

APPENDIX 26

Cost Estimates for South Park Lands / Glenside detention basins

PVICTORIA PARK WETLANDS PRELIMINARY DESIGN

ESTIMATE SUMMARY

CONTRACTOR COSTS	This rev
PRELIMINARIES	\$1,417,913
DEMOLITION, SEWER ALTERATIONS AND EARTHWORKS	\$3,208,520
CLAY LINING AND GROWING MEDIUM	\$481,559
INLET AND OUTLET STRUCTURES	\$366,581
PLANTING, IRRIGATION, MAINTENANCE AND PATHS	\$1,132,412
DEMOB	\$27,000
CONTRACTORS OH	\$530,719
TOTAL CONTACTORS COSTS	\$7,164,704

CLIENT COSTS	
EXISTING SERVICES IDENTIFICATION & ALTERATIONS	\$71,647
PROJECT PLANNING	\$429,882
DESIGN AND INVESTIGATIONS	\$1,003,059
PROJECT & CONTRACT MANAGEMENT	\$573,176
COMMUNITY ENGAGEMENT & LIASON	\$143,294
TOTAL CLIENT COSTS	\$2,221,058

RISK AND CONTINGENCY	
Inherent and Contingent risk	\$2,064,868

PROJECT TOTAL	\$11,450,630
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KEY ASSUMPTIONS

Assumes no Hardscaping, path lighting or structures

Assumes all contaminated materials buried in fill mounds

Assumes (conservatavely) that 50% of floor (post reworking and compacting) will be suitable for retaining water and the balance will require suitable clays won from the excavation.

Assumes No land acquisition

Excludes escalation, prices current at Jan 2015

Excludes works associated with additional contaminated materials that may be stockpiled on site by ACC (refer Tonkins report cl. 12.2.3)

BROWN HILL KESWICK CREEK STORMWATER PROJECT

SOUTH PARK LANDS STORMWATER MANAGEMENT

COST ESTIMATE FOR VICTORIA PARK WETLANDS & DETENTION STORAGE PRELIMINARY DESIGN

ITEM	DESCRIPTION	COSTPLAN QTY'S AND COST			COMMENTS	
		QUANTITY	RATE	AMOUNT		
CONTRACT WORKS COSTS						
1	Preliminaries and overheads					
1.1	Establishment including contractors onsite overheads	% calc	15.2%	\$5,667,089	\$859,932	includes mobilisation, supervision, insurances and fees, site accommodation, preparation of Project management plans etc.
1.2	Materials and Geotechnical Testing	item	1	\$50,000	\$50,000	Including geotechnical and concrete
	Environmental management					including dust and sediment testing, auditing and associated testing requirements
1.3	Environmental controls	item	1	\$68,000	\$68,000	
1.4	Environmental maintenance	item	1	\$26,964	\$26,964	
1.5	Survey Setout and abuilding	item	1	\$120,960	\$120,960	Minimal ,utilise GPS fitted plant. Allow for asbulds
1.6	Traffic and pedestrian management	item	1	\$163,649	\$163,649	Includes signage, temporary diversions traffic management crews, audits etc.
1.7	Temporary and project fencing	m	1,592	\$25.00	\$39,800	Project perimeter plus excluded zones
1.8	Temporary access tracks and hardstands	m2	4,800	\$15.96	\$76,608	Includes reinstatement
1.9	Indigenous monitoring for artifacts etc (while topsoil strip works being performed)	Hrs	160	\$75	\$12,000	allows for 2 men x 2 weeks
	Subtotal Section 1				\$1,417,913	
2	Demolition & Earthworks					
2.1	<u>Sewer Relocation</u>					
2.1.1	Remove Existing Sewer Pipe	lm	125	\$45	\$5,625	
2.1.2	New 900 Dia Manhole, 3000 deep	No	2	\$4,815	\$9,630	
2.1.3	New 900 Dia Manhole over existing main	No	2	\$7,315	\$14,630	
2.1.4	New 225mm UPVC Pipe	lm	168	\$325	\$54,600	
2.1.5	Testing	item	1	\$1,500	\$1,500	
2.2	<u>General Demolition / Early works</u>					
2.2.1	Relocate Existing Gym Equipment	Item	1	\$6,000	\$6,000	
2.2.2	Tree Removal	item	1	\$18,000.00	\$18,000	36 total, 4 wetland and 32 batter
2.2.3	Stand of Poplars Removed	item	1	\$20,558.40	\$20,558	Incl poisoning to prevent suckering
2.2.4	General site clearing and Grubbing	m2	93,356	\$0.16	\$14,937	
	<u>Earthworks</u>					Assumes contaminated materials buried on site in fill mounds. Refer EW analysis
2.3	Strip Topsoil	m3	9,336	\$2.75	\$25,673	Assume 100mm thick (Assume able to be reused / stored onsite)
2.3.1	Stockpile management	item	1	\$97,500	\$97,500	Preparation of areas for storage of materials for enviro classification, and local dust control of these
2.3.2	Cut to stockpile for testing and classification,(horizon H1 materials - previous fill)	BCM	57,771	\$2.75	\$158,870	
2.3.3	Testing for contaminants	BCM	57,771	\$2.00	\$115,542	
2.3.4	Fill mounds from stockpile	CCM	24,574	\$4.10	\$100,753	Utilise ILC and LLC materials first
2.3.6	Surplus horizon H1 WFC fills to offsite dump	BCM	48,488	\$20.31	\$984,782	Load and cart to Gillman area , 21 KM lead
2.3.5	Cut to stockpile H2 materials suitable for clay liner	BCM	9,283	\$2.75	\$25,529	
2.3.7	Cut to spoil direct balance of H2 materials	BCM	67,399	\$21.95	\$1,479,409	Load and cart to Gillman area , 21 KM lead
2.3.8	Trim Batter Slopes	m2	43,650	\$0.92	\$40,158	
2.3.9	Respread previously stripped topsoil	m3	9,336	\$3.73	\$34,822	From stockpiles
	Subtotal Section 2				\$3,208,520	\$6,946
3	Basin Lining					Conservatively assumes 50% of subgrade is suitable insitu
3.1	Trim & Compact Basin for lining	m2	42199	\$1.21	\$51,061	approx. 50% remains
3.2	Fill from stockpile select clay lining material	CCM	8,440	\$6.63	\$55,954	assume 50%
3.4	Supply and Place300mm Thick Growing Medium, Compacted to 85%	m2	34205	\$10.95	\$374,545	to Max Active Storage Level excluding the deep ponds
	Subtotal Section 3				\$481,559	
4	Drainage structures, Inlet / Outlet					
4.1	<u>Creek Culvert</u>					
4.1.1	Demolition & Remove Existing Pipe & Headwalls	item	1	\$4,500	\$4,500	
4.1.2	New 1350 Dia RCP, Class 2	lm	23	\$960	\$22,080	
4.1.3	Precast Concrete Headwalls to Suit 1350 RCP	no	2	\$18,000	\$36,000	
4.2	<u>Inlet Structures</u>					
4.2.1	Clear / Trim Existing Creek	item	1	\$4,800	\$4,800	
4.2.2	Concrete Inlet Structure with Grate to suit 675mm RCP	item	1	\$18,000	\$18,000	
4.2.3	1500 SQ Junction Box with Drop Gate	no	1	\$12,450	\$12,450	
4.2.4	Precast Headwall to Suit 675mm RCP	no	1	\$1,800	\$1,800	
4.2.5	675mm RCP Inlet pipe	lm	45	\$308	\$13,860	
4.2.6	150mm PVC Bypass/Base Flow Pipe	lm	1.5	\$500	\$750	

