



CCC

“Building Your Confidence”

Cost Estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings

Revision - 02

Prepared for

Ministry of Business Innovation and Employment

5 September 2024

CONSTRUCTION COST CONSULTANTS
Professional Services Offices | Auckland | Wellington | Christchurch
0800 422 258 | www.costconsultants.co.nz



Ref	Description
	<p>Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings</p>
1	<p>Purpose of Estimate Exercise</p> <p>The purpose of this report is to provide Ministry of Business Innovation and Employment with an estimate of the following scenarios as described in the Scope of work for the supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings, version: [11:00 22/07/24]</p>
2	<p>Basis of Estimate</p> <p><u>The cost estimate exercise has been prepared based on the following reports and correspondence:</u></p> <ul style="list-style-type: none"> - Scope of work for the supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings, version: [11:00 22/07/24] The following files have been used to measure GFA. - 4_M_SS Single Storey Standalone-compressed - 7_S_DS Double Storey Standalone_compressed - 16_T2_MDH Medium Density Housing-compressed - 18_T2_AP Apartment_compressed
3	<p>Assumptions & Clarifications (Generally)</p> <p><u>The following assumptions have been adopted in preparing this estimate:</u></p> <ul style="list-style-type: none"> - The level of accuracy of the cost estimate exercise is directly linked to the level of information used to prepare the estimate. - We have calculated the cost of different climate zones based on New Zealand Building Economist publication statistics and our cost data based on various projects in different regions. - We have considered the labour rate as \$ 75.00 per hour. This is an average for skilled trades. - An average based on our in house project data have been used for Preliminaries/General and profit margin percentages. - Rate breakdowns have been calculated for single and double-story houses and same applicable for town houses. - Due to the complexities involved in managing multi-storey apartment buildings, an additional 3% has been included to account for the extra associated costs. - For Part 2 cost estimates, we assumed standard houses with mid quality finishes, Mid spec kitchen appliances, fittings and fixtures. - Our estimates are based on the GFA (Gross Floor Area) of buildings. - Part 2 of the estimates provides the estimated costs for construction in Auckland. - Our prices were based on Q3 2024 market data.
4	<p>Estimate Exclusions</p> <p><u>The following items have been excluded from this estimate exercise:</u></p> <ul style="list-style-type: none"> - Goods and Services Tax (GST). - Legal Fees. - Infrastructure growth charges or connection fees. - Financing costs or land acquisition costs. - Temporary accommodation costs. - Insurance. - Cost escalation. - Contingency. - Loss of income due to these works. - Out of hours work. - Dewatering. - Rock or softspot excavation. - soil strengthening or heavy foundations. - Public Drainage. - Specialist installations. - Loose furniture. - Landscape works. - Multimedia system, AV, data, or new TV antenna. - Access roads. - CCTV system. - Access control.

Project: Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
Client: Ministry of Business Innovation and Employment



PART - 1

Element Estimate

Part- 1 : Element Estimate

1 Trussed roof assemblies

1.1 Roof assembly 1

Roof assembly 1	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 312.92	\$ 328.57	\$ 331.85	\$ 338.42
Napier	\$ 291.24	\$ 305.80	\$ 308.86	\$ 314.98
Wellington	\$ 290.18	\$ 304.69	\$ 307.74	\$ 313.83
Turangi	\$ 292.81	\$ 307.45	\$ 310.52	\$ 316.67
Christchurch	\$ 297.11	\$ 311.96	\$ 315.08	\$ 321.32
Queenstown	\$ 293.87	\$ 308.57	\$ 311.65	\$ 317.82

1.2 Roof assembly 2

Roof assembly 2	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 314.50	\$ 330.23	\$ 333.53	\$ 340.13
Napier	\$ 292.71	\$ 307.35	\$ 310.42	\$ 316.57
Wellington	\$ 291.65	\$ 306.24	\$ 309.30	\$ 315.42
Turangi	\$ 294.29	\$ 309.00	\$ 312.09	\$ 318.27
Christchurch	\$ 298.61	\$ 313.54	\$ 316.67	\$ 322.95
Queenstown	\$ 295.36	\$ 310.13	\$ 313.23	\$ 319.43

1.3 Roof assembly 3

Roof assembly 3	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 325.46	\$ 341.74	\$ 345.15	\$ 351.99
Napier	\$ 302.92	\$ 318.06	\$ 321.24	\$ 327.60
Wellington	\$ 301.82	\$ 316.91	\$ 320.08	\$ 326.41
Turangi	\$ 304.54	\$ 319.77	\$ 322.97	\$ 329.36
Christchurch	\$ 309.02	\$ 324.47	\$ 327.71	\$ 334.20
Queenstown	\$ 305.65	\$ 320.93	\$ 324.14	\$ 330.56

1.4 Roof assembly 4

Roof assembly 4	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 317.67	\$ 333.56	\$ 336.89	\$ 343.56
Napier	\$ 295.67	\$ 310.45	\$ 313.55	\$ 319.76
Wellington	\$ 294.59	\$ 309.32	\$ 312.42	\$ 318.60
Turangi	\$ 276.66	\$ 290.50	\$ 293.40	\$ 299.21
Christchurch	\$ 279.71	\$ 293.69	\$ 296.63	\$ 302.50
Queenstown	\$ 259.82	\$ 272.81	\$ 275.54	\$ 281.00

1.5 Roof assembly 5

Roof assembly 5	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 319.91	\$ 335.91	\$ 339.27	\$ 345.99
Napier	\$ 297.75	\$ 312.64	\$ 315.76	\$ 322.02
Wellington	\$ 296.67	\$ 311.50	\$ 314.62	\$ 320.85
Turangi	\$ 299.35	\$ 314.32	\$ 317.46	\$ 323.75
Christchurch	\$ 303.75	\$ 318.93	\$ 322.12	\$ 328.50
Queenstown	\$ 300.44	\$ 315.46	\$ 318.62	\$ 324.93

1.6 Roof assembly 6

Roof assembly 6	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 324.09	\$ 340.29	\$ 343.69	\$ 350.50
Napier	\$ 301.64	\$ 316.72	\$ 319.88	\$ 326.22
Wellington	\$ 300.54	\$ 315.57	\$ 318.72	\$ 325.03
Turangi	\$ 303.26	\$ 318.42	\$ 321.60	\$ 327.97
Christchurch	\$ 307.71	\$ 323.09	\$ 326.33	\$ 332.79
Queenstown	\$ 304.36	\$ 319.58	\$ 322.77	\$ 329.17

1.7 Roof assembly 7

Roof assembly 7	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 330.56	\$ 347.09	\$ 350.56	\$ 357.50
Napier	\$ 307.66	\$ 323.04	\$ 326.27	\$ 332.73
Wellington	\$ 306.54	\$ 321.87	\$ 325.09	\$ 331.53
Turangi	\$ 309.31	\$ 324.78	\$ 328.02	\$ 334.52
Christchurch	\$ 313.85	\$ 329.55	\$ 332.84	\$ 339.43
Queenstown	\$ 310.44	\$ 325.96	\$ 329.22	\$ 335.74

Part- 1 : Element Estimate

1.8 Roof assembly 8

Roof assembly 8	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 331.86	\$ 348.46	\$ 351.94	\$ 358.91
Napier	\$ 308.87	\$ 324.32	\$ 327.56	\$ 334.05
Wellington	\$ 307.75	\$ 323.14	\$ 326.37	\$ 332.83
Turangi	\$ 310.53	\$ 326.06	\$ 329.32	\$ 335.84
Christchurch	\$ 315.09	\$ 330.85	\$ 334.16	\$ 340.77
Queenstown	\$ 311.66	\$ 327.25	\$ 330.52	\$ 337.06

1.9 Roof assembly 9

Roof assembly 9	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 327.46	\$ 343.83	\$ 347.27	\$ 354.14
Napier	\$ 304.77	\$ 320.01	\$ 323.21	\$ 329.61
Wellington	\$ 303.67	\$ 318.85	\$ 322.04	\$ 328.41
Turangi	\$ 306.41	\$ 321.73	\$ 324.95	\$ 331.38
Christchurch	\$ 310.91	\$ 326.45	\$ 329.72	\$ 336.25
Queenstown	\$ 307.52	\$ 322.90	\$ 326.13	\$ 332.59

10 Roof assembly 10

Roof assembly 10	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 344.63	\$ 361.86	\$ 365.48	\$ 372.72
Napier	\$ 320.76	\$ 336.79	\$ 340.16	\$ 346.90
Wellington	\$ 319.59	\$ 335.57	\$ 338.93	\$ 345.64
Turangi	\$ 322.48	\$ 338.60	\$ 341.99	\$ 348.76
Christchurch	\$ 327.22	\$ 343.58	\$ 347.01	\$ 353.88
Queenstown	\$ 323.65	\$ 339.84	\$ 343.24	\$ 350.03

2 Skillion roof assemblies

2.1 Skillion 1

Skillion 1	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 343.97	\$ 361.17	\$ 364.78	\$ 372.00
Napier	\$ 320.14	\$ 336.15	\$ 339.51	\$ 346.23
Wellington	\$ 318.98	\$ 334.93	\$ 338.28	\$ 344.98
Turangi	\$ 321.86	\$ 337.95	\$ 341.33	\$ 348.09
Christchurch	\$ 326.59	\$ 342.92	\$ 346.35	\$ 353.20
Queenstown	\$ 323.03	\$ 339.18	\$ 342.58	\$ 349.36

2.2 Skillion 2

Skillion 2	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 366.79	\$ 385.13	\$ 388.98	\$ 396.68
Napier	\$ 341.38	\$ 358.45	\$ 362.03	\$ 369.20
Wellington	\$ 340.14	\$ 357.15	\$ 360.72	\$ 367.86
Turangi	\$ 343.21	\$ 360.37	\$ 363.98	\$ 371.18
Christchurch	\$ 348.25	\$ 365.67	\$ 369.32	\$ 376.64
Queenstown	\$ 344.46	\$ 361.69	\$ 365.30	\$ 372.54

