 4.5 5.5 6 9 6 7 2.5 2.5 2.5 2.5 4.5 7.5 2.5 4.5 7.5 2.5 7,5	6 4 4 3 17 5 4 4 4 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5 12.5 36.0 5.0 14.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Membrane roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services Fire Alarms Fire Sprinklers Lift Floor Coverings Suspended Ceilings	6 5 4 4 12 8 5 4 4 5 8 5 8 5 6 2 2 4 6 2 4 5 6 2 4 5 6 2 4 5	2 2 2 2 2 2 3 3 3 2 3 3 2 2 2 2 2 2 2 2	7 6 7 6 5 13.5 9.5 6 5.5 4.5 5.5 6 7 6 5.5 6 7 6 7 2.5 2.5 2.5 2.5 4.5 2.5 4.5 2.5 7 6	6 4 4 3 17 5 4 4 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5 12.5 36.0 5.0 14.0 12.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services Fire Alarms Fire Sprinklers Lift Floor Coverings Suspended Ceilings Steel Stud Partitions	6 5 6 5 4 12 8 5 4 4 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 2 4 2 6 5 5	2 2 2 2 2 2 3 3 3 3 2 3 3 2 3 3 2 3 3 2 2 2 2 2 1 1 1 1	7 6 7 6 5 13.5 9.5 6 5.5 4.5 5.5 6 9 6 7 2.5 2.5 2.5 2.5 4.5 7.5 2.5 4.5 7.5 2.5 7.5 2.5 7 6 5.5	6 4 4 3 17 5 4 4 4 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 220.1 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5 12.5 36.0 5.0 14.0 12.0 16.5
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork Metal Windows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Membrane roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services Fire Alarms Fire Sprinklers Lift Floor Coverings Suspended Ceilings Steel Stud Partitions Painting	6 5 6 5 4 12 8 5 4 4 5 4 5 8 5 8 5 8 5 8 5 6 2 4 6 2 4 6 5 6 5 6 5 6 5 6 5 6 5 6	2 2 2 2 2 2 3 3 3 3 2 3 3 2 3 3 1 1 2 2 2 1 1 1 1	7 6 7 6 5 13.5 9.5 6 5.5 4.5 5.5 6 9 6 7 2.5 2.5 2.5 2.5 4.5 7.5 2.5 4.5 7.5 2.5 7.5 2.5 7.5 2.5 7.5 2.5 7.5 2.5 7.5 2.5 7.5 2.5 7 6 5.5 7	6 4 4 3 17 5 4 3 3 3 3 3 3 3 3 5 5 5 5 5 5 5 8 2 2 3 4	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 229.5 47.5 24.0 229.5 47.5 24.0 220.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5 12.5 36.0 5.0 14.0 12.0 16.5 28.0
Precast Concrete Reinforcing Steel Blockwork Structural steel Metalwork MetalWindows Carpentry Plasterboard & stopping Joinery Joinery Fittings Waterproofing Metal Roofing Plumbing,Gas & Downpipes Drainage Electrical Data Installation Security Audio Visual Solar Panels Mechanical Services Fire Alarms Fire Sprinklers Lift Floor Coverings Suspended Ceilings Steel Stud Partitions	6 5 6 5 4 12 8 5 4 4 5 4 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 2 4 2 6 5 5	2 2 2 2 2 2 3 3 3 3 2 3 3 2 3 3 2 3 3 2 2 2 2 2 1 1 1 1	7 6 7 6 5 13.5 9.5 6 5.5 4.5 5.5 6 9 6 7 2.5 2.5 2.5 2.5 4.5 7.5 2.5 4.5 7.5 2.5 7.5 2.5 7 6 5.5	6 4 4 3 17 5 4 4 4 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5	42.0 36.0 28.0 24.0 20.0 15.0 229.5 47.5 24.0 229.5 47.5 24.0 22.0 13.5 16.5 18.0 72.0 36.0 56.0 12.5 12.5 13.5 37.5 12.5 36.0 5.0 14.0 12.0 16.5
	Architect Heritage Architect Cultural Architect Structural Engineer Mechanical Services Engineers Electrical Services Engineers Specialist Services Engineers Spa Consultant Quantity Surveyor Planner Surveyors Geotech Engineer Archaeologist Traffic Engineer Landscape Architect Tourism Consultant Consents/others Project Manager Architect Structural Engineer Civil Engineer Geotech Engineer Mechanical Services Engineers Electrical Services Engineers Hydraulic Services Engineers Specialist Services Engineers Quantity Surveyor Geotech Engineer Archaeologist Landscape Architect	Project Manager1Architect2Heritage Architect2Cultural Architect1Structural Engineer1Civil Engineer1Mechanical Services Engineers1Electrical Services Engineers1Specialist