BROWN HILL KESWICK CREEK STORMWATER PROJECT

SOUTH PARK LANDS STORMWATER MANAGEMENT

COST ESTIMATE FOR VICTORIA PARK WETLANDS & DETENTION STORAGE PRELIMINARY DESIGN

ITEM	DESCRIPTION	COSTPLAN QTY'S AND COST				COMMENTS
		QUANTITY	RATE	AMOUNT		
4.3	200mm Spillway Slab (2m x 25m)	m2	50	\$235	\$11,750	including edge footing
4.3.1	200mm Concrete Weir Wall	m2	15.52	\$360	\$5,587	
4.3.2	Rock Facing to Concrete Walls	m2	31.04	\$240	\$7,450	both sides
4.3.3	Fill & Regrade to Match New Structures	item	1	\$5,400	\$5,400	
4.3.4	Rock Scour Protection	m3	91	\$95	\$8,645	
4.4	<u>Outlet Structures</u>					
4.4.1	Clear / Trim Existing Creek	item	1	\$4,800	\$4,800	
4.4.2	Concrete Outlet Structure 7m L x 0.9m W x 0.95m D, Suit 900 RCP	item	1	\$24,000	\$24,000	
4.4.3	1500 SQ Junction Box With light Duty Grate and Flap Gate Valve	no	1	\$12,450	\$12,450	Flap Gate Valve to Suit 900 RCP, Upstream Face
4.4.4	Precast Headwall to Suit 900mm RCP	no	1	\$2,450	\$2,450	
4.4.5	900mm RCP, Class 2 Inlet pipe	lm	17.3	\$481	\$8,321	
4.4.6	Stone Pitching around Outlet Structure	m2	128	\$95	\$12,160	
4.5	<u>Spill Way</u>					
4.5.1	A34 Geotextile	m2	756	\$3.00	\$2,268	
4.5.2	300mm thick Reno Mattress	m2	690	\$150	\$103,500	Fill Between Stone with Friable Sandy loam
4.5.3	200W x 600D N32 Concrete Edge Beam w/N16 Reo Bars	lm	110	\$135	\$14,850	
4.5.4	Footpath over Embankment/Spillway, 100mm thick x 3.6m wide	m2	198	\$145	\$28,710	
	Subtotal Section 4				\$366,581	
5	Landscaping works					
5.1	Establishment / Maintenance and wetlands top up planting for Landscaping works	item	1	\$157,000	\$157,000	Assume 1 yr. maintenance period
5.2	Aquatic and wetland Species	m2	30433	\$10.50	\$319,547	Excludes netting, assume virocell @ 3/m2 on average
5.3	Dryland Grass Mix	m2	57226	\$1.65	\$94,423	Assume hydro seed
5.4	New Tree plantings	no	786	\$90.00	\$70,740	assume 45 litre trees
5.5	Mulched Planting Bed	m2	676	\$31.00	\$20,956	Allow for the recycling of select tree removals(native) as mulch
5.6	Planting Bed in 300 reno matt	m2	110	\$50.00	\$5,500	
5.7	Irrigation to planting beds and trees only	item	1	\$36,930.00	\$36,930	temporary and for establishment period
5.8	Primary Pathway - 3m Sealed	m2	6105	\$64.54	\$393,996	SG prep, 200 CR, prime and 40 AC10+edges+ line marking
5.9	Secondary Pathway - 1.8m Rubble	m2	734.4	\$40.47	\$29,720	SG prep, 150 QR +edges
5.10	Signage	No	12	\$300.00	\$3,600	Token
	Lighting			EXCLUDED FROM ESTIMATE		
	Street and Park furniture			EXCLUDED FROM ESTIMATE		
	Structures and Retaining walls			EXCLUDED FROM ESTIMATE		
	Wetlands edge restraint			EXCLUDED FROM ESTIMATE		
	Subtotal Section 5				\$1,132,412	\$971,812
6	Reinstatement and finishing works					
6.3	Site clean-up and demobilisation	item	1	\$27,000	\$27,000	
	Subtotal Section 6				\$27,000	
	SUBTOTAL 1 - 6				\$6,633,985	\$5,546,129
7	Contractors Offsite OH and Margin					
7.1	Offsite OH and Margin	%	8%	\$6,633,985	\$530,718.84	allowance for offsite OH and profit
	TOTAL CONSTRUCTION COSTS				\$7,164,704	
8	CLIENT COSTS					
8.1	Existing services identification and alteration works	%	1%	\$7,164,704	\$71,647	Gap Pipeline
8.2	Project Planning works	%	6%	\$7,164,704	\$429,882	
8.3	Investigations and design	%	14%	\$7,164,704	\$1,003,059	Including design verification works and Enviro auditing
8.4	Project and contract management	%	8%	\$7,164,704	\$573,176	
8.5	Community engagement and liaison	%	2%	\$7,164,704	\$143,294	
8.6	Land acquisition					EXCLUDED FROM THIS ESTIMATE
	TOTAL CLIENT COSTS		31%		\$2,221,058	
	BASE PROJECT COST				\$9,385,763	
9	RISK AMD OPPORTUNITY					
9.1	Inherent Risk	%	7%	\$9,385,763	\$657,003	This is the uncertainties in the known or planned scope of the project.
9.2	Contingent Risk	%	15%	\$9,385,763	\$1,407,864	These are risks due to unmeasured items and are conditional, i.e. they may or may not happen. Note ; Contingent Risk does not cover changes to the project objectives
	TOTAL RISK ALLOCATION				\$2,064,868	
	TOTAL ESTIMATE PROJECT COST				\$11,450,630	
	TOTAL				\$11.5	(million rounded)

