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Life Cycle Cost Example:Colaiste Bhride

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LIFE CYCLE COST MODEL

for

NEW SCHOOL, PE HALL & SITEWORKS

at

Colaiste Bride
Clondalkin
Dublin 22

KSN 'LIFE' TEAM

May 2011

based on stage 6 cost plan June 2004



KERRIGAN • SHEANON • NEWMAN



S E R V I C E S

• CHARTERED QUANTITY SURVEYORS • BUILDING COST CONSULTANTS • PROJECT MANAGEMENT

Prepared in accordance with The
Society of Chartered Surveyors
LCC/Sustainability Group
Recommendations and BCIS SMM for
LLC

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- Life Cycle Cost Parameters**
- Basis of Estimate**
- Life Cycle Cost Summary**
- Level 1 Breakdown**
- Construction Cost Summary**
- Replacement Summary**
- Cash Flow Forecast**
- Other Construction Costs**
- Operations, Maintenance and Occupancy**
- Major Replacement**

PROJECT TITLE:	
Location	Colaiste Bride, Clondalkin, Dublin 22,
Project Details:	New School, PE Hall and Siteworks for Colaiste Bride
Owner:	Colaiste Bride Board of Management
Occupier:	Colaiste Bride, Clondalkin, Dublin 22,
Prepared By:	Dermot Kehily 086 335 4912

DATES				
Plan	Preparation date:	Jun-04	Indexing Base	N/A
Construction Cost	Base Date:	Jun-04	Start Date:	Aug-04
	Date of Completion:	01/08/2005	Date of Hand Over:	01/08/2005
Maintenance	Start Date:	01/08/2005	End Date:	31/07/2065
Operation	Start Date:	01/08/2005	End Date:	31/07/2065
Occupancy	Start Date:	01/08/2005	End Date:	31/07/2065
End of Life	End Date:	31/07/2065	Hand Back Liability Period:	N/A
Period of Analysis:	60	Unit of time:	Year	Total Asset Life Expectancy: 100

BASIS OF YEARS (eg. Calendar; financial year) – please state
Calander Years

PROCUREMENT DETAILS	
Procurement Route:	Traditional
Procurement Stage:	Cost Plan Stage 6 - Tender
Tender Basis:	Two Stage Selective
Market Conditions:	Non Competitive

BUILDINGS ENVIRONMENTAL TARGET			
Scheme	None	Target Score	
Other Considerations			

BASIS OF COST			
Current Price	Yes	Discount Rate	5%
Net Present Value	Yes	Escalation Rate	3%
Escalation Rate	Oil & Gas 5%	GIFA	7,440

Schedule of Areas

Basement floors:		Percentage of gross floor area:	
Ground floor		Below ground floor	
Upper floors		Single storey construction	
Total (Gross Internal Floor		Two storey construction	
Usable Area		___ storey construction	
Circulation Area		___ storey construction	
Ancillary Areas		Average storey height:	
Internal divisions		Below ground floor(s)	
Total (Gross Internal Floor		Ground floor	
Spaces not enclosed:		Above ground floor(s)	
Areas Requiring Regular Cleaning		External vertical envelope (Ext. walls, windows & doors)	
Internal cube		Area of Glazing	
Area of site		Number of units	

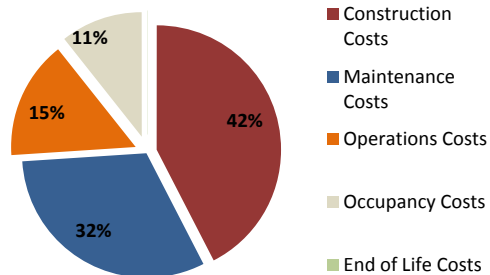
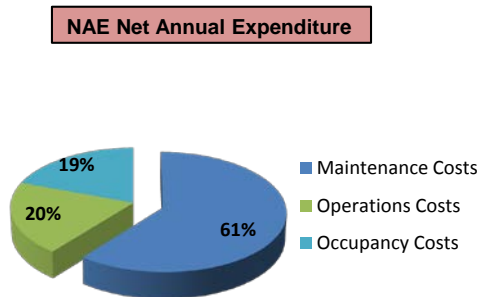
Exclusions		Inclusions	
1	Asbestos Removal	1	Professional Fees
2	Abnormal Ground Conditions	2	Furniture Fixtures and equipment
3	Legal Fees	3	Planning Fees
4	Archaeology	4	Fire Certification Fees
5	Removal of Contaminated Material	5	PC's
6	Overtime due to accelerated Programme	6	Electricity Costs
7	Land Acquisition Costs	7	Fuel Costs
8	Site Investigation Costs	8	Telephone Costs
9	Wages and Salaries	9	Postal Costs
10	Finance Costs	10	Cleaning
11	Taxes	11	Classroom Materials
12	Incomes		
13	Building and Contents Insurance		
14	Contingency for Life Cycle Costs		
15	Enabling Works		
16	Externalities		
17	Non Construction Costs		

