

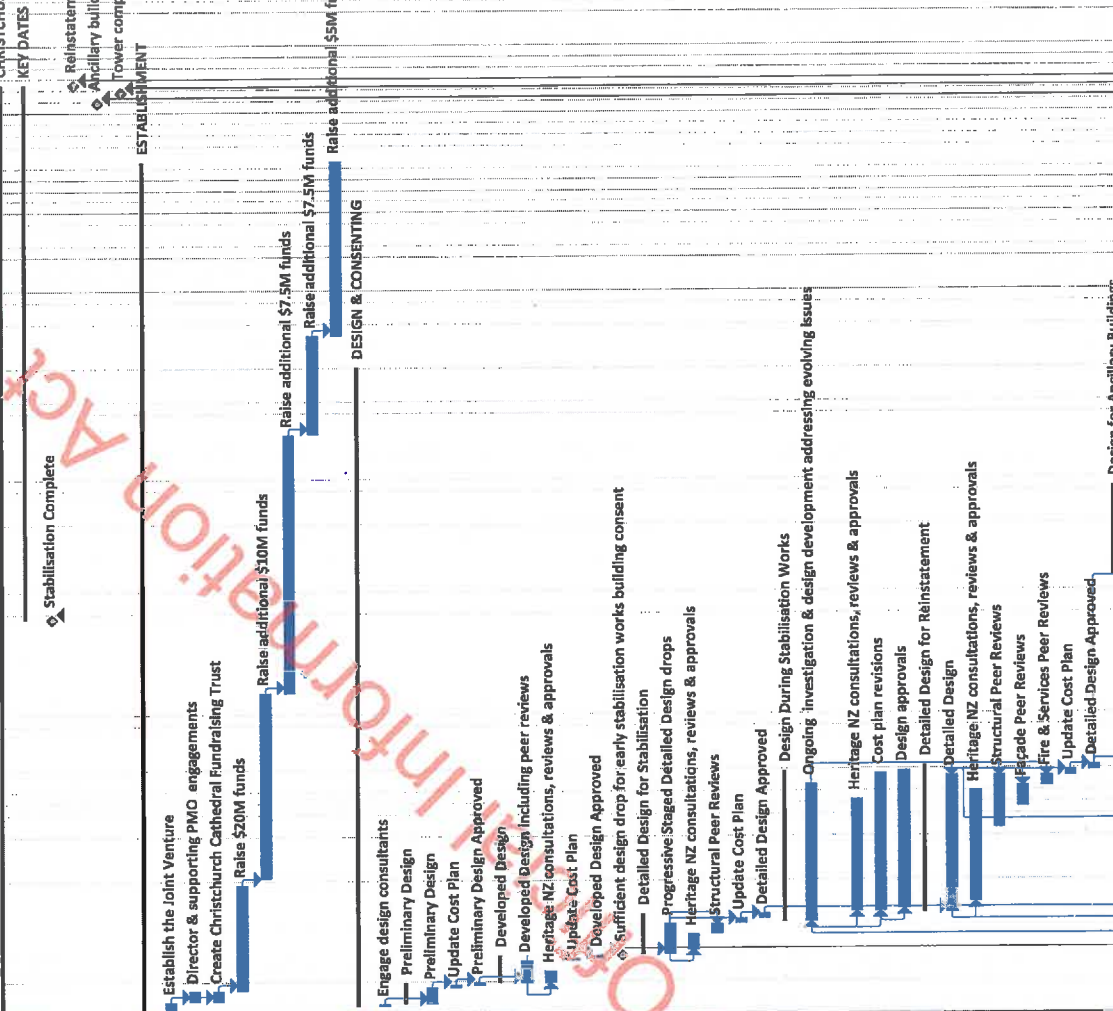
**APPENDIX 8: INDICATIVE DELIVERY PROGRAMME**

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# CHRISTCHURCH CATHEDRAL REINSTATEMENT Draft Master Programme 25 Nov 2016