BROWN HILL KESWICK CREEK STORMWATER PROJECT

SOUTH PARK LANDS STORMWATER MANAGEMENT

COST ESTIMATE FOR VICTORIA PARK WETLANDS & DETENTION STORAGE PRELIMINARY DESIGN

ITEM	DESCRIPTION	COSTPLAN QTYS AND COST			COMMENTS
		QUANTITY	RATE	AMOUNT	
IMPORTANT NOTES AND KEY ASSUMPTIONS					
1	Excludes GST				
2	Costs are current as at Q1, 2015 and excludes escalation				
3	Based on TONKIN Preliminary concept design FOR Victoria Park 20130167_Sht01-10-Rev 3& 4.pdf				
4	Assumes no Hardscaping, path lighting or structures				
5	Assumes all contaminated materials buried in fill mounds				
6	Assumes (conservatively) that 50% of floor (post reworking and compacting) will be suitable for retaining water and the balance will require suitable clays won from the excavation.				
7	Assumes No land acquisition				
8	Excludes works associated with additional contaminated materials that may be stockpiled on site by ACC (refer Tonkins report cl. 12.2.3)				
9	This estimate has been prepared solely for BHKC stormwater authority, C/O the City of Unley . Under no circumstances shall it be passed onto any third parties without the written consent of Costplan Pty Ltd				

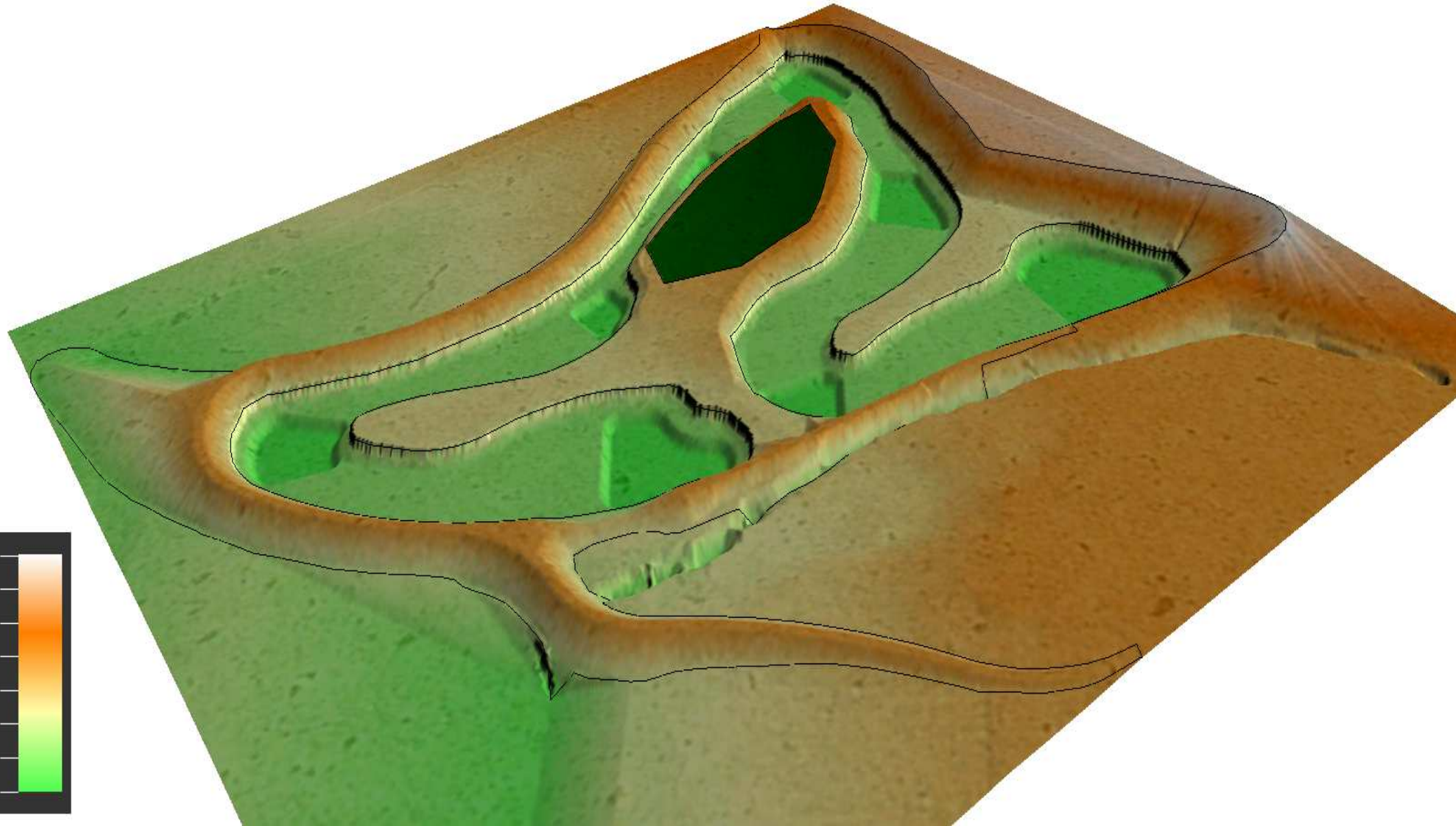
BROWN HILL KESWICK CREEK STORMWATER PROJECT
SOUTH PARK LANDS STORMWATER MANAGEMENT