2.3 Skillion 3

Skillion 3	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 379.47	\$ 398.45	\$ 402.43	\$ 410.40
Napier	\$ 353.19	\$ 370.85	\$ 374.55	\$ 381.97
Wellington	\$ 351.90	\$ 369.50	\$ 373.19	\$ 380.58
Turangi	\$ 355.08	\$ 372.84	\$ 376.57	\$ 384.02
Christchurch	\$ 360.30	\$ 378.31	\$ 382.10	\$ 389.66
Queenstown	\$ 356.38	\$ 374.19	\$ 377.94	\$ 385.42

2.4 Skillion 4

Skillion 4	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 376.79	\$ 395.63	\$ 399.58	\$ 407.50
Napier	\$ 350.68	\$ 368.22	\$ 371.90	\$ 379.27
Wellington	\$ 349.41	\$ 366.88	\$ 370.55	\$ 377.89
Turangi	\$ 352.57	\$ 370.20	\$ 373.90	\$ 381.30
Christchurch	\$ 357.75	\$ 375.63	\$ 379.39	\$ 386.90
Queenstown	\$ 353.85	\$ 371.54	\$ 375.26	\$ 382.69

Part- 1 : Element Estimate

2.5 Skillion 5

Skillion 5	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 401.84	\$ 421.93	\$ 426.15	\$ 434.59
Napier	\$ 374.00	\$ 392.70	\$ 396.63	\$ 404.48
Wellington	\$ 372.64	\$ 391.27	\$ 395.19	\$ 403.01
Turangi	\$ 376.01	\$ 394.81	\$ 398.76	\$ 406.65
Christchurch	\$ 381.53	\$ 400.61	\$ 404.61	\$ 412.62
Queenstown	\$ 377.38	\$ 396.25	\$ 400.21	\$ 408.13

2.6 Skillion 6

Skillion 6	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 407.22	\$ 427.59	\$ 431.86	\$ 440.41
Napier	\$ 379.01	\$ 397.96	\$ 401.94	\$ 409.90
Wellington	\$ 377.64	\$ 396.52	\$ 400.48	\$ 408.41
Turangi	\$ 381.05	\$ 400.10	\$ 404.10	\$ 412.10
Christchurch	\$ 386.64	\$ 405.98	\$ 410.04	\$ 418.16
Queenstown	\$ 382.44	\$ 401.56	\$ 405.57	\$ 413.60

2.7 Skillion 7

Skillion 7	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 429.06	\$ 450.51	\$ 455.02	\$ 464.03
Napier	\$ 399.34	\$ 419.30	\$ 423.50	\$ 431.88
Wellington	\$ 397.89	\$ 417.78	\$ 421.96	\$ 430.31
Turangi	\$ 401.48	\$ 421.56	\$ 425.77	\$ 434.20
Christchurch	\$ 407.38	\$ 427.75	\$ 432.02	\$ 440.58
Queenstown	\$ 402.94	\$ 423.09	\$ 427.32	\$ 435.78

3 Walls

3.1 Wall 1

Wall 1	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 425.73	\$ 447.02	\$ 451.49	\$ 460.43
Napier	\$ 411.89	\$ 432.49	\$ 436.81	\$ 445.46
Wellington	\$ 405.59	\$ 425.87	\$ 430.13	\$ 438.65
Turangi	\$ 411.89	\$ 432.49	\$ 436.81	\$ 445.46
Christchurch	\$ 405.59	\$ 425.87	\$ 430.13	\$ 438.65
Queenstown	\$ 403.82	\$ 424.01	\$ 428.25	\$ 436.73

3.2 Wall 2

Wall 2	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 414.01	\$ 434.71	\$ 439.06	\$ 447.75
Napier	\$ 400.55	\$ 420.58	\$ 424.79	\$ 433.20
Wellington	\$ 394.43	\$ 414.15	\$ 418.29	\$ 426.57
Turangi	\$ 400.55	\$ 420.58	\$ 424.79	\$ 433.20
Christchurch	\$ 394.43	\$ 414.15	\$ 418.29	\$ 426.57
Queenstown	\$ 392.70	\$ 412.34	\$ 416.46	\$ 424.71

3.3 Wall 3

Wall 3	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 447.29	\$ 469.65	\$ 474.35	\$ 483.74
Napier	\$ 432.75	\$ 454.39	\$ 458.93	\$ 468.02
Wellington	\$ 426.13	\$ 447.44	\$ 451.91	\$ 460.86
Turangi	\$ 432.75	\$ 454.39	\$ 458.93	\$ 468.02
Christchurch	\$ 426.13	\$ 447.44	\$ 451.91	\$ 460.86
Queenstown	\$ 424.27	\$ 445.48	\$ 449.94	\$ 458.85

3.4 Wall 4

Wall 4	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 468.11	\$ 491.52	\$ 496.43	\$ 506.26
Napier	\$ 452.90	\$ 475.54	\$ 480.30	\$ 489.81
Wellington	\$ 445.97	\$ 468.26	\$ 472.95	\$ 482.31
Turangi	\$ 452.90	\$ 475.54	\$ 480.30	\$ 489.81
Christchurch	\$ 445.97	\$ 468.27	\$ 472.95	\$ 482.31
Queenstown	\$ 444.02	\$ 466.22	\$ 470.88	\$ 480.20

4 Timber Floors

4.1 Timber floor 1

Timber floor 1	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 355.11	\$ 355.11	NA	NA
Napier	\$ 344.27	\$ 344.27	NA	NA
Wellington	\$ 343.82	\$ 343.82	NA	NA
Turangi	\$ 344.74	\$ 344.74	NA	NA
Christchurch	\$ 340.06	\$ 340.06	NA	NA
Queenstown	\$ 338.70	\$ 338.70	NA	NA

4.1 Timber floor 2

Timber floor 2	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 356.62	\$ 356.62	NA	NA
Napier	\$ 345.73	\$ 345.73	NA	NA
Wellington	\$ 345.28	\$ 345.28	NA	NA
Turangi	\$ 346.21	\$ 346.21	NA	NA
Christchurch	\$ 341.51	\$ 341.51	NA	NA
Queenstown	\$ 340.14	\$ 340.14	NA	NA

4.1 Timber floor 3

Timber floor 3	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 362.08	\$ 362.08	NA	NA
Napier	\$ 351.03	\$ 351.03	NA	NA
Wellington	\$ 350.57	\$ 350.57	NA	NA
Turangi	\$ 351.51	\$ 351.51	NA	NA
Christchurch	\$ 346.74	\$ 346.74	NA	NA
Queenstown	\$ 345.35	\$ 345.35	NA	NA

4.1 Timber floor 4

Timber floor 4	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 362.04	\$ 362.04	NA	NA
Napier	\$ 350.99	\$ 350.99	NA	NA
Wellington	\$ 350.53	\$ 350.53	NA	NA
Turangi	\$ 351.47	\$ 351.47	NA	NA
Christchurch	\$ 346.70	\$ 346.70	NA	NA
Queenstown	\$ 345.31	\$ 345.31	NA	NA

4.1 Timber floor 5

Timber floor 5	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 359.38	\$ 359.38	NA	NA
Napier	\$ 348.41	\$ 348.41	NA	NA
Wellington	\$ 347.95	\$ 347.95	NA	NA
Turangi	\$ 348.89	\$ 348.89	NA	NA
Christchurch	\$ 344.15	\$ 344.15	NA	NA
Queenstown	\$ 342.77	\$ 342.77	NA	NA

4.1 Timber floor 6

Timber floor 6	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 363.48	\$ 363.48	NA	NA
Napier	\$ 352.38	\$ 352.38	NA	NA
Wellington	\$ 351.92	\$ 351.92	NA	NA
Turangi	\$ 352.87	\$ 352.87	NA	NA
Christchurch	\$ 348.08	\$ 348.08	NA	NA
Queenstown	\$ 346.68	\$ 346.68	NA	NA

4.1 Timber floor 7

Timber floor 7	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 363.56	\$ 363.56	NA	NA
Napier	\$ 352.46	\$ 352.46	NA	NA
Wellington	\$ 352.00	\$ 352.00	NA	NA
Turangi	\$ 352.95	\$ 352.95	NA	NA
Christchurch	\$ 348.15	\$ 348.15	NA	NA
Queenstown	\$ 346.76	\$ 346.76	NA	NA

5 Slab Floors

5.1 Slab Floor 1

Slab Floor 1	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 295.06	\$ 295.06	\$ 298.01	\$ 303.91
Napier	\$ 286.05	\$ 286.05	\$ 288.91	\$ 294.64
Wellington	\$ 285.68	\$ 285.68	\$ 288.53	\$ 294.25
Turangi	\$ 286.45	\$ 286.45	\$ 289.31	\$ 295.04
Christchurch	\$ 282.56	\$ 282.56	\$ 285.38	\$ 291.03
Queenstown	\$ 281.42	\$ 281.42	\$ 284.24	\$ 289.87

5.2 Slab Floor 2

Slab Floor 2	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 327.12	\$ 327.12	\$ 330.39	\$ 336.93
Napier	\$ 317.13	\$ 317.13	\$ 320.31	\$ 326.65
Wellington	\$ 316.72	\$ 316.72	\$ 319.88	\$ 326.22
Turangi	\$ 317.57	\$ 317.57	\$ 320.75	\$ 327.10
Christchurch	\$ 313.26	\$ 313.26	\$ 316.39	\$ 322.66
Queenstown	\$ 312.00	\$ 312.00	\$ 315.12	\$ 321.36