Documents Used as Bases of Analysis		Source
1.	Construction Cost Plan Stage 6	KSN
2.	Replacement Values	Department of Education
3.	Replacement Values	BCIS
4.	Annual Costs	Board of Management Colaiste Bride
5.	Methodology	BCIS Standard Method of Measurement for LCC, ISO 15868



WLCC	Whole Life Cycle Cost	Life Cycle Cost	€m2	Total Present Value	€m2
CC	Construction Costs	12,774,063	1716.94	12,774,063	1716.94
	2.0 Maintenance Costs	17,177,655	2308.82	9,501,431	1277.07
	3.0 Operations Costs	5,640,000	758.06	4,625,512	621.71
	4.0 Occupancy Costs	5,469,000	735.08	3,213,619	431.94
	5.0 End of Life Costs	0	0.00	0	0.00
LLC	Life Cycle Cost (2.0 - 5.0)	28,286,655	3801.97	17,340,562	2330.72
TLLC	Total Life Cycle Cost (Incl Construction)	41,060,718	5518.91	30,114,625	4047.66
	6.0 Non Construction Costs	0	0.00	0	0.00
	7.0 Income	0	0.00	0	0.00
	8.0 Externalities	0	0.00	0	0.00
WLC	Whole Life Cycle Cost (ex VAT)	41,060,718	5518.91	30,114,625	4047.66
VAT	Vat	5,543,197	745.05	4,065,474	546.43
WLC VAT	Whole Life Cycle Cost (Inc. VAT)	46,603,914	6263.97	34,180,100	4594.10

NAE	Net Annual Expenditure	Annual Costs	€m2	%
	2.0 Maintenance Costs	286,294	38.48	61%
	3.0 Operations Costs	94,000	12.63	20%
	4.0 Occupancy Costs	91,150	12.25	19%
NAE	Net Annual Expenditure	471,444	63.37	100%
	7.0 Annual Income			
WNAE	Whole Net Annual Expenditure	471,444	63.37	



TLLC Total Life Cycle Cost (Present Value)



	Ref	BCIS	Annual Amount	Life Cycle Cost	Escalated Life Cycle Cost	Total Present Value
Construction Costs	1.0	Construction Costs				
	1.1	Construction works costs		11,073,779	11,073,779	11,073,779
	1.2	Other construction related costs		1,700,284	1,700,284	1,700,284
		Total Construction Costs		12,774,063	12,774,063	12,774,063
Maintenance, Operations and Occupancy Costs	2.0	Maintenance Costs				
	2.1	Major replacement	242,594	14,555,655	40,549,550	7,960,728
	2.3	Redecoration - internal / external	1,000	60,000	167,945	35,256
	2.4	Minor replacement, repairs and PPM maintenance costs	25,200	1,512,000	4,232,215	888,461
	2.5	Unscheduled repairs, replacement and maintenance	8,500	510,000	1,427,533	299,679
	2.6	Grounds maintenance	9,000	540,000	1,511,505	317,307
		Total Maintenance Costs	286,294	17,177,655	47,888,749	9,501,431
	3.0	Operations Costs				
	3.1	Cleaning costs	12,000	720,000	2,015,340	423,077
	3.1.3	Specialist cleaning	12,000	720,000	2,015,340	423,077
	3.2	Utilities costs gas and electric	59,000	3,540,000	20,684,604	3,391,538
	3.2.1	Fuel Costs	53,000	3,180,000	19,676,934	3,180,000
	3.2.2	Water and Drainage	6,000	360,000	1,007,670	211,538
3.3	Administration Costs	23,000	1,380,000	3,862,736	810,897	
3.3.1	Property management	17,000	1,020,000	2,855,066	599,358	
3.3.3	Waste management disposal	6,000	360,000	1,007,670	211,538	
	Total Operations Costs	94,000	5,640,000	26,562,681	4,625,512	
4.0	Occupancy Costs					
4.3	Security	2,000	120,000	335,890	70,513	
4.5	Switchboard / telephones	10,500	630,000	1,763,423	370,192	
4.6	Postroom - mail services	2,500	150,000	419,863	88,141	
4.7	ICT and IT services	11,150	669,000	1,872,587	393,109	
4.12	Occupiers furniture, fittings and equipment	45,000	2,700,000	7,557,527	1,586,537	
4.14	Stationary and reprographics	20,000	1,200,000	3,358,901	705,128	
	Total Occupancy Costs	91,150	5,469,000	15,308,190	3,213,619	
End of Life	5.0	End of Life Costs				
		Included in Replacement Costs				
	Total End of Life Costs		0	0	0	
Whole Life Cycle	6.0	Non Construction Costs				
		Excluded from LCC study				
		Total Non Construction Costs		0	0	0
	7.0	Income				
		Excluded from LCC study				
		Total Income	0	0	0	0
Whole Life Cycle	8.0	Externalities				
		Excluded from LCC study				
	Total Externalities	0	0	0	0	
WLCC		Whole Life Cycle Cost (Not Including Construction Costs)	471,444	41,060,718	102,533,682	30,114,625