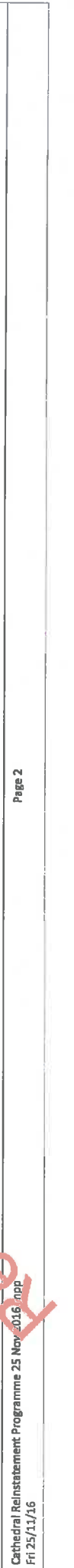
ID	Task Name	Duration	Start	Finish	2017	2018	2019	2020	2021	2022	2023	2024	2025
1	CHRISTCHURCH CATHEDRAL DEVELOPMENT	1725 days	Mon 9/01/17	Thu 14/12/23									
2	<b>KEY DATES</b>	1000 days	Mon 16/12/19	Thu 14/12/23									
3	Stabilisation Complete	0 days	Mon 16/12/19	Mon 16/12/19									
4	Reinstatement sufficiently complete to open Cathedral	0 days	Thu 14/12/23	Thu 14/12/23									
5	Ancillary buildings operational	0 days	Wed 25/10/23	Wed 25/10/23									
6	Tower complete	0 days	Thu 23/11/23	Thu 23/11/23									
7	<b>ESTABLISHMENT</b>	1573 days	Mon 9/01/17	Tue 16/05/23									
8	Establish the Joint Venture	20 days	Mon 9/01/17	Fri 3/02/17									
9	Director & supporting PMO engagements	20 days	Tue 7/02/17	Mon 6/03/17									
10	Create Christchurch Cathedral Fundraising Trust	20 days	Tue 7/02/17	Mon 6/03/17									
11	Raise \$20M funds	200 days	Mon 8/01/18	Tue 19/12/17									
12	Raise additional \$10M funds	340 days	Tue 28/05/19	Mon 27/05/19									
13	Raise additional \$7.5M funds	470 days	Mon 3/05/21	Fri 30/04/21									
14	Raise additional \$7.5M funds	180 days	Mon 3/05/21	Tue 25/01/22									
15	Raise additional \$5M funds	340 days	Wed 26/01/22	Tue 16/05/23									
16	<b>DESIGN &amp; CONSENTING</b>	1172 days	Mon 23/01/17	Mon 1/11/21									
17	Engage design consultants	5 days	Mon 23/01/17	Fri 27/01/17									
18	Preliminary Design	40 days	Mon 30/01/17	Mon 27/03/17									
19	Preliminary Design	30 days	Mon 30/01/17	Mon 13/03/17									
20	Update Cost Plan	5 days	Tue 14/03/17	Mon 20/03/17									
21	Preliminary Design Approved	5 days	Tue 21/03/17	Mon 27/03/17									
22	<b>Developed Design</b>	50 days	Tue 28/03/17	Fri 9/06/17									
23	Developed Design including peer reviews	40 days	Tue 28/03/17	Thu 25/05/17									
24	Heritage NZ consultations, reviews & approvals	20 days	Tue 28/03/17	Thu 27/04/17									
25	Update Cost Plan	5 days	Fri 26/05/17	Thu 1/06/17									
26	Developed Design Approved	5 days	Fri 2/06/17	Fri 9/06/17									
27	Sufficient design drop for early stabilisation works building consent	0 days	Fri 9/06/17	Fri 9/06/17									
28	<b>Detailed Design for Stabilisation</b>	80 days	Mon 12/06/17	Fri 29/09/17									
29	Progressive Staged Detailed Design drops	60 days	Mon 12/06/17	Fri 1/09/17									
30	Heritage NZ consultations, reviews & approvals	30 days	Mon 26/06/17	Fri 4/08/17									
31	Structural Peer Reviews	20 days	Mon 7/08/17	Fri 1/09/17									
32	Update Cost Plan	10 days	Mon 4/09/17	Fri 15/09/17									
33	Detailed Design Approved	10 days	Mon 18/09/17	Thu 29/09/17									
34	<b>Design During Stabilisation Works</b>	275 days	Fri 8/09/17	Tue 23/10/18									
35	Ongoing investigation & design development addressing evolving issues	250 days	Fri 8/09/17	Mon 17/09/18									
36	Heritage NZ consultations, reviews & approvals	200 days	Fri 6/10/17	Mon 6/08/18									
37	Cost plan revisions	250 days	Fri 6/10/17	Mon 15/10/18									
38	Design approvals	250 days	Fri 13/10/17	Tue 23/10/18									
39	<b>Detailed Design for Reinstatement</b>	270 days	Mon 2/10/17	Wed 7/11/18									
40	Detailed Design	250 days	Mon 2/10/17	Tue 9/10/18									
41	Heritage NZ consultations, reviews & approvals	200 days	Tue 31/10/17	Tue 28/08/18									
42	Structural Peer Reviews	100 days	Tue 22/05/18	Tue 9/10/18									
43	Facade Peer Reviews	40 days	Wed 18/07/18	Tue 11/09/18									
44	Fire & Services Peer Reviews	20 days	Wed 12/09/18	Tue 9/10/18									
45	Update Cost Plan	10 days	Wed 10/10/18	Wed 24/10/18									
46	Detailed Design Approved	10 days	Thu 25/10/18	Wed 7/11/18									
47	<b>Design for Ancillary Buildings</b>	170 days	Mon 6/04/20	Mon 7/12/20									
48	Preliminary design	30 days	Mon 6/04/20	Wed 20/05/20									
49	Cost plan update & approvals	10 days	Thu 21/05/20	Thu 4/06/20									