Cost per m

Slab Floor 2	Single \$/m	Double \$/m	Town \$/m	Apartment \$/m
Auckland	\$ 80.16	\$ 80.16	\$ 80.96	\$ 82.56
Napier	\$ 77.71	\$ 77.71	\$ 78.49	\$ 80.04
Wellington	\$ 77.61	\$ 77.61	\$ 78.39	\$ 79.94
Turangi	\$ 77.82	\$ 77.82	\$ 78.60	\$ 80.15
Christchurch	\$ 76.76	\$ 76.76	\$ 77.53	\$ 79.07
Queenstown	\$ 76.46	\$ 76.46	\$ 77.22	\$ 78.75

5.3 Slab Floor 3

Slab Floor 3	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 316.01	\$ 316.01	\$ 319.17	\$ 325.49
Napier	\$ 306.36	\$ 306.36	\$ 309.43	\$ 315.55
Wellington	\$ 305.96	\$ 305.96	\$ 309.02	\$ 315.14
Turangi	\$ 306.79	\$ 306.79	\$ 309.85	\$ 315.99
Christchurch	\$ 302.62	\$ 302.62	\$ 305.64	\$ 311.70
Queenstown	\$ 301.41	\$ 301.41	\$ 304.42	\$ 310.45

5.4 Slab Floor 4

Slab Floor 4	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 322.05	\$ 322.05	\$ 325.27	\$ 331.71
Napier	\$ 312.22	\$ 312.22	\$ 315.34	\$ 321.59
Wellington	\$ 311.81	\$ 311.81	\$ 314.93	\$ 321.16
Turangi	\$ 312.65	\$ 312.65	\$ 315.78	\$ 322.03
Christchurch	\$ 308.40	\$ 308.40	\$ 311.49	\$ 317.65
Queenstown	\$ 307.17	\$ 307.17	\$ 310.24	\$ 316.38

5.5 Slab Floor 5

Slab Floor 5	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 380.61	\$ 380.61	\$ 384.42	\$ 392.03
Napier	\$ 368.99	\$ 368.99	\$ 372.68	\$ 380.06
Wellington	\$ 368.51	\$ 368.51	\$ 372.19	\$ 379.56
Turangi	\$ 369.50	\$ 369.50	\$ 373.20	\$ 380.59
Christchurch	\$ 364.48	\$ 364.48	\$ 368.13	\$ 375.42
Queenstown	\$ 363.02	\$ 363.02	\$ 366.65	\$ 373.91

6 Windows and Doors

6.1 WinDoor 1

WinDoor 1	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 613.53	\$ 674.89	\$ 674.89	\$ 674.89
Napier	\$ 592.98	\$ 652.28	\$ 652.28	\$ 652.28
Wellington	\$ 613.53	\$ 674.89	\$ 674.89	\$ 674.89
Turangi	\$ 613.53	\$ 674.89	\$ 674.89	\$ 674.89
Christchurch	\$ 613.53	\$ 674.89	\$ 674.89	\$ 674.89
Queenstown	\$ 613.53	\$ 674.89	\$ 674.89	\$ 674.89

6.2 WinDoor 2

WinDoor 2	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 680.80	\$ 748.88	\$ 748.88	\$ 748.88
Napier	\$ 657.99	\$ 723.79	\$ 723.79	\$ 723.79
Wellington	\$ 680.80	\$ 748.88	\$ 748.88	\$ 748.88
Turangi	\$ 680.80	\$ 748.88	\$ 748.88	\$ 748.88
Christchurch	\$ 680.80	\$ 748.88	\$ 748.88	\$ 748.88
Queenstown	\$ 680.80	\$ 748.88	\$ 748.88	\$ 748.88

6.3 WinDoor 3

WinDoor 3	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 780.15	\$ 858.16	\$ 858.16	\$ 858.16
Napier	\$ 754.01	\$ 829.41	\$ 829.41	\$ 829.41
Wellington	\$ 780.15	\$ 858.16	\$ 858.16	\$ 858.16
Turangi	\$ 780.15	\$ 858.16	\$ 858.16	\$ 858.16
Christchurch	\$ 780.15	\$ 858.16	\$ 858.16	\$ 858.16
Queenstown	\$ 780.15	\$ 858.16	\$ 858.16	\$ 858.16

6.4 WinDoor 4

WinDoor 4	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 841.46	\$ 925.61	\$ 925.61	\$ 925.61
Napier	\$ 813.27	\$ 894.60	\$ 894.60	\$ 894.60
Wellington	\$ 841.46	\$ 925.61	\$ 925.61	\$ 925.61
Turangi	\$ 841.46	\$ 925.61	\$ 925.61	\$ 925.61
Christchurch	\$ 841.46	\$ 925.61	\$ 925.61	\$ 925.61
Queenstown	\$ 841.46	\$ 925.61	\$ 925.61	\$ 925.61

Project: Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
Client: Ministry of Business Innovation and Employment



PART - 1

Element Estimate - Rate Calculations

Insulation Type	Qty	Unit	Supplier-1	Supplier-2	Supplier-3	Supplier-4	Lowest
			\$/m2	\$/m2	\$/m2	\$/m2	\$/m2
R3.0	1	m2	NA	\$ 7.42	NA	NA	\$ 7.42
R3.2	1	m2	\$ 12.05	\$ 23.15	\$ 10.38	\$ 27.61	\$ 10.38
R3.3	1	m2	NA	\$ 8.78	\$ 10.63	NA	\$ 8.78
R3.4	1	m2	NA	NA	NA	\$ 18.18	\$ 18.18
R3.6	1	m2	\$ 14.19	\$ 15.54	\$ 11.50	\$ 38.34	\$ 11.50
R4.0	1	m2	\$ 15.84	NA	\$ 13.42	NA	\$ 13.42
R4.5	1	m2	\$ 17.00	NA	NA	NA	\$ 17.00
R5.0	1	m2	\$ 22.55	\$ 37.70	NA	NA	\$ 22.55
R6.0	1	m2	\$ 26.25	\$ 23.67	NA	NA	\$ 23.67
R7.0	1	m2	\$ 46.81	\$ 19.89	\$ 27.67	NA	\$ 19.89
R8.0	1	m2	NA	\$ 34.62	NA	NA	\$ 34.62

Supplier-1 - Pink Batts
 Supplier-2 - Earthwool
 Supplier-3 - Bradford Gold
 Supplier-4 - Greenstuf

NA - Product not available

Notes - Applicable to all insulations types

- 1 It is noted that some manufacturers may focus on certain types of insulation or only produce products within a limited R-value range. This means that depending on the brand or supplier, certain insulation options with specific R-values may not be available.
- 2 Some higher R-value insulations are cheaper than lower R-values due to several factors such as market demand, current regulations, brand, material, etc.
- 3 It is noted that cost of insulation, when considered as a percentage of the overall element expenses (roof space1-10 etc.), is relatively minimal compared to the costs associated with other elements. Insulation typically represents a small fraction of the total budget, even though it plays a critical role in enhancing energy efficiency and maintaining comfort within a building. While other components might consume a significant portion of the budget, the investment in insulation remains relatively low. This makes insulation an economical choice that can provide long-term savings through reduced energy consumption, despite its comparatively modest upfront cost.

Trussed roof assemblies

Cost per 100m2

Labour rate per hour - \$ 75.00

Roof space1	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6 R3.0 single layer insulation	100	m2	\$ 7.42	\$ 742.00	\$ 7.50	\$ 750.00	\$ 1,492.00	
7 45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 26,836.80	
12 Add- Preliminaries/General	10	%					\$ 2,683.68	
13 Add- Overhead & Profit	6	%					\$ 1,771.23	
Total Cost for 100m2							\$ 31,291.71	
Cost per 1m2							\$ 312.92	Auckland

Roof space2	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6 R3.3 single layer insulation	100	m2	\$ 8.78	\$ 878.00	\$ 7.50	\$ 750.00	\$ 1,628.00	
7 45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 26,972.80	
12 Add- Preliminaries/General	10	%					\$ 2,697.28	
13 Add- Overhead & Profit	6	%					\$ 1,780.20	
Total Cost for 100m2							\$ 31,450.28	
Cost per 1m2							\$ 314.50	Auckland

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code
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	Roof space3	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	R3.4 GreenStuf® Roll Form
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R3.4 single layer insulation	100	m2	\$ 18.18	\$ 1,818.00	\$ 7.50	\$ 750.00	\$ 2,568.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 27,912.80	
12	Add- Preliminaries/General	10	%					\$ 2,791.28	
13	Add- Overhead & Profit	6	%					\$ 1,842.24	
Total Cost for 100m2								\$ 32,546.32	
Cost per 1m2								\$ 325.46	Auckland

	Roof space4	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Bradford Gold
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R3.6 single layer insulation	100	m2	\$ 11.50	\$ 1,150.00	\$ 7.50	\$ 750.00	\$ 1,900.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 27,244.80	
12	Add- Preliminaries/General	10	%					\$ 2,724.48	
13	Add- Overhead & Profit	6	%					\$ 1,798.16	
Total Cost for 100m2								\$ 31,767.44	
Cost per 1m2								\$ 317.67	Auckland

	Roof space5	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Bradford Gold
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R4.0 single layer insulation	100	m2	\$ 13.42	\$ 1,342.00	\$ 7.50	\$ 750.00	\$ 2,092.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 27,436.80	
12	Add- Preliminaries/General	10	%					\$ 2,743.68	
13	Add- Overhead & Profit	6	%					\$ 1,810.83	
Total Cost for 100m2								\$ 31,991.31	
Cost per 1m2								\$ 319.91	Auckland

	Roof space6	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Pink Batts
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R4.5 single layer insulation	100	m2	\$ 17.00	\$ 1,700.00	\$ 7.50	\$ 750.00	\$ 2,450.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 27,794.80	
12	Add- Preliminaries/General	10	%					\$ 2,779.48	
13	Add- Overhead & Profit	6	%					\$ 1,834.46	
Total Cost for 100m2								\$ 32,408.74	
Cost per 1m2								\$ 324.09	Auckland