Primary Building Unit, Department of Education
Portlaoise Road, Tullamore, Co. Offaly
COST PLAN (STAGE 6)

PROJECT	Colaiste Bride	
	Clondalkin	Job No.
	Dublin 22	

PROJECT DETAILS New School, PE Hall and Siteworks for Colaiste Bride

CLIENT Colaiste Bride Board of Management

DESIGN TEAM Newenham Mulligan & Associates - Architects
Muir Associates- Consulting Engineers
JV Tierney - Services Engineers
Kerrigan Sheanon Newman - Quantity Surveyors

FLOOR AREA **7440 M2**
(Note: includes 231m2 funded by Board of Management)

	€	€per m2 of floor area
Basic Building Cost (Floor Area 7440m2)	9,993,413.29	1343.20
External Works Allowance 11.24%	1,123,591.77	151.02
Abnormal Cost	1,094,168.84	147.07
Furniture and Fittings	357,564.80	48.06
TOTAL COST PLAN	€ 12,568,738.69	1689.35
TOTAL COST PLAN (VAT EXLD)	€ 11,073,778.58	1488.41

DATE OF COST PLAN

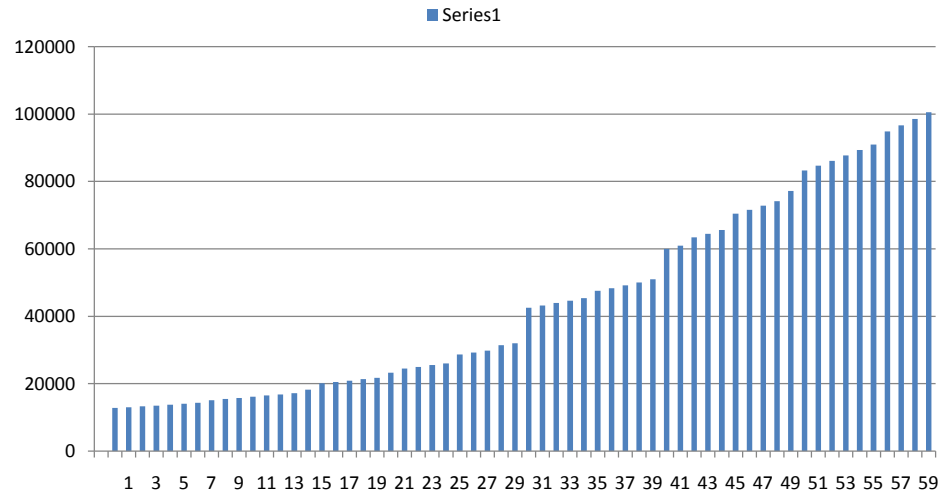
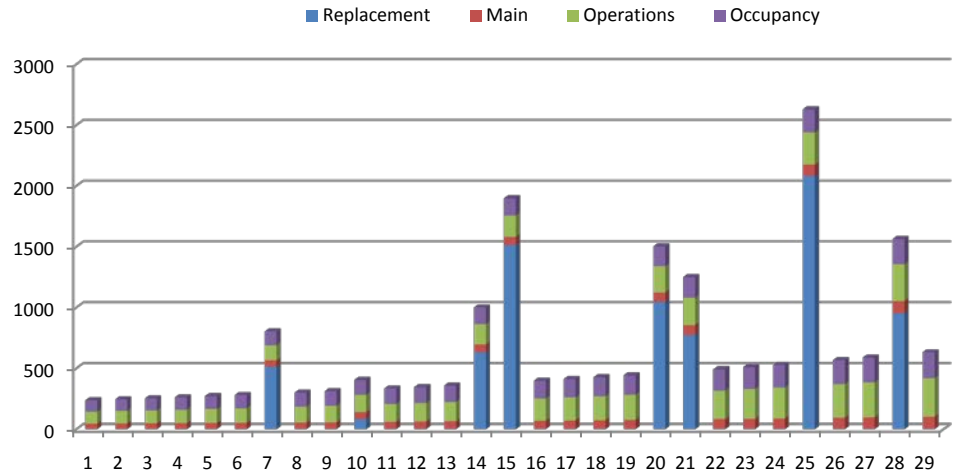
24th June 2004

