

21 June 2017

Level 8
Shortland Chambers Building
70 Shortland Street
Auckland 1010

To whom it may concern

PO Box 3422, Shortland Street
Auckland 1140, New Zealand

Ph: 09 379 6174

www.bbdnz.co.nz

Dear Sir / Madam,

RE: CHRISTCHURCH CATHEDRAL | INSURANCE & MAINTENANCE ENDOWMENT FUNDS

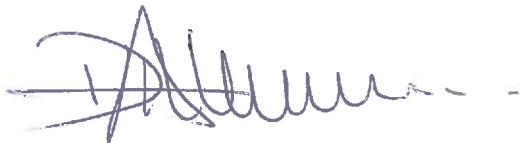
When Church Property Trustees engaged with the Government in discussions on how the cathedral might be reinstated, one of the requirements (agreed to by the Government) was that a sufficient level of endowment be in place to fund the future costs of insuring and maintaining the cathedral. Consistent with this position, the Cathedral Working Group recommended that monies be provided "for the future costs of annual full replacement insurance and ongoing maintenance" (Cathedral Working Group report, page 8) of any reinstated cathedral.

BBD had been engaged by the Cathedral Working Group and had provided project costings for a reinstatement. BBD was then engaged by Church Property Trustees to build upon this work and provide analyses as to the level of endowment required to provide sufficient income in perpetuity to meet the future costs of full insurance and maintenance of both a reinstated cathedral and a contemporary cathedral. Four reports were produced by BBD and are listed below, along with the level of calculated endowment required:

- | | |
|---|--|
| • "Cathedral Insurance Endowment – Reinstatement" | \$10,464,200 |
| • "Cathedral Maintenance Endowment – Reinstatement" | <u>\$ 2,445,000</u> |
| | \$12,909,200 Total Reinstatement Endowment |
| • "Cathedral Insurance Endowment – Contemporary" | \$2,274,000 |
| • "Cathedral Maintenance Endowment – Contemporary" | <u>\$2,281,000</u> |
| | \$4,555,000 Total Contemporary Endowment |

Yours faithfully;

Barnes Beagley Doherr Ltd



David Doherr
Director

Email: davidd@bbdnz.co.nz
Mob: 021 806 478

CATHEDRAL INSURANCE ENDOWMENT - REINSTATEMENT



Summary

	Year 8 Insurance	Endowment Required
Full Cover	\$ 375,130	\$ 10,464,200

Assumptions:

Opening Total Sum Insured Value \$134.8m in Year 8

Fire Service Levy rates remain at 10.6c/\$100 insured

Average before tax return of 6% after fees

No tax payable

Inflation protection 2.2% p.a.

All figures exclude GST

Premiums

Replacement Value (Year 8)	\$ 120,879,770
Inflation Provision (Year 8)	\$ 9,428,361
Demolition Provision (Year 8)	\$ 4,472,551
Total Sum Insured (Year 8)	\$ 134,780,682

Notes:

(\$103.8m after 7 years of inflation at 2.2% (last 15 years actual average rate))

(Based on the rate applied to the Transitional Cathedral in the Colliers December 2016 Valuation Report)

(Based on the rate applied to the Transitional Cathedral in the Colliers December 2016 Valuation Report)

Fire Service Levy (FSL):

Total Sum Insured (Year 8)	\$ 134,780,682	(As Above)
Less Current Limit	-\$ 30,000,000	(Current First Loss Limit in Policy)
	\$ 104,780,682	(Additional First Loss Cover Required)
Additional FSL Cost	\$ 111,068	(Additional First Loss Cover required based on 10.6c/\$100 of First Loss Cover)

Premium	192,400
Plus Fire Service Levy	111,068
Total Premium	303,468
Inflation (7 Years @ 2.2% p.a.)	31,658
Annual Fees	40,004
Total Future Premium	375,130

(Per Crombie Lockwood estimate dated 7th June 2017)

(As calculated above)

(Forecast additional premium when Cathedral is complete)

(Annual Brokerage, Valuation, Funding and Administration Fees, and Inflation Adjusted)

Risks:

Further earthquakes (or other significant global events), raising future premiums to a 'high' or higher level

A further rise (from 10.6c/\$100) in FSL levies before completion

Returns achieved are lower than 6% p.a. average

Difficulty raising up to \$4m to cover excesses following a major event

Inflation exceeds an average of 2.2% p.a. over the next seven years

CPT/Trusts are taxed in future (lower average annual net income)

The project is not completed within 7 years (inflation implications)