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code
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	Roof space7	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Pink Batts
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R5.0 single layer insulation	100	m2	\$ 22.55	\$ 2,255.00	\$ 7.50	\$ 750.00	\$ 3,005.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 28,349.80	
12	Add- Preliminaries/General	10	%					\$ 2,834.98	
13	Add- Overhead & Profit	6	%					\$ 1,871.09	
Total Cost for 100m2								\$ 33,055.87	Auckland
Cost per 1m2								\$ 330.56	

	Roof space8	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R6.0 single layer insulation	100	m2	\$ 23.67	\$ 2,367.00	\$ 7.50	\$ 750.00	\$ 3,117.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 28,461.80	
12	Add- Preliminaries/General	10	%					\$ 2,846.18	
13	Add- Overhead & Profit	6	%					\$ 1,878.48	
Total Cost for 100m2								\$ 33,186.46	Auckland
Cost per 1m2								\$ 331.86	

	Roof space9	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R7.0 single layer insulation	100	m2	\$ 19.89	\$ 1,989.00	\$ 7.50	\$ 750.00	\$ 2,739.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 28,083.80	
12	Add- Preliminaries/General	10	%					\$ 2,808.38	
13	Add- Overhead & Profit	6	%					\$ 1,853.53	
Total Cost for 100m2								\$ 32,745.71	Auckland
Cost per 1m2								\$ 327.46	

	Roof space10	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
				Rate	Total	Rate	Total		
1	Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2	Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3	Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4	70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5	Truss 140x45 all members @900crs with a pitch of 22°	264	m	\$ 12.00	\$ 3,168.00	\$ 15.75	\$ 4,158.00	\$ 7,326.00	
6	R8.0 single layer insulation	100	m2	\$ 34.62	\$ 3,462.00	\$ 7.50	\$ 750.00	\$ 4,212.00	
7	45x19 ceiling batten @600cnrs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8	Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1								\$ 29,556.80	
12	Add- Preliminaries/General	10	%					\$ 2,955.68	
13	Add- Overhead & Profit	6	%					\$ 1,950.75	
Total Cost for 100m2								\$ 34,463.23	Auckland
Cost per 1m2								\$ 344.63	

Skillion roof Insulations

Insulation Type	Qty	Unit	Supplier-1	Supplier-2	Supplier-3	Supplier-4	Lowest
			\$ /m2	\$ /m2	\$ /m2	\$ /m2	\$ /m2
R3.2	1	m2	\$ 29.54	\$ 23.15	NA	\$ 27.62	\$ 23.15
R3.6	1	m2	\$ 22.46	NA	NA	\$ 38.34	\$ 22.46
R4.5	1	m2	\$ 33.34	NA	NA	NA	\$ 33.34
R5.0	1	m2	\$ 33.33	\$ 37.70	NA	NA	\$ 33.33
R6.0	1	m2	NA	\$ 39.33	NA	NA	\$ 39.33
R7.4	1	m2	\$ 43.95	\$ 45.89	NA	NA	\$ 43.95

Supplier-1 - Pink Batts
 Supplier-2 - Earthwool
 Supplier-3 - Bradford Gold
 Supplier-4 - Greenstuf

NA - Product not available

Skillion roof assemblies

Cost per 100m2 Labour rate per hour - \$ 75.00

Skillion 1	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Rafters 140x45 all members @600crs with a pitch of 22°	306	m	\$ 12.00	\$ 3,672.00	\$ 15.75	\$ 4,819.50	\$ 8,491.50	
6 R3.2 single layer insulation	100	m2	\$ 23.15	\$ 2,315.00	\$ 6.75	\$ 675.00	\$ 2,990.00	
7 45x19 ceiling batten @600crs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 29,500.30	
12 Add- Preliminaries/General	10	%					\$ 2,950.03	
13 Add- Overhead & Profit	6	%					\$ 1,947.02	
Total Cost for 100m2							\$ 34,397.35	
Cost per 1m2							\$ 343.97	Auckland

Skillion 2	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Pink Batts
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Rafters 140x45 all members @600crs with a pitch of 22°	306	m	\$ 17.87	\$ 5,468.22	\$ 16.50	\$ 5,049.00	\$ 10,517.22	
6 R3.6 single layer insulation	100	m2	\$ 22.46	\$ 2,246.00	\$ 6.75	\$ 675.00	\$ 2,921.00	
7 45x19 ceiling batten @600crs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 31,457.02	
12 Add- Preliminaries/General	10	%					\$ 3,145.70	
13 Add- Overhead & Profit	6	%					\$ 2,076.16	
Total Cost for 100m2							\$ 36,678.89	
Cost per 1m2							\$ 366.79	Auckland

Skillion 3	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Pink Batts
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Rafters 140x45 all members @600crs with a pitch of 22°	306	m	\$ 17.87	\$ 5,468.22	\$ 16.50	\$ 5,049.00	\$ 10,517.22	
6 R4.5 single layer insulation	100	m2	\$ 33.34	\$ 3,334.00	\$ 6.75	\$ 675.00	\$ 4,009.00	
7 45x19 ceiling batten @600crs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 32,545.02	
12 Add- Preliminaries/General	10	%					\$ 3,254.50	
13 Add- Overhead & Profit	6	%					\$ 2,147.97	
Total Cost for 100m2							\$ 37,947.49	
Cost per 1m2							\$ 379.47	Auckland

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Skillion 4	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Pink Batts
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Rafters 140x45 all members @600crs with a pitch of 22°	306	m	\$ 17.87	\$ 5,468.22	\$ 15.75	\$ 4,819.50	\$ 10,287.72	
6 R5.0 single layer insulation	100	m2	\$ 33.33	\$ 3,333.00	\$ 6.75	\$ 675.00	\$ 4,008.00	
7 45x19 ceiling batten @600crs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 32,314.52	
12 Add- Preliminaries/General	10	%					\$ 3,231.45	
13 Add- Overhead & Profit	6	%					\$ 2,132.76	
Total Cost for 100m2							\$ 37,678.73	Auckland
Cost per 1m2							\$ 376.79	

Skillion 5	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Rafters 140x45 all members @600crs with a pitch of 22°	306	m	\$ 22.93	\$ 7,016.58	\$ 15.75	\$ 4,819.50	\$ 11,836.08	
6 R6.0 single layer insulation	100	m2	\$ 39.33	\$ 3,933.00	\$ 6.75	\$ 675.00	\$ 4,608.00	
7 45x19 ceiling batten @600crs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 34,462.88	
12 Add- Preliminaries/General	10	%					\$ 3,446.29	
13 Add- Overhead & Profit	6	%					\$ 2,274.55	
Total Cost for 100m2							\$ 40,183.72	Auckland
Cost per 1m2							\$ 401.84	

Skillion 6	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Earthwool
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Rafters 140x45 all members @600crs with a pitch of 22°	306	m	\$ 22.93	\$ 7,016.58	\$ 15.75	\$ 4,819.50	\$ 11,836.08	
6 R7.4 single layer insulation	100	m2	\$ 43.95	\$ 4,395.00	\$ 6.75	\$ 675.00	\$ 5,070.00	
7 45x19 ceiling batten @600crs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 34,924.88	
12 Add- Preliminaries/General	10	%					\$ 3,492.49	
13 Add- Overhead & Profit	6	%					\$ 2,305.04	
Total Cost for 100m2							\$ 40,722.41	Auckland
Cost per 1m2							\$ 407.22	

Skillion 7	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 Corrugated profile 0.55BMT coloursteel metal roof cladding	100	m2	\$ 27.60	\$ 2,760.00	\$ 9.75	\$ 975.00	\$ 3,735.00	Pink Batts Superbatts
2 Thermakraft covertek 403	100	m2	\$ 4.50	\$ 450.00	\$ 3.75	\$ 375.00	\$ 825.00	
3 Roof safety mesh, hexagonal netting	100	m2	\$ 2.50	\$ 250.00	\$ 3.75	\$ 375.00	\$ 625.00	
4 70x45 purlins @900crs	240	m	\$ 5.12	\$ 1,228.80	\$ 11.25	\$ 2,700.00	\$ 3,928.80	
5 Rafters 140x45 all members @600crs with a pitch of 22°	306	m	\$ 29.05	\$ 8,889.30	\$ 15.75	\$ 4,819.50	\$ 13,708.80	
6 R7.4 single layer insulation	100	m2	\$ 43.95	\$ 4,395.00	\$ 6.75	\$ 675.00	\$ 5,070.00	
7 45x19 ceiling batten @600crs	340	m	\$ 4.00	\$ 1,360.00	\$ 6.75	\$ 2,295.00	\$ 3,655.00	
8 Plasterboard 13mm ceiling	100	m2	\$ 15.00	\$ 1,500.00	\$ 37.50	\$ 3,750.00	\$ 5,250.00	
Sub Total-1							\$ 36,797.60	
12 Add- Preliminaries/General	10	%					\$ 3,679.76	
13 Add- Overhead & Profit	6	%					\$ 2,428.64	
Total Cost for 100m2							\$ 42,906.00	Auckland
Cost per 1m2							\$ 429.06	

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code
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 Rate breakdowns



Wall Insulations

Insulation Type	Qty	Unit	Supplier-1	Supplier-2	Supplier-3	Supplier-4	Lowest
			\$/m2	\$/m2	\$/m2	\$/m2	\$/m2
R2.5	1	m2				\$ 30.00	\$ 30.00
R2.6	1	m2	\$ 17.60	\$ 13.31	\$ 12.89		\$ 12.89
R2.8	1	m2	\$ 21.74		\$ 19.95		\$ 19.95
R4.0	1	m2	\$ 19.83		\$ 23.58		\$ 19.83
R4.4	1	m2		\$ 37.68			\$ 37.68