MR Major Replacement Costs

Years 60



REF	Description	Annual Cost Equiv.	Life Cycle Cost	Escalated LLC	Present Value
2.0	Maintenance (Replacement) Costs				
2.1	Major Replacement BUILDING WORK				
22	Internal Walls, Partitions	283	17,004	41,273	9,550
27	Roofs	392	23,522	76,731	10,899
28	Frame	428	25,699	83,832	11,908
31	External Walls : Completions	23,549	1,412,936	4,609,049	654,696
32	Internal Walls : Completions	30,517	1,831,013	4,921,006	1,053,081
34	Stairs, Ramps : Completions	2,886	173,186	560,923	86,644
37	Roof : Completions	806	48,334	117,318	27,145
41	Wall Finishes Externally	6,983	418,970	1,117,855	237,880
42	Wall Finishes Internally	19,738	1,184,250	3,375,925	663,096
43	Floor Finishes	19,753	1,185,157	3,069,720	677,186
44	Stair, Ramp Finishes	4,189	251,333	668,773	144,686
45	Ceiling Finishes	4,247	254,832	707,990	142,524
47	Roof Finishes	23,407	1,404,396	3,408,838	788,728
52	Drainage and Refuse Disposal	1,616	96,968	304,936	46,118
51	Heating Centre	23,635	1,418,090	3,605,413	800,726
61	Electricity Centre and Main Distribution	22,667	1,359,996	4,335,463	687,459
74	Sanitary Fittings	5,286	317,162	891,402	177,490
	SITWORK				
10	Prepared Site	674	40,412	98,091	22,696
30	Site Enclosures, Site Retaining Walls	3,253	195,179	524,287	107,599
40	Roads, Paths, Pavings	8,847	530,817	1,519,123	283,040
50	Site Services (Pipe & Ducted)	3,108	186,489	608,335	86,411
60	Site Services (Mainly Electrical)	1,128	67,665	220,725	31,353
70	Site Fittings	3,548	212,850	549,524	122,729
80	Landscape, Play Area	12,690	761,382	2,186,766	430,107
	BUILDING FITTING AND FURNITURE				
71	Display, Circulation Fittings	18,967	1,138,014	2,946,252	656,976
	Total Major Replacement Costs	242,594	14,555,655	40,549,550	7,960,728





REF	BCIS	Description	Qty	Unit	Rate	Cost
1.2		Other Construction Costs				
1.2		Other Related Construction Costs				
1.2		PC's Desktops and Keyboards	100	nr	550.00	55,000
1.2		ESB Contributions	1	ea	15,000.00	15,000
1.2		Planning Fees	7440	m2	3.60	26,784
1.2		Fire Cert Fees	1	ls	12,500.00	12,500
1.2		Loose Furniture	1	ls	75,000.00	75,000
1.2		Design Team Fees	0.1369	%	11,073,779	1,516,000
		Total Non Construction Costs				1,700,284