CATHEDRAL INSURANCE ENDOWMENT - REINSTATEMENT



Reinstated Cathedral Insurance Endowment Calculations - Full Cover

	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
MID PREMIUM										
Opening	10,464,200	10,694,414	10,929,693	11,170,148	11,415,893	11,667,044	11,923,722	12,186,046	12,454,141	12,728,135
Premium	- 375,130	383,383	391,818	400,438	409,247	418,251	427,452	436,856	446,467	456,289
Income at 6%	605,344	618,662	632,273	646,183	660,399	674,928	689,776	704,951	720,460	736,311
Closing	10,694,414	10,929,693	11,170,148	11,415,893	11,667,044	11,923,722	12,186,046	12,454,141	12,728,135	13,008,156
Opening	10,464,200									
End Inf Adj 2.2%	10,694,412	10,929,689	11,170,143	11,415,886	11,667,035	11,923,710	12,186,032	12,454,124	12,728,115	13,008,134
Inflation Adjust	100.0%	102.2%	104.4%	106.7%	109.1%	111.5%	113.9%	116.5%	119.0%	121.6%
Replacement Value	134,780,682	137,745,857	140,776,266	143,873,344	147,038,557	150,273,405	153,579,420	156,958,168	160,411,247	163,940,295
Existing First Loss Limit	- 30,000,000	- 30,660,000	- 31,334,520	- 32,023,879	- 32,728,405	- 33,448,430	- 34,184,295	- 34,936,350	- 35,704,949	- 36,490,458
Additional FSL Cover	104,780,682	107,085,857	109,441,746	111,849,464	114,310,152	116,824,976	119,395,125	122,021,818	124,706,298	127,449,837
FSL	111,068	113,511	116,008	118,560	121,169	123,834	126,559	129,343	132,189	135,097
Insurance Cost	264,063	269,872	275,809	281,877	288,078	294,416	300,893	307,513	314,278	321,192
Total Insurance Cost	375,130	383,383	391,818	400,438	409,247	418,251	427,452	436,856	446,467	456,289

CATHEDRAL INSURANCE ENDOWMENT - CONTEMPORARY



Summary

	Year 8 Insurance	Endowment Required
Full Cover	\$ 81,519	\$ 2,274,000

Assumptions:

Opening Total Sum Insured Value of \$38.9m in Year 8

Fire Service Levy rates remain at 10.6c/\$100 insured

Average before tax return of 6% after fees

No tax payable

Inflation protection 2.2% p.a.

All figures exclude GST

Premiums - Insurance Cost Summary

Insurance Cover:

Replacement Value (Year 8)	\$ 34,936,350
Inflation Provision (Year 8)	\$ 2,724,960
Demolition Provision (Year 8)	\$ 1,292,645
Total Sum Insured (Year 8)	\$ 38,953,954

Notes:

(\$30.0m after 7 years of inflation at 2.2% (last 15 years actual average rate))
 (Based on the rate applied to the Transitional Cathedral in the Colliers December 2016 Valuation Report)
 (Based on the rate applied to the Transitional Cathedral in the Colliers December 2016 Valuation Report)

Fire Service Levy (FSL):

Total Sum Insured (Year 8)	\$ 38,953,954	(As above)
Less Current Limit	-\$ 30,000,000	(Current First Loss Limit in Policy)
	\$ 8,953,954	(Additional First Loss Cover Required)
Additional FSL Cost	\$ 9,491	(Additional First Loss Cover required based on 10.6c/\$100 of First Loss Cover)

Premium	\$ 50,000
Plus Fire Service Levy	\$ 9,491
Total Premium	\$ 59,491
Inflation (7 Years @ 2.2% p.a.)	\$ 8,227
Annual Fees	\$ 13,800
Total Future Insurance Cost	\$ 81,519

(Per Crombie Lockwood estimate dated 7 June 2017)

(As calculated above)

(Forecast additional premium when Cathedral is complete)

(Annual Brokerage, Valuation, Funding and Administration Fees, and Inflation Adjusted)

Risks:

Further earthquakes (or other significant global events), raising future premiums to a 'high' or higher level
 A further rise (from 10.6c/\$100) in FSL levies before completion
 Returns achieved are lower than 6% p.a. average after fees
 Difficulty raising up to \$4m to cover excesses following a major event
 Inflation exceeds an average of 2.2% p.a. over the next seven years
 CPT/Trusts are taxed in future (lower average annual net income)
 The project is not completed within 7 years (inflation implications)