Supplier-1 - Pink Batts
 Supplier-2 - Earthwool
 Supplier-3 - Bradford Gold
 Supplier-4 - Greenstuf

NA - Product not available

Walls

Cost per 9m2 (3m x 3m)

Labour rate per hour - \$75.00

Wall 1	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140mm Wide, Standard P61 Bevelback Weatherboard	92	m	\$ 12.58	\$ 1,157.36	\$ 75.00	\$ 675.00	\$ 1,832.36	Greenstuf Supply and fix only
2 20x 45 cavity batten @ 600cnrs	36	m2	\$ 3.02	\$ 108.72	\$ 9.00	\$ 324.00	\$ 432.72	
3 Thermakraft covertek 403	9	m2	\$ 4.50	\$ 40.50	\$ 3.75	\$ 33.75	\$ 74.25	
4 90x45 timber framing with 24% framing ratio	18.9	m	\$ 7.77	\$ 146.85	\$ 3.75	\$ 70.88	\$ 217.73	
5 R2.5 single layer 90mm insulation	9	m2	\$ 30.00	\$ 270.00	\$ 4.50	\$ 40.50	\$ 310.50	
6 Plasterboard 13mm	9	m2	\$ 15.00	\$ 135.00	\$ 31.50	\$ 283.50	\$ 418.50	
Sub Total-1							\$ 3,286.06	
7 Add- Preliminaries/General	10	%					\$ 328.61	
8 Add- Overhead & Profit	6	%					\$ 216.88	
Total Cost for 9m2							\$ 3,831.54	Auckland
Cost per 1m2							\$ 425.73	

Wall 2	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140mm Wide, Standard P61 Bevelback Weatherboard	92	m	\$ 12.58	\$ 1,157.36	\$ 75.00	\$ 675.00	\$ 1,832.36	Bradford Gold Supply and fix only
2 20x 45 cavity batten @ 600cnrs	36	m2	\$ 3.02	\$ 108.72	\$ 9.00	\$ 324.00	\$ 432.72	
3 Thermakraft covertek 403	9	m2	\$ 4.50	\$ 40.50	\$ 3.75	\$ 33.75	\$ 74.25	
4 90x45 timber framing with 24% framing ratio	18.9	m	\$ 7.77	\$ 146.85	\$ 3.75	\$ 70.88	\$ 217.73	
5 R2.8 single layer 90mm insulation	9	m2	\$ 19.95	\$ 179.55	\$ 4.50	\$ 40.50	\$ 220.05	
6 Plasterboard 13mm	9	m2	\$ 15.00	\$ 135.00	\$ 31.50	\$ 283.50	\$ 418.50	
Sub Total-1							\$ 3,195.61	
7 Add- Preliminaries/General	10	%					\$ 319.56	
8 Add- Overhead & Profit	6	%					\$ 210.91	
Total Cost for 9m2							\$ 3,726.08	Auckland
Cost per 1m2							\$ 414.01	

Wall 3	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140mm Wide, Standard P61 Bevelback Weatherboard	92	m	\$ 12.58	\$ 1,157.36	\$ 75.00	\$ 675.00	\$ 1,832.36	Pink Batts Supply and fix only
2 20x 45 cavity batten @ 600cnrs	36	m2	\$ 3.02	\$ 108.72	\$ 9.00	\$ 324.00	\$ 432.72	
3 Thermakraft covertek 403	9	m2	\$ 4.50	\$ 40.50	\$ 3.75	\$ 33.75	\$ 74.25	
4 140x45 timber framing with 24% framing ratio	18.9	m	\$ 13.92	\$ 263.09	\$ 11.25	\$ 212.63	\$ 475.71	
5 R4.0 single layer 90mm insulation	9	m2	\$ 19.83	\$ 178.47	\$ 4.50	\$ 40.50	\$ 218.97	
6 Plasterboard 13mm	9	m2	\$ 15.00	\$ 135.00	\$ 31.50	\$ 283.50	\$ 418.50	
Sub Total-1							\$ 3,452.51	
7 Add- Preliminaries/General	10	%					\$ 345.25	
8 Add- Overhead & Profit	6	%					\$ 227.87	
Total Cost for 9m2							\$ 4,025.63	Auckland
Cost per 1m2							\$ 447.29	

Wall 4	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140mm Wide, Standard P61 Bevelback Weatherboard	92	m	\$ 12.58	\$ 1,157.36	\$ 75.00	\$ 675.00	\$ 1,832.36	Earthwool Supply and fix only
2 20x 45 cavity batten @ 600cnrs	36	m2	\$ 3.02	\$ 108.72	\$ 9.00	\$ 324.00	\$ 432.72	
3 Thermakraft covertek 403	9	m2	\$ 4.50	\$ 40.50	\$ 3.75	\$ 33.75	\$ 74.25	
4 140x45 timber framing with 24% framing ratio	18.9	m	\$ 13.92	\$ 263.09	\$ 11.25	\$ 212.63	\$ 475.71	
5 R4.4 single layer 90mm insulation	9	m2	\$ 37.68	\$ 339.12	\$ 4.50	\$ 40.50	\$ 379.62	
6 Plasterboard 13mm	9	m2	\$ 15.00	\$ 135.00	\$ 31.50	\$ 283.50	\$ 418.50	
Sub Total-1							\$ 3,613.16	
7 Add- Preliminaries/General	10	%					\$ 361.32	
8 Add- Overhead & Profit	6	%					\$ 238.47	
Total Cost for 9m2							\$ 4,212.95	Auckland
Cost per 1m2							\$ 468.11	

Floor Insulations

Insulation Type	Qty	Unit	Supplier-1	Supplier-2	Supplier-3	Supplier-4	Lowest
			\$/m2	\$/m2	\$/m2	\$/m2	\$/m2
R1.5	1	m2	\$ 14.85	NA	\$ 8.05	\$ 9.70	\$ 8.05
R1.8	1	m2	NA	\$ 11.84	\$ 9.35	\$ 11.35	\$ 9.35
R2.0	1	m2	NA	NA	\$ 14.03	NA	\$ 14.03
R2.6	1	m2	NA	\$ 14.00	\$ 15.46	NA	\$ 14.00
R2.8	1	m2	NA	NA	\$ 11.72	NA	\$ 11.72
R3.0	1	m2	NA	\$ 15.23	NA	NA	\$ 15.23
R3.2	1	m2	NA	NA	\$ 15.30	NA	\$ 15.30

Supplier-1 - Pink Batts
 Supplier-2 - Earthwool
 Supplier-3 - Greenstuf
 Supplier-4 - Mammoth

NA - Product not available

Timber Floors

Cost per 9m2 (3m x 3m)

Labour rate per hour - \$ 75.00

Timber Floor 1	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140x45 timber framing @ 400 cnrs with 90x45 blocking @1200 cnrs & 140x70 bearers @ 2000 cnrs	9	m2	\$ 112.00	\$ 1,008.00	\$ 88.50	\$ 796.50	\$ 1,804.50	Greenstuf
2 20mm strand board H3.2 T&G floor	9	m2	\$ 69.00	\$ 621.00	\$ 22.50	\$ 202.50	\$ 823.50	
3 R1.5 single layer Insulation	9	m2	\$ 8.05	\$ 72.45	\$ 4.50	\$ 40.50	\$ 112.95	
Sub Total-1							\$ 2,740.95	
4 Add- Preliminaries/General	10	%					\$ 274.10	
5 Add- Overhead & Profit	6	%					\$ 180.90	
Total Cost for 100m2							\$ 3,195.95	Auckland
Cost per 1m2							\$ 355.11	

Timber Floor 2	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140x45 timber framing @ 400 cnrs with 90x45 blocking @1200 cnrs & 140x70 bearers @ 2000 cnrs	9	m2	\$ 112.00	\$ 1,008.00	\$ 88.50	\$ 796.50	\$ 1,804.50	Greenstuf
2 20mm strand board H3.2 T&G floor	9	m2	\$ 69.00	\$ 621.00	\$ 22.50	\$ 202.50	\$ 823.50	
3 R1.8 single layer Insulation	9	m2	\$ 9.35	\$ 84.15	\$ 4.50	\$ 40.50	\$ 124.65	
Sub Total-1							\$ 2,752.65	
4 Add- Preliminaries/General	10	%					\$ 275.27	
5 Add- Overhead & Profit	6	%					\$ 181.67	
Total Cost for 100m2							\$ 3,209.59	Auckland
Cost per 1m2							\$ 356.62	

Timber Floor 3	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140x45 timber framing @ 400 cnrs with 90x45 blocking @1200 cnrs & 140x70 bearers @ 2000 cnrs	9	m2	\$ 112.00	\$ 1,008.00	\$ 88.50	\$ 796.50	\$ 1,804.50	Greenstuf
2 20mm strand board H3.2 T&G floor	9	m2	\$ 69.00	\$ 621.00	\$ 22.50	\$ 202.50	\$ 823.50	
3 R2.0 single layer Insulation	9	m2	\$ 14.03	\$ 126.27	\$ 4.50	\$ 40.50	\$ 166.77	
Sub Total-1							\$ 2,794.77	
4 Add- Preliminaries/General	10	%					\$ 279.48	
5 Add- Overhead & Profit	6	%					\$ 184.45	
Total Cost for 100m2							\$ 3,258.70	Auckland
Cost per 1m2							\$ 362.08	