**CHRISTCHURCH CATHEDRAL REINSTATEMENT**  
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ID	Task Name	Duration	Start	Finish
50	Developed design	50 days	Fri 5/06/20	Thu 13/08/20
51	Cost plan update & approvals	10 days	Fri 14/08/20	Thu 27/08/20
52	Detailed design	60 days	Fri 28/08/20	Mon 23/11/20
53	Cost plan update & approvals	10 days	Tue 24/11/20	Mon 7/12/20
54	Design for Replacement Tower	140 days	Mon 1/03/21	Fri 17/09/21
55	Preliminary design	30 days	Mon 1/03/21	Wed 14/04/21
56	Cost plan update & approvals	10 days	Thu 15/04/21	Thu 29/04/21
57	Developed design	40 days	Fri 30/04/21	Fri 25/06/21
58	Cost plan update & approvals	10 days	Mon 28/06/21	Fri 9/07/21
59	Detailed design	40 days	Mon 12/07/21	Fri 3/09/21
60	Cost plan update & approvals	10 days	Mon 6/09/21	Fri 17/09/21
61	Building Consents	1077 days	Mon 12/06/17	Mon 1/11/21
62	Submit, process & uplift early stabilisation building consent	20 days	Mon 12/06/17	Fri 7/07/17
63	Submit, process & uplift balance of stabilisation building consent	30 days	Mon 2/10/17	Mon 13/11/17
64	Submit, process & uplift reinstatement works building consent	30 days	Thu 8/11/18	Thu 20/12/18
65	Submit, process & uplift ancillary buildings building consent	30 days	Tue 8/12/20	Fri 29/01/21
66	Submit, process & uplift tower building consent	30 days	Mon 20/09/21	Mon 1/11/21
67	MAIN CONTRACTOR PROCUREMENT - STABILISATION	105 days	Mon 13/02/17	Thu 13/07/17
68	EOI GETS	20 days	Mon 13/02/17	Fri 10/03/17
69	Contractor evaluation, interview & shortlist	5 days	Mon 13/03/17	Fri 17/03/17
70	Prepare tender documents	10 days	Mon 20/03/17	Fri 31/03/17
71	Selected RFP Tender period	30 days	Mon 3/04/17	Wed 17/05/17
72	Review & recommendation	10 days	Thu 18/05/17	Wed 31/05/17
73	Approval	10 days	Thu 1/06/17	Thu 15/06/17
74	Contractor engagement	10 days	Fri 16/06/17	Thu 29/06/17
75	Off site works for initial stabilisation	10 days	Fri 30/06/17	Thu 13/07/17
76	MAIN CONTRACTOR PROCUREMENT - REINSTATEMENT	210 days	Thu 8/03/18	Thu 17/01/19
77	EOI GETS	20 days	Thu 8/03/18	Fri 6/04/18
78	Contractor evaluation, interview & shortlist	5 days	Mon 9/04/18	Fri 13/04/18
79	Prepare tender documents	10 days	Wed 18/07/18	Tue 31/07/18
80	Selected RFP Tender period	30 days	Wed 1/08/18	Tue 11/09/18
81	Review & recommendation	10 days	Wed 12/09/18	Thu 25/09/18
82	Approval	10 days	Wed 26/09/18	Thu 5/10/18
83	Contractor engagement	10 days	Wed 10/10/18	Wed 24/10/18
84	Off site works for initial reinstatement	40 days	Thu 8/11/18	Thu 17/01/19
85	ENABLING WORKS	30 days	Fri 30/06/17	Thu 7/09/17
86	Mobilise for stabilisation works	10 days	Fri 30/06/17	Fri 14/07/17
87	Initial stabilisation works	40 days	Fri 14/07/17	Thu 7/09/17
88	Stabilisation	536 days	Fri 8/09/17	Mon 16/12/19
89	Underpinning shallow foundations	40 days	Fri 8/09/17	Fri 3/11/17
90	Remove existing steel frame and supporting concrete foundation beams from western end	20 days	Fri 8/09/17	Thu 5/10/17
91	Site measure for new steel frame, complete shop drgs & fabricate	60 days	Fri 22/09/17	Mon 18/12/17
92	Demolish west wall and rose window to porch level	10 days	Fri 6/10/17	Thu 19/10/17
93	Install new preassembled West Wall structural steel braced frame into west wall	20 days	Tue 19/12/17	Mon 29/01/18
94	Connect new West Wall Braces Frame to existing clerestory roof and deconstruct damaged portions of the Clerestory walls	20 days	Tue 30/01/18	Tue 27/02/18
95				