CATHEDRAL INSURANCE ENDOWMENT - CONTEMPORARY



Endowment Calculations - Full Cover

Year	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
Opening	2,274,000	2,324,030	2,375,161	2,427,417	2,480,823	2,535,404	2,591,186	2,648,195	2,706,459	2,766,005
Insurance Cost	-	83,312	85,145	87,018	88,932	90,889	92,889	94,932	97,021	99,155
Income at 6%	131,549	134,443	137,401	140,424	143,513	146,671	149,898	153,196	156,566	160,011
Closing	2,324,030	2,375,161	2,427,417	2,480,823	2,535,404	2,591,186	2,648,195	2,706,459	2,766,005	2,826,861
Opening	2,274,000									Check
End Inf Adj 2.2%	2,324,028	2,375,157	2,427,410	2,480,813	2,535,391	2,591,170	2,648,175	2,706,435	2,765,977	2,826,828
Inflation Adjust	100.0%	102.2%	104.4%	106.7%	109.1%	111.5%	113.9%	116.5%	119.0%	121.6%
Replacement Value	38,953,954	39,810,941	40,686,782	41,581,891	42,496,693	43,431,620	44,387,116	45,363,632	46,361,632	47,381,588
Existing First Loss Limit	-	30,000,000	31,334,520	32,023,879	32,728,405	33,448,430	34,184,295	34,936,350	35,704,949	36,490,458
Additional FSL Cover	8,953,954	9,150,941	9,352,262	9,558,012	9,768,288	9,983,190	10,202,821	10,427,283	10,656,683	10,891,130
FSL	9,491	9,700	9,913	10,131	10,354	10,582	10,815	11,053	11,296	11,545
Insurance Cost	72,027	73,612	75,232	76,887	78,578	80,307	82,074	83,879	85,725	87,610
Total Insurance Cost	81,519	83,312	85,145	87,018	88,932	90,889	92,889	94,932	97,021	99,155

CATHEDRAL MAINTENANCE ENDOWMENT - CONTEMPORARY

30 Year Maintenance Plan - 2017



Item	Maintenance Frequency	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30					
CATHEDRAL - CONTEMPORARY NEW BUILD SCHEME																																				
1.00 Roof	3 Monthly	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	
1.01 Clear gutters, hawks and downpipes	3 Monthly	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000
1.02 Clean main roof	3 Yearly	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500	\$3,500
1.03 Computer cabling repairs	All Yearly	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
2.00 Exterior Walls & Exterior Finish	10 Yearly																																			
2.01 Clean facade	10 Yearly																																			
2.02 Periodic repairs of facade	10 Yearly																																			
3.00 Windows & Exterior Doors	3 Yearly	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	
3.01 Clean glass facades	3 Yearly	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	
3.02 Repair / replace windows (5%)	10 Yearly																																			
3.03 Clean and re-paint doors	3 Yearly																																			
3.04 Repair / replace window and door hardware	10 Yearly																																			
3.05 Repair and repaper paper mesh	5 Yearly																																			
4.00 Interior Walls	6 Yearly																																			
4.01 Interior Doors	5 Yearly																																			
4.02 Repair / replace timber doors	10 Yearly																																			
4.03 Repair / replace door hardware	10 Yearly																																			
4.04 Floor Finishes	12 Yearly																																			
4.01 Repoint mortar (Repoint (5% of GFA)	12 Yearly																																			
4.02 Repoint Vinyl finishes (assumed 5% of GFA)	12 Yearly																																			
7.00 Wall Finishes	10 Yearly																																			
8.00 Ceiling Finishes	10 Yearly																																			
8.01 Dust and clean truss framing and soffits	10 Yearly																																			
8.02 Ceiling Plastering	10 Yearly																																			
9.01 Repairs to lost water supply	Enabled																																			
11.00 Heating & Ventilation Services	5 Yearly																																			
11.01 HVAC systems repairs and re-commissioning	5 Yearly																																			
11.02 HVAC systems replacement (moving parts only)	15 Yearly																																			
11.00 Fire Services	10 Yearly																																			
11.01 Fire Services systems repairs and re-commissioning	10 Yearly																																			
11.02 Fire Services systems replacement (moving parts only)	30 Yearly																																			
12.00 Electrical Services	3 Yearly																																			
12.01 Replacing standard LED	3 Yearly																																			
12.02 Light Ballast and GPO repairs (10%)	10 Yearly																																			
12.03 Rewiring	30 Yearly																																			
13.00 Drainage	Annually																																			
13.01 11.1.2 Clean drainage traps etc.	Annually																																			
CATHEDRAL TOTAL		\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	\$4,800	\$47,279	