Ref	BCIS	Description	Qty	Unit	Rate	Annual Cost	Life Cycle Cost	(e)	Escalated Life Cycle Cost	(i)	Present Value
2.0	Maintenance Costs										
2.1	Major replacement										
2.1		Major Replacement (see MR Major Replacement)				242,594	14,555,655	-	40,549,550	-	7,960,728
2.2	Subsequent refurbishment and adaptation costs										
2.2		N/A				0	0	0.00%	0	0.00%	0
2.3	Redecoration - internal / external										
2.3		Unscheduled Redecoration	1	LS	1,000.00	1,000	60,000	3.00%	167,945	5.00%	35,256
2.4	Minor replacement, repairs and PPM maintenance costs										
2.4		Planned Preventative Maintenance - Building	1	LS	16,000.00	16,000	960,000	3.00%	2,687,121	5.00%	564,102
2.4		Planned Preventative Maintenance - Furniture and Fittings	1	LS	9,200.00	9,200	552,000	3.00%	1,545,094	5.00%	324,359
2.5	Unscheduled repairs, replacement and maintenance										
2.5		Unscheduled repairs	1	LS	8,500.00	8,500	510,000	3.00%	1,427,533	5.00%	299,679
2.6	Grounds maintenance										
2.6		Unscheduled - Grounds maintenance	1	LS	2,000.00	2,000	120,000	3.00%	335,890	5.00%	70,513
2.6		PPM - Grounds maintenance	1	LS	7,000.00	7,000	420,000	3.00%	1,175,615	5.00%	246,795
2.7	Client definable costs										
Total Maintenance Costs						286,294	17,177,655		47,888,749		9,501,431
3.0	Operations Costs										
3.1	Cleaning costs										
3.1		3.1.1 <u>Windows and external surfaces</u>									
3.1		3.1.1 N/A				0	0	0.00%	0	0.00%	0
3.1		3.1.2 <u>Internal cleaning</u>									
3.1		3.1.2 N/A				0	0	0.00%	0	0.00%	0
3.1		3.1.3 <u>Specialist cleaning</u>									
3.1		3.1.3 Cleaning Materials	1	LS	12,000.00	12,000	720,000	3.00%	2,015,340	5.00%	423,077
3.1		3.1.4 <u>External works cleaning</u>									
3.1		3.1.4 N/A				0	0	0.00%	0	0.00%	0
3.2	Utilities costs gas and electric										
3.2		3.2.1 <u>Fuel Costs</u>									
3.2		3.2.1 Heating	1	LS	23,000.00	23,000	1,380,000	5.00%	8,539,047	5.00%	1,380,000
3.2		3.2.1 ESB	1	LS	30,000.00	30,000	1,800,000	5.00%	11,137,887	5.00%	1,800,000
3.2		3.2.2 <u>Water and Drainage</u>									
3.2		3.2.2 Water	1	LS	6,000.00	6,000	360,000	3.00%	1,007,670	5.00%	211,538



Ref	BCIS	Description	Qty	Unit	Rate	Annual Cost	Life Cycle Cost	(e)	Escalated Life Cycle Cost	(i)	Present Value
4.9	N/A					0	0	0.00%	0	0.00%	0
	4.10	Laundry									
4.10	N/A					0	0	0.00%	0	0.00%	0
	4.11	Vending									
4.11	N/A					0	0	0.00%	0	0.00%	0
	4.12	Occupiers furniture, fittings and equipment									
4.12		Classroom Equipment; Metalwork, PE, Science, Languages,	1	LS	45,000.00	45,000	2,700,000	3.00%	7,557,527	5.00%	1,586,537
	4.13	Internal plants and landscaping									
4.13	N/A					0	0	0.00%	0	0.00%	0
	4.14	Stationary and reprographics									
4.14		Printing/Photocopying	1	LS	15,000.00	15,000	900,000	3.00%	2,519,176	5.00%	528,846
4.14		Office Stationary	1	LS	5,000.00	5,000	300,000	3.00%	839,725	5.00%	176,282
	4.15	Porters									
4.15	N/A					0	0	0.00%	0	0.00%	0
	4.16	Carparking charges									
4.16	N/A					0	0	0.00%	0	0.00%	0
	4.17	Client definable costs									
Total Occupancy Costs						91,150	5,469,000		15,308,190		3,213,619