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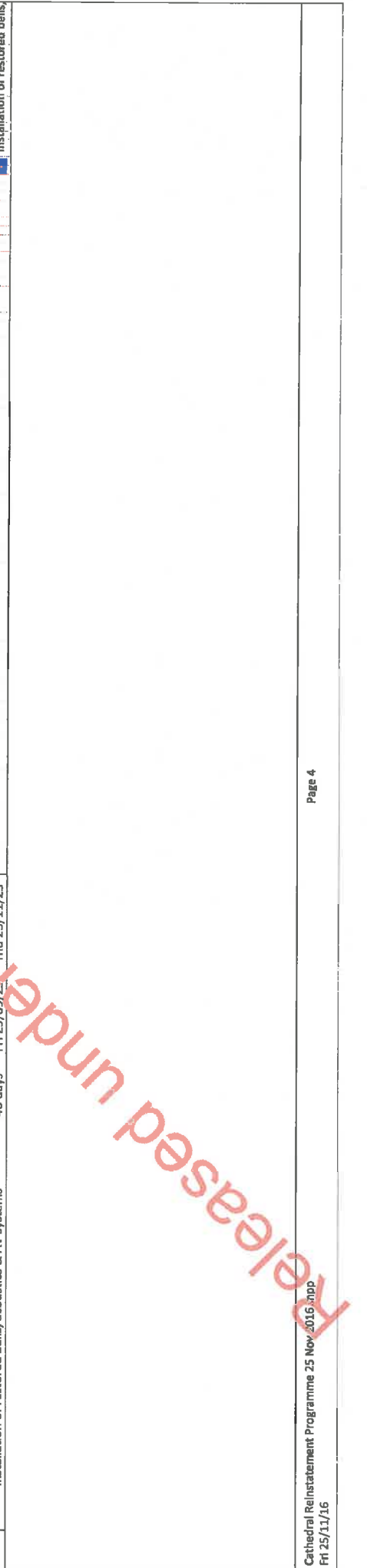


ID	Task Name	Duration	Start	Finish
96	Install new screw piles for new temporary clerestory structural steel braces frames	20 days	Mon 6/11/17	Mon 4/12/17
97	Construct new reinforced concrete foundation block for Clerestory Braced Frames & erect new preassembled braces frames over (incl measure & fabrication)	60 days	Tue 5/12/17	Tue 13/03/18
98	Connect Clerestory braced frames to existing 200 UC chord members below side aisle roof	15 days	Wed 14/03/18	Thu 5/04/18
99	Deconstruct porch & complete balance of west wall bracing	15 days	Fri 6/04/18	Fri 27/04/18
100	Install precast concrete foundation block for new temporary steel frames	20 days	Mon 30/04/18	Fri 25/05/18
101	Install new preassembled Transsept Gable Securing Frames to north and south transept gables	20 days	Mon 28/05/18	Mon 25/06/18
102	Secure Phase 1.8 Transsept Frame Foundation Blocks thru existing walls using RB32 through ties secured to double PFC	30 days	Tue 26/06/18	Mon 6/08/18
103	Temporary strengthening badly damaged southern gable wall pier using heavy duty fabric straps with timber packers	20 days	Tue 26/06/18	Mon 23/07/18
104	Provide temporary roof level cross-ties between the Phase 1.9 Transsept Gable Securing Frames.	20 days	Tue 7/08/18	Mon 3/09/18
105	Install precast concrete foundation blocks for North porch securing frame	20 days	Tue 4/09/18	Mon 1/10/18
106	Install new preassembled North Porch Securing Frame	20 days	Tue 2/10/18	Tue 30/10/18
107	High level works (in man baskets) removing or securing loose masonry, ahead of other work at low level.	30 days	Fri 8/09/17	Thu 19/10/17
108	Connect new West Wall Braced Frame to existing adjacent masonry piers.	20 days	Wed 28/02/18	Tue 27/03/18
109	Reconstruct portion of the north aisle roof and wall damaged by tower including capping beam rafters roof braces and a new temporary light weight roof	40 days	Wed 31/10/18	Wed 9/01/19
110	Deconstruct and temporarily reinstate damaged portion of North Porch roof	40 days	Wed 31/10/18	Wed 9/01/19
111	Shore arches, cover & brace existing windows opening with timber framing plywood & new or make good timber framing plywood & new or make good existing flashings	40 days	Fri 18/10/19	Mon 16/12/19
112	Temporary strengthening of badly damaged north and south walls of Apse using heavy duty fabric straps with timber packers	20 days	Tue 24/07/18	Mon 20/08/18
113	Reinstatement Works	110 days	Fri 12/07/18	Thu 14/12/18
114	Replace existing damaged south aisle roof brace with a new RB32 roof brace.	30 days	Fri 12/07/19	Thu 22/08/19
115	Progressively install timber propping to support side aisle rafters & stabilise damaged north and south aisle walls	40 days	Fri 23/08/19	Thu 17/10/19
116	Progressively shore clerestory piers and arches with new braced shoring towers and timber propping working from west to east	40 days	Fri 18/10/19	Mon 16/12/19
117	Progressively shore transept piers & arches with new braced shoring towers & timber propping working from west to east	40 days	Tue 17/12/19	Tue 25/02/20
118	Progressively prop and shore remaining damaged piers and arches at the eastern end of the Cathedral	40 days	Wed 26/02/20	Thu 23/04/20
119	Mobilise for reinstatement works	10 days	Fri 24/04/20	Fri 8/05/20
120	Strengthening of existing walls with reinforcing & grouting & FRP& structural steel	200 days	Mon 11/05/20	Wed 3/03/21
121	Internal & external stone masonry minor repair including reinforcing, pinning & grouting	400 days	Thu 4/03/21	Thu 6/10/22