This revision prepared Jan 2015

EARTHWORKS QUANTITY ANALYSIS FOR VICTORIA PARK WETLANDS & DETENTION STORAGE

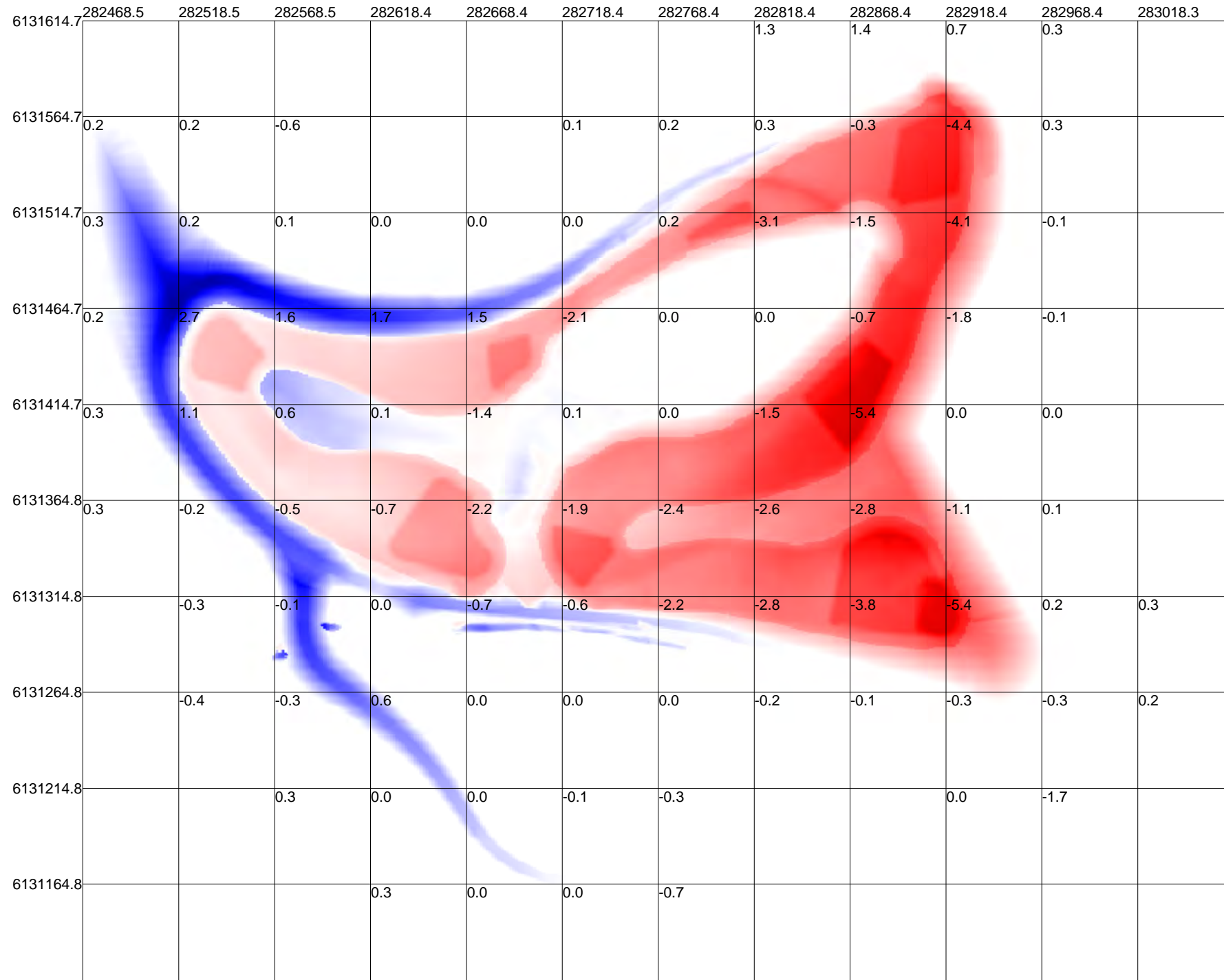
ITEM	DESCRIPTION	UOM	QTY		NOTES
Note	Quantities from DC amended 2 take-off				
1	Nett Cut (exclusive of topsoil strip, Topsoil respread, growing medium and clay box out)	BCM	138,295		
2	plus cut fill interface 0.5m zone	BCM	4,598		
3	Less 50% of clay liner, assume reworked Insitu		-8,440		
4	Total nett cut therefore =	BCM	134,454		
5	Upper horizon H1 of fill materials (area of contamination)	BCM	53,173		
6	Plus 0.5m interface zone above	BCM	4,598		
7	Total nett H1 therefore =	BCM	57,771		
8	Leaves balance of excavation (Horizon 2, natural materials) at	BCM	76,683		
9	For Clay liner salvage following vol of suitable clays from H2	CCM	8,440		
10	Fill required for mounds	CCM	19,976		
11	Fill required to replace 0.5m interface zone	CCM	4,598		
12	Total fill required	CCM	24,574		
13	Based on review of enviro report , in particular CI 2.5.3 we can interpret the following				
14	Quantity of samples that meets WFC		82%		100 out of 121 samples (for PAH, note for HM contamination considerably lower)
15	Quantity of samples that was ILC		15%		18 out of 121 samples
16	Quantity of samples that was LLC		3%		3 out of 121 samples
17	So for H1 materials we can adopt				
18	for WFC (waste fill criteria)	BCM	47,372	what if ILC and LLC QUANTITIES double	
19	for ILC (intermediate level contamination)	BCM	8,666	36,973	
20	for LLC (low level contamination)	BCM	1,733	17,331	} still room to contain onsite in mound if these quantities doubled
				3,466	}
21	Strategy is therefore to Bury ILC and LLC in fill mounds and only cart WFC materials to dump (therefore no dump fees)				

BROWN HILL KESWICK CREEK STORMWATER PROJECT
VICTORIA PARK
3D Report
Proposed



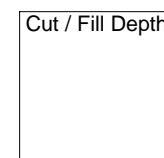
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BROWN HILL KESWICK CREEK STORMWATER PROJECT
 VICTORIA PARK
 Grid Report (50mx50m Grid)
 Proposed