Timber Floor 4	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 140x45 timber framing @ 400 cnrs with 90x45 blocking @1200 cnrs & 140x70 bearers @ 2000 cnrs	9	m2	\$ 112.00	\$ 1,008.00	\$ 88.50	\$ 796.50	\$ 1,804.50	Earthwool
2 20mm strand board H3.2 T&G floor	9	m2	\$ 69.00	\$ 621.00	\$ 22.50	\$ 202.50	\$ 823.50	
3 R2.6 single layer Insulation	9	m2	\$ 14.00	\$ 126.00	\$ 4.50	\$ 40.50	\$ 166.50	
Sub Total-1							\$ 2,794.50	
4 Add- Preliminaries/General	10	%					\$ 279.45	
5 Add- Overhead & Profit	6	%					\$ 184.44	
Total Cost for 100m2							\$ 3,258.39	Auckland
Cost per 1m2							\$ 362.04	

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code
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	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
Timber Floor 5								
1 140x45 timber framing @ 400 cnrs with 90x45 blocking @1200 cnrs & 140x70 bearers @ 2000 cnrs	9	m2	\$ 112.00	\$ 1,008.00	\$ 88.50	\$ 796.50	\$ 1,804.50	Greenstuf
2 20mm strand board H3.2 T&G floor	9	m2	\$ 69.00	\$ 621.00	\$ 22.50	\$ 202.50	\$ 823.50	
3 R2.8 single layer Insulation	9	m2	\$ 11.72	\$ 105.48	\$ 4.50	\$ 40.50	\$ 145.98	
Sub Total-1							\$ 2,773.98	
4 Add- Preliminaries/General	10	%					\$ 277.40	
5 Add- Overhead & Profit	6	%					\$ 183.08	
Total Cost for 100m2							\$ 3,234.46	Auckland
Cost per 1m2							\$ 359.38	

	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
Timber Floor 6								
1 140x45 timber framing @ 400 cnrs with 90x45 blocking @1200 cnrs & 140x70 bearers @ 2000 cnrs	9	m2	\$ 112.00	\$ 1,008.00	\$ 88.50	\$ 796.50	\$ 1,804.50	Earthwool
2 20mm strand board H3.2 T&G floor	9	m2	\$ 69.00	\$ 621.00	\$ 22.50	\$ 202.50	\$ 823.50	
3 R3.0 single layer Insulation	9	m2	\$ 15.23	\$ 137.07	\$ 4.50	\$ 40.50	\$ 177.57	
Sub Total-1							\$ 2,805.57	
4 Add- Preliminaries/General	10	%					\$ 280.56	
5 Add- Overhead & Profit	6	%					\$ 185.17	
Total Cost for 100m2							\$ 3,271.29	Auckland
Cost per 1m2							\$ 363.48	

	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
Timber Floor 7								
1 140x45 timber framing @ 400 cnrs with 90x45 blocking @1200 cnrs & 140x70 bearers @ 2000 cnrs	9	m2	\$ 112.00	\$ 1,008.00	\$ 88.50	\$ 796.50	\$ 1,804.50	Greenstuf
2 20mm strand board H3.2 T&G floor	9	m2	\$ 69.00	\$ 621.00	\$ 22.50	\$ 202.50	\$ 823.50	
3 R3.2 single layer Insulation	9	m2	\$ 15.30	\$ 137.70	\$ 4.50	\$ 40.50	\$ 178.20	
Sub Total-1							\$ 2,806.20	
4 Add- Preliminaries/General	10	%					\$ 280.62	
5 Add- Overhead & Profit	6	%					\$ 185.21	
Total Cost for 100m2							\$ 3,272.03	Auckland
Cost per 1m2							\$ 363.56	

Floor Insulations

Insulation Type	Qty	Unit	Supplier-1	Supplier-2	Lowest	
			\$ /m2	\$ /m2	\$ /m2	
30mm thick x400mm deep XPS vertical edge insulation	1	m2	\$ 8.58	\$ 13.50	\$ 8.58	Supplier-1 - Expol
45mm S-grade EPS underslab insulation	1	m2	\$ 12.72	NA	\$ 12.72	Supplier-2 - Koolfoam
90mm S-grade EPS underslab insulation	1	m2	\$ 20.36	\$ 17.90	\$ 17.90	
R1.0 topper insulation (40mm EPS laid on top of slab in between external and internal walls),	1	m2	\$ 8.87	NA	\$ 8.87	

NA - Product not available

Slab Floors

Cost per 100m2 (10m x 10m)

Labour rate per hour - \$ 75.00

Slab Floor 1	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 100mm slab on grade	100	m2	\$ 117.00	\$ 11,700.00	\$ 63.75	\$ 6,375.00	\$ 18,075.00	Concrete/RF/FW
2 Allow 300 x 400 thickening to slab edge	40	m	\$ 117.00	\$ 4,680.00	\$ 63.75	\$ 2,550.00	\$ 7,230.00	Concrete/RF/FW
3 Edge insulation		m2	\$ -	\$ -	\$ 6.75	\$ -	\$ -	No insulations
4 Under slab insulation		m2	\$ -	\$ -	\$ 5.25	\$ -	\$ -	No insulations
Sub Total-1							\$ 25,305.00	
5 Add- Preliminaries/General	10	%					\$ 2,530.50	
6 Add- Overhead & Profit	6	%					\$ 1,670.13	
Total Cost for 100m2							\$ 29,505.63	
Cost per 1m2							\$ 295.06	Auckland

Slab Floor 2	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 100mm slab on grade	100	m2	\$ 117.00	\$ 11,700.00	\$ 63.75	\$ 6,375.00	\$ 18,075.00	Concrete/RF/FW
2 Allow 300 x 400 thickening to slab edge	40	m	\$ 117.00	\$ 4,680.00	\$ 63.75	\$ 2,550.00	\$ 7,230.00	Concrete/RF/FW
3 Edge protection eg render(over edge insulation) - 400mm high	40	m	\$ 48.00	\$ 1,920.00	\$ 11.25	\$ 450.00	\$ 2,370.00	12mm thick render
4 Edge insulation	40	m	\$ 5.00	\$ 200.00	\$ 4.50	\$ 180.00	\$ 380.00	30mm thick x400mm deep XPS vertical edge insulation
5 Under slab insulation		m2	\$ -	\$ -	\$ -	\$ -	\$ -	No insulations
Sub Total-1							\$ 28,055.00	
6 Add- Preliminaries/General	10	%					\$ 2,805.50	
7 Add- Overhead & Profit	6	%					\$ 1,851.63	
Total Cost for 100m2							\$ 32,712.13	
Cost per 1m2							\$ 327.12	Auckland

Edge insulation cost per m								
3 Edge protection eg render(over edge insulation) - 400mm high	40	m	\$ 48.00	\$ 1,920.00	\$ 11.25	\$ 450.00	\$ 2,370.00	
4 Edge insulation - 400mm high	40	m	\$ 5.00	\$ 200.00	\$ 4.50	\$ 180.00	\$ 380.00	30mm thick x400mm deep XPS vertical edge insulation
Sub Total-1							\$ 2,750.00	
6 Add- Preliminaries/General	10	%					\$ 275.00	
7 Add- Overhead & Profit	6	%					\$ 181.50	
Total Cost for 40m							\$ 3,206.50	
Cost per 1m							\$ 80.16	Auckland

Slab Floor 3	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
1 100mm slab on grade	100	m2	\$ 117.00	\$ 11,700.00	\$ 63.75	\$ 6,375.00	\$ 18,075.00	Concrete/RF/FW
2 Allow 300 x 400 thickening to slab edge	40	m	\$ 117.00	\$ 4,680.00	\$ 63.75	\$ 2,550.00	\$ 7,230.00	Concrete/RF/FW
3 Edge insulation	16	m2	\$ -	\$ -	\$ -	\$ -	\$ -	No insulations
4 Under slab insulation	100	m2	\$ 12.72	\$ 1,272.00	\$ 5.25	\$ 525.00	\$ 1,797.00	45mm S-grade EPS underslab insulation
Sub Total-1							\$ 27,102.00	
5 Add- Preliminaries/General	10	%					\$ 2,710.20	
6 Add- Overhead & Profit	6	%					\$ 1,788.73	
Total Cost for 100m2							\$ 31,600.93	
Cost per 1m2							\$ 316.01	Auckland

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code
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	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
Slab Floor 4								
1 100mm slab on grade	100	m2	\$ 117.00	\$ 11,700.00	\$ 63.75	\$ 6,375.00	\$ 18,075.00	Concrete/RF/FW
2 Allow 300 x 400 thickening to slab edge	40	m	\$ 117.00	\$ 4,680.00	\$ 63.75	\$ 2,550.00	\$ 7,230.00	Concrete/RF/FW
3 Edge insulation		m2	\$ -	\$ -	\$ -	\$ -	\$ -	No insulations
4 Under slab insulation	100	m2	\$ 17.90	\$ 1,790.00	\$ 5.25	\$ 525.00	\$ 2,315.00	90mm S-grade EPS underslab insulation
Sub Total-1							\$ 27,620.00	
5 Add- Preliminaries/General	10	%					\$ 2,762.00	
6 Add- Overhead & Profit	6	%					\$ 1,822.92	
Total Cost for 100m2							\$ 32,204.92	
Cost per 1m2							\$ 322.05	Auckland

	Quantity	Unit	Material Cost		Labour Cost		Total Cost	Remarks
			Rate	Total	Rate	Total		
Slab Floor 5								
1 100mm slab on grade	100	m2	\$ 117.00	\$ 11,700.00	\$ 63.75	\$ 6,375.00	\$ 18,075.00	Concrete/RF/FW
2 Allow 300 x 400 thickening to slab edge	40	m	\$ 117.00	\$ 4,680.00	\$ 63.75	\$ 2,550.00	\$ 7,230.00	Concrete/RF/FW
3 20mm T&G plywood sheet-floor on top	100	m2	\$ 54.00	\$ 5,400.00	\$ 5.25	\$ 525.00	\$ 5,925.00	
4 Edge insulation	16	m2	\$ -	\$ -	\$ -	\$ -	\$ -	No insulations
5 Under slab insulation		m2	\$ -	\$ -	\$ -	\$ -	\$ -	No insulations
6 R1.0 topper insulation (40mm EPS laid on top of slab in between external and internal walls)	100	m2	\$ 8.87	\$ 887.00	\$ 5.25	\$ 525.00	\$ 1,412.00	R1.0 topper insulation
Sub Total-1							\$ 32,642.00	
7 Add- Preliminaries/General	10	%					\$ 3,264.20	
8 Add- Overhead & Profit	6	%					\$ 2,154.37	
Total Cost for 100m2							\$ 38,060.57	
Cost per 1m2							\$ 380.61	Auckland