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ID	Task Name	Duration	Start	Finish
122	Internal & external stone masonry major repair requiring deconstruction then refabrication & installation	400 days	Thu 4/03/21	Thu 6/10/22
123	Install permanent ties between existing and new elements throughout the building	100 days	Mon 11/05/20	Mon 28/09/20
124	New white precast concrete rose window frame	10 days	Thu 4/03/21	Wed 17/03/21
125	Nave column repair & base isolator installation with two levels of foundations, foundation tie beams and ground floor	200 days	Thu 4/03/21	Fri 17/12/21
126	Envelope	560 days	Tue 29/09/20	Thu 29/12/22
127	Complete roof framing	100 days	Tue 29/09/20	Wed 3/03/21
128	Complete roof membranes, cladding, gutters & down pipes	80 days	Wed 20/01/21	Tue 18/05/21
129	Final fix & fit off	60 days	Wed 19/05/21	Wed 11/08/21
130	Windows & facade reinstatement	120 days	Fri 15/07/22	Thu 29/12/22
131	Fit Out & Services	200 days	Fri 12/08/22	Thu 18/05/23
132	Fit out & services to all areas	200 days	Fri 12/08/22	Thu 18/05/23
133	Outdoor Areas	100 days	Fri 27/01/23	Thu 15/06/23
134	Builders works including footpaths & parking areas & roads	60 days	Fri 27/01/23	Thu 20/04/23
135	Hard landscaping	30 days	Fri 21/04/23	Thu 1/06/23
136	Soft landscaping	10 days	Fri 2/06/23	Thu 15/06/23
137	Cathedral Close Out & Commissioning	150 days	Fri 19/05/23	Thu 14/12/23
138	Furnishings	100 days	Fri 19/05/23	Thu 5/10/23
139	Final commissioning	40 days	Fri 6/10/23	Thu 30/11/23
140	Final clean	10 days	Fri 24/11/23	Thu 7/12/23
141	Final statutory inspections & Code of Compliance	10 days	Fri 1/12/23	Thu 14/12/23
142	Practical Completion	0 days	Thu 14/12/23	Thu 14/12/23
143	Visitors Centre & Ancillary Buildings	640 days	Tue 27/04/21	Wed 25/10/23
144	Structural works	200 days	Tue 27/04/21	Wed 16/02/22
145	Envelope & facade	200 days	Thu 17/02/22	Wed 23/11/22
146	Fit out & services	200 days	Thu 24/11/22	Wed 30/08/23
147	Café tenancy fit out	40 days	Thu 31/08/23	Wed 25/10/23
148	Visitors centre tenancy fit out	40 days	Thu 31/08/23	Wed 25/10/23
149	Replacement Tower	461 days	Thu 17/02/22	Thu 23/11/23
150	Structural works	200 days	Thu 17/02/22	Wed 23/11/22
151	Envelope & facade	161 days	Thu 24/11/22	Thu 10/07/23
152	Fit out & services	60 days	Fri 7/07/23	Thu 08/09/23
153	Installation of restored bells, acoustics & AV systems	40 days	Fri 29/09/23	Thu 23/11/23



**APPENDIX 9: COST ESTIMATE**

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