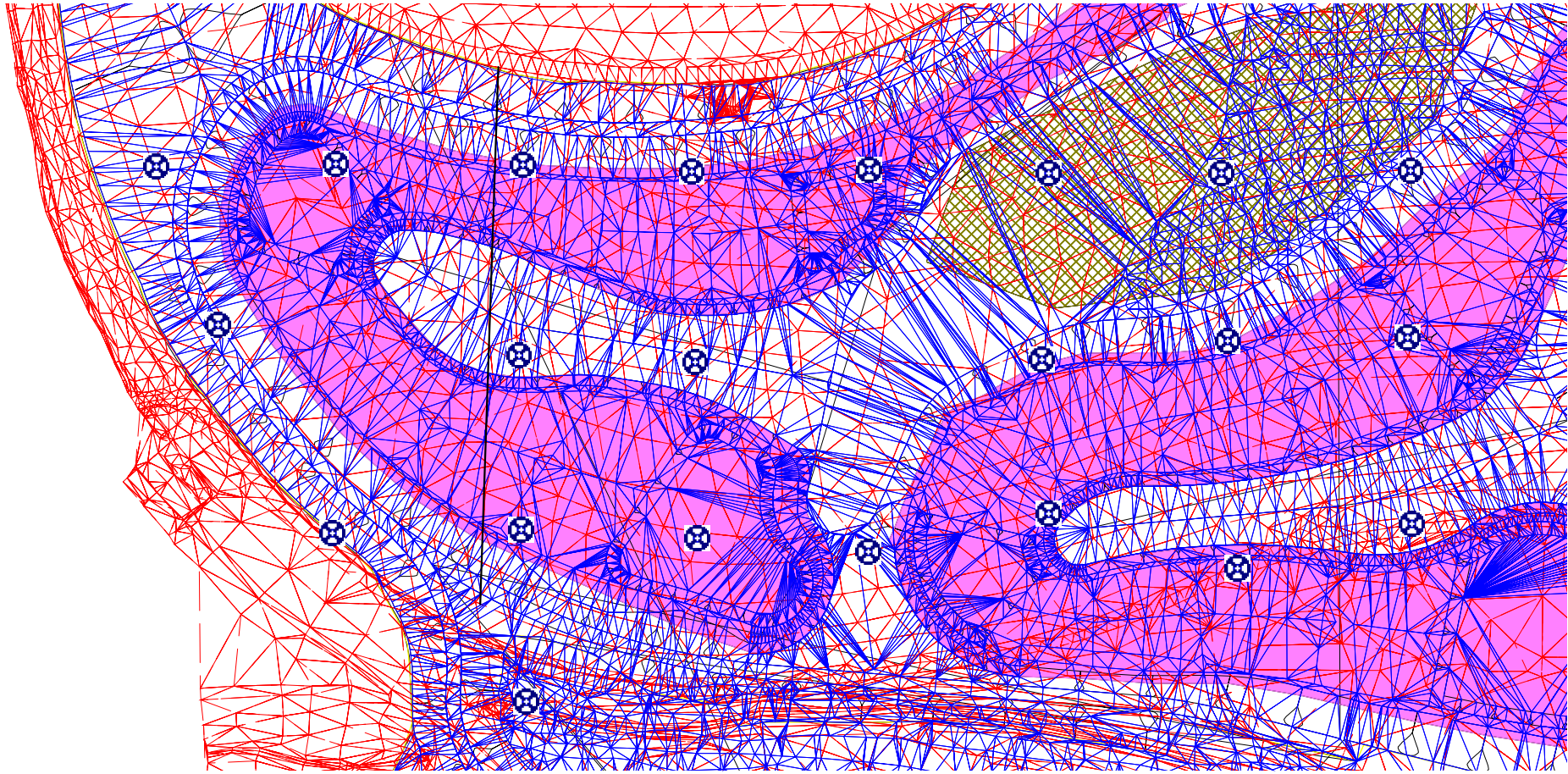


Area: Site Perimeter (Batter Edges), Intersection Point: Lower Left Corner, X Grid: 164, Y Grid: 164, Average Haul Distance: 361.8 m

LEGEND

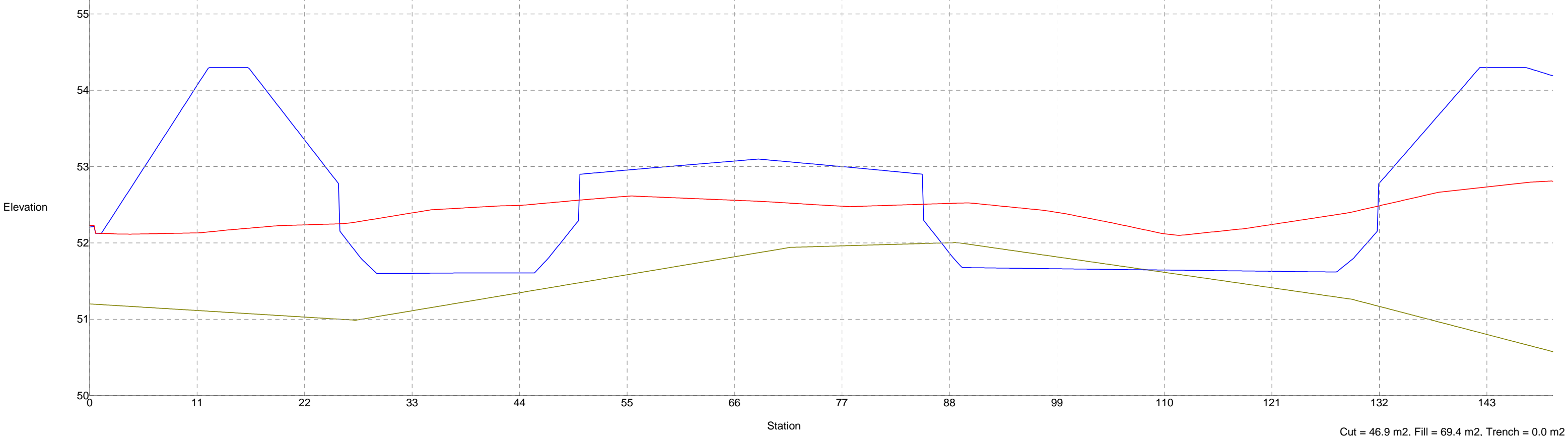


BROWN HILL KESWICK CREEK STORMWATER PROJECT
 VICTORIA PARK
 SECTION 1 (see sheet 03)
 Proposed



Location Points

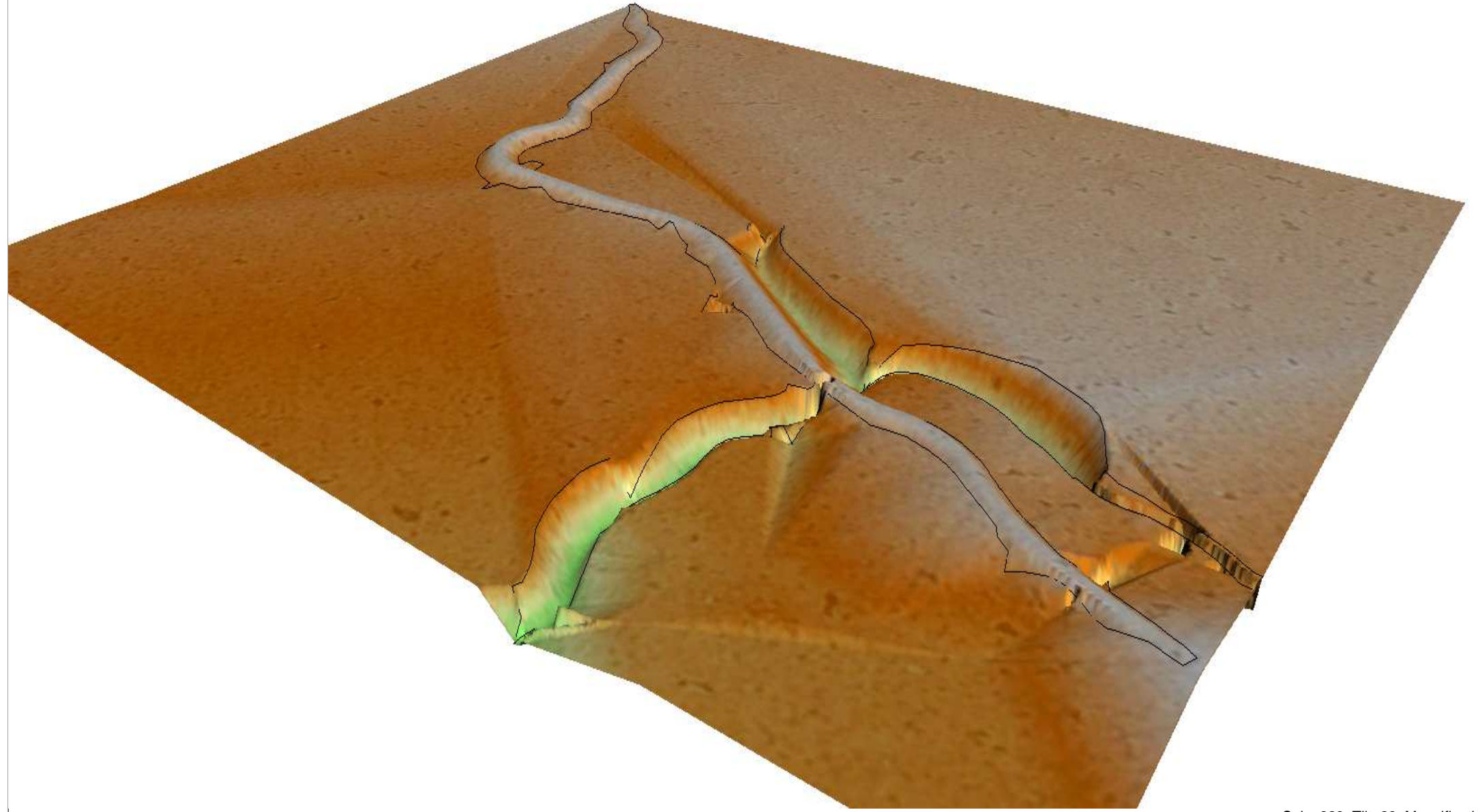
Northing	Easting
6,131,478.0	282,595.7
6,131,328.3	282,590.7