Services Engineers1Quantity Surveyor1Planner1Surveyors1Geotech Engineer1Landscape Architect1Tourism Consultant1Consents/others1Total FTE jobs pProject Manager1Architect1Structural Engineer1Geotech Engineer1Geotech Engineer1Civil Engineer1Geotech Engineers1Hydraulic Services Engineers1Hydraulic Services Engineers2Quantity Surveyor2Geotech Engineer2Quantity Surveyor2Geotech Engineer2Main contractor5Excavation & Filling8	Project Manager12Architect24Heritage Architect1Cultural Architect2Structural Engineer133Civil Engineer13Mechanical Services Engineers133Electrical Services Engineers133Specialist Services Engineers2Spa Consultant1Quantity Surveyor2Planner1Surveyors2Geotech Engineer2Archaeologist1Traffic Engineer1Landscape Architect2Tourism Consultant1Consents/others10Total FTE jobs per month over 13Therefore Ave 29 jobs for 13 mcProject Manager2Architect12Geotech Engineer111Consents/others10Total FTE jobs per month over 13Therefore Ave 29 jobs for 13 mcCivil Engineer2Geotech Engineer111Civil Engineer111Geotech Engineers111Geotech Engineers111Geotech Engineers111Geotech Engineers111Geotech Engineers111Geotech Engineers111Geotech Engi	Project Manager 1 2 2 Architect 2 4 4 Heritage Architect 1 0.5 Cultural Architect 2 1 Structural Engineer 1 3 2.5 Mechanical Services Engineers 1 3 2.5 Mechanical Services Engineers 1 3 2.5 Hydraulic Services Engineers 1 3 2.5 Specialist Services Engineers 1 3 2.5 Specialist Services Engineers 2 1 0.5 Quantity Surveyor 2 1 0.5 Surveyors 2 2 1 Geotech Engineer 2 2 1 Geotech Engineer 1 0.5 1 Traffic Engineer 1 0.5 1 Traffic Engineer 10 5 5 Consents/others 10 5 1 Cuist Engineer 2 1 1 Proje	Project Manager 1 2 2 13 Architect 2 4 4 13 Heritage Architect 1 0.5 13 Cultural Architect 2 1 13 Structural Engineer 1 3 2.5 13 Mechanical Services Engineers 1 3 2.5 13 Mechanical Services Engineers 1 3 2.5 13 SpecialitS Services Engineers 1 3 2.5 13 Quantity Surveyor 2 1 13 2.5 13 Quantity Surveyor 2 1 13 2.5 13 Quantity Surveyor 2 1 13 2.5 13 Quantity Surveyor 2 1 2.5 8 3 2.5 13 Geotech Engineer 2 1 0.5 8 3 1 0.5 5 5 Traffic Engineer 1 0.5 13

	Therefore Ave 8	83.1			
	Total FTE jobs p	1496.0			
Landscaping	6	2	7	3	21.0

Construction Phase 18 months		Full Time	Part Time	Total FTE	No Months	FTE jobs /month
Supply Chain	Quarry metal	0	2	0.7	3	2.0
	Concrete	1	3	2.0	4	8.0
	Precast Concrete	6	2	6.7	4	26.6
	Reinforcing Steel	3	2	3.7	4	14.6
	Blockwork	1	3	2.0	4	8.0
	Structural steel	6	3	7.0	4	28.0
	Metalwork	4	2	4.7	4	18.6
	Metal Windows	5	2	5.7	3	17.0
	Timber	1	6	3.0	12	35.8
	Plasterboard	1	4	2.3	4	9.3
	Joinery	2	2	2.7	4	10.6
	Joinery Fittings	5	2	5.7	4	22.6
	Waterproofing	1	2	1.7	4	6.6
	Metal Roofing	1	3	2.0	3	6.0
	Membrane roofing	1	3	2.0	3	6.0
	Plumbing, Gas & Downpipes	1	4	2.3	8	18.6
	Pools Construction	2	4	3.3	3	10.0
	Drainage pipes	0	2	0.7	5	3.3
	Electrical cable & equipment	0	3	1.0	8	7.9
	Data cable & equipment	0	2	0.7	5	3.3
	Security cable & equipment	0	2	0.7	5	3.3
	Audio Visual cable & equipment	0	2	0.7	5	3.3
	Solar Panels	1	2	1.7	3	5.0
	Mechanical plant & ducting	1	2	1.7	4	6.6
	Pool Plant	1	2	1.7	3	5.0
	Pool Equipment	0	2	0.7	2	1.3
	Fire Alarm cable & equipment	0	2	0.7	5	3.3
	Fire Sprinkler pipes	0	2	0.7	5	3.3
	Lift	0	2	0.7	2	1.3
	Floor Coverings	0	3	1.0	3	3.0
	Tiles	0	3	1.0	3	3.0
	Suspended Ceilings	0	2	0.7	3	2.0
	Steel Stud Partitions	2	2	2.7	4	10.6
	Paint	0	2	0.7	5	3.3
	Stainless Steel Kitchen	4	2	4.7	2	9.3
	Fall Arrest System	0	2	0.7	2	1.3
	Siteworks	0	7	2.3	10	23.1
	Landscaping	0	5	1.7	4	6.6
	· · · · · · · · · · · · · · · · · · ·	÷	per month over 18			357.3
				oply chain for 18 m	onths	19.9