MR Major Replacement Costs



Years 60

REF	Description	Qty	Unit	Rate	Cost TODAY	f	Factored Cost	Year	Annual Cost Equiv.	Life Cycle Cost (ue)	(e)	Escalated LLC	(i)	Present Value
2.0	Maintenance (Replacement) Costs													
2.1	Major Replacement BUILDING WORK													
22	<u>Internal Walls, Partitions</u>													
22	Stud Partitions	1.00	LS	14,170.00	14,170	1.20	17,004	30	283	17,004	3.00%	41,273	5.00%	9,550
27	<u>Roofs</u>													
27	Fireproofing to steelwork	1.00	LS	19,602.00	19,602	1.20	23,522	40	392	23,522	3.00%	76,731	5.00%	10,899
28	<u>Frame</u>													
28	Fireproofing to steelwork	1.00	LS	21,416.00	21,416	1.20	25,699	40	428	25,699	3.00%	83,832	5.00%	11,908
31	<u>External Walls : Completions</u>													
31	Steel Doors	1.00	LS	10,325.00	10,325	1.20	12,390	40	207	12,390	3.00%	40,417	5.00%	5,741
31	Windows and Doors	1.00	LS	1,075,000.00	1,075,000	1.20	1,290,000	40	21,500	1,290,000	3.00%	4,208,029	5.00%	597,732
31	Parklex Raincreen Cladding System	1.00	LS	92,121.25	92,121	1.20	110,546	40	1,842	110,546	3.00%	360,604	5.00%	51,222
32	<u>Internal Walls : Completions</u>													
32	Architraves	1.00	LS	9,097.50	9,098	1.20	10,917	15	546	32,751	3.00%	84,790	5.00%	18,907
32	Doors	1.00	LS	266,853.75	266,854	1.20	320,225	15	16,011	960,674	3.00%	2,487,128	5.00%	554,597
32	Folding Doors	1.00	LS	26,250.00	26,250	1.20	31,500	15	1,575	94,500	3.00%	244,655	5.00%	54,555
32	Painting Door Frames	1.00	LS	77,405.00	77,405	1.20	92,886	7	12,385	743,088	3.00%	2,104,432	5.00%	425,021
34	<u>Stairs, Ramps : Completions</u>													
34	Balustrades and Handrails	1.00	LS	72,161.00	72,161	1.20	86,593	25	2,886	173,186	3.00%	560,923	5.00%	86,644
37	<u>Roof : Completions</u>													
37	Cable System	1.00	LS	37,778.00	37,778	1.20	45,334	30	756	45,334	3.00%	110,037	5.00%	25,460
37	Acess Lader	1.00	LS	2,500.00	2,500	1.20	3,000	30	50	3,000	3.00%	7,282	5.00%	1,685
41	<u>Wall Finishes Externally</u>													
41	Kingspan insulated wall panels and flashing	1.00	LS	23,933.75	23,934	1.20	28,721	30	479	28,721	3.00%	69,712	5.00%	16,130
41	Plaster to blockwork	1.00	LS	122,563.75	122,564	1.15	140,948	30	2,349	140,948	3.00%	342,119	5.00%	79,159
41	Painting to plaster	1.00	LS	29,678.75	29,679	1.05	31,163	7	4,155	249,302	3.00%	706,024	5.00%	142,592
42	<u>Wall Finishes Internally</u>													
42	Plastered Plasterboard Walls	1.00	LS	21,582.50	21,583	1.20	25,899	25	863	51,798	3.00%	167,766	5.00%	25,914
42	Ceramic Wall Tiles	1.00	LS	60,563.75	60,564	1.20	72,677	40	1,211	72,677	3.00%	237,073	5.00%	33,675
42	System Stud Partitions	1.00	LS	76,092.50	76,093	1.20	91,311	30	1,522	91,311	3.00%	221,636	5.00%	51,282
42	Painting Fairfaced Blockwork	1.00	LS	112,798.75	112,799	1.05	118,439	7	15,792	947,510	3.00%	2,683,356	5.00%	541,944
42	Painting Plastered Walls	1.00	LS	626.25	626	1.05	658	7	88	5,261	3.00%	14,898	5.00%	3,009