LEGEND

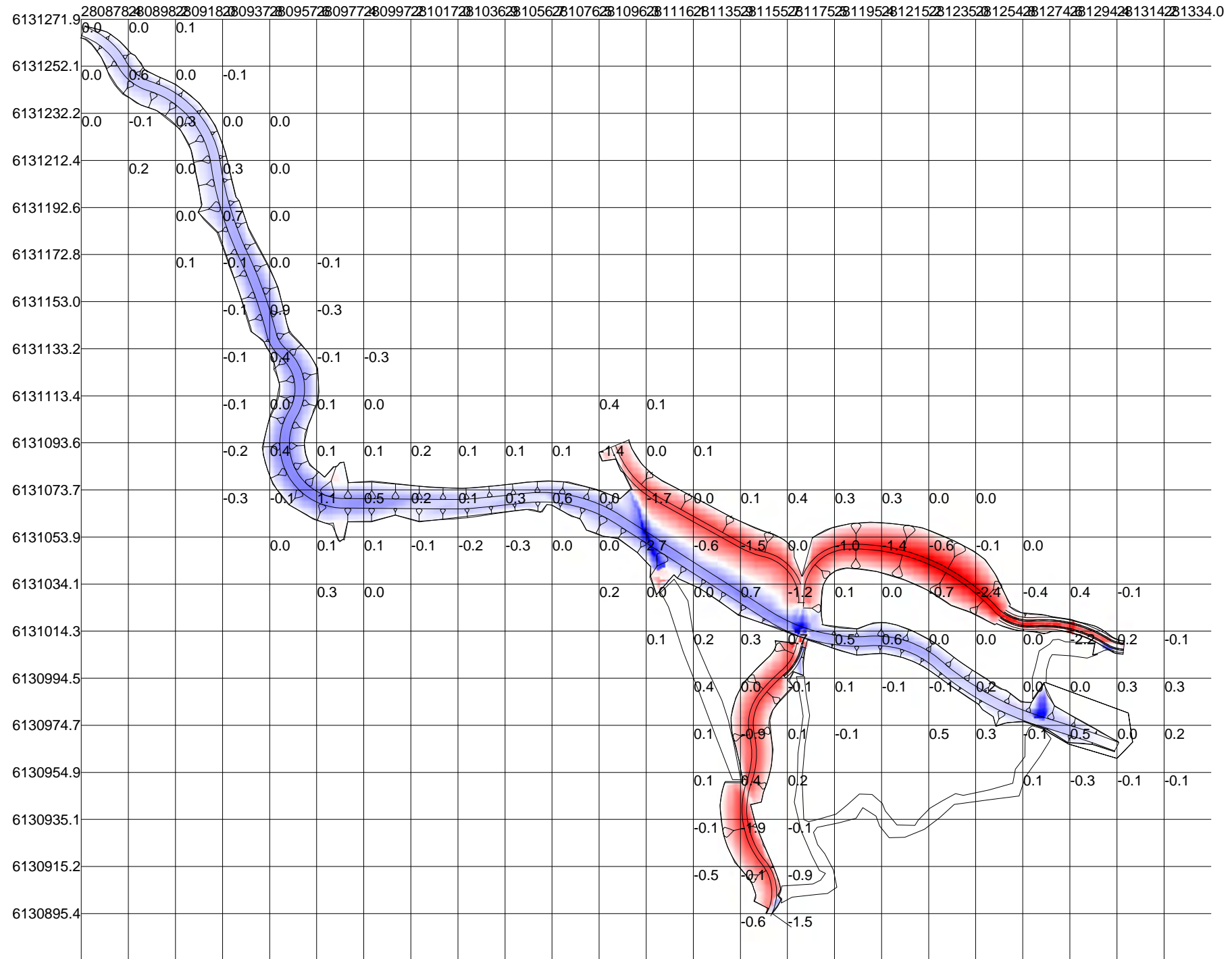
—	Existing
—	Proposed
—	Contaminated

BROWN HILL KESWICK CREEK STORMWATER PROJECT
PARK 20
3D REPORT
Proposed



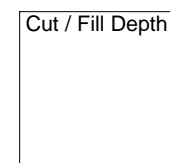
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BROWN HILL KESWICK CREEK STORMWATER PROJECT
 PARK 20
 GRID REPORT (20m x 20m Grid)
 Proposed



Area: Site Perimeter, Intersection Point: Lower Left Corner, X Grid: 65, Y Grid: 65, Average Haul Distance: 199.1 m

LEGEND



PARK 20 EMBANKMENT PRELIMINARY DESIGN**ESTIMATE SUMMARY**

REVISION 3, 29/01/15

Rev3

CONTRACTOR COSTS

PRELIMINARIES	\$390,897
DEMO AND EARTHWORKS	\$218,687
EXISTING CREEK REINSTATEMENT	\$68,559
DRAINAGE STRUCTURES	\$408,140
MISC WORKS AND LANDSCAPING	\$219,670
REINSTATEMENT	\$24,000
CONTRACTORS OH	\$106,396
TOTAL CONTRACTORS COSTS	\$1,436,349