Aluminium Windows - Price Analysis based on quotations

Vision Windows Ltd, 33 Rangī Road, Takanini

Option-1 (Window 1) - R0.26	Total Price (\$)	Window area (m2)	Price per m2 in Auckland
Window Type W1 - 615 x 1115 mm	\$ 7,040.02	0.69	\$ 613.53
Window Type W3 - 1815 x 1215 mm		2.21	
Window Type W9 - 1615 x 455 mm		0.73	
Window Type W13 - 2415 x 1215 mm		2.93	
Window Type D5 - 2415 x 2035 mm		4.91	
		11.47	

Option-2 (Window 2) - R0.37	Total Price (\$)	Window area (m2)	Price per m2 in Auckland
Window Type W1 - 615 x 1115 mm	\$ 7,811.89	0.69	\$ 680.80
Window Type W3 - 1815 x 1215 mm		2.21	
Window Type W9 - 1615 x 455 mm		0.73	
Window Type W13 - 2415 x 1215 mm		2.93	
Window Type D5 - 2415 x 2035 mm		4.91	
		11.47	

Option-3 (Window 3) - R0.46	Total Price (\$)	Window area (m2)	Price per m2 in Auckland
Window Type W1 - 615 x 1115 mm	\$ 8,951.85	0.69	\$ 780.15
Window Type W3 - 1815 x 1215 mm		2.21	
Window Type W9 - 1615 x 455 mm		0.73	
Window Type W13 - 2415 x 1215 mm		2.93	
Window Type D5 - 2415 x 2035 mm		4.91	
		11.47	

Option-4 (Window 4) - R0.50	Total Price (\$)	Window area (m2)	Price per m2 in Auckland
Window Type W1 - 615 x 1115 mm	\$ 9,655.39	0.69	\$ 841.46
Window Type W3 - 1815 x 1215 mm		2.21	
Window Type W9 - 1615 x 455 mm		0.73	
Window Type W13 - 2415 x 1215 mm		2.93	
Window Type D5 - 2415 x 2035 mm		4.91	
		11.47	

Project: Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
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PART - 1

Element Estimate - Rate analysis for climate zones

Based on internal benchmark data

A Regional prices of key construction elements - Roof

Key construction elements	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
Ceiling batts R3.2 - m2	\$ 17.13	\$ 16.00	\$ 16.00	\$ 16.00	\$ 16.50	\$ 16.50
75 x 40mm ceiling battens - m	\$ 20.10	\$ 17.00	\$ 18.50	\$ 18.00	\$ 18.40	\$ 18.20
Corrugated profile 0.55BMT coloursteel metal roof cladding - m2	\$ 62.00	\$ 58.00	\$ 56.00	\$ 57.00	\$ 59.00	\$ 59.00
Framing: Roof, H1.2, KD, SG8 - 140mm x 45mm - m	\$ 30.00	\$ 28.00	\$ 27.50	\$ 28.00	\$ 28.50	\$ 27.00
Plasterboard 13mm ceiling (Supply & Fix) - m2	\$ 52.50	\$ 51.00	\$ 49.00	\$ 51.00	\$ 50.00	\$ 50.00

% - Difference compared to the Auckland

House type	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
Ceiling batts R3.2 - m2	0%	-6%	-6%	-6%	-4%	-4%
75 x 40mm ceiling battens - m	0%	-13%	-7%	-9%	-8%	-9%
Corrugated profile 0.55BMT coloursteel metal roof cladding - m2	0%	-6%	-9%	-7%	-5%	-5%
Framing: Roof, H1.2, KD, SG8 - 140mm x 45mm - m	0%	-6%	-8%	-6%	-5%	-9%
Plasterboard 13mm ceiling (Supply & Fix) - m2	0%	-3%	-6%	-3%	-5%	-5%
Average	0%	-7%	-7%	-6%	-5%	-6%

B Regional prices of key construction elements - Walls

Key construction elements	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
140mm Wide, Standard P61 Bevelback Weatherboard - m2	\$ 203.60	\$ 201.00	\$ 200.00	\$ 201.00	\$ 198.00	\$ 197.00
90x45 timber framing - m	\$ 18.00	\$ 17.00	\$ 16.50	\$ 17.00	\$ 17.00	\$ 16.90
13mm plasterboard (Sply, fix, stop) - m2	\$ 60.00	\$ 58.00	\$ 57.00	\$ 58.00	\$ 56.00	\$ 55.80

% - Difference compared to the Auckland

House type	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
140mm Wide, Standard P61 Bevelback Weatherboard - m2	0%	-1%	-2%	-1%	-3%	-3%
90x45 timber framing - m	0%	-5%	-8%	-5%	-5%	-6%
13mm plasterboard (Sply, fix, stop) - m2	0%	-3%	-5%	-3%	-6%	-7%
Average	0%	-3%	-5%	-3%	-5%	-5%

C Regional prices of key construction elements - Floors

Key construction elements	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
140x45 timber framing - m	\$ 22.00	\$ 20.50	\$ 21.00	\$ 20.50	\$ 21.00	\$ 21.00
20mm strand board H3.2 T&G floor - m2	\$ 91.50	\$ 90.50	\$ 90.00	\$ 90.50	\$ 89.00	\$ 88.00
100mm slab on grade - m2	\$ 180.75	\$ 177.00	\$ 176.00	\$ 178.00	\$ 174.00	\$ 173.00
R1.5 single layer Insulation - m2	\$ 12.55	\$ 12.20	\$ 12.00	\$ 12.20	\$ 11.70	\$ 11.70

% - Difference compared to the Auckland

House type	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
140x45 timber framing - m	0%	-6%	-4%	-6%	-4%	-4%
20mm strand board H3.2 T&G floor - m2	0%	-1%	-2%	-1%	-3%	-4%
100mm slab on grade - m2	0%	-2%	-3%	-1%	-4%	-4%
R1.5 single layer Insulation - m2	0%	-3%	-4%	-3%	-6%	-6%
Average	0%	-3%	-3%	-3%	-4%	-5%

D Regional prices of key construction elements - Windows

Key construction elements	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
Aluminium Windows, Residential Quality Double Glazed, Sliding (25% opening) - m2	\$ 800.00	\$ 770.00	\$ 760.00	\$ 760.00	\$ 750.00	\$ 750.00
Aluminium Windows, Residential Quality Double Glazed, Casement (25% opening) - m2	\$ 785.00	\$ 760.00	\$ 750.00	\$ 750.00	\$ 740.00	\$ 740.00

% - Difference compared to the Auckland

House type	Auckland	Napier	Wellington	Turangi	Christchurch	Queenstown
Aluminium Windows, Residential Quality Double Glazed, Sliding (25% opening) - m2	0%	-4%	-5%	-5%	-6%	-6%
Aluminium Windows, Residential Quality Double Glazed, Casement (25% opening) - m2	0%	-3%	-4%	-4%	-5%	-5%
Average	0%	-3%	-5%	-5%	-6%	-6%

Project: Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
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PART - 2

Building Estimates - Preliminary

1 Cost per m2 Summary for total construction

- Single - Single story 4 bed house - Mid quality (Type 1) - GFA - 220 m2
- Double - Two story 5 bed house - Mid quality (Type 2) - GFA - 214 m2
- Town - The town houses - Block V - 8 Town Houses - Mid quantity (Type 3) - GFA - 921 m2
- Town - 9 level apartment building - Mid quantity (Type 4) - GFA - 3,591 m2

Type	Single \$/m ²	Double \$/m ²	Town \$/m ²	Apartment \$/m ²
Auckland	\$ 4,057.68	\$ 4,751.45	\$ 4,815.58	\$ 5,180.99
Napier	\$ 3,889.48	\$ 4,554.50	\$ 4,615.97	\$ 4,966.23
Wellington	\$ 3,857.93	\$ 4,517.55	\$ 4,578.52	\$ 4,925.94
Turangi	\$ 3,884.10	\$ 4,548.19	\$ 4,609.57	\$ 4,959.35
Christchurch	\$ 3,858.11	\$ 4,517.76	\$ 4,578.73	\$ 4,926.17
Queenstown	\$ 3,839.50	\$ 4,495.97	\$ 4,556.65	\$ 4,902.41

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
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Part- 2 : Building Estimates - Preliminary



Building type 1, single-storey house has 4 bedrooms (Auckland)