MR Major Replacement Costs



Years 60

REF	Description	Qty	Unit	Rate	Cost TODAY	f	Factored Cost	Year	Annual Cost Equiv.	Life Cycle Cost (ue)	(e)	Escalated LLC	(i)	Present Value
42	Boarding to steel columns	1.00	LS	6,298.75	6,299	1.20	7,559	40	126	7,559	3.00%	24,656	5.00%	3,502
42	Parklex Timber Panels	1.00	LS	6,780.00	6,780	1.20	8,136	40	136	8,136	3.00%	26,540	5.00%	3,770
43	<u>Floor Finishes</u>													
43	Softwood Skirtings and Grounds	1.00	LS	19,395.00	19,395	1.15	22,304	40	372	22,304	3.00%	72,757	5.00%	10,335
43	Painting Skirtings	1.00	LS	13,113.75	13,114	1.05	13,769	7	1,836	110,156	3.00%	311,961	5.00%	63,005
43	Pilkington floor tiles and skirting	1.00	LS	38,138.75	38,139	1.20	45,767	20	1,526	91,533	3.00%	231,951	5.00%	52,360
43	Altro Safty Floor and skirting	1.00	LS	22,367.50	22,368	1.20	26,841	20	895	53,682	3.00%	136,034	5.00%	30,708
43	Marmoleum Flooring and skirting	1.00	LS	246,068.75	246,069	1.20	295,283	20	9,843	590,565	3.00%	1,496,536	5.00%	337,822
43	Carpetting	1.00	LS	14,775.00	14,775	1.10	16,253	15	813	48,758	3.00%	126,230	5.00%	28,148
43	Matwells	1.00	LS	19,295.00	19,295	1.20	23,154	15	1,158	69,462	3.00%	179,833	5.00%	40,100
43	Epoxy painting to floors	1.00	LS	1,511.25	1,511	1.20	1,814	15	91	5,441	3.00%	14,085	5.00%	3,141
43	Timber sports floor	1.00	LS	53,682.50	53,683	1.20	64,419	15	3,221	193,257	3.00%	500,331	5.00%	111,567
44	<u>Stair, Ramp Finishes</u>													
44	Skirtings	1.00	LS	1,683.75	1,684	1.20	2,021	15	101	6,062	3.00%	15,693	5.00%	3,499
44	Painting Skirtings	1.00	LS	720.00	720	1.05	756	7	101	6,048	3.00%	17,128	5.00%	3,459
44	Plastered Plasterboard Walls	1.00	LS	541.25	541	1.15	622	30	10	622	3.00%	1,511	5.00%	350
44	Painting	1.00	LS	8,187.50	8,188	1.05	8,597	7	1,146	68,775	3.00%	194,771	5.00%	39,337
44	Marmoleum flooring to stairs, nosings and edging	1.00	LS	49,225.00	49,225	1.15	56,609	15	2,830	169,826	3.00%	439,670	5.00%	98,041
45	<u>Ceiling Finishes</u>													
45	T&G Ceder Soffit	1.00	LS	13,218.75	13,219	1.15	15,202	15	760	45,605	3.00%	118,068	5.00%	26,328
45	Suspended Plastered Plasterboard Celings	1.00	LS	18,051.25	18,051	1.15	20,759	25	692	41,518	3.00%	134,470	5.00%	20,771
45	Painting Plastered Ceilings	1.00	LS	1,139.00	1,139	1.05	1,196	7	159	9,568	3.00%	27,096	5.00%	5,472
45	Metal Ceiling Tiles	1.00	LS	40,155.00	40,155	1.20	48,186	30	803	48,186	3.00%	116,960	5.00%	27,062
45	Painting Exposed Concrete Ceilings	1.00	LS	13,090.00	13,090	1.05	13,745	7	1,833	109,956	3.00%	311,396	5.00%	62,891
47	<u>Roof Finishes</u>													
47	Kalzip standing seam roofing system	1.00	LS	1,017,422.50	1,017,423	1.20	1,220,907	30	20,348	1,220,907	3.00%	2,963,462	5.00%	685,678
47	Kingspan Wall Panels	1.00	LS	87,681.25	87,681	1.20	105,218	30	1,754	105,218	3.00%	255,390	5.00%	59,092
47	Parlon gutters and walkways	1.00	LS	65,226.25	65,226	1.20	78,272	30	1,305	78,272	3.00%	189,985	5.00%	43,958
52	<u>(52) Drainage and Refuse Disposal</u>													
52	Drainage above ground	1.00	LS	21,151.25	21,151	1.20	25,382	35	423	25,382	3.00%	71,420	5.00%	12,948
52	Drainage below ground	1.00	LS	59,655.00	59,655	1.20	71,586	40	1,193	71,586	3.00%	233,516	5.00%	33,170
51	<u>Heating Centre</u>													
51	Mechanical System	1.00	LS	804,625.00	804,625	1.20	965,550	30	16,093	965,550	3.00%	2,343,643	5.00%	542,266