CLIENT COSTS

EXISTING SERVICES IDENTIFICATION & ALTERATIONS	\$28,727
PROJECT PLANNING	\$86,181
DESIGN AND INVESTIGATIONS	\$172,362
PROJECT & CONTRACT MANAGEMENT	\$114,908
COMMUNITY ENGAGEMENT & LIASON	\$28,727
TOTAL CLIENT COSTS	\$430,905

RISK AND CONTINGENCY

Inherent and Contingent risk	\$410,796
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PROJECT TOTAL**\$2,278,049****KEY ASSUMPTIONS**

Assumes No Hardscaping, path lighting or structures

Assumes No land acquisition

Excludes escalation, prices current at Jan 2015

BROWN HILL KESWICK CREEK STORMWATER PROJECT

SOUTH PARK LANDS STORMWATER MANAGEMENT

COST ESTIMATE FOR PARK 20 EMBANKMENT PRELIMINARY DESIGN

ITEM	DESCRIPTION	COSTPLAN QTY'S AND COST			COMMENTS	
		QUANTITY	RATE	AMOUNT		
CONTRACT WORKS COSTS						
1	Preliminaries and overheads					
1.1	Establishment including contractors onsite overheads	item	15.2%	\$1,144,056	\$173,897	includes mobilisation, supervision, insurances and fees, site accommodation, preparation of Project management plans etc.
1.2	Testing	item	1	\$15,000	\$15,000	Including geotechnical, Level one supervision and the supply and installation of dam monitoring equipment
1.3	Environmental controls	item	1	\$35,000	\$35,000	including dust and sediment testing, auditing and associated testing requirements
1.4	Survey Setout and abuilding	item	1	\$25,000	\$25,000	
1.5	Traffic and pedestrian management	item	1	\$85,000	\$85,000	Includes signage, temporary diversions traffic management crews, audits etc.
1.6	Temporary and project fencing	m	1	\$15,000	\$15,000	
1.7	Temporary access tracks and hardstands	item	1	\$30,000	\$30,000	
1.9	Indigenous monitoring (while topsoil strip works being performed)	Hrs	160	\$75	\$12,000	allows for 2 men x 2 weeks
	Subtotal Section 1				\$390,897	0.188459304
2	Demolition & Earthworks					
	<u>General Demolition / Early works</u>					
2.5	Protection of Toilet Block During construction	Item	1	\$5,000	\$5,000	
2.6	Protection of Trees	Item	1	\$15,000	\$15,000	Assume minor fencing around some of the bigger trees, not specified
2.8	Tree Removal	No	1	\$43,500	\$43,500	53 Batter and 34 Swale Poplars
2.9	Clearing and Grubbing	m2	13930	\$1.20	\$16,716	
2.9	Relocate Existing Headwall and Existing Drainage pipe to Discharge to new creek Diversion. Inc. Rock pitching reinstatement hunter HW	item	1	\$3,500	\$3,500	Sheet 104, Assume 20-30m additional pipe required?
	<u>Earthworks</u>					
2.10	Strip Topsoil	m3	1393	\$9.00	\$12,537	Assume 100mm thick
2.11	Bulk Cut to Fill	m3	4239	\$12.00	\$50,868	
2.12	Bulk Cut to Spoil	m3	1501	\$25.21	\$37,840	
2.16	Trim Batter Slopes	m2	10309	\$1.65	\$17,010	
2.17	Respread 100mm topsoil	m3	1393	\$12.00	\$16,716	
	Subtotal Section 2				\$218,687	
3	Existing Creek reinstatement					
	<u>Existing Creek with Subsurface Drainage</u>					
3.1	Shape existing Creek Bed	m2	1865	\$5	\$9,325	
3.2	Aggregate Bedding (13mm)	m3	44	\$95	\$4,174	150mm thick cover to top and side of pipe, 0.5m wide
3.3	160mm CLASS 400 Slotted Drain coil pipe	lm	303	\$25	\$7,575	
3.4	150mm PVC DWR Riser with Screw Cap, 50m Spacing	lm	15	\$75	\$1,125	2.5m each
3.5	Light Duty Cover and Frame to 150mm PVC risers	no	6	\$1,200	\$7,200	
3.6	65mm Rock Ballast	m3	230.9	\$75	\$17,316	Fill to 300mm above top of aggregate bedding
3.7	A34 Geotextile	m2	818.1	\$3	\$2,454	allowed additional 0.5m for each side
3.8	Selected Backfill, to 95%	m3	1382.7	\$12	\$16,592	utilise stockpiled spoil
3.9	100mm Topsoil respread	m3	186.5	\$15	\$2,798	
	Subtotal Section 3				\$68,559	
4	Drainage structures, Gabions / Walls					
	<u>Creek Culvert</u>					
	<u>North of Existing Culvert</u>					Sheet 102/115
1	Demolish Existing Northern Headwall & Make Good, Match new 1200 x 900 RCBC	item	1	\$3,000	\$3,000	
2	New Twin 1200 x 900 RCBC, 1.2m units	lm	12	\$2,570	\$30,840	20 Units
3	Insitu Concrete Headwall to Suit Twin 1200x900 RCBC	item	1	\$12,000	\$12,000	
4	Concrete Trash Deflector	item	1	\$6,000	\$6,000	
5	Grouted Stone Pitching	m2	6	\$150	\$900	
6	New Headwall Barrier	lm	11	\$350	\$3,850	1200 high Steel Barrier with Posts at 2m Centres
	<u>South of Existing Culvert</u>					Sheet 102/115
4.2	Demolish Existing Southern Headwall & Make Good, Match new 1200 x 900 RCBC	item	1	\$3,000	\$3,000	
1	New Twin 1200 x 900 RCBC, 1.2m units	lm	18.3	\$2,570	\$47,031	34 Units
2	e/o for Tapered Units	no	4	\$1,000	\$4,000	
3	Insitu Concrete Bend	no	1	\$8,000	\$8,000	
4	Insitu Concrete Headwall to Suit Twin 1200x900 RCBC	item	1	\$12,000	\$12,000	
5	Concrete Trash Deflector	item	1	\$6,000	\$6,000	
6	Grouted Stone Pitching	m2	6	\$150	\$900	