Code	Drawdown Schedule	Quantity	UOM	Rate / m2	Total
1.1	Site Preparation	220.0	m2	\$ 60	\$ 13,200.00
1.2	Substructure	220.0	m2	\$ 325	\$ 71,500.00
1.3	Frame	220.0	m2	\$ 120	\$ 26,400.00
1.4	Structural Walls				NA
1.5	Upper Floors				NA
1.6	Roof	220.0	m2	\$ 310	\$ 68,200.00
1.7	Exterior Walls and Exterior Finish	220.0	m2	\$ 320	\$ 70,400.00
1.8	Windows and Exterior Doors	220.0	m2	\$ 430	\$ 94,600.00
1.9	Stairs and Balustrades				NA
1.10	Interior Walls	220.0	m2	\$ 150	\$ 33,000.00
1.11	Interior Doors	220.0	m2	\$ 170	\$ 37,400.00
1.12	Floor Finishes	220.0	m2	\$ 250	\$ 55,000.00
1.13	Wall Finishes	220.0	m2	\$ 230	\$ 50,600.00
1.14	Ceiling Finishes	220.0	m2	\$ 260	\$ 57,200.00
1.15	Fittings and Fixtures	220.0	m2	\$ 320	\$ 70,400.00
1.16	Sanitary Plumbing	220.0	m2	\$ 130	\$ 28,600.00
1.17	Heating and Ventilation Services	220.0	m2	\$ 85	\$ 18,700.00
1.18	Fire Services	220.0	m2	\$ 80	\$ 17,600.00
1.19	Electrical Services	220.0	m2	\$ 150	\$ 33,000.00
1.20	Vertical and Horizontal Transportation				NA
1.21	Special Services				NA
1.22	Drainage	220.0	m2	\$ 75	\$ 16,500.00
1.23	External Works				NA
1.24	Sundries	220.0	m2	\$ 15	\$ 3,300.00
Net Construction Total (excl. GST)		220.0	m2	3,480.00	\$ 765,600.00
1.25	Preliminaries and General (10%)				\$ 76,560.00
1.26	Contractor's Margin (6%)				\$ 50,529.60
Contractor Overheads Total (excl. GST)		220.0	m2	4,057.68	\$ 892,689.60
1.27	Contingency				Excluded
1.28	Other Development Costs				Excluded
Gross Construction Total (excl. GST)		220.0	m2	4,057.68	\$ 892,689.60

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
Client- Ministry of Business Innovation and Employment
Part- 2 : Building Estimates - Preliminary



Building type 2, double-storey house has 5 bedrooms (Auckland)

Code	Drawdown Schedule	Quantity	UOM	Rate / m2	Total
1.1	Site Preparation	214.0	m2	\$ 65	\$ 13,910.00
1.2	Substructure	214.0	m2	\$ 390	\$ 83,460.00
1.3	Frame	214.0	m2	\$ 160	\$ 34,240.00
1.4	Structural Walls				NA
1.5	Upper Floors	214.0	m2	\$ 150	\$ 32,100.00
1.6	Roof	214.0	m2	\$ 180	\$ 38,520.00
1.7	Exterior Walls and Exterior Finish	214.0	m2	\$ 380	\$ 81,320.00
1.8	Windows and Exterior Doors	214.0	m2	\$ 480	\$ 102,720.00
1.9	Stairs and Balustrades	214.0	m2	\$ 70	\$ 14,980.00
1.10	Interior Walls	214.0	m2	\$ 180	\$ 38,520.00
1.11	Interior Doors	214.0	m2	\$ 230	\$ 49,220.00
1.12	Floor Finishes	214.0	m2	\$ 275	\$ 58,850.00
1.13	Wall Finishes	214.0	m2	\$ 280	\$ 59,920.00
1.14	Ceiling Finishes	214.0	m2	\$ 290	\$ 62,060.00
1.15	Fittings and Fixtures	214.0	m2	\$ 325	\$ 69,550.00
1.16	Sanitary Plumbing	214.0	m2	\$ 160	\$ 34,240.00
1.17	Heating and Ventilation Services	214.0	m2	\$ 90	\$ 19,260.00
1.18	Fire Services	214.0	m2	\$ 85	\$ 18,190.00
1.19	Electrical Services	214.0	m2	\$ 180	\$ 38,520.00
1.20	Vertical and Horizontal Transportation				NA
1.21	Special Services				NA
1.22	Drainage	214.0	m2	\$ 85	\$ 18,190.00
1.23	External Works				NA
1.24	Sundries	214.0	m2	\$ 20	\$ 4,280.00
Net Construction Total (excl. GST)		214.0	m2	4,075.00	\$ 872,050.00
1.25	Preliminaries and General (10%)				\$ 87,205.00
1.26	Contractor's Margin (6%)				\$ 57,555.30
Contractor Overheads Total (excl. GST)		214.0	m2	4,751.45	\$ 1,016,810.30
1.27	Contingency				Excluded
1.28	Other Development Costs				Excluded
Gross Construction Total (excl. GST)		214.0	m2	4,751.45	\$ 1,016,810.30

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
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Part- 2 : Building Estimates - Preliminary



Building type 3, The town houses - Block V - 8 Town Houses (Auckland)

Code	Drawdown Schedule	Quantity	UOM	Rate / m2	Total
1.1	Site Preparation	921.0	m2	\$ 65	\$ 59,865.00
1.2	Substructure	921.0	m2	\$ 390	\$ 359,190.00
1.3	Frame	921.0	m2	\$ 160	\$ 147,360.00
1.4	Structural Walls	921.0	m2	\$ 60	\$ 55,260.00
1.5	Upper Floors	921.0	m2	\$ 160	\$ 147,360.00
1.6	Roof	921.0	m2	\$ 180	\$ 165,780.00
1.7	Exterior Walls and Exterior Finish	921.0	m2	\$ 410	\$ 377,610.00
1.8	Windows and Exterior Doors	921.0	m2	\$ 480	\$ 442,080.00
1.9	Stairs and Balustrades	921.0	m2	\$ 70	\$ 64,470.00
1.10	Interior Walls	921.0	m2	\$ 180	\$ 165,780.00
1.11	Interior Doors	921.0	m2	\$ 200	\$ 184,200.00
1.12	Floor Finishes	921.0	m2	\$ 275	\$ 253,275.00
1.13	Wall Finishes	921.0	m2	\$ 270	\$ 248,670.00
1.14	Ceiling Finishes	921.0	m2	\$ 290	\$ 267,090.00
1.15	Fittings and Fixtures	921.0	m2	\$ 310	\$ 285,510.00
1.16	Sanitary Plumbing	921.0	m2	\$ 170	\$ 156,570.00
1.17	Heating and Ventilation Services	921.0	m2	\$ 90	\$ 82,890.00
1.18	Fire Services	921.0	m2	\$ 85	\$ 78,285.00
1.19	Electrical Services	921.0	m2	\$ 180	\$ 165,780.00
1.20	Vertical and Horizontal Transportation				NA
1.21	Special Services				NA
1.22	Drainage	921.0	m2	\$ 85	\$ 78,285.00
1.23	External Works				NA
1.24	Sundries	921.0	m2	\$ 20	\$ 18,420.00
Net Construction Total (excl. GST)		921.0	m2	4,130.00	\$ 3,803,730.00
1.25	Preliminaries and General (10%)				\$ 380,373.00
1.26	Contractor's Margin (6%)				\$ 251,046.18
Contractor Overheads Total (excl. GST)		921.0	m2	4,815.58	\$ 4,435,149.18
1.27	Contingency				Excluded
1.28	Other Development Costs				Excluded
Gross Construction Total (excl. GST)		921.0	m2	4,815.58	\$ 4,435,149.18
Gross Construction Total for 1 Town House (excl. GST)					\$ 554,393.65

Supply of cost estimates for thermal envelope options for new housing to inform a review of Building Code Clause H1 Energy Efficiency settings
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Part- 2 : Building Estimates - Preliminary



Building type 4, 9 level apartment building (Auckland)

Code	Drawdown Schedule	Quantity	UOM	Rate / m2	Total
1.1	Site Preparation	3,591.0	m2	\$ 65	\$ 233,415.00
1.2	Substructure	3,591.0	m2	\$ 390	\$ 1,400,490.00
1.3	Frame	3,591.0	m2	\$ 280	\$ 1,005,480.00
1.4	Structural Walls	3,591.0	m2	\$ 250	\$ 897,750.00
1.5	Upper Floors	3,591.0	m2	\$ 220	\$ 790,020.00
1.6	Roof	3,591.0	m2	\$ 60	\$ 215,460.00
1.7	Exterior Walls and Exterior Finish	3,591.0	m2	\$ 320	\$ 1,149,120.00
1.8	Windows and Exterior Doors	3,591.0	m2	\$ 150	\$ 538,650.00
1.9	Stairs and Balustrades	3,591.0	m2	\$ 85	\$ 305,235.00
1.10	Interior Walls	3,591.0	m2	\$ 200	\$ 718,200.00
1.11	Interior Doors	3,591.0	m2	\$ 150	\$ 538,650.00
1.12	Floor Finishes	3,591.0	m2	\$ 275	\$ 987,525.00
1.13	Wall Finishes	3,591.0	m2	\$ 270	\$ 969,570.00
1.14	Ceiling Finishes	3,591.0	m2	\$ 210	\$ 754,110.00
1.15	Fittings and Fixtures	3,591.0	m2	\$ 380	\$ 1,364,580.00
1.16	Sanitary Plumbing	3,591.0	m2	\$ 275	\$ 987,525.00
1.17	Heating and Ventilation Services	3,591.0	m2	\$ 165	\$ 592,515.00
1.18	Fire Services	3,591.0	m2	\$ 85	\$ 305,235.00
1.19	Electrical Services	3,591.0	m2	\$ 255	\$ 915,705.00
1.20	Vertical and Horizontal Transportation	3,591.0	m2	\$ 95	\$ 341,145.00
1.21	Special Services				NA
1.22	Drainage	3,591.0	m2	\$ 85	\$ 305,235.00
1.23	External Works				NA
1.24	Sundries	3,591.0	m2	\$ 20	\$ 71,820.00
Net Construction Total (excl. GST)		3,591.0	m2	4,285.00	\$ 15,387,435.00
1.25	Preliminaries and General (13%)				\$ 2,000,366.55
1.26	Contractor's Margin (7%)				\$ 1,217,146.11
Contractor Overheads Total (excl. GST)		3,591.0	m2	5,180.99	\$ 18,604,947.66
1.27	Contingency				Excluded
1.28	Other Development Costs				Excluded
Gross Construction Total (excl. GST)		3,591.0	m2	5,180.99	\$ 18,604,947.66