MR Major Replacement Costs



REF	Description	Qty	Unit	Rate	Cost TODAY	f	Factored Cost	Year	Annual Cost Equiv.	Life Cycle Cost (ue)	(e)	Escalated LLC	(i)	Present Value
51	Builders Work	1.00	LS	35,191.25	35,191	1.20	42,230	30	704	42,230	3.00%	102,502	5.00%	23,717
51	Painting pipes, radiators etc.	1.00	LS	41,568.75	41,569	1.20	49,883	7	6,651	399,060	3.00%	1,130,142	5.00%	228,249
51	Waterproofing tankroom floor	1.00	LS	3,125.00	3,125	1.20	3,750	15	188	11,250	3.00%	29,126	5.00%	6,495
61	<u>Electricity Centre and Main Distribution</u>													
61	Electrical System	1.00	LS	504,300.00	504,300	1.20	605,160	25	20,172	1,210,320	3.00%	3,920,035	5.00%	605,518
61	Builders Work	1.00	LS	21,365.00	21,365	1.20	25,638	25	855	51,276	3.00%	166,075	5.00%	25,653
61	Lift Installation	1.00	LS	41,000.00	41,000	1.20	49,200	20	1,640	98,400	3.00%	249,353	5.00%	56,288
74	<u>Sanitary Fittings</u>													
74	Sanitary Fixturers	1.00	LS	34,061.25	34,061	1.30	44,280	25	1,476	88,559	3.00%	286,829	5.00%	44,306
74	Sanitary Fittings	1.00	LS	5,230.00	5,230	1.15	6,015	10	501	30,073	3.00%	79,531	5.00%	17,520
74	System Partitions	1.00	LS	28,780.00	28,780	1.20	34,536	10	2,878	172,680	3.00%	456,678	5.00%	100,604
74	Mirrors	1.00	LS	4,700.00	4,700	1.10	5,170	10	431	25,850	3.00%	68,364	5.00%	15,060
	SITWORK													
10	<u>(10) Prepared Site</u>													
10	30% in Year 30	1.00	LS	33,676.80	33,677	1.20	40,412	30	674	40,412	3.00%	98,091	5.00%	22,696
30	<u>Site Enclosures, Site Retaining Walls</u>													
30	Perimeter Fencing	1.00	LS	25,608.75	25,609	1.20	30,731	35	512	30,731	3.00%	86,471	5.00%	15,676
30	Ballcourt Fencing and Gates	1.00	LS	56,050.00	56,050	1.20	67,260	20	2,242	134,520	3.00%	340,884	5.00%	76,950
30	Entrance Gates	1.00	LS	12,470.00	12,470	1.20	14,964	25	499	29,928	3.00%	96,932	5.00%	14,973
40	<u>Roads, Paths, Pavings</u>													
40	Precast Concrete Kerbs	1.00	LS	17,195.00	17,195	1.20	20,634	25	688	41,268	3.00%	133,661	5.00%	20,646
40	Timber Edging	1.00	LS	8,192.50	8,193	1.20	9,831	15	492	29,493	3.00%	76,356	5.00%	17,026
40	Tegula Flag Paving	1.00	LS	20,095.00	20,095	1.20	24,114	25	804	48,228	3.00%	156,203	5.00%	24,128
40	Bitumen Macadam Paving and Markings	1.00	LS	74,128.75	74,129	1.20	88,955	25	2,965	177,909	3.00%	576,219	5.00%	89,007
40	Gravel Paving	1.00	LS	6,825.00	6,825	1.20	8,190	10	683	40,950	3.00%	108,298	5.00%	23,858
40	Internal Courtyard	1.00	LS	160,807.50	160,808	1.20	192,969	30	3,216	192,969	3.00%	468,386	5.00%	108,374
50	<u>(50) Site Services (Pipe & Ducted)</u>													
50	60% Replacement - Year 30	1.00	LS	155,407.80	155,408	1.20	186,489	40	3,108	186,489	3.00%	608,335	5.00%	86,411
60	<u>Site Services (Mainly Electrical)</u>	1.00	LS											
60	60% Replacement - Year 30	1.00	LS	56,387.40	56,387	1.20	67,665	40	1,128	67,665	3.00%	220,725	5.00%	31,353
70	<u>Site Fittings</u>													
70	Cycle Shelter	1.00	LS	27,500.00	27,500	1.20	33,000	20	1,100	66,000	3.00%	167,249	5.00%	37,754
70	Cycle Stand	1.00	LS	15,375.00	15,375	1.20	18,450	15	923	55,350	3.00%	143,298	5.00%	31,954

MR Major Replacement Costs



Years 60

REF	Description	Qty	Unit	Rate	Cost TODAY	f	Factored Cost	Year	Annual Cost Equiv.	Life Cycle Cost (ue)	(e)	Escalated LLC	(i)	Present Value
70	Benching	1.00	LS	15,000.00	15,000	1.20	18,000	15	900	54,000	3.00%	139,803	5.00%	31,174
70	Sports Equipment	1.00	LS	6,250.00	6,250	1.20	7,500	10	625	37,500	3.00%	99,174	5.00%	21,848
80	<u>Landscape, Play Area</u>													
80	Bitumen Macadam Paving (Basketball)	1.00	LS	31,262.50	31,263	1.20	37,515	25	1,251	75,030	3.00%	243,010	5.00%	37,537
80	Grassing and Planting	1.00	LS	71,495.00	71,495	1.20	85,794	7	11,439	686,352	3.00%	1,943,755	5.00%	392,570
80	Building Fittings and Furniture													
71	<u>Display, Circulation Fittings</u>													
71	Building Fittings	1.00	LS	316,115.00	316,115	1.20	379,338	15	18,967	1,138,014	3.00%	2,946,252	5.00%	656,976
Total Major Replacement Costs					6,644,882		7,937,002		242,594	14,555,655		40,549,550		7,960,728