BROWN HILL KESWICK CREEK STORMWATER PROJECT

SOUTH PARK LANDS STORMWATER MANAGEMENT

COST ESTIMATE FOR PARK 20 EMBANKMENT PRELIMINARY DESIGN

ITEM	DESCRIPTION	COSTPLAN QTY'S AND COST				COMMENTS
		QUANTITY	RATE	AMOUNT		
7	New Headwall Barrier	lm	11	\$350	\$3,850	1200 high Steel Barrier with Posts at 2m Centres
<u>East Creek Enlargement</u>						
4.3	<u>Upstream</u>					Sheet 103/115
1	Detailed Excavation	item	1	\$2,700	\$2,700.00	
2	Localised Backfill	item	1	\$3,200	\$3,200.00	
3	A34 Geotextile	m2	26.46	\$3	\$79	
4	Sand Bedding to Aggregate Pipe	m3	0.21	\$63	\$13	0.3m wide
5	Aggregate Bedding to Slotted pipe(13mm)	m3	0.63	\$75	\$47	0.3m wide
6	160mm CLASS 400 Slotted Drain coil pipe	lm	14	\$25	\$350	to IP1
7	150mm PVC DWR Riser with Screw Cap	lm	1.8	\$75	\$135	Approx. 1.8m each
8	Light Duty Cover and Frame to 150mm PVC risers	no	1	\$800	\$800	
9	300mm Rock Filled Reno Mattress	m2	19	\$185	\$3,515	
10	Rock Filled Gabion at end of reno matt	m3	2	\$350	\$700	1x1x2
11	New Headwall Barrier	lm	8	\$350	\$2,800	1200 high Steel Barrier with Posts at 2m Centres
4.4	<u>Downstream</u>					Sheet 103/115
1	Detailed Excavation	item	1	\$2,400	\$2,400.00	
2	Localised Backfill	item	1	\$2,800	\$2,800.00	
3	A34 Geotextile	m2	26.46	\$3	\$79	
4	300mm Rock Filled Reno Mattress	m2	20	\$185	\$3,700	
5	Rock Filled Gabion at end of reno matt	m3	2	\$350	\$700	1x1x2
6	New Headwall Barrier	lm	8	\$350	\$2,800	
4.5	<u>Culvert & HW</u>					Sheet 102/115
1	Detailed Excavation	m3	535.68	\$45	\$24,105.60	Stepped Batter Slope @ 1mx1m
2	New Twin 1800 x 1200 RCBC, 1.2m units	lm	55.8	\$2,570	\$143,406	94 Units
3	e/o for Tapered Crown Units	item	1	\$5,000	\$5,000	94 Units
4	Insitu Concrete Headwall to Suit Twin 1800x1200 RCBC	no	2	\$12,000	\$24,000	
5	Backfill	m3	425	\$15	\$6,377.94	with excavated spoil
4.6	NEW TELSTRA SERVICE, CONCRETE ENCSCED CREEK CROSSING	lm	12.4	\$2,000	\$24,800	Crossing at Chainage 265 (MC10)
<u>Southern Creek & Drain Enlargement</u>						
4.7	<u>Extend Existing headwall</u>					Sheet 104
1	Detailed Excavation	m3	10.5	\$125	\$1,312.50	
2	A34 Geotextile	m2	53.2	\$3	\$160	
3	Rock Filled Gabions	m3	21	\$350	\$7,350	
4.8	<u>Existing Creek Discharge</u>					Sheet 104/116
1	A34 Geotextile	m2	26	\$3	\$78	
2	300mm Thick Stone Pitching (100-150mm rock spalls)	m2	22.4	\$150	\$3,360	5.6m(avg) x 4m
Subtotal Section 4					\$408,140	
5	MISC					
5.1	200x300H Concrete Edge Beam	lm	100	\$90	\$9,000	Chain 0-100
5.2	Reinstate Footpath over Embankment with AC to council spec	m2	70	\$125	\$8,750	35m x 2m wide
<u>Landscaping works</u>						
5.3	Remove Existing Path	lm	122	\$30.00	\$3,660	
5.4	Primary Pathway - 3m Wide Sealed	m2	1332	\$64.54	\$85,963	
5.5	Secondary Path - 1.8m Wide Rubble	m2	559.8	\$40.47	\$22,654	
5.6	Dryland Grassing	m2	20450	\$1.65	\$33,743	Hydro seed
5.7	New Trees	no	148	\$90.00	\$13,320	Assume 40 Litre
5.8	Establishment / Maintenance for Landscaping works	item	1	\$42,580	\$42,580	Assume 1 yr. maintenance period
Subtotal Section 5					\$219,670	
6	Reinstatement and finishing works					
6.3	Site clean-up and demobilisation	item	1	\$24,000	\$24,000	
Subtotal Section 6					\$24,000	
SUBTOTAL 1 - 6					\$1,329,952	\$1,119,056
7	Contractors Offsite OH and Margin					
7.1	Offsite OH and Margin	%	8%	\$1,329,952	\$106,396.19	allowance for offsite OH and profit
TOTAL CONSTRUCTION COSTS					\$1,436,349	
8	CLIENT COSTS					
8.1	Existing services identification and alteration works	%	2%	\$1,436,349	\$28,727	Gap pipeline?
8.2	Project Planning works	%	6%	\$1,436,349	\$86,181	

BROWN HILL KESWICK CREEK STORMWATER PROJECT

SOUTH PARK LANDS STORMWATER MANAGEMENT

COST ESTIMATE FOR PARK 20 EMBANKMENT PRELIMINARY DESIGN

ITEM	DESCRIPTION	COSTPLAN QTY'S AND COST			COMMENTS	
		QUANTITY	RATE	AMOUNT		
8.3	Investigations and design	%	12%	\$1,436,349	\$172,362	Including design verification works
8.4	Project and contract management	%	8%	\$1,436,349	\$114,908	
8.5	Community engagement and liaison	%	2%	\$1,436,349	\$28,727	
8.6	Land acquisition					EXCLUDED FROM THIS ESTIMATE
TOTAL CLIENT COSTS			30%		\$430,905	
BASE PROJECT COST					\$1,867,253	
9	RISK AMD OPPORTUNITY					
9.1	Inherent Risk	%	7%	\$1,867,253	\$130,708	This is the uncertainties in the known or planned scope of the project.
9.2	Contingent Risk	%	15%	\$1,867,253	\$280,088	These are risks due to unmeasured items and are conditional, i.e. they may or may not happen. Note ; Contingent Risk does not cover changes to the project objectives
TOTAL RISK ALLOCATION					\$410,796	
TOTAL ESTIMATE PROJECT COST					\$2,278,049	
TOTAL					\$2.3	(million rounded)

IMPORTANT NOTES AND KEY ASSUMPTIONS	
1	Excludes GST
2	Costs are current as at Q1, 2015 and excludes escalation
3	Based on TONKIN Preliminary concept design FOR Park 20 Embankment20130167_Sht100-116-Rev 3.pdf
4	Excludes Land acquisition costs (if applicable)
5	Assumes no Hardscaping, path lighting or structures
6	This estimate has been prepared solely for BHKC stormwater authority, C/Othe City of Unley . Under no circumstances shall it be passed onto any third parties without the written consent of Costplan Pty Ltd